



General Catalogue

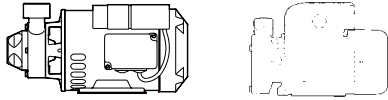
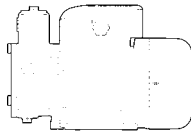
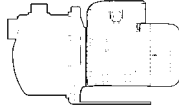
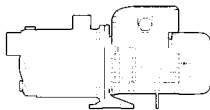
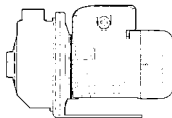
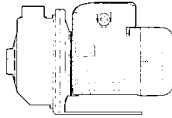
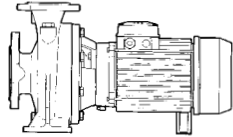
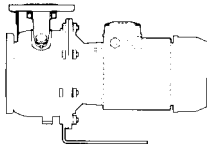
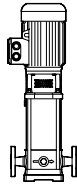


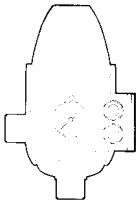
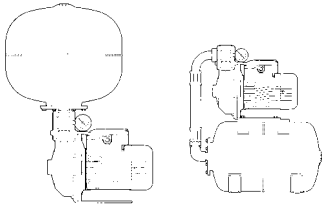
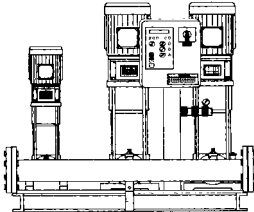
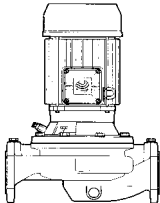
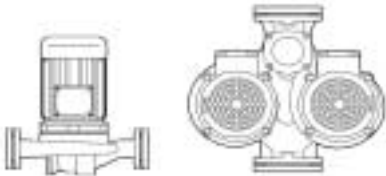
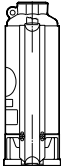
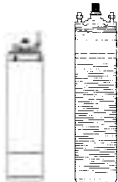
Lowara



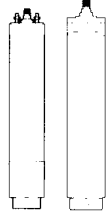
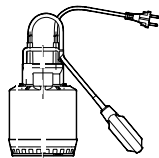
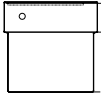
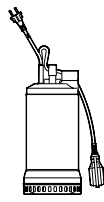
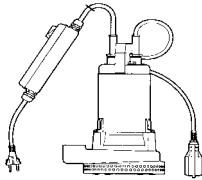
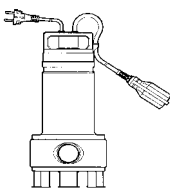
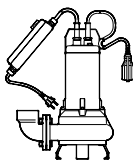
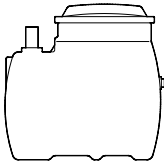
ITT Industries
Engineered for life

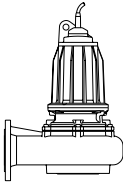
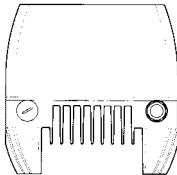
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P-PAB-PSA SERIES

PERIPHERAL PUMPS

Peripheral pumps can develop high heads using lower-powered motors. The P-PAB-PSA series is the result of Lowara's thirty-year experience in the manufacture of these products.

APPLICATIONS

- **Clear water handling for domestic use.**
- Lawn sprinkling.
- Assembled with pressure vessels for pressure boosting in various applications.
- Washing.
- **Boiler feed (the PSA series is specially indicated).**
- Use in hot water systems (PAB and PABLB models)

SPECIFICATIONS

- P-PAB series with front suction and radial delivery. PSA-PABLB series with radial suction and delivery.
- **Capacity:** up to **62 l/min (3,72 m³/h)**.
- **Head:** up to **82 m (8,2 bar)**.
- **Maximum operating pressure: 8 bar (10 bar for PSA series).**
- **Continuous duty.**
- **Temperature of pumped liquid: -10°C to +40°C for P series, 80°C for PSA and PAB, PABLB series.**
- **Max ambient temperature: 40°C.**
- Enclosed motor with internal ventilation through casing for series P, (P16, P21, P30, P40) pumps, enclosed with external ventilation and aluminium alloy casing for (P60, P70), PSA and PAB, PABLB series pumps.
- Versions:
 - Single-phase** 220 V 50 Hz, permanently connected capacitor and built-in automatic reset overload protection.
 - Three-phase** 220-240/380-415 V 50 Hz, thermal overload protection to be provided by user.
- **Power** up to **1,1 kW**.
- Class **F Insulation**.
- **IP44 protection for models P16, P21, P30, P40, PAB, PABLB, (IP55 for models P60, P70 and PSA).**



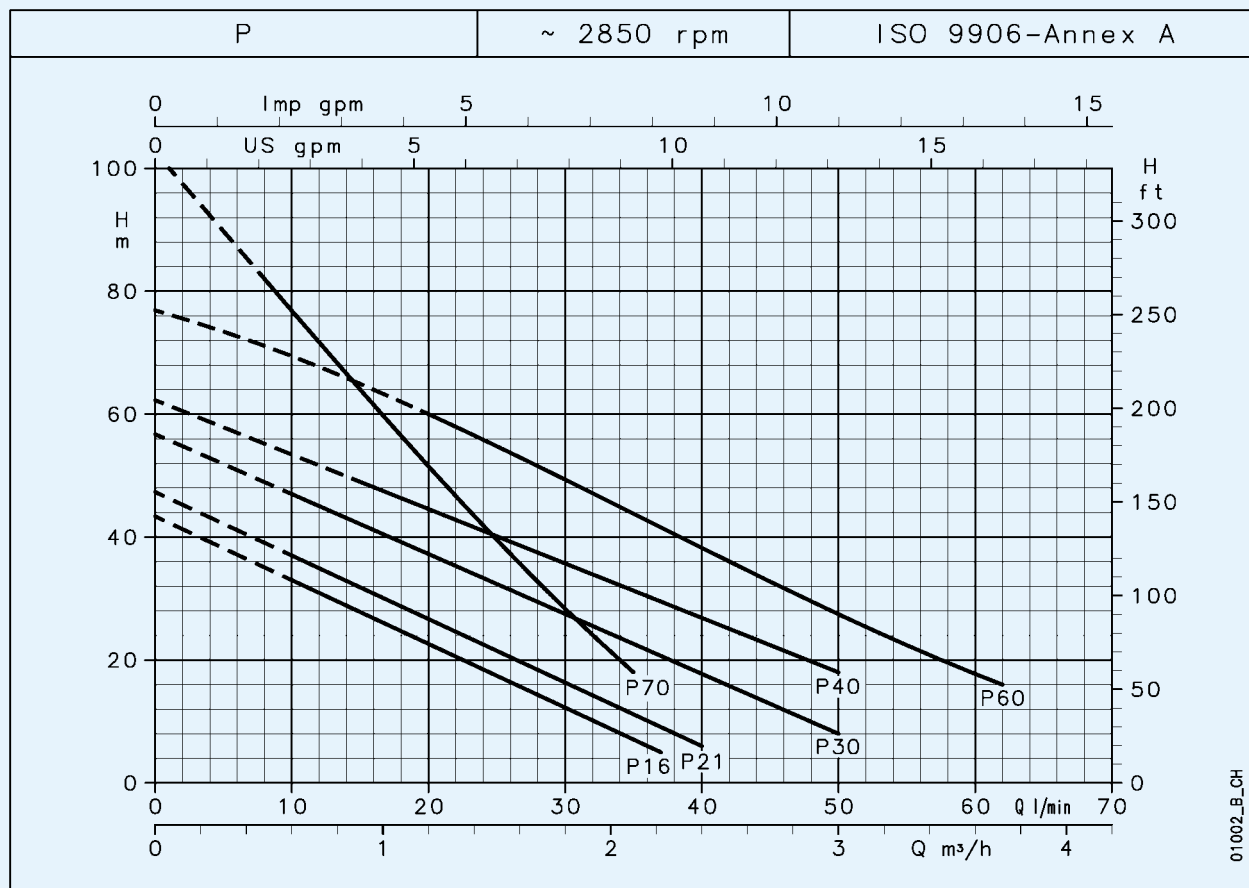
TABLE OF MATERIALS

PART	MATERIAL
Pump body Adapter	CAST IRON * (P, PSA) (PSA HAS BRASS FITTINGS TO PREVENT RUST FROM JAMMING THE IMPELLER) BRONZE (PAB, PABLB)
Impeller	BRASS
Shaft extension (P16, P21, P30, P40)	STAINLESS STEEL (AISI 303 – DIN 1.4305)
Shaft extension (P60, P70, PSA, PAB, PABLB)	STAINLESS STEEL (AISI 416 – DIN 1.4005)
Fill plug	BRASS
Mechanical seal	CARBON/CERAMIC/NBR
O-ring seals	NBR

* P version available in a special option with pump body in bronze.

P SERIES

OPERATING CHARACTERISTICS AT 2850 rpm 50 Hz



PUMP TYPE	RATED POWER		Q = DELIVERY										
			l/min	0	8	10	15	20	35	37	40	50	62
			m³/h	0	0.48	0.60	0.90	1.20	2.10	2.22	2.40	3.00	3.72
	kW	HP	H = TOTAL HEAD METERS COLUMN OF WATER										
P(M)16	0.3	0.4	43.4		33.0	27.8	22.6	7.1	5.0				
P(M)21	0.37	0.5	47.4		37.0	31.8	26.7	11.2	9.1	6.0			
P(M)30	0.5	0.7	56.8		47.0	42.1	37.3	22.6	20.7	17.8	8.0		
P(M)40	0.6	0.8	62.3			49.0	44.6	31.3	29.5	26.9	18.0		
P(M)60	1.1	1.5	76.9				60.0	43.8	41.6	38.2	27.5	16.0	
P(M)70	0.75	1	102.6	82.0	76.8	64.0	51.5	18.0					

These performances are valid for liquids with density $\rho = 1.0 \text{ kg/dm}^3$ and kinematic viscosity $\gamma = 1 \text{ mm}^2/\text{sec}$.

p-2p50_a_th

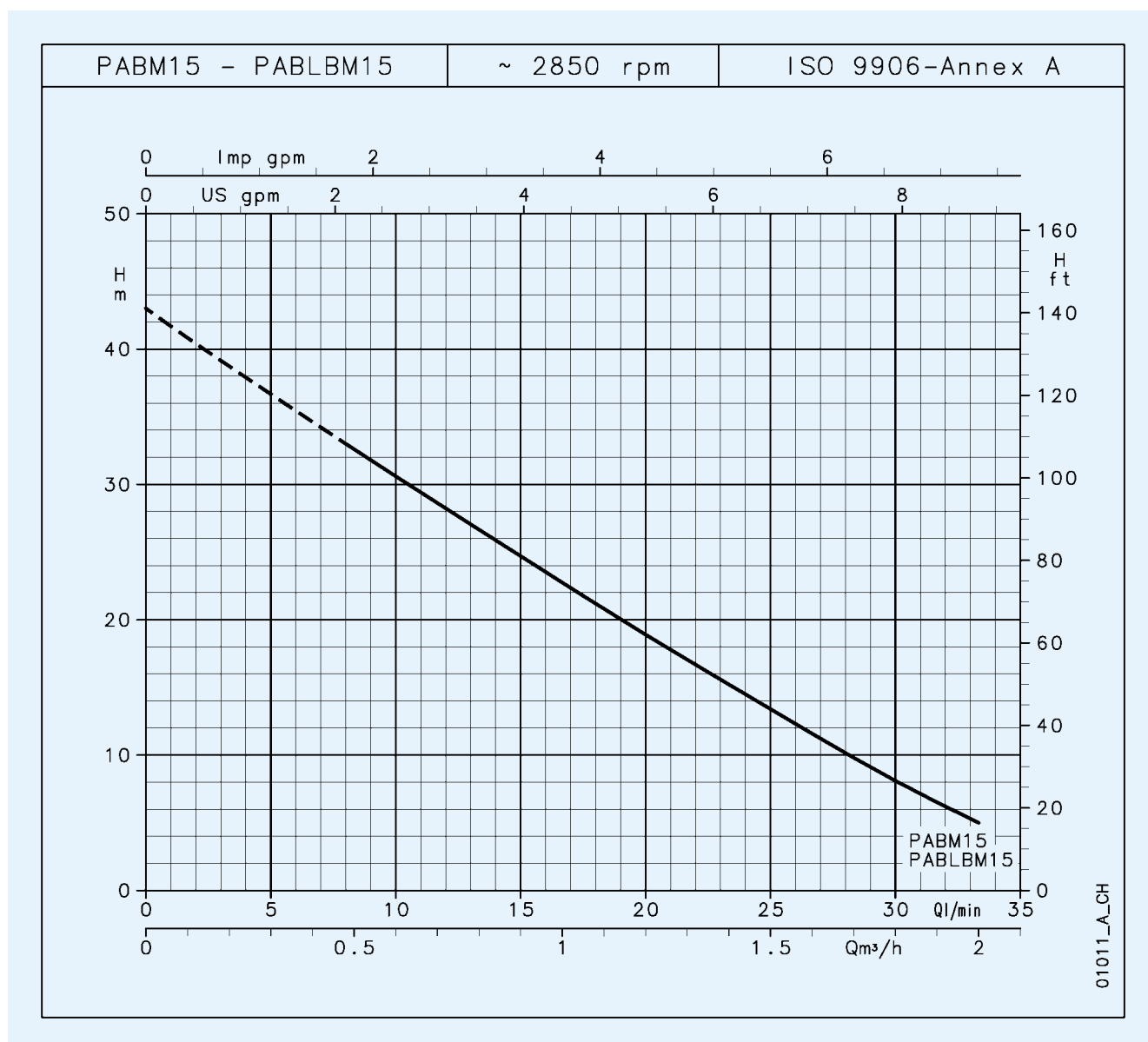
PUMP TYPE	INPUT POWER*	INPUT CURRENT*	CAPACITOR
SINGLE-PHASE		220-240 V	
	kW	A	$\mu\text{F} / 450 \text{ V}$
PM16	0.5	2.4	10
PM21	0.58	2.8	12.5
PM30	0.8	4	16
PM40	1.15	5.3	20
PM60	1.77	7.95	30
PM70	1.36	6.12	25

* Maximum value in specified range

PUMP TYPE	INPUT POWER*	INPUT CURRENT*	INPUT CURRENT*
THREE-PHASE		220-240 V	380-415 V
	kW	A	A
P16	0.48	1.55	0.9
P21	0.55	1.9	1.1
P30	0.78	2.8	1.6
P40	1.1	3.6	2.1
P60	1.72	5.23	3.02
P70	1.3	4.36	2.52

p-2p50_a_th

PAB SERIES OPERATING CHARACTERISTICS AT 2850 rpm 50 Hz



PUMP TYPE	RATED POWER		Q = DELIVERY							
			l/min	0	8	10	15	20	25	30
	m³/h	0	0.48	0.60	0.90	1.20	1.50	1.80	1.98	
	kW		HP	H = TOTAL HEAD METERS COLUMN OF WATER						
PABM15	0.37	0.5	43.0	33.0	30.6	24.7	18.9	13.4	8.1	5.0
PABLBM15	0.37	0.5	43.0	33.0	30.6	24.7	18.9	13.4	8.1	5.0

These performances are valid for liquids with density $\rho = 1.0 \text{ kg/dm}^3$ and kinematic viscosity $\gamma = 1 \text{ mm}^2/\text{sec}$.

pab-2p50_a_th

PUMP TYPE	INPUT POWER*	INPUT CURRENT*	CAPACITOR
SINGLE-PHASE		220-240 V	
	kW	A	$\mu\text{F} / 450 \text{ V}$
PABM15	0.47	2.1	10
PABLBM15	0.47	2.1	10

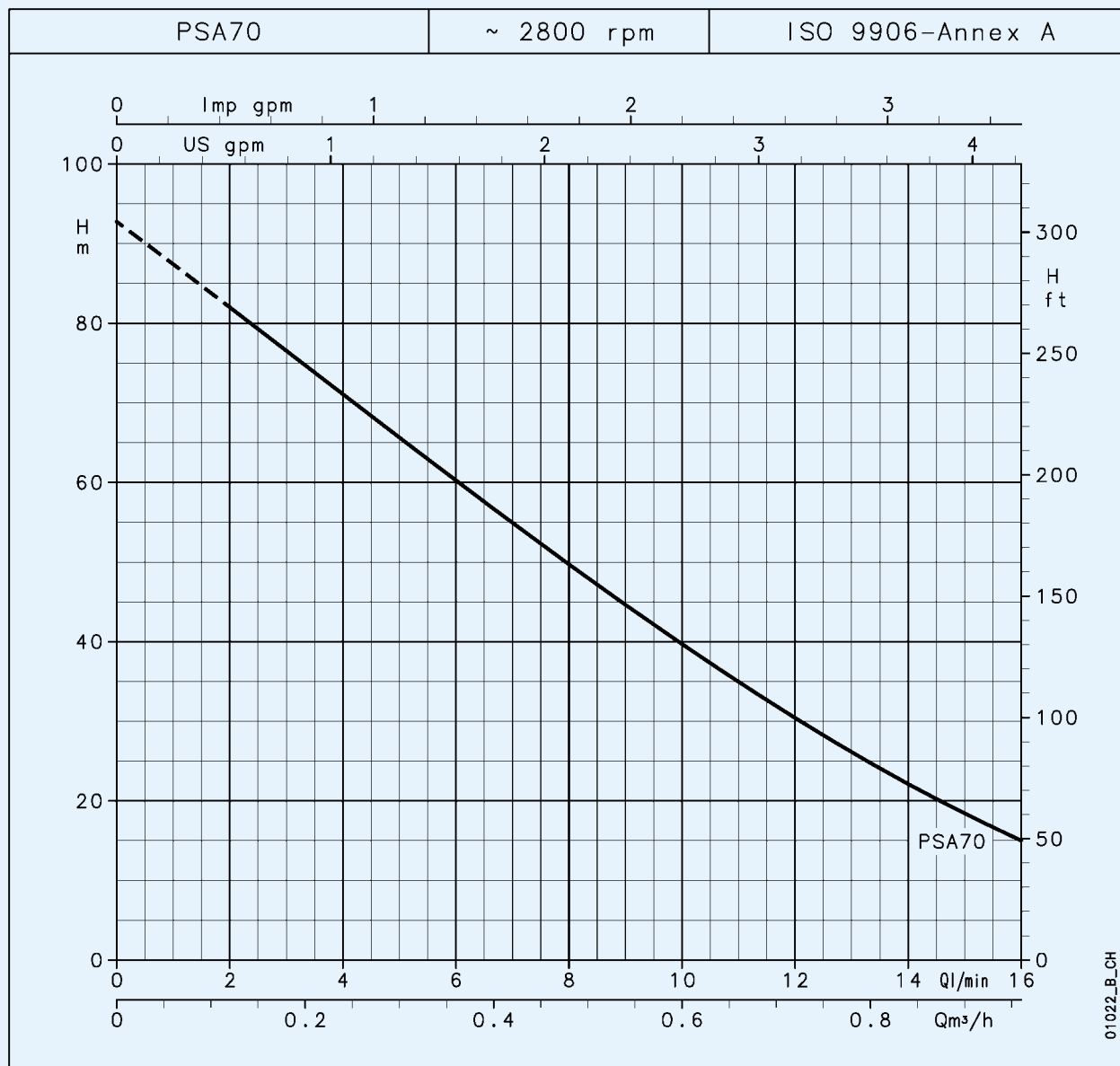
* Maximum value in specified range

PUMP TYPE	INPUT POWER*	INPUT CURRENT*	INPUT CURRENT*
THREE-PHASE		220-240 V	380-415 V
	kW	A	A
-	-	-	-
-	-	-	-

pab-2p50_a_te

PSA70 SERIES

OPERATING CHARACTERISTICS AT 2850 rpm 50 Hz



PUMP TYPE	RATED POWER		Q = DELIVERY							
			l/min	0	2	4	8	10	12	14
	m³/h	0	0.12	0.24	0.48	0.6	0.72	0.84	0.96	
	kW	HP	H = TOTAL HEAD METERS COLUMN OF WATER							
PSA(M)70	0.37	0.5	92.8	82.0	71.1	49.7	39.7	30.4	22.1	15.0

These performances are valid for liquids with density $\rho = 1.0 \text{ kg/dm}^3$ and kinematic viscosity $\gamma = 1 \text{ mm}^2/\text{sec}$.

psa-2p50 a th

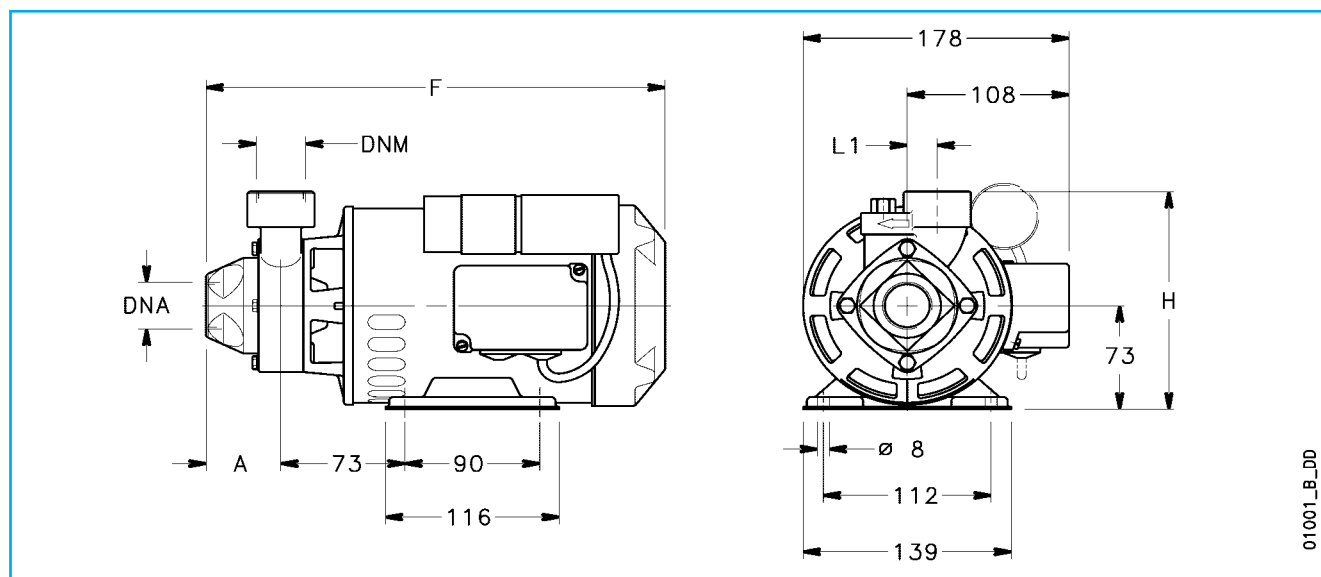
PUMP TYPE	INPUT POWER*	INPUT CURRENT*	CAPACITOR
SINGLE-PHASE	kW	220-240 V A	μF / 450 V
PSAM70	0.75	3.41	16

* Maximum value in specified range

PUMP TYPE	INPUT POWER*	INPUT CURRENT*	INPUT CURRENT*
THREE-PHASE	kW	220-240 V A	380-415 V A
PSA70	0.76	2.75	1.59

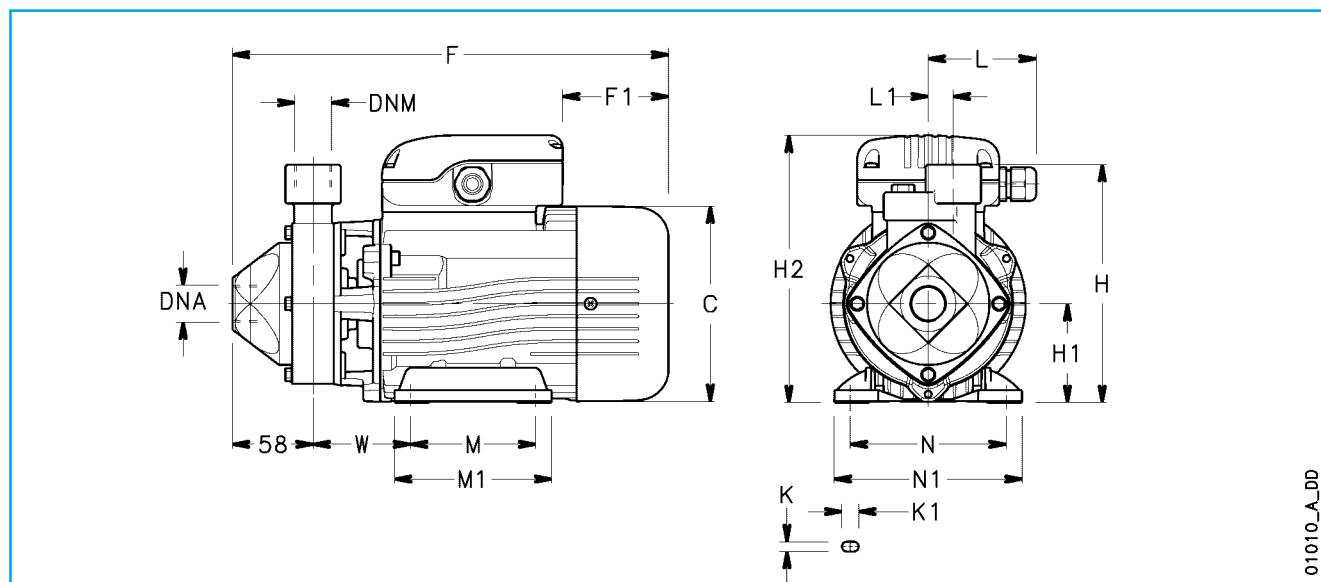
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DIMENSIONS AND WEIGHTS, P SERIES



PUMP TYPE	DIMENSIONS (mm)				DNA	DNM	WEIGHT kg
	A	F	H	L1			
P16-PM16	50	280	153	18.5	Rp 1	Rp 1	8.5
P21-PM21	50	280	153	18.5	Rp 1	Rp 1	9.5
P30-PM30	55	285	163	20	Rp 1	Rp 1	11
P40-PM40	54.5	305	163	20	Rp 1	Rp 1	11.5

p-2p50_a_td

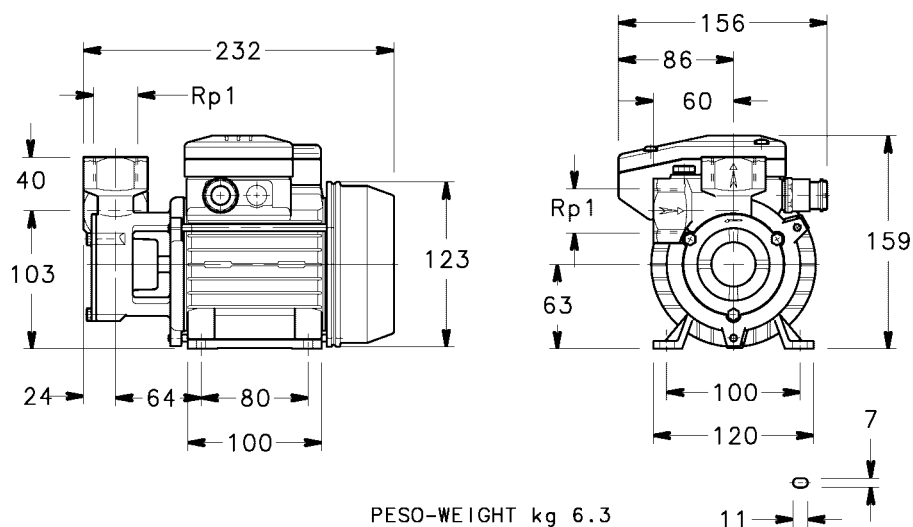


PUMP TYPE	DIMENSIONS (mm)															DNA	DNM	WEIGHT
	C	F	F1	H	H1	H2	L	L1	M	M1	N	N1	K	K1	W			kg
P60	155	354	113	180	80	209	78	20	100	124	125	153	9	12	83	Rp 1	Rp 1	8.5
PM60	155	354	68	180	80	217	81	20	100	124	125	153	9	12	83	Rp 1	Rp 1	9.5
P70-PM70	140	314	76	171	71	192	78	18	90	113	112	135	7	12	70	Rp ¾	Rp ¾	11

p60-70-2p50_a_td

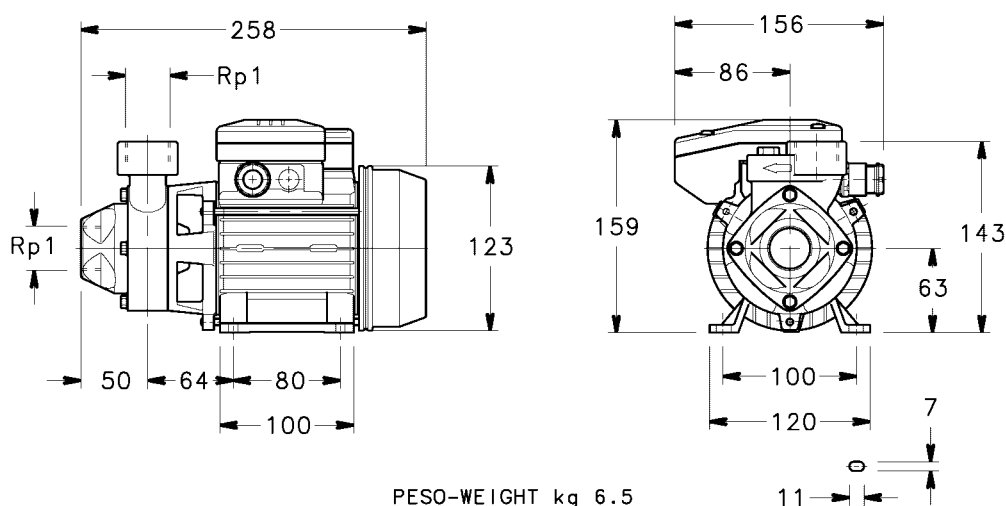
DIMENSIONS AND WEIGHTS, PAB AND PSA70 SERIES

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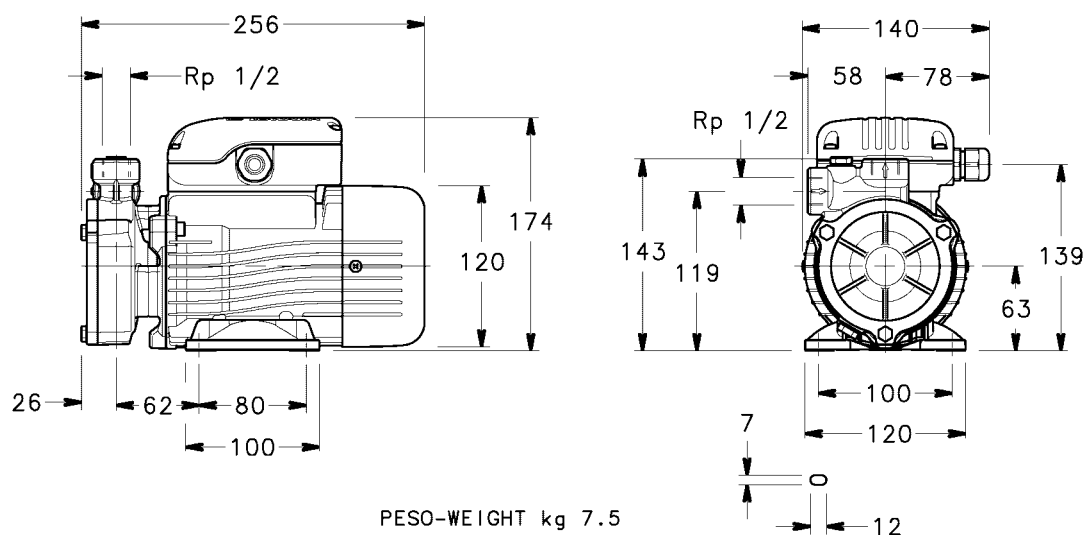
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PABM15



01025_A_DD

PSA70



01020SM_B_DD

SP SERIES

SELF-PRIMING PUMPS WITH SIDE CHANNEL

Close-coupled centrifugal pumps with liquid side channel and star impeller. Designed to remain primed even in the presence of water-dissolved gases or when the suction line is not filled with liquid.

- ❑ **THE NICKEL-PLATED BRASS IMPELLER IS HOUSED BETWEEN TWO BRASS WEAR PLATES IN THE PUMP BODY TO PREVENT JAMMING DUE TO OXIDATION**



APPLICATIONS

- Water circulation for domestic use.
- Home lawn and garden sprinkler systems.
- Washing and transfer.
- Applications where keeping the pump primed is problema.

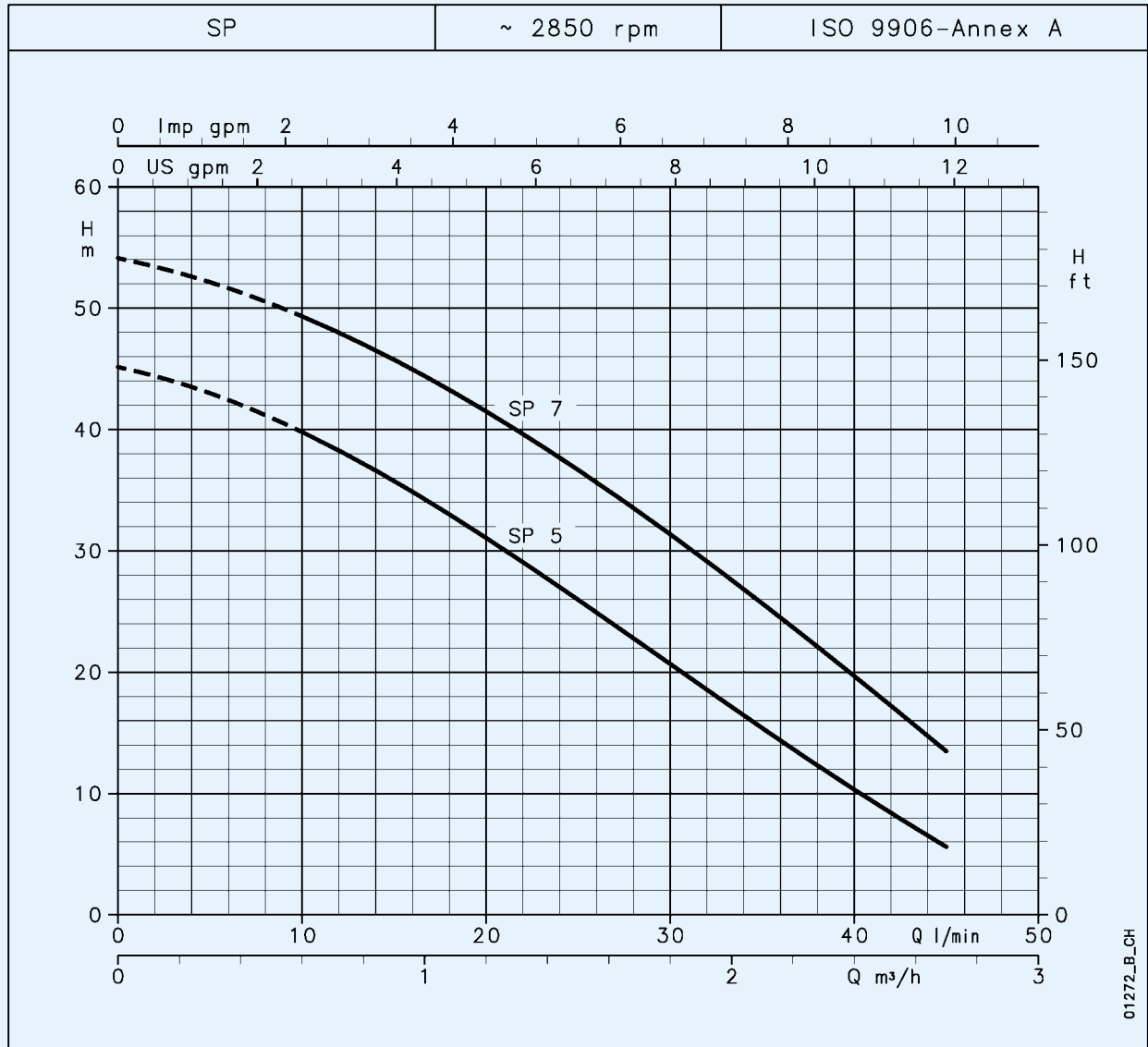
SPECIFICATIONS

- **Delivery:** up to **45 l/min (2,7 m³/h).**
- **Head:** up to **49,3 m.**
- **Maximum operating pressure: 8 bar.**
- **Continuous duty.**
- **Temperature of pumped liquid: -10°C to +40°C.**
- **Max ambient temperature: 40°C.**
- Enclosed **motor** with **external ventilation and aluminium alloy finned casing.**
- Versions:
 - Single-phase** 220-240 V 50 Hz, permanently connected capacitor and built-in automatic reset overload protection.
 - Three-phase** 220-240/380-415 V 50 Hz, thermal overload protection to be provided by user.
- Power up to 0.75 kW.
- Class **F Insulation.**
- **IP 55 protection.**

TABLE OF MATERIALS

PART	MATERIAL
Pump body and motor/pump support	CAST IRON
Impeller	NICKEL-PLATED BRASS
Front flange, rear diffuser plate and fill plug	BRASS
Shaft extension	STAINLESS STEEL (AISI 416 – DIN 1.405)
Mechanical seal	CARBON/CERAMIC/NBR
O-ring seals	NBR

SP SERIES OPERATING CHARACTERISTICS AT 2850 rpm 50 Hz



PUMP TYPE	RATED POWER		Q = DELIVERY							
			l/min	0	10	20	25	30	35	40
	m³/h	0	0.6	1.2	1.5	1.8	2.1	2.4	2.7	
	kW	HP	H = TOTAL HEAD METERS COLUMN OF WATER							
SP5(T)	0.55	0.75	45.2	39.8	31.1	26.0	20.7	15.4	10.3	5.7
SP7(T)	0.75	1	54.1	49.3	41.5	36.7	31.4	25.7	19.7	13.5

These performances are valid for liquids with density $\rho = 1.0 \text{ kg/dm}^3$ and kinematic viscosity $\gamma = 1 \text{ mm}^2/\text{sec}$.

sp-2p50_a_th

PUMP TYPE	INPUT POWER*	INPUT CURRENT*	CAPACITOR
SINGLE-PHASE		220-240 V	
	kW	A	$\mu\text{F} / 450 \text{ V}$
SP5	0.87	4.21	16
SP7	1.00	4.60	20

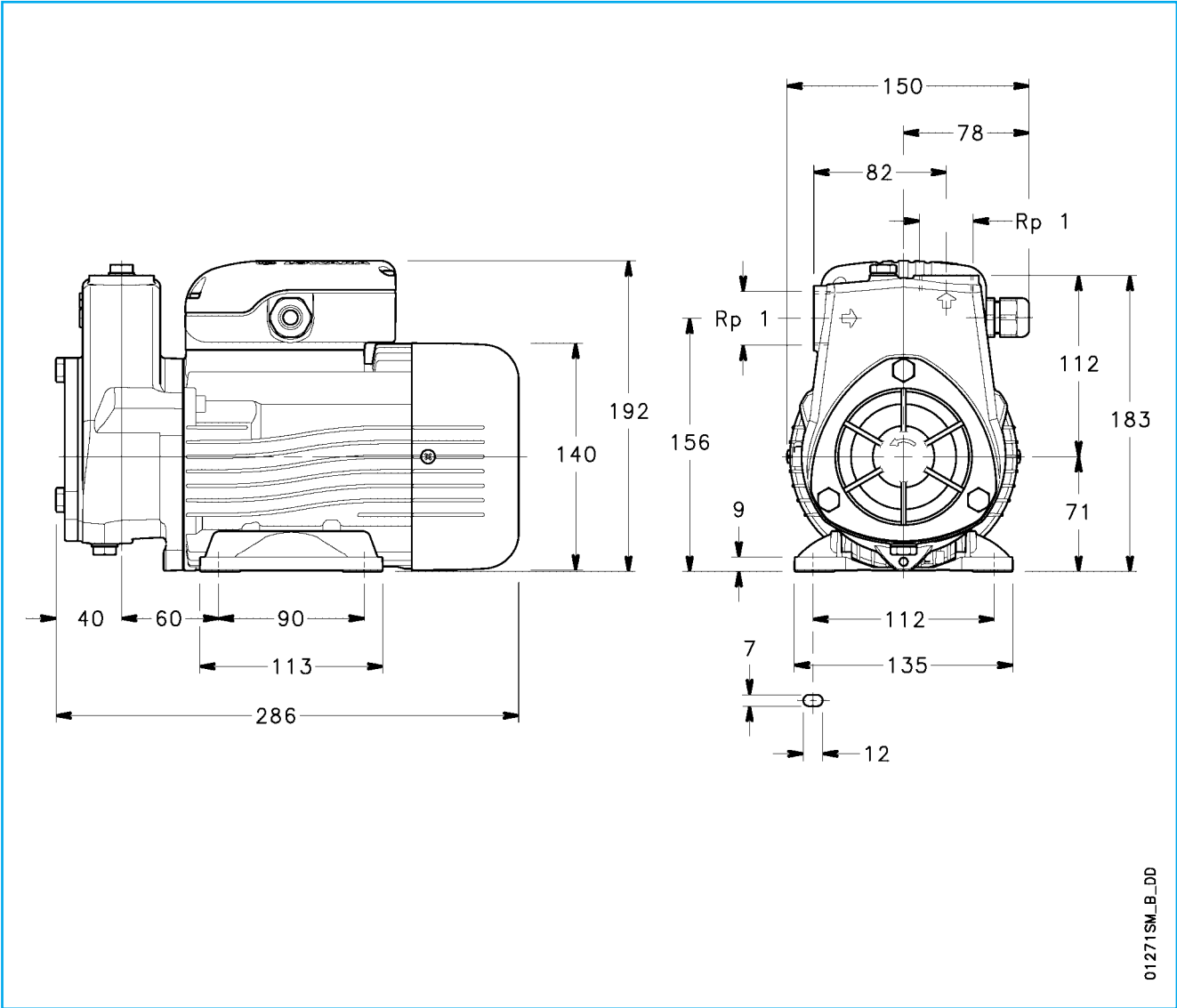
* Maximum value in specified range

PUMP TYPE	INPUT POWER*	INPUT CURRENT*	INPUT CURRENT*
THREE-PHASE		220-240 V	380-415 V
	kW	A	A
SP5T	0.78	2.67	1.54
SP7T	0.98	3.53	2.04

sp-2p50_a_te

DIMENSIONS AND WEIGHTS, SP SERIES

SP



PUMP TYPE	WEIGHT kg
SP5(T)	11
SP7(T)	12

sp-2p50_a_td

BG SERIES

SELF-PRIMING CENTRIFUGAL PUMPS

Close-coupled centrifugal pumps with built-in ejector system, designed to remain primed even in the presence of water-dissolved gases. The extensive use of pressed stainless steel ensures a high-performance, durable and lightweight pump.

- ❑ **"GARDEN" VERSION AVAILABLE WITH HANDLE, TERMINAL BOX WITH INCORPORATED SWITCH AND 2 m CABLE WITH PLUG**
- ❑ **EXTENSIVE USE OF AISI 304 OR AISI 316 STAINLESS STEEL**
- ❑ **IP 55 MOTOR PROTECTION**

APPLICATIONS

- Water handling for domestic use.
- Lawn sprinkling.
- Composition of surge tank units for pressure boosting in various applications.
- Washing and transfer.

SPECIFICATIONS

- **Delivery:** up to **70 l/min (4,2 m³/h).**
- **Head:** up to **53 m.**
- **Maximum operating pressure: 8 bar.**
- **Maximum total lift 8 m** (1"¼ suction pipe and foot valve for water at 20°C).
- **Continuous duty.**
- **Temperature of pumped liquid: -10°C to +40°C.**
- **Max ambient temperature: 40°C.**
- Enclosed motor with external ventilation and **aluminium alloy finned casing.**
- Versions:
 - Single-phase** 220-240 V 50 Hz, permanently connected capacitor and built-in automatic reset overload protection.
 - Three-phase** 220-240/380-415 V 50 Hz, thermal overload protection to be provided by user.
- Power up to 1.1 kW.
- Class **F Insulation.**
- **IP 55 protection.**

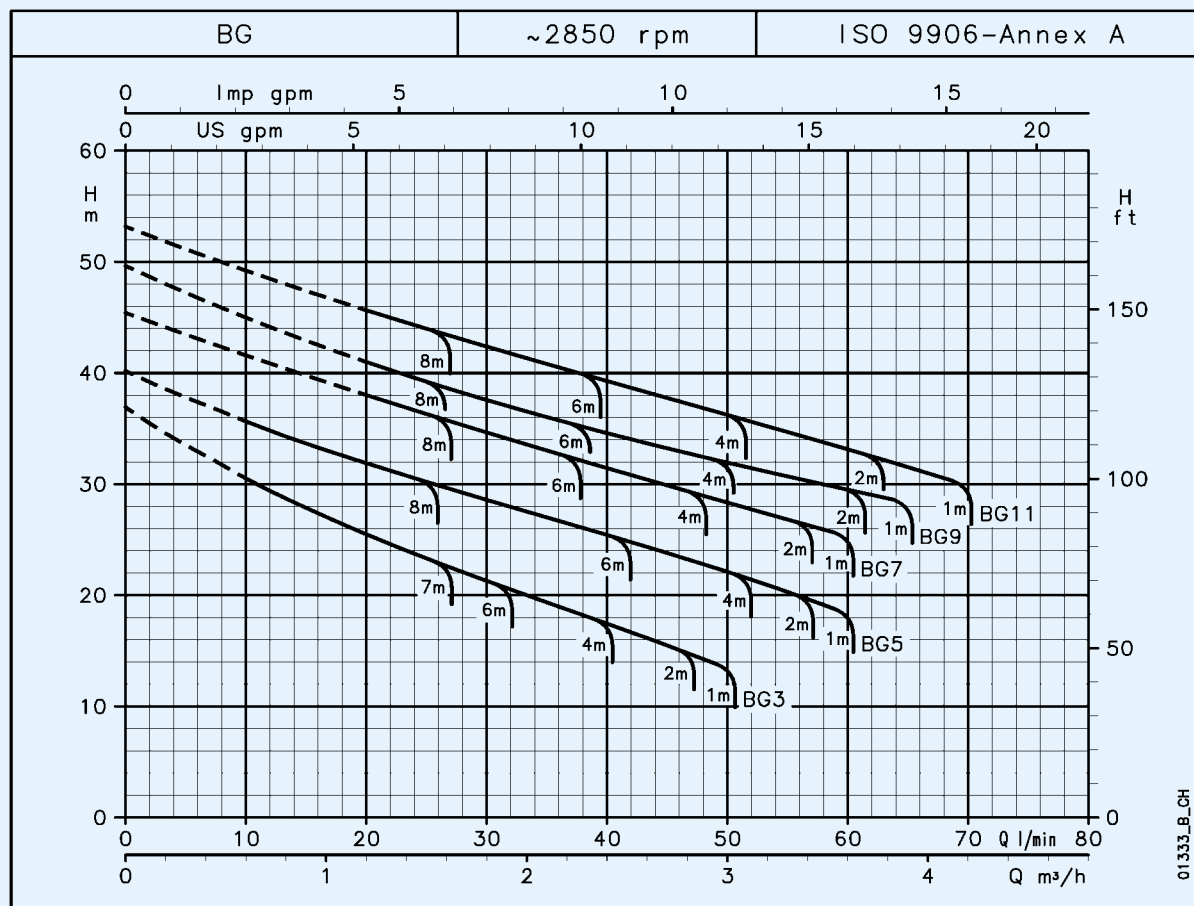


TABLE OF MATERIALS

PART	MATERIAL
Pump body, seal-housing, Impeller	STAINLESS STEEL (AISI 304 – DIN 1.4301)
Diffuser, Ejector	THERMOPLASTIC MATERIAL SUITABLE FOR HANDLING DRINKING WATER
Shaft extension	STAINLESS STEEL (AISI 316 – DIN 1.4571)
Fill and drain plugs	NICKEL-PLATED BRASS
Mechanical seal	CARBON/CERAMIC/NBR
O-ring seals	NBR

BG SERIES

OPERATING CHARACTERISTICS AT 2850 rpm 50 Hz



PUMP TYPE	RATED POWER		Q = DELIVERY								
			l/min	0	10	20	30	40	50	60	65
	m³/h	0	0.6	1.2	1.8	2.4	3	3.6	3.9	4.2	
	kW	HP	H = TOTAL HEAD METERS COLUMN OF WATER								
BG(M)3	0.37	0.5	36.9	30.6	25.6	21.5	17.7	13.8			
BG(M)5	0.55	0.75	40.2	35.7	32.0	28.8	25.7	22.4	18.8		
BG(M)7	0.75	1	45.4		38.1	34.8	31.7	28.6	25.6		
BG(M)9	0.9	1.2	49.6		41.1	37.7	34.8	32.2	29.8	28.6	
BG(M)11	1.1	1.5	53.2		45.8	42.5	39.5	36.5	33.5	31.9	30.3

Maximum delivery depends on geodetic suction lift with clean 8 m pipe and 1 1/4" foot valve.

bg-2p50_a_th

These performances are valid for liquids with density $\rho = 1.0 \text{ kg/dm}^3$ and kinematic viscosity $\gamma = 1 \text{ mm}^2/\text{sec}$.

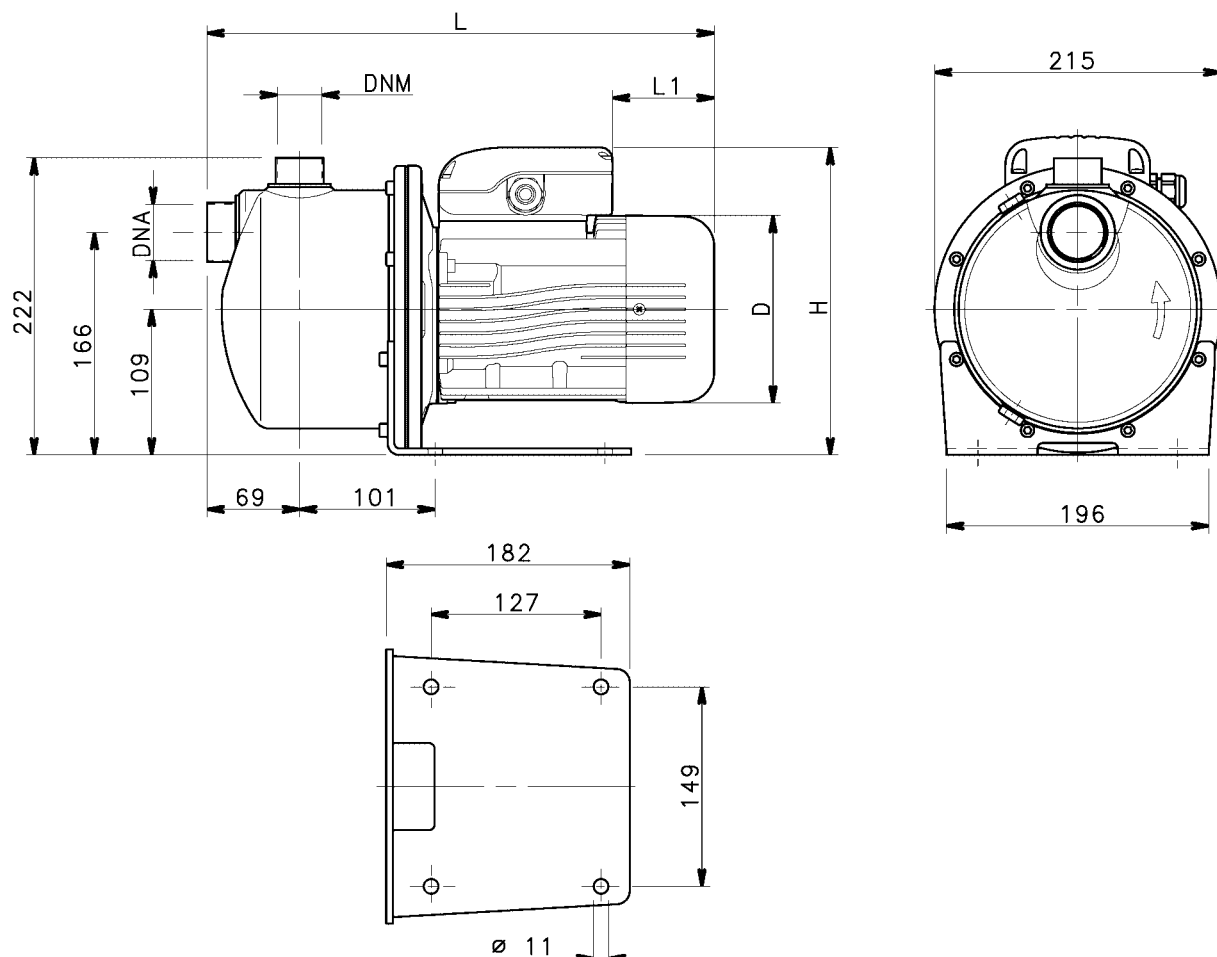
PUMP TYPE	INPUT POWER*	INPUT CURRENT*	CAPACITOR
SINGLE-PHASE		220-240 V	
	kW	A	$\mu\text{F} / 450 \text{ V}$
BGM3	0.67	2.96	14
BGM5	0.91	4.33	16
BGM7	1.11	5	20
BGM9	1.24	5.54	25
BGM11	1.43	6.47	30

* Maximum value in specified range

PUMP TYPE	INPUT POWER*	INPUT CURRENT*	INPUT CURRENT*
THREE-PHASE		220-240 V	380-415 V
	kW	A	A
BG3	0.68	2.56	1.48
BG5	0.81	2.74	1.58
BG7	1.1	3.71	2.14
BG9	1.16	4.24	2.45
BG11	1.38	4.59	2.65

bg-2p50_a_te

DIMENSIONS AND WEIGHTS, BG SERIES



013508_B_DD

PUMP TYPE	DIMENSIONS (mm)				DNA	DNM	WEIGHT kg
	D	L	L1	H			
BGM3	120	366	62	220	Rp 1 1/4	Rp 1	10
BGM5	140	380	76	230	Rp 1 1/4	Rp 1	12
BGM7	140	380	76	230	Rp 1 1/4	Rp 1	13
BGM9	140	380	31	239	Rp 1 1/4	Rp 1	13
BGM11	156	425	69	246	Rp 1 1/4	Rp 1	16
BG3	120	366	62	220	Rp 1 1/4	Rp 1	10
BG5	140	380	76	230	Rp 1 1/4	Rp 1	12
BG7	140	380	76	230	Rp 1 1/4	Rp 1	13
BG9	140	380	76	230	Rp 1 1/4	Rp 1	13
BG11	156	425	114	238	Rp 1 1/4	Rp 1	16

bg-2p50_a_td

HM-HMS SERIES

HORIZONTAL MULTISTAGE CENTRIFUGAL PUMPS

Modern-design noiseless high-efficiency pumps, available in the HM version for domestic applications and in the HMS version for industrial applications (made entirely of AISI 316 stainless steel).

HM APPLICATIONS (AISI 304 + Technopolymer)

- Clean water circulation for domestic use.
- Pressure boosting units for single- or double-family dwelling water supply.
- Irrigation systems.
- Washing.

HMS APPLICATIONS (AISI 316)

- Industrial washing systems.
- Cooling and heating circuits.
- Handling of special liquids (demineralized or softened water, washing solutions, oils, etc.).
- Irrigation systems handling water containing nutritive and/or chemically aggressive substances.

SPECIFICATIONS

- **Delivery:** up to **120 l/min (7,2 m³/h)**.
- **Head:** up to **60 m**.
- **Continuous duty.**
- **Max. temperature of pumped liquid:**
-10°C to +60°C for HM
-10°C to +110°C for HMS.
- **Maximum operating pressure: 8 bar.**
- Enclosed motor with external ventilation and **aluminium alloy finned casing.**
- Versions:
Single-phase 220-240 V 50 Hz, built-in automatic reset overload protection.
Three-phase 220-240/380-415 V 50 Hz, overload protection to be provided by user.
- **Class F Insulation.**
- **Power up to 0.9 kW.**
- **IP 55 protection.**



TABLE OF MATERIALS

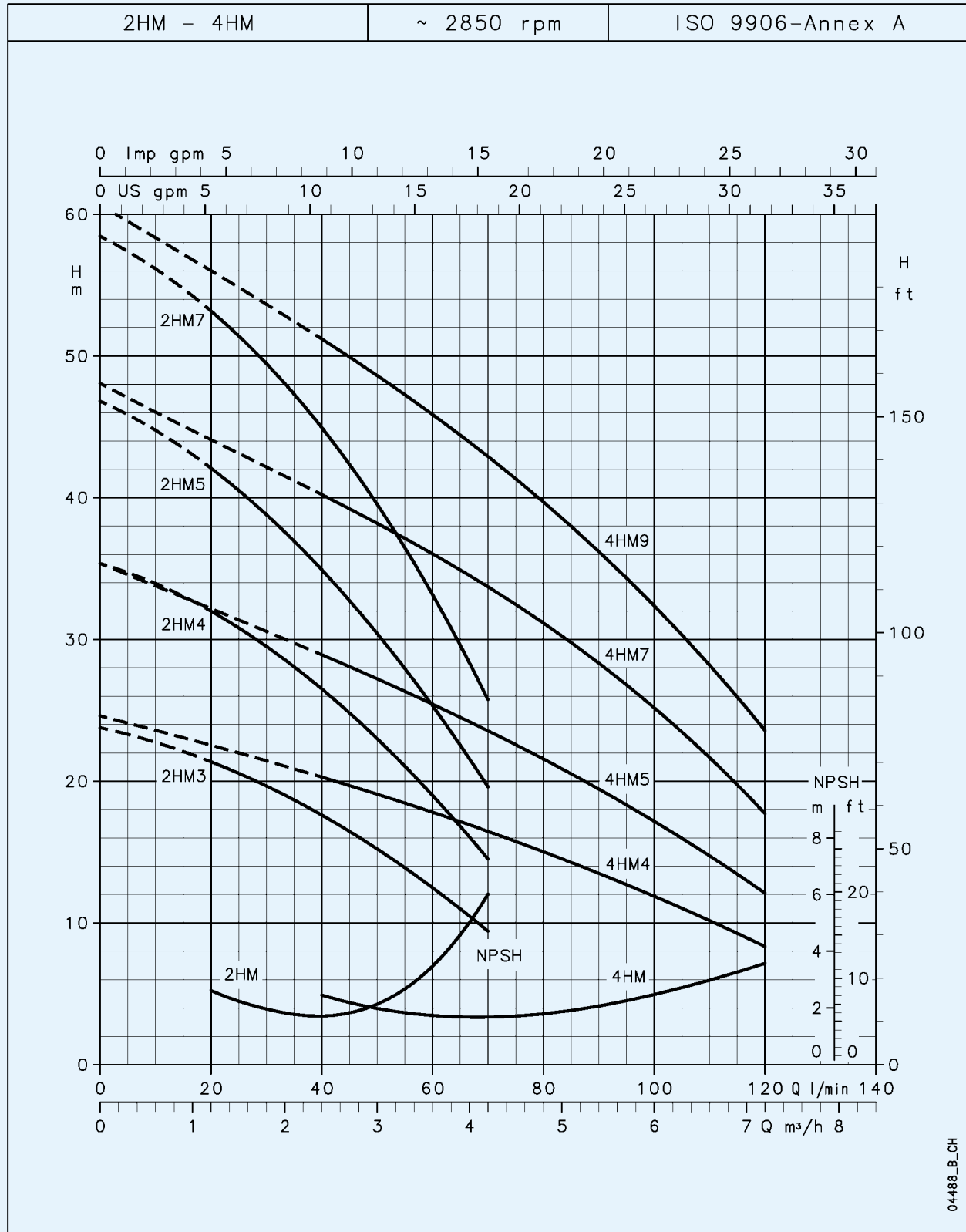
HM SERIES

PART	MATERIAL
Pump body, Seal-housing, Diffusers, Covers, Spacers	STAINLESS STEEL (AISI 304 – DIN 1.4301)
Impellers	TECHNOPOLYMER SUITED FOR HANDLING FOOD PRODUCTS
Shaft extension	STAINLESS STEEL (AISI 316L – DIN 1.4404)
Fill and drain plugs	NICKEL-PLATED BRASS
Mechanical seal	CARBON/CERAMIC/EPDM
O-ring seals	EPDM

HMS SERIES

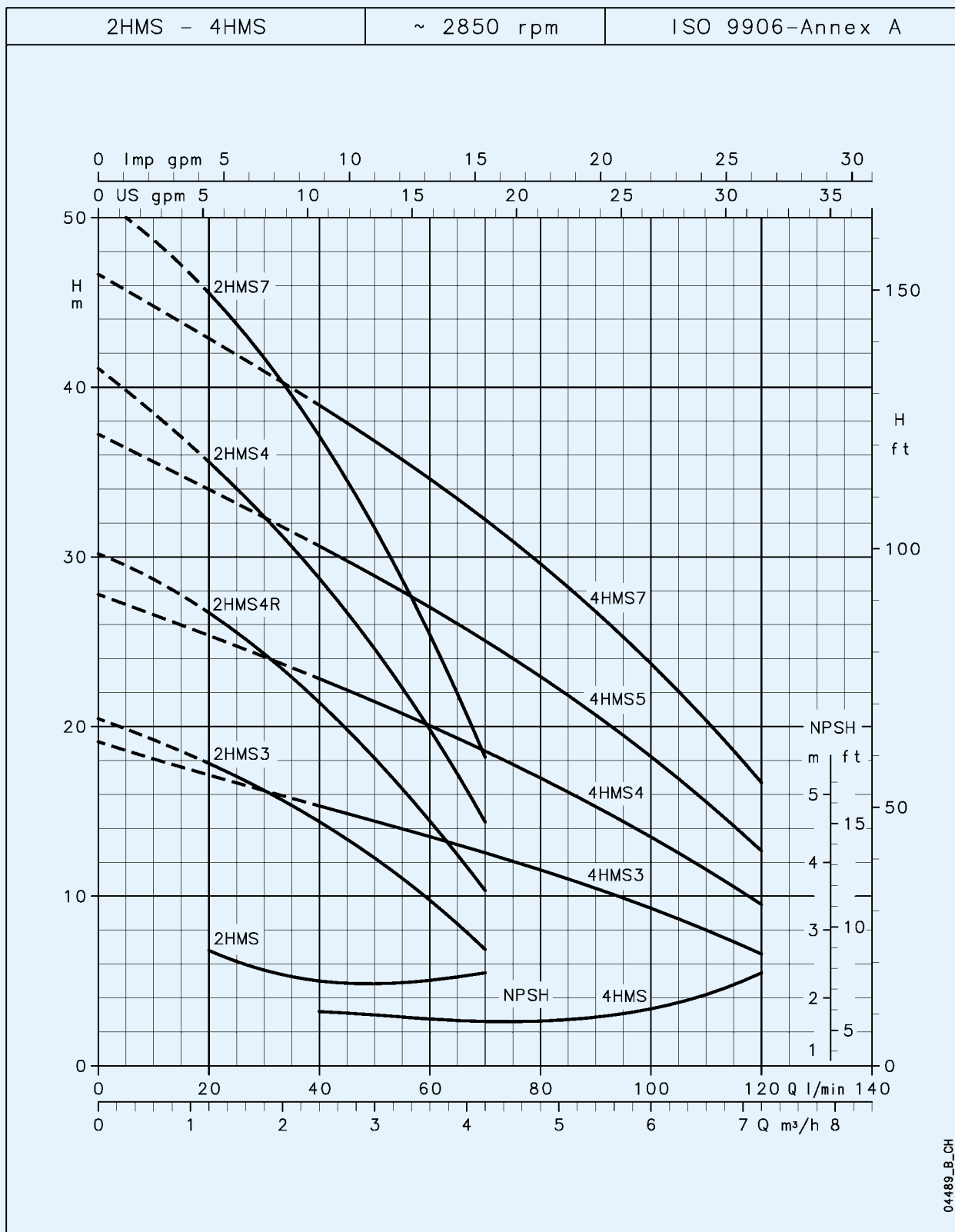
PART	MATERIAL
Pump body, Seal-housing, Diffusers, Covers, Spacers	STAINLESS STEEL (AISI 316L – DIN 1.4404)
Impellers, Shaft extension, Fill and drain plugs	STAINLESS STEEL (AISI 316L – DIN 1.4404)
Mechanical seal	CARBON/CERAMIC/EPDM
O-ring seals	EPDM

HM SERIES OPERATING CHARACTERISTICS AT 2850 rpm 50 Hz



These performances are valid for liquids with density $\rho = 1.0 \text{ kg/dm}^3$ and kinematic viscosity $\gamma = 1 \text{ mm}^2/\text{sec}$.

HMS SERIES OPERATING CHARACTERISTICS AT 2850 rpm 50 Hz



These performances are valid for liquids with density $\rho = 1.0 \text{ kg/dm}^3$ and kinematic viscosity $\gamma = 1 \text{ mm}^2/\text{sec}$.

HM SERIES OPERATING CHARACTERISTICS AT 2850 rpm 50 Hz

PUMP TYPE	RATED POWER		Q = DELIVERY									
			l/min	0	20	30	40	50	60	70	80	100
	m³/h	0	1.2	1.8	2.4	3	3.6	4.2	4.8	6	7.2	
	kW	HP	H = TOTAL HEAD METERS COLUMN WATER									
2HM3(T)	0.3	0.4	23.8	21.4	19.7	17.6	15.2	12.5	9.4			
2HM4(T)	0.45	0.6	35.4	32.0	29.5	26.5	23.0	19.0	14.5			
2HM5(T)	0.55	0.75	46.8	42.1	38.8	34.9	30.4	25.3	19.6			
2HM7(T)	0.75	1	58.5	53.2	49.5	44.9	39.5	33.2	25.8			
4HM4(T)	0.45	0.6	24.6			20.3	19.1	17.8	16.5	15.0	11.9	8.3
4HM5(T)	0.55	0.75	35.4			28.9	27.2	25.4	23.6	21.6	17.2	12.1
4HM7(T)	0.75	1	48.1			40.2	38.2	36.0	33.7	31.2	25.2	17.7
4HM9(T)	0.9	1.2	60.7			51.2	48.6	45.9	42.9	39.7	32.4	23.6

hm-2p50_a_th

PUMP TYPE	INPUT POWER*	INPUT CURRENT*	CAPACITOR
SINGLE-PHASE		220-240 V	
	kW	A	μF / 450 V
2HM3	0.51	2.34	10
2HM4	0.66	2.92	14
2HM5	0.85	3.72	16
2HM7	1.13	5.09	20
4HM4	0.62	2.77	14
4HM5	0.86	3.76	16
4HM7	1.29	5.74	25
4HM9	2.45	6.49	25

* Maximum value in specified range

PUMP TYPE	INPUT POWER*	INPUT CURRENT*	INPUT CURRENT*
THREE-PHASE		220-240 V	380-415 V
	kW	A	A
2HM3T	0.47	1.80	1.04
2HM4T	0.67	2.56	1.48
2HM5T	0.87	2.94	1.70
2HM7T	1.12	3.74	2.16
4HM4T	0.62	2.51	1.45
4HM5T	0.88	2.96	1.71
4HM7T	1.21	4.33	2.50
4HM9T	1.38	4.61	2.66

hm-2p50_a_te

HMS SERIES OPERATING CHARACTERISTICS AT 2850 rpm 50 Hz

PUMP TYPE	RATED POWER		Q = DELIVERY										
			l/min	0	20	30	40	50	60	70	80	100	120
	m³/h	0	1.2	1.8	2.4	3	3.6	4.2	4.8	6	7.2		
	kW	HP	H = TOTAL HEAD METERS COLUMN OF WATER										
2HMS3(T)	0.3	0.4	20.5	17.8	16.2	14.4	12.3	9.8	6.9				
2HMS4R(T)	0.45	0.6	30.2	26.7	24.3	21.4	18.1	14.4	10.3				
2HMS4(T)	0.45	0.6	41.1	35.6	32.4	28.7	24.6	19.8	14.4				
2HMS7(T)	0.75	1	51.2	45.6	41.7	37.1	31.7	25.4	18.2				
4HMS3(T)	0.3	0.4	19.1			15.3	14.4	13.5	12.6	11.6	9.3	6.6	
4HMS4(T)	0.45	0.6	27.8			22.8	21.5	20.1	18.6	17.0	13.5	9.5	
4HMS5(T)	0.55	0.75	37.2			30.6	28.9	27.0	25.1	23.0	18.2	12.7	
4HMS7(T)	0.75	1	46.7			38.9	36.8	34.6	32.2	29.6	23.7	16.7	

hms-2p50_a_th

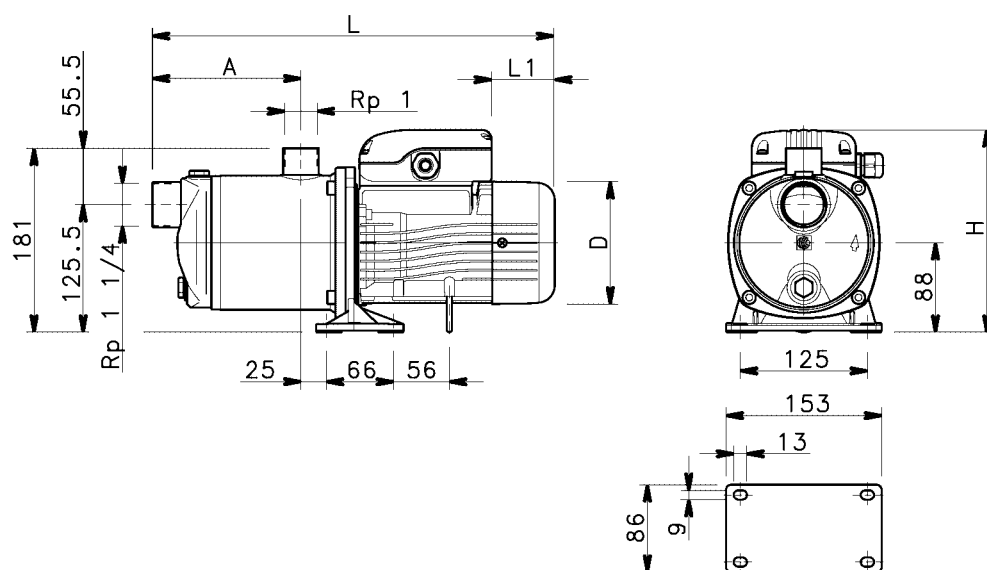
PUMP TYPE	INPUT POWER*	INPUT CURRENT*	CAPACITOR
SINGLE-PHASE		220-240 V	
	kW	A	μF / 450 V
2HMS3	0.47	2.25	10
2HMS4R	0.61	2.75	14
2HMS4	0.73	3.28	16
2HMS7	1.00	4.61	20
4HMS3	0.51	2.35	10
4HMS4	0.68	2.99	14
4HMS5	0.81	3.54	16
4HMS7	1.13	5.08	20

* Maximum value in specified range

PUMP TYPE	INPUT POWER*	INPUT CURRENT*	INPUT CURRENT*
THREE-PHASE		220-240 V	380-415 V
	kW	A	A
2HMS3T	0.42	1.77	1.02
2HMS4RT	0.61	2.51	1.45
2HMS4T	0.73	2.79	1.61
2HMS7T	0.98	3.53	2.04
4HMS3T	0.48	1.8	1.04
4HMS4T	0.69	2.58	1.49
4HMS5T	0.82	2.89	1.67
4HMS7T	1.10	3.65	2.11

hms-2p50_a_te

DIMENSIONS AND WEIGHTS, HM, HMS SERIES



04480B_B_DD

HM-HMS

PUMP TYPE	DIMENSIONS (mm)						WEIGHT
	NUMBER OF STAGES	A	D	L	L1	H	kg
2HM3	2	96	120	345	62	199	7
2HM4	3	121	120	370	62	199	8.1
2HM5	4	146	120	395	62	199	8.9
2HM7	5	171	140	434	76	209	11.7
4HM4	2	96	120	345	62	199	8.7
4HM5	3	121	120	370	62	199	8.5
4HM7	4	146	140	409	31	218	11.3
4HM9	5	171	140	434	31	218	12.4
2HM3T	2	96	120	345	62	199	7.1
2HM4T	3	121	120	370	62	199	7.9
2HM5T	4	146	120	395	62	199	8.9
2HM7T	5	171	140	434	76	209	11.7
4HM4T	2	96	120	345	62	199	7.6
4HM5T	3	121	120	370	62	199	8.4
4HM7T	4	146	140	409	76	209	11.7
4HM9T	5	171	140	434	76	209	12.2
2HMS3	2	96	120	345	62	199	7.3
2HMS4R	3	121	120	370	62	199	8.4
2HMS4	4	146	120	395	62	199	9.3
2HMS7	5	171	140	434	76	209	12
4HMS3	2	96	120	345	62	199	7.4
4HMS4	3	121	120	370	62	199	8.4
4HMS5	4	146	120	395	62	199	9.2
4HMS7	5	171	140	434	76	209	12
2HMS3T	2	96	120	345	62	199	7.2
2HMS4RT	3	121	120	370	62	199	8.3
2HMS4T	4	146	120	395	62	199	9
2HMS7T	5	171	140	434	76	209	11.7
4HMS3T	2	96	120	345	62	199	7.2
4HMS4T	3	121	120	370	62	199	8.5
4HMS5T	4	146	120	395	62	199	9.2
4HMS7T	5	171	140	434	76	209	12

hm-hms-2p50_a_td

CEA-CA SERIES

STAINLESS STEEL THREADED CENTRIFUGAL PUMPS

Wide range of pumps for domestic and industrial applications.

Single-impeller (CEA) and dual-impeller (CA) models available.

- ❑ **IN THE STANDARD VERSION ALL COMPONENTS IN CONTACT WITH THE PUMPED LIQUID ARE MADE OF STAINLESS STEEL (AISI 304 OR AISI 316)**
- ❑ **IP 55 MOTOR PROTECTION**

APPLICATIONS

- **Handling of liquids compatible with AISI 304 stainless steel in a wide variety of civil and industrial systems.**
- Water circulation for domestic use.
- Sprinkler systems.
- Composition of surge tank units for pressure boosting in various applications.

SPECIFICATIONS

- **Single-impeller CEA series, dual-impeller CA series.**
- **Delivery:** up to **31 m³/h.**
- **Head:** up to **62 m.**
- **Maximum operating pressure: 8 bar.**
- **Continuous duty.**
- **Temperature of pumped liquid: -10°C to 85°C (special CEA-V CA-V version, with O-ring or FPM seals, is available for temperatures up to +110°C).**
- Enclosed motor with external ventilation and aluminium alloy finned casing.
- Versions:
 - Single-phase** 220-240 V 50 Hz, permanently connected capacitor and built-in automatic reset overload protection up to 1,5 kW (except for 2,2 kW version).
 - Three-phase** 220-240/380-415 V 50 Hz, overload protection to be provided by user.
- Power up to 3 kW.
- Class **F Insulation.**
- **IP 55 protection.**



TABLE OF MATERIALS

PART	MATERIAL	
	CEA	CA
Pump body, Flange, Seal housing, Diffuser, Impeller	STAINLESS STEEL (AISI 304 - DIN 1.4301)	
Shaft extension	STAINLESS STEEL (AISI 316 - DIN 1.4401)	STAINLESS STEEL (AISI 304 - DIN 1.4301)
Fill and drain plugs	STAINLESS STEEL (AISI 316 - DIN 1.4401)	
Mechanical seal	CARBON/CERAMIC/NBR	
O-ring seals	NBR	

CEA SERIES HYDRAULIC PERFORMANCE TABLE AT 2850 rpm 50 Hz

PUMP TYPE	RATED POWER		Q = DELIVERY																		
			l/min	0	30	40	60	80	100	120	140	160	180	200	250	300	350	400	430	480	520
	m³/h	0	1.8	2.4	3.6	4.8	6	7.2	8.4	9.6	10.8	12	15	18	21	24	26	29	31		
	kW	HP	H = TOTAL HEAD METERS COLUMN OF WATER																		
CEA(M) 70/3	0.37	0.5	22.0	20.1	19.1	16.6	12.8														
CEA(M) 70/5	0.55	0.75	31.1	28.8	27.7	24.7	20.2														
CEA(M) 80/5	0.75	1	32.0	30.0	29.3	27.4	24.7	21.0													
CEA(M) 120/3	0.55	0.75	22.4			18.9	17.5	15.9	14.0	11.8	9.2										
CEA(M) 120/5	0.9	1.2	31.8			28.2	26.5	24.6	22.4	20.0	17.3										
CEA(M) 210/2	0.75	1	17.7						16.5	16.1	15.6	15.0	14.4	12.6	10.4						
CEA(M) 210/3	1.1	1.5	20.8						19.7	19.3	19.0	18.5	18.0	16.5	14.4						
CEA(M) 210/4	1.5	2	25.5						24.8	24.5	24.0	23.6	23.0	21.3	19.0						
CEA(M) 210/5	*1.85	2.5	29.0						28.2	27.9	27.5	27.1	26.6	25.1	23.1						
CEA(M) 370/1	1.1	1.5	16.3									15.5	15.2	14.3	13.0	11.4	9.4	8.1			
CEA(M) 370/2	1.5	2	20.4										19.1	18.3	17.2	15.8	14.1	13.0	10.8		
CEA(M) 370/3	*1.85	2.5	24.4										22.9	22.1	21.1	19.8	18.2	17.1	15.0	13.0	

* Singlephase version = 2.2 kW (3HP)

cea-2p50_a_th

PUMP TYPE	INPUT POWER*	INPUT CURRENT*	CAPACITOR
SINGLE-PHASE		220-240 V	
	kW	A	μF / 450 V
CEAM 70/3	0.6	2.72	14
CEAM 70/5	0.97	4.55	16
CEAM 80/5	1.07	4.87	20
CEAM 120/3	0.91	4.33	16
CEAM 120/5	1.39	6.24	25
CEAM 210/2	1.13	5.1	20
CEAM 210/3	1.48	6.68	30
CEAM 210/4	1.91	8.6	40
CEAM 210/5	2.31	10.6	50
CEAM 370/1	1.49	6.75	30
CEAM 370/2	2.05	9.26	40
CEAM 370/3	2.47	11.2	50

* Maximum value in specified range

PUMP TYPE	INPUT POWER*	INPUT CURRENT*	INPUT CURRENT*
THREE-PHASE		220-240 V	380-415 V
	kW	A	A
CEA 70/3	0.61	2.51	1.45
CEA 70/5	0.88	2.86	1.65
CEA 80/5	1.06	3.65	2.11
CEA 120/3	0.82	2.74	1.58
CEA 120/5	1.32	4.52	2.61
CEA 210/2	1.12	3.76	2.17
CEA 210/3	1.43	4.68	2.7
CEA 210/4	1.84	6.04	3.49
CEA 210/5	2.28	8.35	4.82
CEA 370/1	1.44	4.71	2.72
CEA 370/2	1.99	6.32	3.65
CEA 370/3	2.47	8.63	4.98

cea-2p50_a_te

CA SERIES HYDRAULIC PERFORMANCE TABLE AT 2850 rpm 50 Hz

PUMP TYPE	RATED POWER		Q = DELIVERY													
			l/min	0	30	40	50	60	70	80	100	120	150	180	210	
	m³/h	0	1.8	2.4	3	3.6	4.2	4.8	6	7.2	9	10.8	12.6			
	kW	HP	H = TOTAL HEAD METERS COLUMN OF WATER													
CA(M) 70/33	0.75	1	42.9	38.8	36.9	34.6	31.7	28.2	23.9							
CA(M) 70/34	0.9	1.2	48.8	45.1	43.2	40.7	37.7	34.0	29.5							
CA(M) 70/45	1.1	1.5	56.2	52.0	49.8	47.1	43.9	39.9	35.3							
CA(M) 120/33	1.1	1.5	44.3			39.1	37.8	36.4	34.8	31.4	27.6	21.0				
CA(M) 120/35	1.5	2	54.0			49.4	48.1	46.6	44.9	41.2	36.8	29.3				
CA(M) 120/55	*1.85	2.5	63.8			59.6	58.2	56.6	54.8	50.6	45.7	37.1				
CA(M) 200/33	*1.85	2.5	43.2			41.8	41.2	40.6	39.9	38.3	36.4	33.2	29.5	25.5		
CA 200/35	2.2	3	53.5			52.4	51.9	51.4	50.7	49.2	47.5	44.3	40.6	36.5		
CA 200/55	3	4	62.6			61.0	60.6	60.1	59.5	58.2	56.6	53.8	50.4	46.2		

* Singlephase version = 2.2 kW (3HP)

ca-2p50_a_th

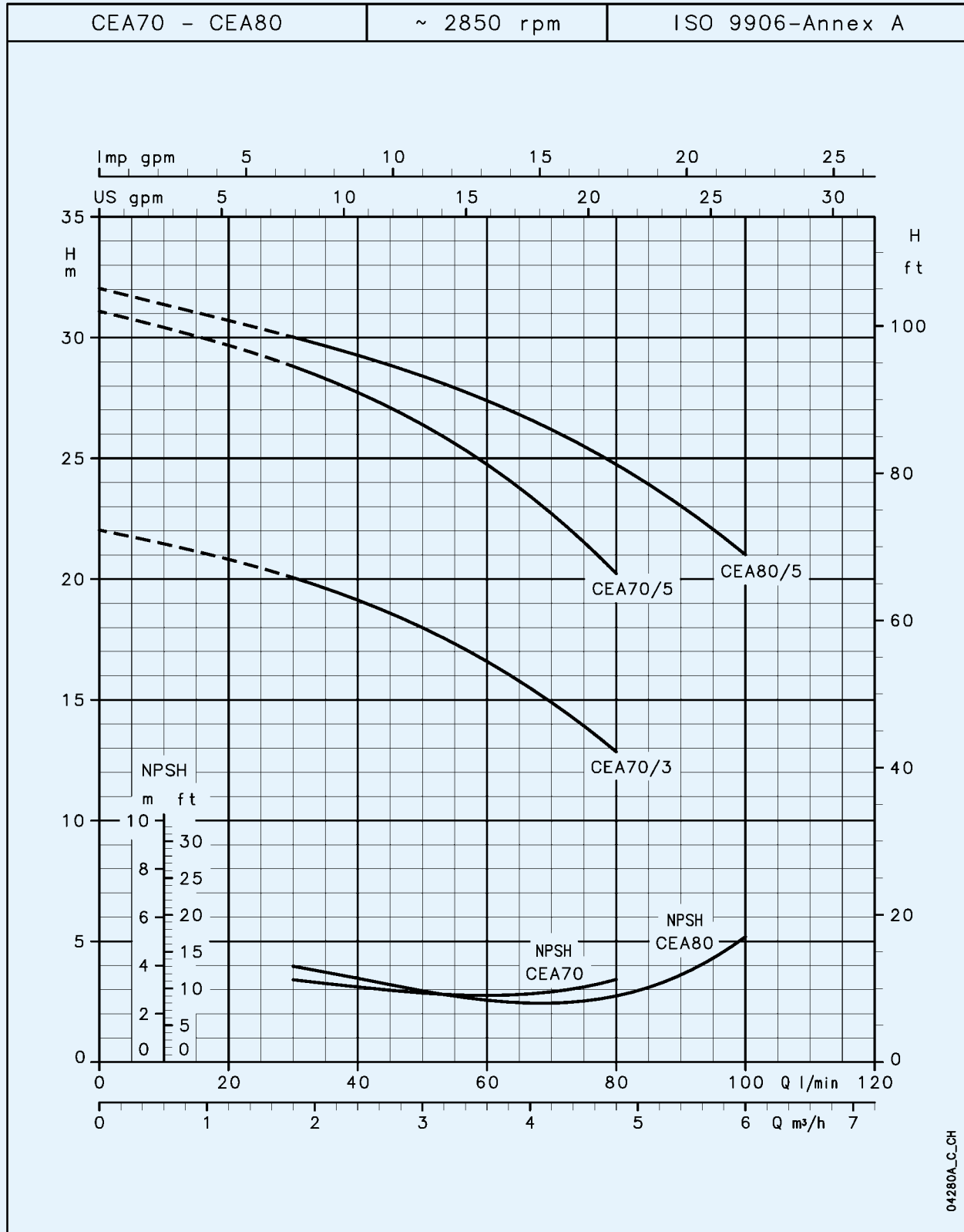
PUMP TYPE	INPUT POWER*	INPUT CURRENT*	CAPACITOR
SINGLE-PHASE		220-240 V	
	kW	A	μF / 450 V
CAM 70/33	1.15	5.16	20
CAM 70/34	1.39	6.22	25
CAM 70/45	1.76	7.92	30
CAM 120/33	1.67	7.53	30
CAM 120/35	2.18	9.87	40
CAM 120/55	2.61	11.7	50
CAM 200/33	2.36	10.8	50
-	-	-	-
-	-	-	-

* Maximum value in specified range

PUMP TYPE	INPUT POWER*	INPUT CURRENT*	INPUT CURRENT*
THREE-PHASE		220-240 V	380-415 V
	kW	A	A
CA 70/33	1.14	3.78	2.18
CA 70/34	1.32	4.52	2.61
CA 70/45	1.71	5.23	3.02
CA 120/33	1.62	5.06	2.92
CA 120/35	2.13	6.58	3.8
CA 120/55	2.62	8.89	5.13
CA 200/33	2.34	8.44	4.87
CA 200/35	3.14	9.18	5.3
CA 200/55	3.68	10.9	6.3

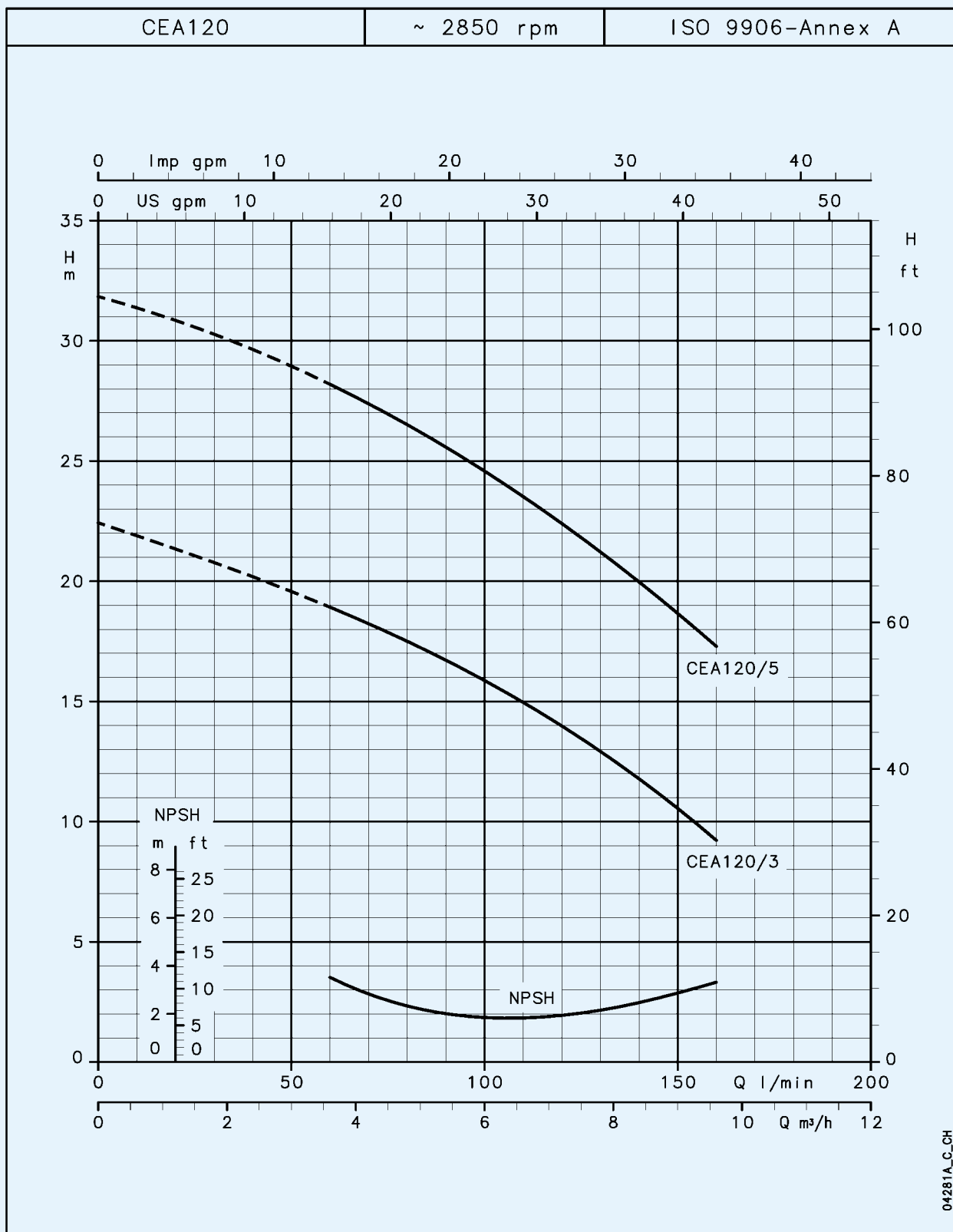
ca-2p50_a_te

CEA70-CEA80 SERIES OPERATING CHARACTERISTICS AT 2850 rpm 50 Hz



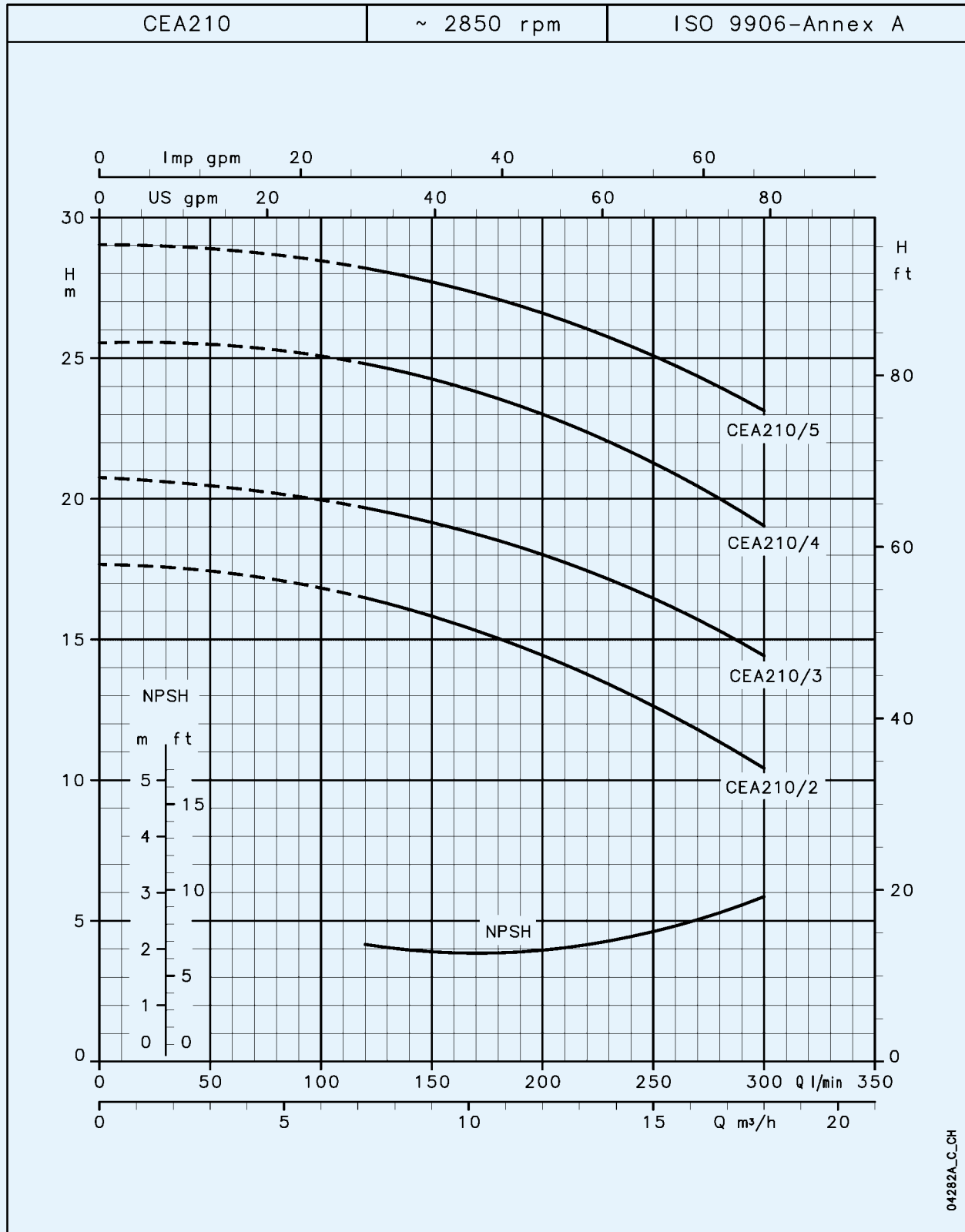
These performances are valid for liquids with density $\rho = 1.0 \text{ kg/dm}^3$ and kinematic viscosity $\gamma = 1 \text{ mm}^2/\text{sec}$.

CEA120 SERIES OPERATING CHARACTERISTICS AT 2850 rpm 50 Hz



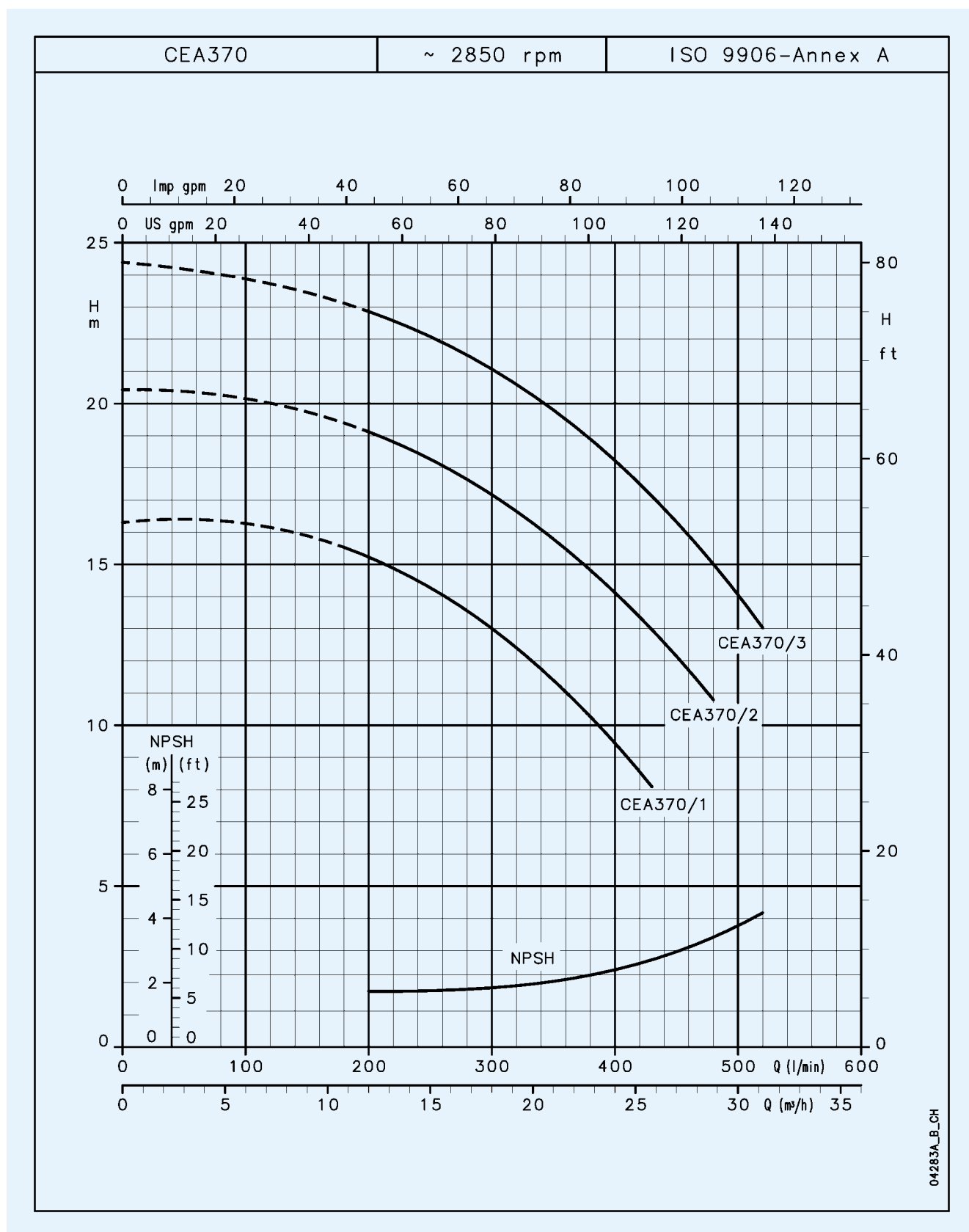
These performances are valid for liquids with density $\rho = 1.0 \text{ kg/dm}^3$ and kinematic viscosity $\gamma = 1 \text{ mm}^2/\text{sec}$.

CEA210 SERIES OPERATING CHARACTERISTICS AT 2850 rpm 50 Hz



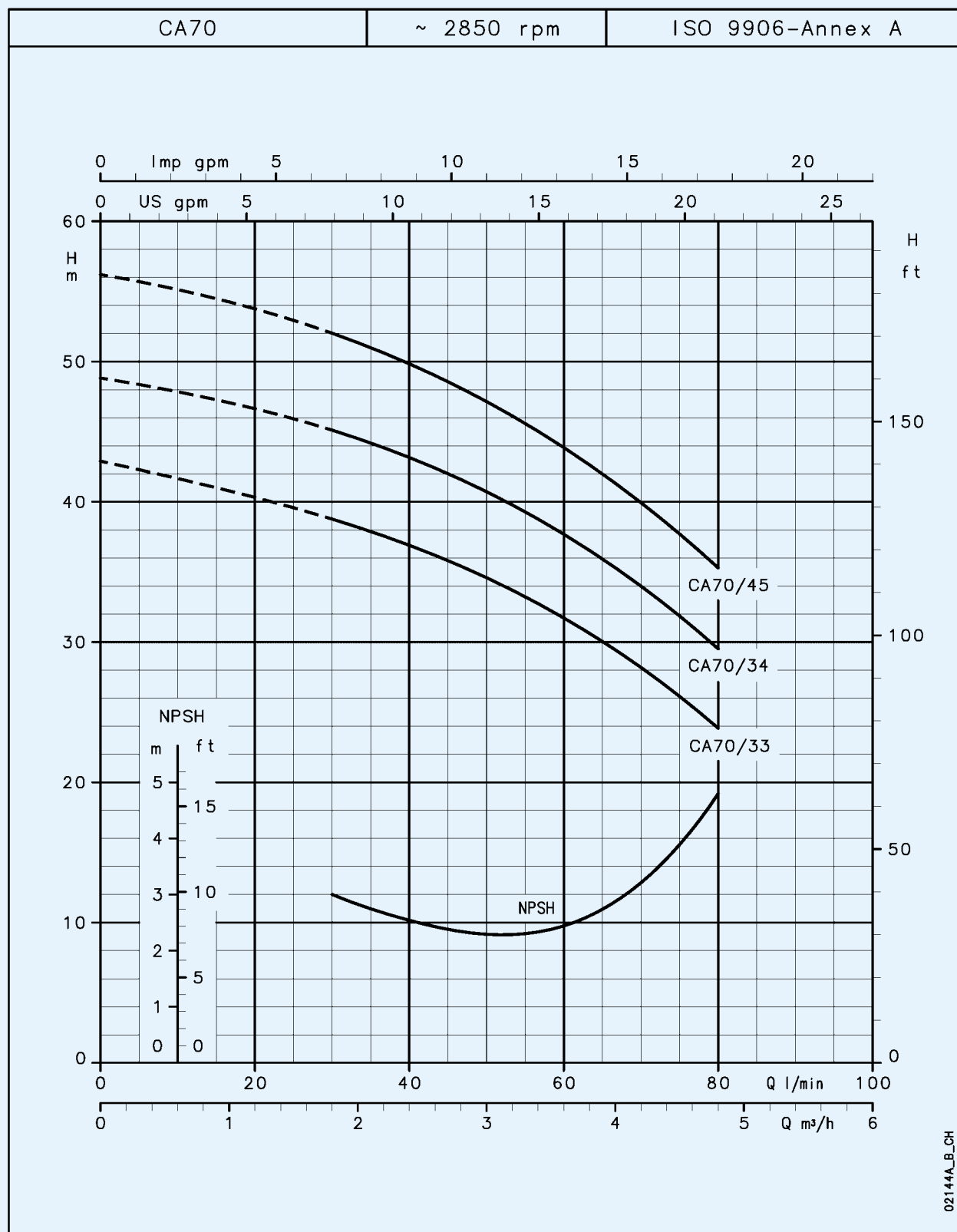
These performances are valid for liquids with density $\rho = 1.0 \text{ kg/dm}^3$ and kinematic viscosity $\gamma = 1 \text{ mm}^2/\text{sec}$.

CEA370 SERIES OPERATING CHARACTERISTICS AT 2850 rpm 50 Hz



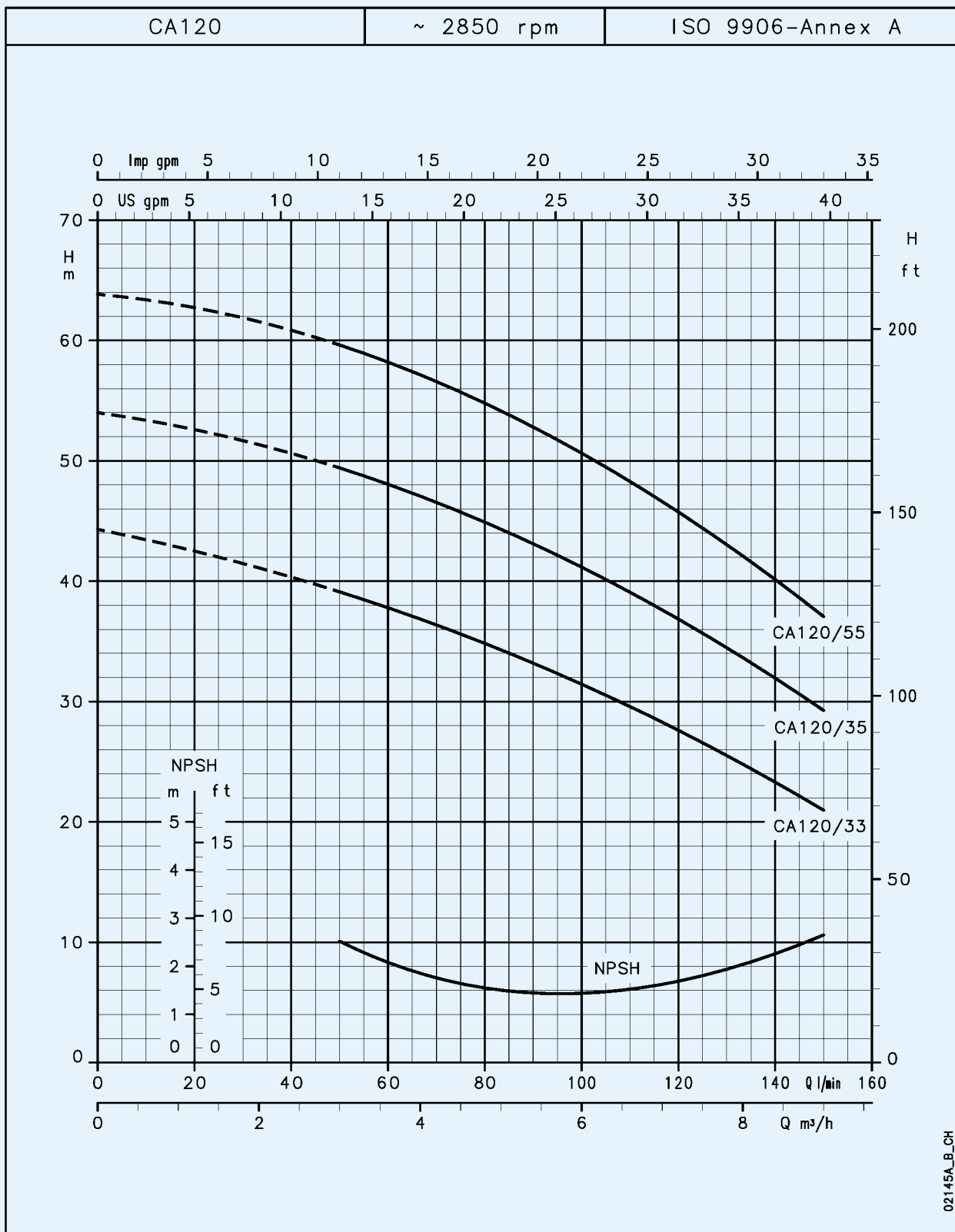
These performances are valid for liquids with density $\rho = 1.0 \text{ kg/dm}^3$ and kinematic viscosity $\gamma = 1 \text{ mm}^2/\text{sec}$.

CA70 SERIES OPERATING CHARACTERISTICS AT 2850 rpm 50 Hz



These performances are valid for liquids with density $\rho = 1.0 \text{ kg/dm}^3$ and kinematic viscosity $\gamma = 1 \text{ mm}^2/\text{sec}$.

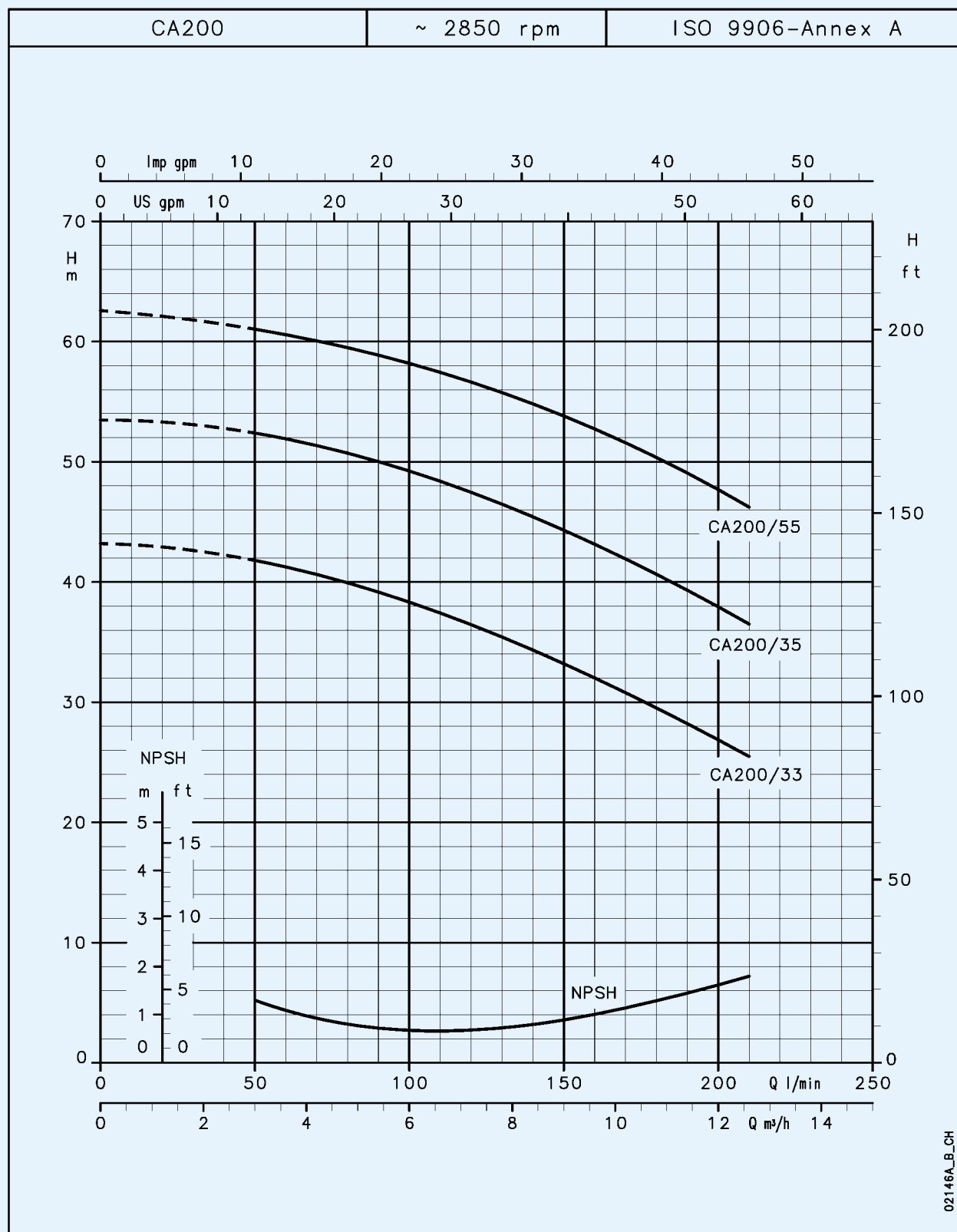
CA120 SERIES OPERATING CHARACTERISTICS AT 2850 rpm 50 Hz



CEA-CA

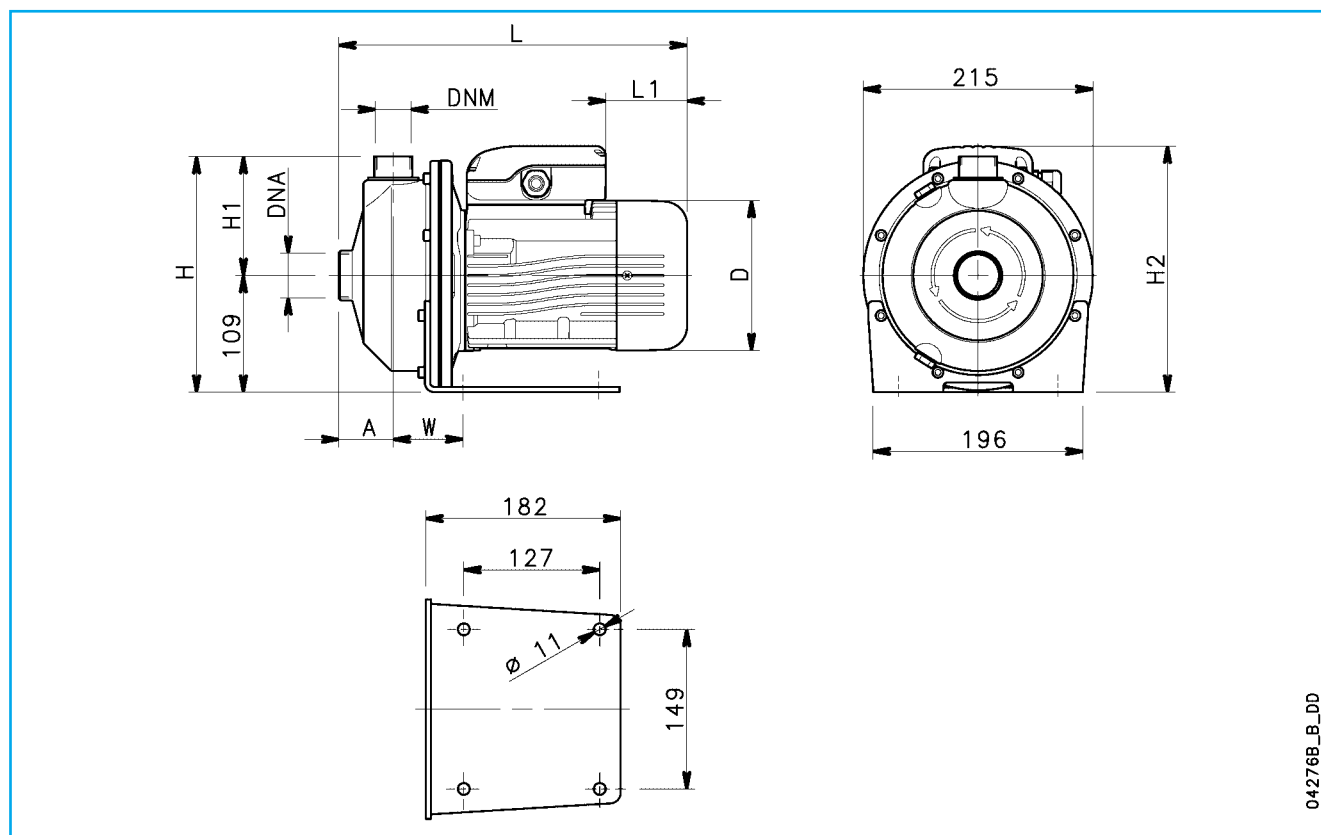
These performances are valid for liquids with density $\rho = 1.0 \text{ kg/dm}^3$ and kinematic viscosity $\gamma = 1 \text{ mm}^2/\text{sec}$.

CA200 SERIES OPERATING CHARACTERISTICS AT 2850 rpm 50 Hz



These performances are valid for liquids with density $\rho = 1.0 \text{ kg/dm}^3$ and kinematic viscosity $\gamma = 1 \text{ mm}^2/\text{sec}$.

DIMENSIONS AND WEIGHTS, CEA SERIES



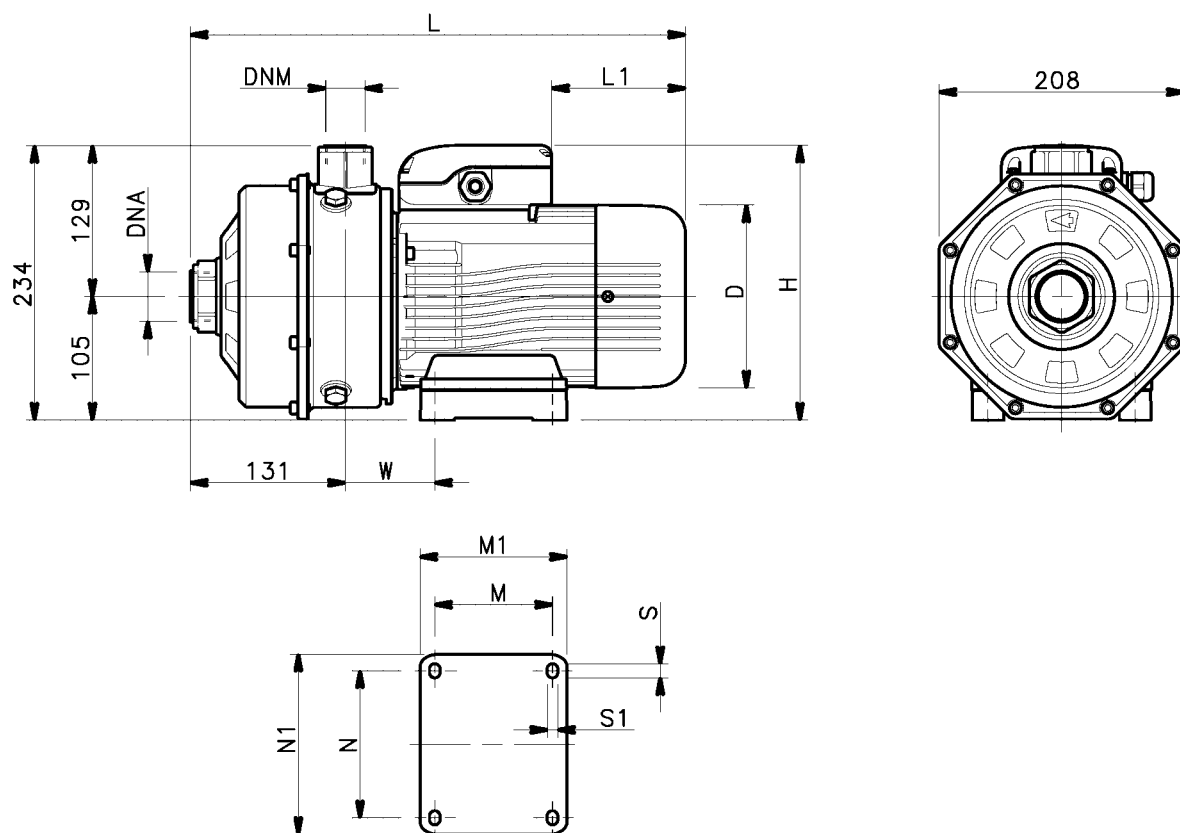
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CEA-CA

PUMP TYPE	DIMENSIONS (mm)								DNA	DNM	WEIGHT kg
	A	D	H	H1	H2	L	L1	W			
CEAM 70/3	51	120	220	111	220	311	62	65	Rp 1 1/4	Rp 1	9.7
CEAM 70/5	51	140	220	111	230	325	76	65	Rp 1 1/4	Rp 1	11.6
CEAM 80/5	51	140	220	111	230	325	76	65	Rp 1 1/4	Rp 1	12.5
CEAM 120/3	51	140	220	111	230	325	76	65	Rp 1 1/4	Rp 1	11.5
CEAM 120/5	51	140	220	111	239	325	31	65	Rp 1 1/4	Rp 1	13
CEAM 210/2	54	140	222	113	230	339	76	76	Rp 1 1/2	Rp 1 1/4	13
CEAM 210/3	54	156	222	113	246	385	69	76	Rp 1 1/2	Rp 1 1/4	14.5
CEAM 210/4	54	156	222	113	246	385	69	76	Rp 1 1/2	Rp 1 1/4	16.1
CEAM 210/5	54	176	222	113	230	416	114	76	Rp 1 1/2	Rp 1 1/4	14.4
CEAM 370/1	54	156	222	113	246	385	69	76	Rp 2	Rp 1 1/4	14
CEAM 370/2	54	156	222	113	246	385	69	76	Rp 2	Rp 1 1/4	16.1
CEAM 370/3	54	176	222	113	230	416	114	76	Rp 2	Rp 1 1/4	17.7
CEA 70/3	51	120	220	111	220	311	62	65	Rp 1 1/4	Rp 1	9.7
CEA 70/5	51	140	220	111	230	325	76	65	Rp 1 1/4	Rp 1	11.6
CEA 80/5	51	140	220	111	230	325	76	65	Rp 1 1/4	Rp 1	12.5
CEA 120/3	51	140	220	111	230	325	76	65	Rp 1 1/4	Rp 1	11.5
CEA 120/5	51	140	220	111	230	325	76	65	Rp 1 1/4	Rp 1	13
CEA 210/2	54	140	222	113	230	339	76	76	Rp 1 1/2	Rp 1 1/4	13
CEA 210/3	54	156	222	113	238	385	114	76	Rp 1 1/2	Rp 1 1/4	14.5
CEA 210/4	54	156	222	113	238	385	114	76	Rp 1 1/2	Rp 1 1/4	16.1
CEA 210/5	54	156	222	113	238	385	114	76	Rp 1 1/2	Rp 1 1/4	14.4
CEA 370/1	54	156	222	113	238	285	114	76	Rp 2	Rp 1 1/4	14
CEA 370/2	54	156	222	113	238	385	114	76	Rp 2	Rp 1 1/4	16.1
CEA 370/3	54	156	222	113	238	385	114	76	Rp 2	Rp 1 1/4	17.7

cea-2p50_a_td

DIMENSIONS AND WEIGHTS, CA SERIES



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PUMP TYPE	DIMENSIONS (mm)											DNA	DNM	WEIGHT
	D	H	L	L1	M	M1	N	N1	S	S1	W			kg
CAM 70/33	140	226	383	76	90	113	112	135	12	7	66	Rp 1¼	Rp 1	15
CAM 70/34	140	235	383	31	90	113	112	135	12	7	66	Rp 1¼	Rp 1	15.8
CAM 70/45	156	242	420	69	100	125	125	153	12	9	76	Rp 1¼	Rp 1	18.5
CAM 120/33	156	242	420	69	100	125	125	153	12	9	76	Rp 1¼	Rp 1	18.4
CAM 120/35	156	242	420	69	100	125	125	153	12	9	76	Rp 1¼	Rp 1	20.2
CAM 120/55	176	226	450	114	125	156	140	170	13	9	98	Rp 1¼	Rp 1	24.5
CAM 200/33	176	226	450	114	125	156	140	170	13	9	98	Rp 1½	Rp 1	24.2
CA 70/33	140	226	383	76	90	113	112	135	12	7	66	Rp 1¼	Rp 1	14.9
CA 70/34	140	226	383	76	90	113	112	135	12	7	66	Rp 1¼	Rp 1	15.7
CA 70/35	156	234	420	114	100	125	125	153	12	9	76	Rp 1¼	Rp 1	17
CA 120/33	156	234	420	114	100	125	125	153	12	9	76	Rp 1¼	Rp 1	16.8
CA 120/35	156	234	420	114	100	125	125	153	12	9	76	Rp 1¼	Rp 1	18.7
CA 120/55	156	234	420	114	100	125	125	153	12	9	76	Rp 1¼	Rp 1	20.3
CA 200/33	156	234	420	114	100	125	125	153	12	9	76	Rp 1½	Rp 1	20
CA 200/35	176	226	450	149	125	156	140	170	13	9	98	Rp 1½	Rp 1	22.3
CA 200/55	176	226	450	149	125	156	140	170	13	9	98	Rp 1½	Rp 1	24.3

ca-2p50_a_td

CO SERIES

THREADED CENTRIFUGAL PUMPS WITH OPEN IMPELLER

These pumps combine the advantages of an open impeller with those of the AISI 316 stainless steel construction, which is particularly suited for handling moderately aggressive liquids with suspended solids.

- ❑ **ALL COMPONENTS IN CONTACT WITH PUMPED LIQUID ARE MADE OF AISI 316L STAINLESS STEEL**
- ❑ **MECHANICAL SEAL MADE OF SILICON CARBIDE/SILICON CARBIDE/FPM IN THE "K" VERSION**

APPLICATIONS

- Washing and surface treatment of metal parts.
- Washing of foodstuffs, produce, fish and shellfish.
- Oil and cleaner circulation systems.
- Machine tool cooling fluid circulation systems.
- Commercial dishwashers.
- Industrial washing machines.

SPECIFICATIONS

- **Open impeller handles solids up to 20 mm in diameter (10 mm for C0350 series pumps).**
- **Delivery up to 900 l/min (54m³/h).**
- **Head up to 24 m.**
- **Maximum operating pressure: 8 bar.**
- **Continuous duty.**
- **Temperature of pumped liquid: -10°C to +110°C.**
- Enclosed motor with external ventilation and aluminium alloy finned casing.
- Versions:
 - Single-phase** 220-240 V 50 Hz, permanently connected capacitor and built-in automatic reset overload protection up to 1,5 kW (except for 2,2 kW version).
 - Three-phase** 220-240/380-415 V 50 Hz, overload protection to be provided by user.
- **Power up to 3 kW.**
- **Class F Insulation.**
- **IP 55 protection.**



TABLE OF MATERIALS

PART	MATERIAL
Pump body, Flange, Seal-housing disk, Impeller	STAINLESS STEEL (AISI 316L - DIN 1.4404)
Shaft extension, Fill and drain plugs	STAINLESS STEEL (AISI 316 - DIN 1.4401)
Standard mechanical seal	CARBON/CERAMIC/FPM
"K" version mechanical seal	SILICON CARBIDE/SILICON CARBIDE/FPM
O-rings seals	FPM

* Bare shaft version available

* 2 and 4 poles motor available

CO350 SERIES

HYDRAULIC PERFORMANCE TABLE AT 2850 rpm 50 Hz

PUMP TYPE	RATED POWER		Q = DELIVERY																		
			l/min	0	100	120	160	200	240	280	300	350	375	400	450	500	600	650	700	800	900
	m³/h	0	6	7.2	9.6	12	14.4	16.8	18	21	22.5	24	27	30	36	39	42	48	54		
	kW	HP	H = TOTAL HEAD METERS COLUMN OF WATER																		
CO(M) 350/03	0.37	0.5	9.5	6.8	6.3	5.5	4.8	4.1	3.4	3.0											
CO(M) 350/05	0.55	0.75	12.0	9.2	8.8	7.9	7.1	6.3	5.5	5.1	4.0										
CO(M) 350/07	0.75	1	13.7	11.2	10.8	9.9	9.1	8.2	7.4	6.9	5.8	5.3									
CO(M) 350/09	0.9	1.2	15.7	12.7	12.2	11.3	10.5	9.6	8.8	8.3	7.2	6.6	5.9								
CO(M) 350/11	1.1	0.5	17.3	14.3	13.8	12.9	12.0	11.2	10.5	10.1	9.1	8.6	8.0	6.8							
CO(M) 350/15	1.5	2	20.3	16.9	16.4	15.3	14.4	13.5	12.7	12.2	11.2	10.6	10.0	8.7	7.2						
CO(M) 500/15	1.5	2	16.0				13.4	12.8	12.3	12.0	11.3	10.9	10.5	9.8	9.0	7.4	6.6	5.8			
CO(M) 500/22	2.2	3	19.6				17.3	16.7	16.2	15.9	15.2	14.9	14.5	13.7	13.0	11.3	10.4	9.6	7.7		
CO 500/30	3	4	24.1				20.9	20.3	19.3	19.3	18.5	18.1	17.7	16.9	16.0	14.3	13.5	12.6	10.8	9.0	

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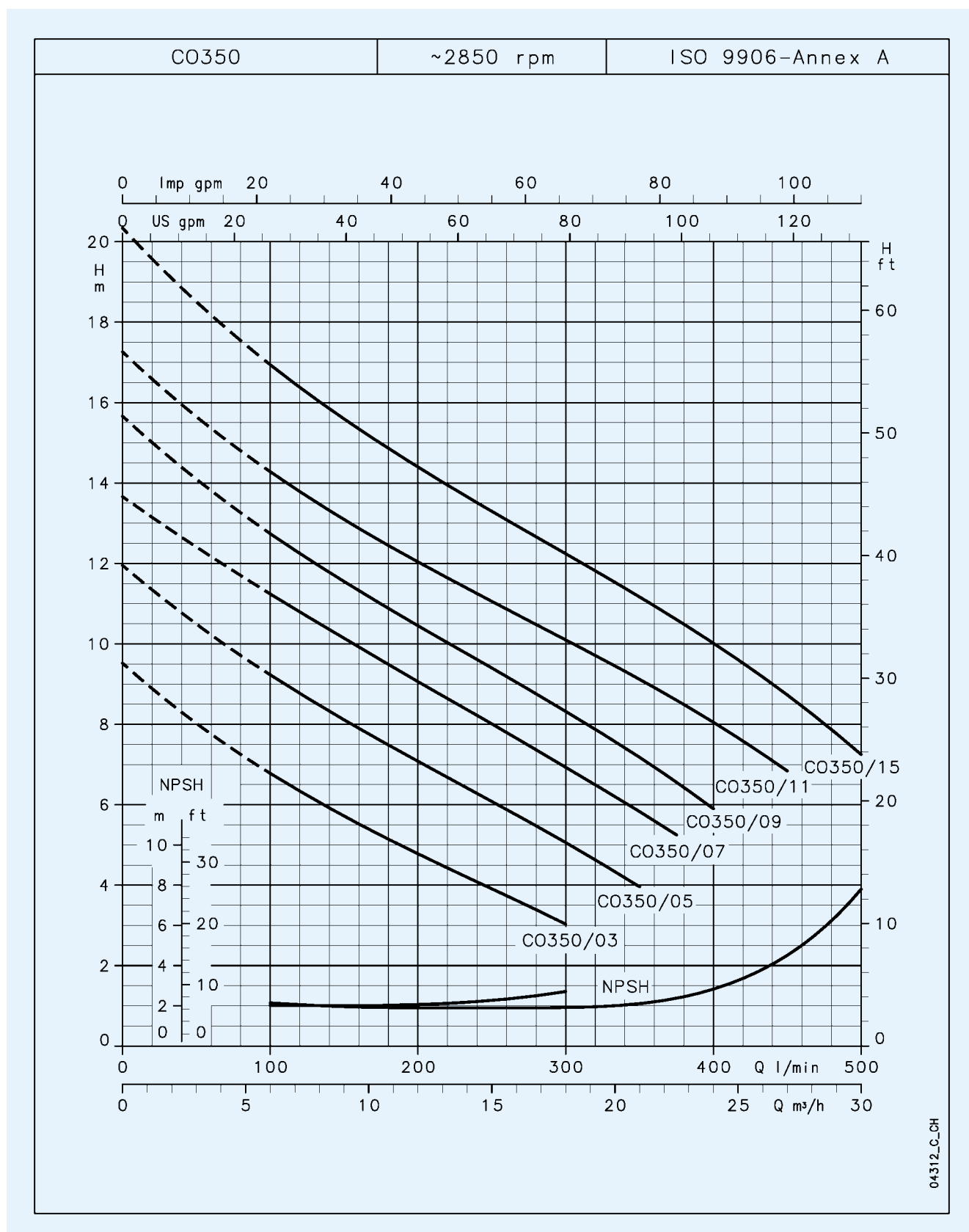
PUMP TYPE	INPUT POWER*	INPUT CURRENT*	CAPACITOR
SINGLE-PHASE		220-240 V	
	kW	A	μF / 450 V
COM350/03	0.63	2.82	14
COM350/05	0.88	4.25	16
COM350/07	1.02	4.67	20
COM350/09	1.21	5.46	25
COM350/11	1.75	7.85	30
COM350/15	2.04	9.21	40
COM500/15	2.02	9.12	40
COM500/22	2.71	12.1	50
-	-	-	-

* Maximum value in specified range

PUMP TYPE	INPUT POWER*	INPUT CURRENT*	INPUT CURRENT*
THREE-PHASE		220-240 V	380-415 V
	kW	A	A
CO 350/03	0.64	2.53	1.46
CO 350/05	0.79	2.7	1.56
CO 350/07	1	3.57	2.06
CO 350/09	1.13	4.21	2.43
CO 350/11	1.69	5.2	3
CO 350/15	1.98	6.3	3.64
CO 500/15	1.96	6.27	3.62
CO 500/22	2.73	9.06	5.23
CO 500/30	3.97	11.7	6.78

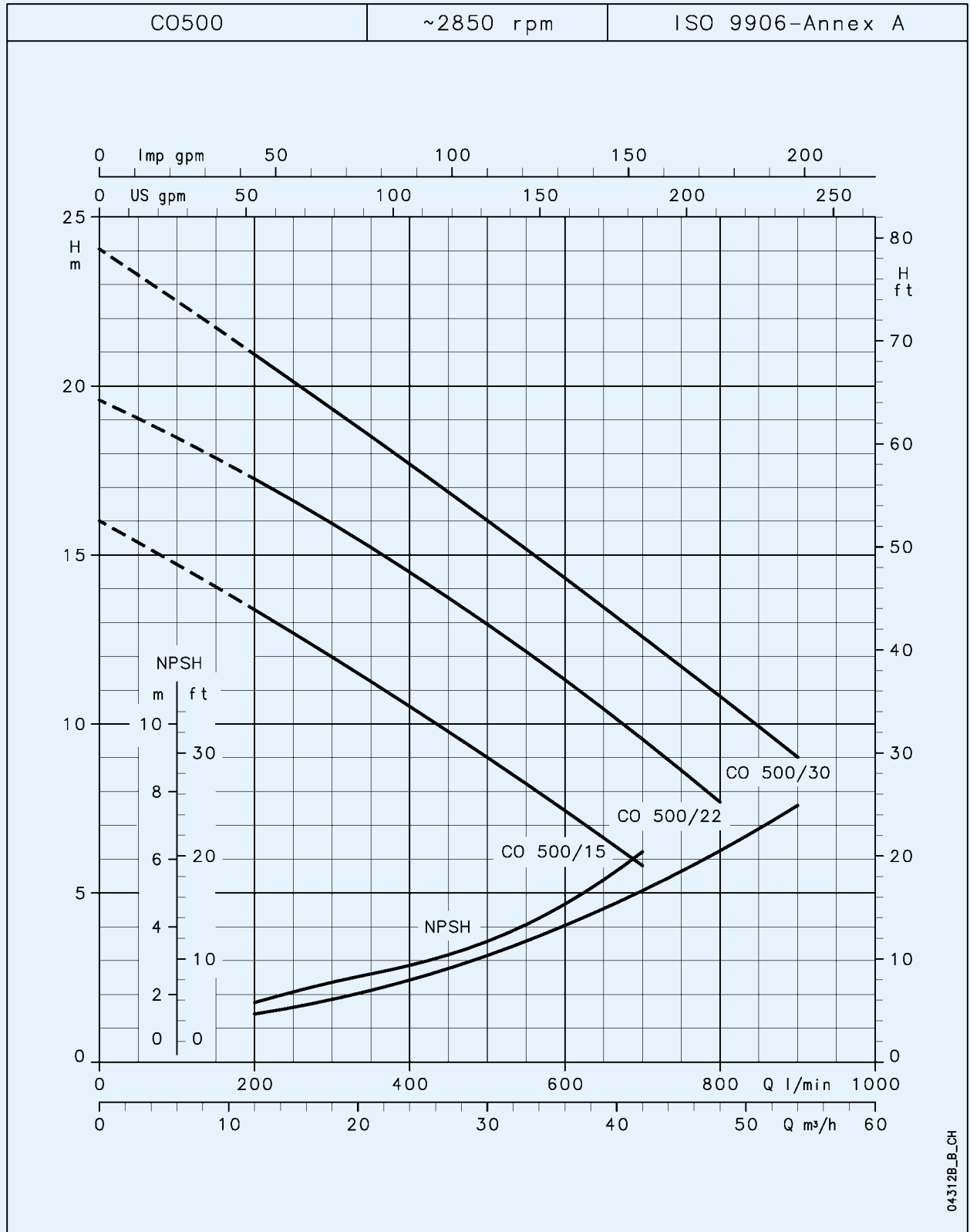
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CO350 SERIES HYDRAULIC PERFORMANCE TABLE AT 2850 rpm 50 Hz



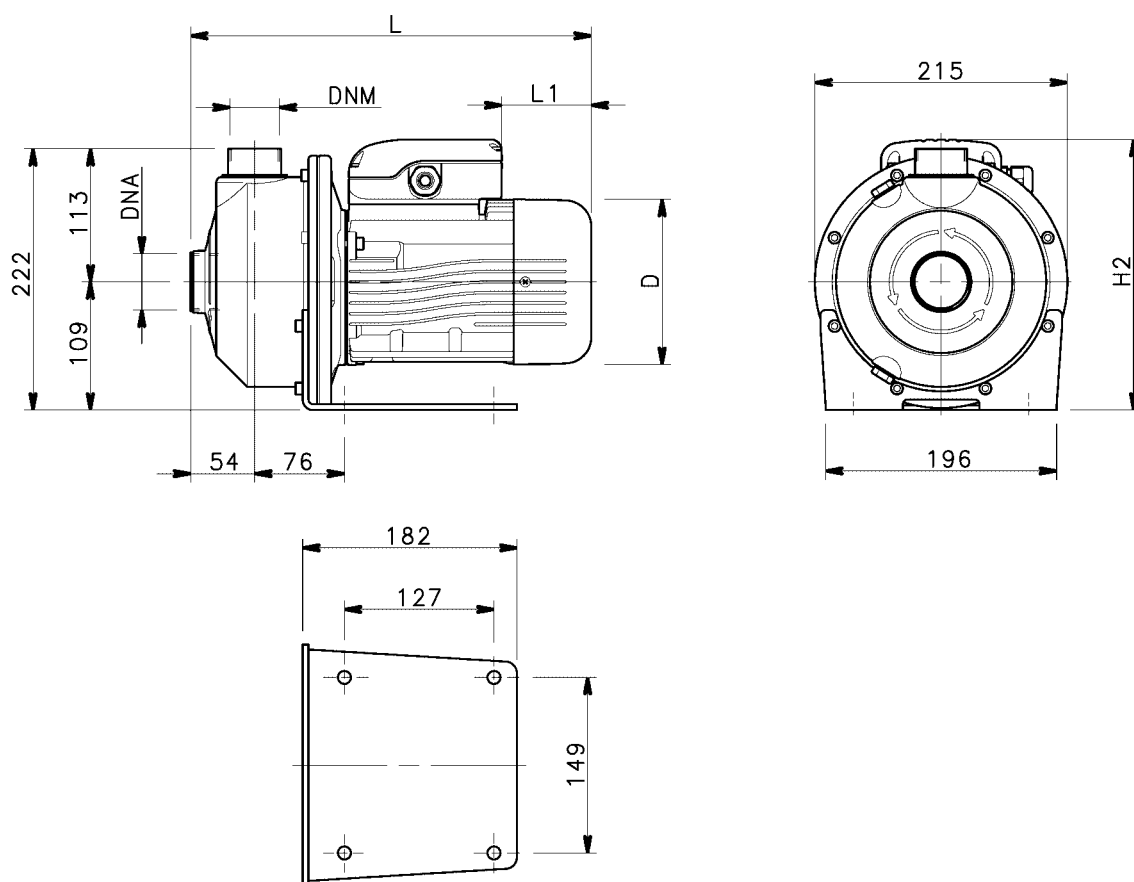
These performances are valid for liquids with density $\rho = 1.0 \text{ kg/dm}^3$ and kinematic viscosity $\gamma = 1 \text{ mm}^2/\text{sec}$.

CO500 SERIES OPERATING CHARACTERISTICS AT 2850 rpm 50 Hz



These performances are valid for liquids with density $\rho = 1.0 \text{ kg/dm}^3$ and kinematic viscosity $\gamma = 1 \text{ mm}^2/\text{sec}$.

DIMENSIONS AND WEIGHTS, CO SERIES



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CO

PUMP TYPE	DIMENSIONS (mm)				DNA	DNM	WEIGHT kg
	D	H2	L	L1			
COM 350/03	120	220	325	62	Rp 1½	Rp 1¼	10
COM 350/05	140	230	339	76	Rp 1½	Rp 1¼	11.9
COM 350/07	140	230	339	76	Rp 1½	Rp 1¼	12.6
COM 350/09	140	239	339	31	Rp 1½	Rp 1¼	13.2
COM 350/11	156	246	385	69	Rp 1½	Rp 1¼	14.5
COM 350/15	156	246	385	69	Rp 1½	Rp 1¼	16.2
COM 500/15	156	246	385	69	Rp 2	Rp 1½	16.2
COM 500/22	176	230	416	114	Rp 2	Rp 1½	17.8
CO 350/03	120	220	325	62	Rp 1½	Rp 1¼	10
CO 350/05	140	230	339	76	Rp 1½	Rp 1¼	11.9
CO 350/07	140	230	339	76	Rp 1½	Rp 1¼	12.6
CO 350/09	140	230	339	76	Rp 1½	Rp 1¼	12.2
CO 350/11	156	238	385	114	Rp 1½	Rp 1¼	14.5
CO 350/15	156	238	385	114	Rp 1½	Rp 1¼	16.2
CO 500/15	156	238	385	114	Rp 2	Rp 1½	16.2
CO 500/22	156	238	385	114	Rp 2	Rp 1½	17.8
CO 500/30	176	230	416	149	Rp 2	Rp 1½	22

co-2p50_a_td

FH SERIES

CENTRIFUGAL ELECTRIC PUMPS IN COMPLIANCE WITH EN 733 - (ex DIN 24255)

Cast iron pump body and AISI 316L stainless steel, laser-technology welded impeller ⁽¹⁾. Suitable for pumping hot and cold, moderately aggressive liquids.

APPLICATIONS

- Water circulation and transfer in civil, industrial and agricultural sectors.
- Pressure boosting.
- Water supply.
- Circulation of hot and cold water in heating and conditioning systems.
- Industrial washing.
- Water display, fountains.

AVAILABLE MODELS

- **FHE** close-coupled with special motor shaft extension.
- **FHS** with stub shaft and standard motor.
- **FHF** with flexible coupling, base and standard motor in compliance with EN 733 - (ex DIN 24255).

SPECIFICATIONS

- **Maximum delivery** up to **500 m³/h.**
- **Maximum head** up to **95 m.**
- Wear ring in stainless steel AISI 316 up to DN80 (except 65-315 and 80-315).
- Mechanical seal lubricated with the pumped liquid through a recirculation channel up to DN 80 (except 65-315 and 80-315).
- **Nominal diameter of ports** up to **150 mm.**
- **Nominal diameter of impeller** up to **315 mm.**
- 2-pole single-phase motors up to 2.2 kW.
- 2 and 4-pole three-phase motors.
- 50 and 60 Hz frequencies.
- Counterflanges available on request.
- IP55 protection.
- Class F insulation.
- **Maximum operating pressure: 12 bar.**
- **Temperature of liquid** from **-10°C to +85°C** for versions up to DN 80 (from **-20°C to +120°C** for versions with EPDM elastomers) from **-10°C to +120°C** for 65-315, 80-315 and for DN 100, 125, 150.
- **Versions with HYDROVAR frequency converter (variable speed) are available on request.**

⁽¹⁾ Impeller in cast iron for some models of DN 65 and DN 80, and DN 100, 125, 150.

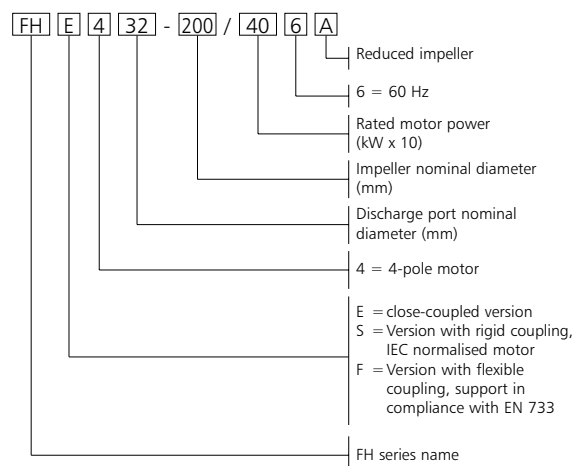


TABLE OF MATERIALS

PART	MATERIAL
Pump body	CAST IRON
Impeller 32, 40, 50, 65-125	STAINLESS STEEL (AISI 316 - DIN 1.4404)
Impeller 65-160, 65-200, 65-250, 80, 100, 125, 150	CAST IRON
Adapter	ALUMINIUM OR CAST IRON
Mechanical seal*	CERAMIC/CARBON/NBR up to DN 80 CARBON/SILICON CARBIDE/EPDM for 65-315, 80-315, 100, 125, 150
O-ring seals	NBR
Wear ring, Counterwear ring (only for DN32-80 except for 65-315 and 80-315)	STAINLESS STEEL (AISI 316L - DIN 1.4404)
Shaft	STAINLESS STEEL AISI 316 L for DN 32-80 (except for 65-315 and 80-135) STAINLESS STEEL AISI 420 for 65-315, 80-315, 100, 125, 150
Support body (FHF)	CAST IRON (200 - UNI ISO 185)
Fill and drain plugs	NICKEL-PLATED BRASS

* -20°C a 120°C version: Ceramic / Carbon / EPDM

IDENTIFICATION CODE



ELECTRICAL SPECIFICATIONS OF MOTORS WITH SPECIAL SHAFT EXTENSION, FHE SERIES

SINGLE-PHASE 50 Hz 2-POLES MOTORS

MOTOR TYPE			INPUT CURRENT In (A)	CAPACITOR		DATA FOR 230 V 50 Hz					
kW	IEC SIZE *	CONSTRUCTION DESIGN		μ F	V	rpm	Is / In	n %	cos ϕ	Cn Nm	Cs/Cn
0.75	90R	B14	5.02-5.39	30	450	2875	5.1	70.6	0.91	2.49	0.71
1.1	90R	B14	7.07-6.81	30	450	2800	3.80	73.8	0.95	3.75	0.47
1.5	90R	B14	9.32-8.63	40	450	2780	3.45	75.5	0.97	5.15	0.47
2.2	90	B14	13.3-12.6	50	450	2785	3.45	76.9	0.97	7.54	0.36

* R = Reduced size of motor casing as compared to shaft extension and flange.

fhe-motm-2p50_a_te

THREE-PHASE 50 Hz 2-POLES MOTORS

MOTOR TYPE			INPUT CURRENT In (A)				DATA FOR 400 V 50 Hz					
kW	IEC SIZE *	CONSTRUCTION DESIGN	Δ 220-240 V	Y 380-415 V	Δ 380-415 V	Y 660-690 V	rpm	Is / In	n %	cos ϕ	Cn Nm	Cs/Cn
0.75	90R	B14	3.72	2.15	-	-	2915	8.23	77.7	0.65	2.45	5.20
1.1	90R	B14	4.52	2.61	-	-	2875	6.78	78.9	0.77	3.65	3.49
1.5	90R	B14	5.98	3.45	-	-	2875	7.04	80.1	0.78	4.98	3.83
2.2	90R	B14	8.71	5.03	-	-	2860	7.32	81.1	0.78	7.34	4.12
3	90	B14	10.8	6.22	-	-	2845	6.81	80.4	0.87	10.1	3.00
4	112R	B14	-	-	8.14	4.70	2900	7.86	83.5	0.85	13.2	2.86
5.5	112	B14	-	-	11.0	6.35	2910	7.71	84.5	0.85	18.0	2.66
7.5	112	B14	-	-	14.6	8.43	2910	7.62	87.2	0.85	24.6	3.03
9.2	132	B14	-	-	17.5	10.1	2925	8.72	86.3	0.88	30.0	3.33
11	132	B14	-	-	21.2	12.2	2925	8.75	88.8	0.84	35.9	3.66
15	160	B34	-	-	28.6	16.5	2940	8.56	85.3	0.89	48.7	3.10
18.5	160	B34	-	-	34.2	19.7	2945	8.80	87.3	0.90	60.0	4.06
22	160	B34	-	-	40.3	23.3	2945	8.61	89.5	0.88	71.2	4.79

* R = Reduced size of motor casing as compared to shaft extension and flange.

fhe-mott-2p50_a_te

THREE-PHASE 50 Hz 4-POLES MOTORS

MOTOR TYPE			INPUT CURRENT In (A)				DATA FOR 400 V 50 Hz					
kW	IEC SIZE *	CONSTRUCTION DESIGN	Δ 220-240 V	Y 380-415 V	Δ 380-415 V	Y 660-690 V	rpm	Is / In	n %	cos ϕ	Cn Nm	Cs/Cn
0.25	71	B5	1.71	0.99	-	-	1390	3.58	62.0	0.59	1.71	3.16
0.37	71	B5	2.53	1.46	-	-	1370	3.39	61.4	0.60	2.57	3.40
0.55	90R	B14	3.03	1.75	-	-	1390	3.95	68.2	0.67	3.77	2.45
0.75	90R	B5	4.04	2.33	-	-	1395	4.06	70.1	0.66	5.13	2.73
1.1	90	B5	4.35	2.51	-	-	1415	4.65	78.0	0.81	7.42	2.15
1.5	90	B5	5.85	3.38	-	-	1420	4.99	79.9	0.80	10.1	2.26
2.2	100	B5	8.28	4.78	-	-	1410	5.53	81.4	0.82	14.9	2.52
3	100	B5	11.0	6.37	-	-	1425	6.03	82.5	0.82	20.1	2.53
4	112	B5	-	-	8.38	4.84	1440	5.81	84.8	0.81	26.5	2.50
5.5	132	B14	-	-	11.3	6.52	1445	5.98	85.8	0.82	36.3	2.60
7.5	132	B14	-	-	15.2	8.78	1450	6.70	88.1	0.81	49.3	3.17

* R = Reduced size of motor casing as compared to shaft extension and flange.

fhe-mott-4p50_a_te

STANDARD MOTOR ELECTRICAL SPECIFICATIONS FHS - FHF SERIES

THREE-PHASE 50 Hz 2-POLES MOTORS

MOTOR TYPE				INPUT CURRENT				DATA FOR 400 V 50 Hz					
kW	IEC SIZE *	CONSTRUCTION		In (A)				rpm	Is / In	n %	cosφ	Cn Nm	Cs/Cn
		FHS	FHF	Δ	Y	Δ	Y						
0.75	80R	B5	-	3.50	2.02	-	-	2855	5.81	74.3	0.72	2.51	3.76
0.75	80	-	B3	3.72	2.15	-	-	2915	8.23	77.7	0.65	2.45	5.20
1.1	80	B5	B3	4.52	2.61	-	-	2875	6.78	78.9	0.77	3.65	3.49
1.5	90R	B5	-	5.98	3.45	-	-	2875	7.04	80.1	0.78	4.98	3.83
1.5	90	-	B3	5.66	3.27	-	-	2875	6.40	76.5	0.87	4.98	2.71
2.2	90R	B5	-	8.71	5.03	-	-	2860	7.32	81.1	0.78	7.34	4.12
2.2	90	-	B3	8.02	4.63	-	-	2870	6.94	80.0	0.86	7.32	2.85
3	100R	B5	-	10.8	6.22	-	-	2845	6.81	80.4	0.87	10.1	3.00
3	100	-	B3	10.6	6.10	-	-	2895	6.53	83.6	0.85	9.89	3.34
4	112R	B5	-	-	-	8.14	4.70	2900	7.86	83.5	0.85	13.2	2.86
4	112	-	B3	-	-	8.21	4.74	2915	7.41	82.2	0.86	13.1	2.58
5.5	132R	B5	-	-	-	11.0	6.35	2910	7.71	84.5	0.85	18.0	2.66
5.5	132	-	B3	-	-	10.7	6.18	2905	6.53	84.4	0.88	18.1	2.39
7.5	132R	B5	-	-	-	14.6	8.43	2910	7.62	87.2	0.85	24.6	3.03
7.5	132	-	B3	-	-	14.4	8.31	2915	7.37	85.8	0.88	24.6	2.69
11	160	B35	B3	-	-	21.6	12.5	2925	6.83	82.4	0.89	35.9	2.97
15	160	B35	B3	-	-	28.6	16.5	2940	8.56	85.3	0.89	48.7	3.10
18.5	160	B35	B3	-	-	34.2	19.7	2945	8.80	87.3	0.90	60.0	4.06
22	180R	B35	-	-	-	40.3	23.3	2945	8.61	89.5	0.88	71.2	4.79
22	180	-	B3	-	-	42.0	24.2	2930	7.10	90.0	0.84	71.0	2.50
30	200	B35	B3	-	-	55.0	31.8	2945	6.80	90.5	0.87	97.0	2.40
37	200	B35	B3	-	-	67.0	38.7	2940	7.20	91.5	0.87	120	2.50
45	225	B35	B3	-	-	81.0	46.8	2955	6.70	91.3	0.88	145	2.40
55	250	B35	B3	-	-	98.0	56.6	2960	6.70	92.1	0.88	177	2.40

* R = Reduced size of motor casing as compared to shaft extension and flange.

fhs-fhf-mott-2p50_a_te

THREE-PHASE 50 Hz 4-POLES MOTORS

MOTOR TYPE				INPUT CURRENT				DATA FOR 400 V 50 Hz					
kW	IEC SIZE *	CONSTRUCTION		In (A)				rpm	Is / In	n %	cosφ	Cn Nm	Cs/Cn
		FHS	FHF	Δ	Y	Δ	Y						
0.25	71	-	B3	1.71	0.99	-	-	1390	3.58	62.0	0.59	1.71	3.16
0.37	71	-	B3	2.53	1.46	-	-	1370	3.39	61.4	0.6	2.57	3.40
0.55	80	B5	B3	3.03	1.75	-	-	1390	3.95	68.2	0.67	3.77	2.45
0.75	80	B5	B3	4.04	2.33	-	-	1395	4.06	70.1	0.66	5.13	2.73
1.1	90	B5	B3	4.35	2.51	-	-	1415	4.65	78.0	0.81	7.42	2.15
1.5	90	B5	B3	5.85	3.38	-	-	1420	4.99	79.9	0.8	10.1	2.26
2.2	100	B5	B3	8.28	4.78	-	-	1410	5.53	81.4	0.82	14.9	2.52
3	100	B5	B3	11.0	6.37	-	-	1425	6.03	82.5	0.82	20.1	2.53
4	112	B5	B3	-	-	8.38	4.84	1440	5.81	84.8	0.81	26.5	2.50
5.5	132	B5	B3	-	-	11.3	6.52	1445	5.98	85.8	0.82	36.3	2.60
7.5	132	B5	B3	-	-	15.2	8.78	1450	6.70	88.1	0.81	49.3	3.17
11	160	B5	-	-	-	22.5	13.0	1460	5.20	87.0	0.81	72.0	2.00
15	160	B5	-	-	-	30.4	17.6	1460	5.90	88.0	0.81	96.0	2.30
18.5	180	B5	-	-	-	37.1	21.4	1465	6.20	88.0	0.82	120	2.30
22	180	B5	-	-	-	42.6	24.6	1465	6.30	89.0	0.84	143	2.40
30	200	B5	-	-	-	57.3	33.1	1465	6.60	90.0	0.84	195	2.40

* R = Reduced size of motor casing as compared to shaft extension and flange.

fhs-fhf-mott-4p50_a_te

FHE - FHS - FHF SERIES

HYDRAULIC PERFORMANCE TABLE 50 Hz, 2 POLES

PUMP TYPE	POWER		Q = DELIVERY																											
			l/min	0	100	150	200	250	300	400	500	600	700	800	1000	1200	1400	1600	1800	2000	2300	2500	3000	3600	4500	5300	6200			
	m³/h	0	6	9	12	15	18	24	30	36	42	48	60	72	84	96	108	120	138	150	180	216	270	318	372					
	kW	HP	H = TOTAL HEAD METERS COLUMN OF WATER																											
32-125/07*	0,75	1	16,9	15,8	14,6	13	11	8,7																						
32-125/11*	1,1	1,5	21,9	20,7	19,6	18,1	16,3	14,2	9																					
32-160/15*	1,5	2	27,3	25,9	24,5	22,7	20,5	17,8	11																					
32-160/22*	2,2	3	34,7	33,3	32	30,2	28	25,3	18,8																					
32-200/30	3	4	44,2	41,5	39,8	37,7	35,2	32,2	24,6																					
32-200/40	4	5,5	54,4	52	50	47,7	45	41,9	34,6	26																				
32-250/55	5,5	7,5	79	74,7	71	67	62	55,6	37																					
32-250/75	7,5	10	99	95,3	92	88	83	76	58,3																					
40-125/11*	1,1	1,5	14,5				13,7	13	11,3	8,8	5,8																			
40-125/15*	1,5	2	18,1				17,2	16,7	15	12,7	9,6	6																		
40-125/22*	2,2	3	24,5				23,5	23	21	18,8	15,8	12,3	8,2																	
40-160/30	3	4	31,5				30	29,5	27,5	24,5	21,5	17,4																		
40-160/40	4	5,5	38				37	36	34	31,5	28,5	24,5	20																	
40-200/55	5,5	7,5	46,5				45	44	41,5	38,5	34,5	29,5																		
40-200/75	7,5	10	57				55	54	52	49	45,5	41	36																	
40-250/**	11	15	64				60	59	56	53	49	45	39																	
40-250/110	11	15	72				68	67	65	61	57	52	47																	
40-250/150	15	20	85				81	80	77	74	70	65	60																	
50-125/22*	2,2	3	17							16	15,1	14	12,8	9,8	6,2															
50-125/30	3	4	20							19,5	18,8	18	16,9	14,1	10,5															
50-125/40	4	5,5	24							23,5	23	22,5	21,5	19	15,8	11,8														
50-160/55	5,5	7,5	32							31,5	30,5	29,5	28	24,5	20,5	14,8														
50-160/75	7,5	10	40							39	38	37	36	33	29	24														
50-200/**	11	15	50,5							48	47	45	43	38,5	32,5	25,5														
50-200/110	11	15	58							55	54	53	50	46	40	33														
50-250/150	15	20	68							65	64	63	61	56	50	41														
50-250/185	18,5	25	77							74	73	72	70	66	60	52														
50-250/220	22	30	86							84	83	81	80	75	70	61	51													
65-125/40	4	5,5	19										17,5	16	14,5	13	11													
65-125/55	5,5	7,5	23										21,5	20,5	19	17,5	16	14												
65-125/75	7,5	10	27										26	25	24,5	23	22	20	18											
65-160/**	11	15	33										32	31	30	28	26	24	21,5											
65-160/110	11	15	36										35	34	33	31,5	30	28	25,5											
65-160/150	15	20	42										41,5	41	40	38,5	37	35	33	29,5										
65-200/150	15	20	45										46	45	43	41	39	36,5	34											
65-200/185	18,5	25	52										53	52	51	49	47	44,5	42											
65-200/220	22	30	59										60	59	58	56	54	52	49,5	44,5										
65-250/200	22	30	62										62	60	58	55,5	52	48,5	44	36,5										
65-250/300	30	40	76										75	74	73	70,5	67,5	64	61	54										
65-250/370	37	50	90										88,5	87	86	84	81	78	74,5	68,5										
80-160/110	11	15	27												27,5	27	26	24,5	22,5	21	16									
80-160/150	15	20	33												33	32	31	30	28	26	22									
80-160/185	18,5	25	39												38,5	37,5	36,5	35,5	34	32,5	28,5	22								
80-200/220	22	30	48												47,5	46,5	45	43,5	41	38,5	32,5									
80-200/300	30	40	60												60	59	58	57	54,5	52	47	39								
80-250/370	37	50	71												71	69	67	65	61	58	49									
80-250/450	45	61	80												81	80	78	76	72,5	70	62									
80-250/550	55	75	92												94	93	91	89,5	86,5	84	77	66								
100-160/220	22	30	33,3																31,8	31	30,3	28,2	25,5	20,3	15,3					
100-160/300	30	40	43																40,8	40	39,2	37,2	34,7	29,3	23,7	16				
100-200/300	30	40	49,5																47	45,8	44,7	41,5	37,3	29,3	20					
100-200/370	37	50	56																54,3	53,3	52,4	49,8	45,8	38	29,5					

* * / 92 - 9,2 kW - 12,5 HP - FHE

/ 110A - 11 kW - 15 HP - FHS-FHF

* single-phase version (FHEM) also available



FHE - FHS - FHF SERIES

HYDRAULIC PERFORMANCE TABLE 50 Hz, 4 POLES

PUMP TYPE	POWER		Q = DELIVERY																			
			l/min	0	50	75	100	125	150	175	200	250	300	400	500	600	800	1000	1200	1400	1600	1800
			m³/h	0	3	4,5	6	7,5	9	10,5	12	15	18	24	30	36	48	60	72	84	96	108
	H = TOTAL HEAD METERS COLUMN OF WATER																					
kW	HP																					
32-125/02A	0,25	0,33	4,4	4,2	3,9	3,5	3,1	2,5	1,9													
32-125/02	0,25	0,33	5,5	5,2	5	4,7	4,3	3,8	3,1	2,4												
32-160/02	0,25	0,33	6,5	6,1	5,8	5,4	4,9	4,3	3,6	2,8												
32-160/03	0,37	0,5	8,5	8	7,7	7,3	6,9	6,3	5,7	4,9												
32-200/03	0,37	0,5	9,9	9,2	8,7	8,1	7,4	6,7	5,9	5												
32-200/05	0,55	0,75	12,5	11,9	11,3	10,7	10,1	9,3	8,4	7,5	5,4											
32-250/07	0,75	1	19,4	18,5	17,7	16,7	15,5	13,8	11,7	9												
32-250/11	1,1	1,5	22,5	21,6	20,8	19,9	18,6	17	15	12,5												
40-125/02A	0,25	0,33	4				3,9	3,8	3,6	3,4	2,9	2,2										
40-125/02	0,25	0,33	5,1				4,9	4,7	4,5	4,3	3,8	3,1										
40-125/03	0,37	0,5	6,3				6	5,8	5,6	5,4	4,9	4,2	2,3									
40-160/03	0,37	0,5	7,4				6,9	6,7	6,4	6,1	5,4	4,6										
40-160/05	0,55	0,75	9,1				8,7	8,5	8,2	7,9	7,2	6,3	4,3									
40-200/07	0,75	1	11,6				11	10,8	10,5	10,2	9,4	8,4										
40-200/11	1,1	1,5	14,1				13,4	13,2	12,9	12,6	11,8	10,8	8,3									
40-250/11	1,1	1,5	15				14	13,7	13,3	13	12,2	11,2	8,5									
40-250/15	1,5	2	17,5				16,5	16,2	15,8	15,5	14,6	13,5	10,8									
40-250/22	2,2	3	21				19,7	19,3	19	18,5	17,6	16,6	14	10,6								
40-125/03A	0,37	0,5	4,3							4,2	4,1	3,9	3,4	2,7	1,8							
50-125/03	0,37	0,5	5							4,8	4,6	4,4	3,9	3,3	2,4							
50-125/05	0,55	0,75	5,9							5,8	5,7	5,5	5,1	4,4	3,5							
50-160/07	0,75	1	7,9							7,8	7,6	7,4	6,8	5,8	4,7							
50-160/11	1,1	1,5	9,7							9,5	9,3	9,1	8,5	7,6	6,5							
50-200/11	1,1	1,5	12,1							11,6	11,3	10,9	9,9	8,6	7,1							
50-200/15	1,5	2	13,9							13,3	13	12,6	11,6	10,2	8,6							
50-250/22A	2,2	3	16,5							16,2	16	15,6	14,6	13,2	11,4							
50-250/22	2,2	3	18,6							18	17,8	17,4	16,5	15,2	13,4							
50-250/30	3	4	21							20,5	20,3	20	19	17,8	16,2	11,8						
65-125/05	0,55	0,75	4,6										4,1	3,8	3,4	2,5						
65-125/07	0,75	1	5,6										5,1	4,9	4,5	3,7	2,6					
65-125/11	1,1	1,5	6,6										6,3	6,1	5,9	5,2	4,2					
65-160/11	1,1	1,5	8										7,6	7,3	7	6	4,8	3,4				
65-160/15	1,5	2	8,8										8,5	8,3	8	7,1	6	4,6				
65-160/22	2,2	3	10,3										10,1	9,8	9,5	8,8	7,8	6,5	5			
65-200/15	1,5	2	10										10	9,6	9,1	7,9	6,4	4,6				
65-200/22	2,2	3	12,4										12,5	12,2	11,8	10,7	9,3	7,6				
65-200/30	3	4	14,4										14,5	14,3	13,8	12,7	11,3	9,6	7,5			
65-250/30	3	4	15,4										15	14,6	13,9	12	9,7	6,7				
65-250/40	4	5,5	19										18,8	18,3	17,8	15,7	14,4	11,7				
65-250/50	5,5	7,5	22,3										21,7	21,3	20,9	19,5	17,7	15,1	12			
65-315/75	7,5	10	30,8												30	29,8	28,8	27,6	25,8	23,3	19,7	
65-315/110	11	15	36,2												35,7	35,5	34,7	33,5	31,8	29,8	31,8	23

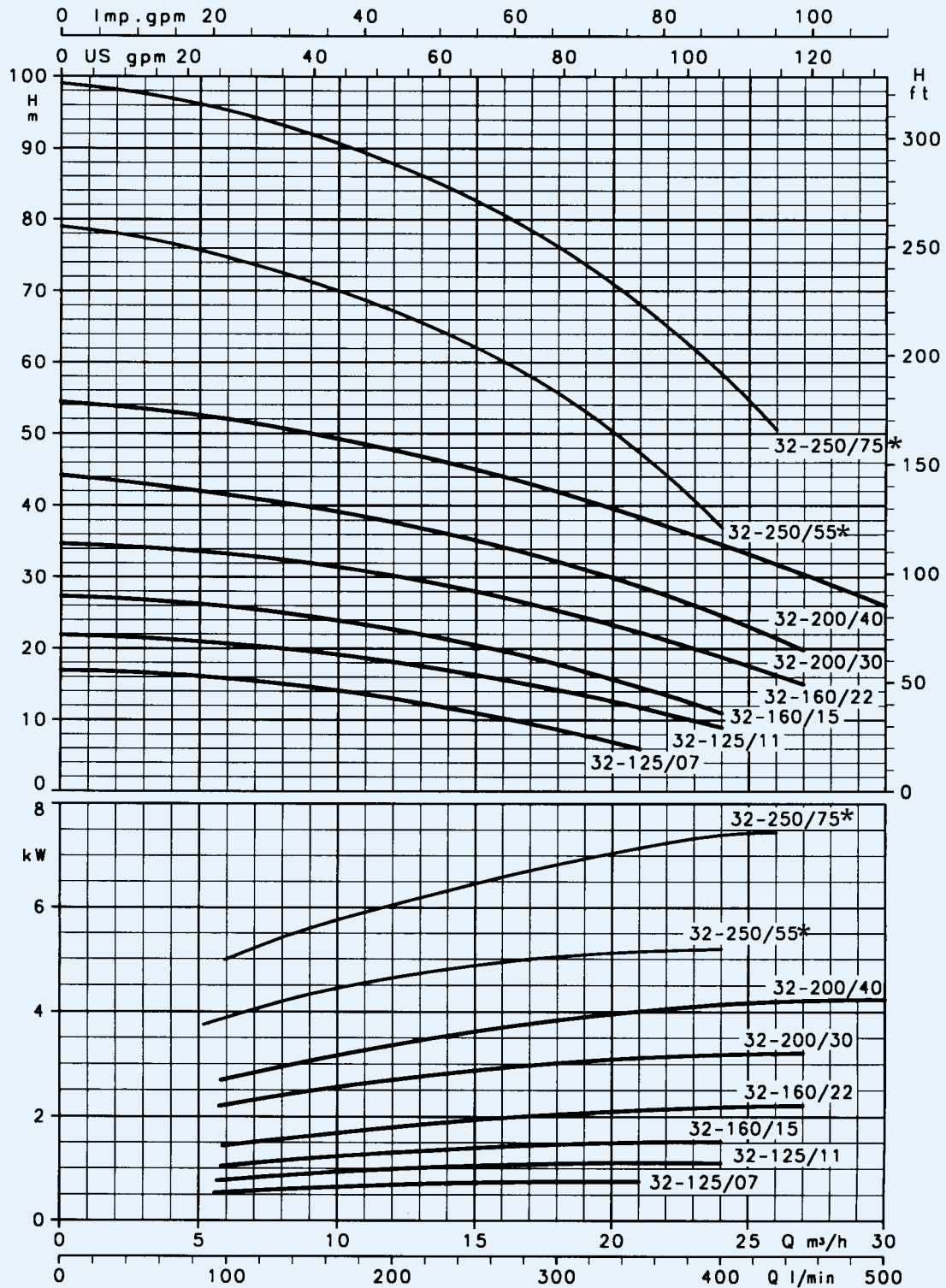
FHE - FHS - FHF SERIES

HYDRAULIC PERFORMANCE TABLE 50 Hz, 4 POLES

PUMP TYPE	POWER		Q = DELIVERY																			
			l/min	0	600	800	1000	1200	1600	1800	2200	2500	2900	3400	2900	4400	5200	6000	6800	7800	8900	10000
			m³/h	0	36	48	60	72	96	108	132	150	174	204	234	264	312	360	408	468	534	600
	H = TOTAL HEAD METERS COLUMN OF WATER																					
	kW	HP																				
80-160/15	1,5	2	7,2	7,4	7	6,4	5,5	3,5	2,3													
80-160/22	2,2	3	8,5	8,8	8,5	8	7,4	5,7	4,5													
80-200/30	3	4	11,2	11,3	10,8	10,1	9,2	6,6	5													
80-200/40	4	5,5	13,8	14,3	14	13,3	12,4	10	8,5													
80-250/40	4	5,5	16,5	16,4	15,8	14,8	13,2	9	6,3													
80-250/55	5,5	7,5	19,8	19,9	19,3	18,4	17,2	13,5	11,1													
80-250/75	7,5	10	23,6	24,8	23,3	22,5	21,3	18,1	16	11,3												
80-315/110	11	15	31,5		30,7	30	29	26,3	24,7	19,8	14,2											
80-315/150	15	20	38,3		37,8	37,2	36,4	33,8	32,2	27,8	23,8	16,3										
100-160/30	3	4	9				8,2	7,5	7,1	5,8	4,9											
100-200/40	4	5,5	12,4				11,5	10,4	9,8	7,8	6,2											
100-200/55	5,5	7,5	15				14,3	13,5	13	11,3	10	7,7										
100-250/75	7,5	10	21				20	18,8	18	15,7	13,8	10										
100-250/110	11	15	27				26,2	25,3	24,5	22,5	20,7	17,8	13									
100-315/150	15	20	31,2				30,2	29	28,2	26	24,3	21,2	16,2									
100-315/185	18,5	25	34,8				34	33	32,3	30,5	29	26,2	21,7	16								
100-315/220	22	30	38,8				37,8	37	36,3	34,6	33,3	30,8	26,8	21,5	15,3							
125-200/55	5,5	7,5	11							8,8	8,2	7,5	6,3	5,2	3,7							
125-200/75	7,5	10	15							12,8	12,3	11,6	10,3	9	7,3							
125-250/110	11	15	19,4							18	17,3	16	14,2	12,2	9,7	5,4						
125-250/150	15	20	23,4							22,4	22	21	19,3	17,3	15	10,8						
125-250/185	18,5	25	26							25,2	24,8	24,2	22,8	21,3	19,2	15,3	11					
125-315/220	22	30	30,6							29,3	28,8	27,8	26,3	24,3	21,8	17,2	11					
125-315/300	30	40	36,3							35,5	35	34,3	32,8	31,3	29,2	25	19,3	12,5				
150-250/150	15	20	18,3									17,3	16,7	16	15	13,3	11,6	9,5	6,6			
150-250/185	18,5	25	21,5									20,7	20	19,5	18,7	17,2	15,3	13,3	10,4	6,5		
150-250/220	22	30	24									23,3	22,7	22,2	21,4	20	18,3	16,4	13,5	9,8		
150-250/300	30	40	25,5									24,8	24,4	23,8	23	21,7	20,3	18,3	15,4	11,7		
150-315/300	30	40	30,4									29,5	28,8	28,3	27,4	25,8	28,8	21,4	18	14	8,5	

FH 32 SERIES

OPERATING CHARACTERISTICS at 2900 rpm 50 Hz, 2 POLES

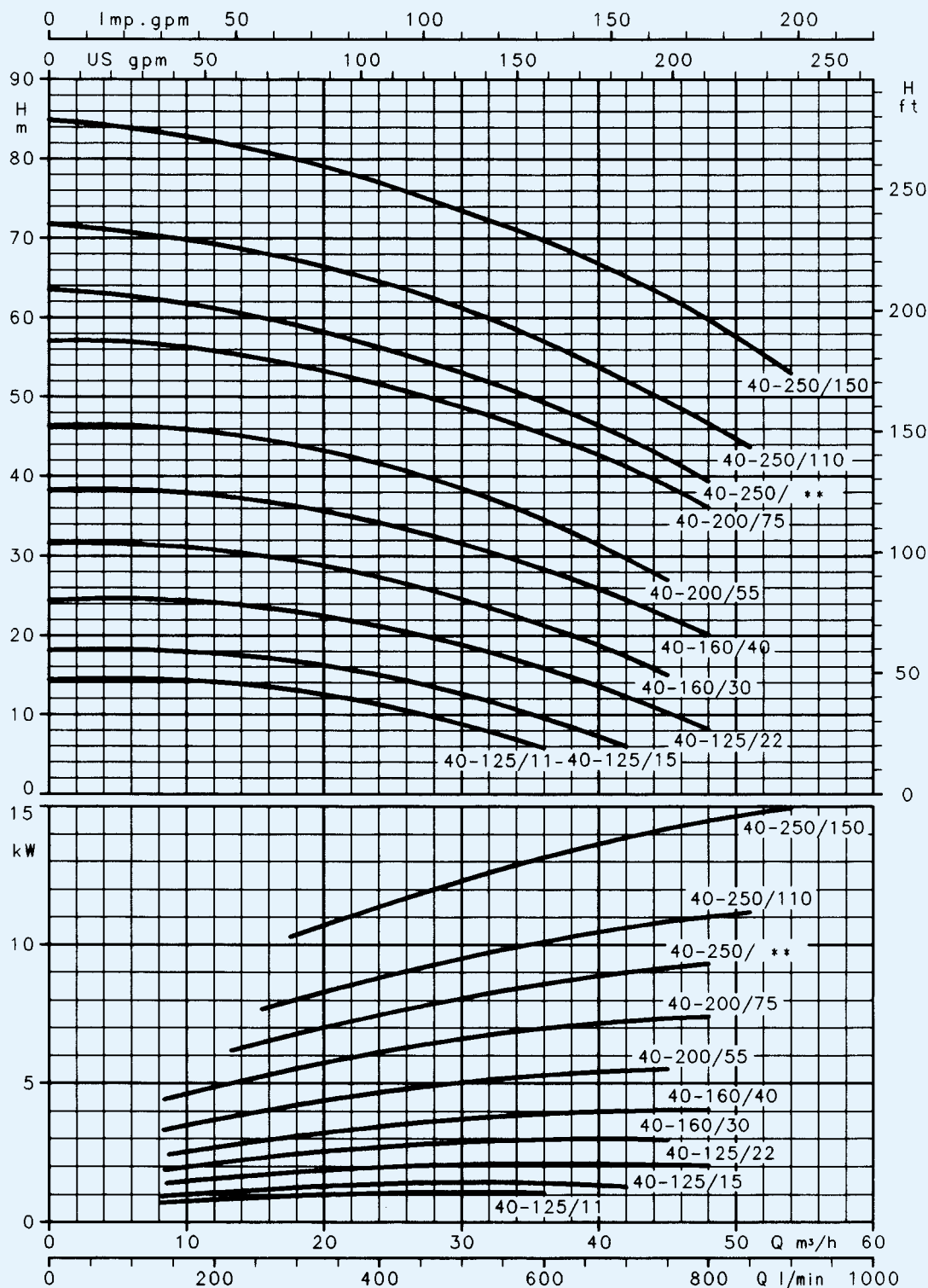


* 2FHE Version

Please verify with the price list the availability of model type FHE-FHS-FHF.
These performances are valid for liquids with density $\rho = 1.0 \text{ kg/dm}^3$ and kinematic viscosity $\gamma = 1 \text{ mm}^2/\text{sec}$.

FH 40 SERIES

OPERATING CHARACTERISTICS at 2900 rpm 50 Hz, 2 POLES



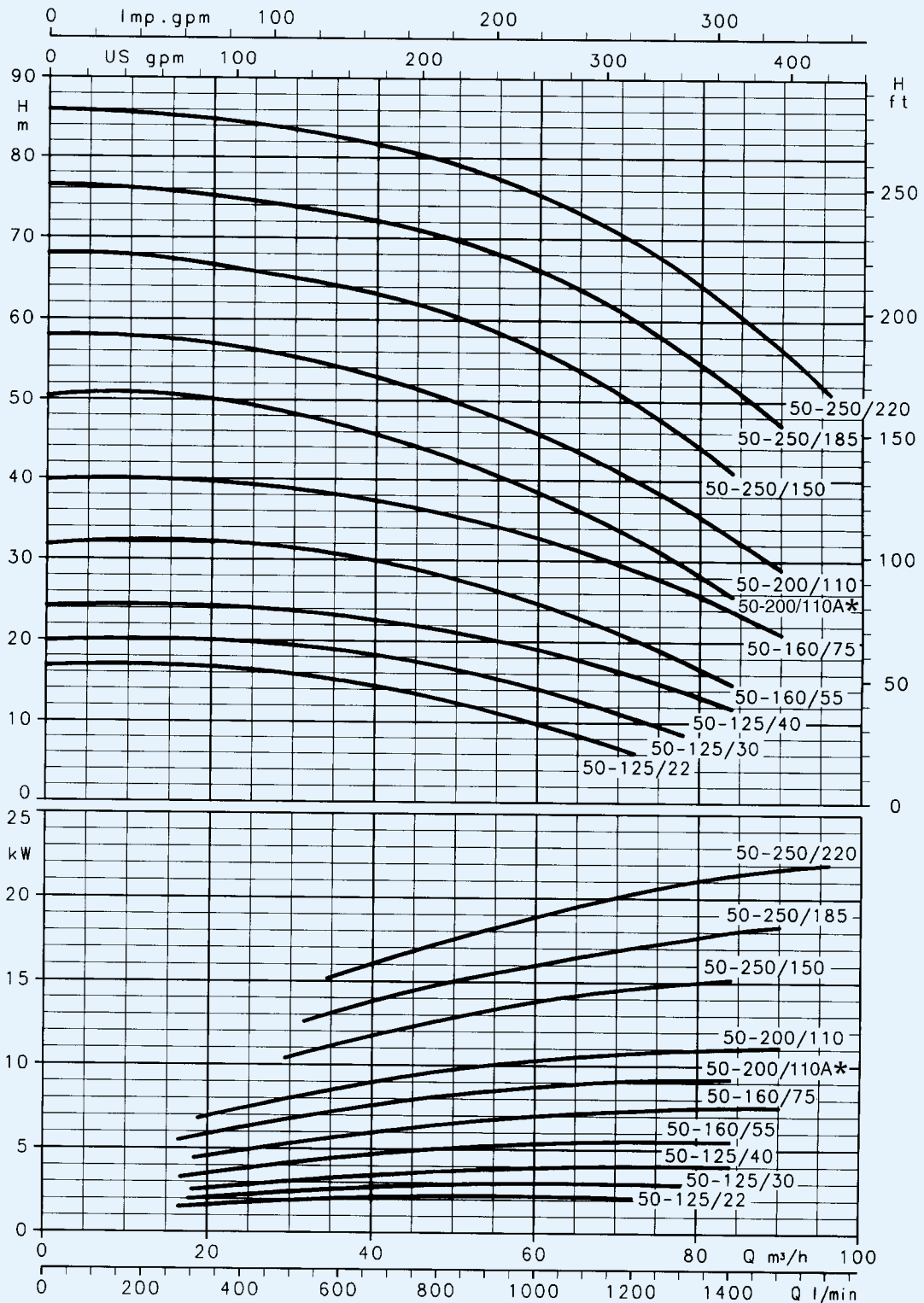
** /92 - 9,2 - 12,5HP for version FHE - /110A - 11kW - 15HP for version FHS-FHF

Please verify with the price list the availability of model type FHE-FHS-FHF

These performances are valid for liquids with density $\rho = 1.0 \text{ kg/dm}^3$ and kinematic viscosity $\gamma = 1 \text{ mm}^2/\text{sec}$.

FH 50 SERIES

OPERATING CHARACTERISTICS at 2900 rpm 50 Hz, 2 POLES

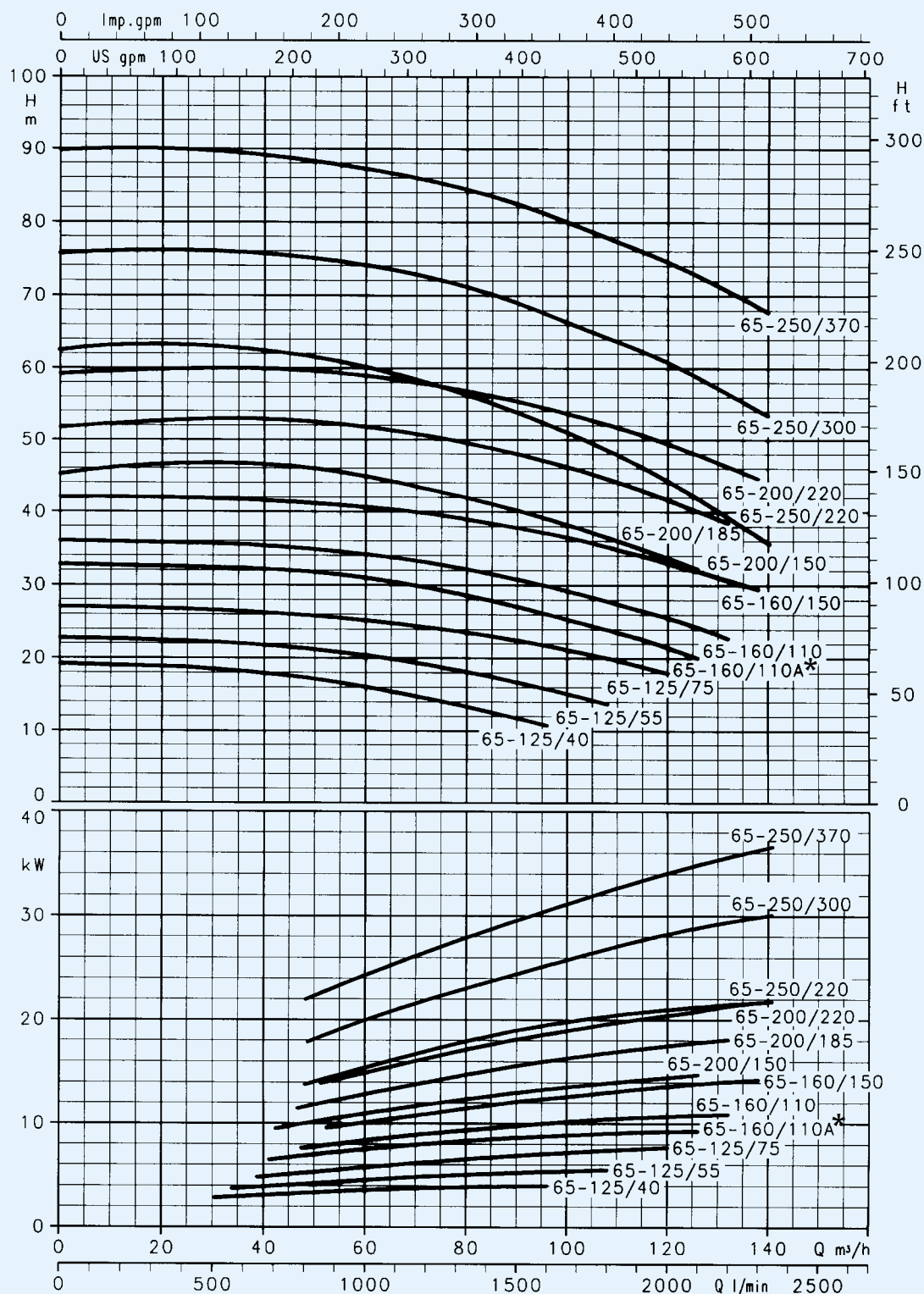


* /92 - 9,2 kW - 12,5 HP for version FHE - /110A - 11 kW - 15 HP for version FHS-FHF

Please verify with the price list the availability of model type FHE-FHS-FHF
 These performances are valid for liquids with density $\rho = 1.0 \text{ kg/dm}^3$ and kinematic viscosity $\gamma = 1 \text{ mm}^2/\text{sec}$.

FH 65 SERIES

OPERATING CHARACTERISTICS at 2900 rpm 50 Hz, 2 POLES

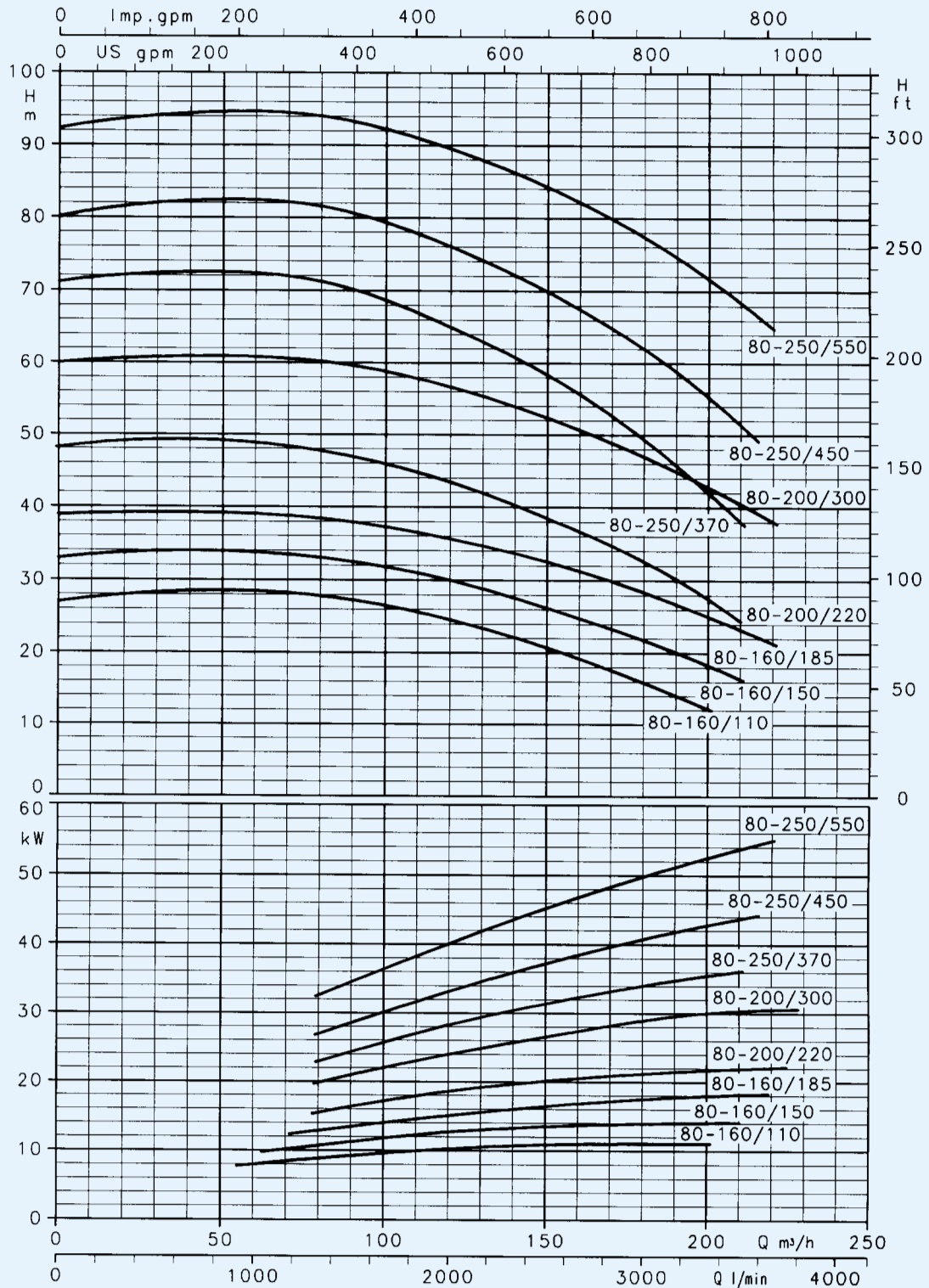


* /92 - 9,2 kW - 12,5 HP for version FHE - /110A - 11 kW - 15 HP for version FHS-FHF

Please verify with the price list the availability of model type FHE-FHS-FHF
 These performances are valid for liquids with density $\rho = 1.0 \text{ kg/dm}^3$ and kinematic viscosity $\gamma = 1 \text{ mm}^2/\text{sec}$.

FH 80 SERIES

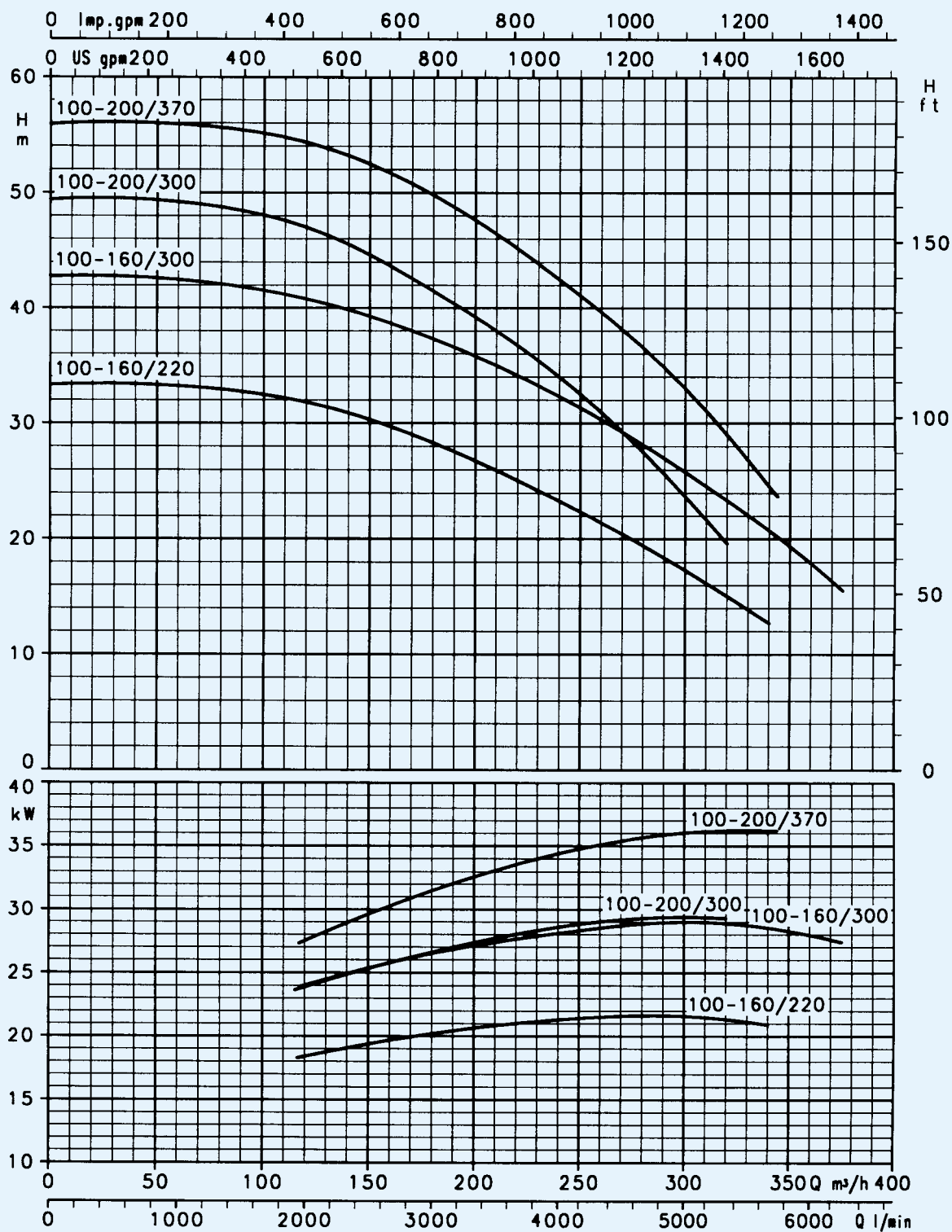
OPERATING CHARACTERISTICS at 2900 rpm 50 Hz, 2 POLES



Please verify with the price list the availability of model type FHE-FHS-FHF.
 These performances are valid for liquids with density $\rho = 1.0 \text{ kg/dm}^3$ and kinematic viscosity $\gamma = 1 \text{ mm}^2/\text{sec}$.

FH 100 SERIES

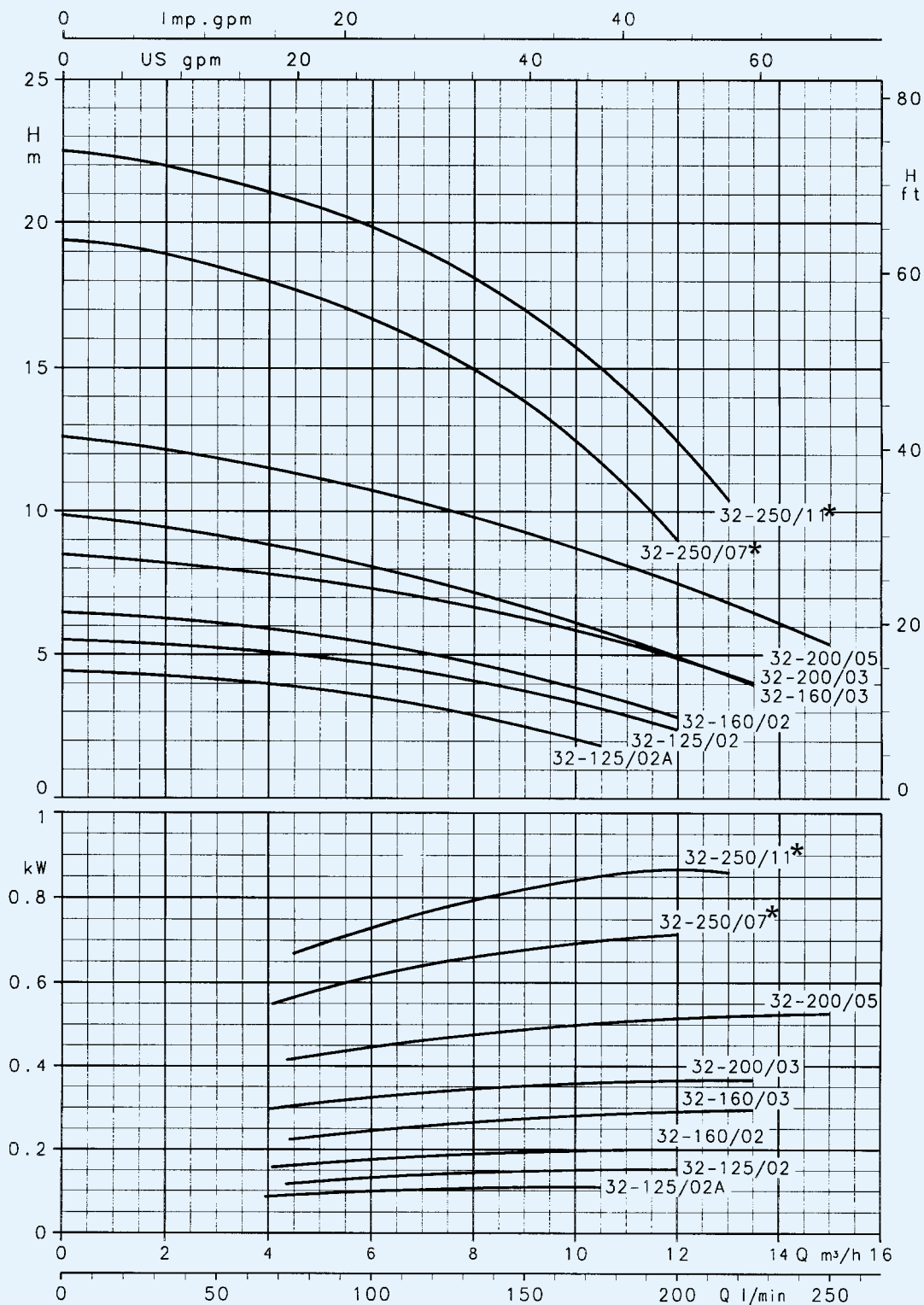
OPERATING CHARACTERISTICS at 2900 rpm 50 Hz, 2 POLES



Please verify with the price list the availability of model type FHE-FHS-FHF
 These performances are valid for liquids with density $\rho = 1.0 \text{ kg/dm}^3$ and kinematic viscosity $\gamma = 1 \text{ mm}^2/\text{sec}$.

FH4 32 SERIES

OPERATING CHARACTERISTICS at 1450 rpm 50 Hz, 4 POLES

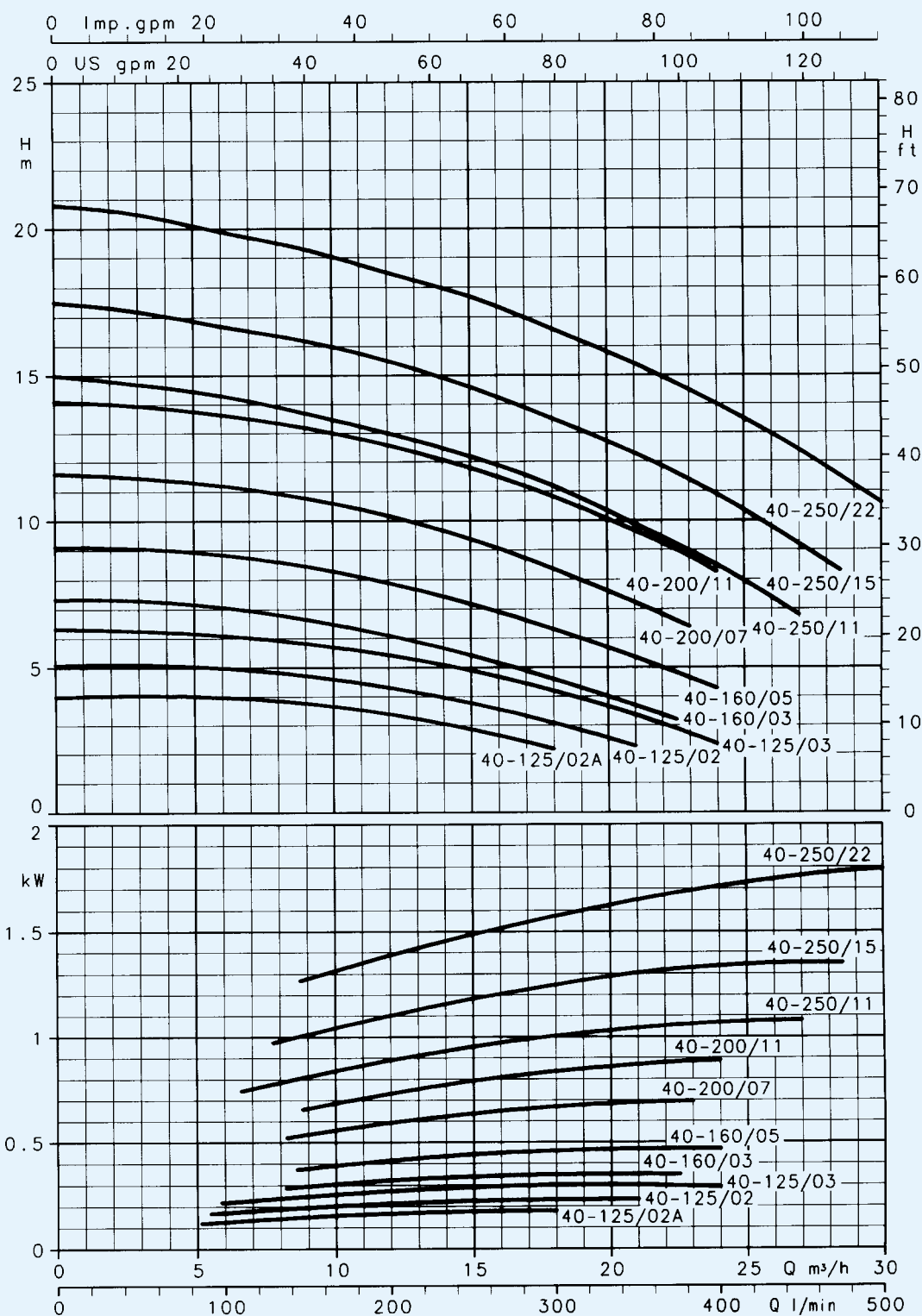


* Version 2FHE4

Please verify with the price list the availability of model type FHE-FHS-FHF
 These performances are valid for liquids with density $\rho = 1.0 \text{ kg/dm}^3$ and kinematic viscosity $\gamma = 1 \text{ mm}^2/\text{sec}$.

FH4 40 SERIES

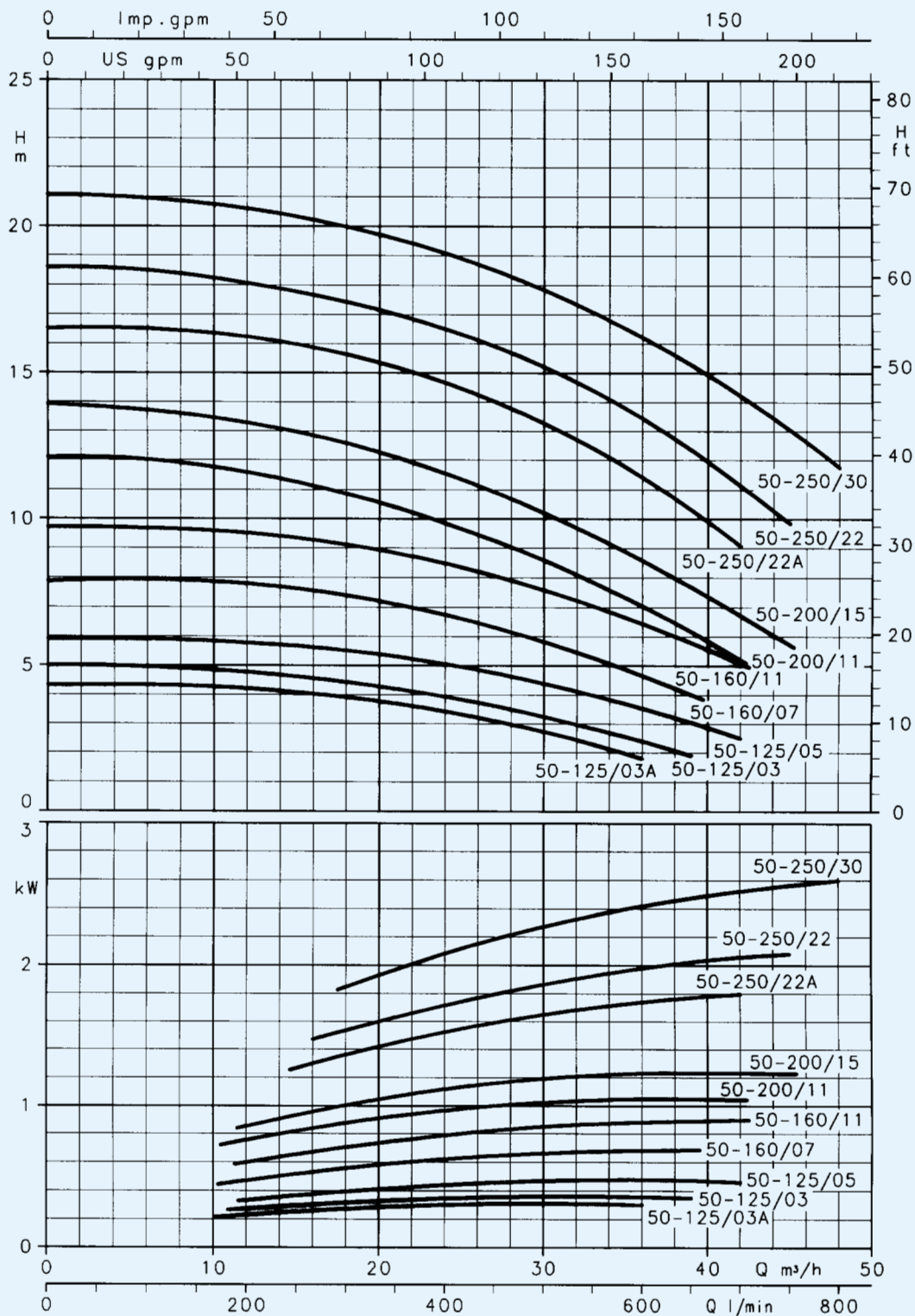
OPERATING CHARACTERISTICS at 1450 rpm 50 Hz, 4 POLES



Please verify with the price list the availability of model type FHE-FHS-FHF
 These performances are valid for liquids with density $\rho = 1.0 \text{ kg/dm}^3$ and kinematic viscosity $\gamma = 1 \text{ mm}^2/\text{sec}$.

FH4 50 SERIES

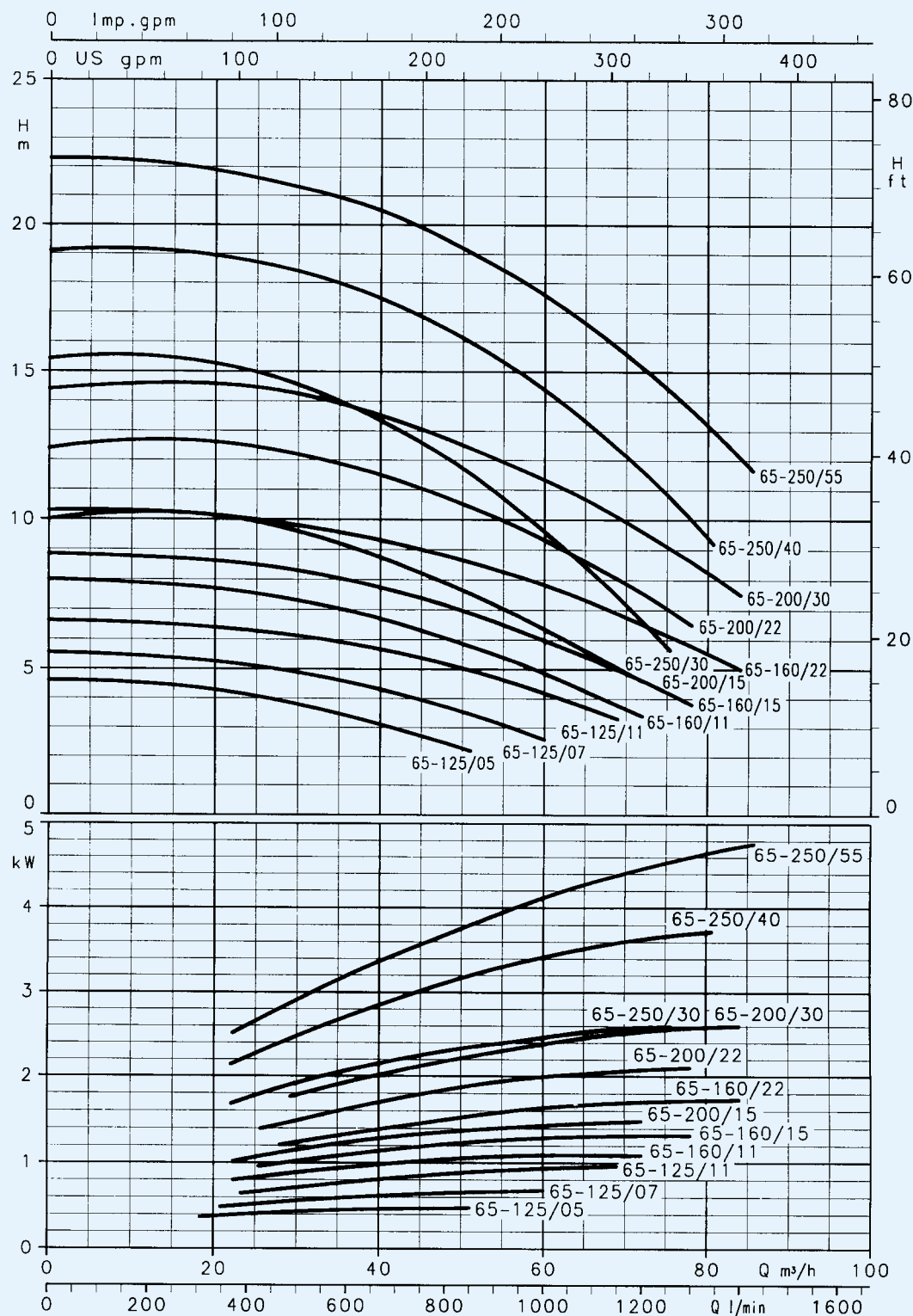
OPERATING CHARACTERISTICS at 1450 rpm 50 Hz, 4 POLES



Please verify with the price list the availability of model type FHE-FHS-FHF
 These performances are valid for liquids with density $\rho = 1.0 \text{ kg/dm}^3$ and kinematic viscosity $\gamma = 1 \text{ mm}^2/\text{sec}$.

FH4 65 SERIES

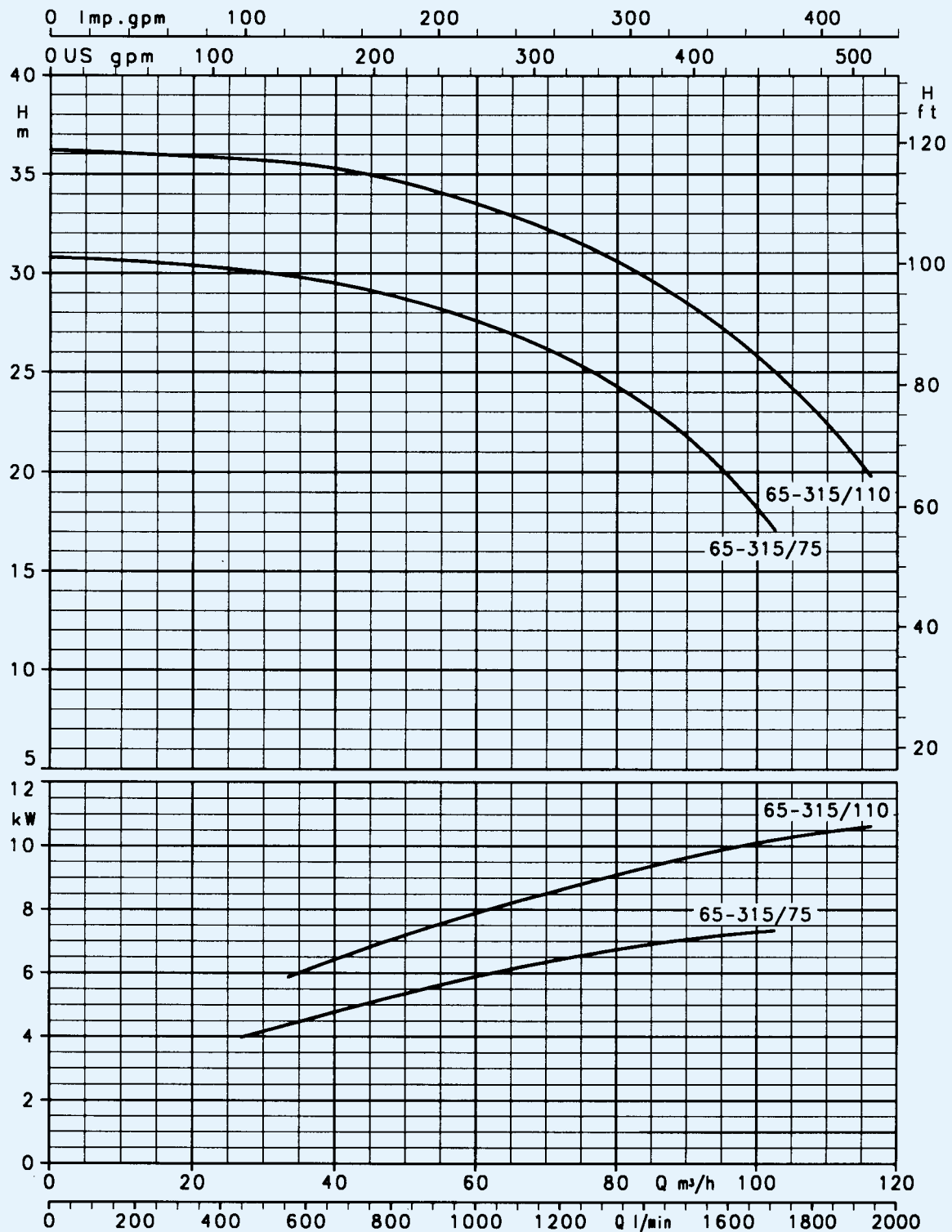
OPERATING CHARACTERISTICS at 1450 rpm 50 Hz, 4 POLES



Please verify with the price list the availability of model type FHE-FHS-FHF
 These performances are valid for liquids with density $\rho = 1.0 \text{ kg/dm}^3$ and kinematic viscosity $\gamma = 1 \text{ mm}^2/\text{sec}$.

FH4 65 - 315 SERIES

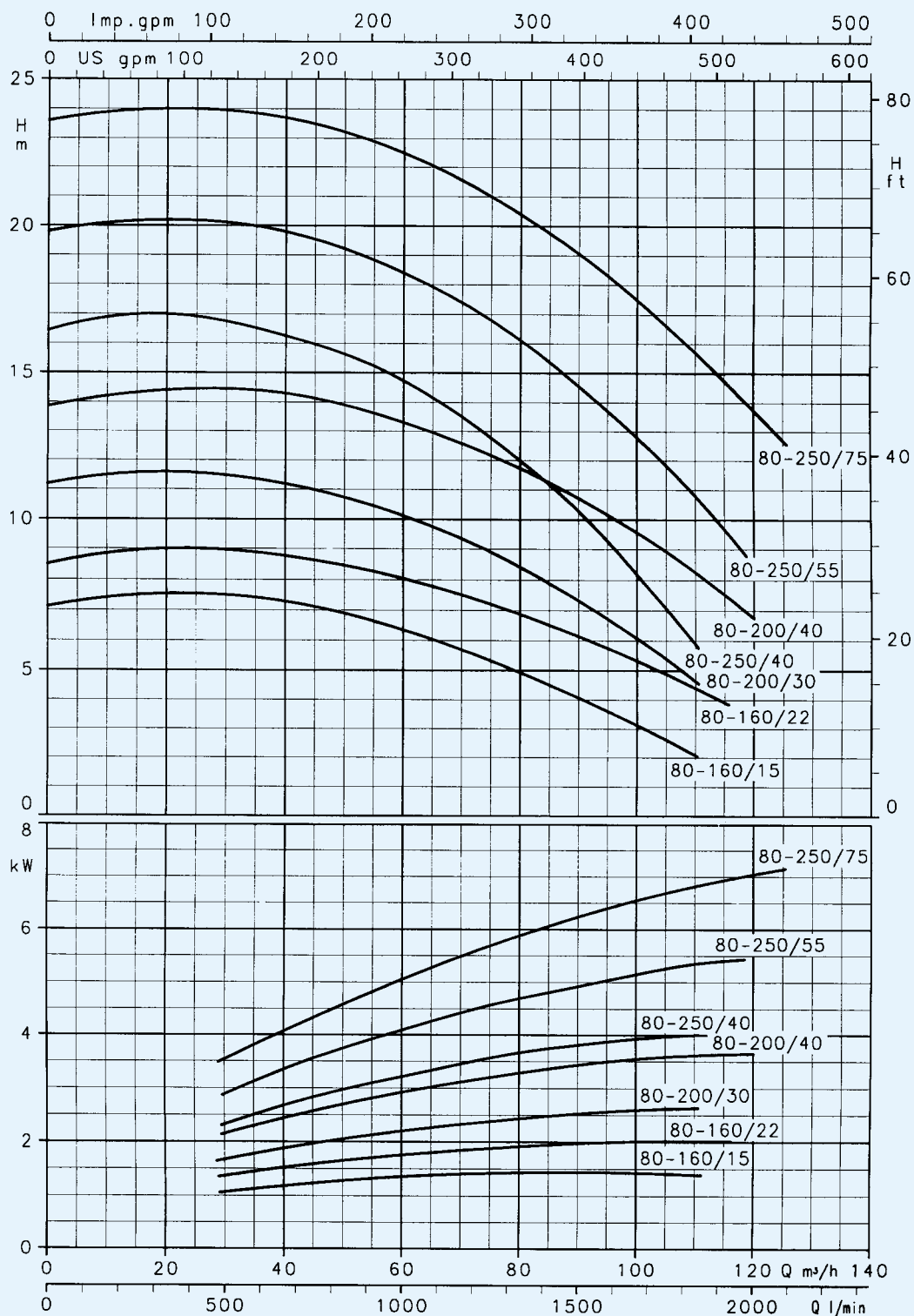
OPERATING CHARACTERISTICS at 1450 rpm 50 Hz, 4 POLES



Please verify with the price list the availability of model type FHE-FHS-FHF
 These performances are valid for liquids with density $\rho = 1.0 \text{ kg/dm}^3$ and kinematic viscosity $\gamma = 1 \text{ mm}^2/\text{sec}$.

FH4 80 SERIES

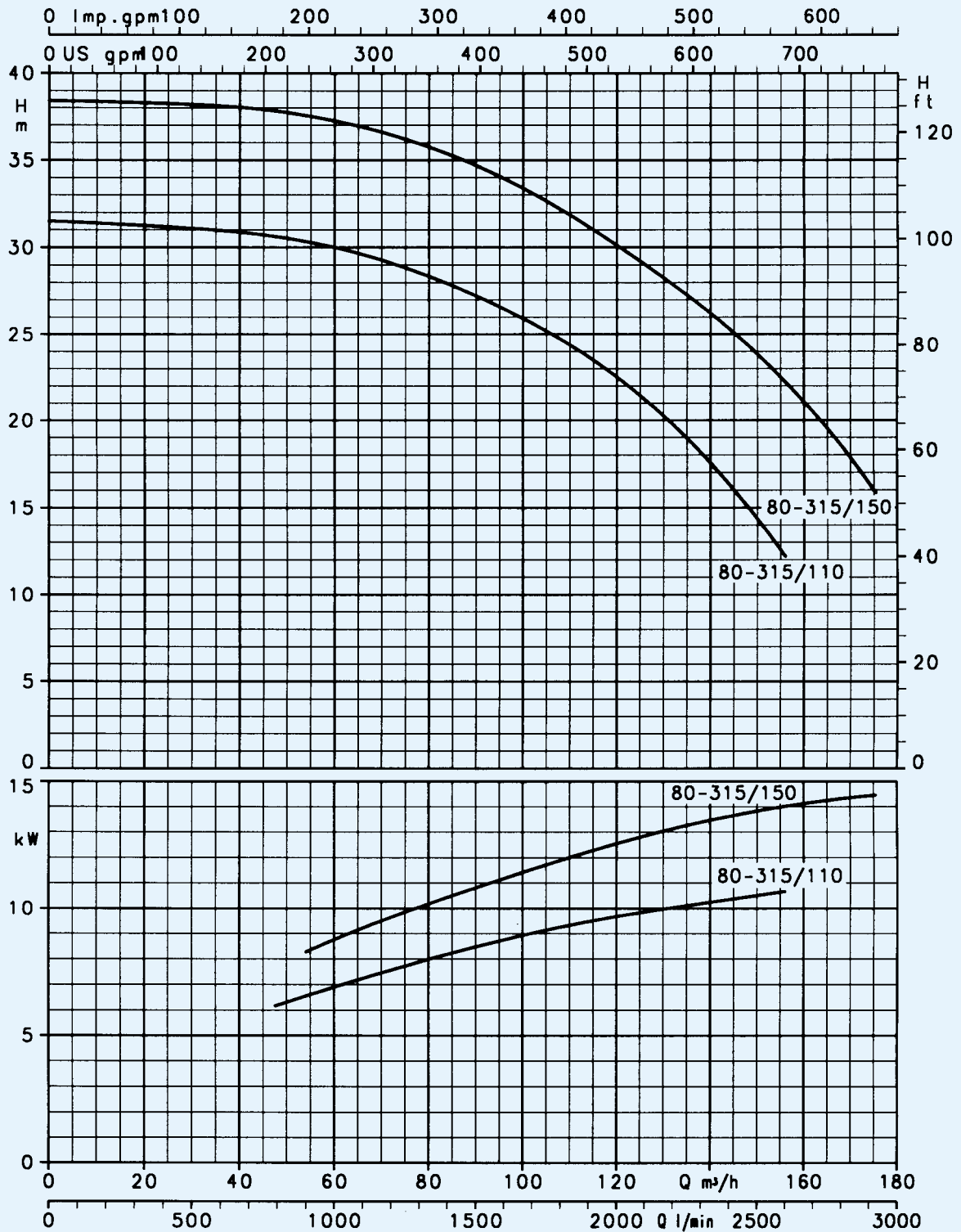
OPERATING CHARACTERISTICS at 1450 rpm 50 Hz, 4 POLES



Please verify with the price list the availability of model type FHE-FHS-FHF
 These performances are valid for liquids with density $\rho = 1.0 \text{ kg/dm}^3$ and kinematic viscosity $\gamma = 1 \text{ mm}^2/\text{sec}$.

FH4 80 - 315 SERIES

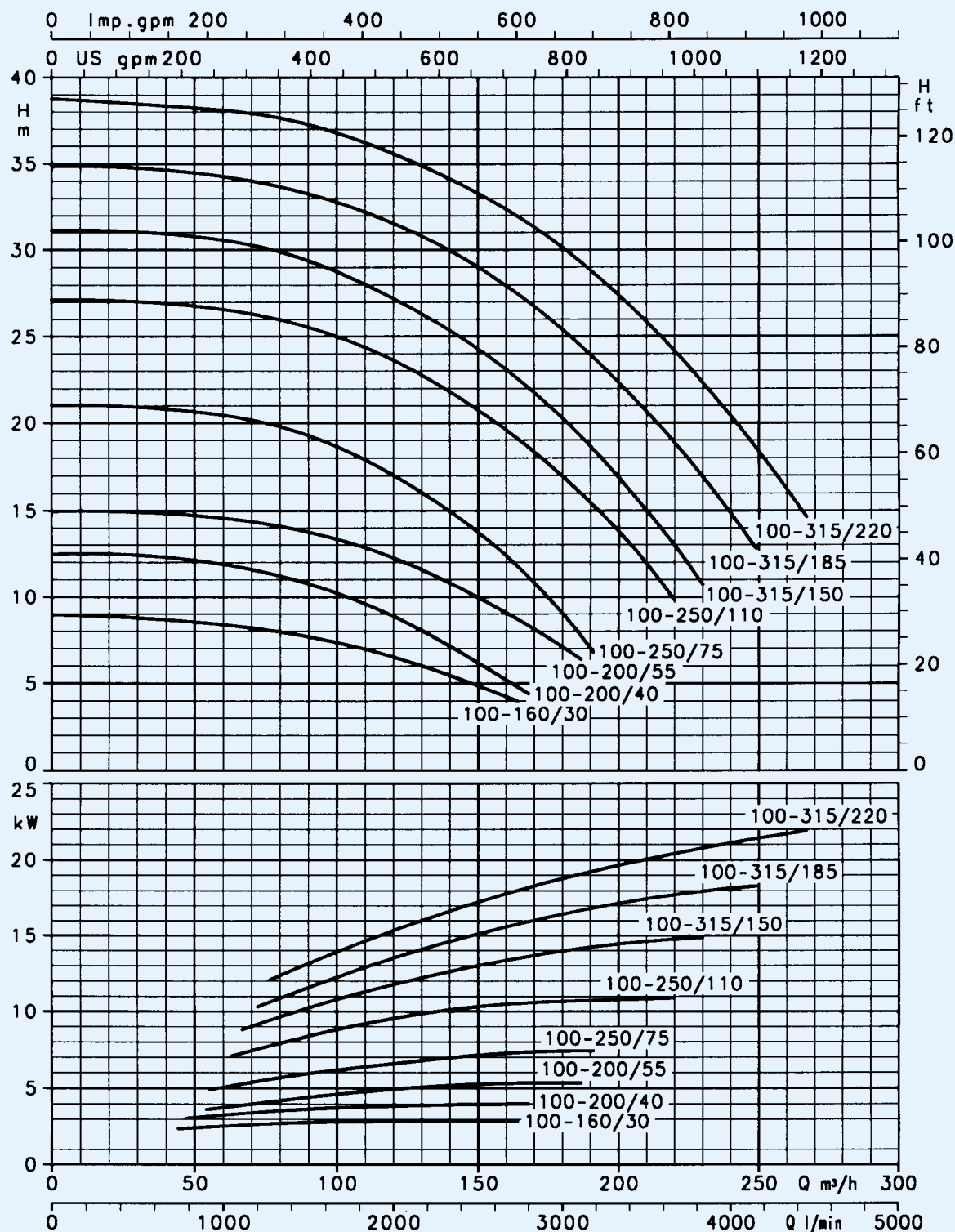
OPERATING CHARACTERISTICS at 1450 rpm 50 Hz, 4 POLES



Please verify with the price list the availability of model type FHE-FHS-FHF
 These performances are valid for liquids with density $\rho = 1.0 \text{ kg/dm}^3$ and kinematic viscosity $\gamma = 1 \text{ mm}^2/\text{sec}$.

FH4 100 SERIES

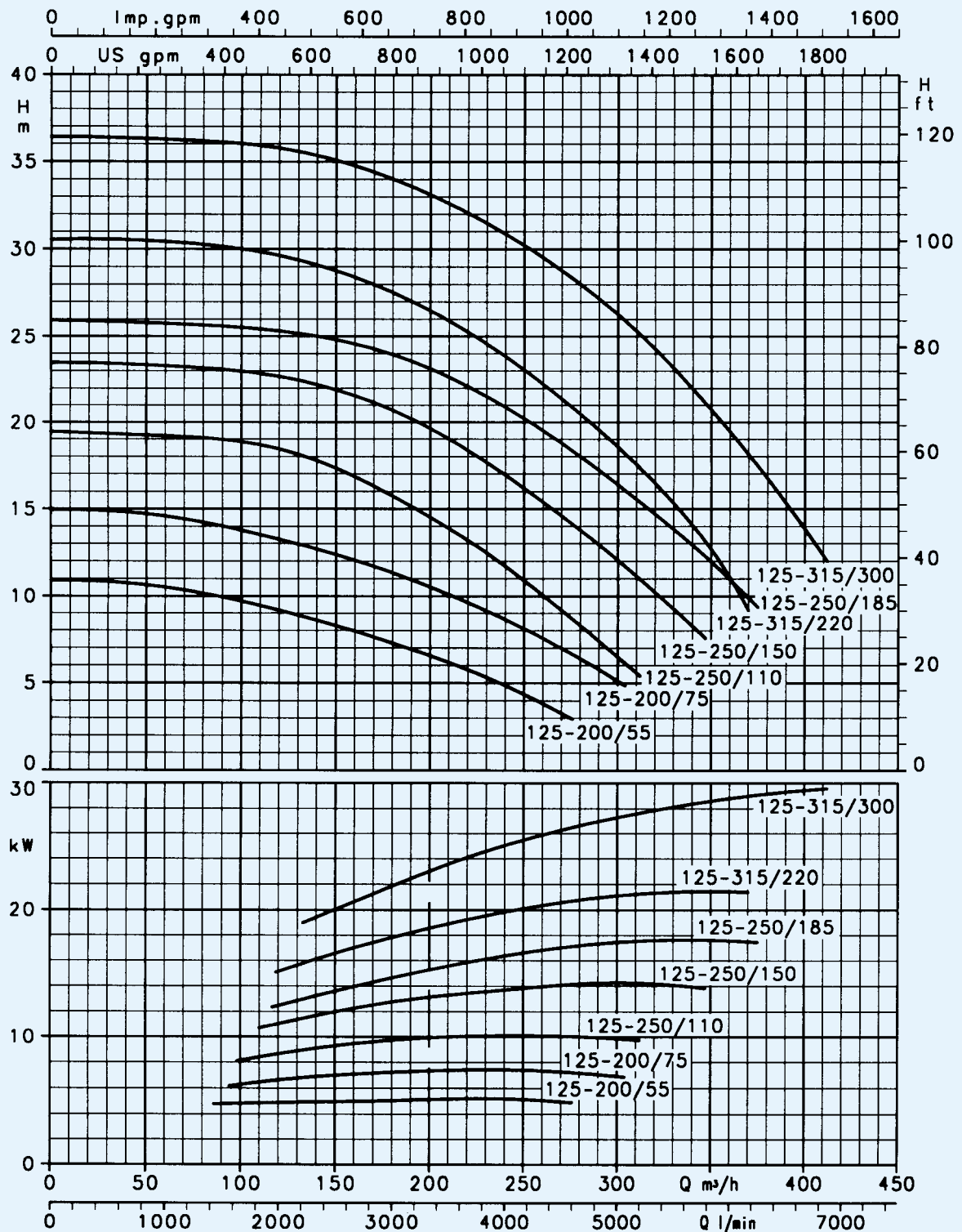
OPERATING CHARACTERISTICS at 1450 rpm 50 Hz, 4 POLES



Please verify with the price list the availability of model type FHE-FHS-FHF
 These performances are valid for liquids with density $\rho = 1.0 \text{ kg/dm}^3$ and kinematic viscosity $\gamma = 1 \text{ mm}^2/\text{sec}$.

FH4 125 SERIES

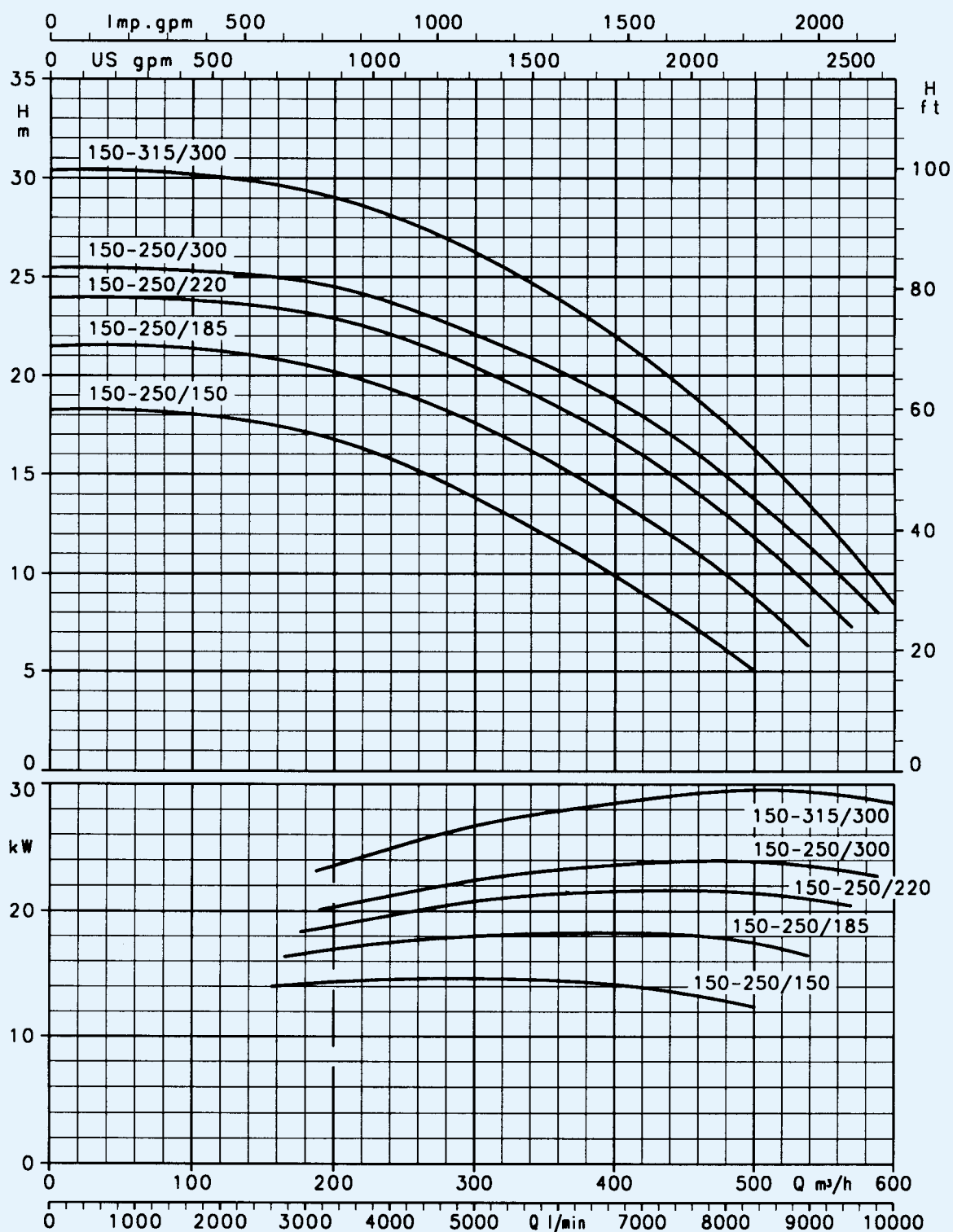
OPERATING CHARACTERISTICS at 1450 rpm 50 Hz, 4 POLES



Please verify with the price list the availability of model type FHE-FHS-FHF
 These performances are valid for liquids with density $\rho = 1.0 \text{ kg/dm}^3$ and kinematic viscosity $\gamma = 1 \text{ mm}^2/\text{sec}$.

FH4 150 SERIES

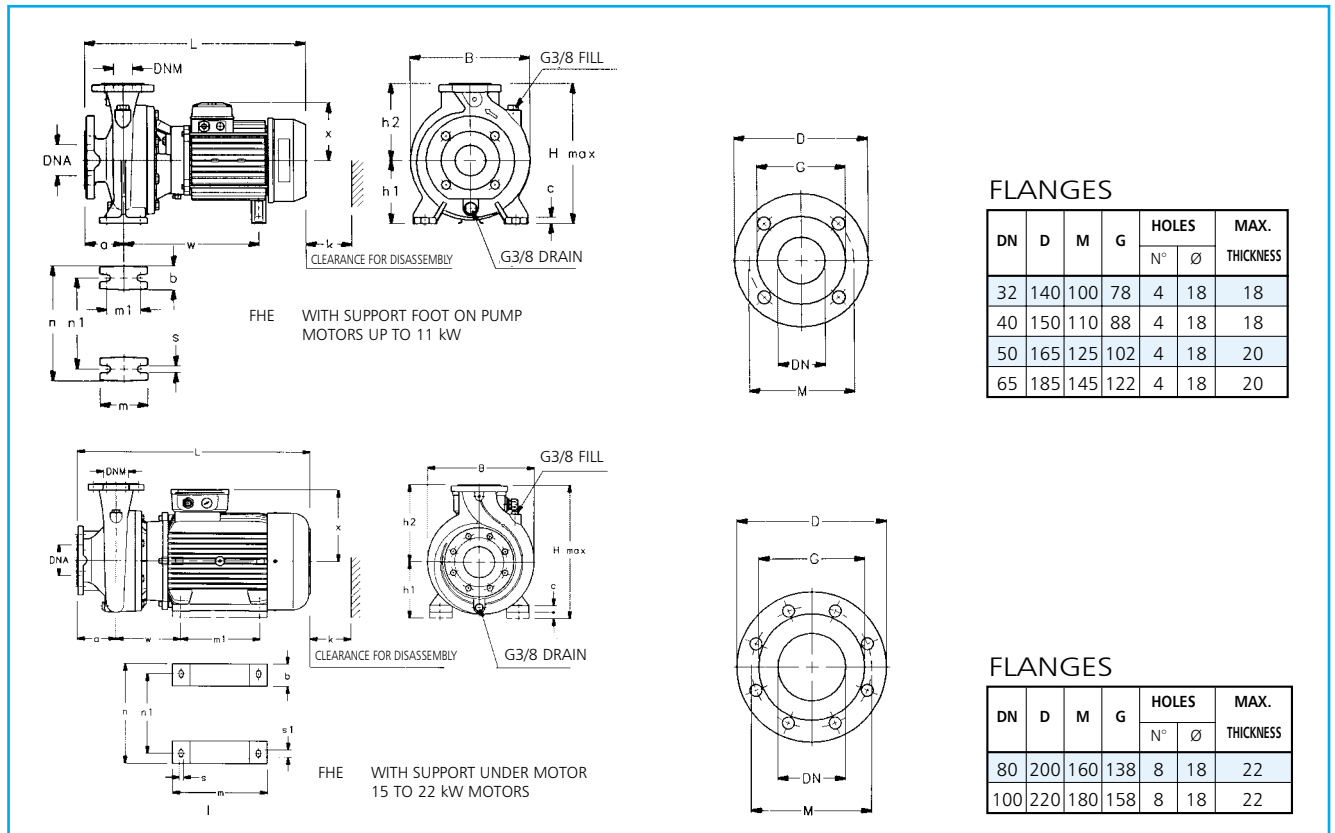
OPERATING CHARACTERISTICS at 1450 rpm 50 Hz, 4 POLES



Please verify with the price list the availability of model type FHE-FHS-FHF

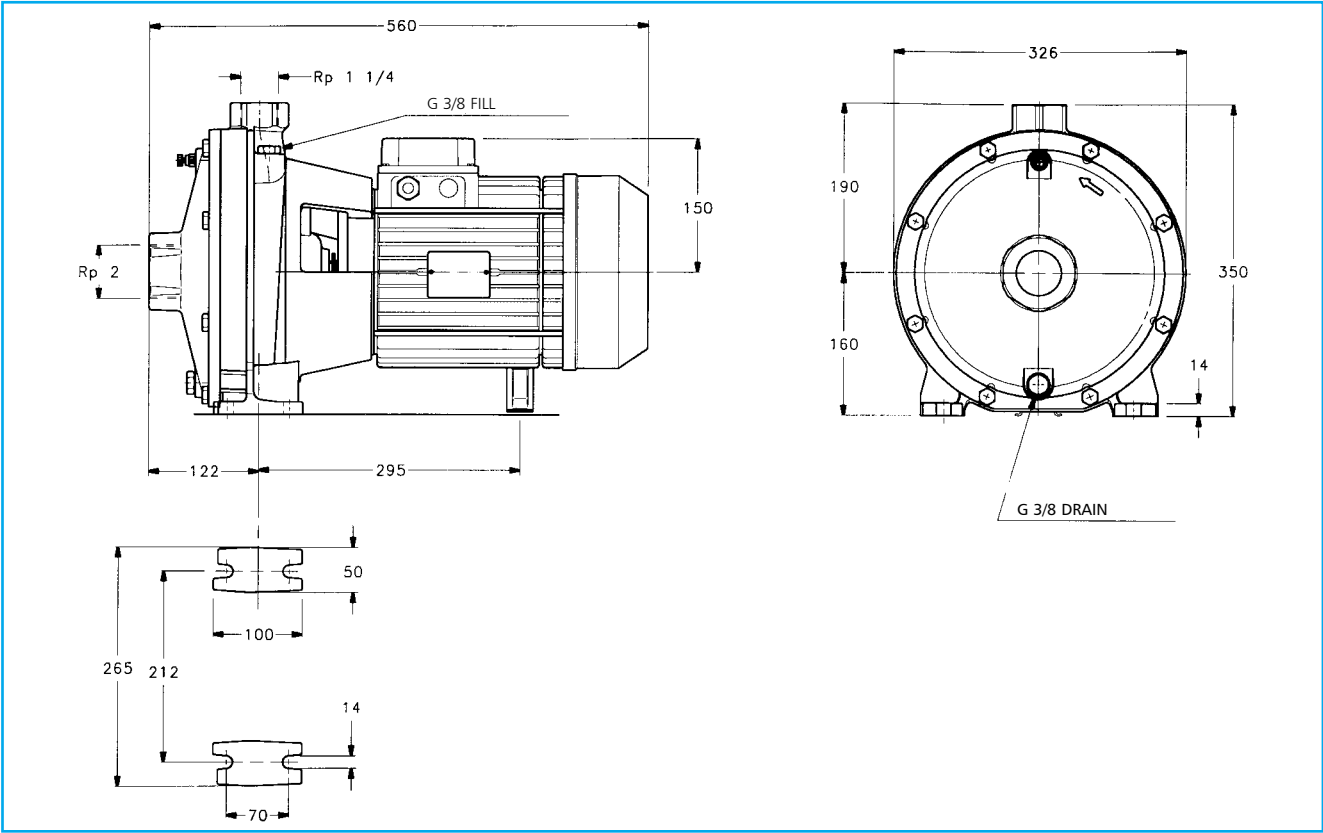
These performances are valid for liquids with density $\rho = 1.0 \text{ kg/dm}^3$ and kinematic viscosity $\gamma = 1 \text{ mm}^2/\text{sec}$.

DIMENSIONS AND WEIGHTS, FHE 2 POLES SERIES



PUMP TYPE	PUMP						SUPPORT										B	H max.	L	k	WEIGHT kg
	DNM	DNA	a	h2	w	x	b	c	c1	h1	m	m1	n	n1	s	s1					
FHE 32-125/07	32	50	80	140	235	129	50	12	—	112	100	70	190	140	14	—	233	252	443	86	27
FHE 32-125/11	32	50	80	140	235	129	50	12	—	112	100	70	190	140	14	—	233	252	443	86	28
FHE 32-160/15	32	50	80	160	235	129	50	12	—	132	100	70	240	190	14	—	235	292	443	86	31
FHE 32-160/22	32	50	80	160	235	129	50	12	—	132	100	70	240	190	14	—	235	292	443	86	34
FHE 32-200/30	32	50	80	180	283	121	50	12	—	160	100	70	240	190	14	—	285	340	461	86	43
FHE 32-200/40	32	50	80	180	290	133	50	12	—	160	100	70	240	190	14	—	285	340	487	86	49
FHE 40-125/11	40	65	80	140	235	129	50	12	—	112	100	70	210	160	14	—	233	252	443	88	30
FHE 40-125/15	40	65	80	140	235	129	50	12	—	112	100	70	210	160	14	—	233	252	443	88	31
FHE 40-125/22	40	65	80	140	235	129	50	12	—	112	100	70	210	160	14	—	233	252	443	88	33
FHE 40-160/30	40	65	80	160	283	121	50	12	—	132	100	70	240	190	14	—	250	292	461	88	36
FHE 40-160/40	40	65	80	160	290	133	50	12	—	132	100	70	240	190	14	—	250	292	487	88	42
FHE 40-200/55	40	65	100	180	311	150	50	12	—	160	100	70	265	212	14	—	285	340	553	88	59
FHE 40-200/75	40	65	100	180	311	150	50	12	—	160	100	70	265	212	14	—	285	340	553	88	64
FHE 40-250/92	40	65	100	225	278	191	65	14	—	180	125	95	320	250	14	—	335	405	604	107	91
FHE 40-250/110	40	65	100	225	278	191	65	14	—	180	125	95	320	250	14	—	335	405	604	107	99
FHE 40-250/150	40	65	100	225	208	232	50	22	20	180	260	210	318	254	13	23	335	412	688	107	123
FHE 50-125/22	50	65	100	160	235	129	50	12	—	132	100	70	240	190	14	—	255	292	463	92	37
FHE 50-125/30	50	65	100	160	285	121	50	12	—	132	100	70	240	190	14	—	255	292	481	92	39
FHE 50-125/40	50	65	100	160	292	133	50	12	—	132	100	70	240	190	14	—	255	292	507	92	45
FHE 50-160/55	50	65	100	180	313	150	50	12	—	160	100	70	265	212	14	—	285	340	553	92	68
FHE 50-160/75	50	65	100	180	313	150	50	12	—	160	100	70	265	212	14	—	285	340	553	92	72
FHE 50-200/92	50	65	100	200	280	191	50	12	—	160	100	70	265	212	14	—	305	360	604	92	81
FHE 50-200/110	50	65	100	200	280	191	50	12	—	160	100	70	265	212	14	—	305	360	604	92	86
FHE 50-250/150	50	65	100	225	208	232	50	22	20	180	260	210	318	254	13	23	340	412	688	107	123
FHE 50-250/185	50	65	100	225	208	232	50	22	20	180	304	254	318	254	13	23	340	412	732	107	135
FHE 50-250/220	50	65	100	225	208	232	50	22	20	180	304	254	318	254	13	23	340	412	732	107	149
FHE 65-125/40	65	80	100	180	292	133	65	14	—	160	125	95	280	212	14	—	285	340	507	105	64
FHE 65-125/55	65	80	100	180	313	150	65	14	—	160	125	95	280	212	14	—	285	340	553	105	72
FHE 65-125/75	65	80	100	180	313	150	65	14	—	160	125	95	280	212	14	—	285	340	553	105	76
FHE 65-160/92	65	80	100	200	278	191	65	14	—	160	125	95	280	212	14	—	331	360	604	112	95
FHE 65-160/110	65	80	100	200	278	191	65	14	—	160	125	95	280	212	14	—	331	360	604	112	103
FHE 65-160/150	65	80	100	200	208	232	50	22	—	160	260	210	318	254	13	23	331	392	688	112	127
FHE 65-200/150	65	80	100	225	208	232	50	22	20	180	260	210	318	254	13	23	335	412	688	112	127
FHE 65-200/185	65	80	100	225	208	232	50	22	20	180	304	254	318	254	13	23	335	412	732	112	139
FHE 65-200/220	65	80	100	225	208	232	50	22	20	180	304	254	318	254	13	23	335	412	732	112	153
FHE 65-250/220	65	80	100	250	208	232	50	22	40	200	304	254	318	254	13	23	332	450	732	112	159
FHE 80-160/110	80	100	125	225	278	191	65	14	—	180	125	95	320	250	14	—	332	405	629	129	109
FHE 80-160/150	80	100	125	225	208	232	50	22	20	180	260	210	318	254	13	23	332	412	713	129	133
FHE 80-160/185	80	100	125	225	208	232	50	22	20	180	304	254	318	254	13	23	332	412	757	129	145
FHE 80-200/220	80	100	125	250	208	232	50	22	20	180	304	254	318	254	13	23	332	430	757	129	159

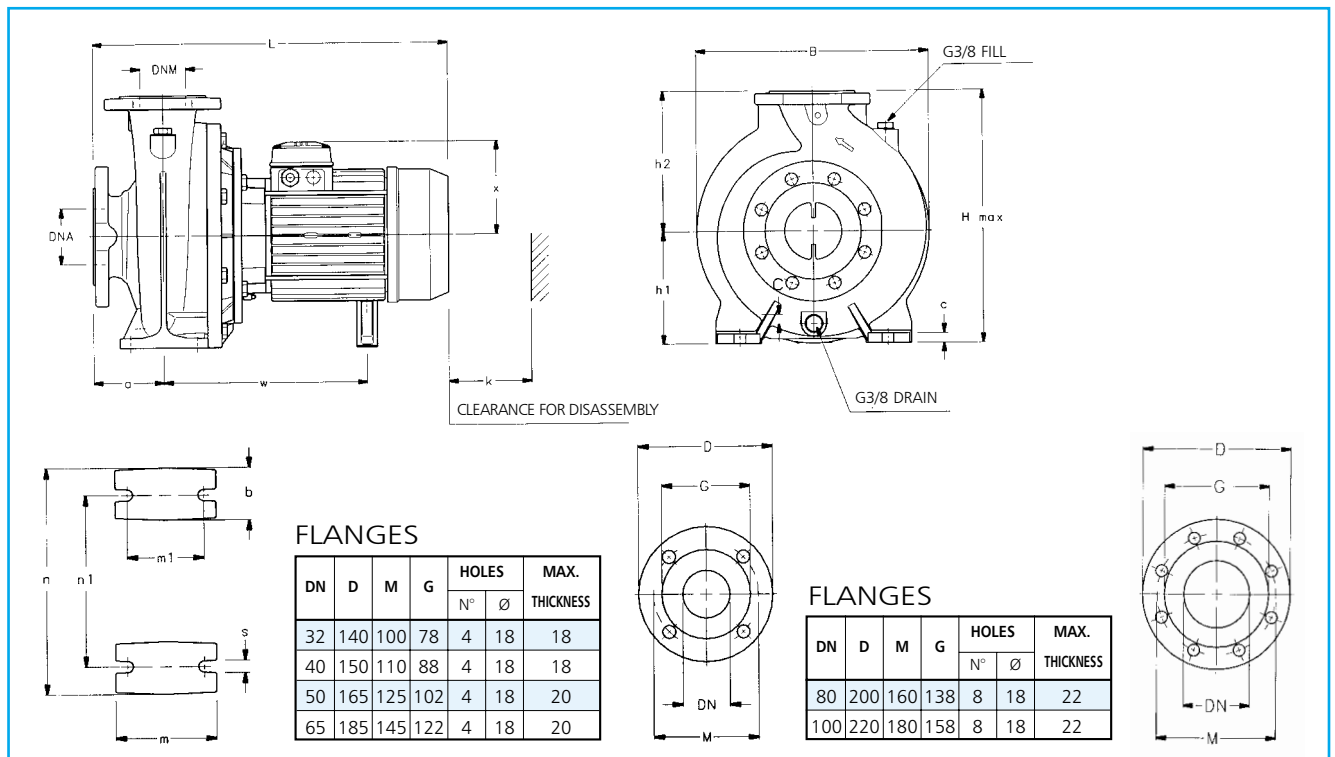
DIMENSIONS AND WEIGHTS, 2FHE 2 POLES SERIES



PUMP TYPE	WEIGHT kg
2FHE 32-250/55	71
2FHE 32-250/75	75

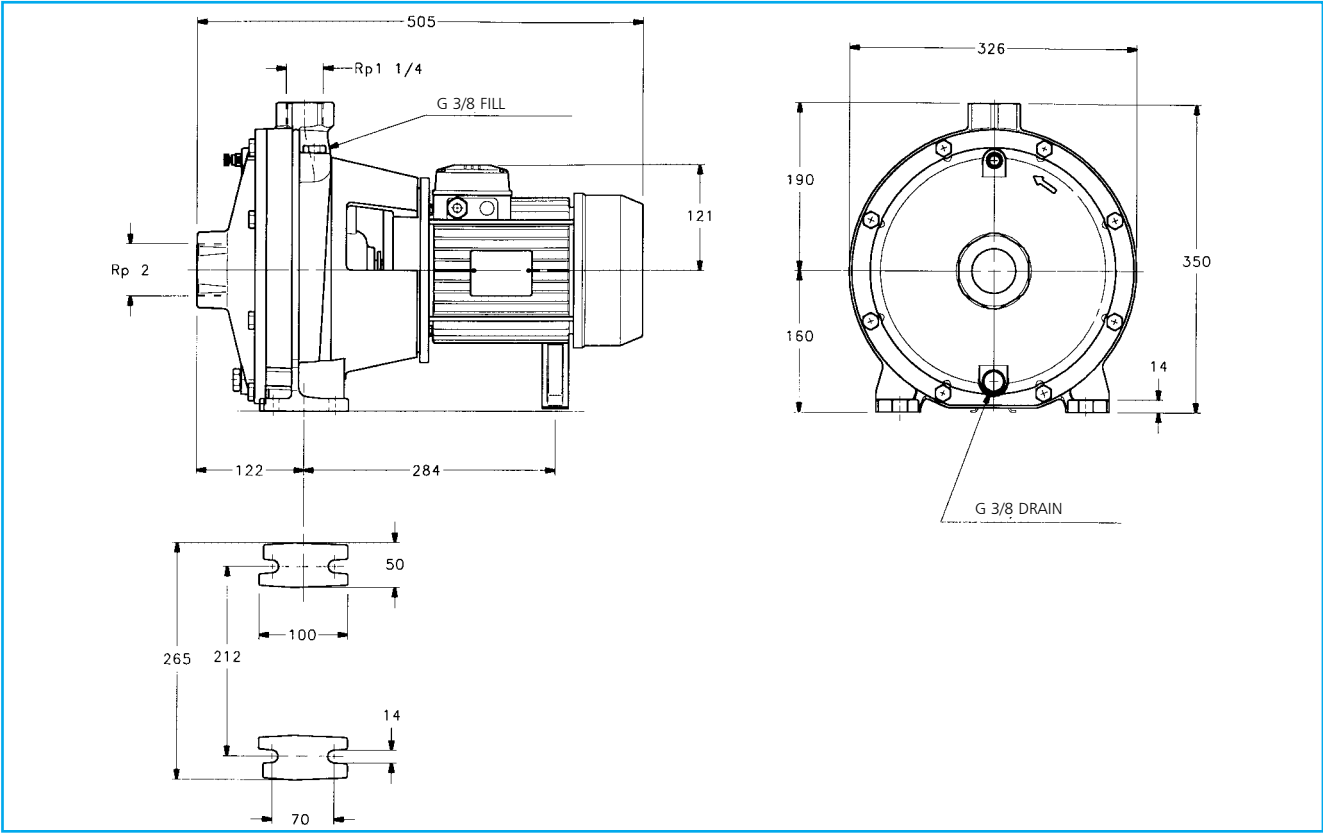


DIMENSIONS AND WEIGHTS, FHE4 4 POLES SERIES



PUMP TYPE	PUMP						SUPPORT									B	H max.	L	k	WEIGHT kg
	DNM	DNA	a	h2	w	x	b	c	h1	m	m1	n	n1	s						
FHE4 32-125/02A	32	50	80	140	215	121	50	12	112	100	70	190	140	14	233	252	411	92	25	
FHE4 32-125/02	32	50	80	140	215	121	50	12	112	100	70	190	140	14	233	252	411	92	25	
FHE4 32-160/02	32	50	80	160	215	121	50	12	132	100	70	240	190	14	235	292	411	92	26	
FHE4 32-160/03	32	50	80	160	215	121	50	12	132	100	70	240	190	14	235	292	411	92	26	
FHE4 32-200/03	32	50	80	180	215	121	50	12	160	100	70	240	190	14	285	340	411	92	35	
FHE4 32-200/05	32	50	80	180	235	129	50	12	160	100	70	240	190	14	285	340	443	92	37	
FHE4 40-125/02A	40	65	80	140	215	121	50	12	112	100	70	210	160	14	233	252	411	94	25	
FHE4 40-125/02	40	65	80	140	215	121	50	12	112	100	70	210	160	14	233	252	411	94	25	
FHE4 40-125/03	40	65	80	140	215	121	50	12	112	100	70	210	160	14	233	252	411	94	25	
FHE4 40-160/03	40	65	80	160	215	121	50	12	132	100	70	240	190	14	250	292	411	94	27	
FHE4 40-160/05	40	65	80	160	235	129	50	12	132	100	70	240	190	14	250	292	443	94	29	
FHE4 40-200/07	40	65	100	180	235	129	50	12	160	100	70	265	212	14	285	340	463	94	38	
FHE4 40-200/11	40	65	100	180	283	121	50	12	160	100	70	265	212	14	285	340	481	94	42	
FHE4 40-250/11	40	65	100	225	283	121	65	14	180	125	95	320	250	14	335	405	481	113	52	
FHE4 40-250/15	40	65	100	225	283	121	65	14	180	125	95	320	250	14	335	405	481	113	55	
FHE4 40-250/22	40	65	100	225	290	133	65	14	180	125	95	320	250	14	335	405	507	113	59	
FHE4 50-125/03A	50	65	100	160	217	121	50	12	132	100	70	240	190	14	255	292	433	98	29	
FHE4 50-125/03	50	65	100	160	217	121	50	12	132	100	70	240	190	14	255	292	433	98	29	
FHE4 50-125/05	50	65	100	160	237	129	50	12	132	100	70	240	190	14	255	292	465	98	32	
FHE4 50-160/07	50	65	100	180	237	129	50	12	160	100	70	265	212	14	285	340	465	98	41	
FHE4 50-160/11	50	65	100	180	285	121	50	12	160	100	70	265	212	14	285	340	483	98	45	
FHE4 50-200/11	50	65	100	200	285	121	50	12	160	100	70	265	212	14	305	360	483	98	44	
FHE4 50-200/15	50	65	100	200	285	121	50	12	160	100	70	265	212	14	305	360	483	98	47	
FHE4 50-250/22A	50	65	100	225	290	133	65	14	180	125	95	320	250	14	340	405	507	113	59	
FHE4 50-250/22	50	65	100	225	290	133	65	14	180	125	95	320	250	14	340	405	507	113	59	
FHE4 50-250/30	50	65	100	225	290	133	65	14	180	125	95	320	250	14	340	405	507	113	62	
FHE4 65-125/05	65	80	100	180	237	129	65	14	160	125	95	280	212	14	285	340	465	108	45	
FHE4 65-125/07	65	80	100	180	237	129	65	14	160	125	95	280	212	14	285	340	465	108	45	
FHE4 65-125/11	65	80	100	180	265	121	65	14	160	125	95	280	212	14	285	340	483	108	49	
FHE4 65-160/11	65	80	100	200	283	121	65	14	160	125	95	280	212	14	331	360	481	117	56	
FHE4 65-160/15	65	80	100	200	283	121	65	14	160	125	95	280	212	14	331	360	481	117	59	
FHE4 65-160/22	65	80	100	200	290	133	65	14	160	125	95	280	212	14	331	360	507	117	63	
FHE4 65-200/15	65	80	100	225	283	121	65	14	180	125	95	320	250	14	335	405	481	117	59	
FHE4 65-200/22	65	80	100	225	290	133	65	14	180	125	95	320	250	14	335	405	507	117	63	
FHE4 65-200/30	65	80	100	225	290	133	65	14	180	125	95	320	250	14	335	405	507	117	65	
FHE4 65-250/30	65	80	100	250	290	133	80	16	200	160	120	360	280	18	360	450	507	125	75	
FHE4 65-250/40	65	80	100	250	311	151	80	16	200	160	120	360	280	18	360	450	530	125	105	
FHE4 65-250/55	65	80	100	250	259	191	80	16	200	160	120	360	280	18	360	450	566	125	111	
FHE4 80-160/15	80	100	125	225	283	121	65	14	180	125	95	320	250	14	332	405	506	132	64	
FHE4 80-160/22	80	100	125	225	290	133	65	14	180	125	95	320	250	14	332	405	532	132	69	
FHE4 80-200/30	80	100	125	250	290	133	65	14	180	125	95	345	280	14	345	430	532	132	80	
FHE4 80-200/40	80	100	125	250	311	151	65	14	180	125	95	345	280	14	345	430	555	132	103	
FHE4 80-250/40	80	100	125	280	311	151	80	16	200	160	120	400	315	18	400	480	555	132	100	
FHE4 80-250/55	80	100	125	280	259	191	80	16	200	160	120	400	315	18	400	480	591	132	106	
FHE4 80-250/75	80	100	125	280	278	191	80	16	200	160	120	400	315	18	400	480	629	132	116	

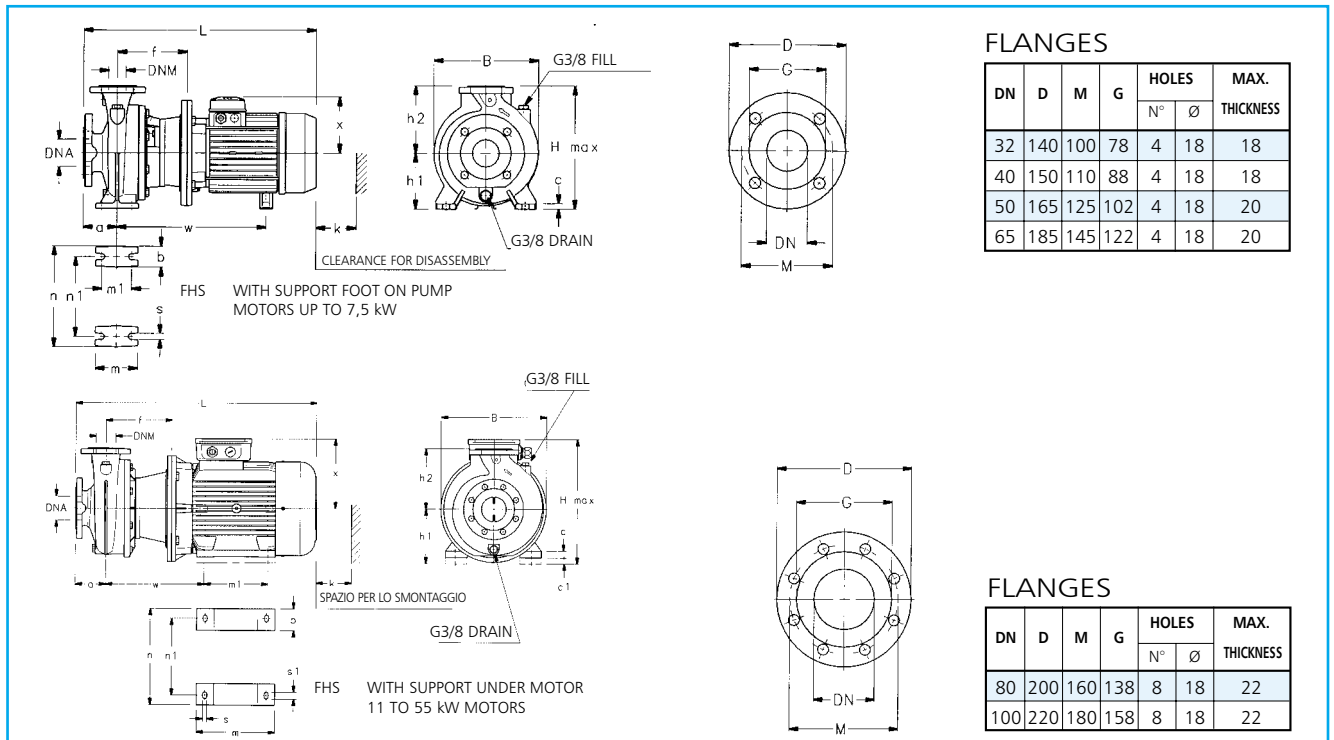
DIMENSIONS AND WEIGHTS, 2FHE4 4 POLES SERIES



PUMP TYPE	WEIGHT kg
2FHE4 32-250/07	47
2FHE4 32-250/11	49

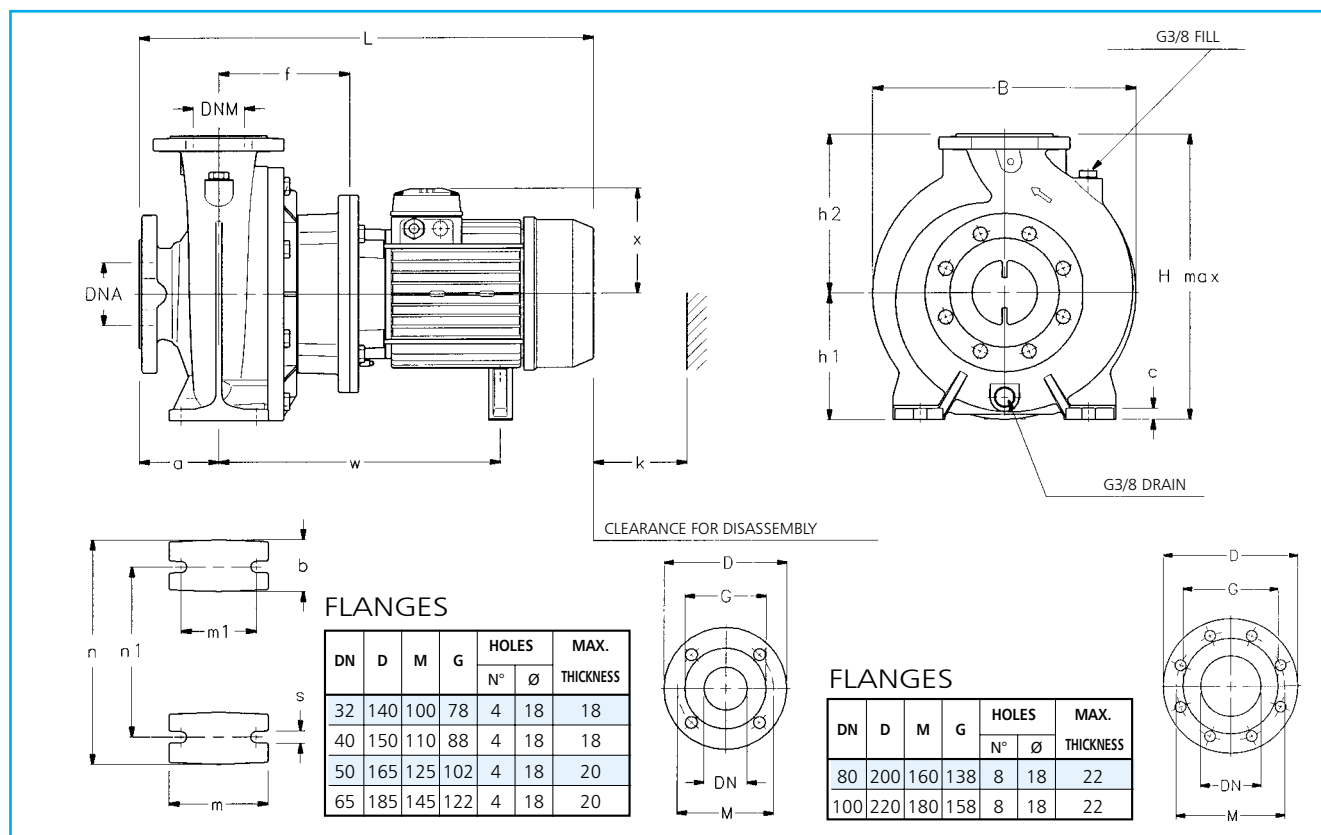


DIMENSIONS AND WEIGHTS, FHS 2 POLES SERIES



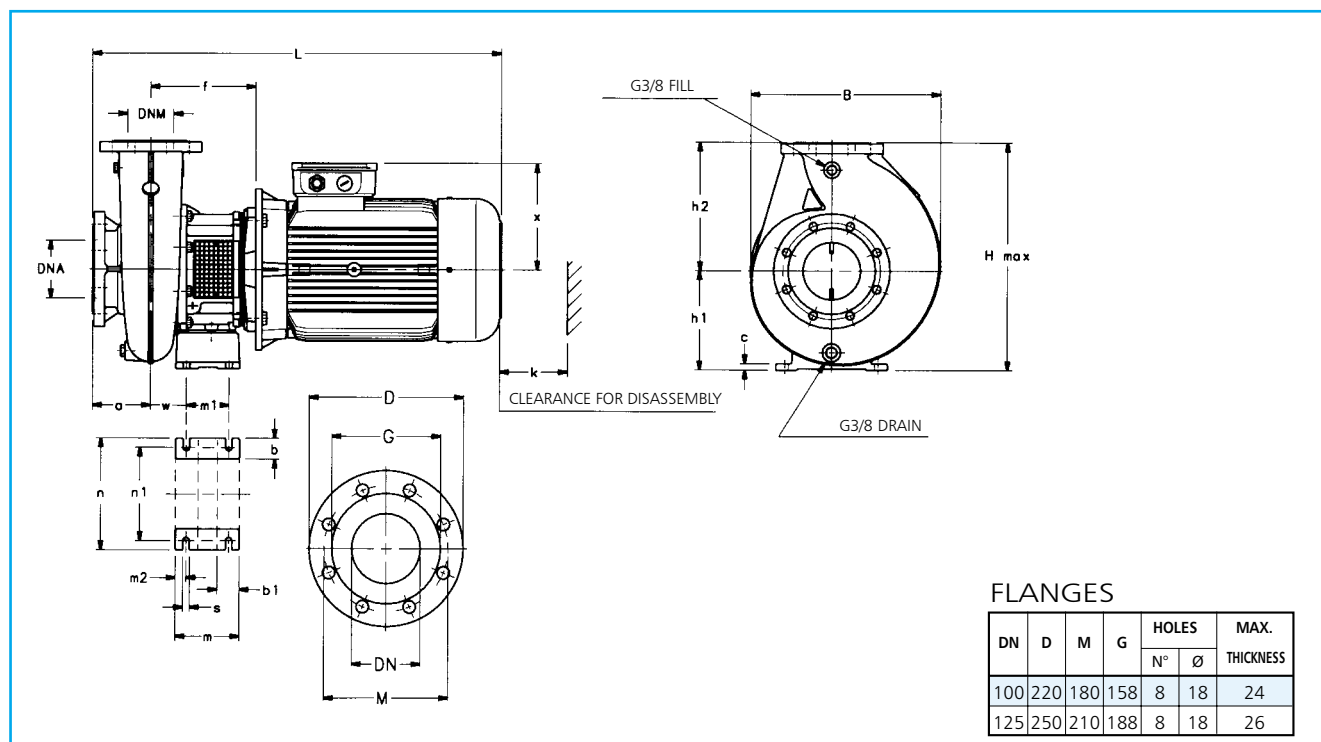
PUMP TYPE	PUMP							SUPPORT										B	H max.	L	k	WEIGHT kg
	DNM	DNA	a	f	h2	w	x	b	c	c1	h1	m	m1	n	n1	s	s1					
FHS 32-125/07	32	50	80	155	140	265	121	50	12	—	112	100	70	190	140	14	—	233	252	461	86	32
FHS 32-125/11	32	50	80	155	140	290	129	50	12	—	112	100	70	190	140	14	—	233	252	498	86	34
FHS 32-160/15	32	50	80	155	160	290	129	50	12	—	132	100	70	240	190	14	—	235	292	498	86	35
FHS 32-160/22	32	50	80	155	160	290	129	50	12	—	132	100	70	240	190	14	—	235	292	498	86	37
FHS 32-200/30	32	50	80	165	180	355	121	50	12	—	160	100	70	240	190	14	—	285	340	548	86	51
FHS 32-200/40	32	50	80	165	180	355	133	50	12	—	160	100	70	240	190	14	—	285	340	552	86	62
FHS 40-125/11	40	65	80	155	140	290	129	50	12	—	112	100	70	210	160	14	—	233	252	498	88	34
FHS 40-125/15	40	65	80	155	140	290	129	50	12	—	112	100	70	210	160	14	—	233	252	498	88	36
FHS 40-125/22	40	65	80	155	140	290	129	50	12	—	112	100	70	210	160	14	—	233	252	498	88	39
FHS 40-160/30	40	65	80	165	160	355	121	50	12	—	132	100	70	240	190	14	—	250	292	548	88	44
FHS 40-160/40	40	65	80	165	160	355	133	50	12	—	132	100	70	240	190	14	—	250	292	552	88	45
FHS 40-200/55	40	65	100	192	180	424	150	50	12	—	160	100	70	265	212	14	—	300	340	666	88	73
FHS 40-200/75	40	65	100	192	180	424	150	50	12	—	160	100	70	265	212	14	—	300	340	666	88	77
FHS 40-250/110A	40	65	100	222	225	330	232	50	22	20	180	260	210	318	254	13	23	350	412	801	107	119
FHS 40-250/110	40	65	100	222	225	330	232	50	22	20	180	260	210	318	254	13	23	350	412	801	107	119
FHS 40-250/150	40	65	100	222	225	330	232	50	22	20	180	260	210	318	254	13	23	350	412	801	107	133
FHS 50-125/22	50	65	100	157	160	292	129	50	12	—	132	100	70	240	190	14	—	255	292	520	92	43
FHS 50-125/30	50	65	100	167	160	357	121	50	12	—	132	100	70	240	190	14	—	255	292	570	92	48
FHS 50-125/40	50	65	100	167	160	357	133	50	12	—	132	100	70	240	190	14	—	255	292	574	92	56
FHS 50-160/55	50	65	100	194	180	426	150	50	12	—	160	100	70	265	212	14	—	300	340	668	92	76
FHS 50-160/75	50	65	100	194	180	426	150	50	12	—	160	100	70	265	212	14	—	300	340	668	92	80
FHS 50-200/110A	50	65	100	224	200	332	232	50	22	—	160	260	210	318	254	13	23	350	392	812	92	111
FHS 50-200/110	50	65	100	224	200	332	232	50	22	—	160	260	210	318	254	13	23	350	392	812	92	111
FHS 50-250/150	50	65	100	222	225	330	232	50	22	20	180	260	210	318	254	13	23	350	412	810	107	133
FHS 50-250/185	50	65	100	222	225	330	232	50	22	20	180	304	254	318	254	13	23	350	412	854	107	145
FHS 50-250/220	50	65	100	222	225	330	232	50	22	20	180	304	254	318	254	13	23	350	412	854	107	159
FHS 65-125/40	65	80	100	167	180	357	133	65	14	—	160	125	95	280	212	14	—	285	340	574	105	70
FHS 65-125/55	65	80	100	194	180	426	150	65	14	—	160	125	95	280	212	14	—	300	340	668	105	80
FHS 65-125/75	65	80	100	194	180	426	150	65	14	—	160	125	95	280	212	14	—	300	340	668	105	84
FHS 65-160/110A	65	80	100	222	200	330	232	50	22	20	180	260	210	318	254	13	23	350	412	810	112	123
FHS 65-160/110	65	80	100	222	200	330	232	50	22	20	180	260	210	318	254	13	23	350	412	810	112	123
FHS 65-160/150	65	80	100	222	200	330	232	50	22	20	180	260	210	318	254	13	23	350	412	810	112	137
FHS 65-200/150	65	80	100	222	225	330	232	50	22	20	180	260	210	318	254	13	23	350	412	810	112	137
FHS 65-200/185	65	80	100	222	225	330	232	50	22	20	180	304	254	318	254	13	23	350	412	854	112	149
FHS 65-200/220	65	80	100	222	225	330	232	50	22	20	180	304	254	318	254	13	23	350	412	854	112	163
FHS 65-250/220	65	80	100	222	250	330	232	50	22	40	200	304	254	318	254	13	23	350	450	854	112	157
FHS 65-250/300	65	80	100	228	250	361	257	60	24	—	200	345	305	360	318	18	18	400	457	941	112	200
FHS 65-250/370	65	80	100	228	250	361	257	60	24	—	200	345	305	360	318	18	18	400	457	941	112	218
FHS 80-160/110	80	100	125	222	225	330	232	50	22	20	180	260	210	318	254	13	23	350	412	835	129	124
FHS 80-160/150	80	100	125	222	225	330	232	50	22	20	180	260	210	318	254	13	23	350	412	835	129	138
FHS 80-160/185	80	100	125	222	225	330	232	50	22	20	180	304	254	318	254	13	23	350	412	879	129	156
FHS 80-200/220	80	100	125	222	250	330	232	50	22	20	180	304	254	318	254	13	23	350	430	879	129	163
FHS 80-200/300	80	100	125	228	250	361	257	60	24	—	200	345	305	360	318	18	18	400	457	966	129	199
FHS 80-250/370	80	100	125	228	280	361	257	60	24	—	200	345	305	360	318	18	18	400	480	966	129	213
FHS 80-250/450	80	100	125	228	280	377	280	76	28	—	225	360	311	405	356	18	18	450	505	1043	129	278
FHS 80-250/550	80	100	125	258	280	426	280	90	28	—	250	406	349	465	406	22	22	550	530	1073	129	311

DIMENSIONS AND WEIGHTS, FHS4 4 POLES SERIES



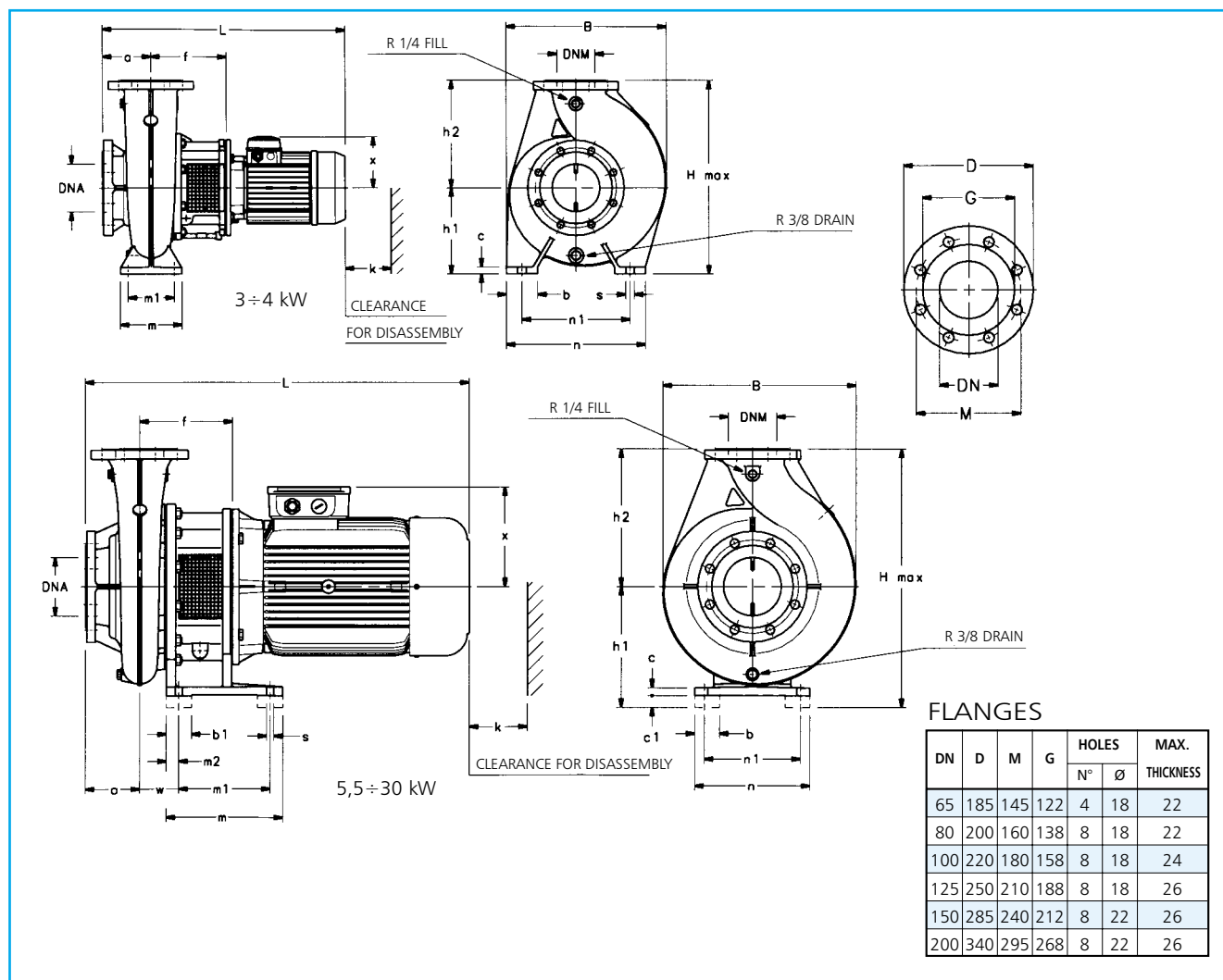
PUMP TYPE	PUMP							SUPPORT								B	H max.	L	k	WEIGHT kg
	DNM	DNA	a	f	h2	w	x	b	c	h1	m	m1	n	n1	s					
FHS4 40-200/07	40	65	100	155	180	290	129	50	12	160	100	70	265	212	14	285	340	518	94	43
FHS4 40-200/11	40	65	100	155	180	338	121	50	12	160	100	70	265	212	14	285	340	536	94	47
FHS4 40-250/11	40	65	100	155	225	338	121	65	14	180	125	95	320	250	14	335	405	536	113	57
FHS4 40-250/15	40	65	100	155	225	338	121	65	14	180	125	95	320	250	14	335	405	536	113	60
FHS4 40-250/22	40	65	100	165	225	355	133	65	14	180	125	95	320	250	14	335	405	572	113	65
FHS4 50-160/07	50	65	100	157	180	292	129	50	12	160	100	70	265	212	14	285	340	520	98	46
FHS4 50-160/11	50	65	100	157	180	340	121	50	12	160	100	70	265	212	14	285	340	536	98	50
FHS4 50-200/11	50	65	100	157	200	340	121	50	12	160	100	70	265	212	14	305	360	536	98	49
FHS4 50-200/15	50	65	100	157	200	340	121	50	12	160	100	70	265	212	14	305	360	536	98	52
FHS4 50-250/22A	50	65	100	165	225	355	133	65	14	180	125	95	320	250	14	340	405	572	113	65
FHS4 50-250/22	50	65	100	165	225	355	133	65	14	180	125	95	320	250	14	340	405	572	113	65
FHS4 50-250/30	50	65	100	165	225	355	133	65	14	180	125	95	320	250	14	340	405	572	113	68
FHS4 65-125/05	65	80	100	157	180	292	129	65	14	160	125	95	280	212	14	285	340	520	108	50
FHS4 65-125/07	65	80	100	157	180	292	129	65	14	160	125	95	280	212	14	285	340	520	108	52
FHS4 65-125/11	65	80	100	157	180	340	121	65	14	160	125	95	280	212	14	285	340	536	108	54
FHS4 65-160/11	65	80	100	155	200	338	121	65	14	160	125	95	280	212	14	331	360	536	117	61
FHS4 65-160/15	65	80	100	155	200	338	121	65	14	160	125	95	280	212	14	331	360	536	117	64
FHS4 65-160/22	65	80	100	165	200	345	153	65	14	160	125	95	280	212	14	331	360	572	117	69
FHS4 65-200/15	65	80	100	155	225	338	121	65	14	180	125	95	320	250	14	335	405	536	117	64
FHS4 65-200/22	65	80	100	165	225	355	133	65	14	180	125	95	320	250	14	335	405	572	117	69
FHS4 65-200/30	65	80	100	165	225	355	133	65	14	180	125	95	320	250	14	335	405	572	117	72
FHS4 65-250/30	65	80	100	165	250	355	133	80	16	200	160	120	360	280	18	360	450	572	125	78
FHS4 65-250/40	65	80	100	165	250	376	151	80	16	200	160	120	360	280	18	360	450	595	125	101
FHS4 65-250/55	65	80	100	192	250	351	191	80	16	200	160	120	360	280	18	360	450	658	125	104
FHS4 80-160/15	80	100	125	155	225	338	121	65	14	180	125	95	320	250	14	332	405	561	132	71
FHS4 80-160/22	80	100	125	165	225	355	133	65	14	180	125	95	320	250	14	332	405	597	132	75
FHS4 80-200/30	80	100	125	165	250	355	133	65	14	180	125	95	345	280	14	345	430	597	132	81
FHS4 80-200/40	80	100	125	165	250	376	151	65	14	180	125	95	345	280	14	345	430	620	132	104
FHS4 80-250/40	80	100	125	165	280	376	151	80	16	200	160	120	400	315	18	400	480	620	132	110
FHS4 80-250/55	80	100	125	192	280	351	191	80	16	200	160	120	400	315	18	400	480	683	132	113
FHS4 80-250/75	80	100	125	192	280	370	191	80	16	200	160	120	400	315	18	400	480	721	132	116

DIMENSIONS AND WEIGHTS, FHS 2 POLES SERIES



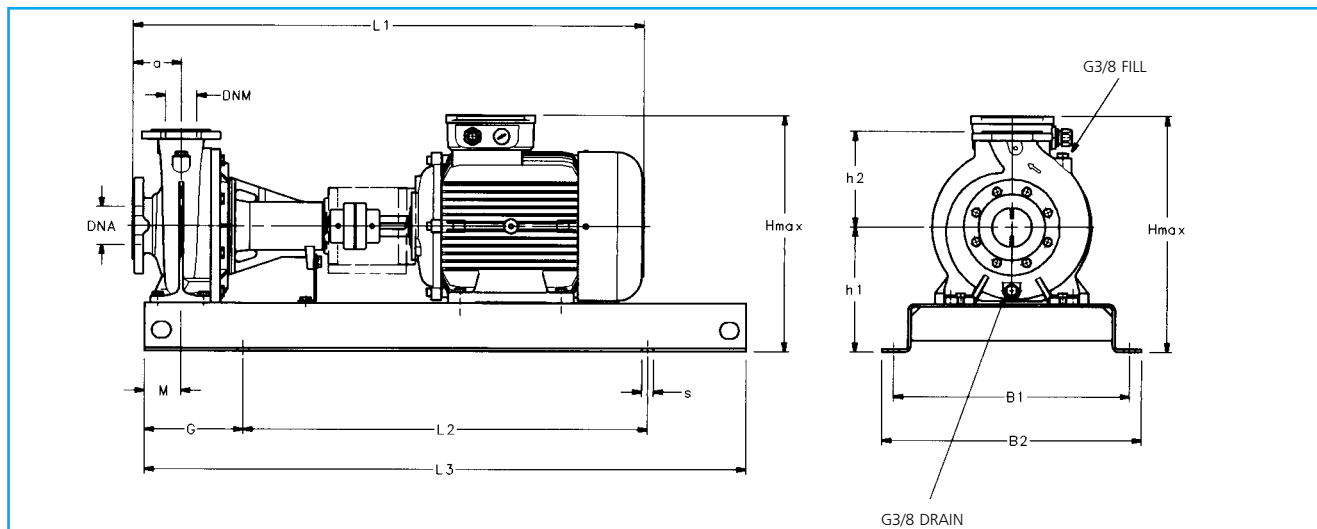
PUMP TYPE	PUMP							SUPPORT										B	H max.	L	k	WEIGHT kg
	DNM	DNA	a	f	h2	w	x	b	b1	c	h1	m	m1	m2	n	n1	s					
FHS 100-160/220	100	125	125	226	280	78	232	45	48	14	215	137	91	23	240	200	14	411	495	883	143	236
FHS 100-160/300	100	125	125	231	280	92	257	—	65	20	250	300	235	32,5	300	250	18	435	530	969	143	348
FHS 100-200/300	100	125	125	231	280	92	257	—	65	20	250	300	235	32,5	300	250	18	405	530	969	153	340
FHS 100-200/370	100	125	125	231	280	92	257	—	65	20	250	300	235	32,5	300	250	18	405	530	969	153	360

DIMENSIONS AND WEIGHTS, FHS4 4 POLES SERIES



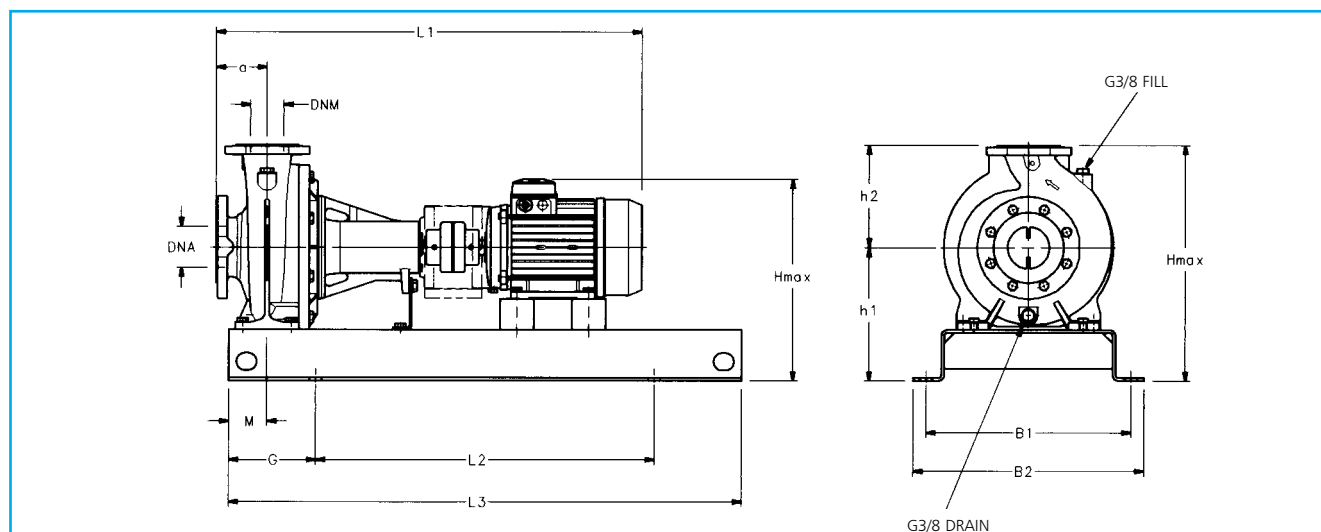
PUMP TYPE	PUMP								SUPPORT										B	H max.	L	k	WEIGHT kg
	DNM	DNA	a	f	h2	w	x	b	b1	c	c1	h1	m	m1	m2	n	n1	s					
FHS4 65-315/75	65	80	125	196	280	83	194	45	48	14	—	250	137	89	24	240	200	14	434	530	725	160	168
FHS4 65-315/110	65	80	125	226	280	83	243	45	48	14	—	250	137	89	24	240	200	14	434	530	889	160	212
FHS4 80-315/110	80	100	125	226	315	83	243	45	48	14	—	250	137	89	24	240	200	14	450	565	889	160	218
FHS4 80-315/150	80	100	125	226	315	83	243	45	48	14	—	250	137	89	24	240	200	14	450	565	889	160	238
FHS4 100-160/30	100	125	125	196	280	—	133	80	—	16	—	225	160	120	—	360	280	19	415	505	628	143	110
FHS4 100-200/40	100	125	125	196	280	—	151	80	—	18	—	200	160	120	—	360	280	19	385	480	651	153	106
FHS4 100-200/55	100	125	125	196	280	77	194	45	48	14	—	215	137	91	23	240	200	14	373	495	687	153	131
FHS4 100-250/75	100	125	140	196	280	78	194	45	42	14	—	220	165	131	15	240	200	14	416	500	740	150	171
FHS4 100-250/110	100	125	140	226	280	78	243	45	42	14	—	220	165	131	15	240	200	14	416	500	904	150	215
FHS4 100-315/150	100	125	140	226	315	78	243	45	48	14	—	250	137	89	24	240	200	14	486	565	904	160	247
FHS4 100-315/185	100	125	140	226	315	83	243	45	48	14	—	250	137	89	24	240	200	14	486	565	904	160	282
FHS4 100-315/220	100	125	140	226	315	83	263	45	48	14	—	250	137	89	24	240	200	14	486	565	979	160	292
FHS4 125-200/55	125	150	140	211	315	91	194	45	48	14	—	235	137	91	23	240	200	14	469	550	717	160	162
FHS4 125-200/75	125	150	140	211	315	91	194	45	48	14	—	235	137	91	23	240	200	14	469	550	755	160	175
FHS4 125-250/110	125	150	140	226	355	78	243	45	48	14	—	250	137	91	23	240	200	14	493	605	904	158	217
FHS4 125-250/150	125	150	140	226	355	78	243	45	48	14	—	250	137	91	23	240	200	14	493	605	904	158	237
FHS4 125-250/185	125	150	140	226	355	78	243	45	48	14	—	250	137	91	23	240	200	14	493	605	904	158	273
FHS4 125-315/220	125	150	140	241	355	101	263	—	65	20	—	280	300	235	32,5	300	250	18	501	635	994	171	344
FHS4 125-315/300	125	150	140	241	355	101	263	—	65	20	—	280	300	235	32,5	300	250	18	501	635	994	171	429
FHS4 150-250/150	150	200	160	241	375	101	243	—	70	20	30	280	305	235	35	305	250	18	543	655	939	181	300
FHS4 150-250/185	150	200	160	241	375	101	243	—	70	20	30	280	305	235	35	305	250	18	543	655	939	181	335
FHS4 150-250/220	150	200	160	241	375	101	263	—	70	20	30	280	305	235	35	305	250	18	543	655	1014	181	345
FHS4 150-250/300	150	200	160	241	375	101	263	—	70	20	30	280	305	235	35	305	250	18	543	655	1014	181	430
FHS4 150-315/300	150	200	160	241	400	101	263	—	65	20	—	280	300	235	32,5	300	250	18	567	680	1014	186	448

DIMENSIONS AND WEIGHTS, FHF 2 POLES SERIES



PUMP TYPE	DIMENSIONS(mm)													s FOR SCREWS	WEIGHT kg
	DNM	DNA	a	B1	B2	L1	L2	L3	G	M	h1	h2	H max.		
FHF 32-125/07	32	50	80	320	360	744	540	800	130	60	212	140	352	M16	67
FHF 32-125/11	32	50	80	320	360	744	540	800	130	60	212	140	352	M16	69
FHF 32-160/15	32	50	80	350	390	773	600	900	150	60	232	160	392	M16	71
FHF 32-160/22	32	50	80	350	390	773	600	900	150	60	232	160	392	M16	73
FHF 32-200/30	32	50	80	350	390	809	600	900	150	60	260	180	440	M16	92
FHF 32-200/40	32	50	80	350	390	832	600	900	150	60	260	180	440	M16	96
FHF 40-125/11	40	65	80	320	360	744	540	800	130	60	212	140	352	M16	72
FHF 40-125/15	40	65	80	350	390	773	600	900	150	60	212	140	352	M16	74
FHF 40-125/22	40	65	80	350	390	773	600	900	150	60	212	140	352	M16	77
FHF 40-160/30	40	65	80	350	390	809	600	900	150	60	232	160	392	M16	91
FHF 40-160/40	40	65	80	350	390	832	600	900	150	60	232	160	392	M16	97
FHF 40-200/55	40	65	100	400	450	909	660	1000	170	60	260	180	451	M20	112
FHF 40-200/75	40	65	100	400	450	909	660	1000	170	60	260	180	451	M20	120
FHF 40-250/110A	40	65	100	490	540	1061	840	1250	205	75	280	225	512	M20	178
FHF 40-250/110	40	65	100	490	540	1061	840	1250	205	75	280	225	512	M20	178
FHF 40-250/150	40	65	100	490	540	1061	840	1250	205	75	280	225	512	M20	188
FHF 50-125/22	50	65	100	350	390	793	600	900	150	60	232	160	392	M16	85
FHF 50-125/30	50	65	100	350	390	829	600	900	150	60	232	160	392	M16	92
FHF 50-125/40	50	65	100	350	390	852	600	900	150	60	232	160	392	M16	97
FHF 50-160/55	50	65	100	400	450	909	660	1000	170	60	260	180	451	M20	111
FHF 50-160/75	50	65	100	400	450	909	660	1000	170	60	260	180	451	M20	115
FHF 50-200/110A	50	65	100	440	490	1061	740	1120	190	60	260	200	492	M20	173
FHF 50-200/110	50	65	100	440	490	1061	740	1120	190	60	260	200	492	M20	173
FHF 50-250/150	50	65	100	490	540	1061	840	1250	205	75	280	225	512	M20	179
FHF 50-250/185	50	65	100	490	540	1105	840	1250	205	75	280	225	512	M20	199
FHF 50-250/220	50	65	100	490	540	1111	840	1250	205	75	280	225	510	M20	219
FHF 65-125/40	65	80	100	350	390	852	600	900	150	75	260	180	440	M16	135
FHF 65-125/55	65	80	100	400	450	909	660	1000	170	75	260	180	451	M20	141
FHF 65-125/75	65	80	100	400	450	909	660	1000	170	75	260	180	451	M20	147
FHF 65-160/110A	65	80	100	490	540	1061	840	1250	205	75	260	200	492	M20	164
FHF 65-160/110	65	80	100	490	540	1061	840	1250	205	75	260	200	492	M20	164
FHF 65-160/150	65	80	100	490	540	1061	840	1250	205	75	260	200	492	M20	180
FHF 65-200/150	65	80	100	490	540	1061	840	1250	205	75	280	225	512	M20	187
FHF 65-200/185	65	80	100	490	540	1105	840	1250	205	75	280	225	512	M20	197
FHF 65-200/220	65	80	100	490	540	1111	840	1250	205	75	280	225	510	M20	215
FHF 65-250/220	65	80	100	490	540	1221	840	1250	205	90	310	250	550	M20	223
FHF 65-250/300	65	80	100	550	610	1296	940	1400	230	90	310	250	557	M24	300
FHF 65-250/370	65	80	100	550	610	1296	940	1400	230	90	310	250	557	M24	315
FHF 80-160/110	80	100	125	490	540	1086	840	1250	205	75	280	225	512	M20	202
FHF 80-160/150	80	100	125	490	540	1086	840	1250	205	75	280	225	512	M20	212
FHF 80-160/185	80	100	125	490	540	1130	840	1250	205	75	280	225	512	M20	233
FHF 80-200/220	80	100	125	490	540	1246	840	1250	205	75	280	250	530	M20	245
FHF 80-200/300	80	100	125	550	610	1321	940	1400	230	75	310	250	557	M24	285
FHF 80-250/370	80	100	125	550	610	1321	940	1400	230	90	310	280	580	M24	305
FHF 80-250/450	80	100	125	550	610	1398	940	1400	230	90	365	280	605	M24	365
FHF 80-250/550	80	100	125	600	660	1428	1060	1600	270	90	390	280	660	M24	400

DIMENSIONS AND WEIGHTS, FHF4 4 POLES SERIES



PUMP TYPE	DIMENSIONS(mm)													s FOR SCREWS	WEIGHT kg
	DNM	DNA	a	B1	B2	L1	L2	L3	G	M	h1	h2	H max.		
FHF4 32-125/02A	32	50	80	320	360	702	540	800	130	60	212	140	352	M16	74
FHF4 32-125/02	32	50	80	320	360	702	540	800	130	60	212	140	352	M16	74
FHF4 32-160/02	32	50	80	320	360	702	540	800	130	60	232	160	392	M16	76
FHF4 32-160/03	32	50	80	320	360	702	540	800	130	60	232	160	392	M16	78
FHF4 32-200/03	32	50	80	320	360	702	540	800	130	60	260	180	440	M16	80
FHF4 32-200/05	32	50	80	320	360	744	540	800	130	60	260	180	440	M16	82
FHF4 40-125/02A	40	65	80	320	360	702	540	800	130	60	212	140	352	M16	61
FHF4 40-125/02	40	65	80	320	360	702	540	800	130	60	212	140	352	M16	61
FHF4 40-125/03	40	65	80	320	360	702	540	800	130	60	212	140	352	M16	64
FHF4 40-160/03	40	65	80	320	360	702	540	800	130	60	232	160	392	M16	65
FHF4 40-160/05	40	65	80	320	360	744	540	800	130	60	232	160	392	M16	66
FHF4 40-200/07	40	65	100	350	390	764	600	900	150	60	260	180	440	M16	73
FHF4 40-200/11	40	65	100	350	390	793	600	900	150	60	260	180	440	M16	76
FHF4 40-250/11	40	65	100	400	450	793	660	1000	170	75	280	225	505	M20	103
FHF4 40-250/15	40	65	100	400	450	793	660	1000	170	75	280	225	505	M20	106
FHF4 40-250/22	40	65	100	400	450	829	660	1000	170	75	280	225	505	M20	119
FHF4 50-125/03A	50	65	100	320	360	722	540	800	130	60	232	160	392	M16	64
FHF4 50-125/03	50	65	100	320	360	722	540	800	130	60	232	160	392	M16	64
FHF4 50-125/05	50	65	100	320	360	764	540	800	130	60	232	160	392	M16	66
FHF4 50-160/07	50	65	100	350	390	764	600	900	150	60	260	180	440	M16	73
FHF4 50-160/11	50	65	100	350	390	793	600	900	150	60	260	180	440	M16	76
FHF4 50-200/11	50	65	100	350	390	793	600	900	150	60	260	200	460	M16	87
FHF4 50-200/15	50	65	100	350	390	793	600	900	150	60	260	200	460	M16	90
FHF4 50/250/22A	50	65	100	400	450	829	660	1000	170	75	280	225	505	M20	121
FHF4 50-250/22	50	65	100	400	450	829	660	1000	170	75	280	225	505	M20	121
FHF4 50-250/30	50	65	100	400	450	829	660	1000	170	75	280	225	505	M20	125
FHF4 65-125/05	65	80	100	350	390	764	600	900	150	75	260	180	440	M16	90
FHF4 65-125/07	65	80	100	350	390	764	600	900	150	75	260	180	440	M16	91
FHF4 65-125/11	65	80	100	350	390	793	600	900	150	75	260	180	440	M16	95
FHF4 65-160/11	65	80	100	400	450	793	660	1000	170	75	260	200	460	M20	100
FHF4 65-160/15	65	80	100	400	450	793	660	1000	170	75	260	200	460	M20	110
FHF4 65-160/22	65	80	100	400	450	829	660	1000	170	75	260	200	460	M20	119
FHF4 65-200/15	65	80	100	400	450	793	660	1000	170	75	280	225	505	M20	112
FHF4 65-200/22	65	80	100	440	490	829	740	1120	190	75	280	225	505	M20	123
FHF4 65-200/30	65	80	100	440	490	829	740	1120	190	75	280	225	505	M20	126
FHF4 65-250/30	65	80	100	440	490	939	740	1120	190	90	310	250	550	M20	150
FHF4 65-250/40	65	80	100	440	490	962	740	1120	190	90	310	250	550	M20	162
FHF4 65-250/55	65	80	100	440	490	1019	740	1120	190	90	310	250	550	M20	180
FHF4 80-160/15	80	100	125	400	450	818	660	1000	170	75	280	228	505	M20	130
FHF4 80-160/22	80	100	125	440	490	854	740	1120	190	75	280	228	505	M20	136
FHF4 80-200/30	80	100	125	440	490	964	740	1120	190	75	280	250	530	M20	155
FHF4 80-200/40	80	100	125	440	490	987	740	1120	190	75	280	250	530	M20	159
FHF4 80-250/40	80	100	125	490	540	987	840	1250	205	90	310	280	580	M20	165
FHF4 80-250/55	80	100	125	490	540	1044	840	1250	205	90	310	280	580	M20	180
FHF4 80-250/75	80	100	125	490	540	1082	840	1250	205	90	310	280	580	M20	193

SH SERIES

CENTRIFUGAL PUMPS MANUFACTURED IN AISI 316 STAINLESS STEEL IN COMPLIANCE WITH EN 733 - (ex DIN 24255)

Laser-technology welded centrifugal pumps.
Designed to handle hot, cold and moderately aggressive liquids.

APPLICATIONS

- Water circulation and transfer in the civil, industrial and agricultural markets.
- Industrial washing.
- Pressure boosting.
- Hot and cold water circulation for heating and conditioning systems.

AVAILABLE MODELS

- **SHE** close-coupled with special motor shaft extension.
- **SHS** with stub shaft and standard motor.
- **SHF** with flexible coupling, base and standard motor in compliance with EN 733 - (ex DIN 24255).
- **SSH** 25-125, 160, 200, 250 on request.

SPECIFICATIONS

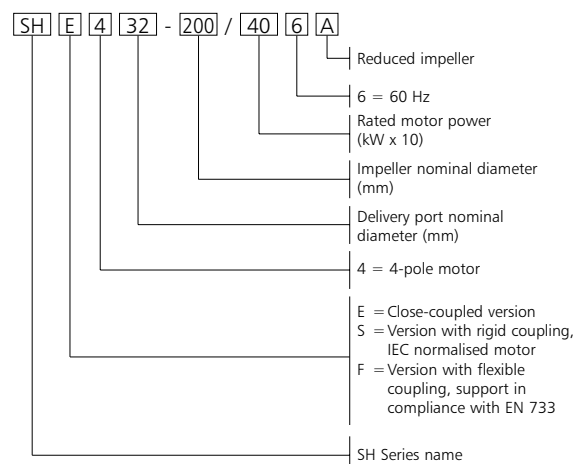
- **Maximum delivery** up to **240 m³/h.**
- **Maximum head** up to **110 m.**
- 316L stainless steel, laser-welded impeller (up to 65-160 size) and pump body.
- **AISI 316L** stainless steel wear rings.
- **Port nominal diameter** up to **DN 80.**
- **Impeller nominal diameter** up to **250 mm.**
- 2- and 4-pole three-phase motors.
- 50 and 60 Hz frequencies.
- Counterflanges available on request.
- IP55 protection.
- Class F insulation.
- **Maximum operating pressure: 12 bar (PN12).**
- Pumped **liquid temperature -10°C to +110°C.**
- **Versions with HYDROVAR frequency converter (variable speed) are available on request.**



TABLE OF MATERIALS

PART	MATERIAL
Pump body, Seal housing, Impeller Wear ring Counterwear ring	STAINLESS STEEL AISI 316L - DIN 1.4404
Adapter	ALUMINIUM OR DIN GG20 CAST IRON
Mechanical seal	CERAMIC/CARBON/FPM
O-Ring	FPM
Fill/drain plugs	STAINLESS STEEL AISI 316L-DIN 1.4404
Shaft (SHE - SHF), Coupling (SHS)	STAINLESS STEEL AISI 316 - DIN 1.4401
Support body (SHF)	DIN GG20 CAST IRON

IDENTIFICATION CODE



ELECTRICAL SPECIFICATIONS MOTORS WITH EXTENDED SHAFT FOR SHE SERIES

SINGLE-PHASE 50 Hz 2 POLES MOTORS

MOTOR TYPE			INPUT CURRENT	CAPACITOR		DATA FOR 230 V 50 Hz					
kW	IEC SIZE *	CONSTRUCTION DESIGN	In (A) 220-240 V	μF	V	rpm	Is / In	n %	cosφ	Cn Nm	Cs/Cn
1.1	90R	B14	7.07-6.81	30	450	2800	3.80	73.8	0.95	3.75	0.47

* R = Reduced size of motor casing as compared to shaft extension and flange.

she-motm-2p50_a_te

THREE-PHASE 50 Hz 2 POLES MOTORS

MOTOR TYPE			INPUT CURRENT In (A)				DATA FOR 400 V 50 Hz					
kW	IEC SIZE *	CONSTRUCTION DESIGN	Δ 220-240 V	Y 380-415 V	Δ 380-415 V	Y 660-690 V	rpm	Is / In	n %	cosφ	Cn Nm	Cs/Cn
0.75	90R	B14	3.72	2.15	-	-	2915	8.23	77.7	0.65	2.45	5.20
1.1	90R	B14	4.52	2.61	-	-	2875	6.78	78.9	0.77	3.65	3.49
1.5	90R	B14	5.98	3.45	-	-	2875	7.04	80.1	0.78	4.98	3.83
2.2	90R	B14	8.71	5.03	-	-	2860	7.32	81.1	0.78	7.34	4.12
3	90	B14	10.8	6.22	-	-	2845	6.81	80.4	0.87	10.1	3.00
4	112R	B14	-	-	8.14	4.70	2900	7.86	83.5	0.85	13.2	2.86
5.5	112	B14	-	-	11.0	6.35	2910	7.71	84.5	0.85	18.0	2.66
7.5	112	B14	-	-	14.6	8.43	2910	7.62	87.2	0.85	24.6	3.03
9.2	132	B14	-	-	17.5	10.1	2925	8.72	86.3	0.88	30.0	3.33
11	132	B14	-	-	21.2	12.2	2925	8.75	88.8	0.84	35.9	3.66
15	160	B34	-	-	28.6	16.5	2940	8.56	85.3	0.89	48.7	3.10
18.5	160	B34	-	-	34.2	19.7	2945	8.80	87.3	0.90	60.0	4.06
22	160	B34	-	-	40.3	23.3	2945	8.61	89.5	0.88	71.2	4.79

* R = Reduced size of motor casing as compared to shaft extension and flange.

she-mott-2p50_a_te

THREE-PHASE 50 Hz 4 POLES MOTORS

MOTOR TYPE			INPUT CURRENT In (A)				DATA FOR 400 V 50 Hz					
kW	IEC SIZE *	CONSTRUCTION DESIGN	Δ 220-240 V	Y 380-415 V	Δ 380-415 V	Y 660-690 V	rpm	Is / In	n %	cosφ	Cn Nm	Cs/Cn
0.25	71	B5	1.71	0.99	-	-	1390	3.58	62.0	0.59	1.71	3.16
0.37	71	B5	2.53	1.46	-	-	1370	3.39	61.4	0.60	2.57	3.40
0.55	90R	B14	3.03	1.75	-	-	1390	3.95	68.2	0.67	3.77	2.45
0.75	90R	B5	4.04	2.33	-	-	1395	4.06	70.1	0.66	5.13	2.73
1.1	90	B5	4.35	2.51	-	-	1415	4.65	78.0	0.81	7.42	2.15
1.5	90	B5	5.85	3.38	-	-	1420	4.99	79.9	0.80	10.1	2.26
2.2	100	B5	8.28	4.78	-	-	1410	5.53	81.4	0.82	14.9	2.52
3	100	B5	11.0	6.37	-	-	1425	6.03	82.5	0.82	20.1	2.53
4	112	B5	-	-	8.38	4.84	1440	5.81	84.8	0.81	26.5	2.50
5.5	132	B14	-	-	11.3	6.52	1445	5.98	85.8	0.82	36.3	2.60
7.5	132	B14	-	-	15.2	8.78	1450	6.70	88.1	0.81	49.3	3.17
9.2	132	B14	-	-	19	11.0	1445	5.63	87.9	0.80	60.7	2.80

* R = Reduced size of motor casing as compared to shaft extension and flange.

she-mott-4p50_a_te

ELECTRICAL SPECIFICATIONS STANDARD MOTORS FOR SHS - SHF SERIES

THREE-PHASE 50 Hz 2 POLES MOTORS

MOTOR TYPE				INPUT CURRENT				DATA FOR 400 V 50 Hz					
kW	IEC SIZE *	CONSTRUCTION		In (A)				rpm	Is / In	n %	cosφ	Cn Nm	Cs/Cn
		DESIGN		Δ	Y	Δ	Y						
		SHS	SHF	220-240 V	380-415 V	380-415 V	660-690 V						
0.75	80R	B5	-	3.50	2.02	-	-	2855	5.81	74.3	0.72	2.51	3.76
0.75	80	-	B3	3.72	2.15	-	-	2915	8.23	77.7	0.65	2.45	5.20
1.1	80	B5	B3	4.52	2.61	-	-	2875	6.78	78.9	0.77	3.65	3.49
1.5	90R	B5	-	5.98	3.45	-	-	2875	7.04	80.1	0.78	4.98	3.83
1.5	90	-	B3	5.66	3.27	-	-	2875	6.40	76.5	0.87	4.98	2.71
2.2	90R	B5	-	8.71	5.03	-	-	2860	7.32	81.1	0.78	7.34	4.12
2.2	90	-	B3	8.02	4.63	-	-	2870	6.94	80.0	0.86	7.32	2.85
3	100R	B5	-	10.8	6.22	-	-	2845	6.81	80.4	0.87	10.1	3.00
3	100	-	B3	10.6	6.10	-	-	2895	6.53	83.6	0.85	9.89	3.34
4	112R	B5	-	-	-	8.14	4.70	2900	7.86	83.5	0.85	13.2	2.86
4	112	-	B3	-	-	8.21	4.74	2915	7.41	82.2	0.86	13.1	2.58
5.5	132R	B5	-	-	-	11.0	6.35	2910	7.71	84.5	0.85	18.0	2.66
5.5	132	-	B3	-	-	10.7	6.18	2905	6.53	84.4	0.88	18.1	2.39
7.5	132R	B5	-	-	-	14.6	8.43	2910	7.62	87.2	0.85	24.6	3.03
7.5	132	-	B3	-	-	14.4	8.31	2915	7.37	85.8	0.88	24.6	2.69
11	160	B35	B3	-	-	21.6	12.5	2925	6.83	82.4	0.89	35.9	2.97
15	160	B35	B3	-	-	28.6	16.5	2940	8.56	85.3	0.89	48.7	3.10
18.5	160	B35	B3	-	-	34.2	19.7	2945	8.80	87.3	0.90	60.0	4.06
22	180R	B35	-	-	-	40.3	23.3	2945	8.61	89.5	0.88	71.2	4.79
22	180	-	B3	-	-	42.0	24.2	2930	7.10	90.0	0.84	71.0	2.50
30	200	B35	B3	-	-	55.0	31.8	2945	6.80	90.5	0.87	97.0	2.40
37	200	B35	B3	-	-	67.0	38.7	2940	7.20	91.5	0.87	120	2.50
45	225	-	B3	-	-	81.0	46.8	2955	6.70	91.3	0.88	145	2.40
55	250	-	B3	-	-	98.0	56.6	2960	6.70	92.1	0.88	177	2.40
75	280	-	B3	-	-	134	77.4	2965	6.80	92.8	0.87	241	2.30

* R = Reduced size of motor casing as compared to shaft extension and flange.

shs-shf-mott-2p50_a_te

ELECTRICAL SPECIFICATIONS STANDARD MOTORS FOR SHS - SHF SERIES

THREE-PHASE 50 Hz 4 POLES MOTORS

MOTOR TYPE				INPUT CURRENT				DATA FOR 400 V 50 Hz					
kW	IEC SIZE *	CONSTRUCTION		In (A)				rpm	Is / In	n %	cosφ	Cn Nm	Cs/Cn
		SHS	SHF	Δ 220-240 V	Y 380-415 V	Δ 380-415 V	Y 660-690 V						
0.25	71	-	B3	1.71	0.99	-	-	1390	3.58	62.0	0.59	1.71	3.16
0.37	71	-	B3	2.53	1.46	-	-	1370	3.39	61.4	0.60	2.57	3.40
0.55	80	B5	B3	3.03	1.75	-	-	1390	3.95	68.2	0.67	3.77	2.45
0.75	80	B5	B3	4.04	2.33	-	-	1395	4.06	70.1	0.66	5.13	2.73
1.1	90	B5	B3	4.35	2.51	-	-	1415	4.65	78.0	0.81	7.42	2.15
1.5	90	B5	B3	5.85	3.38	-	-	1420	4.99	79.9	0.8	10.1	2.26
2.2	100	B5	B3	8.28	4.78	-	-	1410	5.53	81.4	0.82	14.9	2.52
3	100	B5	B3	11.0	6.37	-	-	1425	6.03	82.5	0.82	20.1	2.53
4	112	B5	B3	-	-	8.38	4.84	1440	5.81	84.8	0.81	26.5	2.50
5.5	132	B5	B3	-	-	11.3	6.52	1445	5.98	85.8	0.82	36.3	2.60
7.5	132	B5	B3	-	-	15.2	8.78	1450	6.70	88.1	0.81	49.3	3.17
9.2	132	B5	B3	-	-	19.0	11.0	1445	5.63	87.9	0.80	60.7	2.80

* R = Reduced size of motor casing as compared to shaft extension and flange.

shs-shf-mott-4p50_a_te

SHE - SHS - SHF SERIES

HYDRAULIC PERFORMANCE TABLE at 2900 rpm 50 Hz, 2 POLES

PUMP TYPE	POWER		Q = DELIVERY																											
			l/min	0	100	150	200	250	300	400	500	600	700	800	1000	1200	1400	1600	1800	2000	2500	3000	3500	3800						
	m³/h	0	6	9	12	15	18	24	30	36	42	48	60	72	84	96	108	120	150	180	210	228								
	kW	HP	H = TOTAL HEAD METERS COLUMN OF WATER																											
32-125/07 *	0,75	1	16,6	15,6	14,4	13	11,3	9,5																						
32-125/11 *	1,1	1,5	21,6	20,6	19,4	18	16	14	9,8																					
32-160/15 *	1,5	2	26,7	25	23,5	21,5	19,5	17	11,7																					
32-160/22 *	2,2	3	35	33,6	32,5	31	29	26,5	21																					
32-200/30 *	3	4	43,7	40,7	38,5	36	33	30	21																					
32-200/40 *	4	5,5	53,5	51	49	47	44	41	32,3																					
32-250/55 *	5,5	7,5	58,6	55,5	53,4	51	48	44,5	36,8																					
32-250/75 *	7,5	10	74	71	68,9	66	63	60	52																					
32-250/110*	11	15	86	82,5	80,1	77,5	74,3	71	63																					
40-125/11	1,1	1,5	15,1				13,5	12,8	11,3	9,5	7,5																			
40-125/15	1,5	2	18,7				17	16,5	14,8	13	10,7	8,2																		
40-125/22	2,2	3	24,2				23	22,2	20,5	18,3	15,8	13,2																		
40-160/30	3	4	32,2				30,5	29,5	27	24	20,8	17																		
40-160/40	4	5,5	38				36,5	35,5	33	30	26,5	22,8	18,5																	
40-200/55	5,5	7,5	49,1				47,5	46,4	43,5	40,5	36	31	25																	
40-200/75	7,5	10	58,2				56	55,1	52,5	49	45	40	34,4																	
40-250/* *	11	15	65				63	62	60	56	52	44,6																		
40-250/110	11	15	75				72	71	69	66	61	55																		
40-250/150	15	20	88				85	84	82	78	74	69	63																	
50-125/22	2,2	3	17,2							15,5	14,6	13,6	12,3	9,5	6,5															
50-125/30	3	4	21,7							20	18,8	17,6	16,4	13,5	10,5															
50-125/40	4	5,5	25,7							24	23,3	22,2	21	18	15	12														
50-160/55	5,5	7,5	34,1							32	30,6	29	27,6	24	19,9	14,7														
50-160/75	7,5	10	40,8							38,5	37,5	36	34,7	31,2	27	21,8														
50-200/* *	11	15	53							49,5	47,5	45	42,8	37	29,8	20,7														
50-200/110	11	15	60,1							57	55	53	50,3	44,4	37,4	28,4														
50-250/150	15	20	70							68	67	65	63	58	51															
50-250/185	18,5	25	80							76	75	73	71	66	60															
50-250/220	22	30	89							86	85	83	81	76	69	61														
65-160/40	4	5,5	19,6											16,8	15,2	13,5	11,7	9,7	7,6											
65-160/55	5,5	10	24,2											21,4	19,8	18	16	14	11,8											
65-160/75	7,5	5,5	28,2											26	24,5	23	21	19	16,9	14,5										
65-160/* *	11	15	38,2											35,4	33	30	27	23,7	20											
65-160/110	11	15	42,9											40,8	38,5	35,5	32,5	29	25,5	21,4										
65-200/150	15	20	53											50	47,5	44,5	40,5	36,5	32											
65-200/185	18,5	25	60											57,5	55	52	48,7	44,7	40	35,4										
65-200/220	22	30	68											65,5	63	60	57	53,5	49	41,8										
65-250/300	30	40	84											83	81,7	80	77	73	69	64										
65-250/370	37	50	97											97	95,3	93	90	86	82	78										
80-160/110	11	15	33													31,9	30,6	29,2	27,5	25,6	20,5	14,5								
80-160/150	15	20	39,6													38,8	37,6	36,3	34,5	32,8	27,5	21,5	15							
80-160/185	18,5	25	46,5													45,7	44,7	43	41,5	40	35	29	22,5	19,5						
80-200/220	22	30	52														50,5	49	47,5	45,8	41	35	28,5							
80-200/300	30	40	62														62	60,5	59	57,5	52	46,5	39,5	35,1						
80-200/370	37	50	70														70	69	68	66	61	55,5	49	44,4						
80-250/450* **	45	61	82														81	80	78	76	70	63	54							
80-250/550* **	55	75	94														94	93	91	89	83	77	68							
80-250/750* **	75	100	110														111	109	108	106	101	94	86	80						

* DN 25 available with the same performance of DN 32

** /92 in the SHE version

/110 in the SHS-SHF version

*** F version available only

SHE - SHS - SHF SERIES

HYDRAULIC PERFORMANCE TABLE at 1450 rpm 50 Hz, 4 POLES

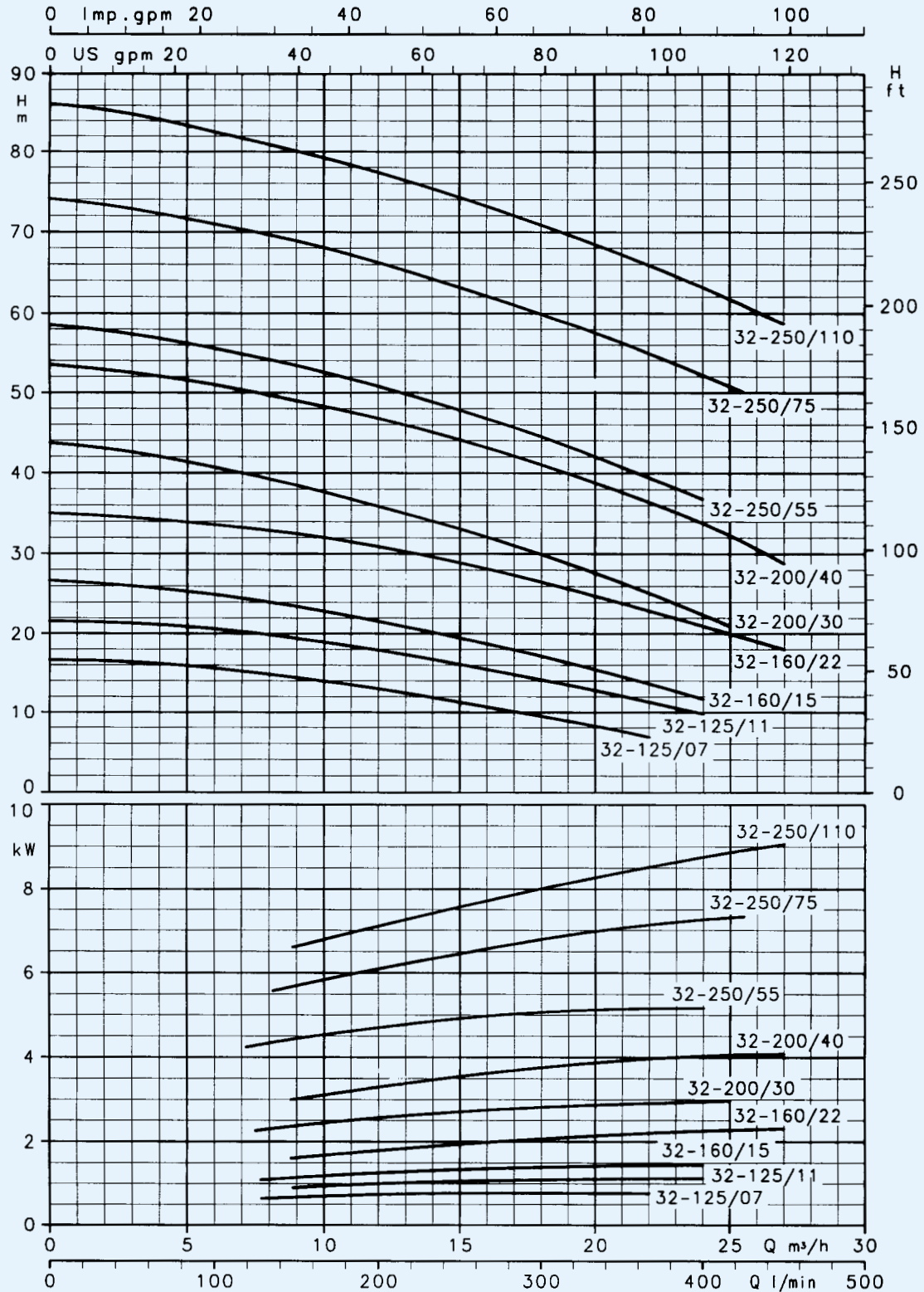
PUMP TYPE	POWER		Q = DELIVERY																				
			l/min	0	50	75	100	125	150	175	200	250	300	400	500	600	700	800	1000	1200	1500	1800	2200
			m³/h	0	3	4,5	6	7,5	9	10,5	12	15	18	24	30	36	42	48	60	72	90	108	132
	kW	HP	H = TOTAL HEAD METERS COLUMN OF WATER																				
32-125/02A*	0,25	0,33	4,4	4,1	3,9	3,6	3,2	2,7	2,2	1,6													
32-125/02 *	0,5	0,33	5,5	5,2	5	4,7	4,3	3,8	3,3	2,7													
32-160/02 *	0,25	0,33	6,9	6,3	5,9	5,4	4,9	4,4	3,7	2,9													
32-160/03 *	0,37	0,5	8,6	8,2	7,8	7,4	6,9	6,4	5,8	5,2	3,6												
32-200/03 *	0,37	0,5	10,8	10	9,4	8,7	7,9	7	6,1	5,1													
32-200/05 *	0,55	0,75	13,2	12,5	12	11,4	10,6	9,8	8,8	7,8	5,4												
32-250/07 *	0,75	1	14,5	13,6	13	12,3	11,6	10,8	9,9	8,9	6,5												
32-250/11 *	1,1	1,5	18,4	17,5	16,8	16,1	15,3	14,4	13,5	12,5	10,2												
32-250/15 *	1,5	2	21,3	20,3	19,7	19	18,2	17,4	16,3	15,2	12,8												
40-125/02A	0,25	0,33	4				3,6	3,5	3,3	3,1	2,7	2,1											
40-125/02	0,25	0,33	5,4				5	4,8	4,6	4,4	3,9	3,3	2										
40-125/03	0,37	0,5	6,3				5,9	5,7	5,5	5,2	4,7	4	2,7										
40-160/03	0,37	0,5	8				7,4	7,2	6,9	6,6	5,9	5,1	3,1										
40-160/05	0,55	0,75	9,2				8,7	8,5	8,2	7,9	7,2	6,4	4,4										
40-200/07	0,75	1	11,9				11,5	11,2	10,8	10,5	9,7	8,6	5,8										
40-200/11	1,1	1,5	14,2				13,5	13,3	13	12,7	11,8	10,8	8										
40-250/11	1,1	1,5	15,6				14,9	14,6	14,3	14	13	11,9											
40-250/15	1,5	2	18,1				17,3	17	16,7	16,4	15,5	14,5	11,4										
40-250/22	2,2	3	21,5				20,7	20,3	20	19,7	18,8	17,7	14,8										
50-125/03A	0,37	0,5	4,4							4,2	4	3,8	3,3	2,7	2								
50-125/03	0,37	0,5	5,4							5	4,8	4,6	4	3,3	2,6	1,8							
50-125/05	0,55	0,75	6,4							6	5,8	5,6	5	4,3	3,6	2,8							
50-160/07	0,75	1	8,2							7,8	7,6	7,3	6,7	5,9	4,9	3,8							
50-160/11	1,1	1,5	9,9							9,3	9,1	8,8	8,2	7,4	6,6	5,4							
50-200/11	1,1	1,5	12,8							12,1	11,7	11,2	10	8,6	6,8	4,8							
50-200/15	1,5	2	14,7							13,9	13,6	13	11,8	10,4	8,7	6,6							
50-250/22A	2,2	3	17,5							16,8	16,4	16	15	13,8	12	9,7							
50-250/22	2,2	3	19,4							18,5	18,2	17,8	16,8	15,5	13,8	11,6							
50-250/30	3	4	21,9							21,3	20,9	20,5	19,6	18,4	16,8	14,7							
65-160/05	0,55	0,75	5,4										4,2	3,7	3,3	2,7	2,2						
65-160/07	0,75	1	6,4										5,3	4,8	4,4	3,8	3,4						
65-160/11A	1,1	1,5	7,6										6,5	6,1	5,7	5,1	4,6	3,4					
65-160/11	1,1	1,5	9,4										8,5	7,9	7,2	6,3	5,5	3,4					
65-160/15	1,5	2	10,6										9,7	9,2	8,5	7,7	6,9	4,9					
65-200/15	1,5	2	11,8										11	10,2	9,4	8,4	7,4	5,1					
65-200/22	2,2	3	14,4										13,5	12,8	12	11	10	7,9					
65-200/30	3	4	17,5										16,8	16,3	15,6	14,7	13,8	11,7	9,3				
65-250/40	4	5,5	20,4										20	19,5	18,9	18	17,3	15,1	12				
65-250/55	5,5	7,5	23,7										23,7	23,2	22,6	22	21	19	16,3				
80-160/15	1,5	2	8												7,6	7,2	6,8	6	5,1	3,6			
80-160/22A	2,2	2	9,4												9	8,7	8,3	7,5	6,6	5	3,2		
80-160/22	2,2	3	10,8												10,4	10,1	9,7	9	8	6,4	4,5		
80-200/30	3	4	12,3												12,5	12,2	11,8	10,8	9,8	8	6,1		
80-200/40	4	5,5	15,4												15,8	15,5	15,2	14,3	13,3	11,6	9,7	7	
80-250/55	5,5	7,5	20,3												20	19,7	19,3	18,4	17,4	15,2	12,4		
80-250/75	7,5	10	22,6												22,6	22,3	22	21,3	20,3	18,5	16,1	12,2	
80-250/92	9,2	12,5	26,7												26,5	26,3	26	25,2	24,2	22,3	20,2	16,8	

* DN 25 available with the same performances of DN 32

SHS

SH 25 - SH 32 SERIES

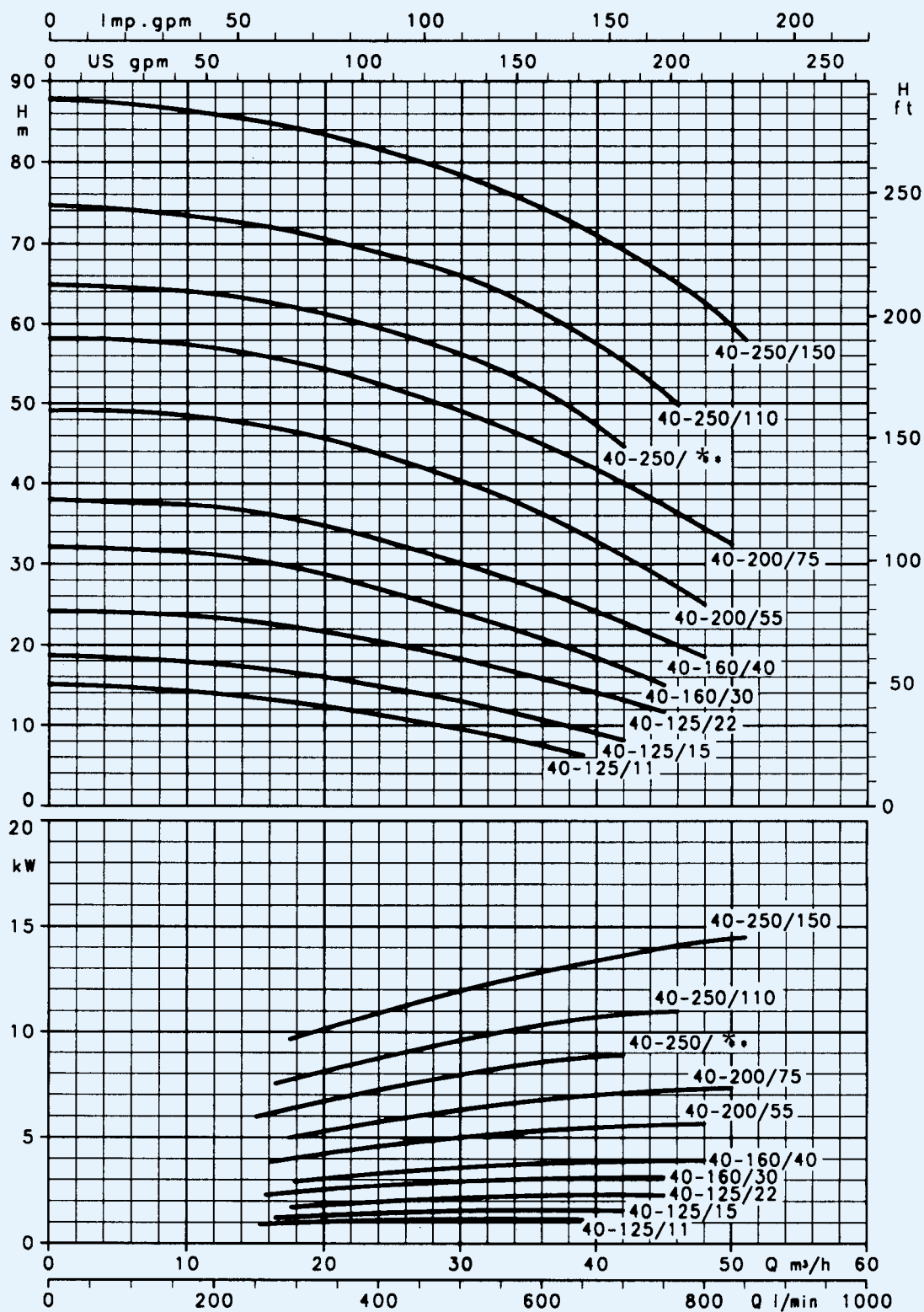
OPERATING CHARACTERISTICS at 2900 rpm 50 Hz, 2 POLES



Please verify with the price list the availability of model type SHE-SHS-SHF.
These performances are valid for liquids with density $\rho = 1.0 \text{ kg/dm}^3$ and kinematic viscosity $\gamma = 1 \text{ mm}^2/\text{sec}$.

SH 40 SERIES

OPERATING CHARACTERISTICS at 2900 rpm 50 Hz, 2 POLES

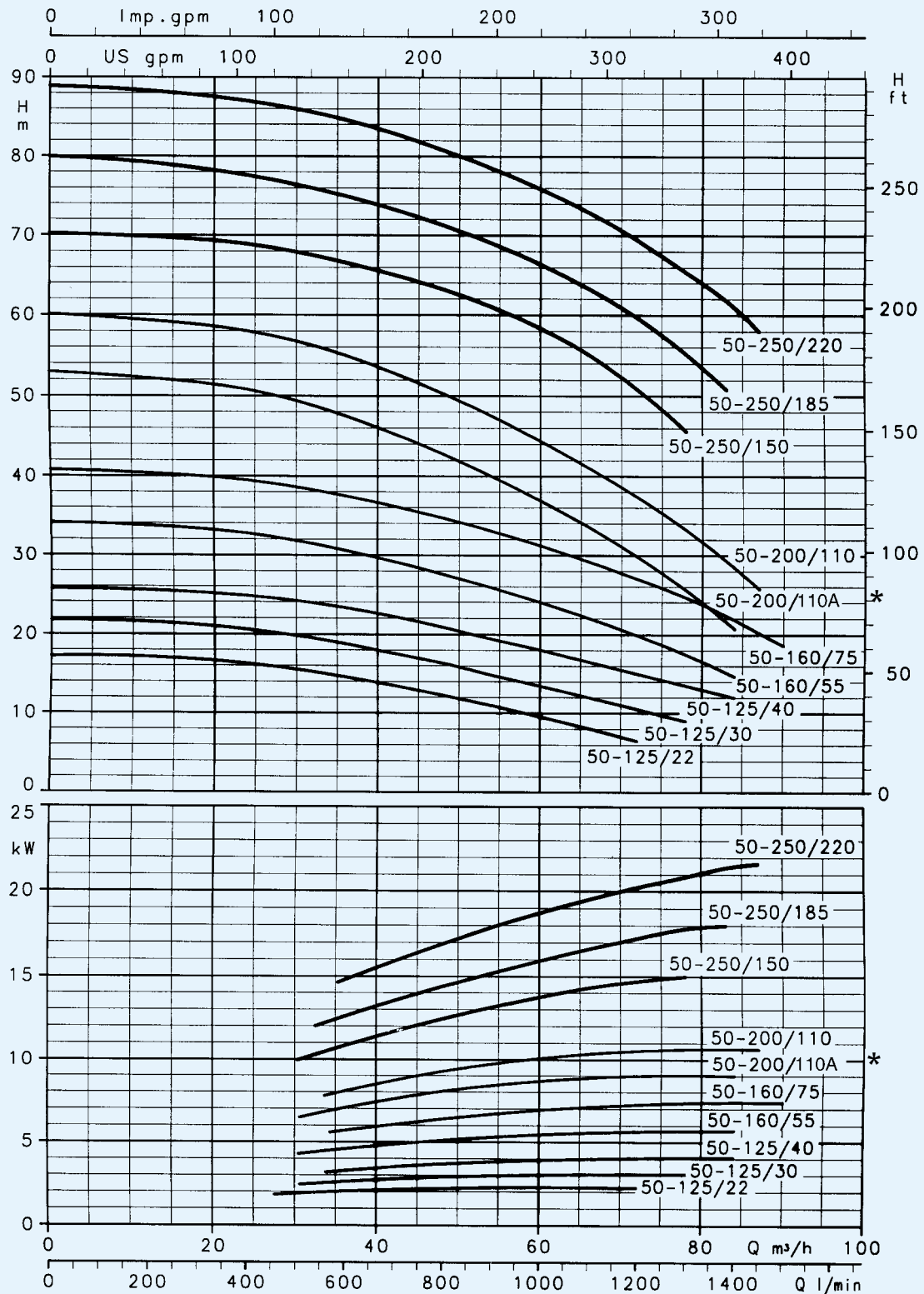


* /92 - 9,2 kW - 12,5 HP for version SHE - /110A - 11 kW - 15 HP for version SHS-SHF

Please verify with the price list the availability of model type SHE-SHS-SHF

These performances are valid for liquids with density $\rho = 1.0 \text{ kg/dm}^3$ and kinematic viscosity $\gamma = 1 \text{ mm}^2/\text{sec}$.

SH 50 SERIES OPERATING CHARACTERISTICS at 2900 rpm 50 Hz, 2 POLES



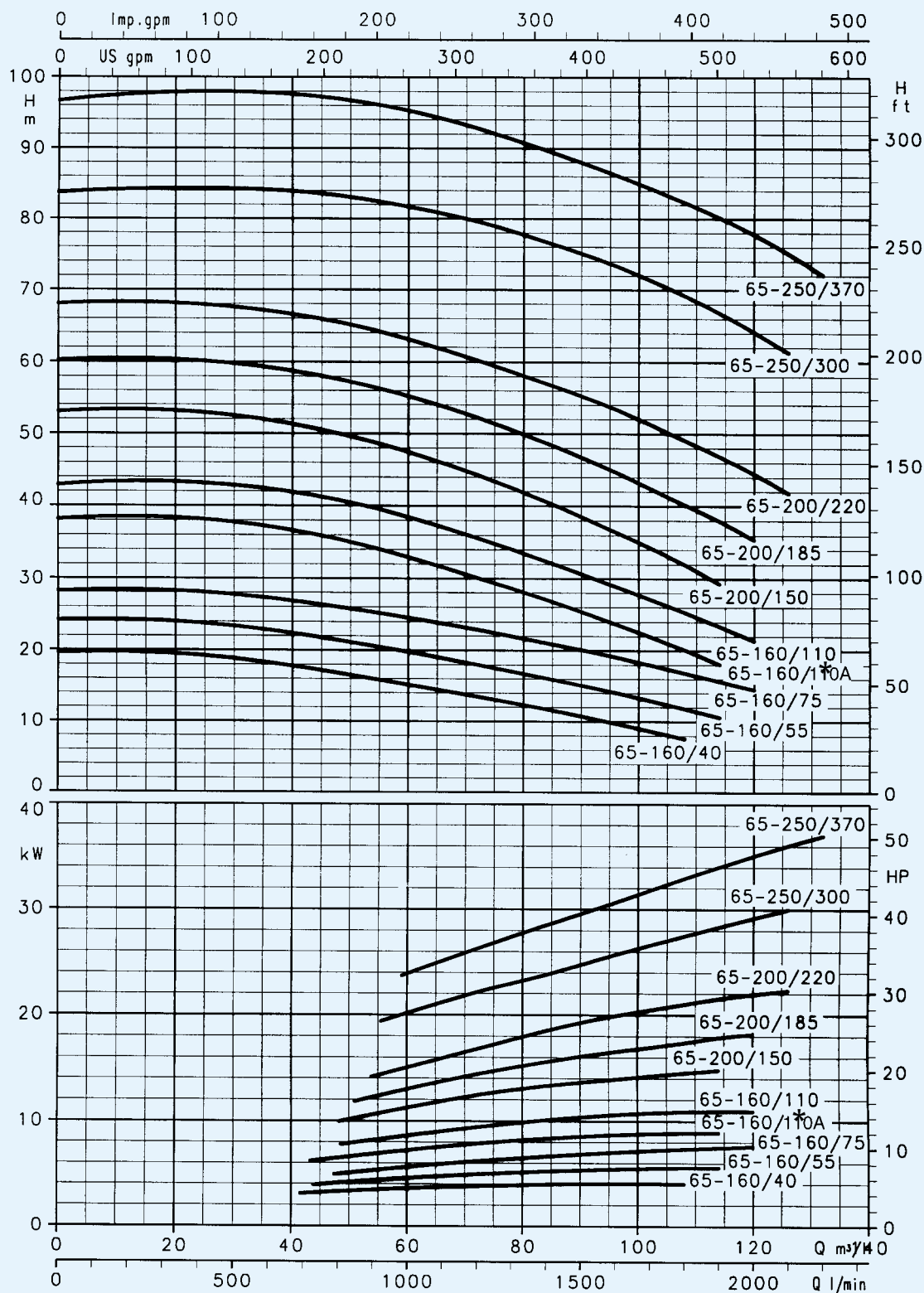
* /92 - 9,2 kW - 12,5 HP for version SHE - /110A - 11 kW - 15 HP for version SHS-SHF

Please verify with the price list the availability of model type SHE-SHS-SHF

These performances are valid for liquids with density $\rho = 1.0 \text{ kg/dm}^3$ and kinematic viscosity $\gamma = 1 \text{ mm}^2/\text{sec}$.

SH 65 SERIES

OPERATING CHARACTERISTICS at 2900 rpm 50 Hz, 2 POLES

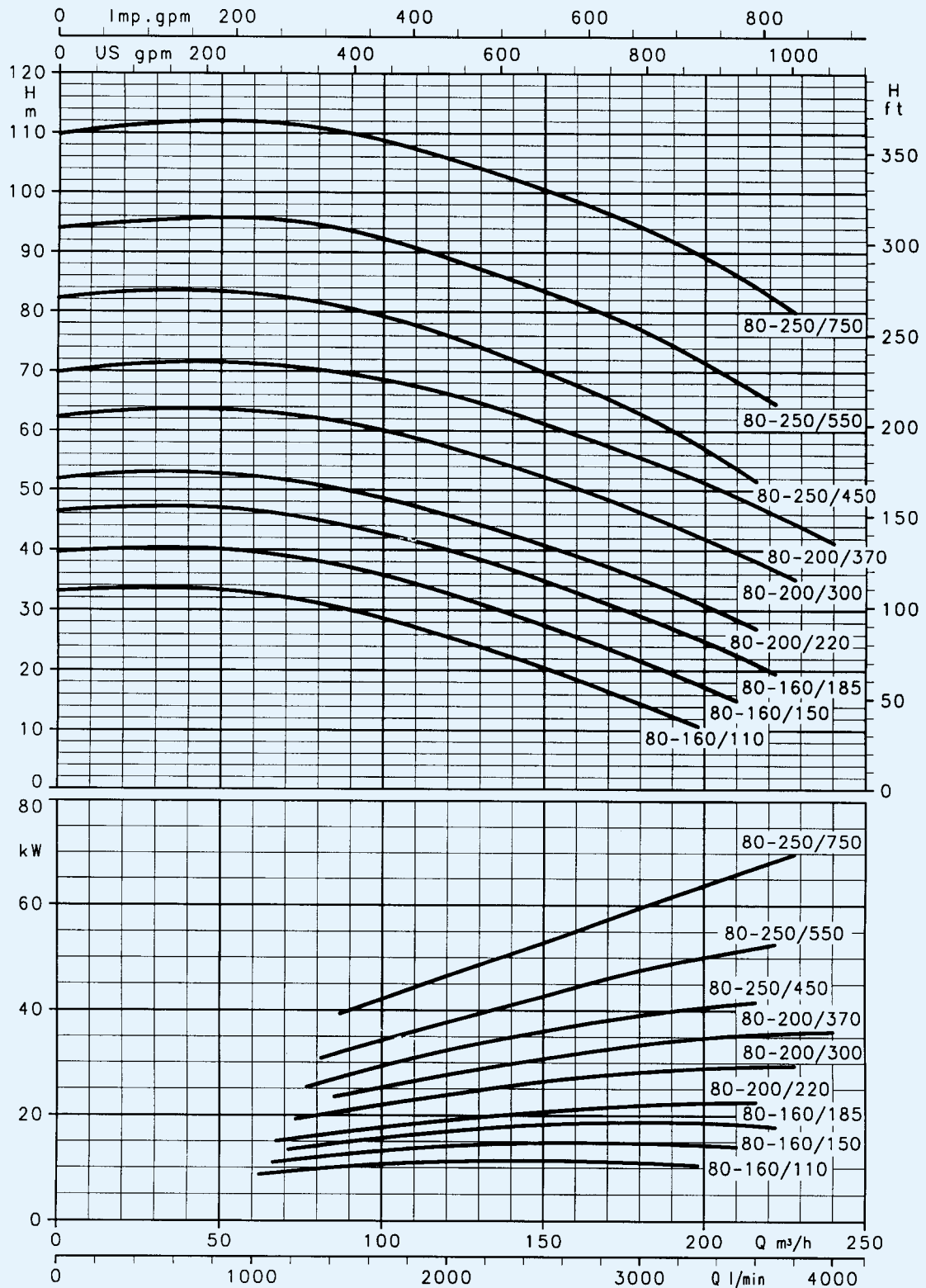


* /92 - 9,2 kW - 12,5 HP for version SHE - /110A - 11 kW - 15 HP for version SHS-SHF

Please verify with the price list the availability of model type SHE-SHS-SHF

These performances are valid for liquids with density $\rho = 1.0 \text{ kg/dm}^3$ and kinematic viscosity $\gamma = 1 \text{ mm}^2/\text{sec}$.

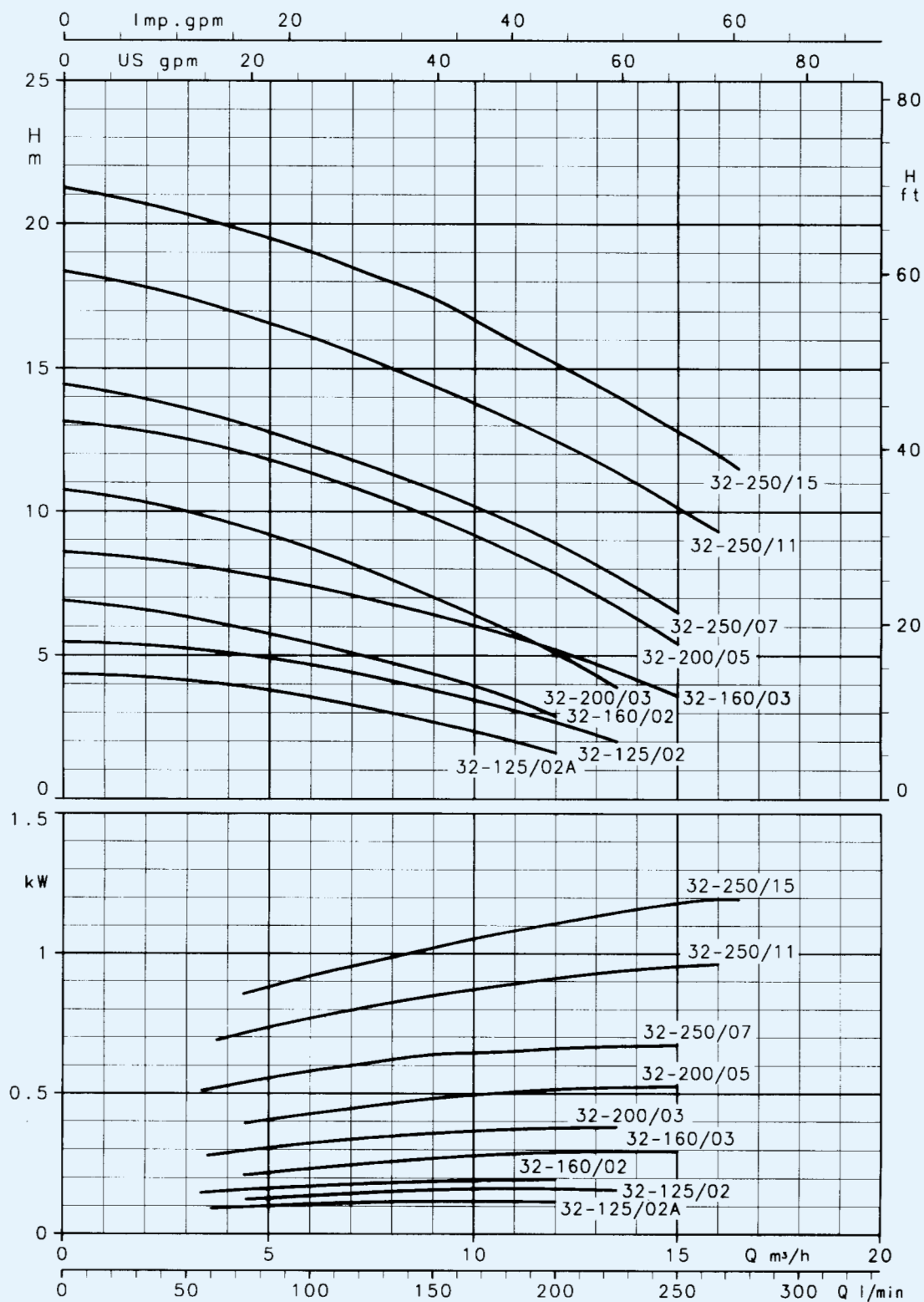
SH 80 SERIES OPERATING CHARACTERISTICS at 2900 rpm 50 Hz, 2 POLES



Please verify with the price list the availability of model type SHE-SHS-SHF.
These performances are valid for liquids with density $\rho = 1.0 \text{ kg/dm}^3$ and kinematic viscosity $\gamma = 1 \text{ mm}^2/\text{sec}$.

SH4 25 - SH4 32 SERIES

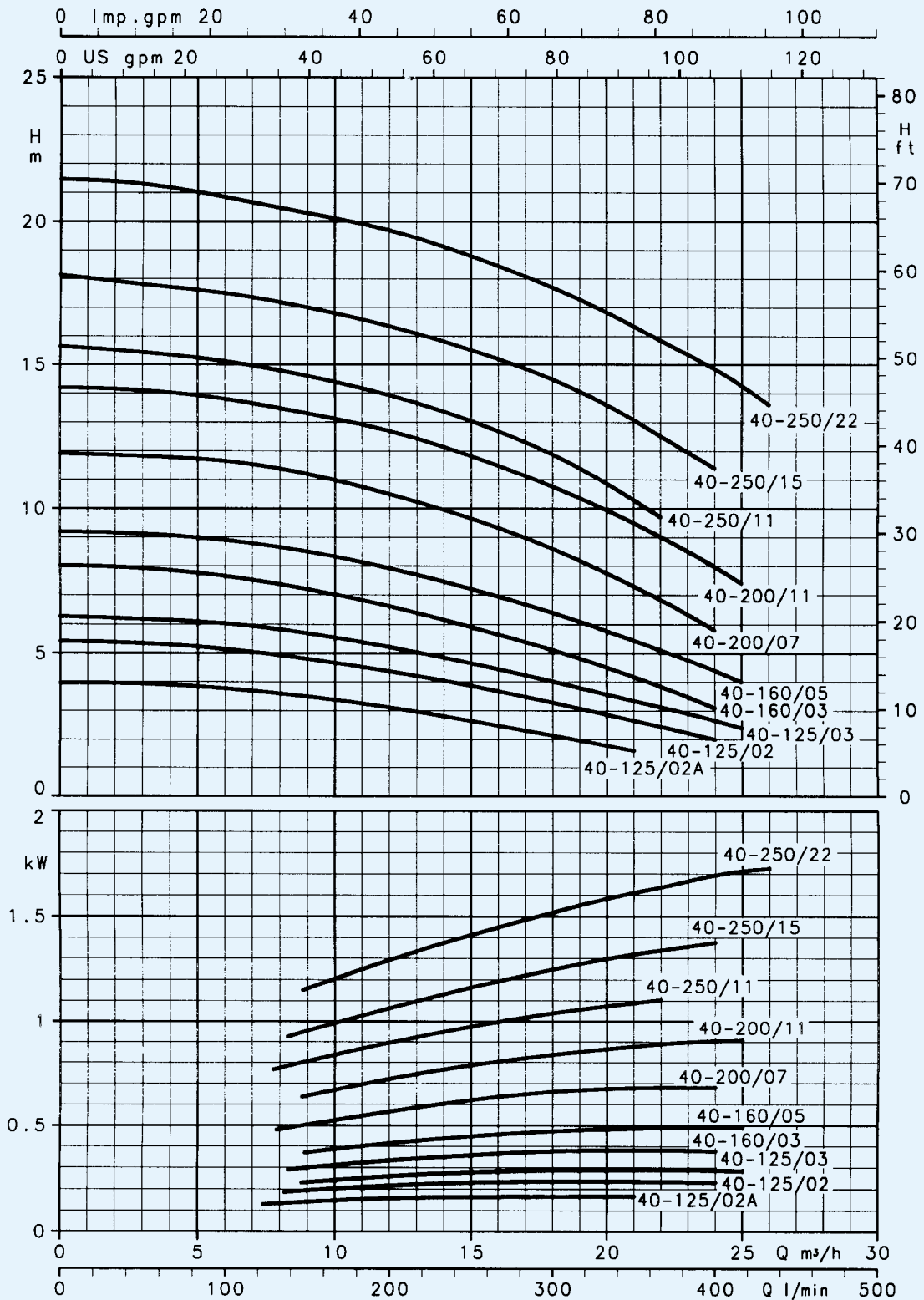
OPERATING CHARACTERISTICS at 1450 rpm 50 Hz, 4 POLES



Please verify with the price list the availability of model type SHE4-SHS4-SHF4
 These performances are valid for liquids with density $\rho = 1.0 \text{ kg/dm}^3$ and kinematic viscosity $\gamma = 1 \text{ mm}^2/\text{sec}$.

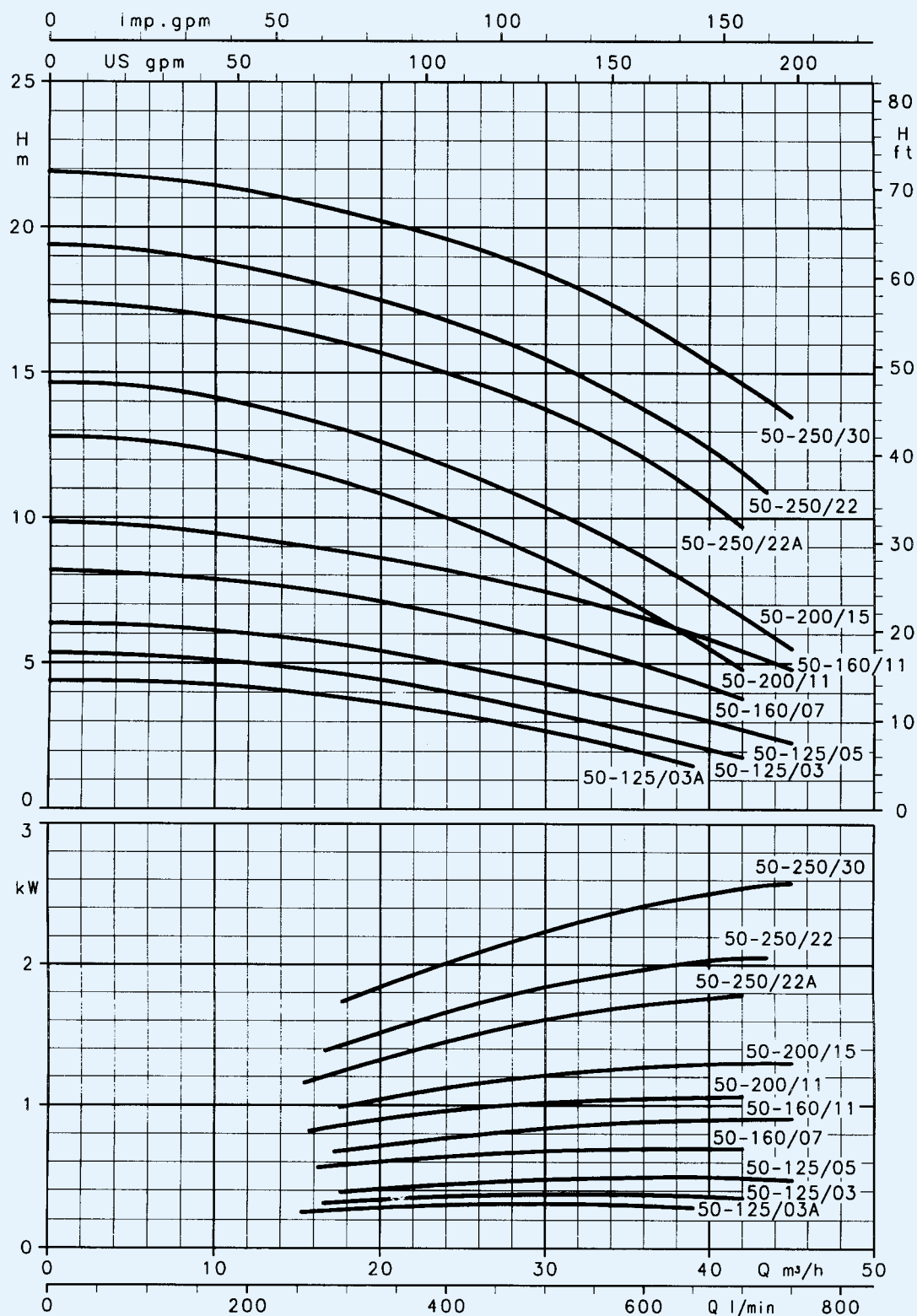
SH4 40 SERIES

OPERATING CHARACTERISTICS at 1450 rpm 50 Hz, 4 POLES



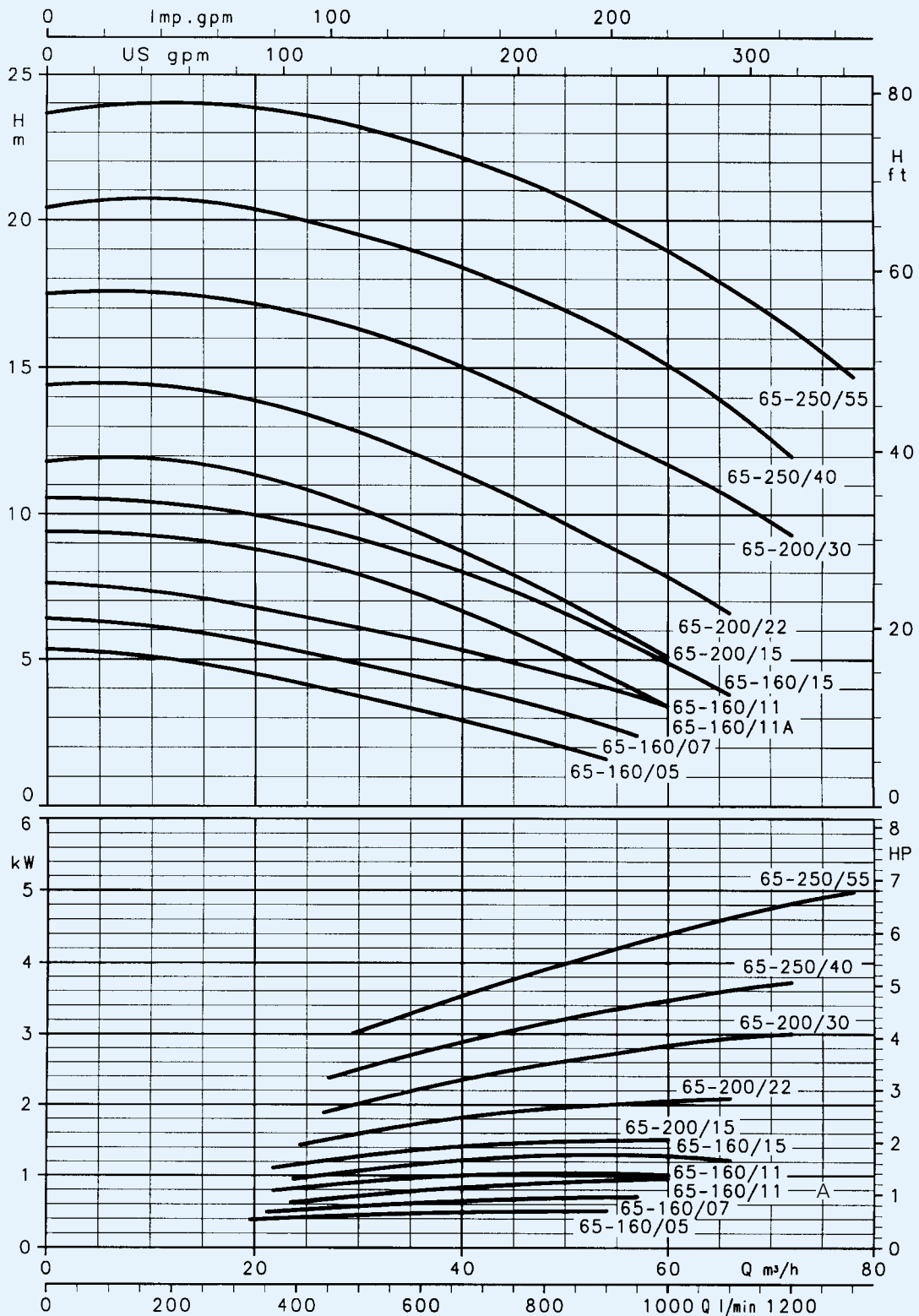
Please verify with the price list the availability of model type SHE4-SHS4-SHF4
 These performances are valid for liquids with density $\rho = 1.0 \text{ kg/dm}^3$ and kinematic viscosity $\gamma = 1 \text{ mm}^2/\text{sec}$.

SH4 50 SERIES OPERATING CHARACTERISTICS at 1450 rpm 50 Hz, 4 POLES



Please verify with the price list the availability of model type SHE4-SHS4-SHF4
These performances are valid for liquids with density $\rho = 1.0 \text{ kg/dm}^3$ and kinematic viscosity $\gamma = 1 \text{ mm}^2/\text{sec}$.

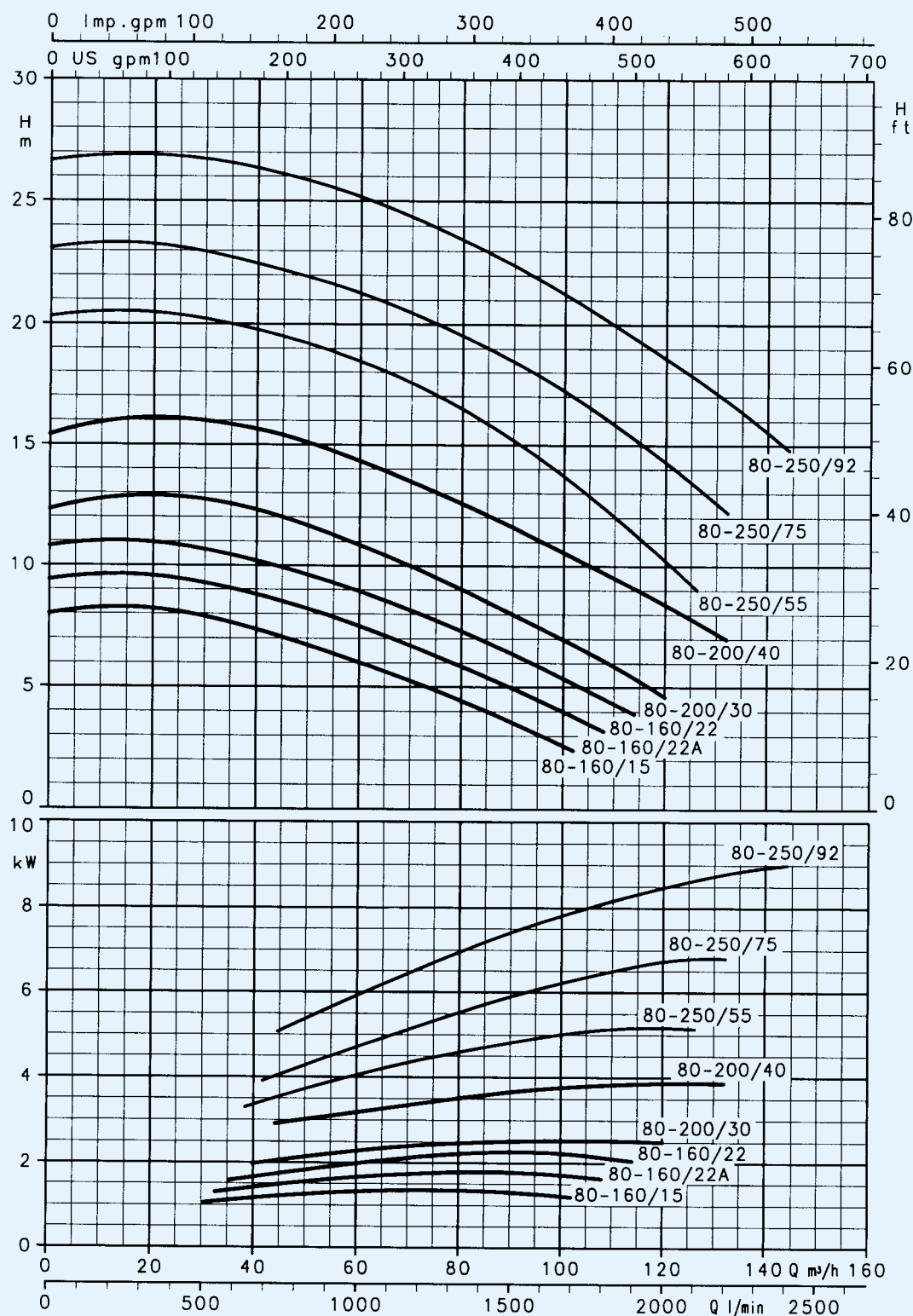
SH4 65 SERIES OPERATING CHARACTERISTICS at 1450 rpm 50 Hz, 4 POLES



Please verify with the price list the availability of model type SHE4-SHS4-SHF4
These performances are valid for liquids with density $\rho = 1.0 \text{ kg/dm}^3$ and kinematic viscosity $\gamma = 1 \text{ mm}^2/\text{sec}$.

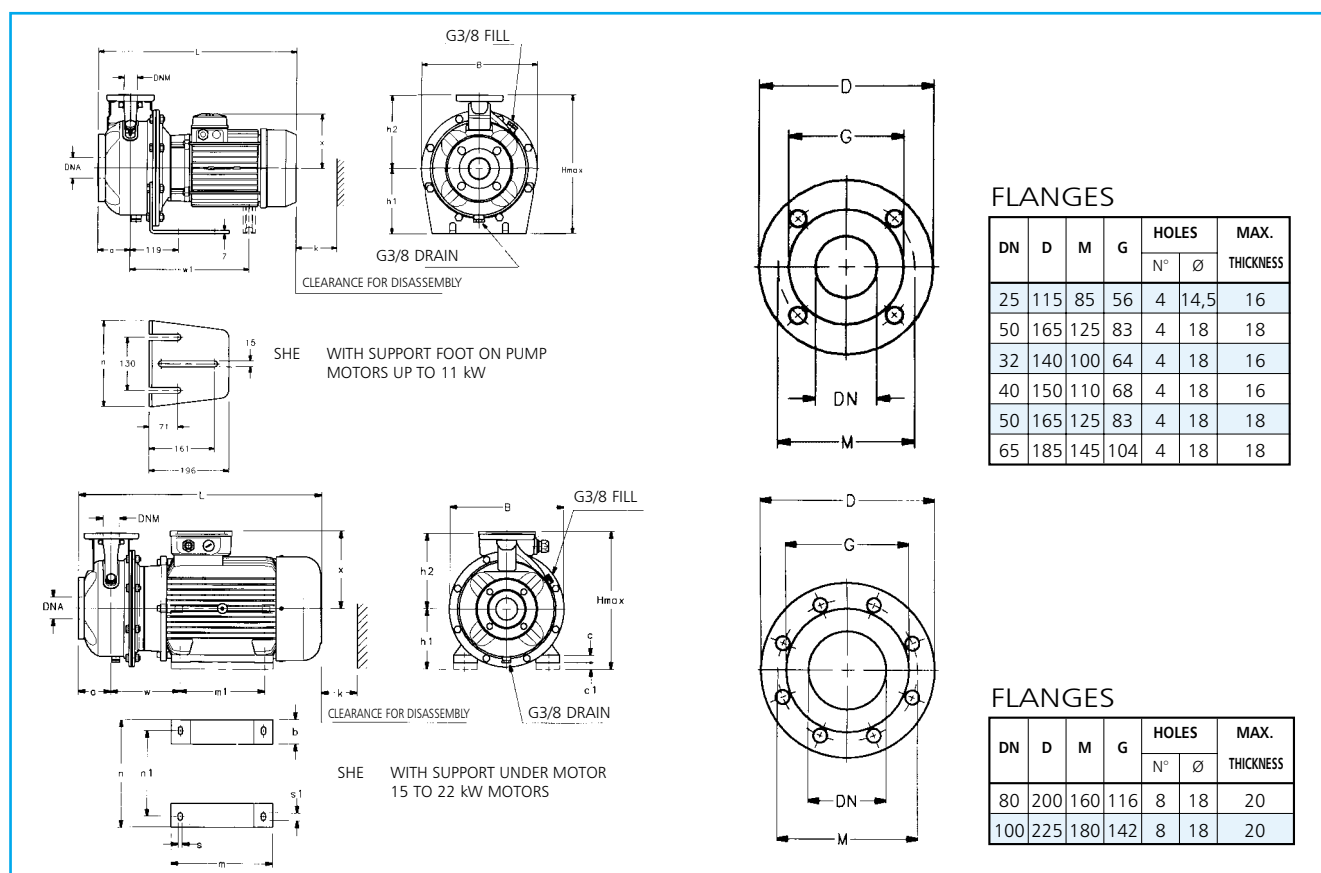
SH4 80 SERIES

OPERATING CHARACTERISTICS at 1450 rpm 50 Hz, 4 POLES



Please verify with the price list the availability of model type SHE4-SHS4-SHF4
 These performances are valid for liquids with density $\rho = 1.0 \text{ kg/dm}^3$ and kinematic viscosity $\gamma = 1 \text{ mm}^2/\text{sec}$.

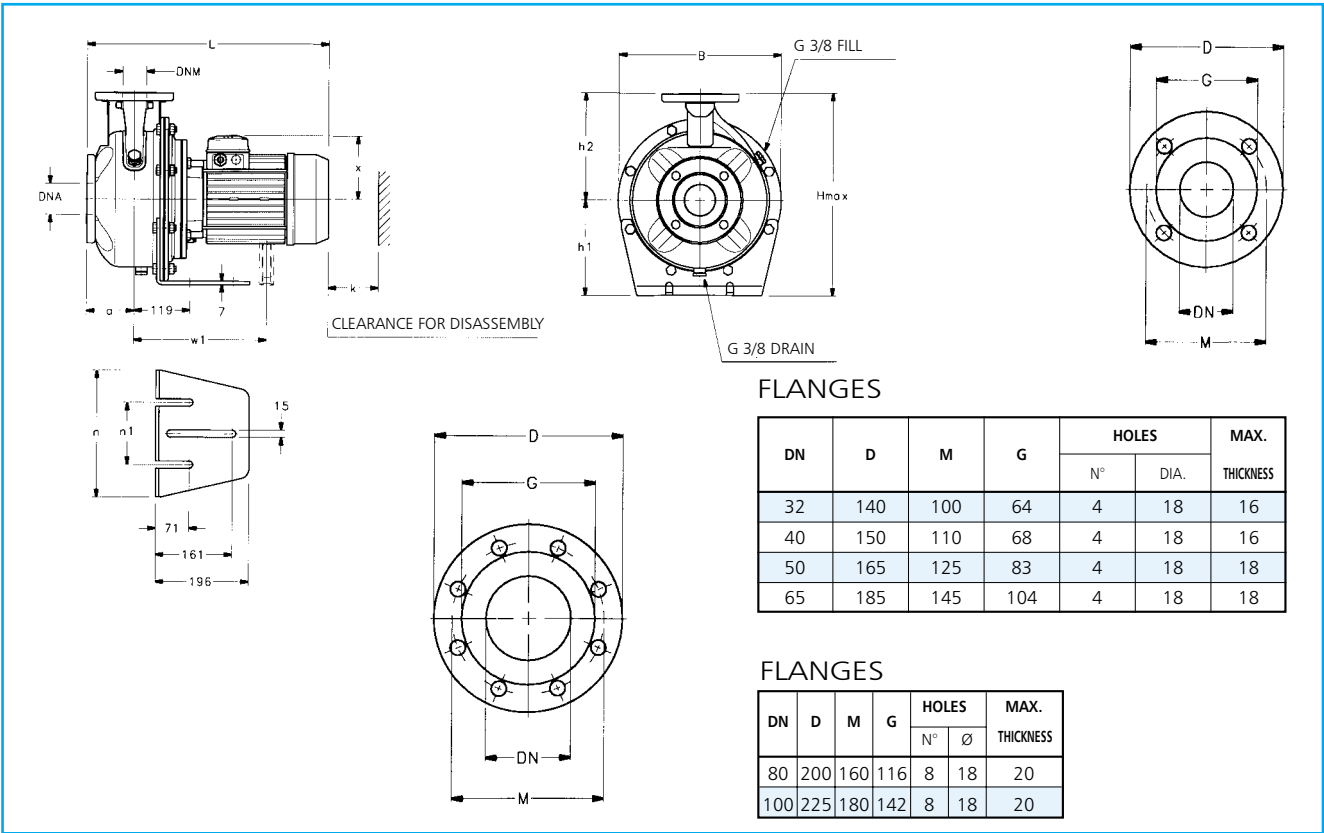
DIMENSIONS AND WEIGHTS SHE SERIES, 2 POLES



DIMENSIONS AND WEIGHTS SHE SERIES, 2 POLES

PUMP TYPE	PUMP							SUPPORT										B	H	L	k	WEIGHT
	DNM	DNA	a	h2	w	w1	x	b	c	c1	h1	m	m1	n	n1	s	s1		max			kg
SHE 25-125/07	25	50	80	140	—	—	129	—	—	—	160	—	—	190	—	—	—	218	252	443	98	20
SHE 25-125/11	25	50	80	140	—	—	129	—	—	—	160	—	—	190	—	—	—	218	252	443	98	22
SHE 25-160/15	25	50	80	160	—	—	129	—	—	—	160	—	—	210	—	—	—	253	320	443	98	23
SHE 25-160/22	25	50	80	160	—	—	129	—	—	—	160	—	—	210	—	—	—	253	320	443	98	25
SHE 25-200/30	25	50	80	180	—	—	121	—	—	—	160	—	—	230	—	—	—	285	340	461	98	29
SHE 25-200/40	25	50	80	180	—	—	133	—	—	—	160	—	—	230	—	—	—	285	340	487	98	36
SHE 25-250/55	25	50	100	225	—	—	150	—	—	—	180	—	—	265	—	—	—	345	405	553	98	48
SHE 25-250/75	25	50	100	225	—	—	150	—	—	—	180	—	—	265	—	—	—	245	405	553	98	60
SHE 25-250/110	25	50	100	225	—	278	191	—	—	—	180	—	—	265	—	—	—	245	405	604	98	80
SHE 32-125/07	32	50	80	140	—	—	129	—	—	—	112	—	—	190	—	—	—	218	252	443	96	20
SHE 32-125/11	32	50	80	140	—	—	129	—	—	—	112	—	—	190	—	—	—	218	252	443	96	22
SHE 32-160/15	32	50	80	160	—	—	129	—	—	—	132	—	—	210	—	—	—	253	292	443	96	23
SHE 32-160/22	32	50	80	160	—	—	129	—	—	—	132	—	—	210	—	—	—	253	292	443	96	25
SHE 32-200/30	32	50	80	180	—	—	121	—	—	—	160	—	—	230	—	—	—	285	340	461	96	29
SHE 32-200/40	32	50	80	180	—	—	133	—	—	—	160	—	—	230	—	—	—	285	340	487	96	36
SHE 32-250/55	32	50	100	225	—	—	150	—	—	—	180	—	—	265	—	—	—	345	405	553	96	48
SHE 32-250/75	32	50	100	225	—	—	150	—	—	—	180	—	—	265	—	—	—	345	405	553	96	60
SHE 32-250/110	32	50	100	225	—	278	191	—	—	—	180	—	—	265	—	—	—	345	405	604	96	80
SHE 40-125/11	40	65	80	140	—	—	129	—	—	—	112	—	—	190	—	—	—	219	252	443	100	23
SHE 40-125/15	40	65	80	140	—	—	129	—	—	—	112	—	—	190	—	—	—	219	252	443	100	25
SHE 40-125/22	40	65	80	140	—	—	129	—	—	—	112	—	—	190	—	—	—	219	252	443	100	26
SHE 40-160/30	40	65	80	160	—	—	121	—	—	—	132	—	—	210	—	—	—	254	292	461	100	29
SHE 40-160/40	40	65	80	160	—	—	133	—	—	—	132	—	—	210	—	—	—	254	292	487	100	35
SHE 40-200/55	40	65	100	180	—	—	150	—	—	—	160	—	—	230	—	—	—	285	340	553	100	46
SHE 40-200/75	40	65	100	180	—	—	150	—	—	—	160	—	—	230	—	—	—	285	340	553	100	51
SHE 40-250/92	40	65	100	225	—	278	191	—	—	—	180	—	—	265	—	—	—	345	405	604	107	62
SHE 40-250/110	40	65	100	225	—	278	191	—	—	—	180	—	—	265	—	—	—	345	405	604	107	65
SHE 40-250/150	40	65	100	225	208	—	232	72	22	20	180	260	210	318	254	13	23	345	412	688	107	91
SHE 50-125/22	50	65	100	160	—	—	129	—	—	—	132	—	—	210	—	—	—	254	292	463	104	29
SHE 50-125/30	50	65	100	160	—	—	121	—	—	—	132	—	—	210	—	—	—	254	292	481	104	32
SHE 50-125/40	50	65	100	160	—	—	135	—	—	—	132	—	—	210	—	—	—	254	292	507	104	35
SHE 50-160/55	50	65	100	180	—	—	150	—	—	—	160	—	—	210	—	—	—	255	340	553	104	47
SHE 50-160/75	50	65	100	180	—	—	150	—	—	—	160	—	—	210	—	—	—	255	340	553	104	52
SHE 50-200/92	50	65	100	200	—	278	191	—	—	—	160	—	—	245	—	—	—	310	360	604	104	63
SHE 50-200/110	50	65	100	200	—	278	191	—	—	—	160	—	—	245	—	—	—	310	360	604	104	67
SHE 50-250/150	50	65	100	225	208	—	232	72	22	20	180	260	210	318	254	13	23	345	412	688	107	103
SHE 50-250/185	50	65	100	225	208	—	232	72	22	20	180	304	254	318	254	13	23	345	412	732	107	119
SHE 50-250/220	50	65	100	225	208	—	232	72	22	20	180	304	254	318	254	13	23	345	412	732	107	136
SHE 65-160/40	65	80	100	200	—	—	133	—	—	—	160	—	—	245	—	—	—	310	360	507	115	60
SHE 65-160/55	65	80	100	200	—	—	150	—	—	—	160	—	—	245	—	—	—	310	360	553	115	69
SHE 65-160/75	65	80	100	200	—	—	150	—	—	—	160	—	—	245	—	—	—	310	360	553	115	75
SHE 65-160/92	65	80	100	200	—	278	191	—	—	—	160	—	—	245	—	—	—	310	360	604	130	92
SHE 65-160/110	65	80	100	200	—	278	191	—	—	—	160	—	—	245	—	—	—	310	360	604	130	101
SHE 65-200/150	65	80	100	225	208	—	232	72	22	20	180	260	210	318	254	13	23	310	412	688	130	116
SHE 65-200/185	65	80	100	225	208	—	232	72	22	20	180	304	254	318	254	13	23	310	412	732	130	126
SHE 65-200/220	65	80	100	225	208	—	232	72	22	20	180	304	254	318	254	13	23	310	412	732	130	139
SHE 80-160/110	80	100	125	235	—	278	191	—	—	—	180	—	—	265	—	—	—	345	405	629	160	102
SHE 80-160/150	80	100	125	235	208	—	232	72	22	20	180	260	210	318	254	13	23	345	412	713	160	120
SHE 80-160/185	80	100	125	235	208	—	232	72	22	20	180	304	254	318	254	13	23	345	412	757	160	139
SHE 80-200/220	80	100	125	250	208	—	232	72	22	20	180	304	254	318	254	13	23	345	430	757	160	150

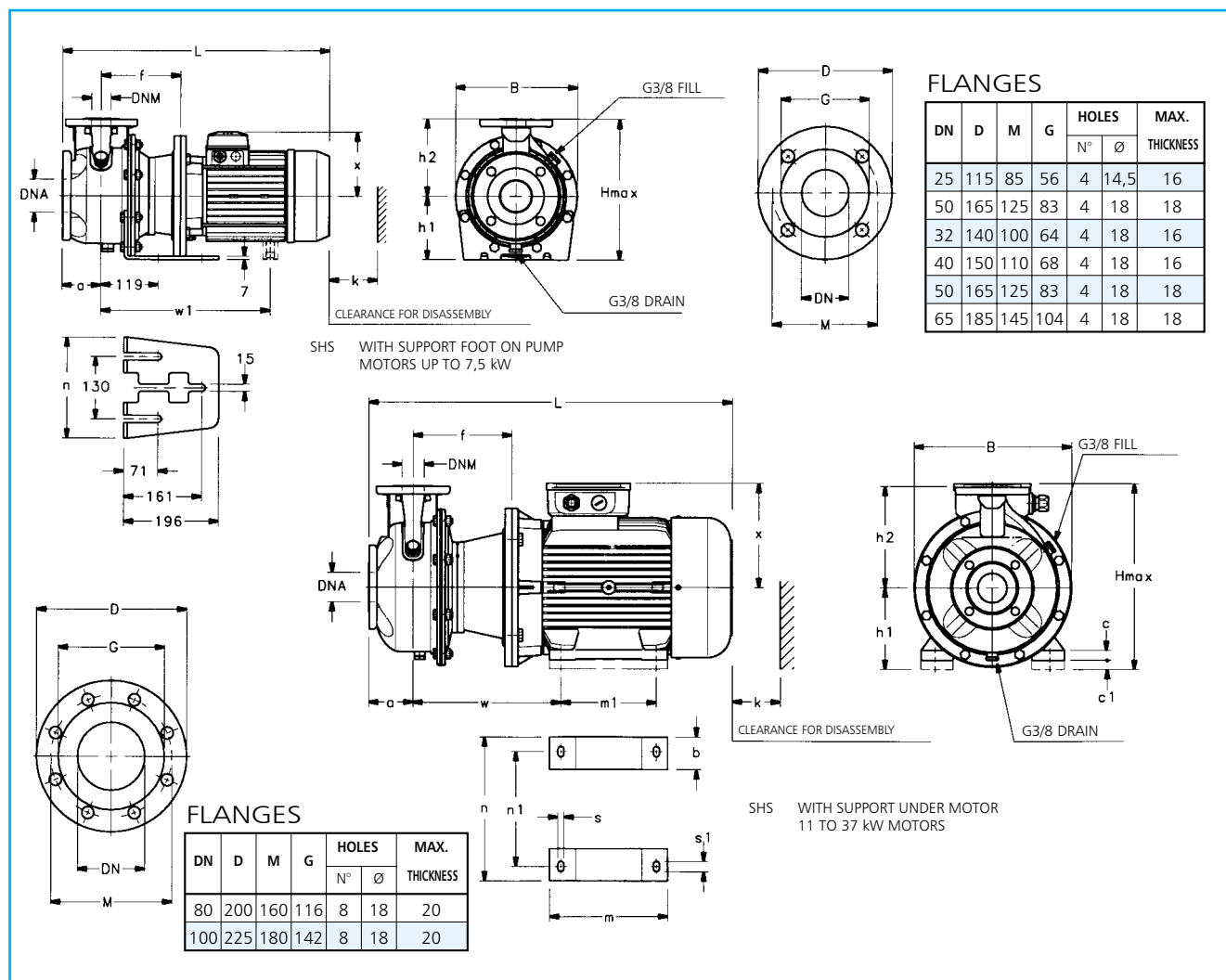
DIMENSIONS AND WEIGHTS SHE4 SERIES, 4 POLES



DIMENSIONS AND WEIGHTS SHE4 SERIES, 4 POLES

PUMP TYPE	PUMP						DIMENSIONS IN mm			B	H max	L	k	WEIGHT kg
	DNM	DNA	a	h2	w1	x	h1	n	n1					
SHE4 25-125/02A	25	50	80	140	–	121	160	190	130	218	252	411	98	20
SHE4 25-125/02	25	50	80	140	–	121	160	190	130	218	252	411	98	20
SHE4 25-160/02	25	50	80	160	–	121	160	210	130	253	320	411	98	22
SHE4 25-160/03	25	50	80	160	–	121	160	210	130	253	320	411	98	23
SHE4 25-200/03	25	50	80	180	–	121	160	230	130	285	340	411	98	28
SHE4 25-200/05	25	50	80	180	–	129	160	230	130	285	340	443	98	30
SHE4 25-250/07	25	50	100	225	–	129	180	265	130	345	405	463	98	38
SHE4 25-250/11	25	50	100	225	–	121	180	265	130	345	405	481	98	40
SHE4 25-250/15	25	50	100	225	–	121	180	265	130	345	405	481	98	45
SHE4 32-125/02A	32	50	80	140	–	121	112	190	130	218	252	411	98	20
SHE4 32-125/02	32	50	80	140	–	121	112	190	130	218	252	411	98	20
SHE4 32-160/02	32	50	80	160	–	121	132	210	130	253	292	411	98	22
SHE4 32-160/03	32	50	80	160	–	121	132	210	130	253	292	411	98	23
SHE4 32-200/03	32	50	80	180	–	121	160	230	130	285	340	411	98	28
SHE4 32-200/05	32	50	80	180	–	129	160	230	130	285	340	443	98	30
SHE4 32-250/07	32	50	100	225	–	129	180	265	130	345	405	463	98	38
SHE4 32-250/11	32	50	100	225	–	121	180	265	130	345	405	481	98	40
SHE4 32-250/15	32	50	100	225	–	121	180	265	130	345	405	481	98	45
SHE4 40-125/02A	40	65	80	140	–	121	112	190	130	219	252	411	100	21
SHE4 40-125/02	40	65	80	140	–	121	112	190	130	219	252	411	100	21
SHE4 40-125/03	40	65	80	140	–	121	112	190	130	219	252	411	100	22
SHE4 40-160/03	40	65	80	160	–	121	132	210	130	254	292	411	100	24
SHE4 40-160/05	40	65	80	160	–	129	132	210	130	254	292	411	100	25
SHE4 40-200/07	40	65	100	180	–	129	160	230	130	285	340	443	100	26
SHE4 40-200/11	40	65	100	180	–	121	160	230	130	285	340	463	100	30
SHE4 40-250/11	40	65	100	225	–	121	180	265	130	345	405	481	107	32
SHE4 40-250/15	40	65	100	225	–	121	180	265	130	345	405	481	107	42
SHE4 40-250/22	40	65	100	225	–	133	180	265	130	345	405	507	107	49
SHE4 50-125/03A	50	65	100	160	–	121	132	210	130	254	292	431	104	22
SHE4 50-125/03	50	65	100	160	–	121	132	210	130	254	292	431	104	22
SHE4 50-125/05	50	65	100	160	–	129	132	210	130	254	292	463	104	24
SHE4 50-160/07	50	65	100	180	–	129	160	210	130	255	340	463	104	26
SHE4 50-160/11	50	65	100	180	–	121	160	210	130	255	340	481	104	28
SHE4 50-200/11	50	65	100	200	–	121	160	245	130	310	360	481	104	30
SHE4 50-200/15	50	65	100	200	–	121	160	245	130	310	360	481	104	41
SHE4 50-250/22A	50	65	100	225	–	133	180	265	130	345	405	507	107	46
SHE4 50-250/22	50	65	100	225	–	133	180	265	130	345	405	507	107	46
SHE4 50-250/30	50	65	100	225	–	133	180	265	130	345	405	507	107	55
SHE4 65-160/05	65	80	100	200	–	129	160	245	130	310	360	463	115	32
SHE4 65-160/07	65	80	100	200	–	129	160	245	130	310	360	463	115	35
SHE4 65-160/11A	65	80	100	200	–	121	160	245	130	310	360	481	115	38
SHE4 65-160/11	65	80	100	200	–	121	160	245	130	310	360	481	130	38
SHE4 65-160/15	65	80	100	200	–	121	160	245	130	310	360	481	130	42
SHE4 65-200/15	65	80	100	225	–	121	180	245	130	310	405	481	130	45
SHE4 65-200/22	65	80	100	225	–	133	180	245	130	310	405	507	130	50
SHE4 65-200/30	65	80	100	225	–	133	180	245	130	310	405	507	130	55
SHE4 65-250/40	65	80	100	250	–	150	200	265	130	345	450	530	140	64
SHE4 65-250/55	65	80	100	250	–	191	200	265	130	345	450	566	140	78
SHE4 80-160/15	80	100	125	225	–	121	180	265	130	345	405	506	160	49
SHE4 80-160/22A	80	100	125	225	–	133	180	265	130	345	405	532	160	54
SHE4 80-160/22	80	100	125	225	–	133	180	265	130	345	405	532	160	54
SHE4 80-200/30	80	100	125	250	–	133	180	265	130	345	430	532	160	59
SHE4 80-200/40	80	100	125	250	–	150	180	265	130	345	430	555	160	65
SHE4 80-250/55	80	100	125	280	259	191	200	303	210	384	480	591	160	79
SHE4 80-250/75	80	100	125	280	278	191	200	303	210	384	480	629	160	87
SHE4 80-250/92	80	100	125	280	278	191	200	303	210	384	480	629	160	88

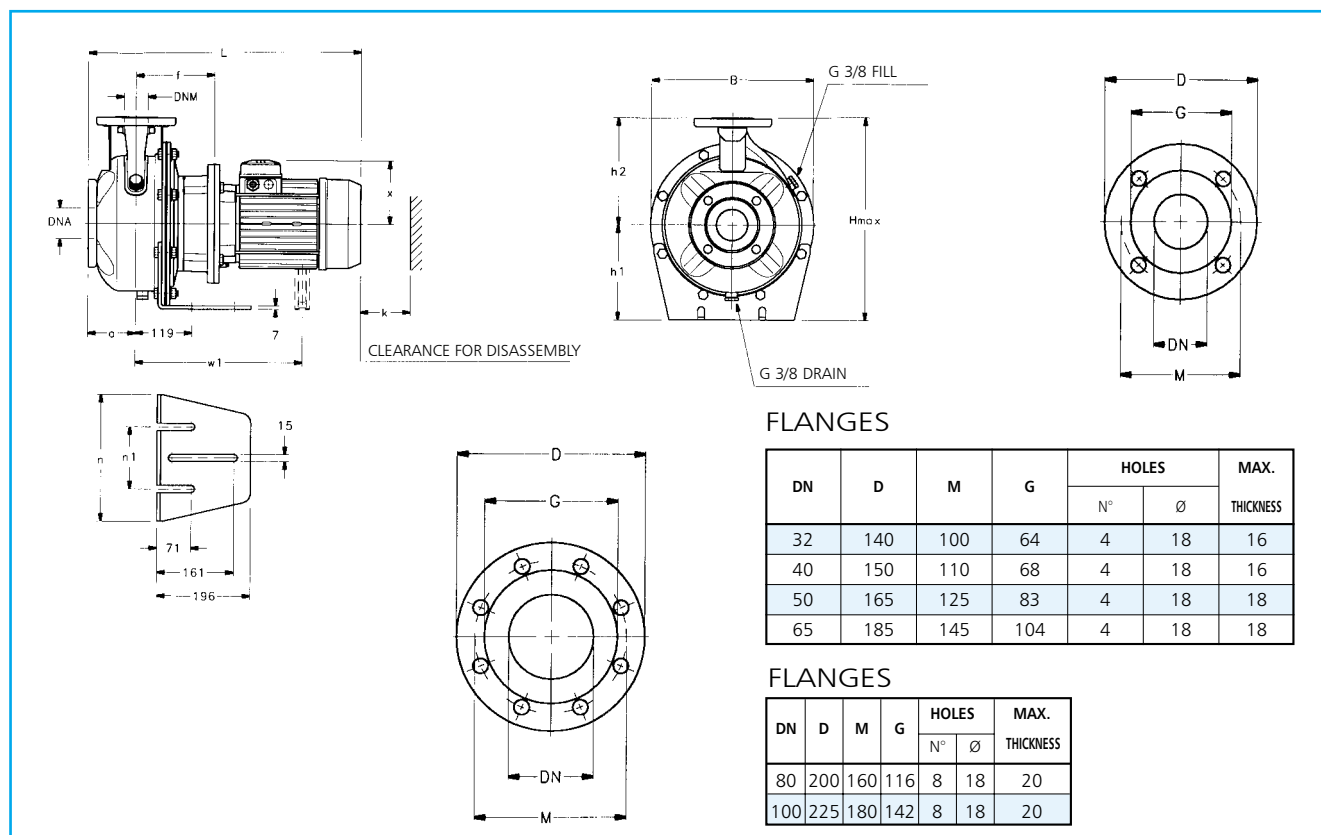
DIMENSIONS AND WEIGHTS SHS SERIES, 2 POLES



DIMENSIONS AND WEIGHTS SHS SERIES, 2 POLES

PUMP TYPE	PUMP								SUPPORT										B	H	L	k	WEIGHT
	DNM	DNA	a	f	h2	w	w1	x	b	c	c1	h1	m	m1	n	n1	s	s1		max			kg
SHS 25-125/07	25	50	80	155	140	—	—	121	—	—	—	160	—	—	190	—	—	—	218	252	461	98	25
SHS 25-125/11	25	50	80	155	140	—	—	129	—	—	—	160	—	—	190	—	—	—	218	252	498	98	26
SHS 25-160/15	25	50	80	155	160	—	—	129	—	—	—	160	—	—	210	—	—	—	253	320	498	98	28
SHS 25-160/22	25	50	80	155	160	—	—	129	—	—	—	160	—	—	210	—	—	—	253	320	498	98	30
SHS 25-200/30	25	50	80	165	180	—	—	121	—	—	—	160	—	—	230	—	—	—	285	340	548	98	41
SHS 25-200/40	25	50	80	165	180	—	—	133	—	—	—	160	—	—	230	—	—	—	285	340	552	98	44
SHS 25-250/55	25	50	100	192	225	—	424	150	—	—	—	180	—	—	265	—	—	—	345	405	666	98	63
SHS 25-250/75	25	50	100	192	225	—	424	150	—	—	—	180	—	—	265	—	—	—	345	405	666	98	69
SHS 25-250/110	25	50	100	222	225	330	—	232	72	22	20	180	260	210	318	254	14	23	350	412	810	98	81
SHS 32-125/07	32	50	80	155	140	—	—	121	—	—	—	112	—	—	190	—	—	—	218	252	461	98	25
SHS 32-125/11	32	50	80	155	140	—	—	129	—	—	—	112	—	—	190	—	—	—	218	252	498	98	26
SHS 32-160/15	32	50	80	155	160	—	—	129	—	—	—	132	—	—	210	—	—	—	253	292	498	98	28
SHS 32-160/22	32	50	80	155	160	—	—	129	—	—	—	132	—	—	210	—	—	—	253	292	498	98	30
SHS 32-200/30	32	50	80	165	180	—	—	121	—	—	—	160	—	—	230	—	—	—	285	340	548	98	41
SHS 32-200/40	32	50	80	165	180	—	—	133	—	—	—	160	—	—	230	—	—	—	285	340	552	98	44
SHS 32-250/55	32	50	100	192	225	—	424	150	—	—	—	180	—	—	265	—	—	—	345	405	666	98	63
SHS 32-250/75	32	50	100	192	225	—	424	150	—	—	—	180	—	—	265	—	—	—	345	405	666	98	69
SHS 32-250/110	32	50	100	222	225	330	—	232	72	22	20	180	260	210	318	254	14	23	350	412	810	98	81
SHS 40-125/11	40	65	80	155	140	—	—	129	—	—	—	112	—	—	190	—	—	—	219	252	498	100	25
SHS 40-125/15	40	65	80	155	140	—	—	129	—	—	—	112	—	—	190	—	—	—	219	252	498	100	27
SHS 40-125/22	40	65	80	155	140	—	—	129	—	—	—	112	—	—	190	—	—	—	219	252	498	100	28
SHS 40-160/30	40	65	80	165	160	—	—	121	—	—	—	132	—	—	210	—	—	—	254	292	548	100	38
SHS 40-160/40	40	65	80	165	160	—	—	133	—	—	—	132	—	—	210	—	—	—	254	292	552	100	42
SHS 40-200/55	40	65	100	192	180	—	424	150	—	—	—	160	—	—	230	—	—	—	300	340	666	100	64
SHS 40-200/75	40	65	100	192	180	—	424	150	—	—	—	160	—	—	230	—	—	—	300	340	666	100	66
SHS 40-250/110A	40	65	100	222	225	330	—	232	72	22	20	180	260	210	318	254	14	23	350	412	810	107	116
SHS 40-250/110	40	65	100	222	225	330	—	232	72	22	20	180	260	210	318	254	14	23	350	412	810	107	116
SHS 40-250/150	40	65	100	222	225	330	—	232	72	22	20	180	260	210	318	254	14	23	350	412	810	107	122
SHS 50-125/22	50	65	100	155	160	—	—	129	—	—	—	132	—	—	210	—	—	—	254	292	518	104	34
SHS 50-125/30	50	65	100	165	160	—	—	121	—	—	—	132	—	—	210	—	—	—	254	292	568	104	37
SHS 50-125/40	50	65	100	165	160	—	—	133	—	—	—	132	—	—	210	—	—	—	254	292	572	104	42
SHS 50-160/55	50	65	100	192	180	—	424	150	—	—	—	160	—	—	210	—	—	—	255	340	666	104	60
SHS 50-160/75	50	65	100	192	180	—	424	150	—	—	—	160	—	—	210	—	—	—	255	340	666	104	65
SHS 50-200/110A	50	65	100	222	200	330	—	232	72	22	20	180	260	210	318	254	14	23	350	412	810	104	90
SHS 50-200/110	50	65	100	222	200	330	—	232	72	22	20	180	260	210	318	254	14	23	350	412	810	104	90
SHS 50-250/150	50	65	100	222	225	330	—	232	72	22	20	180	260	210	318	254	14	23	350	412	810	107	115
SHS 50-250/185	50	65	100	222	225	330	—	232	72	22	20	180	304	254	318	254	14	23	350	412	854	107	125
SHS 50-250/220	50	65	100	222	225	330	—	232	72	22	20	180	304	254	318	254	14	23	350	412	854	107	145
SHS 65-160/40	65	80	100	165	200	—	—	133	—	—	—	160	—	—	245	—	—	—	310	360	572	115	67
SHS 65-160/55	65	80	100	192	200	—	424	150	—	—	—	160	—	—	245	—	—	—	310	360	666	115	75
SHS 65-160/75	65	80	100	192	200	—	424	150	—	—	—	160	—	—	245	—	—	—	310	360	666	115	80
SHS 65-160/110A	65	80	100	222	200	330	—	232	72	22	20	180	260	210	318	254	14	23	350	412	810	130	106
SHS 65-160/110	65	80	100	222	200	330	—	232	72	22	20	180	260	210	318	254	14	23	350	412	810	130	106
SHS 65-200/150	65	80	100	222	225	330	—	232	72	22	20	180	260	210	318	254	14	23	350	412	810	130	122
SHS 65-200/185	65	80	100	222	225	330	—	232	72	22	20	180	304	254	318	254	14	23	350	412	854	130	135
SHS 65-200/220	65	80	100	222	225	330	—	232	72	22	20	180	304	254	318	254	14	23	350	412	854	130	149
SHS 65-250/300	65	80	100	228	250	361	—	257	60	24	—	200	345	305	360	318	18	18	400	457	941	140	189
SHS 65-250/370	65	80	100	228	250	361	—	257	60	24	—	200	345	305	360	318	18	18	400	457	941	140	200
SHS 80-160/110	80	100	125	222	225	330	—	232	72	22	20	180	260	210	318	254	14	23	350	412	835	155	111
SHS 80-160/150	80	100	125	222	225	330	—	232	72	22	20	180	260	210	318	254	14	23	350	412	835	155	127
SHS 80-160/185	80	100	125	222	225	330	—	232	72	22	20	180	304	254	318	254	14	23	350	412	879	155	148
SHS 80-200/220	80	100	125	222	250	330	—	232	72	22	20	180	304	254	318	254	14	23	350	430	879	155	157
SHS 80-200/300	80	100	125	228	250	361	—	257	60	24	—	200	345	305	360	318	18	18	400	457	966	155	191
SHS 80-200/370	80	100	125	228	250	361	—	257	60	24	—	200	345	305	360	318	18	18	400	457	966	155	203

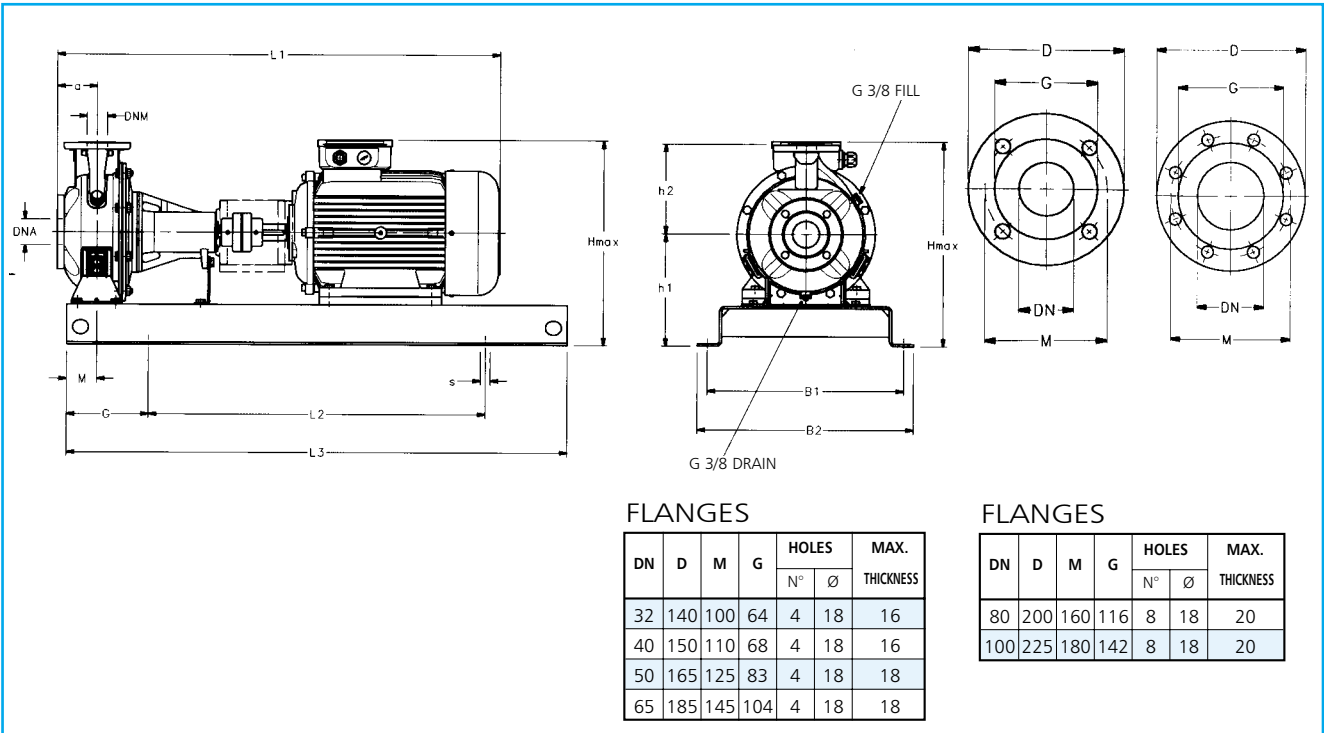
DIMENSIONS AND WEIGHTS SHS4 SERIES, 4 POLES



DIMENSIONS AND WEIGHTS SHS4 SERIES, 4 POLES

PUMP TYPE	PUMP							DIMENSIONS IN mm			B	H max	L	k	WEIGHT kg
	DNM	DNA	a	f	h2	w1	x	h1	n	n1					
SHS4 25-250/07	25	50	100	155	225	–	129	180	265	–	345	405	518	98	41
SHS4 25-250/11	25	50	100	155	225	–	121	180	265	–	345	405	536	98	43
SHS4 25-250/15	25	50	100	155	225	–	121	180	265	–	345	405	536	98	47
SHS4 32-250/07	32	50	100	155	225	–	129	180	265	130	345	405	518	98	41
SHS4 32-250/11	32	50	100	155	225	–	121	180	265	130	345	405	536	98	43
SHS4 32-250/15	32	50	100	155	225	–	121	180	265	130	345	405	536	98	47
SHS4 40-200/07	40	65	100	155	180	–	129	160	230	130	285	340	518	100	28
SHS4 40-200/11	40	65	100	155	180	–	121	160	230	130	285	340	536	100	32
SHS4 40-250/11	40	65	100	155	225	–	121	180	265	130	345	405	536	107	33
SHS4 40-250/15	40	65	100	155	225	–	121	180	265	130	345	405	536	107	46
SHS4 40-250/22	40	65	100	165	225	–	133	180	265	130	345	405	572	107	52
SHS4 50-160/07	50	65	100	155	180	–	129	160	210	130	255	340	518	104	27
SHS4 50-160/11	50	65	100	155	180	–	121	160	210	130	255	340	536	104	30
SHS4 50-200/11	50	65	100	155	200	–	121	160	245	130	310	360	536	104	34
SHS4 50-200/15	50	65	100	155	200	–	121	160	245	130	310	360	536	104	42
SHS4 50-250/22A	50	65	100	165	225	–	133	180	265	130	345	405	572	107	49
SHS4 50-250/22	50	65	100	165	225	–	133	180	265	130	345	405	572	107	49
SHS4 50-250/30	50	65	100	165	225	–	133	180	265	130	345	405	572	107	58
SHS4 65-160/05	65	80	100	155	200	–	129	160	245	130	310	360	518	115	34
SHS4 65-160/07	65	80	100	155	200	–	129	160	245	130	310	360	518	115	37
SHS4 65-160/11A	65	80	100	155	200	–	121	160	245	130	310	360	536	115	40
SHS4 65-160/11	65	80	100	155	200	–	121	160	245	130	310	360	536	130	40
SHS4 65-160/15	65	80	100	155	200	–	121	160	245	130	310	360	536	130	45
SHS4 65-200/15	65	80	100	155	225	–	121	180	245	130	310	405	536	130	48
SHS4 65-200/22	65	80	100	165	225	–	133	180	245	130	310	405	572	130	54
SHS4 65-200/30	65	80	100	165	225	–	133	180	245	130	310	405	572	130	59
SHS4 65-250/40	65	80	100	165	250	–	150	200	265	130	345	450	595	140	65
SHS4 65-250/55	65	80	100	192	250	351	191	200	265	130	345	450	658	140	79
SHS4 80-160/15	80	100	125	155	225	–	121	180	265	130	345	405	561	160	53
SHS4 80-160/22A	80	100	125	165	225	–	133	180	265	130	345	405	597	160	58
SHS4 80-160/22	80	100	125	165	225	–	133	180	265	130	345	405	597	160	58
SHS4 80-200/30	80	100	125	165	250	–	133	180	265	130	345	430	597	160	63
SHS4 80-200/40	80	100	125	165	250	–	150	180	265	130	345	430	620	160	68
SHS4 80-250/55	80	100	125	192	280	351	191	200	303	210	384	480	683	160	85
SHS4 80-250/75	80	100	125	192	280	370	191	200	303	210	384	480	721	160	90
SHS4 80-250/92	80	100	125	192	280	370	191	200	303	210	384	480	721	160	91

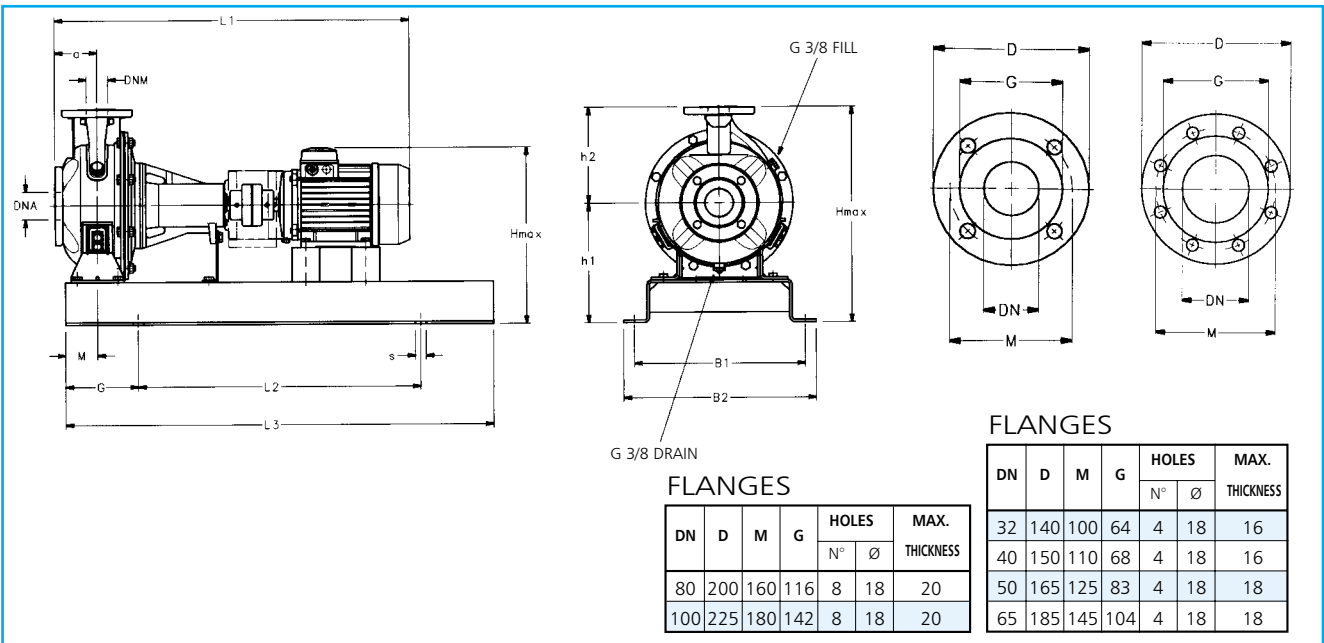
DIMENSIONS AND WEIGHTS SHF SERIES, 2 POLES



DIMENSIONS AND WEIGHTS SHF SERIES, 2 POLES

PUMP TYPE	DIMENSIONS (mm)													s for screws	WEIGHT kg
	DNM	DNA	a	B1	B2	L1	L2	L3	G	M	h1	h2	Hmax		
SHF 25-125/07	25	50	80	320	360	744	540	800	130	60	212	140	352	M16	65
SHF 25-125/11	25	50	80	320	360	744	540	800	130	60	212	140	352	M16	67
SHF 25-160/15	25	50	80	350	390	773	600	900	150	60	232	160	392	M16	69
SHF 25-160/22	25	50	80	350	390	773	600	900	150	60	232	160	392	M16	71
SHF 25-200/30	25	50	80	350	390	809	600	900	150	60	260	180	440	M16	90
SHF 25-200/40	25	50	80	350	390	832	600	900	150	60	260	180	440	M16	94
SHF 25-250/55	25	50	100	440	490	909	740	1120	190	75	280	225	505	M20	126
SHF 25-250/75	25	50	100	440	490	909	740	1120	190	75	280	225	505	M20	131
SHF 25-250/110	25	50	100	490	540	1061	840	1250	205	75	280	225	512	M20	176
SHF 32-125/07	32	50	80	320	360	744	540	800	130	60	212	140	352	M16	65
SHF 32-125/11	32	50	80	320	360	744	540	800	130	60	212	140	352	M16	67
SHF 32-160/15	32	50	80	350	390	773	600	900	150	60	232	160	392	M16	69
SHF 32-160/22	32	50	80	350	390	773	600	900	150	60	232	160	392	M16	71
SHF 32-200/30	32	50	80	350	390	809	600	900	150	60	260	180	440	M16	90
SHF 32-200/40	32	50	80	350	390	832	600	900	150	60	260	180	440	M16	94
SHF 32-250/55	32	50	100	440	490	909	740	1120	190	75	280	225	505	M20	126
SHF 32-250/75	32	50	100	440	490	909	740	1120	190	75	280	225	505	M20	131
SHF 32-250/110	32	50	100	490	540	1061	840	1250	205	75	280	225	512	M20	176
SHF 40-125/11	40	65	80	320	360	744	540	800	130	60	212	140	352	M16	68
SHF 40-125/15	40	65	80	350	390	773	600	900	150	60	212	140	352	M16	70
SHF 40-125/22	40	65	80	350	390	773	600	900	150	60	212	140	352	M16	73
SHF 40-160/30	40	65	80	350	390	809	600	900	150	60	232	160	392	M16	87
SHF 40-160/40	40	65	80	350	390	832	600	900	150	60	232	160	392	M16	93
SHF 40-200/55	40	65	100	400	450	909	660	1000	170	60	260	180	451	M20	108
SHF 40-200/75	40	65	100	400	450	909	660	1000	170	60	260	180	451	M20	116
SHF 40-250/110A	40	65	100	490	540	1061	840	1250	205	75	280	225	512	M20	174
SHF 40-250/110	40	65	100	490	540	1061	840	1250	205	75	280	225	512	M20	174
SHF 40-250/150	40	65	100	490	540	1061	840	1250	205	75	280	225	512	M20	184
SHF 50-125/22	50	65	100	350	390	793	600	900	150	60	232	160	392	M16	80
SHF 50-125/30	50	65	100	350	390	829	600	900	150	60	232	160	392	M16	87
SHF 50-125/40	50	65	100	350	390	852	600	900	150	60	232	160	392	M16	92
SHF 50-160/55	50	65	100	400	450	909	660	1000	170	60	260	180	451	M20	106
SHF 50-160/75	50	65	100	400	450	909	660	1000	170	60	260	180	451	M20	110
SHF 50-200/110A	50	65	100	440	490	1061	740	1120	190	60	260	200	492	M20	168
SHF 50-200/110	50	65	100	440	490	1061	740	1120	190	60	260	200	492	M20	168
SHF 50-250/150	50	65	100	490	540	1061	840	1250	205	75	280	225	512	M20	174
SHF 50-250/185	50	65	100	490	540	1105	840	1250	205	75	280	225	512	M20	194
SHF 50-250/220	50	65	100	490	540	1111	840	1250	205	75	280	225	510	M20	214
SHF 65-160/40	65	80	100	400	450	852	660	1000	170	75	260	200	460	M20	130
SHF 65-160/55	65	80	100	440	490	909	740	1120	190	75	260	200	460	M20	136
SHF 65-160/75	65	80	100	440	490	909	740	1120	190	75	260	200	460	M20	142
SHF 65-160/110A	65	80	100	490	540	1061	840	1250	205	75	260	200	492	M20	157
SHF 65-160/110	65	80	100	490	540	1061	840	1250	205	75	260	200	492	M20	157
SHF 65-200/150	65	80	100	490	540	1061	840	1250	205	75	280	225	512	M20	180
SHF 65-200/185	65	80	100	490	540	1105	840	1250	205	75	280	225	512	M20	192
SHF 65-200/220	65	80	100	490	540	1111	840	1250	205	75	280	225	510	M20	208
SHF 65-250/300	65	80	100	550	610	1296	940	1400	230	90	310	250	557	M24	271
SHF 65-250/370	65	80	100	550	610	1296	940	1400	230	90	310	250	557	M24	296
SHF 80-160/110	80	100	125	490	540	1086	840	1250	205	75	280	225	512	M20	193
SHF 80-160/150	80	100	125	490	540	1086	840	1250	205	75	280	225	512	M20	204
SHF 80-160/185	80	100	125	490	540	1130	840	1250	205	75	280	225	512	M20	225
SHF 80-200/220	80	100	125	490	540	1246	840	1250	205	75	280	250	530	M20	236
SHF 80-200/300	80	100	125	550	610	1321	940	1400	230	75	310	250	557	M24	277
SHF 80-200/370	80	100	125	550	610	1321	940	1400	230	75	310	250	557	M24	295
SHF 80-250/450	80	100	125	550	610	1398	940	1400	230	90	365	280	605	M24	355
SHF 80-250/550	80	100	125	600	660	1428	1060	1600	270	90	390	280	660	M24	394
SHF 80-250/750	80	100	125	670	730	1558	1200	1800	300	90	420	280	735	M24	510

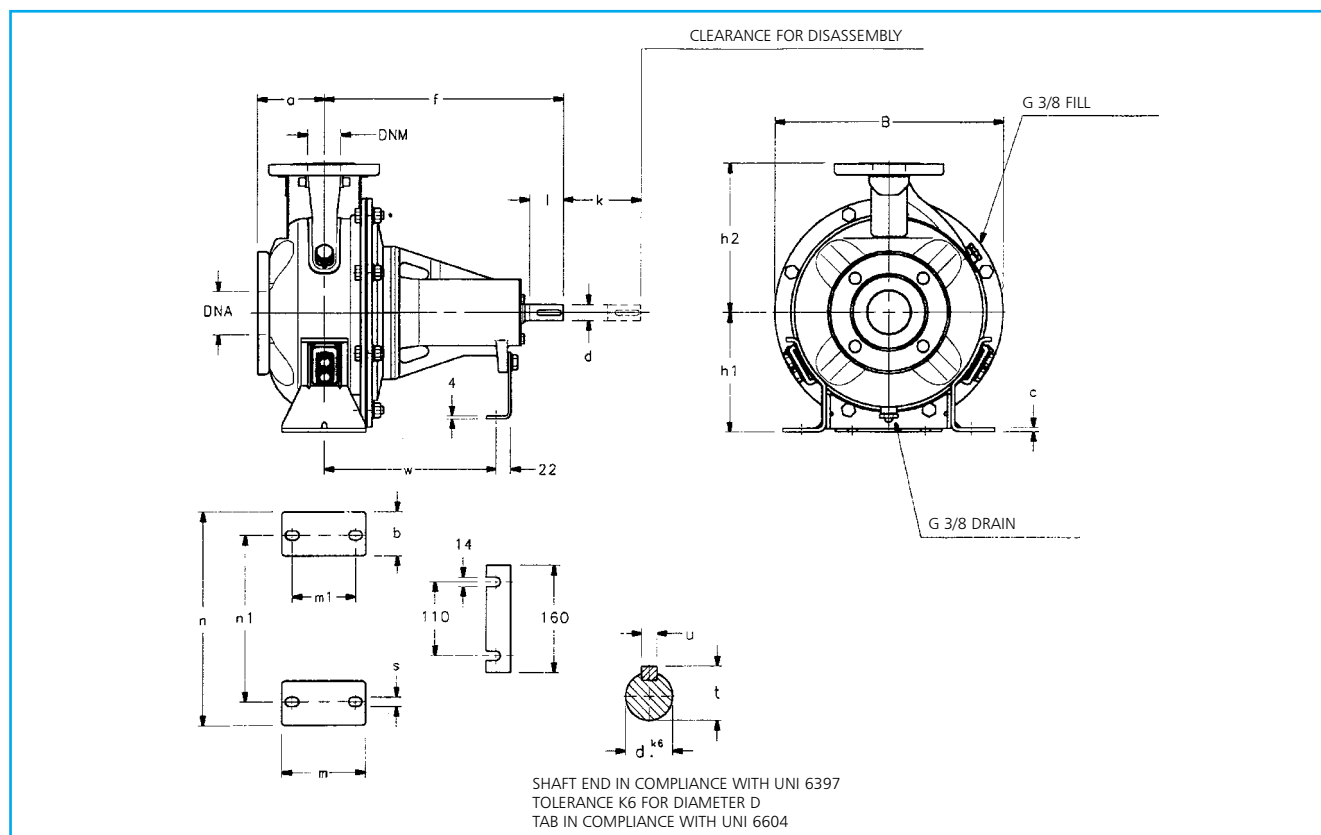
DIMENSIONS AND WEIGHTS SHF4 SERIES, 4 POLES



DIMENSIONS AND WEIGHTS SHF4 SERIES, 4 POLES

PUMP TYPE	DIMENSIONS (mm)													s for screws	WEIGHT kg
	DNM	DNA	a	B1	B2	L1	L2	L3	G	M	h1	h2	Hmax		
SHF4 25-125/02A	25	50	80	320	360	702	540	800	130	60	212	140	352	M16	72
SHF4 25-125/02	25	50	80	320	360	702	540	800	130	60	212	140	352	M16	72
SHF4 25-160/02	25	50	80	320	360	702	540	800	130	60	232	160	392	M16	74
SHF4 25-160/03	25	50	80	320	360	702	540	800	130	60	232	160	392	M16	76
SHF4 25-200/03	25	50	80	320	360	702	540	800	130	60	260	180	440	M16	78
SHF4 25-200/05	25	50	80	320	360	744	540	800	130	60	260	180	440	M16	80
SHF4 25-250/07	25	50	100	400	450	764	660	1000	170	75	280	225	505	M20	97
SHF4 25-250/11	25	50	100	400	450	793	660	1000	170	75	280	225	505	M20	100
SHF4 25-250/15	25	50	100	400	450	793	660	1000	170	75	280	225	505	M20	102
SHF4 32-125/02A	32	50	80	320	360	702	540	800	130	60	212	140	352	M16	72
SHF4 32-125/02	32	50	80	320	360	702	540	800	130	60	212	140	352	M16	72
SHF4 32-160/02	32	50	80	320	360	702	540	800	130	60	232	160	392	M16	74
SHF4 32-160/03	32	50	80	320	360	702	540	800	130	60	232	160	392	M16	76
SHF4 32-200/03	32	50	80	320	360	702	540	800	130	60	260	180	440	M16	78
SHF4 32-200/05	32	50	80	320	360	744	540	800	130	60	260	180	440	M16	80
SHF4 32-250/07	32	50	100	400	450	764	660	1000	170	75	280	225	505	M20	97
SHF4 32-250/11	32	50	100	400	450	793	660	1000	170	75	280	225	505	M20	100
SHF4 32-250/15	32	50	100	400	450	793	660	1000	170	75	280	225	505	M20	102
SHF4 40-125/02A	40	65	80	320	360	702	540	800	130	60	212	140	352	M16	57
SHF4 40-125/02	40	65	80	320	360	702	540	800	130	60	212	140	352	M16	57
SHF4 40-125/03	40	65	80	320	360	702	540	800	130	60	212	140	352	M16	58
SHF4 40-160/03	40	65	80	320	360	702	540	800	130	60	232	160	392	M16	60
SHF4 40-160/05	40	65	80	320	360	744	540	800	130	60	232	160	392	M16	62
SHF4 40-200/07	40	65	100	350	390	764	600	900	150	60	260	180	440	M16	69
SHF4 40-200/11	40	65	100	350	390	793	600	900	150	60	260	180	440	M16	72
SHF4 40-250/11	40	65	100	400	450	793	660	1000	170	75	280	225	505	M20	99
SHF4 40-250/15	40	65	100	400	450	793	660	1000	170	75	280	225	505	M20	102
SHF4 40-250/22	40	65	100	400	450	829	660	1000	170	75	280	225	505	M20	115
SHF4 50-125/03A	50	65	100	320	360	722	540	800	130	60	232	160	392	M16	59
SHF4 50-125/03	50	65	100	320	360	722	540	800	130	60	232	160	392	M16	59
SHF4 50-125/05	50	65	100	320	360	764	540	800	130	60	260	180	440	M16	61
SHF4 50-160/07	50	65	100	350	390	764	600	900	150	60	260	180	440	M16	68
SHF4 50-160/11	50	65	100	350	390	793	600	900	150	60	260	200	460	M16	71
SHF4 50-200/11	50	65	100	350	390	793	600	900	150	60	260	200	460	M16	82
SHF4 50-200/15	50	65	100	350	390	793	600	900	150	60	260	200	460	M16	85
SHF4 50-250/22A	50	65	100	400	450	829	660	1000	170	75	280	225	505	M20	116
SHF4 50-250/22	50	65	100	400	450	829	660	1000	170	75	280	225	505	M20	116
SHF4 50-250/30	50	65	100	400	450	829	660	1000	170	75	280	225	505	M20	120
SHF4 65-160/05	65	80	100	350	390	764	600	900	150	75	260	200	460	M16	84
SHF4 65-160/07	65	80	100	350	390	764	600	900	150	75	260	200	460	M16	85
SHF4 65-160/11A	65	80	100	400	450	793	660	1000	170	75	260	200	460	M20	88
SHF4 65-160/11	65	80	100	400	450	793	660	1000	170	75	260	200	460	M20	88
SHF4 65-160/15	65	80	100	400	450	793	660	1000	170	75	260	200	460	M20	91
SHF4 65-200/15	65	80	100	400	450	793	660	1000	170	75	280	225	505	M20	103
SHF4 65-200/22	65	80	100	440	490	829	740	1120	190	75	280	225	505	M20	117
SHF4 65-200/30	65	80	100	440	490	829	740	1120	190	75	280	225	505	M20	121
SHF4 65-250/40	65	80	100	440	490	962	740	1120	190	90	310	250	550	M20	158
SHF4 65-250/55	65	80	100	440	490	1019	740	1120	190	90	310	250	550	M20	174
SHF4 80-160/15	80	100	125	400	450	818	660	1000	170	75	280	225	505	M20	121
SHF4 80-160/22A	80	100	125	440	490	854	740	1120	190	75	280	225	505	M20	127
SHF4 80-160/22	80	100	125	440	490	854	740	1120	190	75	280	225	505	M20	127
SHF4 80-200/30	80	100	125	440	490	964	740	1120	190	75	280	250	530	M20	146
SHF4 80-200/40	80	100	125	440	490	987	740	1120	190	75	280	250	530	M20	151
SHF4 80-250/55	80	100	125	490	540	1044	840	1250	205	90	310	280	580	M20	175
SHF4 80-250/75	80	100	125	490	540	1082	840	1250	205	90	310	280	580	M20	185
SHF4 80-250/92	80	100	125	490	540	1082	840	1250	205	90	310	280	580	M20	185

SHF BARE SHAFT SERIES DIMENSIONS AND WEIGHTS



PUMP TYPE	DIMENSIONS (mm)							B	k	WEIGHT kg
	DNM	DNA	a	d	f	h1	h2			
SHF 32-125	32	50	80	24	360	112	140	218	98	16
SHF 32-160	32	50	80	24	360	132	160	253	98	18
SHF 32-200	32	50	80	24	360	160	180	285	98	20
SHF 32-250	32	50	100	24	360	180	225	345	98	36
SHF 40-125	40	65	80	24	360	112	140	219	100	17
SHF 40-160	40	65	80	24	360	132	160	254	100	18
SHF 40-200	40	65	100	24	360	160	180	285	100	20
SHF 40-250	40	65	100	24	360	180	225	345	100	36
SHF 50-125	50	65	100	24	360	132	160	254	100	18
SHF 50-160	50	65	100	24	360	160	180	255	100	19
SHF 50-200	50	65	100	24	360	160	200	310	100	30
SHF 50-250	50	65	100	24	360	180	225	345	100	36
SHF 65-160	65	80	100	24	360	160	200	310	100	21
SHF 65-200	65	80	100	24	360	180	225	310	100	31
SHF 65-250	65	80	100	32	470	200	250	345	130	42
SHF 80-160	80	100	125	24	360	180	225	345	140	22
SHF 80-200	80	100	125	32	470	180	250	345	140	37
SHF 80-250	80	100	125	32	470	200	280	384	140	43

SV SERIES

VERTICAL MULTISTAGE CENTRIFUGAL PUMPS

Highly reliable and technologically advanced multipurpose pumps capable of satisfying the needs of a wide variety of users. Many different construction designs are available, with models featuring 2-4-8-16-30-60 m³/h nominal capacities.

- ❑ **HIGH HYDRAULIC EFFICIENCY**
- ❑ **LIQUID END MANUFACTURED IN AISI 304 STAINLESS STEEL FOR THE 2-4-8-16 m³/h STANDARD VERSION**
- ❑ **"N" VERSION AVAILABLE MADE OF AISI 316 STAINLESS STEEL**
- ❑ **VERSIONS WITH 4-POLE AND/OR 60 Hz MOTOR ARE AVAILABLE ON REQUEST**
- ❑ **MOTOR CAN BE REPLACED WITH ANY STANDARD MODEL AVAILABLE ON THE MARKET**
- ❑ **"DPS" HIGH-PRESSURE UNITS, CONSISTING OF TWO SV "N" PUMPS CONNECTED IN SERIES**

APPLICATIONS

- Water transfer and circulation in the civil, industrial and agricultural sectors.
- Pressure boosting and water supply systems.
- Irrigation systems for agriculture and sporting facilities.
- Washing systems.
- Boiler feed.
- Water treatment and reverse osmosis plants.
- Fountains.
- Handling of moderately aggressive liquids.

SPECIFICATIONS

- **Delivery:** up to **72 m³/h**.
- **Head:** up to **247 m**.
- **Maximum** operating pressure: **16/25 bar**, depending on model.
- **Continuous duty.**
- **Temperature of pumped liquid:** **-20°C to +120°C**.
- Versions:
 - Single-phase** 220-240 V 50 Hz (up to 2.2 kW).
 - Three-phase** 220-240/380-415 V 50 Hz up to 3 kW (included), and 380-415/660 or 690 V for higher power (up to 22 kW).
- Class **F insulation**.

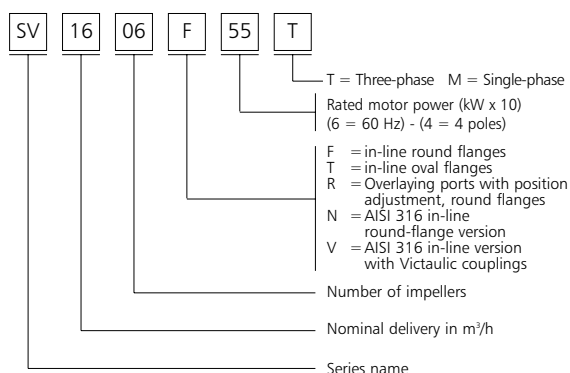


- **IP55 protection.**
- Threaded, round or oval **counterflanges** made of zinc-plated steel are **standard supply**.
- **Version with HYDROVAR frequency converter (variable speed) is available on request.**
- Versions with 4-pole motor are available on request.

AVAILABLE VERSIONS

VERSIONS	SV 2	SV 4	SV 8	SV 16	SV 30	SV 60
In-line ports with oval flanges	X	X	X			
In-line ports with round flanges	X	X	X	X	X	X
Overlapping ports with position adjustment	X	X	X			
AISI 316 stainless steel liquid end	X	X	X	X	X	X
4-pole version	X	X	X	X	X	X
Horizontal version on brackets	X	X	X	X	X	X
With connectors for Victaulic coupling	X	X	X	X		

IDENTIFICATION CODE



SV SERIES

HYDRAULIC PERFORMANCE TABLE AT 2900 rpm 2 POLES

PUMP TYPE	POWER		Q = DELIVERY																							
			l/min	0	20	30	40	50	60	80	100	120	150	200	233	300	350	400	500	600	800	1000	1200			
			m³/h	0	1,2	1,8	2,4	3	3,6	4,8	6	7,2	9	12	14	18	21	24	30	36	48	60	72			
	kW	HP	H = TOTAL HEAD METERS COLUMN OF WATER																							
SV202F03	0,37	0,5	21,5	18,5	17	15	13	10,5																		
SV203F03	0,37	0,5	32	28	25,5	23	19,5	15,5																		
SV204F05	0,55	0,75	42,5	37,5	34	30,5	26	20,5																		
SV205F07	0,75	1	53,5	47	42,5	38	32	26																		
SV206F07	0,75	1	64	56	51	45,5	38,5	31																		
SV207F11	1,1	1,5	75	65,5	60	53	45	36,5																		
SV208F11	1,1	1,5	85,5	75	68	61	51,5	41,5																		
SV209F11	1,1	1,5	96	84	76,5	68,5	58	46,5																		
SV211F15	1,5	2	117	103	94	84	71	57																		
SV212F15	1,5	2	128	112	102	91	77	62																		
SV214F22	2,2	3	150	131	119	106	90	73																		
SV216F22	2,2	3	171	150	136	122	103	83																		
SV218F22	2,2	3	192	168	153	137	116	93																		
SV220F30	3	4	214	187	170	152	129	104																		
SV222F30	3	4	235	206	187	167	142	114																		
SV224F30	3	4	256	224	205	182	155	125																		
SV402F03	0,37	0,5	20			17	16	15	13	10,5	7,5															
SV403F05	0,55	0,75	30			25,5	24	23	19,5	16	11															
SV404F07	0,75	1	40			34	32	30,5	26	21	15															
SV405F11	1,1	1,5	50			42,5	40	38	32,5	26	18,5															
SV406F11	1,1	1,5	60			51	48	45,5	39	31,5	22															
SV407F11	1,1	1,5	70			59,5	56	53	46	37	26															
SV408F15	1,5	2	80			68	65	61	52,5	42	29,5															
SV409F15	1,5	2	90			76,5	73	68,5	59	47	33,5															
SV411F22	2,2	3	110			93,5	89	83,5	72	58	41															
SV413F22	2,2	3	130			111	105	99	85	68	48															
SV414F30	3	4	140			119	113	106	92	73,5	52															
SV416F30	3	4	160			136	129	122	105	84	59,5															
SV418F30	3	4	180			153	145	137	118	94,5	67															
SV420F40	4	5,5	200			170	161	152	131	105	74															
SV422F40	4	5,5	220			187	178	167	144	116	81,5															
SV424F40	4	5,5	240			204	194	182	157	126	89															
SV802F11	1,1	1,5	27						25,5	24,8	24	22	17,2	13,2												
SV803F15	1,5	2	41						38,5	37	36	33	25,8	20												
SV804F22	2,2	3	55						51	50	47,5	44	34,5	26,5												
SV805F22	2,2	3	68						64	62	60	55	43	33												
SV806F30	3	4	82						77	74,5	71	66	52	40												
SV808F40	4	5,5	110						103	99	95	87,5	69	53												
SV809F40	4	5,5	123						116	112	107	97,5	78	60												
SV811F55	5,5	7,5	150						141	137	130	119	95	73												
SV812F55	5,5	7,5	164						154	149	142	130	103	80												
SV814F75	7,5	10	192						180	174	166	152	120	93												
SV816F75	7,5	10	220						205	199	190	174	138	106												
SV1602F22	2,2	3	35								33,5	32,5	31	29,5	25	20	14,3									
SV1603F30	3	4	52								50	49	46	44	37,5	30,2	21,5									
SV1604F40	4	5,5	69								66,5	65	62	59	50	40,3	28,6									
SV1605F55	5,5	7,5	86								83	81	77	73	62	50	35,8									
SV1606F55	5,5	7,5	104								100	98	92	88	75	60,5	43									
SV1607F75	7,5	10	121								116	114	108	103	87	70,5	50									
SV1608F75	7,5	10	138								133	130	123	117	100	81	57									
SV1610F110	11	15	173								166	163	154	147	125	101	72									
SV1612F110	11	15	207								199	195	185	176	150	121	86									
SV1614F150	15	20	242								232	228	215	205	175	141	100									
SV1615F150	15	20	260								249	244	231	220	187	151	108									
SV3002F40	4	5,5	42											39	37	35	32,5	26,5	19							
SV3003F55	5,5	7,5	63											58	55	53	48	40	29							
SV3004F75	7,5	10	83											78	74	70	65	53	38							
SV3005F110	11	15	104											97	92	88	81	66	48							
SV3006F110	11	15	125											117	110	105	97	79	58							
SV3007F150	15	20	145											136	129	123	113	92	67							
SV3008F150	15	20	166											155	147	140	130	106	77							
SV3009F150	15	20	187											175	166	158	146	119	86							
SV3010F185	18,5	25	207											194	184	175	162	132	96							
SV3011F185	18,5	25	229											214	202	193	178	145	106							
SV3012F220	22	30	250											233	221	210	194	158	115							
SV6002F55	5,5	7,5	37													33	32	30	25	19	12					
SV6003F75	7,5	10	55													51	48	45	38	28	17					
SV6004F110	11	15	74													67	63	60	51	38	23					
SV6005F150	15	20	93													84	80	75	63	48	28					
SV6006F150	15	20	111													102	96	90	76	58	35					
SV6007F185	18,5	25	130													118	112	105	88	67	40					
SV6008F220	22	30	148													135	128	120	102	77	46					

Performances in compliance with ISO 9906 – Annex A

SV SERIES

HYDRAULIC PERFORMANCE TABLE AT 1450 rpm 4 POLES

PUMP TYPE	POWER		Q = DELIVERY																													
			l/min	0	5	10	15	20	25	30	40	50	67	83	100	117	133	167	200	250	300	400	500	600								
			m³/h	0	0,3	0,6	0,9	1,2	1,5	1,8	2,4	3	4	5	6	7	8	10	12	15	18	24	30	36								
	kW	HP	H = TOTAL HEAD METERS COLUMN OF WATER																													
SV203F024	0,25	0,34		7,9	7,6	7,2	6,5	5,8	4,8	3,8																						
SV206F024	0,25	0,34		16	15,2	14,4	13	11,6	9,7	7,7																						
SV209F024	0,25	0,34		24	22,8	21,5	19,5	17,5	14,5	11,5																						
SV212F024	0,25	0,34		31,5	23,5	29	26,5	23	19,5	15,5																						
SV214F024	0,25	0,34		37	35,5	33,5	30,5	27	22,5	18																						
SV216F024	0,25	0,34		42	40,5	38,5	35	31	26	20,5																						
SV218F034	0,37	0,5		47,5	45,5	43	39,5	34,5	29	23																						
SV220F034	0,37	0,5		53	50,5	48	44	38,5	32,5	25,5																						
SV222F034	0,37	0,5		58	56	53	48	42,5	35,5	28																						
SV224F034	0,37	0,5		63,5	61	57,5	52,5	46,5	39	30,5																						
SV403F024	0,25	0,34		7				6,3	6	5,8	5	4,3	2																			
SV406F024	0,25	0,34		14				12,5	12	11,5	10,5	8,5	4,3																			
SV409F024	0,25	0,34		21				19	18,5	17,5	15,5	12,5	6,4																			
SV412F024	0,25	0,34		28,5				25,5	24,5	23	20,5	17	8,5																			
SV414F034	0,37	0,5		33				29,5	28,5	27	24	19,5	10																			
SV416F034	0,37	0,5		37,5				34	32,5	31	27	22,5	11,5																			
SV418F034	0,37	0,5		42,5				38	36,5	35	30,5	25	13																			
SV420F054	0,55	0,75		47				42,5	41	39	34	28	14																			
SV422F054	0,55	0,75		52				46,5	45	42,5	37,5	31	15,5																			
SV424F054	0,55	0,75		56,5				51	49	46,5	41	34	17																			
SV804F054	0,55	0,75		13,5							12,8	12,5	11,5	10	8,5	6,5																
SV806F054	0,55	0,75		20							19	18,5	17	15,5	12,8	9,5																
SV808F054	0,55	0,75		27							25,5	25	23	20,5	17	13																
SV810F054	0,55	0,75		34							32	31	29	25,5	21,5	16																
SV812F074	0,75	1		40,5							38,5	37,5	34,5	30,5	25,5	19																
SV814F074	0,75	1		47							45	43,5	40	35,5	29,5	22																
SV815F114	1,1	1,5		50,5							48	46,5	43	38	32	24																
SV816F114	1,1	1,5		54							51	49,5	46	41	34	25,5																
SV1604F054	0,55	0,75		17							16,5	16	15,5	15	14	11	7,5															
SV1606F074	0,75	1,5		25							24,5	24	23	22	21	17	11															
SV1608F114	1,1	1,5		33,5							33	32	31	29,5	27,5	22,5	14,5															
SV1609F114	1,1	1,5		38							37	36	35	33	31	25	16,5															
SV1611F154	1,5	2		46							45	44	42,5	40,5	38	31	20															
SV1613F154	1,5	2		54,5							53	52	50	48	45	36	24															
SV1615F224	2,2	3		63							61,5	60	58	55,5	52	42	28															
SV1616F224	2,2	3		67							65,5	64	62	59	55	45	30															
SV3003F224	2,2	3		14														13,5	13	12	11	8,5	6									
SV3005F224	2,2	3		24														22	21,5	20	18	14	10									
SV3007F224	2,2	3		33,5														31	30	28	25	20	14									
SV3010F224	2,2	3		48														44,5	43	40	36	28,5	19,5									
SV3012F304	3	4		57,5														53	52	48	43	34	23,5									
SV6003F224	2,2	3		13,5																					11,5	11	10		8,2	6		3,2
SV6005F224	2,2	3		22,5																					19,5	18,5	17		13,5	10		5,4
SV6007F224	2,2	3		31,5																					27,5	25,5	23,5		19	14		7,6
SV6010F304	3	4		45																					39	36,5	34		27,5	20		11
SV6012F404	4	5,5		54																					46,5	44	40,5		33	24		13

Performances in compliance with ISO 9906 – Annex A

For curves and electrical data of 4 poles version please refer to the black and white technical catalogue. Code 191002271

SV2 SERIES (~ 2900 rpm)

MAIN CHARACTERISTICS

Working delivery 1.2 to 4.2 m³/h.

Maximum operating pressure, including water hammer on suction side:

- Pumps with oval flanges 16 bar.
- Pumps with round flanges 25 bar.

AVAILABLE VERSIONS

- “F” : In-line ports, round flanges from SV202 to SV224.
- “T” : In-line ports, oval flanges from SV202 to SV214.
- “R” : Overlaying ports, round flanges from SV204 to SV224.
- “N” : In-line ports, round flanges made of AISI 316 from SV202 to SV224.

TABLE OF MATERIALS

PART	“F” “R” “T” MATERIALS	“N” MATERIALS
Impeller	AIS I 316 L	
Diffuser and upper spacer	AISI 304	AISI 316 L
Shaft	AISI 304	AISI 316
Outer sleeve	AISI 304	AISI 316 L
Pump body	AISI 304	AISI 316 L
Shaft sleeve	TUNGSTEN CARBIDE	
Bushing	CERAMIC	
Mechanical seal	TUNGSTEN CARBIDE/CARBON/EPDM	
Elastomers	EPDM	
Fill/drain plugs	AIS I 316	
Adapter	250 CAST IRON	
Coupling	ALUMINIUM	
Coupling protection	AIS I 304	
Seal holding protection	AISI 304	AISI 316 L
Base mount	ALUMINIUM	

ELECTRICAL SPECIFICATIONS

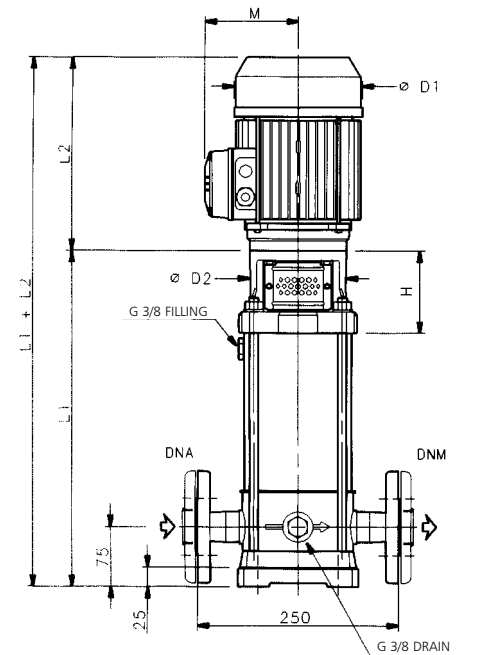
PUMP TYPE	MOTOR POWER			INPUT CURRENT In Amp.				CAPACITOR		Is/In	
				THREE-PHASE			SINGLE- PHASE				
				Δ	Y	Δ		THREE-PHASE 230 V 400 V	SINGLE- PHASE 230 V		
	kW	T	M	220-240V	380-415V	380-415V	220-240V	μF	V		
SV202F03T	0,37	71R	71R	2,30	1,33	–	2,64-2,72	14	450	4,23	3,08
SV203F03T	0,37	71R	71R	2,30	1,33	–	2,64-2,72	14	450	4,23	3,08
SV204F05T	0,55	71	71	2,48	1,43	–	3,89-4,05	16	450	5,95	3,34
SV205F07T	0,75	80R	80R	3,50	2,02	–	5,22-4,97	20	450	5,81	3,55
SV206F07T	0,75	80R	80R	3,50	2,02	–	5,22-4,97	20	450	5,81	3,55
SV207F11T	1,1	80	80	4,52	2,61	–	7,07-6,81	30	450	6,78	3,80
SV208F11T	1,1	80	80	4,52	2,61	–	7,07-6,81	30	450	6,78	3,80
SV209F11T	1,1	80	80	4,52	2,61	–	7,07-6,81	30	450	6,78	3,80
SV211F15T	1,5	90R	90R	5,98	3,45	–	9,32-8,63	40	450	7,04	3,45
SV212F15T	1,5	90R	90R	5,98	3,45	–	9,32-8,63	40	450	7,04	3,45
SV214F22T	2,2	90R	90	8,71	5,03	–	13,3-12,6	50	450	7,32	3,45
SV216F22T	2,2	90R	90	8,71	5,03	–	13,3-12,6	50	450	7,32	3,45
SV218F22T	2,2	90R	90	8,71	5,03	–	13,3-12,6	50	450	7,32	3,45
SV220F30T	3	100R	–	10,8	6,22	–	–	–	–	6,81	–
SV222F30T	3	100R	–	10,8	6,22	–	–	–	–	6,81	–
SV224F30T	3	100R	–	10,8	6,22	–	–	–	–	6,81	–

* R = Reduced size of motor casing as compared to shaft extension and flange.

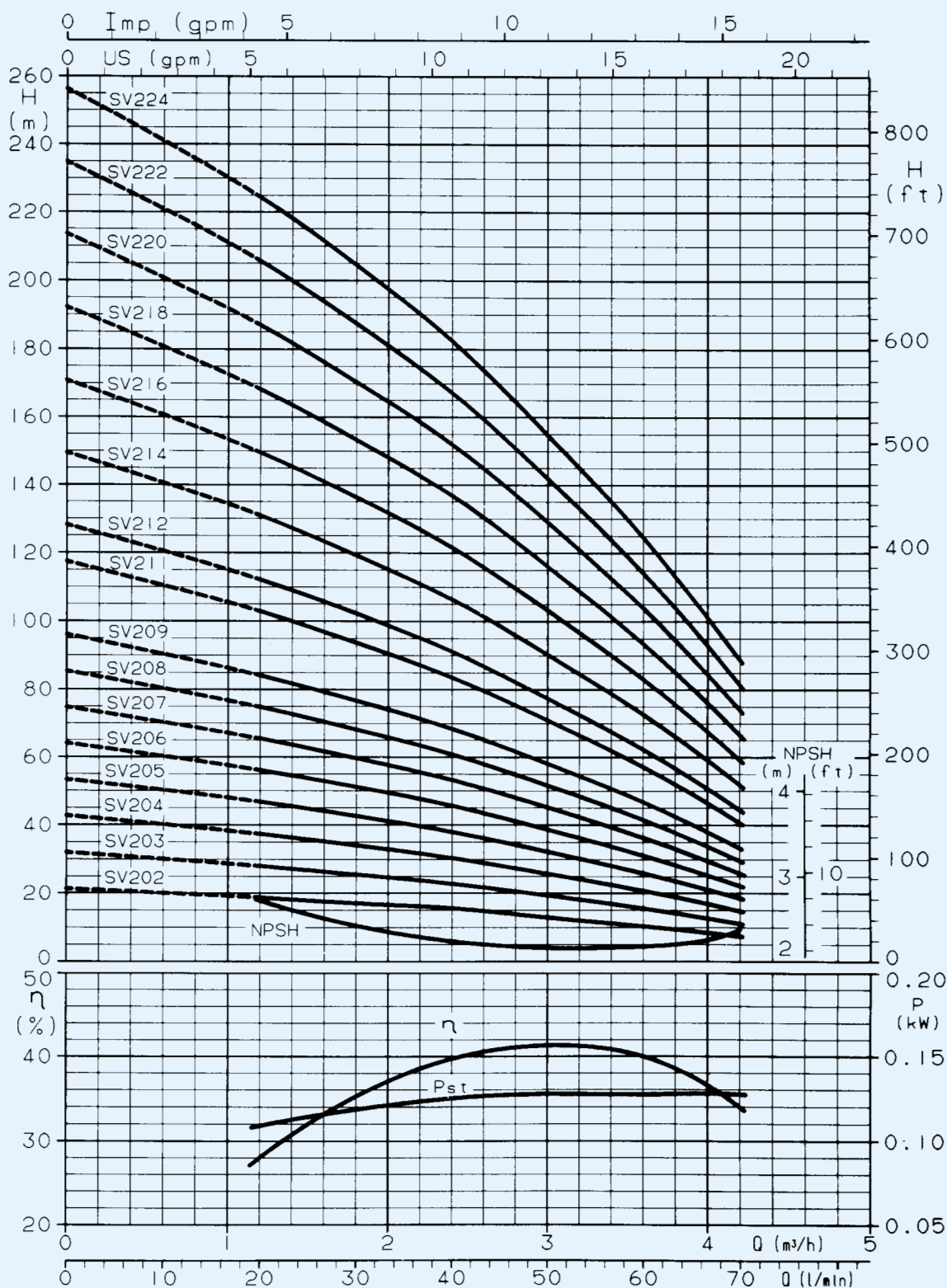
DIMENSIONS AND WEIGHTS

PUMP TYPE	DNA DNM	DIMENSIONS IN mm														WEIGHT (kg)			
		L1	L2	L3	L4	L5	L6	L7	M	D1	D2	H	A	B	PUMP	ELECTRIC PUMP			
																	SINGLE-PHASE	THREE-PHASE	SINGLE-PHASE
SV202F03T	Rp 1"	285	209	209	—	—	260	260	111	111	120	120	105	93	50	20	9,5	17,5	
SV203F03T	Rp 1"	310	209	209	—	—	285	285	111	111	120	120	105	93	50	20	10	18	
SV204F05T	Rp 1"	335	231	231	335	200	310	310	121	121	140	140	105	93	50	20	10,5	19	
SV205F07T	Rp 1"	370	226	226	370	225	345	345	121	121	140	140	120	103	50	20	11,5	21	
SV206F07T	Rp 1"	395	226	226	395	250	370	370	121	121	140	140	120	103	50	20	12	22	
SV207F11T	Rp 1"	420	263	263	420	275	395	395	137	129	155	155	120	103	50	20	12,5	23	
SV208F11T	Rp 1"	445	263	263	445	300	420	420	137	129	155	155	120	103	50	20	13	23	
SV209F11T	Rp 1"	470	263	263	470	325	445	445	137	129	155	155	120	103	50	20	13,5	24	
SV211F15T	Rp 1"	530	263	263	530	375	505	505	137	129	155	155	140	113	50	20	15	31	
SV212F15T	Rp 1"	555	263	263	555	400	530	530	137	129	155	155	140	113	50	20	15,5	31	
SV214F22T	Rp 1"	605	281	263	605	450	580	580	121	129	176	155	140	113	50	20	16,5	33	
SV216F22T	Rp 1"	655	281	263	655	500	—	630	655	121	129	176	155	140	113	75	25	17,5	34
SV218F22T	Rp 1"	705	281	263	705	550	—	680	705	121	129	176	155	140	113	75	25	18,5	35
SV220F30T	Rp 1"	765	—	303	765	600	—	740	765	—	121	—	176	160	123	75	25	20	42
SV222F30T	Rp 1"	815	—	303	815	650	—	790	815	—	121	—	176	160	123	75	25	21	43
SV224F30T	Rp 1"	865	—	303	865	700	—	840	865	—	121	—	176	160	123	75	25	22	44

“F” “N” VERSIONS



SV2 SERIES OPERATING CHARACTERISTICS AT 2900 rpm 50 Hz



These performances are valid for liquids with density $\rho = 1.0 \text{ kg/dm}^3$ and kinematic viscosity $\gamma = 1 \text{ mm}^2/\text{sec}$.

SV4 SERIES (~ 2900 rpm)

MAIN CHARACTERISTICS

Working delivery 2.4 to 8 m³/h.

Maximum operating pressure, including water hammer on suction side:

- Pumps with oval flanges 16 bar.
- Pumps with round flanges 25 bar.

AVAILABLE VERSIONS

- “F” : In-line ports, round flanges from SV402 to SV424.
- “T” : In-line ports, oval flanges from SV402 to SV414.
- “R” : Overlaying ports, round flanges from SV405 to SV424.
- “N” : In-line ports, round flanges made of AISI 316 from SV402 to SV424.

TABLE OF MATERIALS

PART	“F” “R” “T” MATERIALS	“N” MATERIALS
Impeller	AISI 316 L	
Diffuser and upper spacer	AISI 304	AISI 316 L
Shaft	AISI 304	AISI 316
Outer sleeve	AISI 304	AISI 316 L
Pump body	AISI 304	AISI 316 L
Shaft sleeve	TUNGSTEN CARBIDE	
Bushing	CERAMIC	
Mechanical seal	TUNGSTEN CARBIDE/CARBON/EPDM	
Elastomers	EPDM	
Fill/drain plugs	AISI 316	
Adapter	250 CAST IRON	
Coupling	ALUMINIUM	
Coupling protection	AISI 304	
Seal holding disk	AISI 304	AISI 316 L
Base mount	ALUMINIUM	

ELECTRICAL SPECIFICATIONS

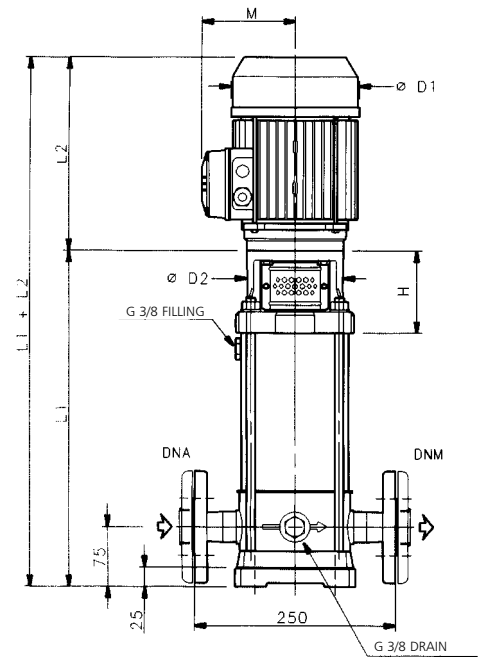
PUMP TYPE	MOTOR POWER			INPUT CURRENT In Amp.				CAPACITOR		Is/In	
				THREE-PHASE			SINGLE- PHASE 220-240V				
	Δ	Y	Δ	THREE- PHASE 230 V 400 V	SINGLE- PHASE 230 V						
						220-240V		380-415V	380-415V		
kW	T	SIZE*	M			220-240V	380-415V	380-415V	220-240V	μF	V
SV402F03T	0,37	71R	71R	2,30	1,33	–	2,64-2,72	14	450	4,23	3,08
SV403F05T	0,55	71	71	2,48	1,43	–	3,89-4,05	16	450	5,95	3,34
SV404F07T	0,75	80R	80R	3,50	2,02	–	5,22-4,97	20	450	5,81	3,55
SV405F11T	1,1	80	80	4,52	2,61	–	7,07-6,81	30	450	6,78	3,80
SV406F11T	1,1	80	80	4,52	2,61	–	7,07-6,81	30	450	6,78	3,80
SV407F11T	1,1	80	80	4,52	2,61	–	7,07-6,81	30	450	6,78	3,80
SV408F15T	1,5	90R	90R	5,98	3,45	–	9,32-8,63	40	450	7,04	3,45
SV409F15T	1,5	90R	90R	5,98	3,45	–	9,32-8,63	40	450	7,04	3,45
SV411F22T	2,2	90R	90	8,71	5,03	–	13,3-12,6	50	450	7,32	3,45
SV413F22T	2,2	90R	90	8,71	5,03	–	13,3-12,6	50	450	7,32	3,45
SV414F30T	3	100R	–	10,8	6,22	–	–	–	–	6,81	–
SV416F30T	3	100R	–	10,8	6,22	–	–	–	–	6,81	–
SV418F30T	3	100R	–	10,8	6,22	–	–	–	–	6,81	–
SV420F40T	4	112R	–	–	–	8,14	–	–	–	7,86	–
SV422F40T	4	112R	–	–	–	8,14	–	–	–	7,86	–
SV424F40T	4	112R	–	–	–	8,14	–	–	–	7,86	–

* R = Reduced size of motor casing as compared to shaft extension and flange.

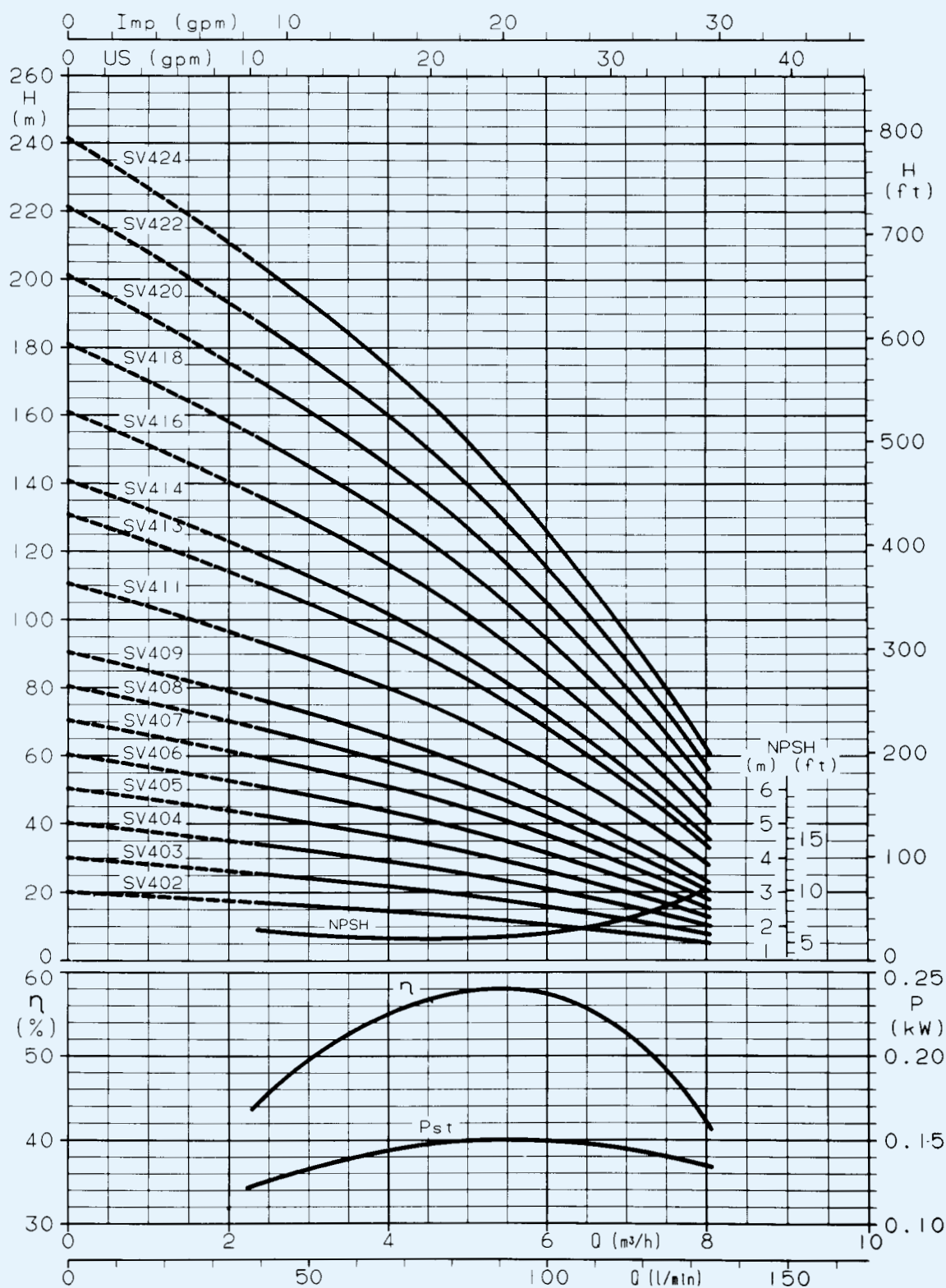
DIMENSIONS AND WEIGHTS

PUMP TYPE	DNA DNM	DIMENSIONS IN mm														WEIGHT (kg)			
		L1	L2 SINGLE-PHASE	L2 THREE-PHASE	L3	L4	L5	L6	L7	M SINGLE-PHASE	M THREE-PHASE	D1 SINGLE-PHASE	D1 THREE-PHASE	D2	H	A	B	PUMP	ELECTRIC PUMP
SV402F03T	Rp 1 1/4	285	209	209	—	—	260	260	111	111	120	120	105	93	50	20	9,5	17,5	
SV403F05T	Rp 1 1/4	310	231	231	—	—	285	285	121	121	140	140	105	93	50	20	10	18,5	
SV404F07T	Rp 1 1/4	345	226	226	—	—	320	320	121	121	140	140	120	103	50	20	11	21	
SV405F11T	Rp 1 1/4	370	263	263	370	225	345	345	137	129	155	155	120	103	50	20	11,5	22	
SV406F11T	Rp 1 1/4	395	263	263	395	250	370	370	137	129	155	155	120	103	50	20	12	22	
SV407F11T	Rp 1 1/4	420	263	263	420	275	395	395	137	129	155	155	120	103	50	20	12,5	23	
SV408F15T	Rp 1 1/4	455	263	263	455	300	430	430	137	129	155	155	140	113	50	20	13,5	29	
SV409F15T	Rp 1 1/4	480	263	263	480	325	455	455	137	129	155	155	140	113	50	20	14	30	
SV411F22T	Rp 1 1/4	530	281	263	530	375	505	505	121	129	176	155	140	113	50	20	15	32	
SV413F22T	Rp 1 1/4	580	281	263	580	425	555	555	121	129	176	155	140	113	50	20	16	33	
SV414F30T	Rp 1 1/4	615	—	303	615	450	590	590	—	121	—	176	160	123	50	20	17	39	
SV416F30T	Rp 1 1/4	665	—	303	665	500	—	640	665	—	121	—	176	160	123	75	25	18	40
SV418F30T	Rp 1 1/4	715	—	303	715	550	—	690	715	—	121	—	176	160	123	75	25	19	41
SV420F40T	Rp 1 1/4	765	—	307	765	600	—	740	765	—	133	—	193	160	123	75	25	20	58
SV422F40T	Rp 1 1/4	815	—	307	815	650	—	790	815	—	133	—	193	160	123	75	25	21	59
SV424F40T	Rp 1 1/4	865	—	307	865	700	—	840	865	—	133	—	193	160	123	75	25	22	60

“F” “N” VERSIONS



SV4 SERIES OPERATING CHARACTERISTICS AT 2900 rpm 50 Hz



These performances are valid for liquids with density $\rho = 1.0 \text{ kg/dm}^3$ and kinematic viscosity $\gamma = 1 \text{ mm}^2/\text{sec}$.

SV8 SERIES (~ 2900 rpm)

MAIN CHARACTERISTICS

Working delivery 6 to 14 m³/h

Maximum operating pressure, including water hammer on suction side:

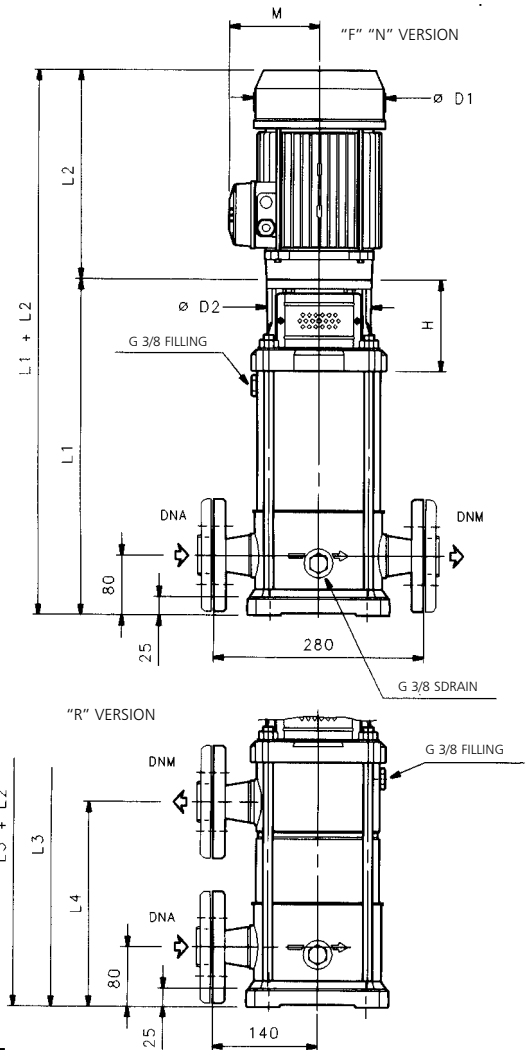
- Pumps with oval flanges 16 bar.
- Pumps with round flanges 25 bar.

AVAILABLE VERSIONS

- "F" : In-line ports, round flanges from SV802 to SV816.
- "T" : In-line ports, oval flanges from SV802 to SV811.
- "R" : Overlaying ports, round flanges from SV803 to SV816.
- "N" : In-line ports, round flanges made of AISI 316 from SV802 to SV816.

TABLE OF MATERIALS

PART	"F" "R" "T" MATERIALS	"N" MATERIALS
Impeller	AIS I 316 L	
Diffuser and upper spacer	AISI 304	AISI 316 L
Shaft	AISI 304	AISI 316
Outer sleeve	AISI 304	AISI 316 L
Pump body	AISI 304	AISI 316 L
Shaft sleeve	TUNGSTEN CARBIDE	
Bushing	CERAMIC	
Mechanical seal	TUNGSTEN CARBIDE/CARBON/EPDM	
Elastomers	EPDM	
Fill/drain plugs	AIS I 316	
Adapter	250 CAST IRON	
Coupling	ALUMINIUM UP TO 4 kW 200 CAST IRON FOR HIGHER POWER	
Coupling protection	AIS I 304	
Seal holding disk	AISI 304	AISI 316 L
Base mount	ALUMINIUM	



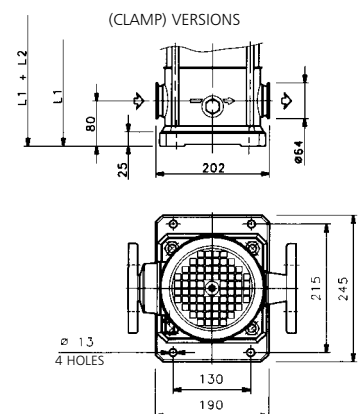
ELECTRICAL SPECIFICATIONS

PUMP TYPE	MOTOR POWER			INPUT CURRENT In Amp.			CAPACITOR		Is/In		
	KW	SIZE*		THREE-PHASE		SINGLE-PHASE			THREE-PHASE	SINGLE-PHASE	
		T	M	Δ 220-240V	Y 380-415V	Δ 380-415V	220-240V	μF	V	230 V	230 V
SV802F11T	1,1	80	80	4,52	2,61	–	7,07-6,81	30	450	6,78	3,80
SV803F15T	1,5	90R	90R	5,98	3,45	–	9,32-8,63	40	450	7,04	3,45
SV804F22T	2,2	90R	90	8,71	5,03	–	13,3-12,6	50	450	7,32	3,45
SV805F22T	2,2	90R	90	8,71	5,03	–	13,3-12,6	50	450	7,32	3,45
SV806F30T	3	100R	–	10,8	6,22	–	–	–	–	6,81	–
SV808F40T	4	112R	–	–	–	8,14	–	–	–	7,86	–
SV809F40T	4	112R	–	–	–	8,14	–	–	–	7,86	–
SV811F55T	5,5	132R	–	–	–	11,0	–	–	–	7,71	–
SV812F55T	5,5	132R	–	–	–	11,0	–	–	–	7,71	–
SV814F75T	7,5	132R	–	–	–	14,6	–	–	–	7,62	–
SV816F75T	7,5	132R	–	–	–	14,6	–	–	–	7,62	–

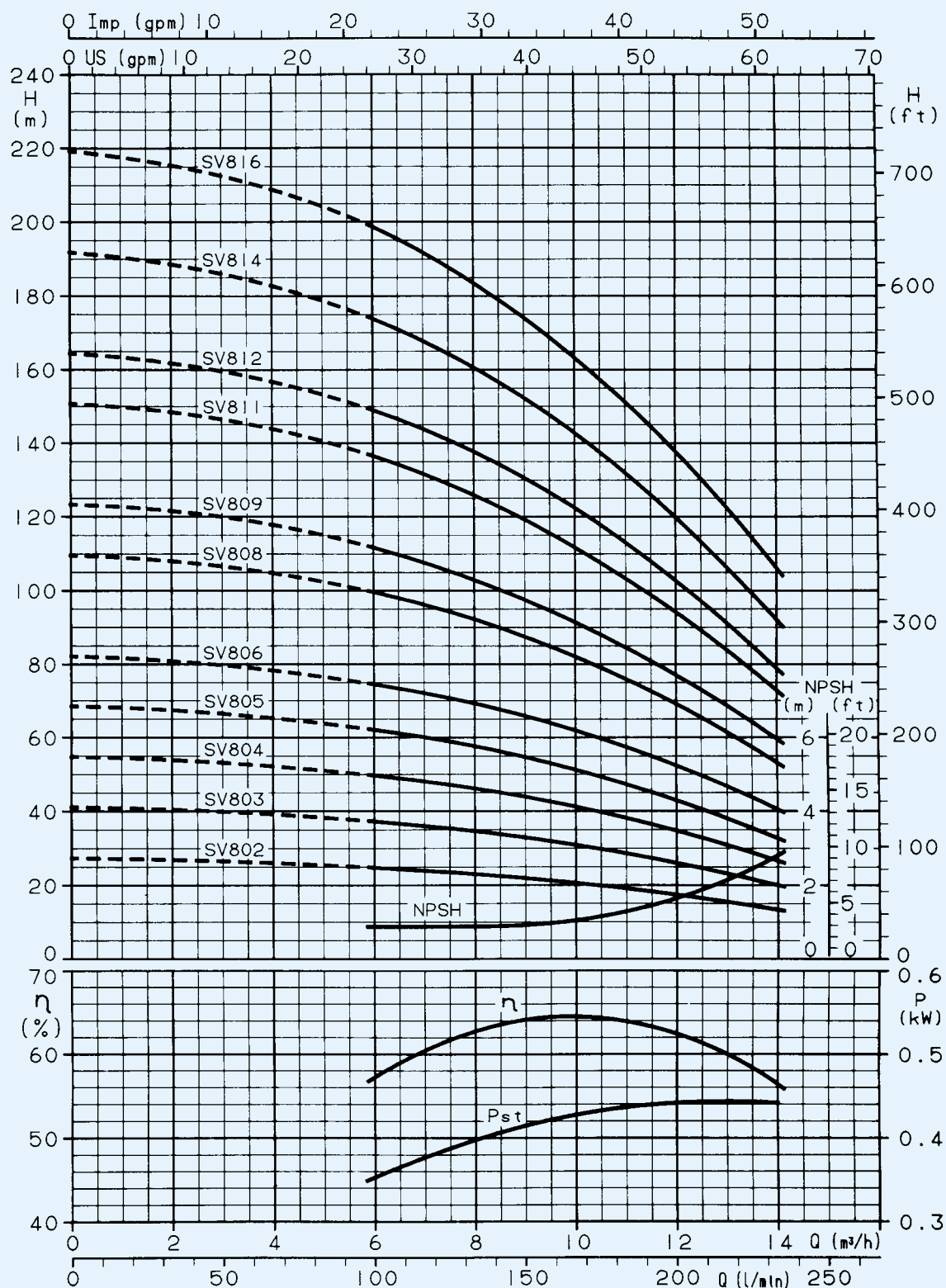
* R = Reduced size of motor casing as compared to shaft extension and flange.

DIMENSIONS AND WEIGHTS

PUMP TYPE	DNA DNM	DIMENSIONS IN mm														WEIGHT (kg)	
		L1	L2		L3	L4	L5	L6	M		D1		D2	H	PUMP	ELECTRIC PUMP	
			SINGLE- PHASE	THREE- PHASE					SINGLE- PHASE	THREE- PHASE	SINGLE- PHASE	THREE- PHASE					
SV802F11T	Rp 1 1/2	363	263	263	—	—	363	373	137	129	155	155	120	112	15	25	
SV803F15T	Rp 1 1/2	411	263	263	411	236	411	421	137	129	155	155	140	122	16	32	
SV804F22T	Rp 1 1/2	449	281	263	449	274	449	459	121	129	176	155	140	122	17	34	
SV805F22T	Rp 1 1/2	487	281	263	487	312	487	497	121	129	176	155	140	122	18	35	
SV806F30T	Rp 1 1/2	535	—	303	535	350	535	545	—	121	—	176	160	132	20	42	
SV808F40T	Rp 1 1/2	611	—	307	611	426	611	621	—	133	—	193	160	132	20	58	
SV809F40T	Rp 1 1/2	649	—	307	649	464	649	659	—	133	—	193	160	132	21	59	
SV811F55T	Rp 1 1/2	745	—	374	745	540	745	755	—	151	—	220	300	152	28	74	
SV812F55T	Rp 1 1/2	783	—	374	783	578	—	793	—	151	—	220	300	152	29	75	
SV814F75T	Rp 1 1/2	859	—	374	859	654	—	869	—	151	—	220	300	152	31	81	
SV816F75T	Rp 1 1/2	935	—	374	935	730	—	945	—	151	—	220	300	152	32	82	



SV8 SERIES OPERATING CHARACTERISTICS AT 2900 rpm 50 Hz



These performances are valid for liquids with density $\rho = 1.0 \text{ kg/dm}^3$ and kinematic viscosity $\gamma = 1 \text{ mm}^2/\text{sec}$.

SV16 SERIES (~ 2900 rpm)

MAIN CHARACTERISTICS

Working delivery 8 to 24 m³/h.

Maximum operating pressure, including water hammer on suction side:

– Pumps with round flanges 25 bar.

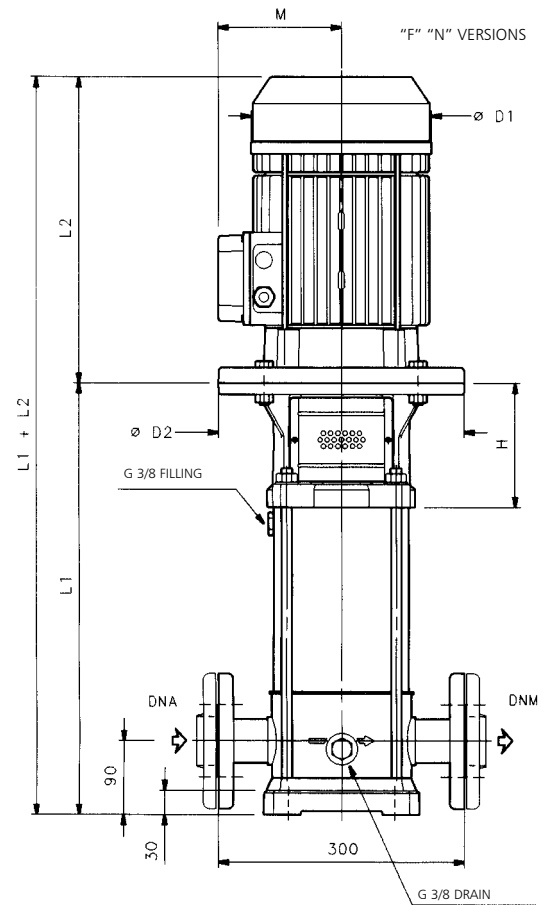
AVAILABLE VERSIONS

– “F” : In-line ports, round flanges from SV1602 to SV1615.

– “N” : In-line ports, round flanges in AISI 316 from SV1602 to SV1615.

TABLE OF MATERIALS

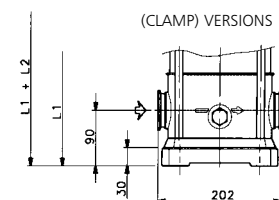
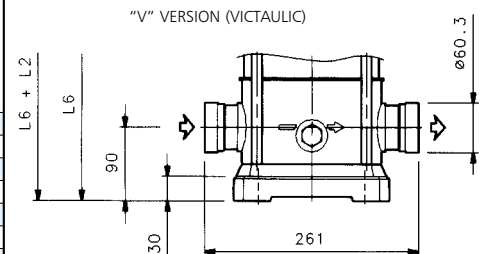
PART	“F” MATERIALS	“N” MATERIALS
Impeller	AISI 316 L	
Diffuser and upper spacer	AISI 304	AISI 316 L
Shaft	AISI 304	AISI 316
Outer sleeve	AISI 304	AISI 316 L
Pump body	AISI 304	AISI 316 L
Shaft sleeve	TUNGSTEN CARBIDE	
Bushing	CERAMIC	
Mechanical seal	TUNGSTEN CARBIDE/CARBON/EPDM	
Elastomers	EPDM	
Fill/drain plugs	AISI 316	
Adapter	250 CAST IRON	
Coupling	Aluminium UP TO 4 kW	
	200 CAST IRON FOR HIGHER POWER	
Coupling protection	AISI 304	
Seal holding disk	AISI 304	AISI 316 L
Base mount	ALUMINIUM	



ELECTRICAL SPECIFICATIONS

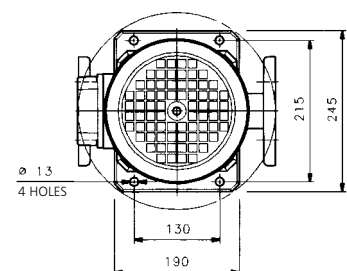
PUMP TYPE	MOTOR POWER			INPUT CURRENT In Amp.				CAPACITOR		Is/In	
				THREE-PHASE			SINGLE- PHASE			THREE- PHASE 230 V 400 V	SINGLE PHASE 230 V
	Δ	Y	Δ								
	kW	T	SIZE* M	220-240V	380-415V	380-415V		220-240V	μF		
SV1602F22T	2,2	90R	90	8,71	5,03	—	13,3-12,6	50	450	7,32	3,45
SV1603F30T	3	100R	—	10,8	6,22	—	—	—	—	6,81	—
SV1604F40T	4	112R	—	—	—	8,14	—	—	—	7,86	—
SV1605F55T	5,5	132R	—	—	—	11,0	—	—	—	7,71	—
SV1606F55T	5,5	132R	—	—	—	11,0	—	—	—	7,71	—
SV1607F75T	7,5	132R	—	—	—	14,6	—	—	—	7,62	—
SV1608F75T	7,5	132R	—	—	—	14,6	—	—	—	7,62	—
SV1610F110T	11	160R	—	—	—	21,2	—	—	—	8,75	—
SV1612F110T	11	160R	—	—	—	21,2	—	—	—	8,75	—
SV1614F150T	15	160	—	—	—	28,6	—	—	—	8,56	—
SV1615F150T	15	160	—	—	—	28,6	—	—	—	8,56	—

* R = Reduced size of motor casing as compared to shaft extension and flange.

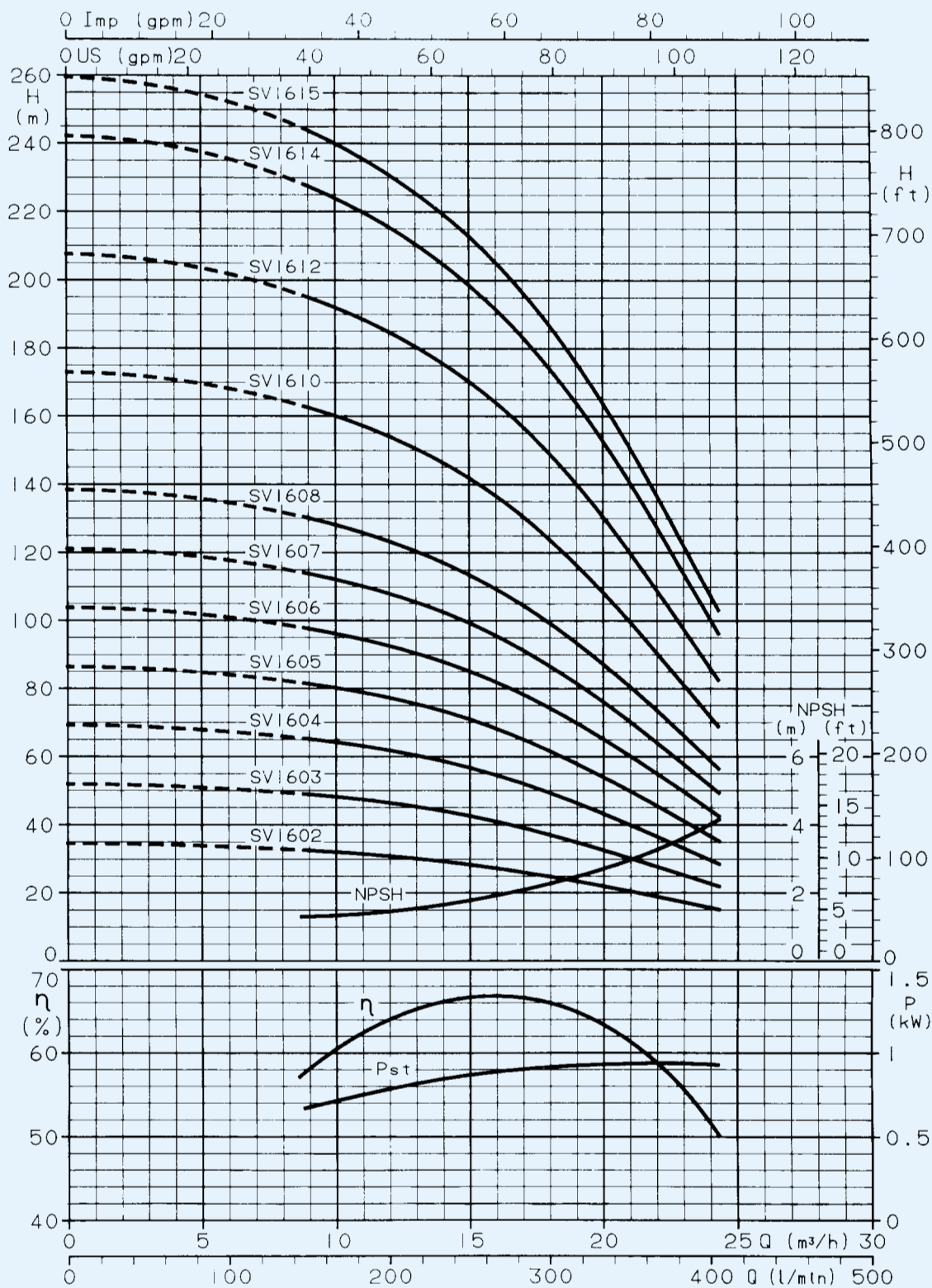


ELECTRICAL SPECIFICATIONS

PUMP TYPE	DNA DNM	DIMENSIONS IN mm												WEIGHT (kg)		
		L1	L2 SINGLE- PHASE	L3 THREE- PHASE	L4	L5	L6	M SINGLE- PHASE	THREE- PHASE	D1 SINGLE- PHASE	THREE- PHASE	D2	H	PUMP	ELECTRIC PUMP	
SV1602F22T	Rp 2"	383	281	263	—	—	—	383	121	129	176	155	140	122	15	32
SV1603F30T	Rp 2"	431	—	303	—	—	—	431	—	121	—	176	160	132	16	38
SV1604F40T	Rp 2"	469	—	307	—	—	—	469	—	133	—	193	160	132	17,5	55
SV1605F55T	Rp 2"	527	—	374	—	—	—	527	—	151	—	220	300	152	22	68
SV1606F55T	Rp 2"	565	—	374	—	—	—	565	—	151	—	220	300	152	23	69
SV1607F75T	Rp 2"	603	—	374	—	—	—	603	—	151	—	220	300	152	24	74
SV1608F75T	Rp 2"	641	—	374	—	—	—	—	151	—	220	300	152	25	75	
SV1610F110T	Rp 2"	749	—	427	—	—	—	749	—	191	—	257	350	184	34	119
SV1612F110T	Rp 2"	825	—	427	—	—	—	825	—	191	—	257	350	184	36	121
SV1614F150T	Rp 2"	901	—	488	—	—	—	901	—	232	—	310	350	184	38	130
SV1615F150T	Rp 2"	939	—	488	—	—	—	939	—	232	—	310	350	184	39	131



SV16 SERIES OPERATING CHARACTERISTICS AT 2900 rpm 50 Hz



These performances are valid for liquids with density $\rho = 1.0 \text{ kg/dm}^3$ and kinematic viscosity $\gamma = 1 \text{ mm}^2/\text{sec}$.

SV30 SERIES (~ 2900 rpm)

MAIN CHARACTERISTICS

Working delivery 15 to 39 m³/h.

Maximum operating pressure, including water hammer on suction side:

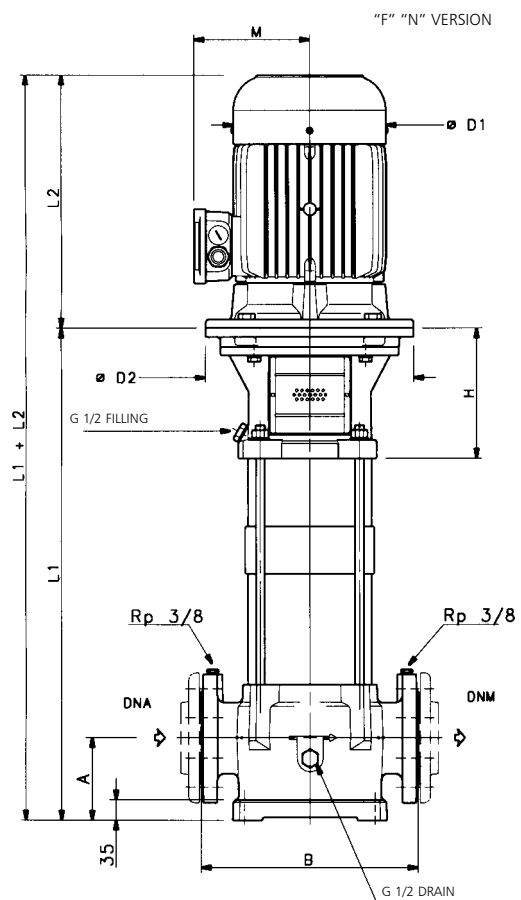
- Up to SV3006 16 bar.
- From SV3007 to SV3012 25 bar.

AVAILABLE VERSIONS

- “F” : In-line ports, round flanges from SV3002 to SV3012.
- “N” : In-line ports, round flanges in AISI 316 from SV3002 to SV3012.

TABLE OF MATERIALS

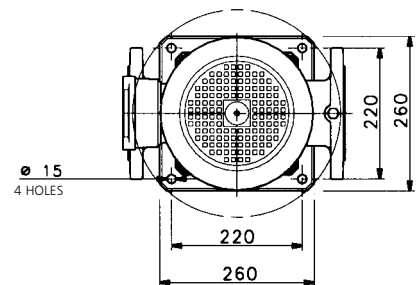
PART	“F” MATERIALS	“N” MATERIALS
Impeller	AISI 316 L	
Diffuser and upper spacer	AISI 316 L	
Shaft	AISI 431	AISI 316
Outer sleeve	AISI 304	AISI 316 L
Pump body	250 CAST IRON	CF - 8M (AISI 316 L)
Shaft sleeve	TUNGSTEN CARBIDE	
Bushing	CERAMIC	
Mechanical seal	SILICON/CARBIDE/CARBON/EPDM	
Elastomers	EPDM	
Fill/drain plugs	NICKEL PLATED BRASS	AISI 316
Spider	250 CAST IRON	
Coupling	200 CAST IRON	
Coupling protection	AISI 304	
Seal holding disk	–	AISI 316 L



ELECTRICAL SPECIFICATIONS

PUMP TYPE	MOTOR POWER		INPUT CURRENT In Amp.			Is/In
			THREE-PHASE			
	kW	SIZE*	Δ 220-240 V	Y 380-415 V	Δ 380-415 V	
SV3002F40T	4	112R	—	—	8,14	7,86
SV3003F55T	5,5	132R	—	—	11,0	7,71
SV3004F75T	7,5	132R	—	—	14,6	7,62
SV3005F110T	11	160R	—	—	21,2	8,75
SV3006F110T	11	160R	—	—	21,2	8,75
SV3007F150T	15	160	—	—	28,6	8,56
SV3008F150T	15	160	—	—	28,6	8,56
SV3009F150T	15	160	—	—	28,6	8,56
SV3010F185T	18,5	160	—	—	34,2	8,80
SV3011F185T	18,5	160	—	—	34,2	8,80
SV3012F220T	22	180R	—	—	40,3	8,61

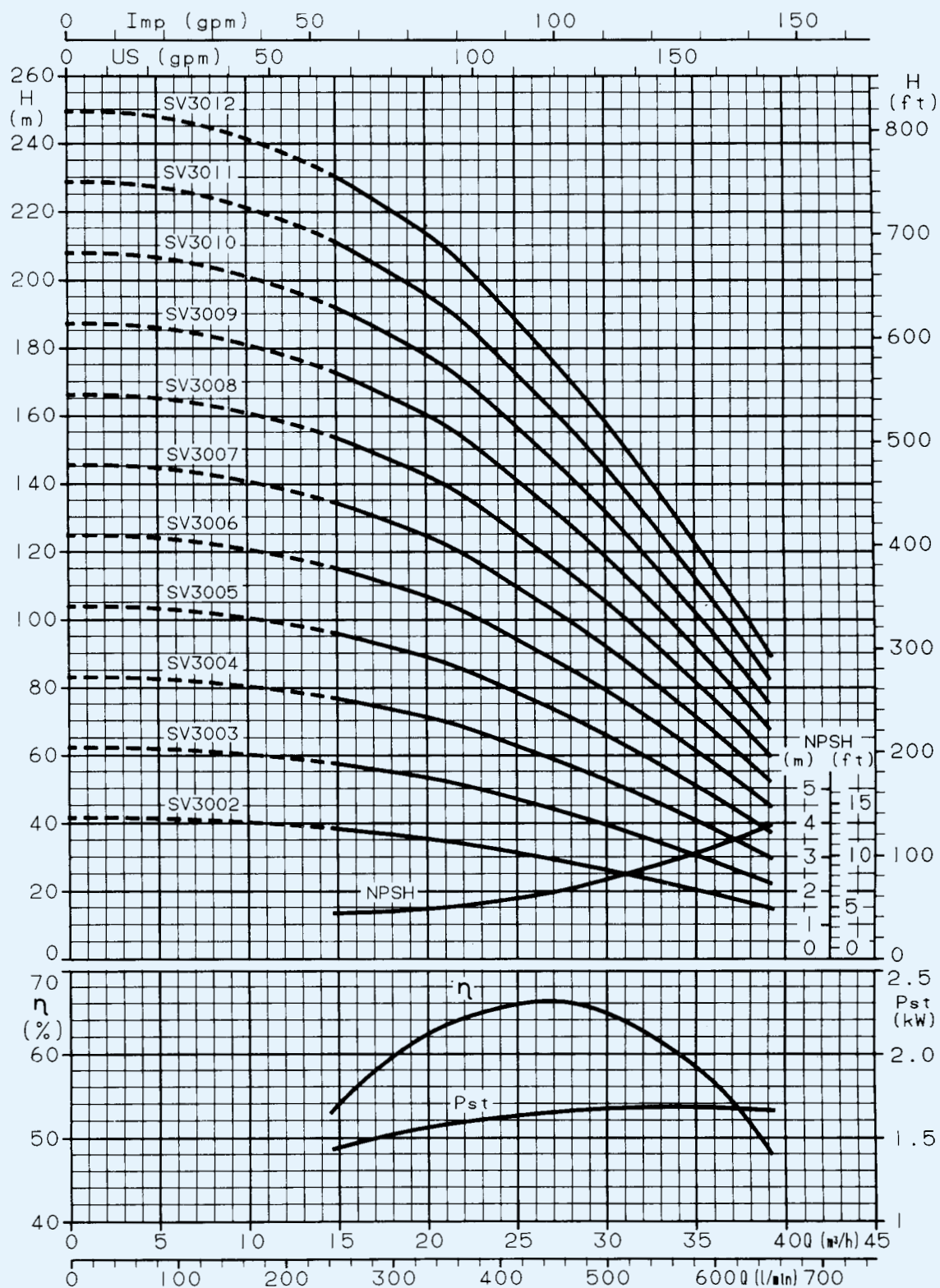
* R = Reduced size of motor casing as compared to shaft extension and flange.



DIMENSIONS AND WEIGHTS

PUMP TYPE	DNA DNM	DIMENSIONS IN mm								WEIGHT (kg)	
		L1	L2	A	B	M	D1	D2	H	PUMP	ELECTRIC PUMP
SV3002F40T	65	588	307	105	320	133	193	160	170	48	78
SV3003F55T	65	680	374	105	320	151	220	300	190	56	102
SV3004F75T	65	752	374	105	320	151	220	300	190	59	109
SV3005F110T	65	856	427	105	320	191	257	350	222	70	155
SV3006F110T	65	1120	427	105	320	191	257	350	222	83	168
SV3007F150T	65	1192	488	105	320	232	310	350	222	86	178
SV3008F150T	65	1264	488	105	320	232	310	350	222	89	181
SV3009F150T	65	1336	488	105	320	232	310	350	222	93	185
SV3010F185T	65	1408	532	105	320	232	310	350	222	96	195
SV3011F185T	65	1480	532	105	320	232	310	350	222	99	198
SV3012F220T	65	1552	532	105	320	232	310	350	222	102	216

SV30 SERIES OPERATING CHARACTERISTICS AT 2900 rpm 50 Hz



These performances are valid for liquids with density $\rho = 1.0 \text{ kg/dm}^3$ and kinematic viscosity $\gamma = 1 \text{ mm}^2/\text{sec}$.

SV60 SERIES (~ 2900 rpm)

MAIN CHARACTERISTICS

Working delivery 24 to 72 m³/h.

Maximum operating pressure, including water hammer on suction side:

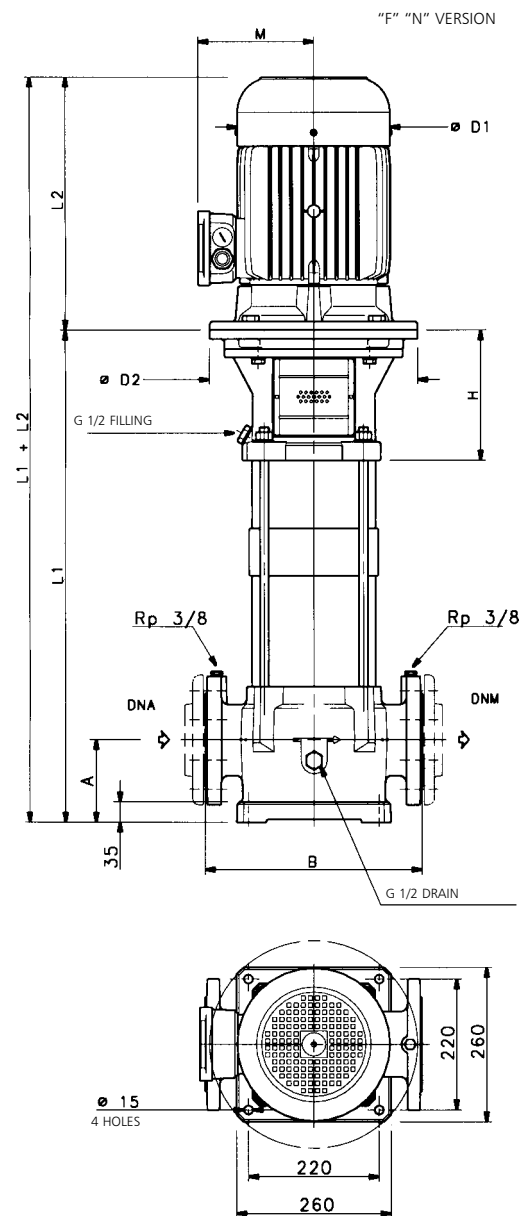
– 16 bar.

AVAILABLE VERSIONS

- “F” : In-line ports, round flanges from SV6002 to SV6008.
- “N” : In-line ports, round flanges made of AISI 316 from SV6002 to SV6008.

TABLE OF MATERIALS

PART	“F” MATERIALS	“N” MATERIALS
Impeller	AISI 316 L	
Diffuser and upper spacer	AISI 316 L	
Shaft	AISI 431	AISI 316
Outer sleeve	AISI 304	AISI 316 L
Pump body	250 CAST IRON	CF - 8M (AISI 316 L)
Shaft sleeve	TUNGSTEN CARBIDE	
Bushing	CERAMIC	
Mechanical seal	SILICON CARBIDE/CARBON/EPDM	
Elastomers	EPDM	
Fill/drain plugs	NICKEL PLATED BRASS	AISI 316
Adapter	250 CAST IRON	
Coupling	200 CAST IRON	
Coupling protection	AISI 304	
Seal holding disk	–	AISI 316 L



ELECTRICAL SPECIFICATIONS

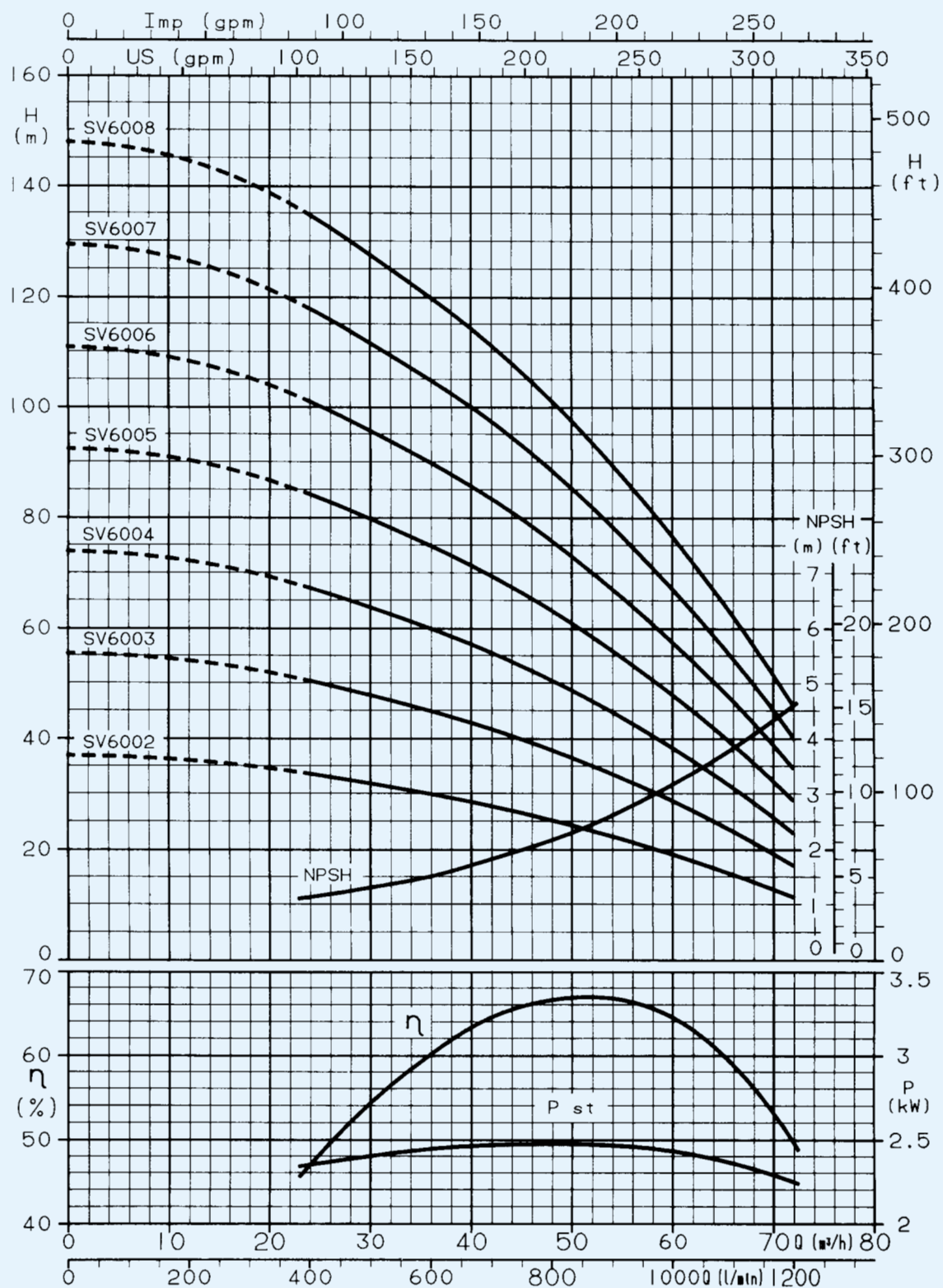
PUMP TYPE	MOTOR POWER	INPUT CURRENT In Amp.				Is/In
		THREE-PHASE				
	kW	SIZE*	Δ 220-240 V	Y 380-415 V	Δ 380-415 V	400 V
SV6002 F55T	5,5	132R	–	–	11,0	7,71
SV6003 F75T	7,5	132R	–	–	14,6	7,72
SV6004 F110T	11	160R	–	–	21,2	8,75
SV6005 F150T	15	160	–	–	28,6	8,56
SV6006 F150T	15	160	–	–	28,6	8,56
SV6007 F185T	18,5	160	–	–	34,2	8,80
SV6008 F220T	22	180R	–	–	40,3	8,61

* R = Reduced size of motor casing as compared to shaft extension and flange.

DIMENSIONS AND WEIGHTS

PUMP TYPE	DNA DNM	DIMENSIONS IN mm								WEIGHT (kg)	
		L1	L2	A	B	M	D1	D2	H	PUMP	ELECTRIC PUMP
SV6002 F55T	100	658	374	140	365	151	220	300	190	57	103
SV6003 F75T	100	730	374	140	365	151	220	300	190	60	110
SV6004 F110T	100	834	427	140	365	191	257	350	222	71	156
SV6005 F150T	100	906	488	140	365	232	310	350	222	74	166
SV6006 F150T	100	1170	488	140	365	232	310	350	222	87	179
SV6007 F185T	100	1242	532	140	365	232	310	350	222	90	189
SV6008 F220T	100	1314	532	140	365	232	310	350	222	94	208

SV60 SERIES OPERATING CHARACTERISTICS AT 2900 rpm 50 Hz



These performances are valid for liquids with density $\rho = 1.0 \text{ kg/dm}^3$ and kinematic viscosity $\gamma = 1 \text{ mm}^2/\text{sec}$.

SVI SERIES

SUBMERSIBLE VERTICAL ELECTRIC PUMPS

APPLICATIONS

- Pumping of coolants, lubricants and condensate.
- Machine tools, welders, engine test stands.
- Cooling systems.
- Washing systems.
- Boosters.
- Fire-fighting systems.

SPECIFICATIONS

PUMP

- **Delivery:** up to **72 m³/h.**
- **Head:** up to **247 m.**
- **Liquid temperature:**
 - 10°C to +90°C for "S" and "N" versions with coupling,
 - 10°C to +60°C for close-coupled "E" versions.
- Maximum ambient temperature: +40°C.
- Tested in compliance with ISO 2548 for class C standard pumps.
- Rotation direction: clockwise when looking at pump end (indicated by the arrow on adapter and coupling).
- **Mechanical seal** in compliance with **DIN 24960 and ISO 3069** for "S" and "N" versions, LOWARA seal for "E" versions. Standard mechanical seal used for clean liquids. For applications with contaminated liquids there are available seals in Tungsten/Silicon/FPM or Tungsten Carbide/Silicon/FPM or Silicon/Silicon/FPM.
- Tank coupling flange in compliance with DIN 5440 and EN 12157.
- Standard installation in vertical position: however, all models (except the SVI 30 and 60 versions with over 5 stages at 50 Hz, and with over 4 stages at 60 Hz) can be installed horizontally.
- Reduced axial thrust allows standard motors to be used (for "S" and "N" versions).
- These pumps can handle clean liquids free of abrasive substances or fibres, with kinematic viscosities up to 37 mm²/sec., with suitably sized motor.
- Minimum level of suction liquid: 25mm for SVI 2-4-6-8-16 models and 100 mm for SVI 30 and 60 models.
- Suction base has filter with 2 mm. diameter holes (SVI 2-4) or 3 mm. holes (SVI 8-16-30-60).
- AISI 316 STAINLESS STEEL "N" version available for models SVI 2-4-8-16.

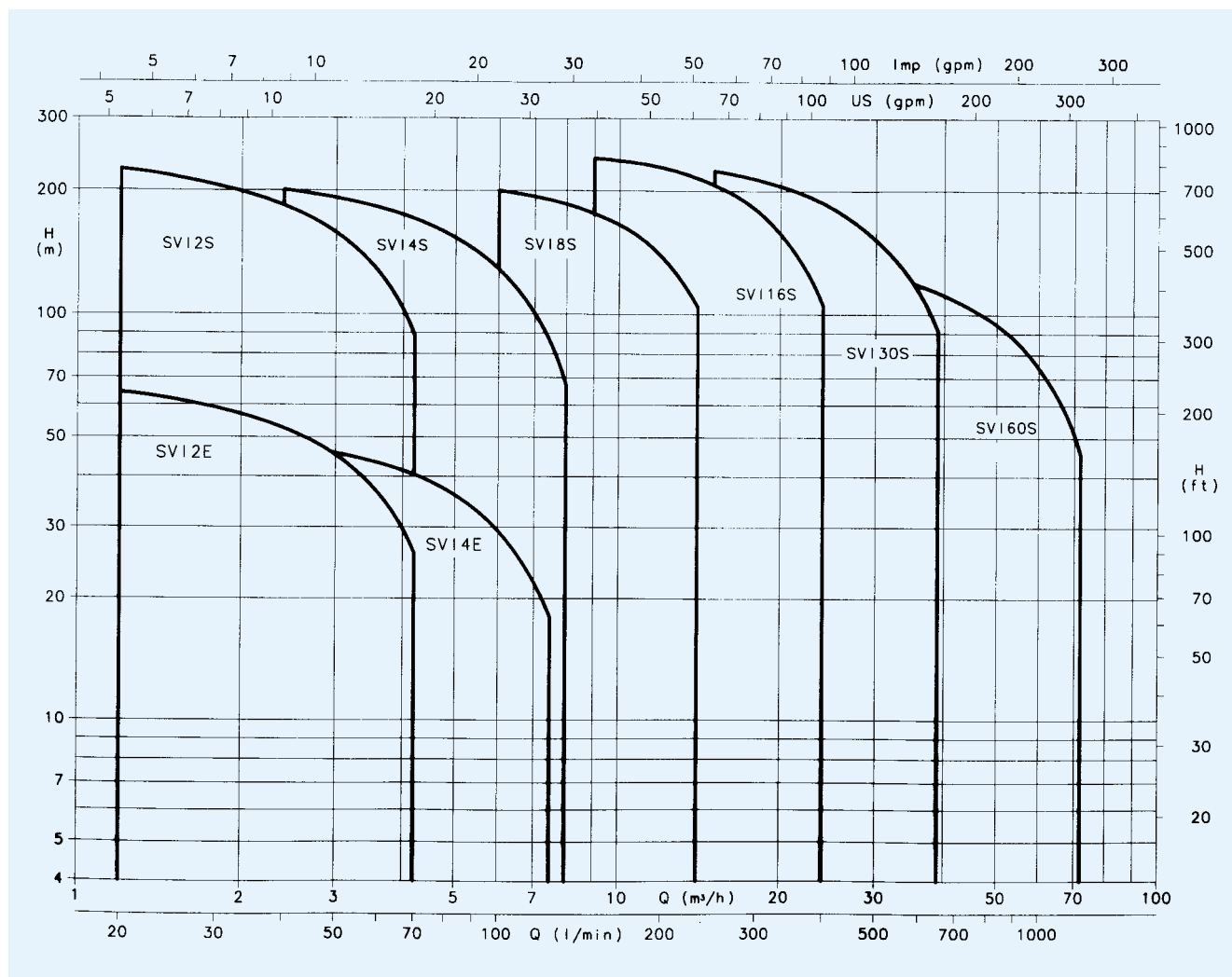


- Longer pump columns (from coupling flange to suction base) are available on request. Possible variants follow the number of upper stages indicated in each model's dimensions table.

MOTOR

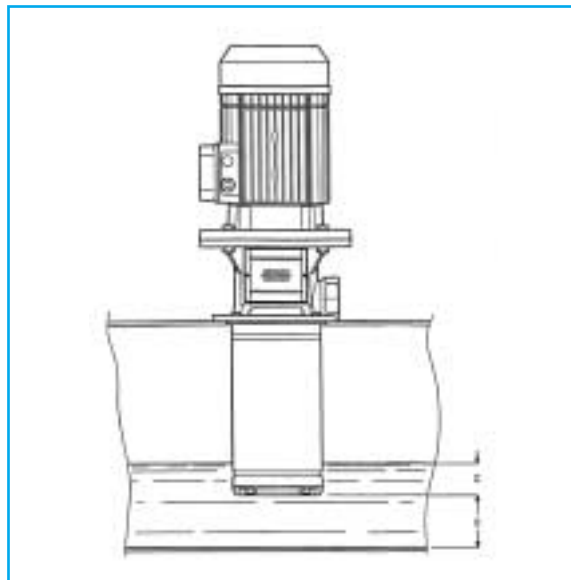
- Squirrel cage, finned aluminium casing, enclosed construction with external ventilation.
- **IP55 protection.**
- **Class F insulation.**
- Performance in compliance with CEI 2-3 (IEC 34,1).
- **Construction design:**
 - Close-coupled for "E" version (LOWARA motor);
 - Standard motor for "S" and "N" V18 versions, for power up to 4 kW, and V1 versions for power above 4 kW.
- **Standard voltage:**
 - Single-phase** 220-240V - 50 Hz on request.
 - Three-phase** 220-240/380-415 V - 50 Hz with power up to 3 kW;
 - 380-415 V - 50 Hz with power up above 23 kW.

SVI SERIES OPERATING CHARACTERISTICS AT 2900 rpm 50 Hz



These performances are valid for liquids with density $\rho = 1.0 \text{ kg/dm}^3$ and kinematic viscosity $\gamma = 1 \text{ mm}^2/\text{sec}$.

MINIMUM IMMERSION LEVEL



PUMP TYPE	DIMENSIONS IN mm C	DISTANCE FROM THE BOTTOM D mm	
		MINIMUM	RECOMMENDED
SVI 2	25	20	60
SVI 4	25	20	60
SVI 8	25	35	80
SVI 16	25	35	80
SVI 30	100	80	120
SVI 60	100	80	120

DOMINO

SINGLE-PHASE ELECTRIC PUMP COMMAND AND CONTROL EQUIPMENT

Domino is a compact and functional device controlled by an electronic circuit, consisting of a diaphragm and retaining spring system integrated by delivery and pressure sensors.

It is designed to replace traditional pressure boosting systems for domestic use (consisting of a pressure switch, expansion tank, pressure gauge and fittings); it offers the advantage of smaller overall dimensions and no routine maintenance is required.

Moreover, Domino provides the electric pump with adequate protection against dry running. The starting pressure setting ranges from 1.5 to 3 bar.

It can be coupled to single-phase pumps with a maximum input current of 10 A, and developing a head at least 0.5 to 0.7 bar greater than the minimum starting pressure setting. It is made of a non-toxic plastic material suitable for the handling of drinking water.

APPLICATIONS

- Pressure boosting in domestic and civil applications.
- Automatic lawn sprinkler systems.

SPECIFICATIONS

- **Voltage: 220-240 V** single-phase.
- **Frequency: 50/60 Hz.**
- Maximum current: 10 A.
- IP 65 protection.
- **Maximum pressure: 10 bar.**
- **Adjustable minimum starting pressure: 1,5 to 3 bar.**



- Differential pressure: 0.5 to 0.7 bar.
- R 1" pump and user connector.
- **Maximum liquid temperature: 35° C.**
- Non-toxic plastic material, suitable for handling drinking water.
- **Protection against dry running.**
- Pressure gauge (0-10 bar).
- Manual reset button.
- Mains power supply (POWER) indicator light (green).
- Pump running (ON) indicator light (yellow).
- Dry running (FAILURE) protection system activation indicator light (red).
- **Delivery up to 170 l/min.** (10 m³/h).
- **Low friction loss** (see diagram next page).
- Approx. overall dimensions: 100 x 150 x 200 mm.

INSTALLATION DIAGRAM

Fig. 1
PRESSURE GAUGE
ASSEMBLY

Fig. 2
POSSIBLE
INSTALLATION
POSITIONS

Fig. 3
ELECTRICAL
CONNECTION
DIAGRAM

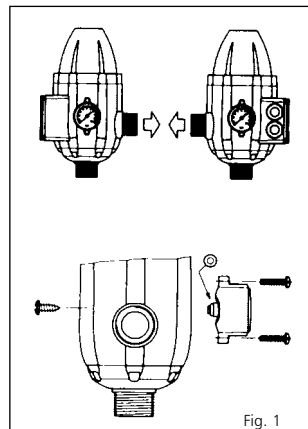


Fig. 1

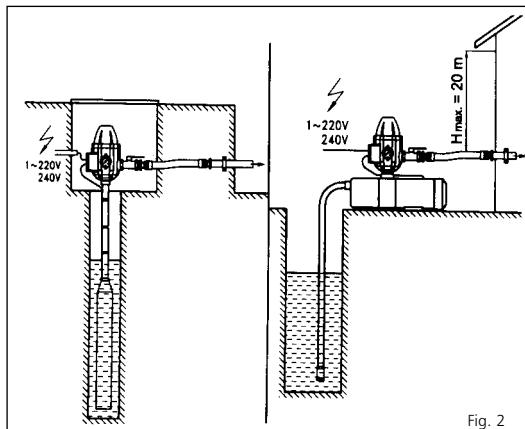


Fig. 2

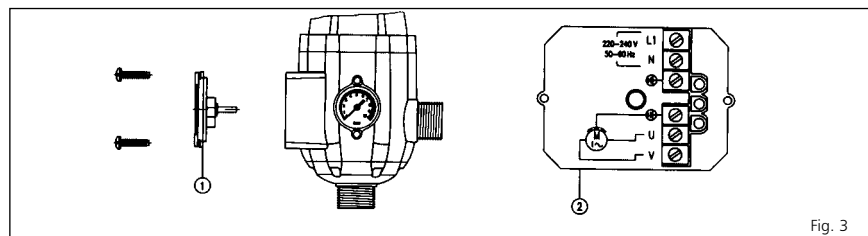
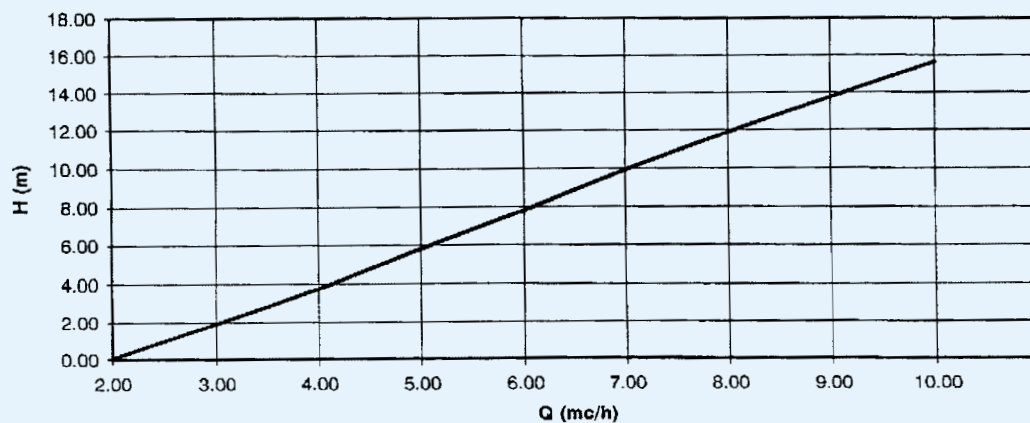
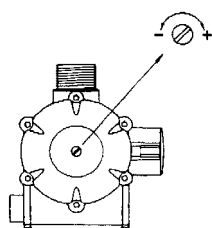


Fig. 3

FRICTION LOSS



MINIMUM STARTING PRESSURE SETTING (1,5 to 3 bar)



SPHERE UNITS, BLOCK UNIT AND DOMINOSYSTEM

SMALL, PRESSURE VESSELS FULLY AUTOMATIC FOR WATER SUPPLY BOOSTING APPLICATIONS

These units consist of a single-phase electric pump, diaphragm tank, pressure switch, pressure gauge and various connectors.

Fully assembled and ready to be connected to the building's water systems.

- ❑ **CHOICE OF UNITS WITH PERIPHERAL (PM), SELF-PRIMING (BGM), HORIZONTAL SINGLE- (CEAM), DOUBLE- (CAM) AND MULTIPLE-IMPELLER (HM) CENTRIFUGAL PUMPS.**
- ❑ **AVAILABILITY OF THE "DOMINO" ELECTROMECHANICAL DEVICE FOR THE CONTROL AND COMMAND OF SINGLE-PHASE PUMPS. SEE RELATED SECTION IN THIS CATALOGUE.**

APPLICATIONS

- Pressure boosting in water systems for domestic use, lawn sprinkling and washing.
- Handling of non-aggressive liquids in industrial plants.

SPECIFICATIONS

- **Delivery: up to 110 l/min (6.6 m³/h).**
- **Head: up to 52 m (5.2 bar).**
- 220 V, 50 Hz single-phase power supply.
- From 0,30 to 1.10 kW installed power.
- For performance ratings (delivery – head) of these single-pump pressure boosting units, see information relating to the electric pump in this catalogue.



AVAILABLE VERSIONS

- **Sphere unit, electric pump** with a 24 litre enamelled steel **ball tank** (AISI 304 stainless steel model available on request).
- **Block, electric pump** with a 25 litre enamelled steel **cylindrical tank**.



TECHNICAL SPECIFICATIONS

UNIT TYPE	RATED POWER		INPUT CURRENT A	PRESSURE SWITCH SETTING bar	CAPACITY l/min	APPROX. OVERALL DIMENSIONS in mm			WEIGHT kg
	kW	HP				MINOR BASE	MAJOR BASE	HEIGHT	
Sphere group PM 16	0,30	0,40	2,4	1,4 - 2,8	15 - 28	390	470	635	15
Sphere group PM 30	0,50	0,70	4,0	2,0 - 3,5	20 - 38	390	470	635	17
Sphere group CEAM 70/5	0,55	0,75	4,2	1,8 - 2,8	40 - 80	390	580	720	17
Sphere group CEAM 80/5	0,75	1,00	4,8	1,8 - 2,8	60 - 110	390	580	720	11
Sphere group CAM 70/33	0,75	1,00	5,0	2,4 - 3,8	40 - 80	390	470	720	21
Sphere group CAM 70/45	1,10	1,50	8,1	3,6 - 5,2	40 - 80	390	470	720	25
* Sphere group BGM 5	0,55	0,75	4,0	2,5 - 3,5	18 - 56	390	580	720	17
* Sphere group BGM 7	0,75	1,00	4,8	2,8 - 4,1	12 - 54	390	580	720	18
* Sphere group BGM 9	0,90	1,20	5,6	3,2 - 4,2	22 - 52	390	580	720	20
* Sphere group BGM 11	1,10	1,50	6,8	3,4 - 4,7	20 - 64	390	580	720	23
Block CEAM 70/5	0,55	0,75	4,2	1,8 - 2,8	40 - 80	290	660	610	21
Block CEAM 80/5	0,75	1,00	4,8	1,8 - 2,8	60 - 100	290	660	610	22
Block CAM 70/33	0,75	1,00	5,0	2,4 - 3,8	40 - 80	290	660	610	25
* Block BGM 5	0,55	0,75	4,0	2,5 - 3,5	18 - 56	290	660	610	21
* Block BGM 11	1,10	1,50	6,8	3,4 - 4,7	20 - 64	290	660	610	26
Sphere group 2HM4	0,45	0,6	2,9	2,0 - 3,3	10 - 50	390	470	720	14
Sphere group 2HM5	0,55	0,75	3,6	3,2 - 4,4	10 - 50	390	470	720	15
Sphere group 2HM7	0,75	1	5,0	3,6 - 5,6	10 - 50	390	470	720	15
Sphere group 4HM5	0,55	0,75	3,8	1,8 - 3,0	40 - 95	390	470	720	15
Sphere group 4HM7	0,75	1	5,0	2,4 - 4,0	40 - 95	390	470	720	17
Sphere group 4HM9	0,9	1,2	5,7	2,8 - 5,0	40 - 100	390	470	720	17

* Specially suited for suction from buried tanks or wells.

The suction port is threaded Rp 1 1/4" (Rp 1" for PM 16 and PM 30).

The delivery port is threaded Rp 1" for all pumps.

NB: after the unit has been installed, the diaphragm tank air precharge must be set to a value 0.2 bar lower than the minimum pressure switch set-point.

PRESSURE BOOSTER UNITS

Wide range of 2, 3 or 4 pump units controlled by pressure switches or pressure transmitter, with constant or variable speed electric pumps, timed or to be coupled to surge tanks of suitable volume, with or without diesel pump. Fire fighting units in compliance with UNI 9490/10779 or with weekly self-testing device.

APPLICATIONS

- Water supply to apartment and office buildings, hotels, shopping centers, factories, and greenhouses.
- Water supply for agricultural use (irrigation systems).
- Water supply to systems requiring steady pressure (version with variable speed pumps).
- Water supply to fire-fighting automatic sprinkler systems and/or hydrants.

For more information see specific catalogues or contact the Lowara sales network.



FIRE FIGHTING SYSTEM UNI 9490 OR UNI 10779 UTILISING BOREHOLE PUMPS

❑ **FOR FURTHER INFORMATION PLS CONTACT
OUR SALES NETWORK.**

Fire Fighting Booster Package that utilise the Lowara Borehole range of pumps, the design reduces the space required by traditional packages resulting in a more economical solution.

The system can be installed directly in a tank which is an alternative to traditional installations where the pumps are surface mounted.

SPECIFICATIONS

- Fire Pump Package manufactured to UNI 9490 or UNI 10779.
- Number of pumps used 1 service or 1 service 1 jockey.
- Pumps used 4", 6", 8", 10" borehole pumps.
- Maximum power size for service pump 75 kW for service pump.
- Manifold in painted steel pipe with anchor bolts to fix to a wall or a floor.
- All hydraulic pre-mounted with all requested items in accordance with UNI 9490/10779.
- Pump connections possible with either flanges or screwed.
- Complete with valves on delivery side.



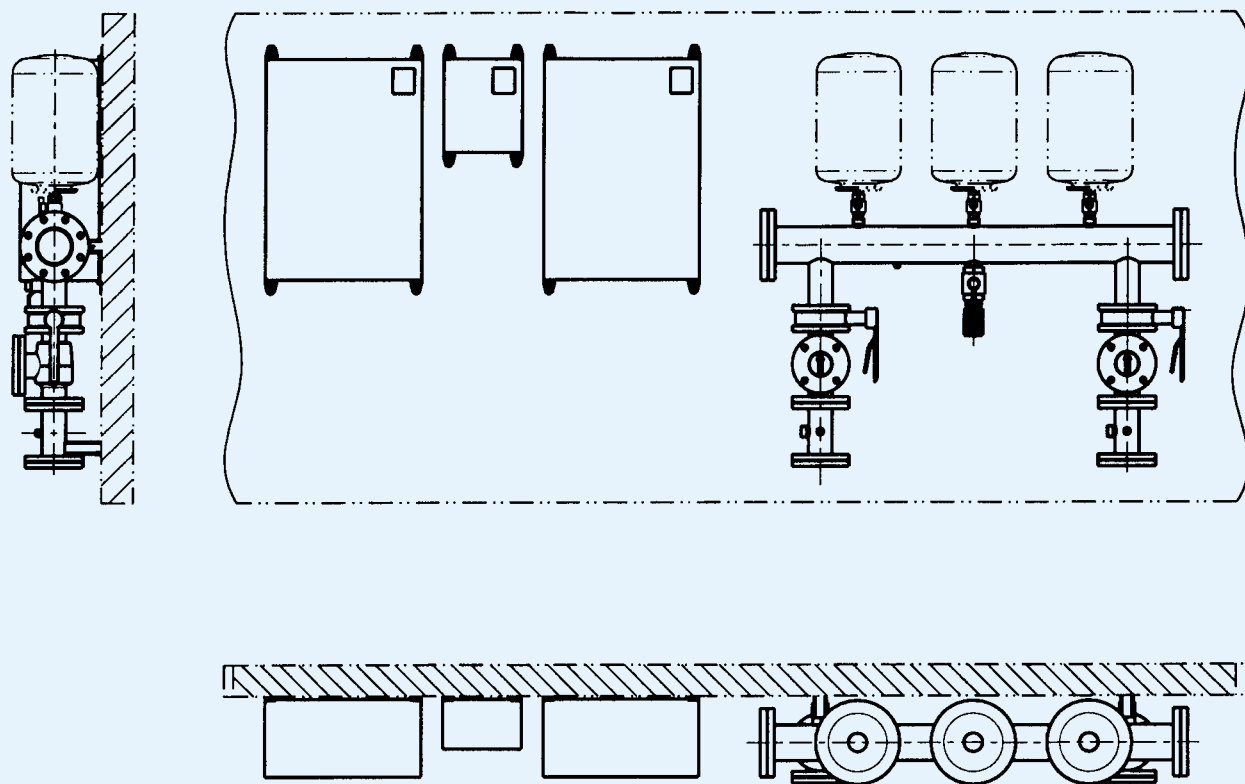
CONTROL EQUIPMENT

- Control panel IP54 for installation on wall or control panel frame.
- Pumps controlled by pressure switches.
- Visual display lamps.
- Audible alarm.

OPTIONAL EXTRAS

- 12 Volt auxiliary circuit.
- Auto-Test.
- Flow meter.
- Sirens and display light.
- Membrane vessels.

GUDB21/P



Lowara have available 3 versions:

- Hydraulic and electric components on skid.
- Only hydraulic on skid.
- Hydraulic and electric components for installation on a wall.

The fire fighting system shown in the photograph on the previous page is an example of an installation using 4" pumps.

For further information contact your sales support office.



FC SERIES

IN-LINE ELECTRIC PUMPS

In-line electric pumps with cast iron pump body, AISI 316L stainless steel impeller entirely welded using laser technology (for models with 40, 50 and 65 nominal port diameter). Suitable for handling hot or cold moderately aggressive liquids.

APPLICATIONS

- Circulation of hot and cold water for heating and conditioning systems.
- Water pumping in the civil, industrial and agricultural sectors.
- Water supply systems in rural applications.

AVAILABLE MODELS

- **FCE:** close-coupled with special motor shaft extension.
- **FCS:** with stub shaft and standardised motor.

SPECIFICATIONS

- **Maximum delivery: 190 m³/h.**
- **Maximum head: 90 m.**
- Continuous duty.
- Pumped liquid **temperature: -20°C to 130°C.**
- **Maximum operating pressure: 12 bar (PN 12).**
- **Port nominal diameter: up to 100 mm.**
- **Impeller nominal diameter: up to 250 mm.**
- **Mechanical seal in compliance with (ex DIN 24960), lubricated by internal recirculation of pumped liquid.**
- **Flanged suction and delivery ports** (in compliance with EN 1092-2).
- **Bleed valve available on all models.**
- IP 55 protection.
- Class F insulation.
- 2- and 4-pole versions
- 50 and 60 Hz motor frequencies.
- **Version with HYDROVAR frequency converter (variable speed) available on request.**
- **For in-line twin pumps contact Lowara sales network.**



TABLE OF MATERIALS

PART	MATERIAL
Pump body	200 CAST IRON (UNI ISO 185)
Impeller	STAINLESS STEEL* (AISI 316L - DIN 1.4404)
Wear ring	STAINLESS STEEL
Counterwear ring	(AISI 316 - DIN 1.4571)
Shaft	
Seal housing	200 CAST IRON (UNI ISO 185)
Adapter	200 CAST IRON (UNI ISO 185)**
Mechanical seal	CERAMIC/CARBON/EPDM
O-Rings	EPDM
Fill/drain plugs	NICKEL-PLATED BRASS
Base (optional)	ALUMINIUM

* Cast iron versions:

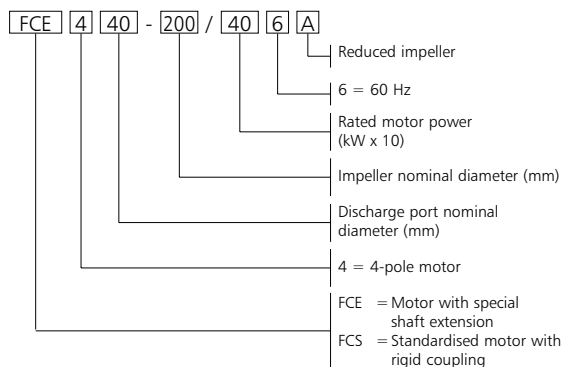
DN 80 and DN 100

** Aluminium versions:

40/50 - 125 2/4 poles

40/50 - 160 2/4 poles

IDENTIFICATION CODE



FCE SERIES

ELECTRICAL SPECIFICATIONS OF MOTORS WITH SPECIAL SHAFT EXTENSION

THREE-PHASE 50 Hz 2 POLES MOTORS

MOTOR TYPE			INPUT CURRENT				DATA FOR 400 V 50 Hz					
kW	IEC SIZE *	CONSTRUCTION DESIGN	In (A)				rpm	Is / In	n %	cosφ	Cn Nm	Cs/Cn
			Δ 220-240 V	Y 380-415 V	Δ 380-415 V	Y 660-690 V						
0.75	90R	B14	3.72	2.15	-	-	2915	8.23	77.7	0.65	2.45	5.20
1.1	90R	B14	4.52	2.61	-	-	2875	6.78	78.9	0.77	3.65	3.49
1.5	90R	B14	5.98	3.45	-	-	2875	7.04	80.1	0.78	4.98	3.83
2.2	90R	B14	8.71	5.03	-	-	2860	7.32	81.1	0.78	7.34	4.12
3	90	B14	10.8	6.22	-	-	2845	6.81	80.4	0.87	10.1	3.00
4	112R	B14	-	-	8.14	4.70	2900	7.86	83.5	0.85	13.2	2.86
5.5	112	B14	-	-	11.0	6.35	2910	7.71	84.5	0.85	18.0	2.66
7.5	112	B14	-	-	14.6	8.43	2910	7.62	87.2	0.85	24.6	3.03
9.2	132	B14	-	-	17.5	10.1	2925	8.72	86.3	0.88	30.0	3.33
11	132	B14	-	-	21.2	12.2	2925	8.75	88.8	0.84	35.9	3.66
15	160	B14	-	-	28.6	16.5	2940	8.56	85.3	0.89	48.7	3.10
18.5	160	B14	-	-	34.2	19.7	2945	8.80	87.3	0.90	60.0	4.06
22	160	B14	-	-	40.3	23.3	2945	8.61	89.5	0.88	71.2	4.79

* R = Reduced size of motor casing as compared to shaft extension and flange.

fce-mott-2p50_a_te

THREE-PHASE 50 Hz 4 POLES MOTORS

MOTOR TYPE			INPUT CURRENT				DATA FOR 400 V 50 Hz					
kW	IEC SIZE *	CONSTRUCTION DESIGN	In (A)				rpm	Is / In	n %	cosφ	Cn Nm	Cs/Cn
			Δ 220-240 V	Y 380-415 V	Δ 380-415 V	Y 660-690 V						
0.25	71	B5	1.71	0.99	-	-	1390	3.58	62.0	0.59	1.71	3.16
0.37	71	B5	2.53	1.46	-	-	1370	3.39	61.4	0.60	2.57	3.40
0.55	90R	B5-B14	3.03	1.75	-	-	1390	3.95	68.2	0.67	3.77	2.45
0.75	90R	B5	4.04	2.33	-	-	1395	4.06	70.1	0.66	5.13	2.73
1.1	90	B5	4.35	2.51	-	-	1415	4.65	78.0	0.81	7.42	2.15
1.5	90	B5	5.85	3.38	-	-	1420	4.99	79.9	0.80	10.1	2.26
2.2	100	B5	8.28	4.78	-	-	1410	5.53	81.4	0.82	14.9	2.52
3	100	B5	11.0	6.37	-	-	1425	6.03	82.5	0.82	20.1	2.53
4	112	B5	-	-	8.38	4.84	1440	5.81	84.8	0.81	26.5	2.50
5.5	132	B14	-	-	11.3	6.52	1445	5.98	85.8	0.82	36.3	2.60
7.5	132	B14	-	-	15.2	8.78	1450	6.70	88.1	0.81	49.3	3.17

* R = Reduced size of motor casing as compared to shaft extension and flange.

fce-mott-4p50_a_te

FCS SERIES STANDARD MOTOR ELECTRICAL SPECIFICATIONS

THREE-PHASE 50 Hz 2 POLES MOTORS

MOTOR TYPE			INPUT CURRENT In (A)				DATA FOR 400 V 50 Hz					
kW	IEC SIZE *	CONSTRUCTION DESIGN	Δ	Y	Δ	Y	rpm	Is / In	n %	cosφ	Cn Nm	Cs/Cn
			220-240 V	380-415 V	380-415 V	660-690 V						
0.75	80R	B5	3.50	2.02	-	-	2855	5.81	74.3	0.72	2.51	3.76
1.1	80	B5	4.52	2.61	-	-	2875	6.78	78.9	0.77	3.65	3.49
1.5	90R	B5	5.98	3.45	-	-	2875	7.04	80.1	0.78	4.98	3.83
2.2	90R	B5	8.71	5.03	-	-	2860	7.32	81.1	0.78	7.34	4.12
3	100R	B5	10.8	6.22	-	-	2845	6.81	80.4	0.87	10.1	3.00
4	112R	B5	-	-	8.14	4.70	2900	7.86	83.5	0.85	13.2	2.86
5.5	132R	B5	-	-	11.0	6.35	2910	7.71	84.5	0.85	18.0	2.66
7.5	132R	B5	-	-	14.6	8.43	2910	7.62	87.2	0.85	24.6	3.03
11	160R	B5	-	-	21.2	12.2	2925	8.75	88.8	0.84	35.9	3.66
15	160	B5	-	-	28.6	16.5	2940	8.56	85.3	0.89	48.7	3.10
18.5	160	B5	-	-	34.2	19.7	2945	8.80	87.3	0.90	60.0	4.06
22	180R	B5	-	-	40.3	23.3	2945	8.61	89.5	0.88	71.2	4.79

* R = Reduced size of motor casing as compared to shaft extension and flange.

fcs-mott-2p50_a_te

THREE-PHASE 50 Hz 4 POLES MOTORS

MOTOR TYPE			INPUT CURRENT In (A)				DATA FOR 400 V 50 Hz					
kW	IEC SIZE *	CONSTRUCTION DESIGN	Δ	Y	Δ	Y	rpm	Is / In	n %	cosφ	Cn Nm	Cs/Cn
			220-240 V	380-415 V	380-415 V	660-690 V						
0.55	80	B5	3.03	1.75	-	-	1390	3.95	68.2	0.67	3.77	2.45
0.75	80	B5	4.04	2.33	-	-	1395	4.06	70.1	0.66	5.13	2.73
1.1	90	B5	4.35	2.51	-	-	1415	4.65	78.0	0.81	7.42	2.15
1.5	90	B5	5.85	3.38	-	-	1420	4.99	79.9	0.80	10.1	2.26
2.2	100	B5	8.28	4.78	-	-	1410	5.53	81.4	0.82	14.9	2.52
3	100	B5	11.0	6.37	-	-	1425	6.03	82.5	0.82	20.1	2.53
4	112	B5	-	-	8.38	4.84	1440	5.81	84.8	0.81	26.5	2.50
5.5	132	B5	-	-	11.3	6.52	1445	5.98	85.8	0.82	36.3	2.60
7.5	132	B5	-	-	15.2	8.78	1450	6.7	88.1	0.81	49.3	3.17

* R = Reduced size of motor casing as compared to shaft extension and flange.

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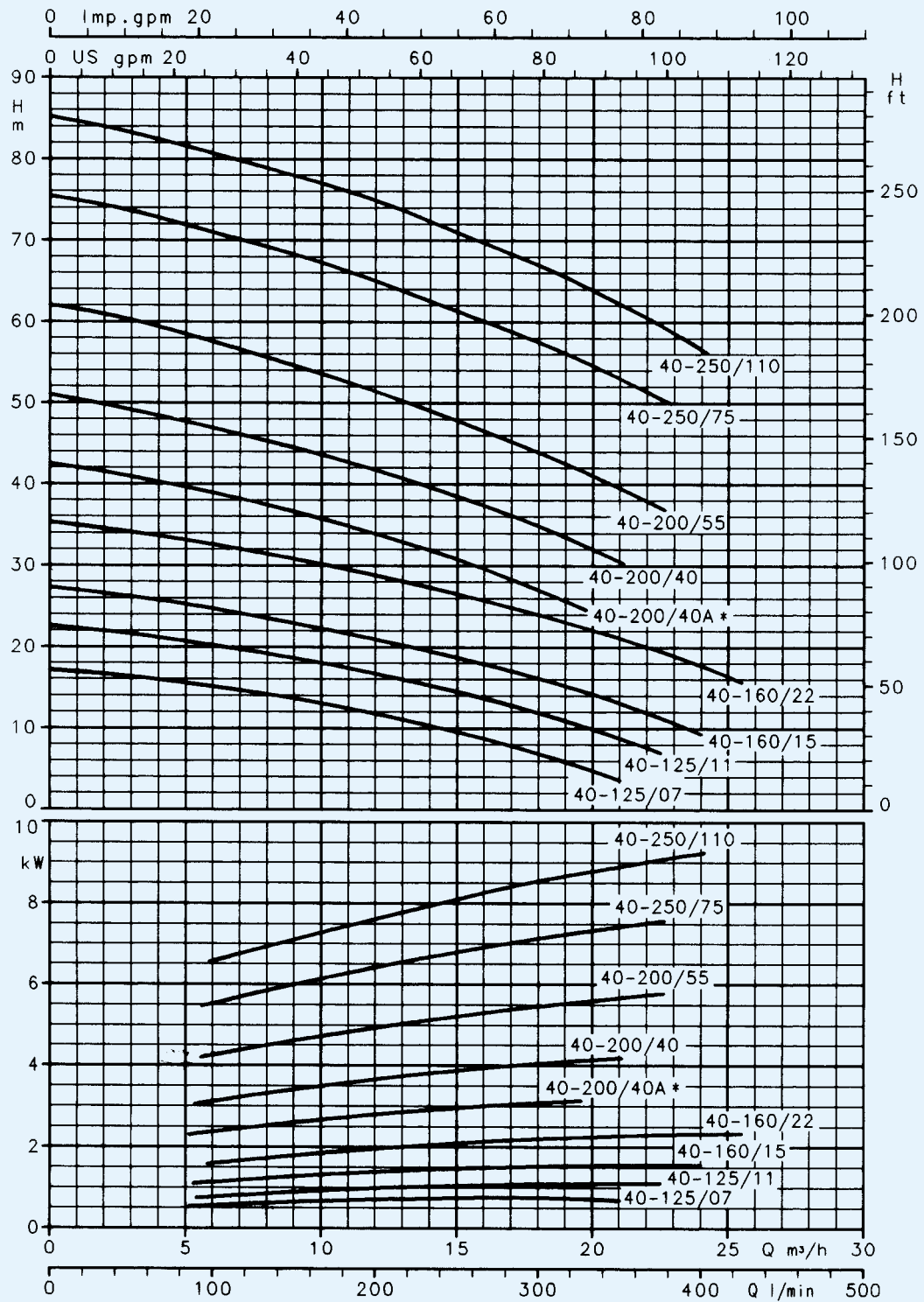
FCE - FCS SERIES

HYDRAULIC PERFORMANCE TABLE 50 Hz, 4 POLES

PUMP TYPE	POWER		Q = DELIVERY																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																															
			l/min	0	50	75	100	125	150	175	200	250	300	350	400	450	500	600	800	1000	1200	1400	1600	1800	2000	2500	2700																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																							
			m³/h	0	3	4,5	6	7,5	9	10,5	12	15	18	21	24	27	30	36	48	60	72	84	96	108	120	150	162																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																							
kW		HP	H = TOTAL HEAD METERS COLUMN OF WATER																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																															
40-125/02A	0,25	0,33	4,7	4,3	4	3,6	3	2,4	1,7																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																									

Performances in compliance with ISO 9906 – Annex A

FC 40 SERIES OPERATING CHARACTERISTICS AT 2900 rpm 50 Hz, 2 POLES



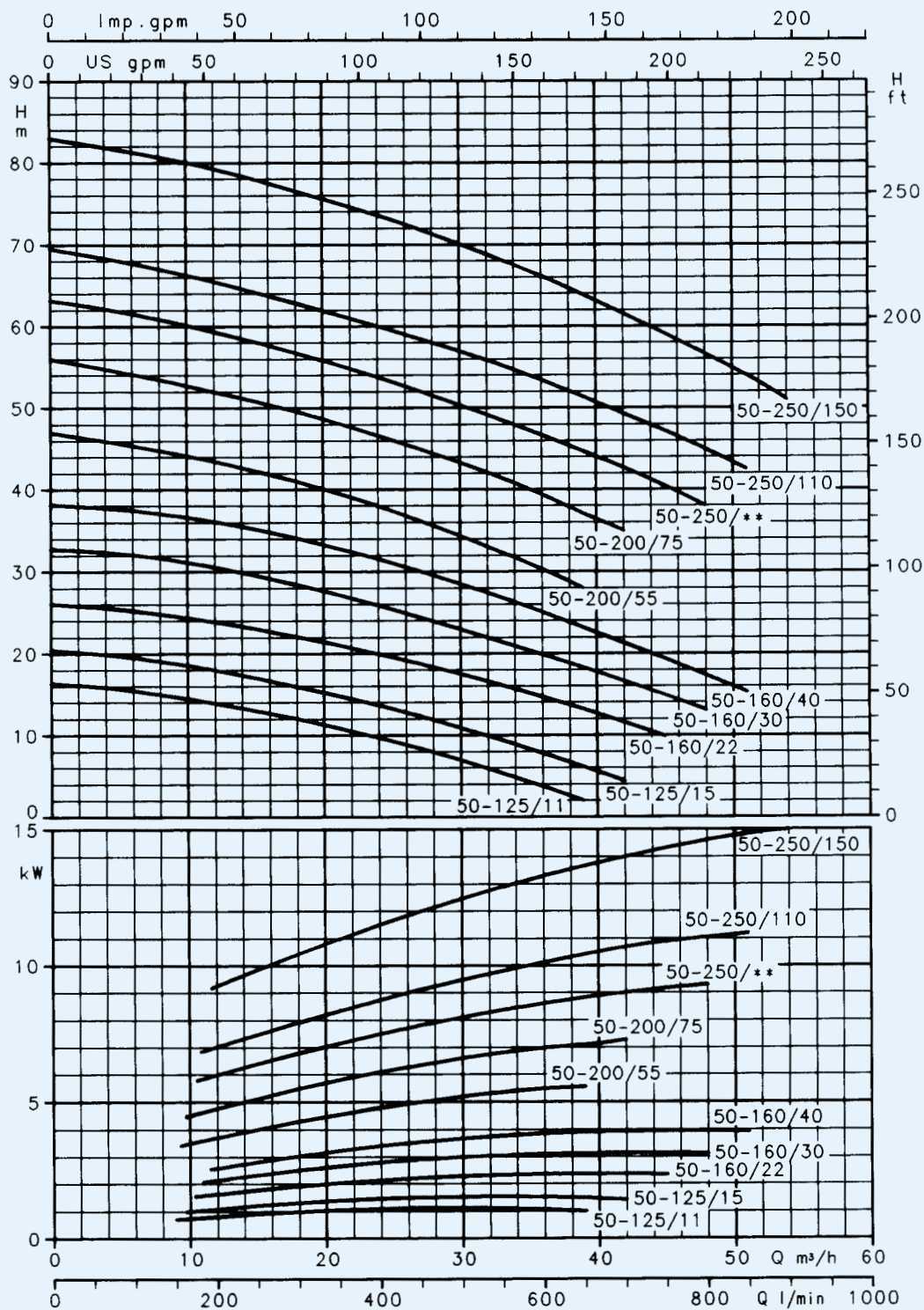
* /40A - 4 kW - 4 kW - 5,5 HP for FCE version - /30 - 3kW - 4 HP for FCS version

Please verify with the price list the availability of model type FCE-FCS

These performances are valid for liquids with density $\rho = 1.0 \text{ kg/dm}^3$ and kinematic viscosity $\gamma = 1 \text{ mm}^2/\text{sec}$.

FC 50 SERIES

OPERATING CHARACTERISTICS AT 2900 rpm 50 Hz, 2 POLES

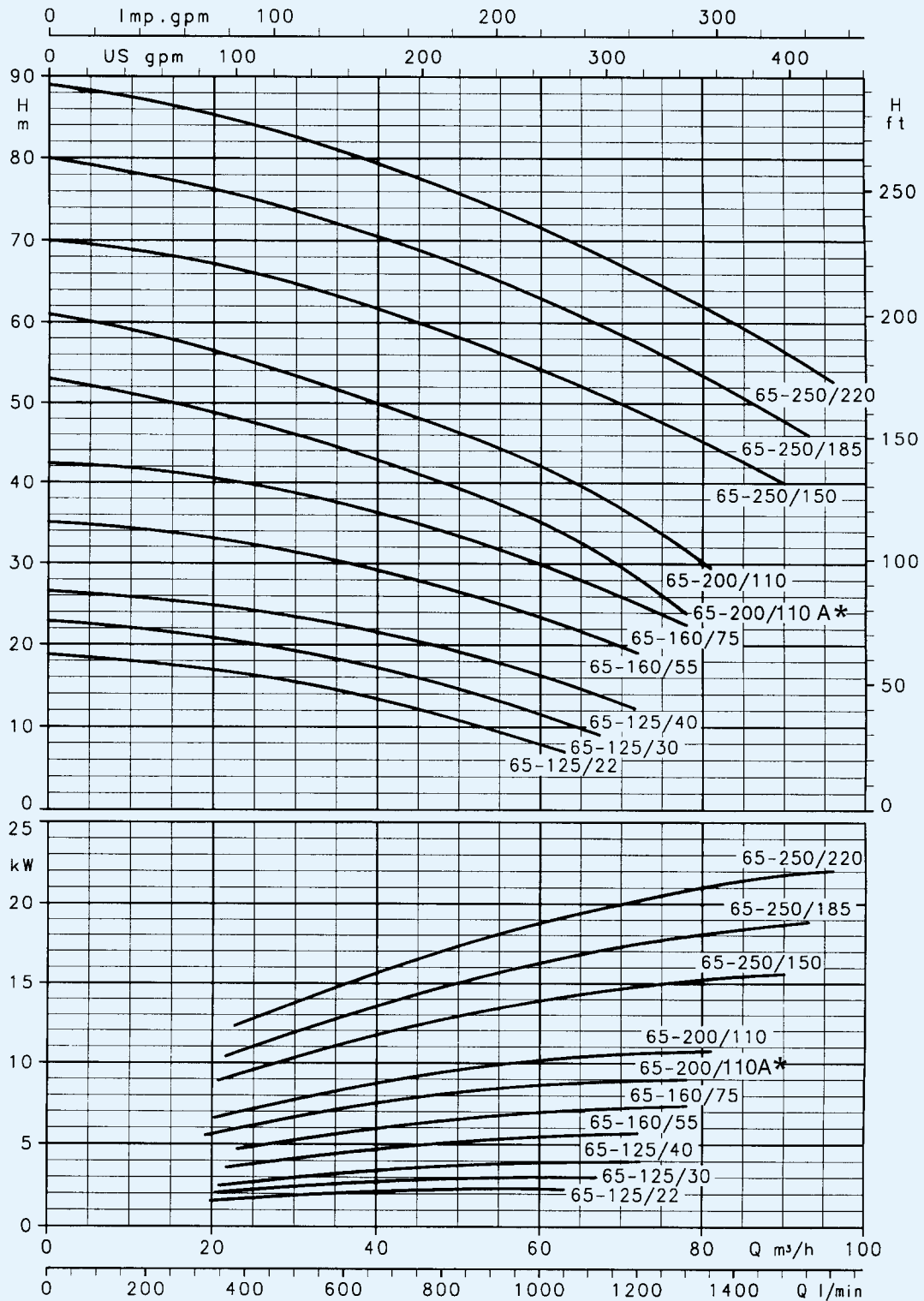


** /92 - 9,2 kW - 12,5 HP for FCE version - /110A - 11 kW - 15 HP for FCS version

Please verify with the price list the availability of model type FCE-FCS

These performances are valid for liquids with density $\rho = 1.0 \text{ kg/dm}^3$ and kinematic viscosity $\gamma = 1 \text{ mm}^2/\text{sec}$.

FC 65 SERIES OPERATING CHARACTERISTICS AT 2900 rpm 50 Hz, 2 POLES



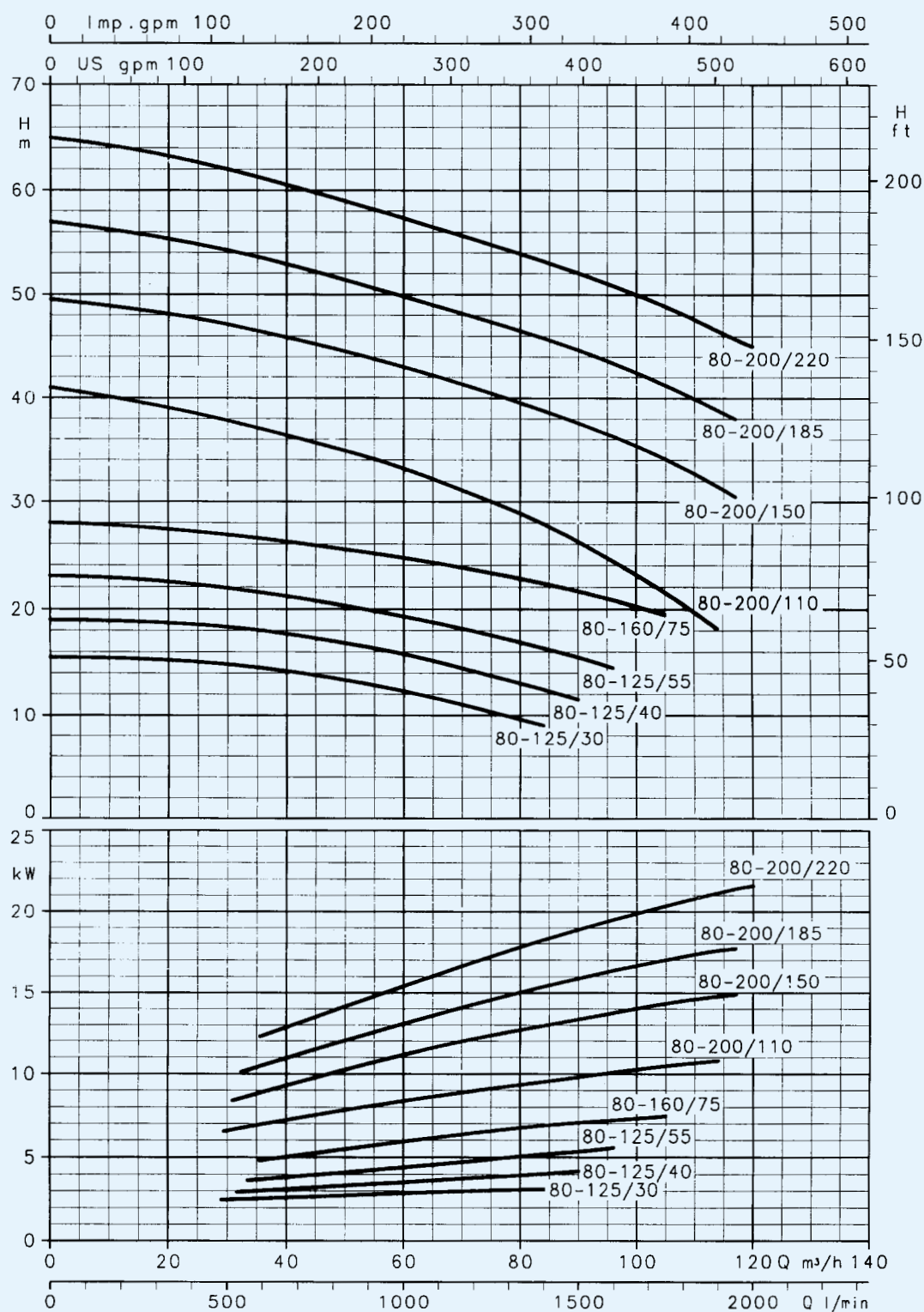
* 92/- 9,2 kW - 12,5 HP for FCE version - /110A - 11 kW - 15 HP for FCS version

Please verify with the price list the availability of model type FCE-FCS

These performances are valid for liquids with density $\rho = 1.0 \text{ kg/dm}^3$ and kinematic viscosity $\gamma = 1 \text{ mm}^2/\text{sec}$.

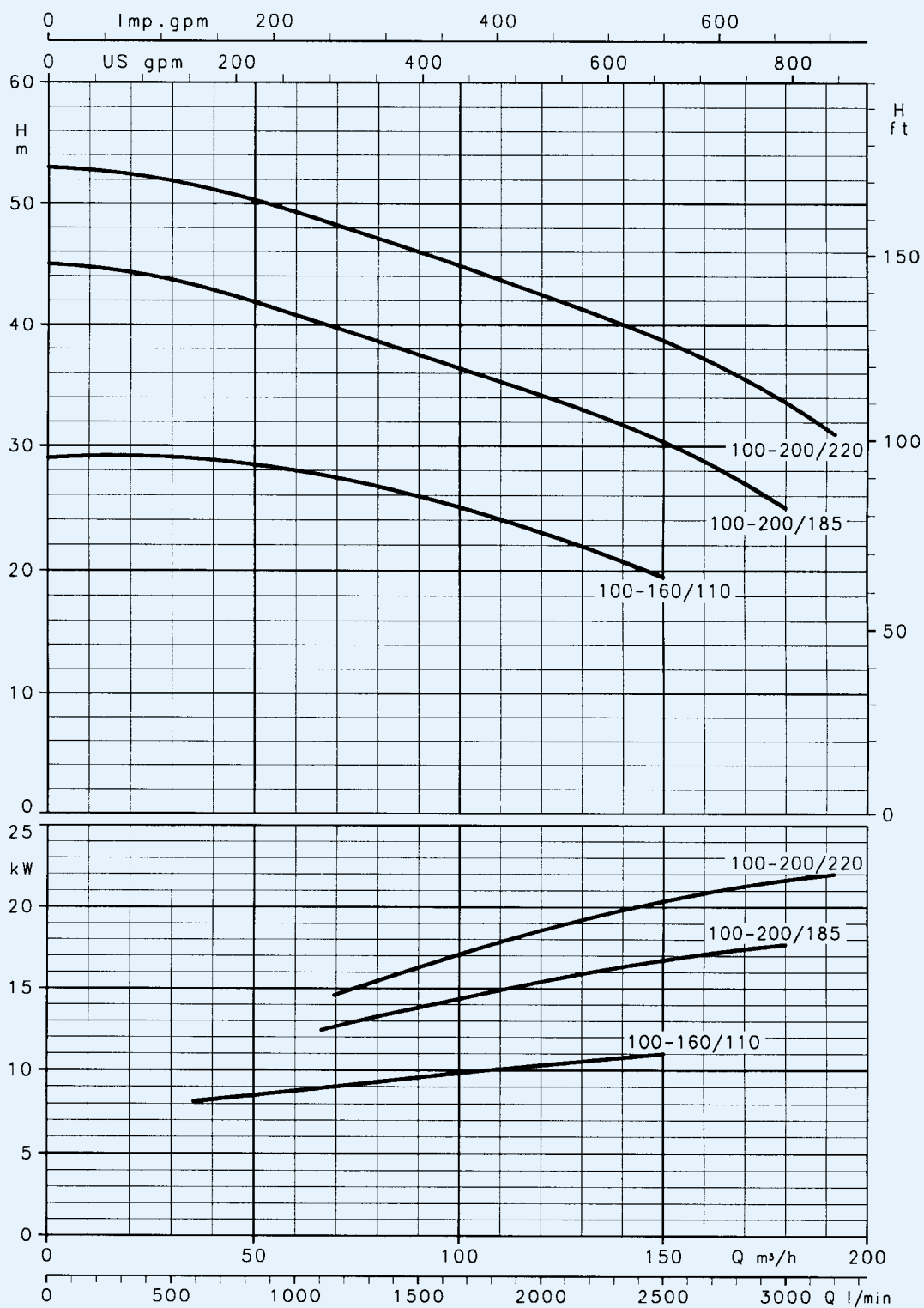
FC 80 SERIES

OPERATING CHARACTERISTICS AT 2900 rpm 50 Hz, 2 POLES



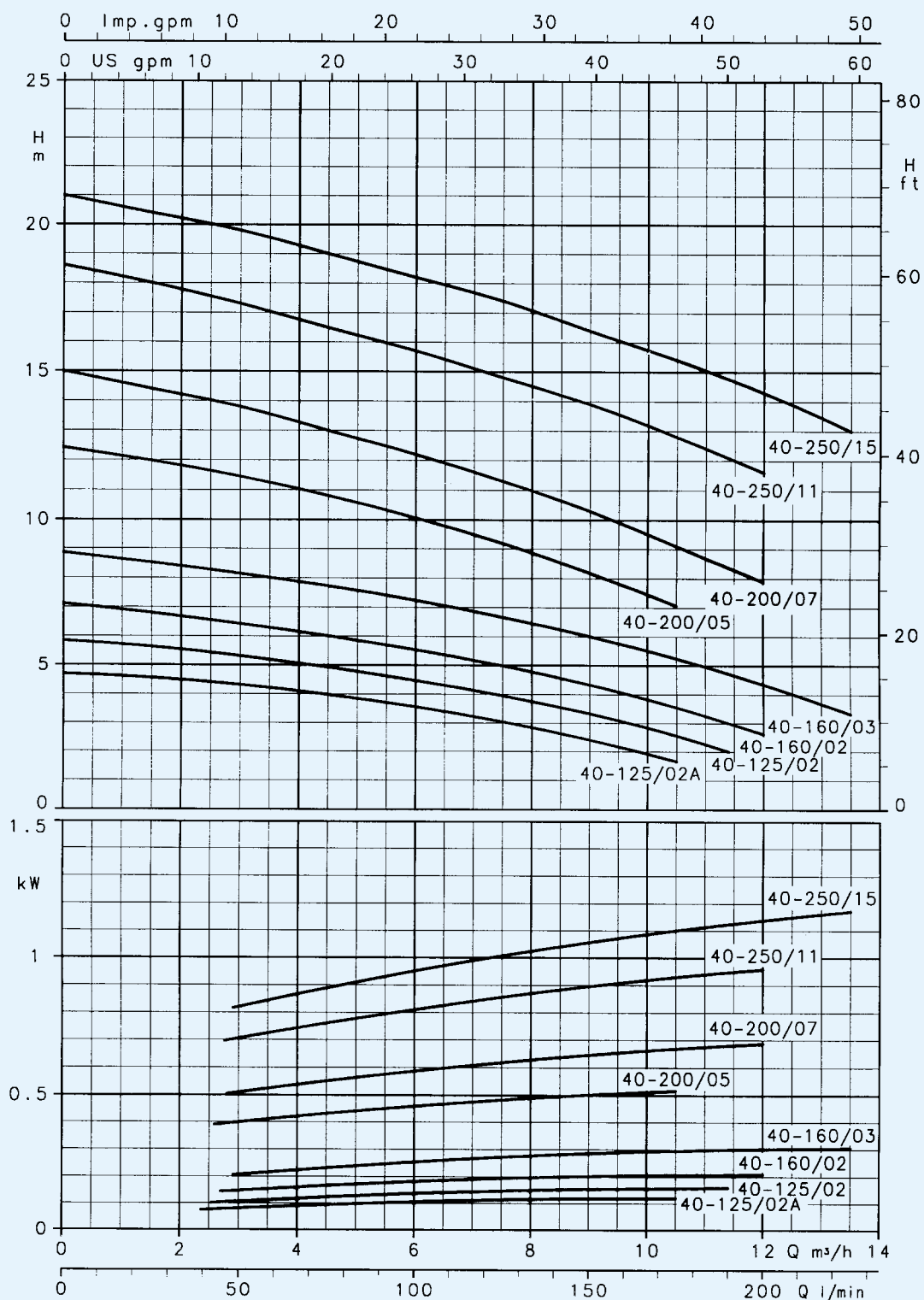
Please verify with the price list the availability of model type FCE-FCS
 These performances are valid for liquids with density $\rho = 1.0 \text{ kg/dm}^3$ and kinematic viscosity $\gamma = 1 \text{ mm}^2/\text{sec}$.

FC 100 SERIES OPERATING CHARACTERISTICS AT 2900 rpm 50 Hz, 2 POLES



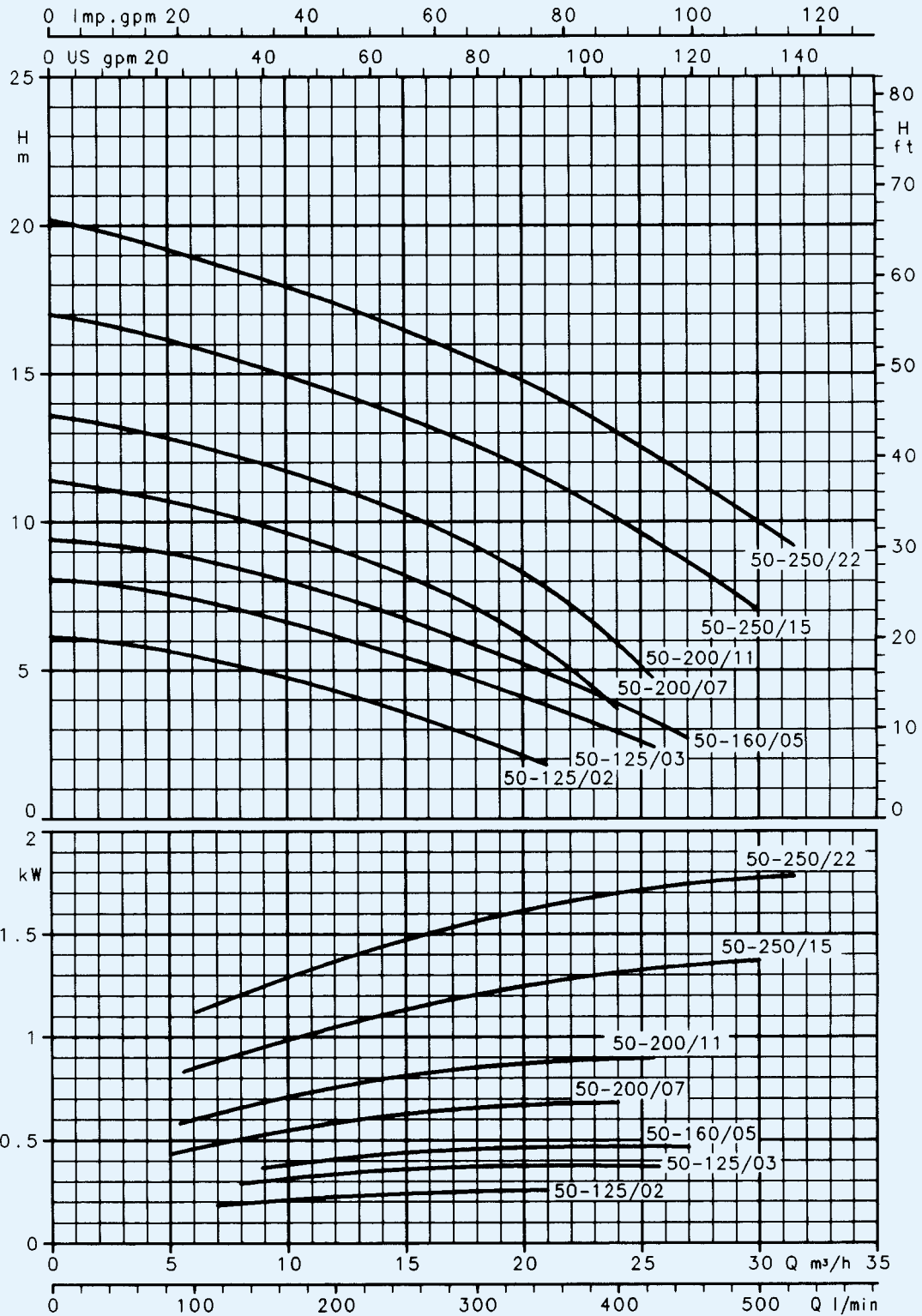
Please verify with the price list the availability of model type FCE-FCS
These performances are valid for liquids with density $\rho = 1.0 \text{ kg/dm}^3$ and kinematic viscosity $\gamma = 1 \text{ mm}^2/\text{sec}$.

FC4 40 SERIES OPERATING CHARACTERISTICS AT 1450 rpm 50 Hz, 4 POLES



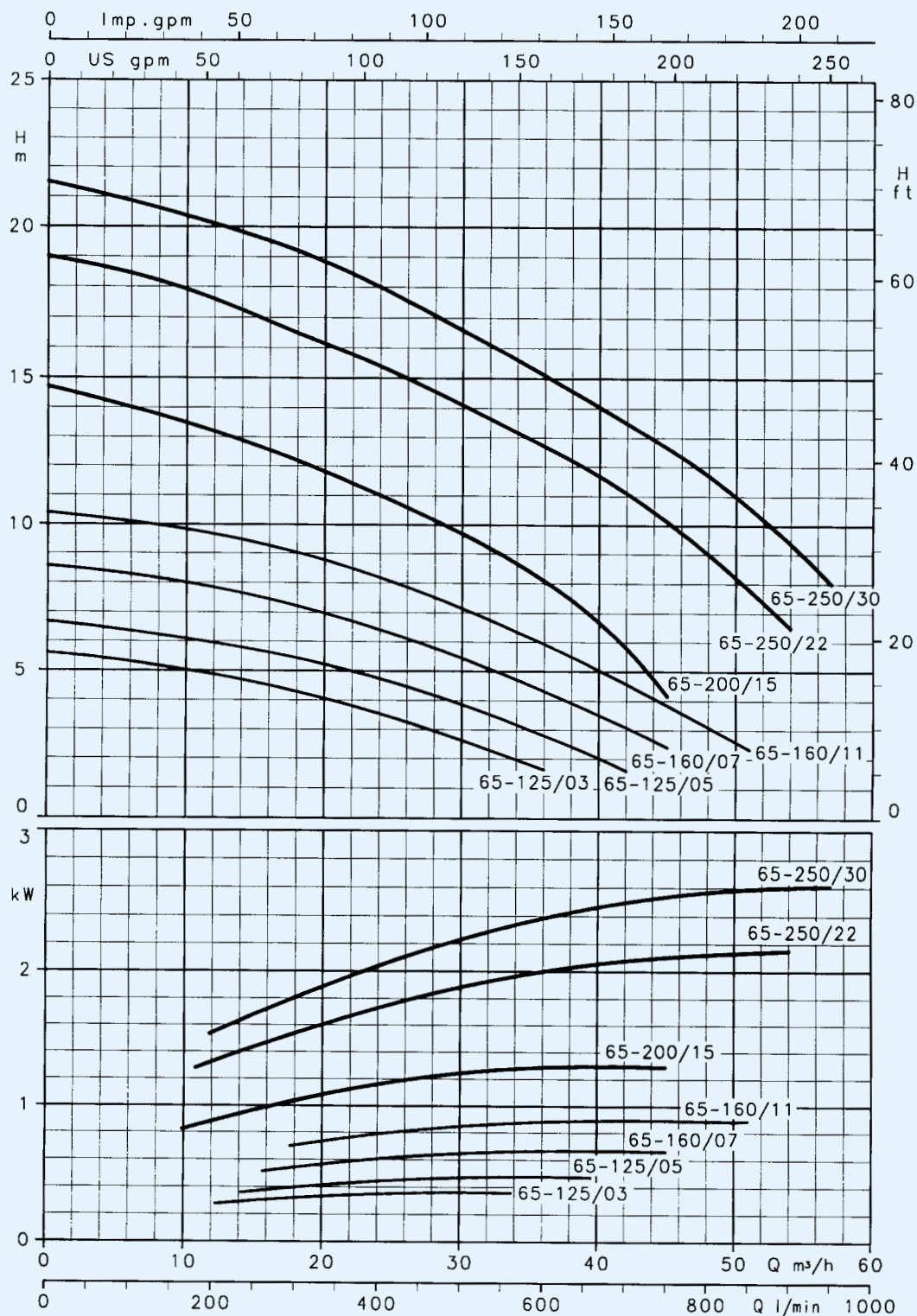
Please verify with the price list the availability of model type FCE-FCS
These performances are valid for liquids with density $\rho = 1.0 \text{ kg/dm}^3$ and kinematic viscosity $\gamma = 1 \text{ mm}^2/\text{sec}$.

FC4 50 SERIES OPERATING CHARACTERISTICS AT 1450 rpm 50 Hz, 4 POLES



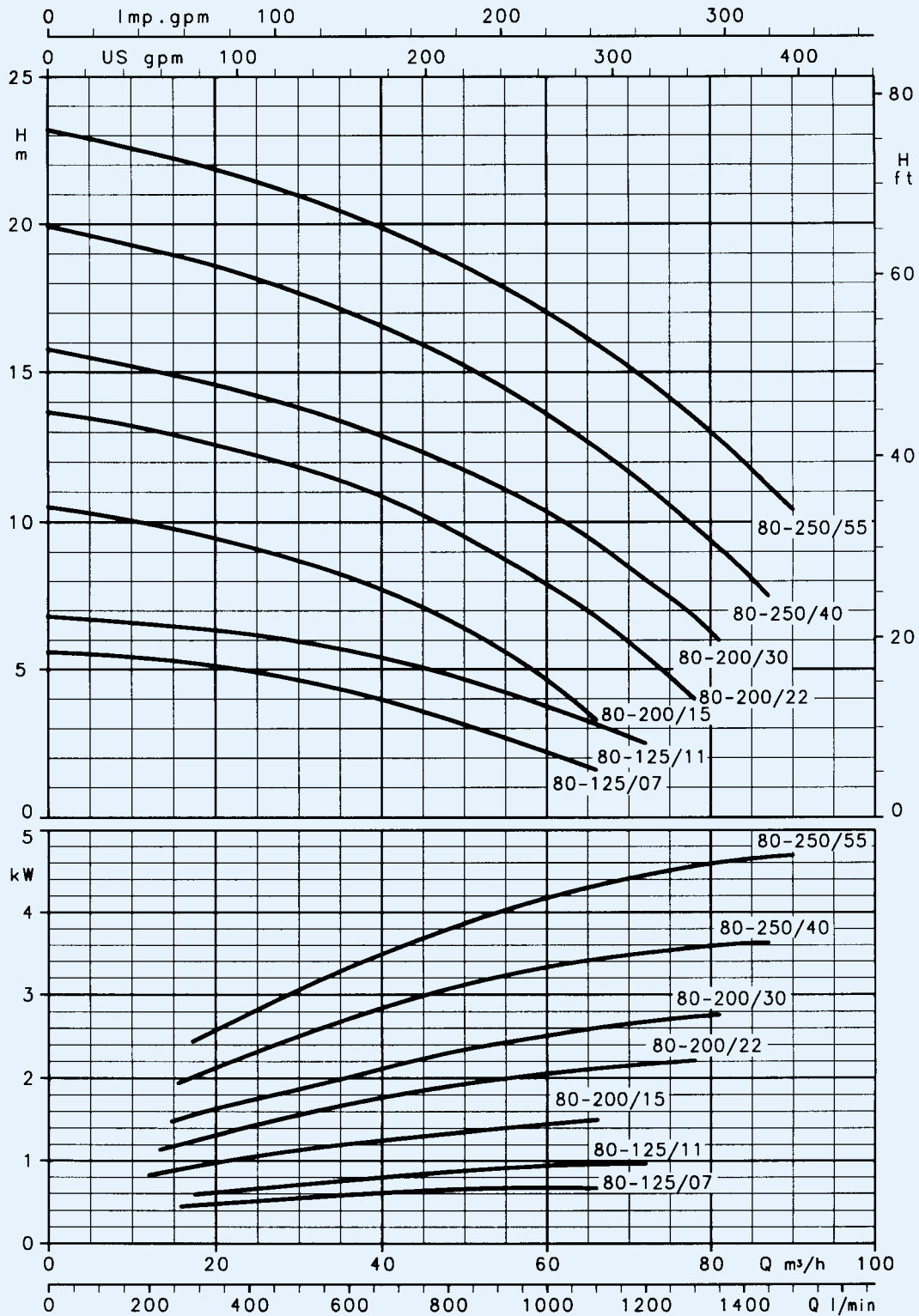
Please verify with the price list the availability of model type FCE-FCS
These performances are valid for liquids with density $\rho = 1.0 \text{ kg/dm}^3$ and kinematic viscosity $\gamma = 1 \text{ mm}^2/\text{sec}$.

FC4 65 SERIES OPERATING CHARACTERISTICS AT 1450 rpm 50 Hz, 4 POLES



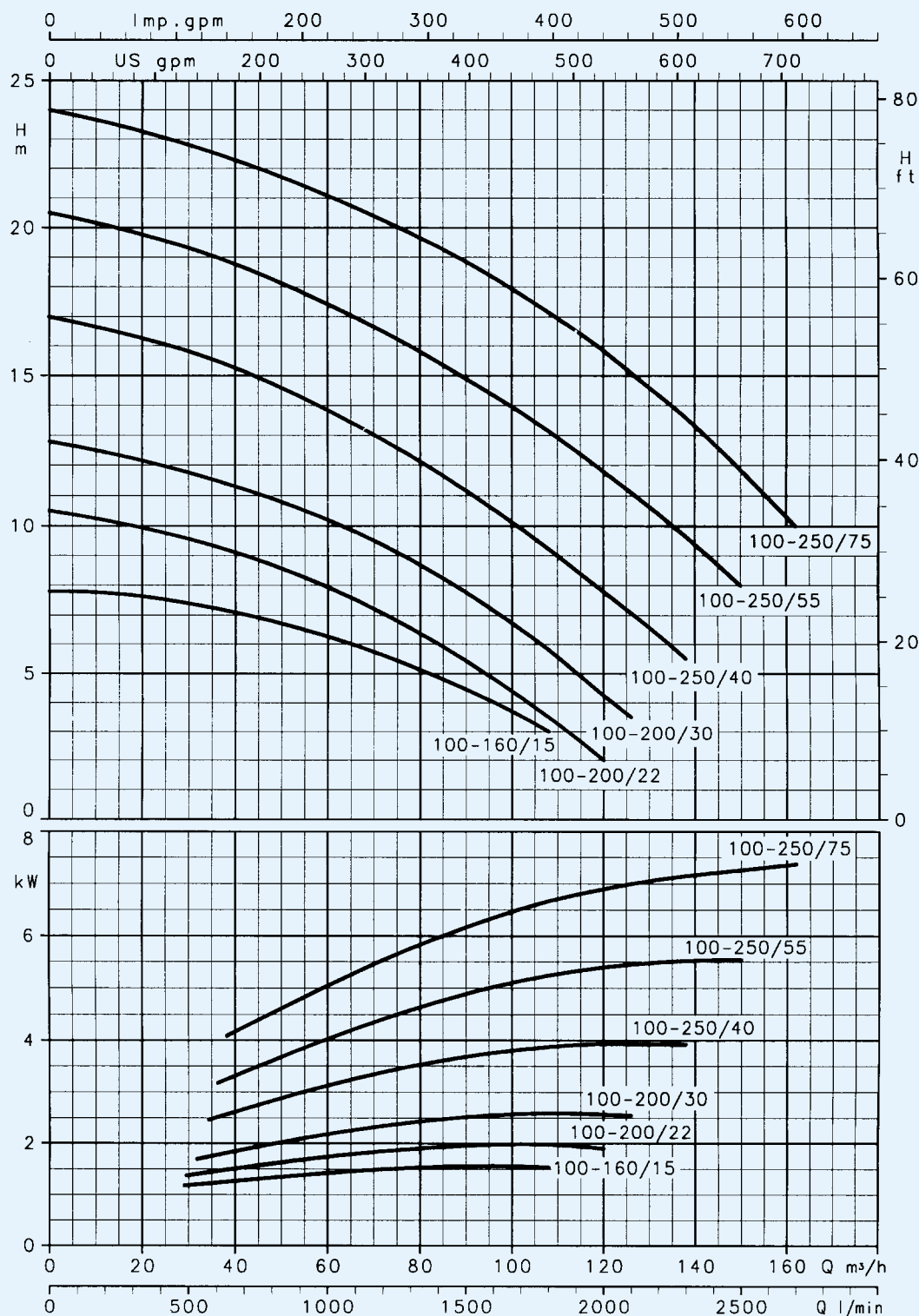
Please verify with the price list the availability of model type FCE-FCS
These performances are valid for liquids with density $\rho = 1.0 \text{ kg/dm}^3$ and kinematic viscosity $\gamma = 1 \text{ mm}^2/\text{sec}$.

FC4 80 SERIES OPERATING CHARACTERISTICS AT 1450 rpm 50 Hz, 4 POLES



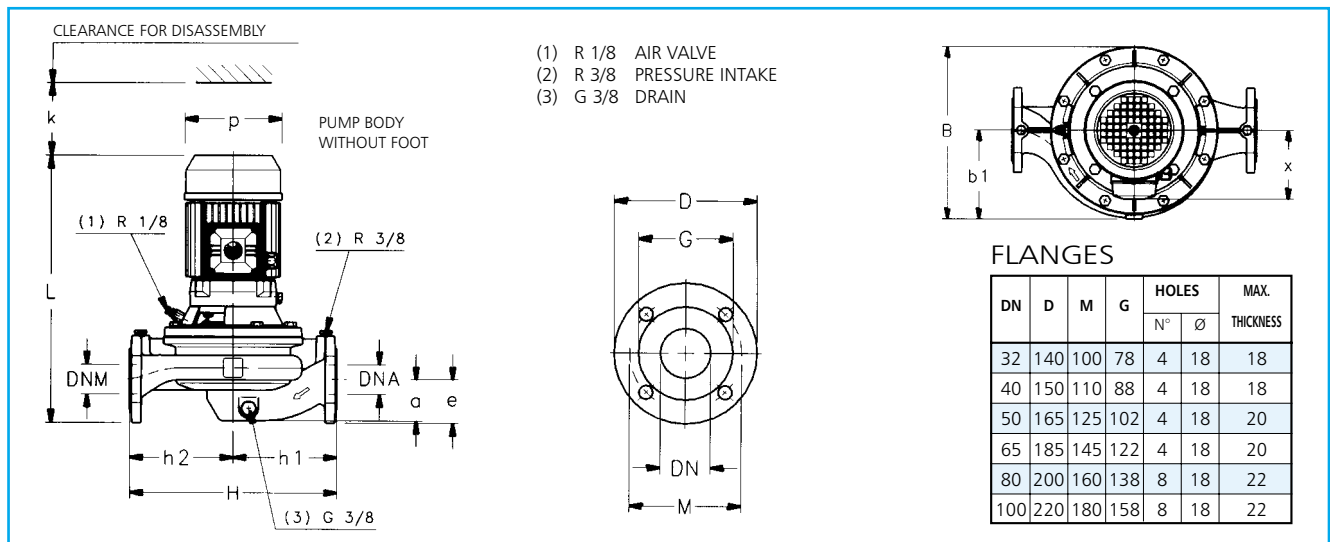
Please verify with the price list the availability of model type FCE-FCS
These performances are valid for liquids with density $\rho = 1.0 \text{ kg/dm}^3$ and kinematic viscosity $\gamma = 1 \text{ mm}^2/\text{sec}$.

FC4 100 SERIES OPERATING CHARACTERISTICS AT 1450 rpm 50 Hz, 4 POLES



Please verify with the price list the availability of model type FCE-FCS
These performances are valid for liquids with density $\rho = 1.0 \text{ kg/dm}^3$ and kinematic viscosity $\gamma = 1 \text{ mm}^2/\text{sec}$.

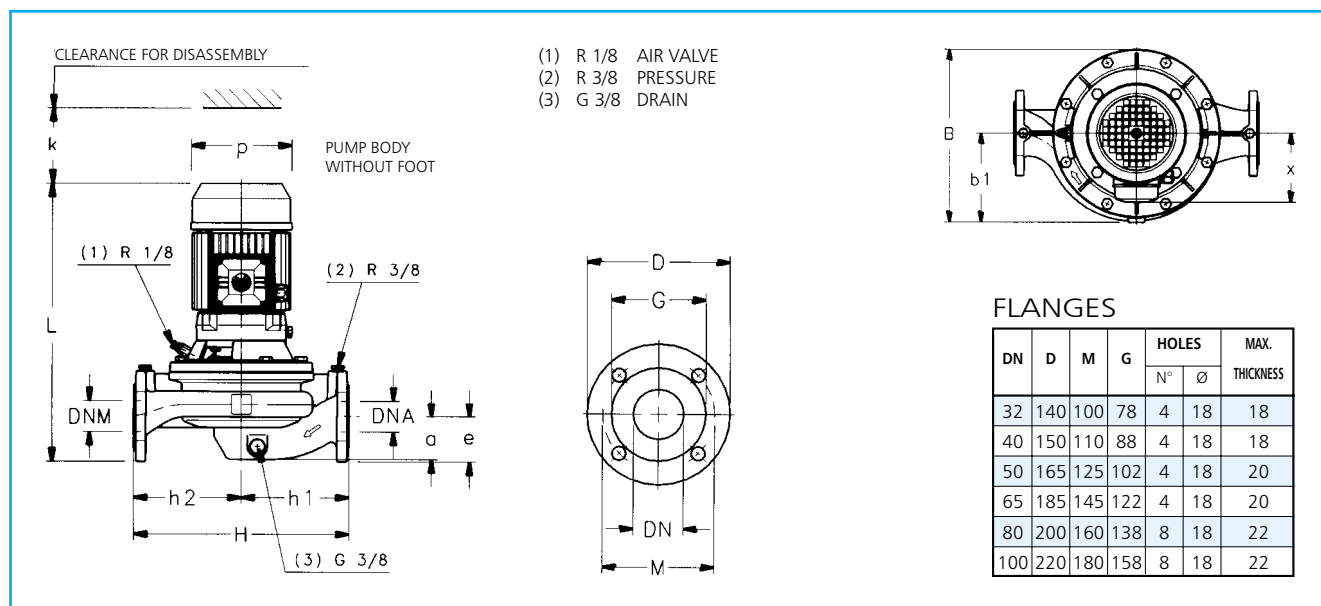
DIMENSIONS AND WEIGHTS, FCE SERIES



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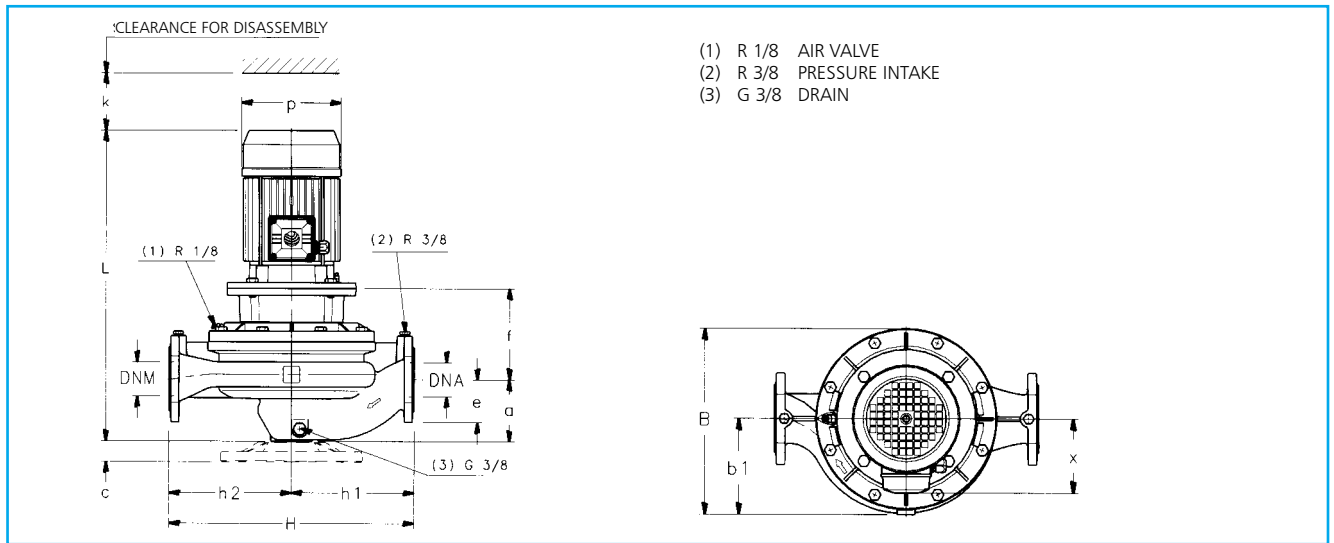
PUMP TYPE	PUMP									B	H max	L	k	WEIGHT kg
	DNM	DNA	a	e	h1	h2	x	b1	p					
FCE 40-125/07	40	40	70	70	160	160	129	116	155	243	320	448	86	27
FCE 40-125/11	40	40	70	70	160	160	129	116	155	243	320	448	86	29
FCE 40-160/15	40	40	70	70	160	160	129	116	155	243	320	448	86	31
FCE 40-160/22	40	40	70	70	160	160	129	116	155	243	320	448	86	33
FCE 40-220/40A	40	40	95	65	220	220	133	163	193	502	440	548	98	65
FCE 40-200/40	40	40	95	65	220	220	133	163	193	502	440	548	98	65
FCE 40-200/55	40	40	95	65	220	220	151	163	220	325	440	548	98	72
FCE 40-250/75	40	40	95	65	220	220	151	163	220	325	440	548	98	76
FCE 40-250/110	40	40	95	65	220	220	191	163	257	354	440	599	98	99
FCE 50-125/11	50	50	69	73	170	170	129	122	155	243	340	457	88	32
FCE 50-125/15	50	50	69	73	170	170	129	122	155	243	340	457	88	35
FCE 50-160/22	50	50	69	73	170	170	129	122	155	243	340	457	88	37
FCE 50-160/30	50	50	69	73	170	170	121	122	176	236	340	475	88	39
FCE 50-160/40	50	50	69	73	170	170	133	122	193	247	340	501	88	47
FCE 50-200/55	50	50	110	73	220	220	151	163	220	326	440	577	100	72
FCE 50-200/75	50	50	110	73	220	220	151	163	220	326	440	577	100	79
FCE 50-200/92	50	50	110	73	220	220	191	163	257	354	440	628	100	93
FCE 50-250/110	50	50	110	73	220	220	191	163	257	354	440	628	100	99
FCE 50-250/150	50	50	110	73	220	220	232	163	310	395	440	712	100	123
FCE 65-125/22	65	65	77	83	170	170	129	137	155	274	340	476	92	45
FCE 65-125/30	65	65	77	83	170	170	121	137	176	274	340	494	92	47
FCE 65-125/40	65	65	77	83	170	170	133	137	193	274	340	520	92	56
FCE 65-160/55	65	65	77	83	170	170	151	137	220	288	340	566	92	65
FCE 65-160/75	65	65	77	83	170	170	151	137	220	288	340	566	92	69
FCE 65-200/92	65	65	119	83	237,5	237,5	191	172	257	354	475	633	104	96
FCE 65-200/110	65	65	119	83	237,5	237,5	191	172	257	354	475	633	104	105
FCE 65-250/150	65	65	119	83	237,5	237,5	232	172	310	395	475	717	104	130
FCE 65-250/185	65	65	119	83	237,5	237,5	232	172	310	395	475	761	104	140
FCE 65-250/220	65	65	119	83	237,5	237,5	232	172	310	395	475	761	104	154
FCE 80-125/30	80	80	90	90	175	185	121	148	176	287	360	528	102	59
FCE 80-125/40	80	80	90	90	175	185	133	148	193	287	360	554	102	69
FCE 80-125/55	80	80	90	90	175	185	151	148	220	290	360	600	102	77
FCE 80-160/75	80	80	90	90	175	185	151	148	220	290	360	600	102	81
FCE 80-200/110	80	80	130	90	250	250	191	184	257	354	500	660	112	112
FCE 80-200/150	80	80	130	90	250	250	232	184	310	395	500	788	112	140
FCE 80-200/185	80	80	130	90	250	250	232	184	310	395	500	788	112	155
FCE 80-200/220	80	80	130	90	250	250	232	184	310	395	500	788	112	165
FCE 100-160/110	100	100	105	105	225	191	172	257	-	330	450	675	117	98
FCE 100-200/185	100	100	140	105	275	275	232	196	310	398	550	809	129	155
FCE 100-200/220	100	100	140	105	275	275	232	196	310	398	550	809	129	169

DIMENSIONS AND WEIGHTS, FCE4 SERIES



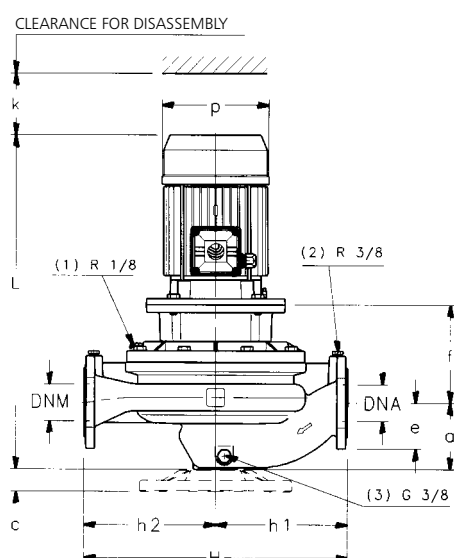
PUMP TYPE	PUMP									B max	H	L	k	WEIGHT kg
	DNM	DNA	a	e	h1	h2	x	b1	p					
FCE4 40-125/02A	40	40	70	70	160	160	121	116	140	235	320	416	86	24
FCE4 40-125/02	40	40	70	70	160	160	121	116	140	235	320	416	86	24
FCE4 40-160/02	40	40	70	70	160	160	121	116	140	235	320	416	86	25
FCE4 40-160/03	40	40	70	70	160	160	121	116	140	235	320	416	86	26
FCE4 40-200/05	40	40	95	65	220	220	129	163	155	325	440	458	98	43
FCE4 40-200/07	40	40	95	65	220	220	129	163	155	325	440	458	98	43
FCE4 40-250/11	40	40	95	65	220	220	121	163	176	325	440	476	98	45
FCE4 40-250/15	40	40	95	65	220	220	121	163	176	325	440	476	98	45
FCE4 50-125/02	50	50	69	73	170	170	121	122	140	236	340	425	88	24
FCE4 50-125/03	50	50	69	73	170	170	121	122	140	236	340	425	88	24
FCE4 50-160/05	50	50	69	73	170	170	129	122	155	243	340	457	88	27
FCE4 50-200/07	50	50	110	73	220	220	129	163	155	326	440	487	100	43
FCE4 50-200/11	50	50	110	73	220	220	121	163	176	326	440	505	100	49
FCE4 50-250/15	50	50	110	73	220	220	121	163	176	326	440	505	100	51
FCE4 50-250/22	50	50	110	73	220	220	133	163	193	326	440	531	100	60
FCE4 65-125/03	65	65	77	83	170	170	121	137	140	274	340	444	92	33
FCE4 65-125/05	65	65	77	83	170	170	129	137	155	274	340	476	92	36
FCE4 65-160/07	65	65	77	83	170	170	129	137	155	274	340	476	92	36
FCE4 65-160/11	65	65	77	83	170	170	121	137	176	274	340	494	92	43
FCE4 65-200/15	65	65	119	83	237,5	237,5	121	172	176	335	475	510	104	60
FCE4 65-250/22	65	65	119	83	237,5	237,5	133	172	193	335	475	536	104	64
FCE4 65-250/30	65	65	119	83	237,5	237,5	133	172	193	335	475	536	104	75
FCE4 80-125/07	80	80	90	90	175	185	129	148	155	287	360	510	102	60
FCE4 80-125/11	80	80	90	90	175	185	121	148	176	287	360	528	102	64
FCE4 80-200/15	80	80	130	90	250	250	121	184	176	347	500	537	112	75
FCE4 80-200/22	80	80	130	90	250	250	133	184	193	347	500	563	112	71
FCE4 80-200/30	80	80	130	90	250	250	133	184	193	347	500	563	112	80
FCE4 80-250/40	80	80	130	90	250	250	151	184	220	347	500	586	112	103
FCE4 80-250/55	80	80	130	90	250	250	191	184	257	354	500	622	112	108
FCE4 100-160/15	100	100	105	105	225	225	121	172	176	311	450	552	117	64
FCE4 100-200/22	100	100	140	105	275	275	133	196	193	362	550	584	129	93
FCE4 100-200/30	100	100	140	105	275	275	133	196	193	362	550	584	129	100
FCE4 100-250/40	100	100	140	105	275	275	151	196	220	362	550	607	129	105
FCE4 100-250/55	100	100	140	105	275	275	191	196	257	362	550	643	129	108
FCE4 100-250/75	100	100	140	105	275	275	191	196	257	362	550	681	129	111

DIMENSIONS AND WEIGHTS, FCS SERIES

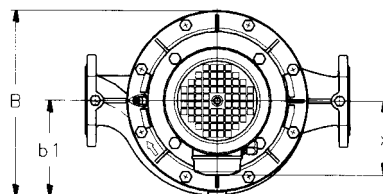


PUMP TYPE	PUMP										B	H max	L	k	WEIGHT kg
	DNM	DNA	a	e	f	h1	h2	x	b1	p					
FCS 40-125/07	40	40	70	70	170	160	160	121	116	140	235	320	466	86	32
FCS 40-125/11	40	40	70	70	170	160	160	129	116	155	243	320	503	86	34
FCS 40-160/15	40	40	70	70	170	160	160	129	116	155	243	320	503	86	36
FCS 40-160/22	40	40	70	70	170	160	160	129	116	155	243	320	503	86	39
FCS 40-200/30	40	40	95	65	165	220	220	121	163	176	325	440	563	98	54
FCS 40-200/40	40	40	95	65	165	220	220	133	163	193	325	440	567	98	67
FCS 40-200/55	40	40	95	65	192	220	220	151	163	220	325	440	661	98	76
FCS 40-250/75	40	40	95	65	192	220	220	151	163	220	325	440	661	98	79
FCS 40-250/110	40	40	95	65	222	220	220	191	163	257	366	440	744	98	120
FCS 50-125/11	50	50	69	73	176	170	170	129	122	155	243	340	512	88	34
FCS 50-125/15	50	50	69	73	176	170	170	129	122	155	243	340	512	88	37
FCS 50-160/22	50	50	69	73	176	170	170	129	122	155	243	340	512	88	40
FCS 50-160/30	50	50	69	73	186	170	170	121	122	176	247	340	562	88	45
FCS 50-160/40	50	50	69	73	186	170	170	133	122	193	258	340	566	88	47
FCS 50-200/55	50	50	110	73	206	220	220	151	163	220	326	440	690	100	76
FCS 50-200/75	50	50	110	73	206	220	220	151	163	220	326	440	690	100	80
FCS 50-250/110A	50	50	110	73	236	220	220	191	163	257	366	440	773	100	120
FCS 50-250/110	50	50	110	73	236	220	220	191	163	257	366	440	773	100	120
FCS 50-250/150	50	50	110	73	236	220	220	232	163	310	407	440	834	100	137
FCS 65-125/22	65	65	77	83	185	170	170	129	137	155	274	340	531	92	46
FCS 65-125/30	65	65	77	83	195	170	170	121	137	176	274	340	581	92	50
FCS 65-125/40	65	65	77	83	195	170	170	153	137	193	274	340	585	92	59
FCS 65-160/55	65	65	77	83	222	170	170	151	137	20	301	340	679	92	80
FCS 65-160/75	65	65	77	83	222	170	170	151	137	20	301	340	679	92	84
FCS 65-200/110A	65	65	119	83	232	237,5	237,5	191	172	257	366	475	778	104	115
FCS 65-200/110	65	65	119	83	232	237,5	237,5	191	172	257	366	475	778	104	115
FCS 65-255/150	65	65	119	83	232	237,5	237,5	232	172	310	407	475	839	104	140
FCS 65-250/185	65	65	119	83	232	237,5	237,5	232	172	310	407	475	883	104	153
FCS 65-250/220	65	65	119	83	232	237,5	237,5	232	172	310	407	475	883	104	167
FCS 80-125/30	80	80	90	90	222	175	185	121	148	176	287	360	615	102	68
FCS 80-125/40	80	80	90	90	222	175	185	133	148	193	287	360	619	102	73
FCS 80-125/55	80	80	90	90	249	175	185	151	148	220	301	360	713	102	84
FCS 80-160/75	80	80	90	90	249	175	185	151	148	220	301	360	713	102	87
FCS 80-200/110	80	80	130	90	248	250	250	191	184	257	366	500	805	112	126
FCS 80-200/150	80	80	130	90	248	250	250	191	184	257	407	500	866	112	149
FCS 80-200/185	80	80	130	90	248	250	250	232	184	310	407	500	910	112	149
FCS 80-200/220	80	80	130	90	248	250	250	232	184	310	407	500	910	112	170
FCS 100-160/110	100	100	105	105	288	225	225	191	172	257	366	450	820	117	130
FCS 100-200/185	100	100	140	105	259	275	275	232	196	310	407	550	931	129	160
FCS 100-200/220	100	100	140	105	259	275	275	232	196	310	407	550	931	129	180

DIMENSIONS AND WEIGHTS, FCS4 SERIES



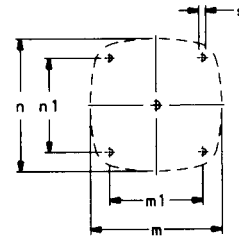
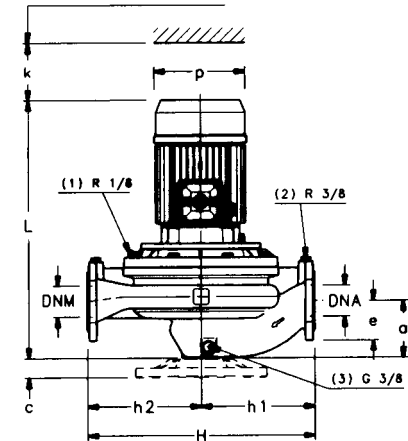
- (1) R 1/8 AIR VALVE
- (2) R 3/8 PRESSURE INTAKE
- (3) G 3/8 DRAIN



PUMP TYPE	PUMP										B	H max	L	k	WEIGHT kg
	DNM	DNA	a	e	f	h1	h2	x	b1	p					
FCS4 40-200/05	40	40	95	65	155	220	220	129	163	155	325	440	513	98	50
FCS4 40-200/07	40	40	95	65	155	220	220	129	163	155	325	440	513	98	52
FCS4 40-250/11	40	40	95	65	155	220	220	121	163	176	325	440	531	98	53
FCS4 40-250/15	40	40	95	65	155	220	220	121	163	176	325	440	531	98	53
FCS4 50-200/07	50	50	110	73	169	220	220	129	163	155	326	440	542	100	44
FCS4 50-200/11	50	50	110	73	169	220	220	121	163	176	326	440	560	100	51
FCS4 50-250/15	50	50	110	73	169	220	220	121	163	176	326	440	560	100	63
FCS4 50-250/22	50	50	110	73	179	220	220	133	163	193	326	440	596	100	68
FCS4 65-160/07	65	65	77	83	185	170	170	129	137	155	274	340	531	92	48
FCS4 65-160/11	65	65	77	83	185	170	170	121	137	176	274	340	549	92	53
FCS4 65-200/15	65	65	119	83	165	237,5	237,5	121	172	176	335	475	565	104	65
FCS4 65-250/22	65	65	119	83	175	237,5	237,5	133	172	193	335	475	601	104	68
FCS4 65-250/30	65	65	119	83	175	237,5	237,5	133	172	193	335	475	601	104	80
FCS4 80-125/07	80	80	90	90	212	175	185	129	148	155	287	360	565	102	54
FCS4 80-125/11	80	80	90	90	212	175	185	121	148	176	287	360	583	102	57
FCS4 80-200/15	80	80	130	90	181	250	250	121	184	176	347	500	592	112	77
FCS4 80-200/22	80	80	130	90	191	250	250	133	184	193	347	500	628	112	75
FCS4 80-200/30	80	80	130	90	191	250	250	133	184	193	347	500	628	112	85
FCS4 80-250/40	80	80	130	90	191	250	250	151	184	220	347	500	651	112	109
FCS4 80-250/55	80	80	130	90	218	250	250	191	184	257	354	500	714	112	115
FCS4 100-160/15	100	100	105	105	221	225	225	121	172	176	311	450	607	117	72
FCS4 100-200/22	100	100	140	105	202	275	275	133	196	193	362	550	649	129	98
FCS4 100-200/30	100	100	140	105	202	275	275	133	196	193	362	550	649	129	105
FCS4 100-250/40	100	100	140	105	202	275	275	151	196	220	362	550	672	129	113
FCS4 100-250/55	100	100	140	105	229	275	275	191	196	257	362	550	735	129	116
FCS4 100-250/75	100	100	140	105	229	275	275	191	196	257	362	550	773	129	120

FCE SUPPORT

CLEARANCE FOR DISASSEMBLY

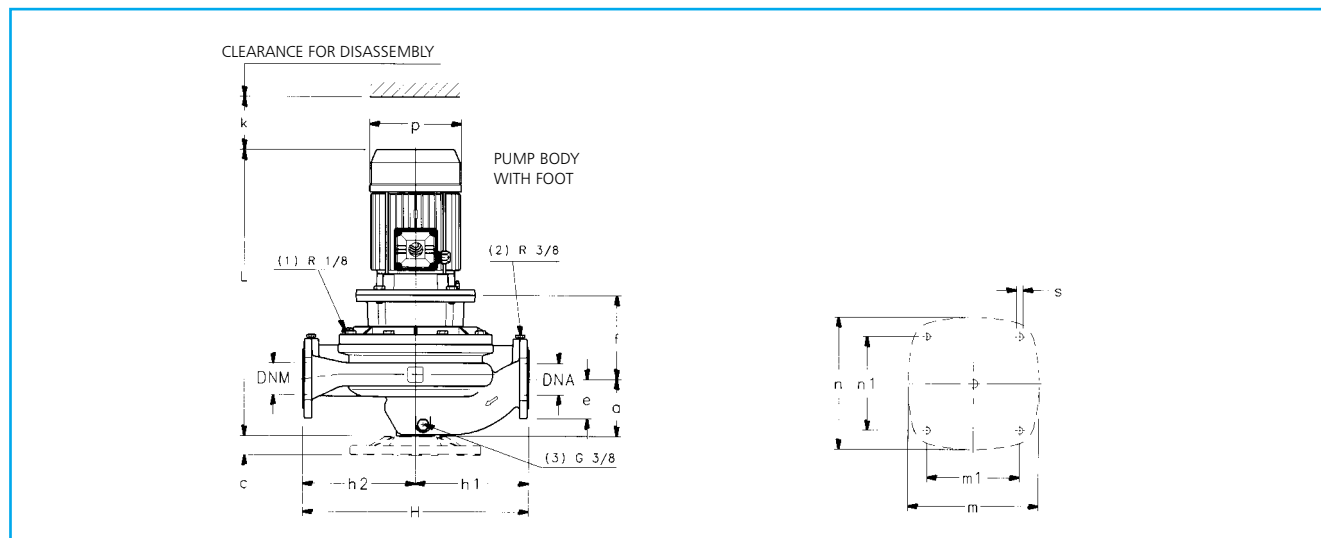


PUMP TYPE	c	m	SUPPORT			
			m1	n	n1	s
FCE 40-125/07	—	—	—	—	—	—
FCE 40-125/11	—	—	—	—	—	—
FCE 40-160/15	—	—	—	—	—	—
FCE 40-160/22	—	—	—	—	—	—
FCE 40-200/40A	40	275	195	275	195	14
FCE 40-200/40	40	275	195	275	195	14
FCE 40-200/55	40	275	195	275	195	14
FCE 40-250/75	40	275	195	275	195	14
FCE 40-250/110	40	275	195	275	195	14
FCE 50-125/11	—	—	—	—	—	—
FCE 50-125/15	—	—	—	—	—	—
FCE 50-160/22	—	—	—	—	—	—
FCE 50-160/30	—	—	—	—	—	—
FCE 50-160/40	—	—	—	—	—	—
FCE 50-200/40	40	275	195	275	195	14
FCE 50-200/55	40	275	195	275	195	14
FCE 50-200/75	40	275	195	275	195	14
FCE 50-250/92	40	275	195	275	195	14
FCE 50-250/110	40	275	195	275	195	14
FCE 50-250/150	40	275	195	275	195	14
FCE 65-125/22	—	—	—	—	—	—
FCE 65-125/30	—	—	—	—	—	—
FCE 65-125/40	—	—	—	—	—	—
FCE 65-160/55	—	—	—	—	—	—
FCE 65-160/75	—	—	—	—	—	—
FCE 65-200/92	40	275	195	275	195	14
FCE 65-200/110	40	275	195	275	195	14
FCE 65-250/150	40	275	195	275	195	14
FCE 65-250/185	40	275	195	275	195	14
FCE 65-250/220	40	275	195	275	195	14
FCE 80-125/30	—	—	—	—	—	—
FCE 80-125/40	—	—	—	—	—	—
FCE 80-125/55	—	—	—	—	—	—
FCE 80-160/75	—	—	—	—	—	—
FCE 80-200/110	40	275	195	275	195	14
FCE 80-200/150	40	275	195	275	195	14
FCE 80-200/185	40	275	195	275	195	14
FCE 80-200/220	40	275	195	275	195	14
FCE 100-160/110	—	—	—	—	—	—
FCE 100-200/185	40	275	195	275	195	14
FCE 100-200/220	40	275	195	275	195	14

PUMP TYPE	c	m	SUPPORT			
			m1	n	n1	s
FCE4 40-125/02A	—	—	—	—	—	—
FCE4 40-125/02	—	—	—	—	—	—
FCE4 40-160/02	—	—	—	—	—	—
FCE4 40-160/03	—	—	—	—	—	—
FCE4 40-200/05	40	275	195	275	195	14
FCE4 40-200/07	40	275	195	275	195	14
FCE4 40-250/11	40	275	195	275	195	14
FCE4 40-250/15	40	275	195	275	195	14
FCE4 50-125/02	—	—	—	—	—	—
FCE4 50-125/03	—	—	—	—	—	—
FCE4 50-160/05	—	—	—	—	—	—
FCE4 50-200/07	40	275	195	275	195	14
FCE4 50-200/11	40	275	195	275	195	14
FCE4 50-250/15	40	275	195	275	195	14
FCE4 50-250/22	40	275	195	275	195	14
FCE4 65-125/03	—	—	—	—	—	—
FCE4 65-125/05	—	—	—	—	—	—
FCE4 65-160/07	—	—	—	—	—	—
FCE4 65-160/11	—	—	—	—	—	—
FCE4 65-200/11	40	275	195	275	195	14
FCE4 65-200/15	40	275	195	275	195	14
FCE4 65-250/22	40	275	195	275	195	14
FCE4 65-250/30	40	275	195	275	195	14
FCE4 80-125/07	—	—	—	—	—	—
FCE4 80-125/11	—	—	—	—	—	—
FCE4 80-160/15	—	—	—	—	—	—
FCE4 80-200/15	40	275	—	—	—	—
FCE4 80-200/22	40	275	195	275	195	14
FCE4 80-200/30	40	275	195	275	195	14
FCE4 80-250/30	40	275	195	275	195	14
FCE4 80-250/40	40	275	195	275	195	14
FCE4 80-250/55	40	275	195	275	195	14
FCE4 100-160/15	—	—	—	—	—	—
FCE4 100-200/22	40	275	195	275	195	14
FCE4 100-200/30	40	275	195	275	195	14
FCE4 100-200/40	40	275	195	275	195	14
FCE4 100-250/40	40	275	195	275	195	14
FCE4 100-250/55	40	275	195	275	195	14
FCE4 100-250/75	40	275	195	275	195	14

—: Not available

FCS SUPPORT



PUMP TYPE	SUPPORT					
	c	m	m1	n	n1	s
FCS 40-125/7	—	—	—	—	—	—
FCS 40-125/11	—	—	—	—	—	—
FCS 40-160/15	—	—	—	—	—	—
FCS 40-160/22	—	—	—	—	—	—
FCS 40-200/30	40	275	195	275	195	14
FCS 40-200/40	40	275	195	275	195	14
FCS 40-200/55	40	275	195	275	195	14
FCS 40-250/75	40	275	195	275	195	14
FCS 40-250/110	40	275	195	275	195	14
FCS 50-125/11	—	—	—	—	—	—
FCS 50-125/15	—	—	—	—	—	—
FCS 50-160/22	—	—	—	—	—	—
FCS 50-160/30	40	275	195	275	195	14
FCS 50-160/40	40	275	195	275	195	14
FCS 50-200/55	40	275	195	275	195	14
FCS 50-200/75	40	275	195	275	195	14
FCS 50-250/110A	40	275	195	275	195	14
FCS 50-250/110	40	275	195	275	195	14
FCS 50-250/150	40	275	195	275	195	14
FCS 65-125/22	—	—	—	—	—	—
FCS 65-125/30	—	—	—	—	—	—
FCS 65-125/40	—	—	—	—	—	—
FCS 65-160/55	—	—	—	—	—	—
FCS 65-160/75	—	—	—	—	—	—
FCS 65-200/110A	40	275	195	275	195	14
FCS 65-200/110	40	275	195	275	195	14
FCS 65-250/150	40	275	195	275	195	14
FCS 65-250/185	40	275	195	275	195	14
FCS 65-250/220	40	275	195	275	195	14
FCS 80-125/30	—	—	—	—	—	—
FCS 80-125/40	—	—	—	—	—	—
FCS 80-125/55	—	—	—	—	—	—
FCS 80-160/75	—	—	—	—	—	—
FCS 80-200/110	40	275	195	275	195	14
FCS 80-200/150	40	275	195	275	195	14
FCS 80-200/185	40	275	195	275	195	14
FCS 80-200/220	40	275	195	275	195	14
FCS 100-160/110	—	—	—	—	—	—
FCS 100-200/185	40	275	195	275	195	14
FCS 100-200/220	40	275	195	275	195	14

PUMP TYPE	SUPPORT					
	c	m	m1	n	n1	s
FCS4 40-200/05	40	275	195	275	195	14
FCS4 40-200/07	40	275	195	275	195	14
FCS4 40-250/11	40	275	195	275	195	14
FCS4 40-250/15	40	275	195	275	195	14
FCS4 50-200/07	40	275	195	275	195	14
FCS4 50-200/11	40	275	195	275	195	14
FCS4 50-250/15	40	275	195	275	195	14
FCS4 50-250/22	40	275	195	275	195	14
FCS4 65-160/07	—	—	—	—	—	—
FCS4 65-160/11	—	—	—	—	—	—
FCS4 65-200/15	40	275	195	275	195	14
FCS4 65-250/22	40	275	195	275	195	14
FCS4 65-250/30	40	275	195	275	195	14
FCS4 80-125/07	—	—	—	—	—	—
FCS4 80-125/11	—	—	—	—	—	—
FCS4 80-200/15	40	275	—	—	—	—
FCS4 80-200/22	40	275	195	275	195	14
FCS4 80-200/30	40	275	195	275	195	14
FCS4 80-250/40	40	275	195	275	195	14
FCS4 80-250/55	40	275	195	275	195	14
FCS4 100-160/15	—	—	—	—	—	—
FCS4 100-200/22	40	275	195	275	195	14
FCS4 100-200/30	40	275	195	275	195	14
FCS4 100-200/40	40	275	195	275	195	14
FCS4 100-250/40	40	275	195	275	195	14
FCS4 100-250/55	40	275	195	275	195	14
FCS4 100-250/75	40	275	195	275	195	14

— : Not available

VIEW OF FCE LIQUID END

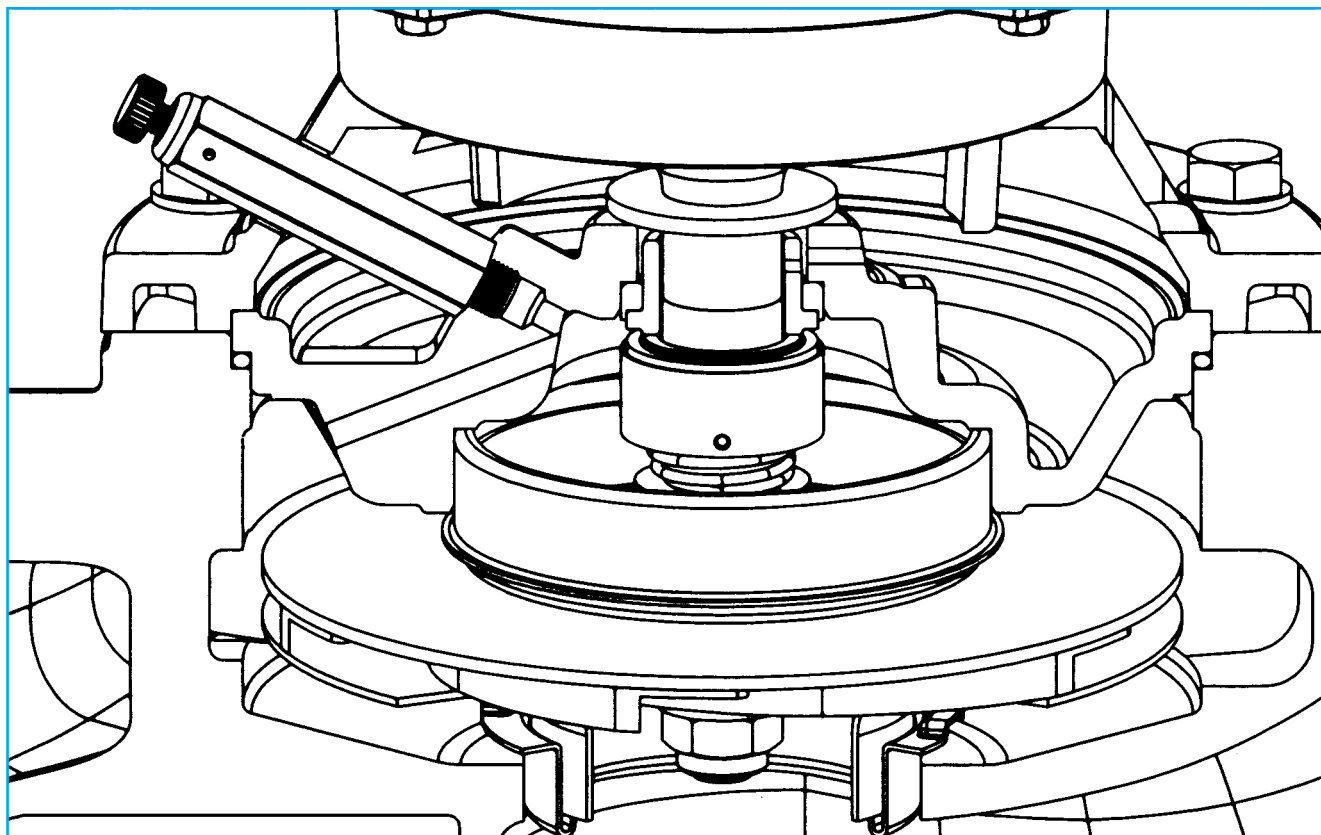


Fig. 1

Fig. 1: Standard design.

Mechanical seal in compliance with DIN 24960, lubricated by internal recirculation of pumped liquid to seal housing.

Air valve seat (valve included).

NCLG4 SERIES

IN-LINE TWIN ELECTRIC PUMPS

In-line electric pumps with cast iron pump body and impeller.

Suitable for handling hot or cold moderately aggressive liquids.

APPLICATIONS

- Circulation of hot and cold water for heating and conditioning systems.
- Water pumping in the civil, industrial and agricultural sectors.
- Water supply systems in rural applications.

SPECIFICATIONS

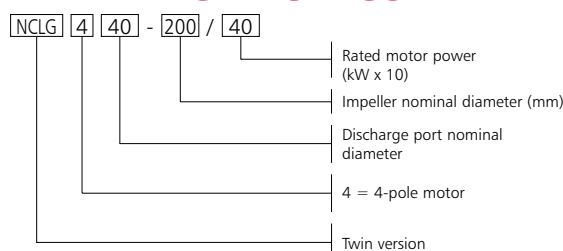
- **Maximum delivery: 120 m³/h.**
- **Maximum head: 15 m.**
- Continuous duty.
- Pumped liquid **temperature: -10°C to 130°C.**
- **Maximum operating pressure: 10 bar (PN 10).**
- **Port nominal diameter: up to 100 mm.**
- **Impeller nominal diameter: up to 200 mm.**
- **Mechanical seal made of ceramic/graphite/EPDM, lubricated by means of a small quantity of recycled pumped liquid.**
- **Flanged suction and delivery ports** (in compliance with UNI 2223-2229).
- IP 55 protection.
- Class F insulation.
- 4-pole versions.



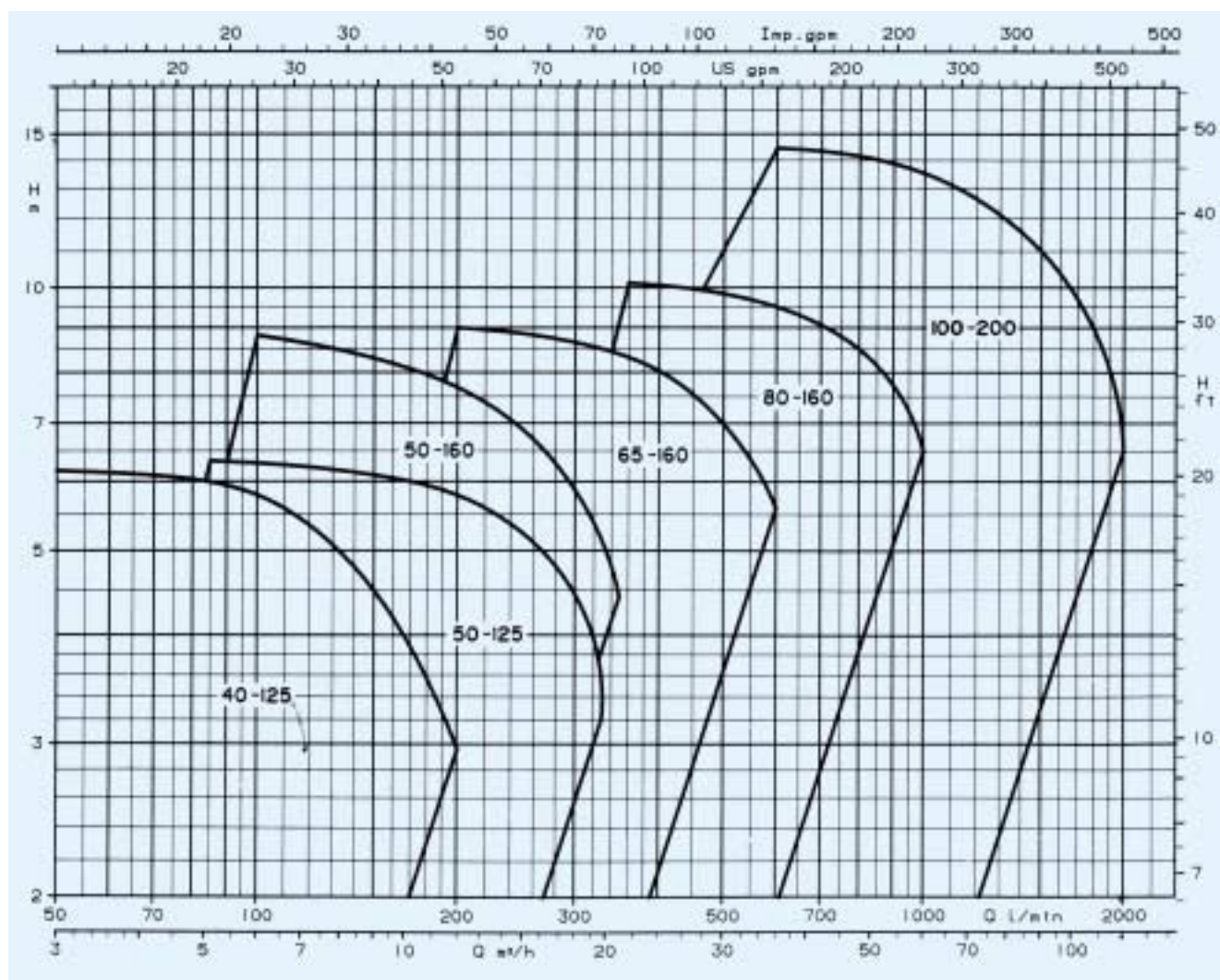
TABLE OF MATERIALS

PART	MATERIAL
Pump body, Impeller	200 CAST IRON (UNI ISO 185)
Wear ring	STAINLESS STEEL (AISI 316 - DIN 1.4571)
Counterwear ring	
Shaft	
Seal housing	200 CAST IRON (UNI ISO 185)
Adapter	200 CAST IRON (UNI ISO 185)
Mechanical seal	CERAMIC/EPDM
O-Rings	EPDM
Fill/drain plugs	PAINTED STEEL
Vase (optional)	ALUMINIUM

IDENTIFICATION CODE



GENERAL VIEW OF THE PERFORMANCE CURVES AT 50 Hz NCLG4 SERIES (TWIN VERSION)



NCLG4

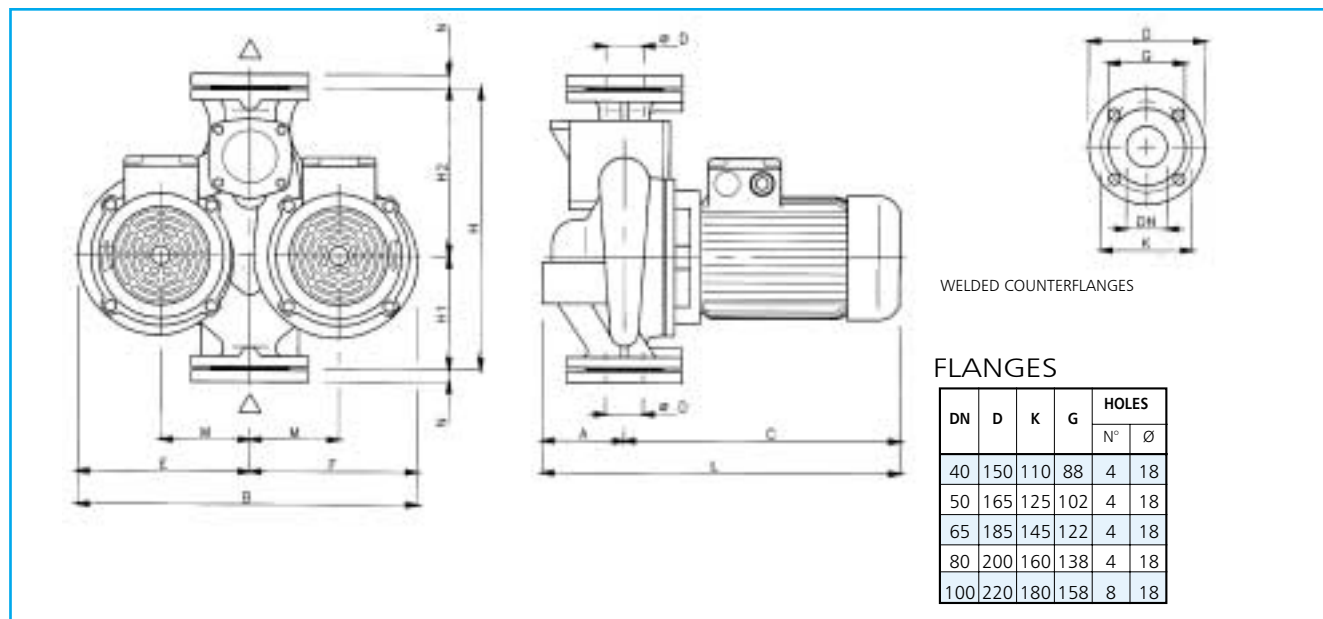
NCLG4 SERIES

PERFORMANCE DATA AT 1450 rpm, 50 Hz

PUMP TYPE	POWER		RATED CURRENT A			Q = DELIVERY																						
						l/min	40	60	80	100	150	200	250	300	350	400	500	600	700	800	1000	1200	1400	1600	2000			
	kW	HP	Δ	Y	Δ	m³/h	2,4	3,6	4,8	6	9	12	15	18	21	24	30	36	42	48	60	72	84	96	120			
	H = TOTAL HEAD IN METRES OF COLUMN OF WATER																											
	220-240 V	380-415 V	380-415 V																									
40-125/02A	0,25	0,33	1,5	0,86				4,3	4	3,6	2,2																	
40-125/02	0,25	0,33	1,5	0,86				6,1	6	5,8	4,5	3																
50-125/03	0,37	0,5	2,3	1,32				6,4	6,3	6,1	5,8	5,2	4,5															
50-160/05	0,5	0,7	3,1	1,8					9	8,8	8,3	7,7	6,9	5,8	4,5													
65-160/07	0,75	1	3,65	2,1								8,1	7,9	7,7	7,4	7	6	4										
65-160/09	0,92	1,25	4,7	2,7								9	8,8	8,6	8,4	8	7	5,6										
80-160/11	1,1	1,5	5	2,9												8,5	8,4	8,2	7,9	7,4	6,7	4,9						
80-160/15	1,5	2	6,6	3,8												10,1	10	9,8	9,5	9,1	8,5	6,5						
100-200/30	3	4	12	7															12,2	11,8	11,5	10,8	10	9	8			
100-200/40	4	5,5			9														14,4	14,2	14	13,5	12,7	11,7	10,3	6,5		

Data refer to the operation with only one pump working. To obtain the performances with both pumps working double the capacity for each head value.
Performances and powers stated are valid for a density $\rho = 1,0 \text{ kg/dm}^3$ and a maximum cinematic viscosity $\nu = 1 \text{ mm}^2/\text{sec}$.

DIMENSIONS NCLG4 SERIES



NCLG4

PUMP TYPE	DIMENSIONS in mm													WEIGHT kg
	DNA DNM	Ø D	A	B	C	E	F	H	H1	H2	L	M	N	
40-125/02A	40	G 1"½	100	397	325	200	197	340	130	210	425	100	20	41
40-125/02	40	G 1"½	100	397	325	200	197	340	130	210	425	100	20	41
50-125/03	50	G 2"	110	427	325	217	210	365	145	220	435	105	22	46
50-160/05	50	G 2"	110	480	325	245	235	410	170	240	435	120	22	52
65-160/07	65	G 1"½	130	543	345	275	268	450	180	270	475	140	22	65
65-160/09	65	G 1"½	130	543	345	275	268	450	180	270	475	140	22	67
80-160/11	80	G 3"	150	550	385	280	270	510	205	305	535	135	24	79
80-160/15	80	G 3"	150	550	385	280	270	510	205	305	535	135	24	83
100-200/30	100	G 4"	180	670	425	325	345	630	240	390	605	165	26	138
100-200/40	100	G 4"	180	670	435	325	345	630	240	390	615	165	26	150

SCUBA* SERIES

CLOSE-COUPLED SUBMERSIBLE PUMPS

APPLICATIONS

- Water supply from rain water tanks or reservoirs, 6" wells, basins and watercourses.
- Sprinkler systems.
- Pressure boosting with pump inserted directly in tank or well, to avoid suction problems and noise.
- Water display, fountains.

SPECIFICATIONS

- **Delivery:** up to **7,5 m³/h.**
- **Head:** up to **75,5 m.**
- **Maximum** pump overall **diameter: 128 mm.**
- **Maximum immersion depth: 20 m.**
- **Maximum** permissible quantity of **suspended sand: 25 g/m³.**
- **Passage of solids** up to **2.5 mm.**
- **Delivery port: Rp 1 1/4".**
- **Rated motor power: 0.55 to 1.1 kW.**
- **Single-phase motor:** 220-240 V, 50 Hz, built-in automatic reset overload protection. A control box with 2-pole switch and capacitor is available on request.
- **Three-phase motor:** 380-415 V, 50 Hz; overload protection to be provided by user and installed in the control box (see control box section).
- Maximum supply voltage variations: $\pm 5\%$
- Class F insulation.
- Can also operate in **horizontal position.**
- Maximum number of **starts per hour**, at regular intervals:
25 for motors up to **0.9 kW.**
20 for motors **1.1 kW** and up.
- Maximum temperature of water in contact with the motor: 40°C (continuous use).

CONSTRUCTION FEATURES

- Close-coupled, multiple-impeller submersible electric pump.
The liquid end is located under the motor, which is cooled by the pumped liquid.

* Named SC for UK market.



• Dry motor

The electric motor is protected by a double seal with an oil chamber.

• Sealing system

The silicon carbide mechanical seal, highly resistant to abrasion and wear, and the lip seal, continuously lubricated thanks to the special design of the oil chamber, ensure the absolute tightness of the motor seal.

In the event of dry running, the sealing system will not be damaged and the motor will not suffer from infiltration.

The oil used complies with FDA (FOOD AND DRUG ADMINISTRATION) standards.

- Single-phase models with float (CG) are also available

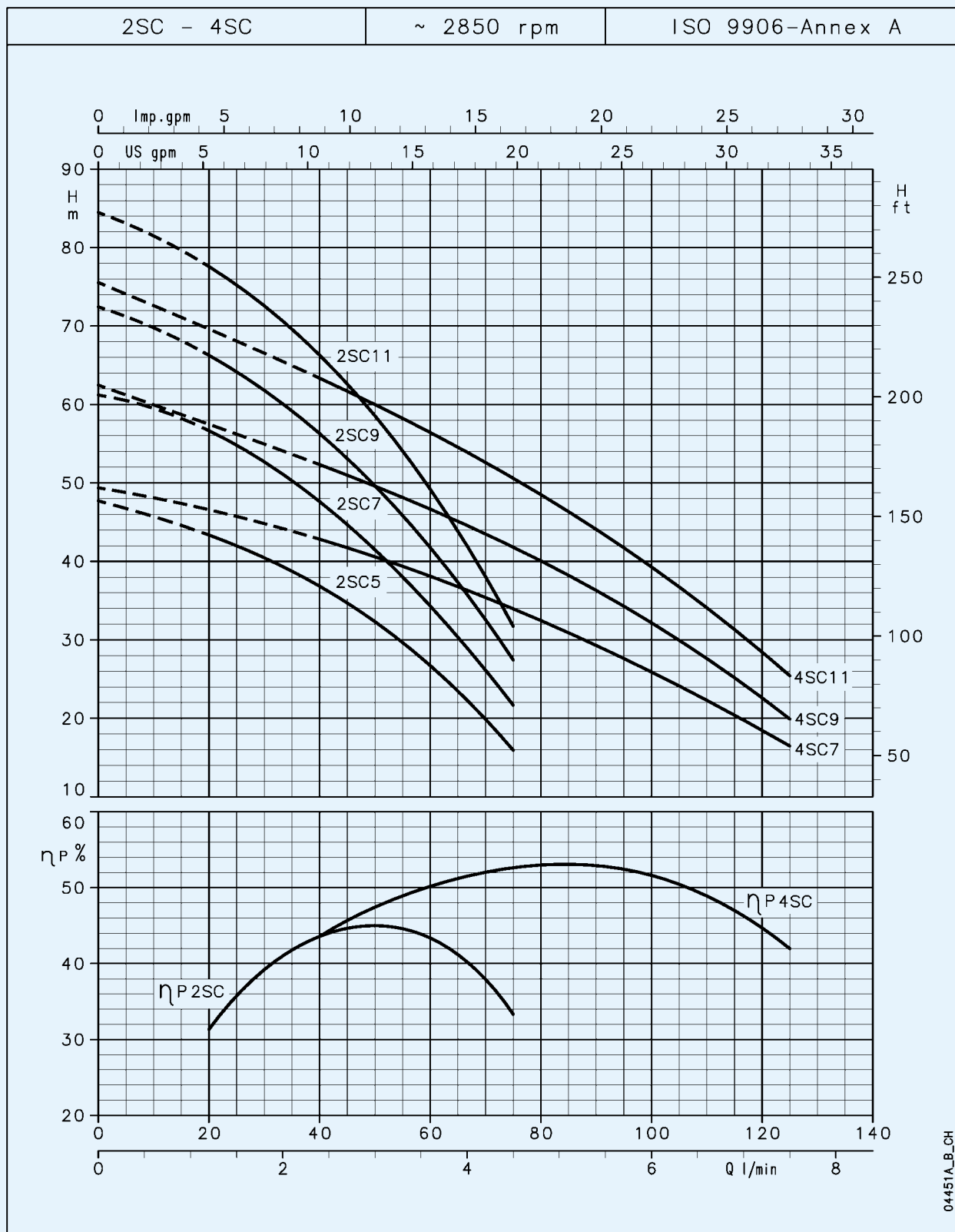
TABLE OF MATERIALS

PART	MATERIAL
Outer sleeve, Upper support, Suction screen, Shaft, Screws and tie-rods, Diffusers	STAINLESS STEEL AISI 304 - DIN 1.4301
Impeller	NORYL
Upper cap, Mechanical seal housing	TECHNOPOLYMER
Lower bearing support	DIE-CAST ALUMINIUM
Lower bearing	SPECIAL RUBBER
Elastomers	NITRILE RUBBER (NBR)
Mechanical seal	SILICON CARBIDE/ SILICON CARBIDE

All the nitrile rubber, polyurethane and polycarbonate components are suitable for usage with foodstuffs and comply with FDA specification (the Food and Drug Administration is the US agency for the safeguard of public health).

SCUBA* SERIES

OPERATING CHARACTERISTICS AT 2850 rpm 50 Hz



These performances are valid for liquids with density $\rho = 1.0 \text{ kg/dm}^3$ and kinematic viscosity $\gamma = 1 \text{ mm}^2/\text{sec}$.

* Named SC for UK market.

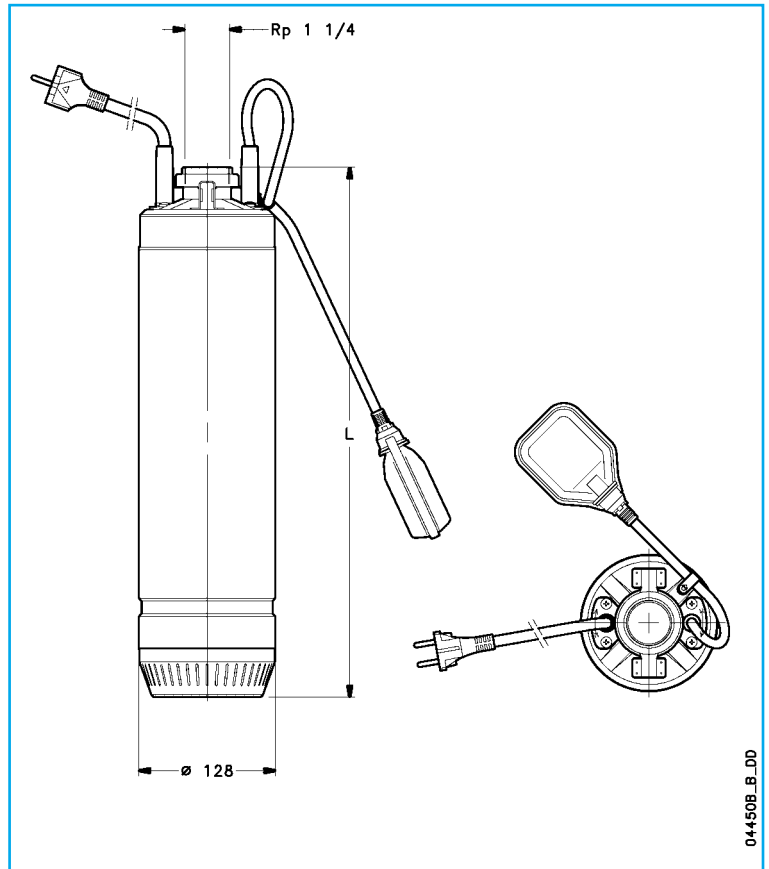
SCUBA*

DIMENSIONS AND WEIGHTS

PUMP TYPE	DIMENSIONS L mm	WEIGHT kg
2SC5	496	13.5
2SC7	536	15
2SC9	561	16
2SC11	606	18
4SC7	511	14.5
4SC9	536	15.5
4SC11	581	17.5
2SC5T	496	13.5
2SC7T	536	15
2SC9T	561	16
2SC11T	606	18
4SC7T	511	14.5
4SC9T	536	15.5
4SC11T	581	17.5

Singlephase version with float switch available (SCUBA CG)

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SCUBA* SERIES HYDRAULIC PERFORMANCE TABLE AT 2850 rpm

PUMP TYPE	RATED POWER		Q = DELIVERY									
			l/min	0	20	30	40	50	60	75	80	100
	m³/h	0	1.2	1.8	2.4	3	3.6	4.5	4.8	6	7.5	
	kW	HP	H = TOTAL HEAD METERS COLUMN OF WATER									
2SC5(T)	0.55	0.75	47.7	43.4	40.5	36.8	32.3	26.7	15.9			
2SC7(T)	0.75	1	61.2	56.7	52.7	47.6	41.5	34.3	21.7			
2SC9(T)	0.9	1.2	72.4	66.3	61.8	56.3	49.6	41.8	27.4			
2SC11(T)	1.1	1.5	84.5	77.6	72.6	66.3	58.6	49.2	31.7			
4SC7(T)	0.75	1	49.4			42.8	40.6	38.1	34.0	32.5	25.9	16.5
4SC9(T)	0.9	1.2	62.5			52.3	49.6	46.7	41.8	40.1	32.2	19.9
4SC11(T)	1.1	1.5	75.5			63.4	60.0	56.4	50.6	48.5	39.3	25.4

scuba-2p50_a_th

PUMP TYPE	INPUT POWER*	INPUT CURRENT*	CAPACITOR
SINGLE-PHASE		220-240 V	
	kW	A	µF / 450 V
2SC5	0.93	4.37	16
2SC7	1.15	5.19	25
2SC9	1.32	5.88	25
2SC11	1.63	7.25	30
4SC7	1.18	5.28	25
4SC9	1.38	6.17	25
4SC11	1.76	7.85	30

* Maximum value in specified range

PUMP TYPE	INPUT POWER*	INPUT CURRENT*	INPUT CURRENT*
THREE-PHASE		220-240 V	380-415 V
	kW	A	A
2SC5T	0.86	2.81	1.62
2SC7T	1.09	4.12	2.38
2SC9T	1.27	4.40	2.54
2SC11T	1.45	4.68	2.70
4SC7T	1.12	4.16	2.40
4SC9T	1.33	4.50	2.60
4SC11T	1.59	4.94	2.85

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SCUBA*

GS SERIES

SUBMERSIBLE PUMPS FOR 4" WELLS

APPLICATIONS

- Water supply.
- Sprinkler systems.
- Pressure boosting.
- Fire-fighting.
- Fountains.

SPECIFICATIONS

- **Delivery** up to **21 m³/h.**
- **Head** up to **340 m.**
- **Maximum** pump overall **diameter** (cable cover included): **99 mm.**
- **Maximum** immersion **depth: 150 m.**
- Maximum permissible **quantity of suspended sand: 150 g/m³.**
- 1GSL - 2GS - 4GS - 6GS versions (radial impellers): 1 1/4" delivery port.
- 8GS - 12GS - 16GS versions (semi-axial impellers): 2" delivery port.
- Rated motor **power** from **0.25 to 7.5 kW.**
- Versions:
 - Single-phase** 220-230 V or 230-240 V, 50 Hz, from 0.25 to 2.2 kW.
 - Three-phase** 380-415 V, 50 Hz, from 0.37 to 7.5 kW.- Overload protection to be provided by user and installed in the control box (see control box section).- Maximum supply voltage variations: +6%/-10%
- Maximum number of **starts per hour**, at regular intervals: **30** (4OS motor), **20** (F4 motor).
- Horizontal operation up to 2.2 kW with 4OS or F4 series motors, with F4 motor for higher powers.
- Maximum **temperature** of water in contact with the motor: **30°C.**

CONSTRUCTION CHARACTERISTICS

PUMP

- Abrasion resistant construction. The front wear plate, combined with the floating impellers, ensures optimum resistance to abrasion.
- The non-return valve is integrated in the head so as to



discharge the weight of the column of water and any water hammer onto the head itself, thus safeguarding impellers and diffusers.

- The upper and lower supports are made of precision-cast stainless steel, ensuring resistance to corrosion, durability and a sturdy coupling to the motor.
- The GS series pumps can be coupled to either 4OS or F4 motors.

MOTOR

For 4OS motor characteristics, please see specific section in this catalogue.

TABLE OF MATERIALS

PART	MATERIAL
Upper head, Valve cap, Valve seat	STAINLESS STEEL (AISI 303 - DIN 1.4305)
Valve gasket	NITRILE RUBBER
Valve stop ring	STAINLESS STEEL (AISI 302 - DIN 1.4319)
Upper support	POLYCARBONATE/FIBERGLASS
Bearing	POLYURETHANE
Diffuser, impeller	POLYCARBONATE/FIBERGLASS
Diffuser case, Shim, Pump shaft, Outer sleeve, Spacer, Filter, Coupling, Cable cover	STAINLESS STEEL (AISI 304 - DIN 1.4301)

All the nitrile rubber, polyurethane and polycarbonate components are suitable for usage with foodstuffs and comply with FDA specification (the Food and Drug Administration is the US agency for the safeguard of public health).

1GSL, 2GS, 4GS, 6GS SERIES

HYDRAULIC PERFORMANCE TABLE AT 2850 rpm, 50 Hz

PUMP TYPE	NUMBER OF STAGES	kW	HP	Q = DELIVERY																RATED CURRENT		CAPACI- TOR 450 V	ELECTRIC PUMP LENGHT mm	ELECTRIC PUMP WEIGHT kg
				l/min	0	5	10	15	20	25	30	40	50	60	80	90	110	133	SINGLE- PHASE 220 V	THREE- PHASE 380-415 V				
				m³/h	0	0,3	0,6	0,9	1,2	1,5	1,8	2,4	3	3,6	4,8	5,4	6,6	8						
H = TOTAL HEAD METERS COLUMN OF WATER																								
1GSL02M	8	0,25	0,33	53	50	44,5	36,5	26,5										2,5	–	12,5	632	11,5		
1GSL03M	12	0,37	0,5	79	75	66,5	55	40										3,5	–	16	722	13		
1GSL03T	12	0,37	0,5	79	75	66,5	55	40										–	1,1	–	701	12		
1GSL05M	18	0,55	0,75	119	112	100	83	60										4,5	–	20	854	15,5		
1GSL05T	18	0,55	0,75	119	112	100	83	60										–	1,6	–	826	14		
1GSL07M	24	0,75	1	159	150	133	110	80										5,7	–	30	981	17,5		
1GSL07T	24	0,75	1	159	150	133	110	80										–	2,1	–	959	16		
1GSL11M	35	1,1	1,5	232	218	194	160	116										8,2	–	40	1232	21		
1GSL11T	35	1,1	1,5	232	218	194	160	116										–	3	–	1203	20		
1GSL15M	49	1,5	2	324	305	272	224	163										10,5	–	50	1504	25		
1GSL15T	49	1,5	2	324	305	272	224	163										–	4	–	1476	23		
2GS02M	5	0,25	0,33	33				30	28	26	20	13						2,5	–	12,5	579	11		
2GS03M	7	0,37	0,5	47				42	40	36	29	19						3,5	–	16	634	12,5		
2GS03T	7	0,37	0,5	47				42	40	36	29	19						–	1,1	–	614	11		
2GS05M	10	0,55	0,75	67				60	56	52	41	27						4,5	–	20	714	14,5		
2GS05T	10	0,55	0,75	67				60	56	52	41	27						–	1,6	–	686	12,5		
2GS07M	14	0,75	1	93				83	79	73	57	37						5,7	–	30	806	16		
2GS07T	14	0,75	1	93				83	79	73	57	37						–	2,1	–	784	14,5		
2GS11M	20	1,1	1,5	133				119	113	104	82	53						8,2	–	40	940	18		
2GS11T	20	1,1	1,5	133				119	113	104	82	53						–	3	–	911	17		
2GS15M	28	1,5	2	187				167	158	146	115	74						10,5	–	50	1138	21		
2GS15T	28	1,5	2	187				167	158	146	115	74						–	4	–	1110	20		
2GS22M	40	2,2	3	267				238	226	208	164	106						15,9	–	70	1452	28		
2GS22T	40	2,2	3	267				238	226	208	164	106						–	5,9	–	1347	23		
2GS30T	52	3	4	347				309	294	271	213	138						–	7,8	–	1623	31		
4GS03M	4	0,37	0,5	27						24	23	21	19	13				3,5	–	16	598	12		
4GS03T	4	0,37	0,5	27						24	23	21	19	13				–	1,1	–	578	10,5		
4GS05M	7	0,55	0,75	47						42	40	37	33	22	15			4,5	–	20	691	14		
4GS05T	7	0,55	0,75	47						42	40	37	33	22	15			–	1,6	–	663	12		
4GS07M	9	0,75	1	60						54	51	47	42	28	19			5,7	–	30	756	15,5		
4GS07T	9	0,75	1	60						54	51	47	42	28	19			–	2,1	–	734	14		
4GS11M	14	1,1	1,5	94						84	80	74	66	44	30			8,2	–	40	893	17,5		
4GS11T	14	1,1	1,5	94						84	80	74	66	44	30			–	3	–	864	16		
4GS15M	19	1,5	2	127						114	108	100	89	60	40			10,5	–	50	1029	20		
4GS15T	19	1,5	2	127						114	108	100	89	60	40			–	4	–	1001	18,5		
4GS22M	27	2,2	3	181						162	154	142	127	85	57			15,9	–	70	1336	26		
4GS22T	27	2,2	3	181						162	154	142	127	85	57			–	5,9	–	1231	22		
4GS30T	35	3	4	228						204	194	179	160	107	72			–	7,8	–	1471	29		
4GS40T	48	4	5,5	322						288	274	252	226	151	102			–	10	–	2065	35		
6GS05M	5	0,55	0,75	30							26	25	22	21	17	12		4,5	–	20	710	14,5		
6GS05T	5	0,55	0,75	30							26	25	22	21	17	12		–	1,6	–	682	12,5		
6GS07M	7	0,75	1	43							36	35	31	29	24	16		5,7	–	30	794	16		
6GS07T	7	0,75	1	43							36	35	31	29	24	16		–	2,1	–	772	14,5		
6GS11M	10	1,1	1,5	61							52	49	44	41	34	23		8,2	–	40	916	18		
6GS11T	10	1,1	1,5	61							52	49	44	41	34	23		–	3	–	887	16,5		
6GS15M	14	1,5	2	85							72	69	62	58	48	32		10,5	–	50	1106	21		
6GS15T	14	1,5	2	85							72	69	62	58	48	32		–	4	–	1078	19,5		
6GS22M	21	2,2	3	128							108	104	93	87	71	48		15,9	–	70	1428	28		
6GS22T	21	2,2	3	128							108	104	93	87	71	48		–	5,9	–	1323	23		
6GS30T	29	3	4	177							150	143	128	120	99	67		–	7,8	–	1630	31		
6GS40T	38	4	5,5	232							196	188	168	157	129	87		–	10	–	2223	37		
6GS55T	52	5,5	7,5	317							268	257	230	215	177	120		–	13,7	–	2657	46		

Performances in compliance with ISO 9906 – Annex A
Diameter of pump delivery port: 1GSL – 2GS – 4GS – 6GS: 1 1/4".

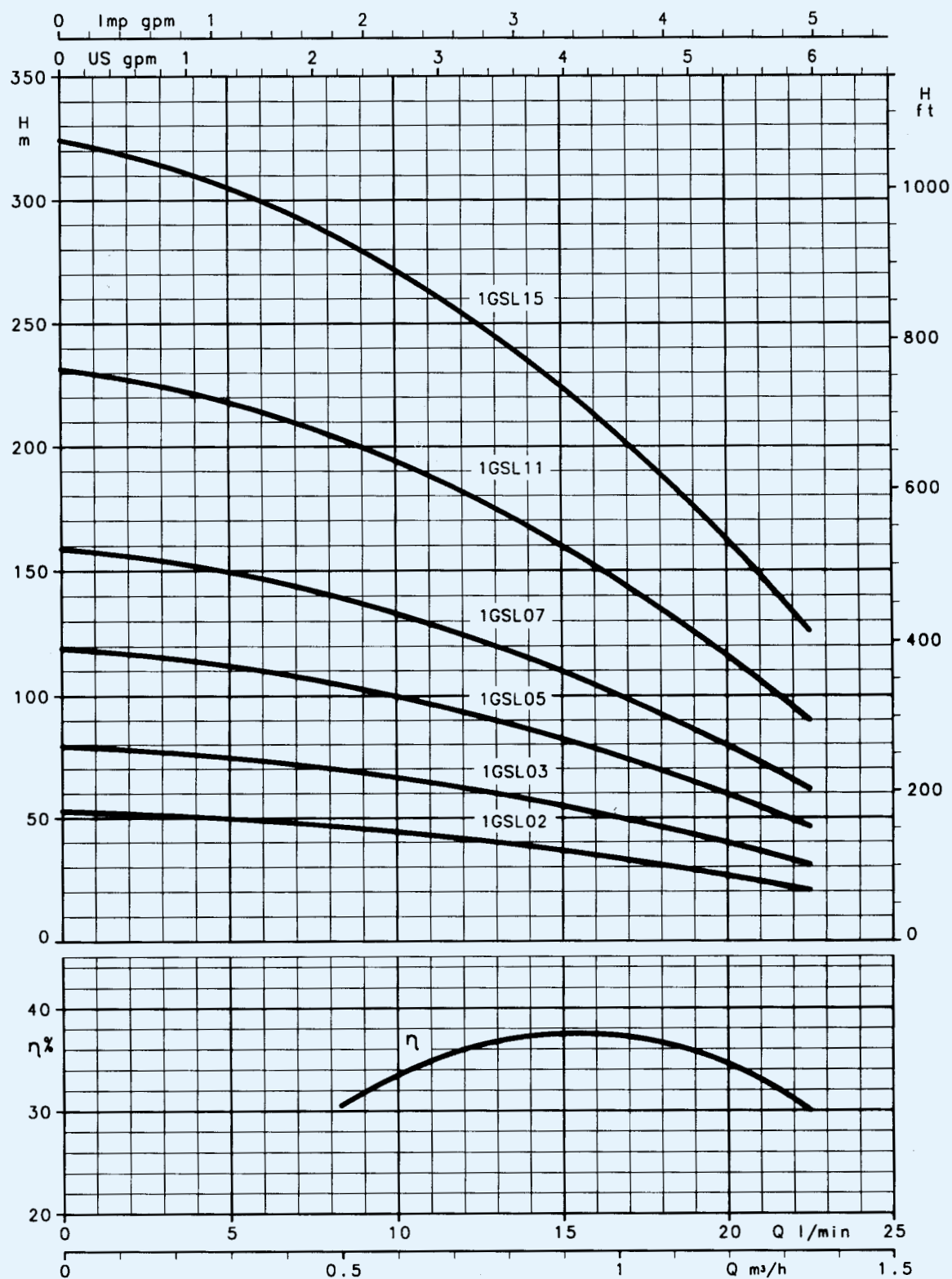
8GS, 12GS, 16GS SERIES

HYDRAULIC PERFORMANCE TABLE AT 2850 rpm, 50 Hz

PUMP TYPE	NUMBER OF STAGES	kW	HP	Q = DELIVERY												RATED CURRENT		CAPACI- TOR 450 V	ELECTRIC PUMP LENGHT mm	ELECTRIC PUMP WEIGHT kg
				l/min	0	60	80	100	120	140	160	200	250	300	367	SINGLE- PHASE 220 V	THREE- PHASE 380-415 V			
				m³/h	0	3,6	4,8	6	7,2	8,4	9,6	12	15	18	22					
H = TOTAL HEAD METERS COLUMN OF WATER																				
8GS07M	4	0,75	1	26	24	23	22	20	18	16					5,7	–	30	703	15	
8GS07T	4	0,75	1	26	24	23	22	20	18	16					–	2,1	–	681	13,5	
8GS11M	6	1,1	1,5	39	36	34	33	31	28	24					8,2	–	40	794	16,5	
8GS11T	6	1,1	1,5	39	36	34	33	31	28	24					–	3	–	765	15,5	
8GS15M	8	1,5	2	52	48	46	44	41	37	32					10,5	–	50	884	18,5	
8GS15T	8	1,5	2	52	48	46	44	41	37	32					–	4	–	856	17	
8GS22M	13	2,2	3	84	77	74	71	67	60	51					15,9	–	70	1144	25	
8GS22T	13	2,2	3	84	77	74	71	67	60	51					–	5,9	–	1039	20	
8GS30T	17	3	4	110	101	97	93	87	78	67					–	7,8	–	1268	28	
8GS40T	23	4	5,5	149	137	132	126	118	106	91					–	10	–	1768	33	
8GS55T	32	5,5	7,5	207	191	183	175	164	147	127					–	13,7	–	2039	40	
8GS75T	43	7,5	10	279	256	246	235	220	198	170					–	19,8	–	2430	47	
12GS15M	7	1,5	2	43			37	35	33	30	25	17			10,5	–	50	1000	19,5	
12GS15T	7	1,5	2	43			37	35	33	30	25	17				4	–	972	18	
12GS22M	10	2,2	3	61			53	50	47	43	36	24			15,9	–	70	1299	26	
12GS22T	10	2,2	3	61			53	50	47	43	36	24			–	5,9	–	1194	21	
12GS30T	14	3	4	86			74	70	66	61	50	34			–	7,8	–	1468	29	
12GS40T	19	4	5,5	116			100	95	89	83	68	46			–	10	–	1804	35	
12GS55T	26	5,5	7,5	159			137	130	122	113	94	63			–	13,7	–	2275	43	
12GS75T	35	7,5	10	215			184	175	164	152	126	85			–	19,8	–	2818	52	
16GS22M	8	2,2	3	47						37	36	32	27	23	16	15,9	–	70	1247	26
16GS22T	8	2,2	3	47						37	36	32	27	23	16	–	5,9	–	1142	21
16GS30T	11	3	4	65						51	49	44	38	31	22	–	7,8	–	1413	29
16GS40T	15	4	5,5	89						70	67	60	51	43	30	–	10	–	1760	35
16GS55T	20	5,5	7,5	118						94	89	80	69	57	41	–	13,7	–	2245	43
16GS75T	28	7,5	10	165						131	125	112	96	80	57	–	19,8	–	2865	52

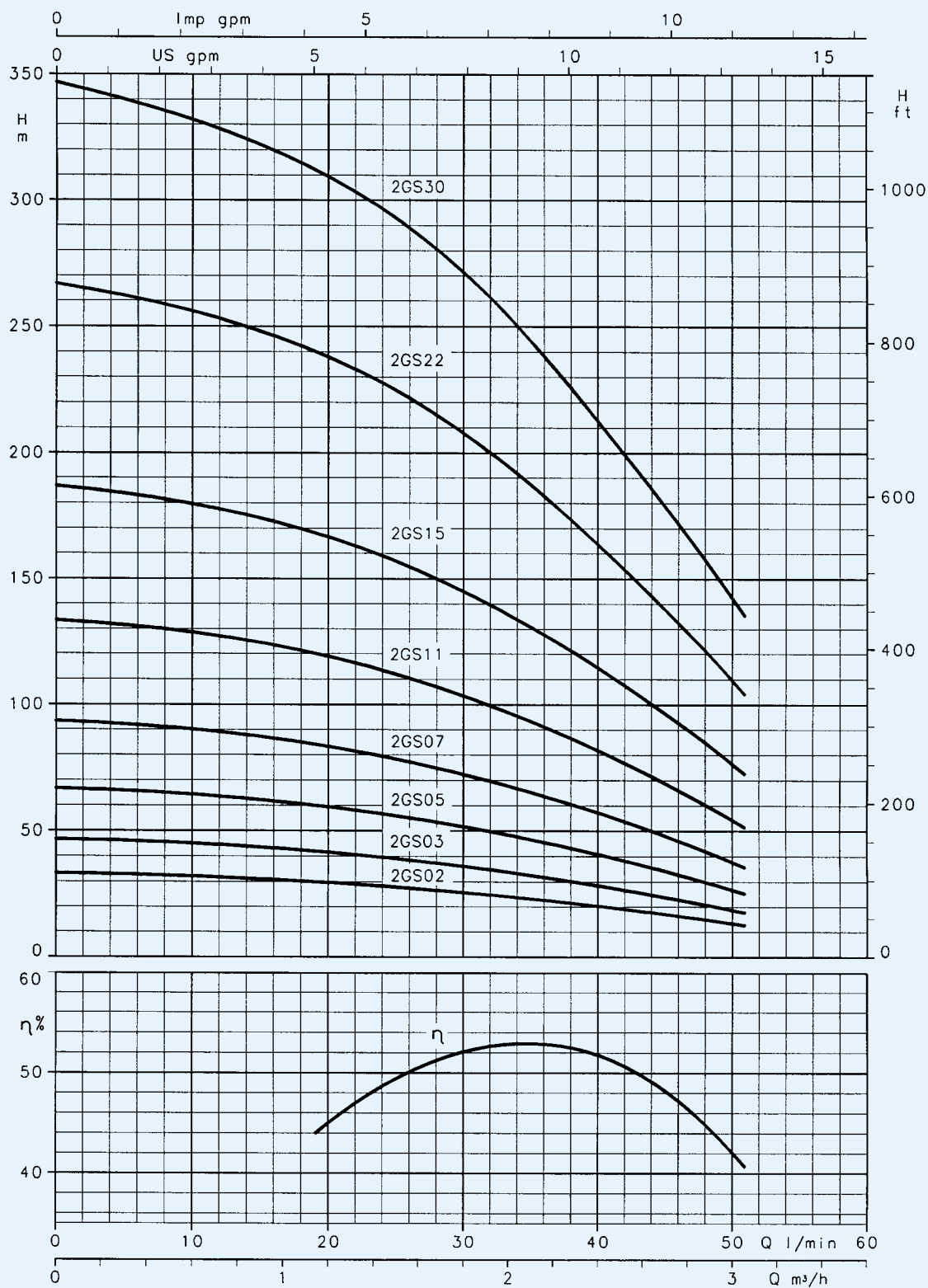
Performances in compliance with ISO 9906 – Annex A
Diameter of pump delivery port: 8GS – 12GS – 16GS: 2".

1GSL SERIES OPERATING CHARACTERISTICS AT 2850 rpm 50 Hz



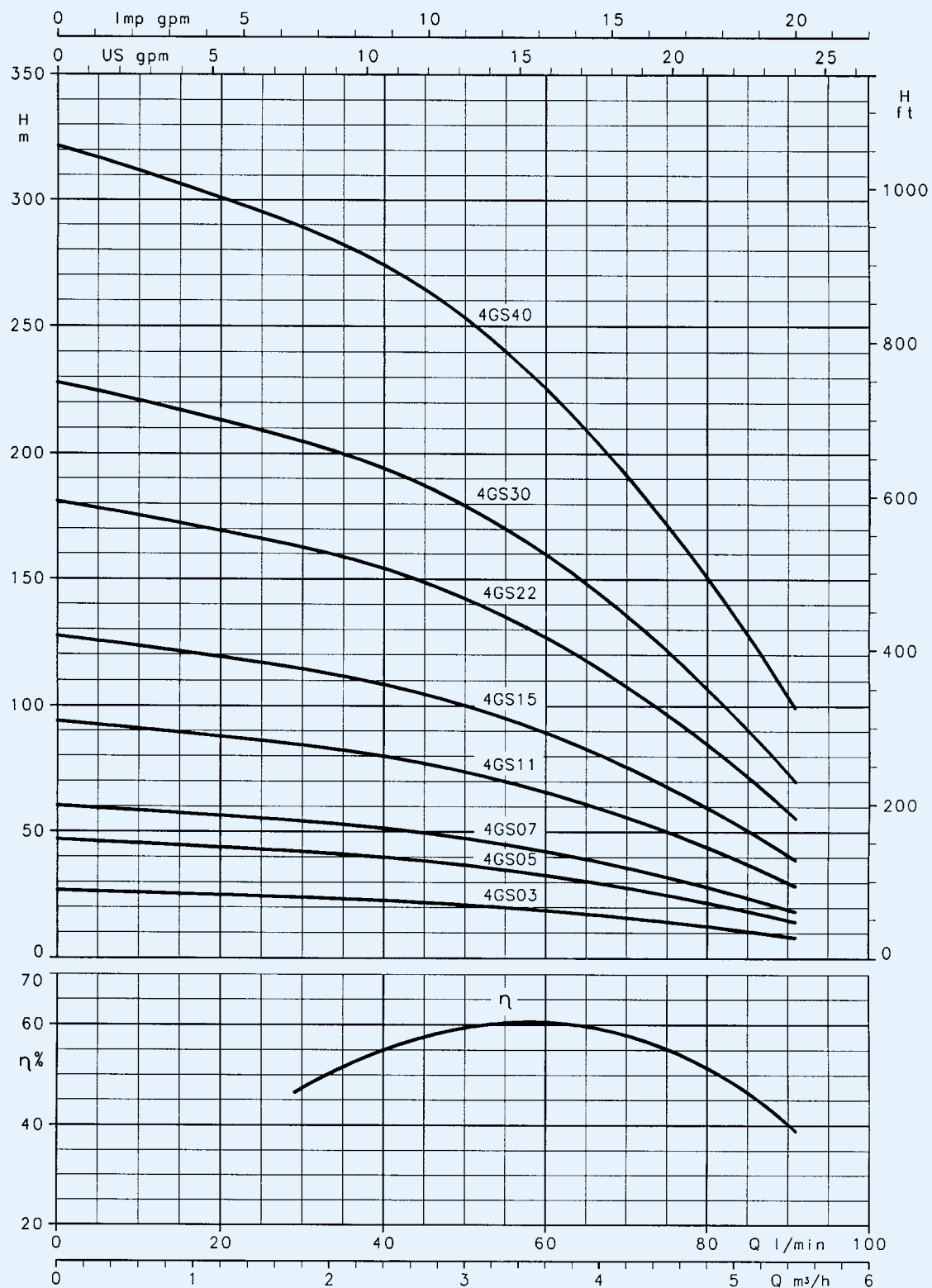
These performances are valid for liquids with density $\rho = 1.0 \text{ kg/dm}^3$ and kinematic viscosity $\gamma = 1 \text{ mm}^2/\text{sec}$.

2GS SERIES OPERATING CHARACTERISTICS AT 2850 rpm 50 Hz



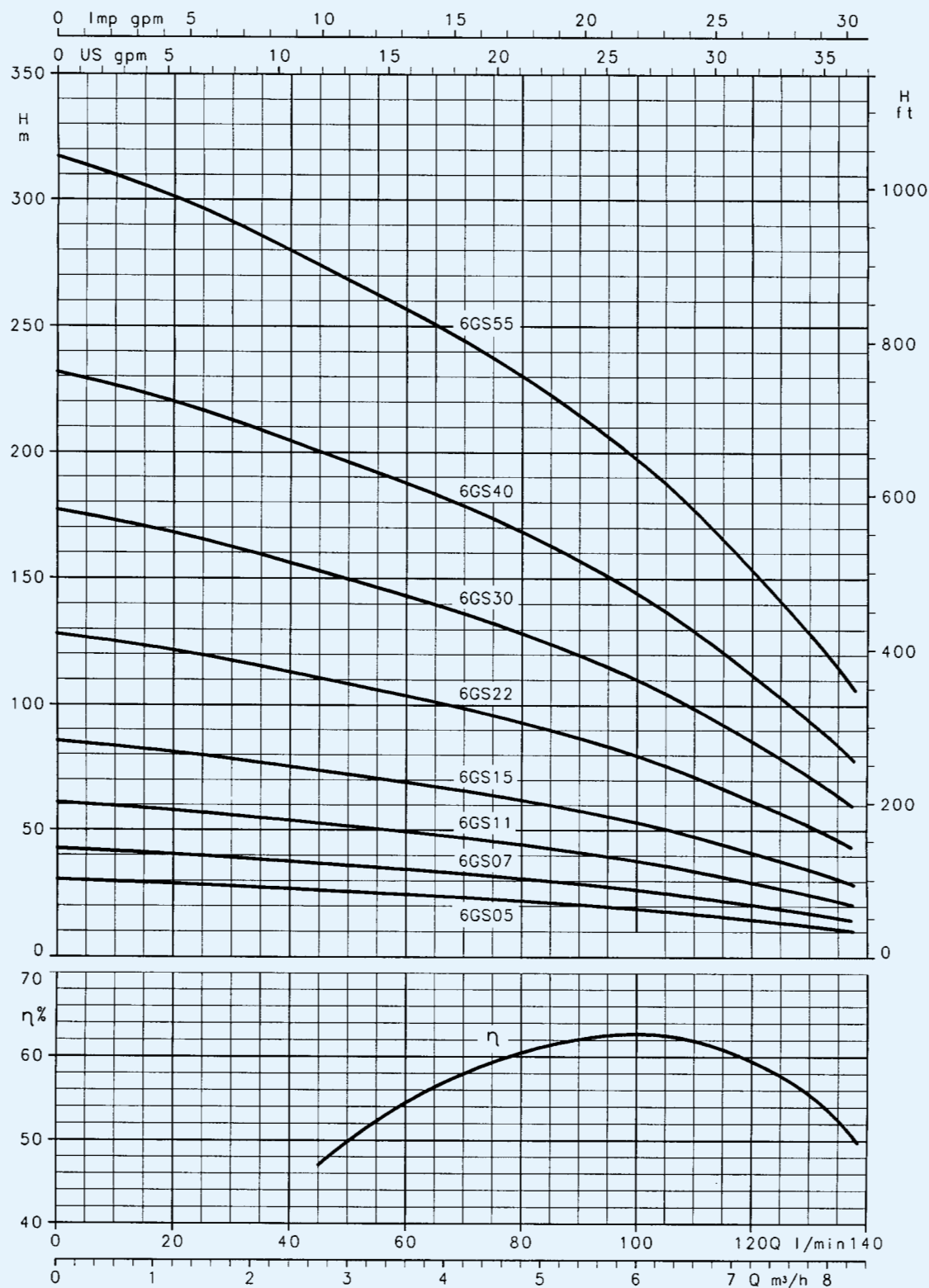
These performances are valid for liquids with density $\rho = 1.0 \text{ kg/dm}^3$ and kinematic viscosity $\gamma = 1 \text{ mm}^2/\text{sec}$.

4GS SERIES OPERATING CHARACTERISTICS AT 2850 rpm 50 Hz



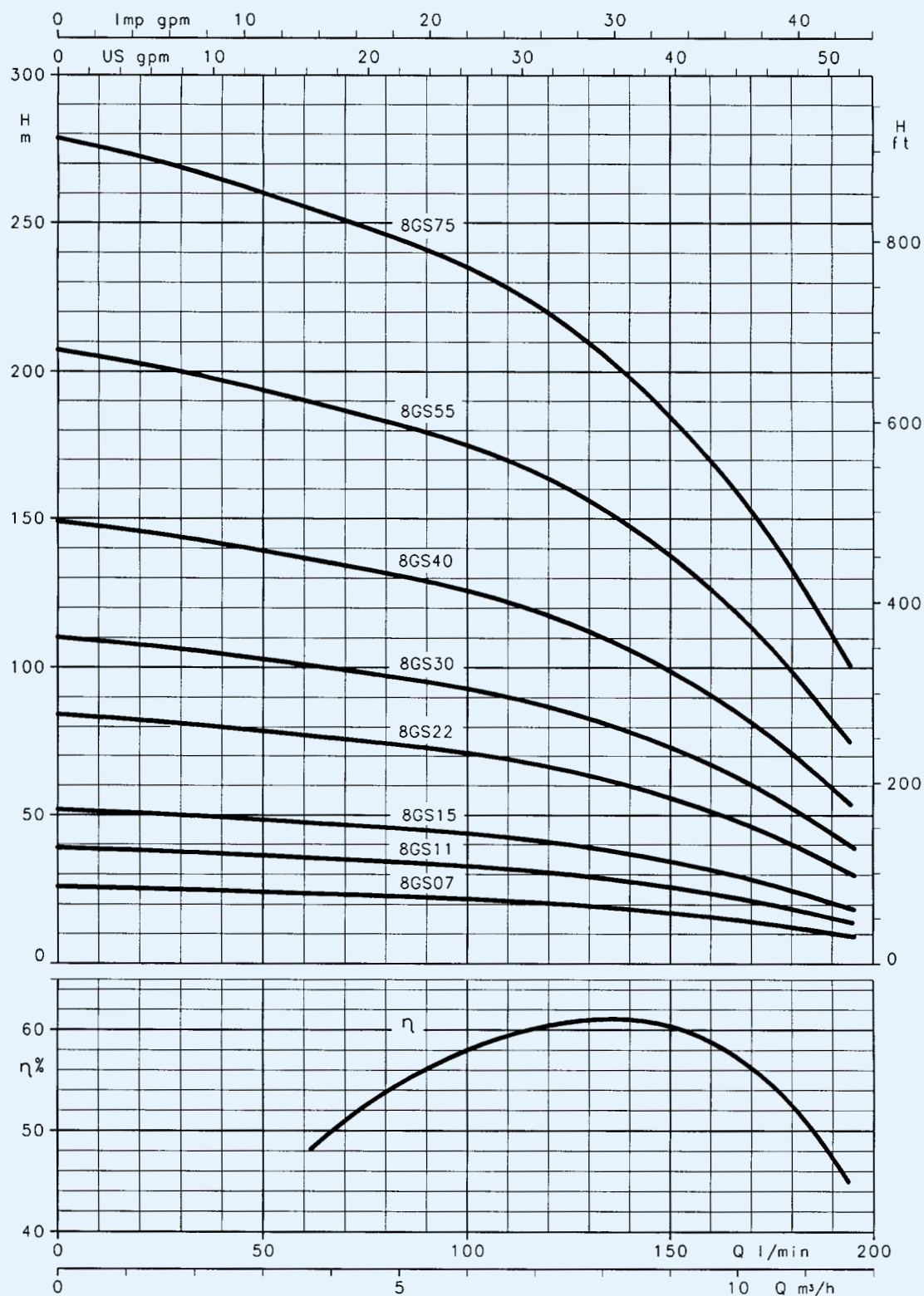
These performances are valid for liquids with density $\rho = 1.0 \text{ kg/dm}^3$ and kinematic viscosity $\gamma = 1 \text{ mm}^2/\text{sec}$.

6GS SERIES OPERATING CHARACTERISTICS AT 2850 rpm 50 Hz



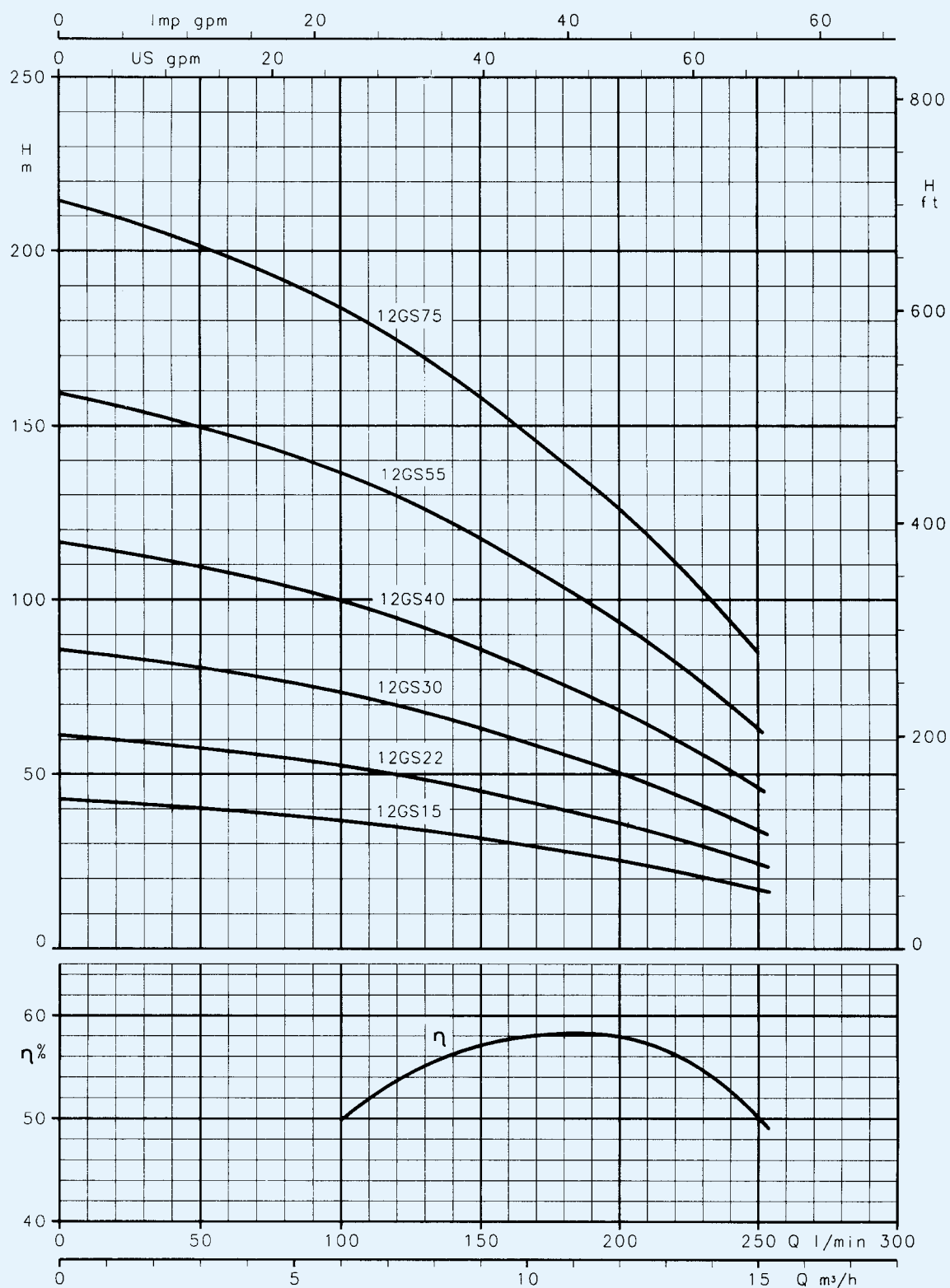
These performances are valid for liquids with density $\rho = 1.0 \text{ kg/dm}^3$ and kinematic viscosity $\gamma = 1 \text{ mm}^2/\text{sec}$.

8GS SERIES OPERATING CHARACTERISTICS AT 2850 rpm 50 Hz



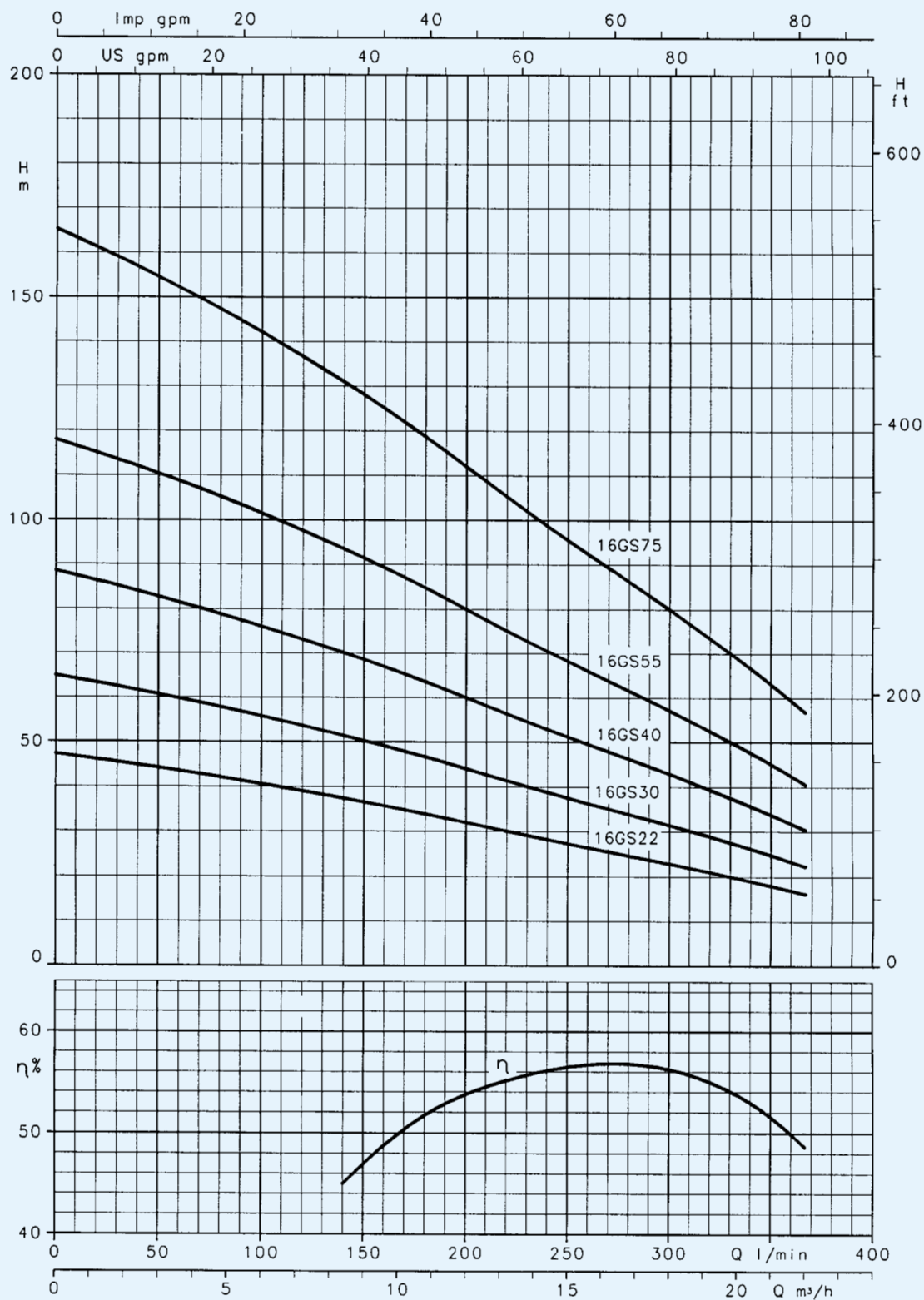
These performances are valid for liquids with density $\rho = 1.0 \text{ kg/dm}^3$ and kinematic viscosity $\gamma = 1 \text{ mm}^2/\text{sec}$.

12GS SERIES OPERATING CHARACTERISTICS AT 2850 rpm 50 Hz



These performances are valid for liquids with density $\rho = 1.0 \text{ kg/dm}^3$ and kinematic viscosity $\gamma = 1 \text{ mm}^2/\text{sec}$.

16GS SERIES OPERATING CHARACTERISTICS AT 2850 rpm 50 Hz

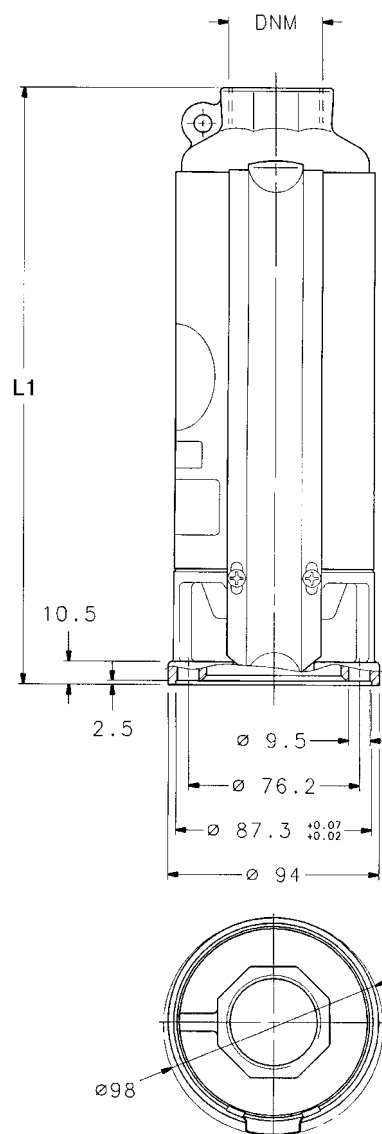


These performances are valid for liquids with density $\rho = 1.0 \text{ kg/dm}^3$ and kinematic viscosity $\gamma = 1 \text{ mm}^2/\text{sec}$.

DIMENSIONS AND WEIGHTS, GS SERIES

PUMP TYPE	No. STAGES	DIMENSION L	DNM	WEIGHT kg
1GSL02	8	298	Rp 1" 1/4	3
1GSL03	12	367	Rp 1" 1/4	4
1GSL05	18	472	Rp 1" 1/4	5
1GSL07	24	577	Rp 1" 1/4	6
1GSL11	35	799	Rp 1" 1/4	8,5
1GSL15	49	1043	Rp 1" 1/4	11,5
2GS02	5	245	Rp 1" 1/4	2,5
2GS03	7	280	Rp 1" 1/4	3
2GS05	10	332	Rp 1" 1/4	3,5
2GS07	14	402	Rp 1" 1/4	4
2GS11	20	507	Rp 1" 1/4	5,5
2GS15	28	677	Rp 1" 1/4	7
2GS22	40	886	Rp 1" 1/4	9,5
2GS30	52	1095	Rp 1" 1/4	12
4GS03	4	244	Rp 1" 1/4	2,5
4GS05	7	309	Rp 1" 1/4	3
4GS07	9	352	Rp 1" 1/4	3,5
4GS11	14	460	Rp 1" 1/4	4,5
4GS15	19	568	Rp 1" 1/4	5,5
4GS22	27	770	Rp 1" 1/4	7,5
4GS30	35	943	Rp 1" 1/4	9
4GS40	48	1223	Rp 1" 1/4	12,5
6GS05	5	328	Rp 1" 1/4	3,5
6GS07	7	390	Rp 1" 1/4	4
6GS11	10	483	Rp 1" 1/4	5
6GS15	14	645	Rp 1" 1/4	7
6GS22	21	862	Rp 1" 1/4	9
6GS30	29	1102	Rp 1" 1/4	11,5
6GS40	38	1381	Rp 1" 1/4	14,5
6GS55	52	1815	Rp 1" 1/4	19
8GS07	4	299	Rp 2"	3
8GS11	6	361	Rp 2"	4
8GS15	8	423	Rp 2"	4,5
8GS22	13	578	Rp 2"	6
8GS30	17	740	Rp 2"	8
8GS40	23	926	Rp 2"	9,5
8GS55	32	1197	Rp 2"	12,5
8GS75	43	1538	Rp 2"	16
12GS15	7	539	Rp 2"	5
12GS22	10	733	Rp 2"	7,5
12GS30	14	940	Rp 2"	9,5
12GS40	19	1200	Rp 2"	12
12GS55	26	1556	Rp 2"	16
12GS75	35	2023	Rp 2"	20,5
16GS22	8	681	Rp 2"	7
16GS30	11	885	Rp 2"	9
16GS40	15	1156	Rp 2"	11,5
16GS55	20	1526	Rp 2"	15,5
16GS75	28	2070	Rp 2"	21

NOTE: for motor dimensions and weights see pages dedicated to 40S and F4 motors in this catalogue.



OZ6-FZ6 SERIES (AISI 304) FZN6 (AISI 316)

SUBMERSIBLE PUMPS FOR 6" WELLS

APPLICATIONS

- Supply of water with the presence of salt.
- Pump contaminated liquids.
- Mining industry.
- Water display fountains.

SPECIFICATIONS

- **F4Z6, FZ6:** Pumps for 6" wells coupled to F4 and F6 motor respectively AISI 316.
- **Delivery** up to **78 m³/h.**
- **Head** up to **460 m.**
- **Maximum** electric pump overall **diameter** (cable cover included): **147 mm.**
- **Maximum** immersion **depth: 350 meters** (with **F** motor)
- **Maximum permissible quantity** of suspended **sand: 50 g/m³.**
- **Delivery port:**
 - **2½"** for **Z611 - Z615 - Z621** series (radial impeller).
 - **3"** for **Z630 - Z642 - Z658** series (semi-axial impeller).
- Rated motor power: from **3 to 30 kW.**
- **Three-phase version:** 380-415 V 50 Hz.
- Maximum supply voltage variations: $\pm 5\%$.
- **Class B or F** windings, depending on motor type.
- F6 and OS6 series motors, with power up to 15 kW, **can operate either vertically or horizontally.**
- Maximum number of **starts per hour: 15-30**, depending on type of motor.
- **Maximum temperature** of water in contact with the motor: **30°/40°C**, depending on installation and motor power.
- Versions with dual cable outlet for star/delta starting are available on request.



CONSTRUCTION CHARACTERISTICS

- The guide bearings and wear rings, made of special high nitrile-content rubber, ensure high resistance to wear and guarantee the **constant and long-lasting performance of the hydraulic characteristics.**
- Coupling and flange dimensions meet NEMA standards.
- Two liquid end versions:
 - **RADIAL FLOW**
for high heads (up to 410 m) and low deliveries (30 m³/h)
 - **SEMIAXIAL FLOW**
for medium deliveries and heads (up to 78 m³/h and up to 270 m).

TABLE OF MATERIALS

PART	MATERIAL	
	OZ6 - FZ6	FZN6
Outer sleeve, Delivery port, Non-return valve Diffusers, Impeller, Conveyor, Cable protection, Lower support, Spacers, Screws, Bolts, Washers	STAINLESS STEEL (AISI 304 - DIN 1.4301)	STAINLESS STEEL (AISI 316 - DIN 1.4404)
Pump shaft, Coupling	STAINLESS STEEL (AISI 420 - DIN 1.4021)	STAINLESS STEEL (AISI 316 - DIN 1.4404)
Coupling fastening screws	STAINLESS STEEL (AISI 431 - DIN 1.4057)	STAINLESS STEEL (AISI 316 - DIN 1.4404)
Small blocks	STAINLESS STEEL (AISI 316L - DIN 1.4404)	STAINLESS STEEL (AISI 316L - DIN 1.4404)
Fifth wheel	PHENOLIC RESIN	PHENOLIC RESIN
Wear rings, Bush bearings	NITRILE RUBBER (NBR)	NITRILE RUBBER (NBR)

OZ6-FZ6 SERIES

HYDRAULIC PERFORMANCE TABLE AT 2850 rpm, 50 Hz

ELECTRIC PUMP TYPE	POWER		RATED CURRENT 380-415 V	Q = DELIVERY												LENGHT	ELECTRIC PUMP WEIGHT
	kW	HP		m³/h	0	3	6	9	12	15	18	21	24	27	30		
				l/min	0	50	100	150	200	250	300	350	400	450	500		
			A	H = TOTAL HEAD METERS COLUMN OF WATER												mm	kg
O4Z611/6	3	4	7,8	67	66	63	60	54	44	28					1210	35	
F4Z611/6	3	4	7,8	67	66	63	60	54	44	28					1195	34,8	
O4Z611/8	4	5,5	10	89	88	85	80	72	59	37					1364	40	
F4Z611/8	3,7	5	9,1	89	88	85	80	72	59	37					1311	39,5	
O4Z611/10	5,5	7,5	13,7	111	110	107	100	91	74	47					1558	46	
F4Z611/10	5,5	7,5	13,7	111	110	107	100	91	74	47					1542	48	
O4Z611/12	5,5	7,5	13,7	133	131	128	120	109	88	56					1635	48	
F4Z611/12	5,5	7,5	13,7	133	131	128	120	109	88	56					1619	50	
O4Z611/14	7,5	10	19,8	156	153	149	140	128	103	65					1789	55	
F4Z611/14	7,5	10	19,8	156	153	149	140	128	103	65					1767	56	
O4Z611/16	7,5	10	19,8	178	175	170	160	146	117	73					1867	57	
F4Z611/16	7,5	10	19,8	178	175	170	160	146	117	73					1845	58	
OZ611/6	3	4	7,6	67	66	63	60	54	44	28					1320	53	
FZ611/6	4	5,5	9,3	67	66	63	60	54	44	28					1267	50,5	
OZ611/8	3,7	5	8,8	89	88	85	80	72	59	37					1399	55	
FZ611/8	4	5,5	9,3	89	88	85	80	72	59	37					1346	52,5	
OZ611/10	5,5	7,5	12,5	111	110	107	100	91	74	47					1557	65	
FZ611/10	5,5	7,5	12,5	111	110	107	100	91	74	47					1457	58	
OZ611/12	5,5	7,5	12,5	133	131	128	120	109	88	56					1634	67	
FZ611/12	5,5	7,5	12,5	133	131	128	120	109	88	56					1534	59,7	
OZ611/14	7,5	10	17	156	153	149	140	128	103	65					1762	80	
FZ611/14	7,5	10	16	156	153	149	140	128	103	65					1644	65	
OZ611/16	7,5	10	17	178	175	170	160	146	117	73					1840	82	
FZ611/16	7,5	10	16	178	175	170	160	146	117	73					1722	66,5	
OZ611/19	11	15	24,5	211	208	202	191	173	139	87					2065	94	
FZ611/19	11	15	23,3	211	208	202	191	173	139	87					1905	77	
OZ611/21	11	15	24,5	233	230	223	211	191	153	97					2143	96	
FZ611/21	11	15	23,3	233	230	223	211	191	153	97					1983	78,8	
OZ611/24	11	15	24,5	267	262	255	241	219	175	110					2259	99	
FZ611/24	11	15	23,3	267	262	255	241	219	175	110					2099	81,8	
OZ611/28	15	20	31	311	306	298	281	255	204	130					2505	115	
FZ611/28	15	20	31,3	311	306	298	281	255	204	130					2320	92,3	
OZ611/31	15	20	31	345	339	329	311	282	226	142					2623	118	
FZ611/31	15	20	31,3	345	339	329	311	282	226	142					2438	95,3	
OZ611/34	18,5	25	39	378	371	361	342	310	249	157					2829	133	
FZ611/34	18,5	25	38,5	378	371	361	342	310	249	157					2620	105	
OZ611/37	18,5	25	39	412	404	393	372	337	270	171					2947	136	
FZ611/37	18,5	25	38,5	412	404	393	372	337	270	171					2738	108	
O4Z615/4	3	4	7,8	49		47	45	43	39	32	24				1131	33	
F4Z615/4	3	4	7,8	49		47	45	43	39	32	24				1117	32,8	
O4Z615/6	4	5,5	10	74		70	68	65	59	49	37				1285	38	
F4Z615/6	3,7	5	9,1	74		70	68	65	59	49	37				1233	37,5	
O4Z615/9	5,5	7,5	13,7	110		104	102	98	89	73	55				1518	45	
F4Z615/9	5,5	7,5	13,7	110		104	102	98	89	73	55				1502	47	
O4Z615/12	7,5	10	19,8	147		140	135	129	119	99	73				1711	52	
F4Z615/12	7,5	10	19,8	147		140	135	129	119	99	73				1689	53	
OZ615/4	3	4	7,6	49		47	45	43	39	32	24				1242	51	
FZ615/4	4	5,5	9,3	49		47	45	43	39	32	24				1189	48,5	
OZ615/6	3,7	5	8,8	74		70	68	65	59	49	37				1320	53	
FZ615/6	4	5,5	9,3	74		70	68	65	59	49	37				1267	50,5	
OZ615/9	5,5	7,5	12,5	110		104	102	98	89	73	55				1518	64	
FZ615/9	5,5	7,5	12,5	110		104	102	98	89	73	55				1418	56,7	
OZ615/12	7,5	10	17	147		140	135	129	119	99	73				1684	77	
FZ615/12	7,5	10	16	147		140	135	129	119	99	73				1566	61,5	
OZ615/15	11	15	24,5	184		175	170	161	149	123	91				1909	90	
FZ615/15	11	15	23,3	184		175	170	161	149	123	91				1749	72,8	
OZ615/18	11	15	24,5	221		210	203	195	178	148	110				2025	93	
FZ615/18	11	15	23,3	221		210	203	195	178	148	110				1865	75,8	
OZ615/21	15	20	31	258		245	238	228	208	171	129				2233	108	
FZ615/21	15	20	31,3	258		245	238	228	208	171	129				2048	85,3	
OZ615/24	15	20	31	295		280	271	259	238	197	148				2349	111	
FZ615/24	15	20	31,3	295		280	271	259	238	197	148				2164	88,3	
OZ615/28	18,5	25	39	344		326	317	302	277	230	171				2595	127	
FZ615/28	18,5	25	38,5	344		326	317	302	277	230	171				2386	98,7	
OZ615/31	18,5	25	39	381		361	350	335	307	254	190				2713	130	
FZ615/31	18,5	25	38,5	381		361	350	335	307	254	190				2504	102	
OZ615/34	22	30	46	418		396	384	368	336	279	209				2919	144	
FZ615/34	22	30	45,3	418		396	384	368	336	279	209				2685	111	
OZ615/37	22	30	46	455		431	419	400	366	302	252				3037	147	
FZ615/37	22	30	45,3	455		431	419	400	366	302	252				2803	114	
O4Z621/3	3	4	7,8	37				34	32	30	28	23	20	13	1109	32	
F4Z621/3	3	4	7,8	37				34	32	30	28	23	20	13	1094	31,8	

All the Z611 - Z621 and Z621 series pumps have delivery port with G 2 1/2" nominal diameter. The maximum external diameter is 147 mm.

Versions FZN6 AISI 316: available up to 22 kW

OZ6-FZ6 SERIES

HYDRAULIC PERFORMANCE TABLE AT 2850 rpm, 50 Hz

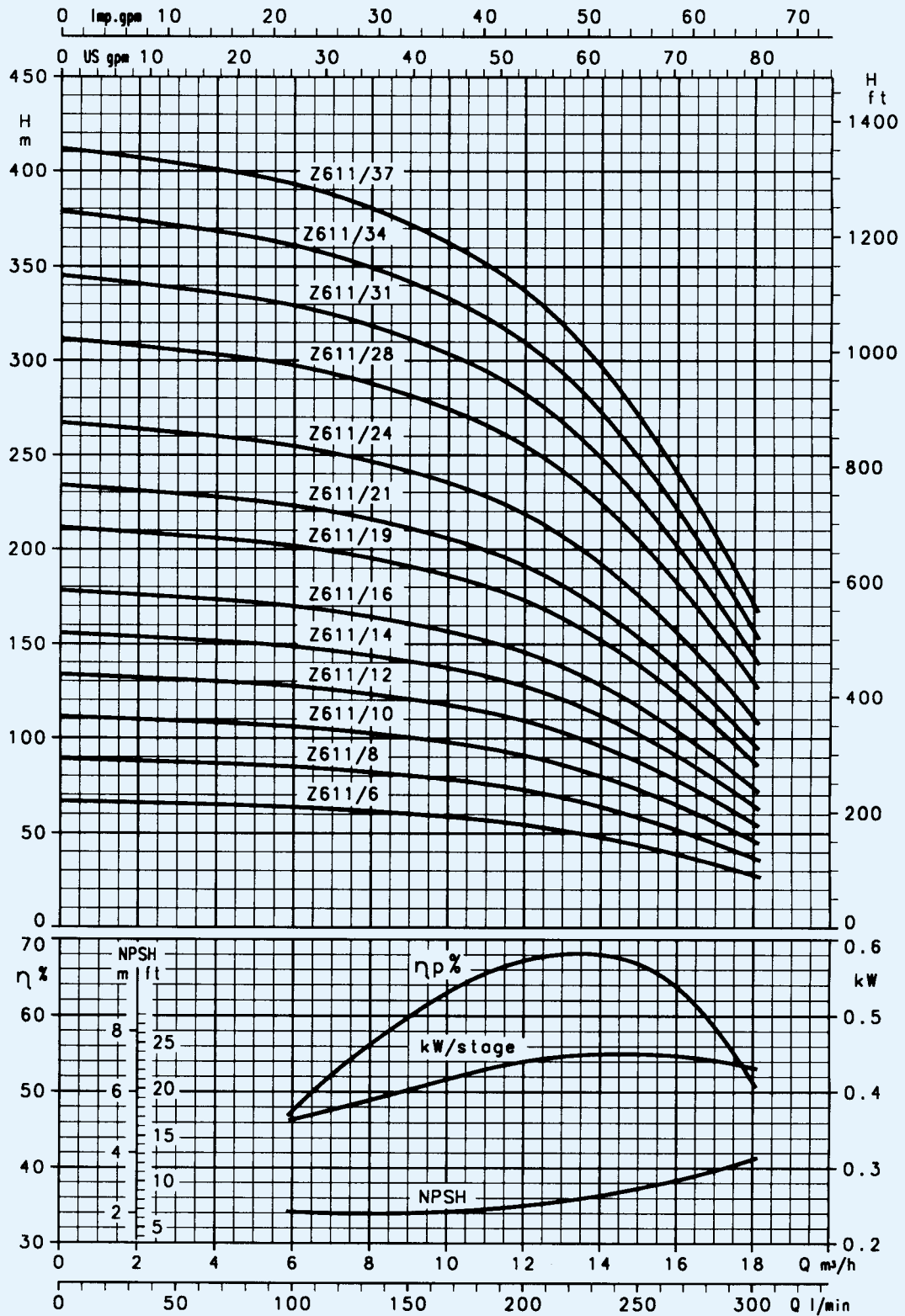
ELECTRIC PUMP TYPE	POWER		RATED CURRENT 380-415 V A	Q = DELIVERY											LENGHT	ELECTRIC PUMP WEIGHT			
				m³/h	0	3	6	9	12	15	18	21	24	27			30		
	l/min	0		50	100	150	200	250	300	350	400	450	500						
H = TOTAL HEAD METERS COLUMN OF WATER																		mm	kg
O4Z621/4	4	5,5	10	50				47	44	41	37	32	26	19	1229	36			
F4Z621/4	3,7	5	9,1	50				47	44	41	37	32	26	19	1177	35,5			
O4Z621/6	5,5	7,5	13,7	74				69	65	61	55	48	38	28	1434	42,5			
F4Z621/6	5,5	7,5	13,7	74				69	65	61	55	48	38	28	1418	44,5			
O4Z621/9	7,5	10	19,8	112				103	99	92	83	72	58	42	1644	49			
F4Z621/9	7,5	10	19,8	112				103	99	92	83	72	58	42	1621	50,5			
OZ621/3	3	4	7,6	37				34	32	30	28	23	20	13	1220	50			
FZ621/3	4	5,5	9,3	37				34	32	30	28	23	20	13	1167	47,5			
OZ621/4	3,7	5	8,8	50				47	44	41	37	32	26	19	1264	51			
FZ621/4	4	5,5	9,3	50				47	44	41	37	32	26	19	1211	48,5			
OZ621/6	5,5	7,5	12,5	74				69	65	61	55	48	38	28	1434	61,5			
FZ621/6	5,5	7,5	12,5	74				69	65	61	55	48	38	28	1334	54,2			
OZ621/9	7,5	10	17	112				103	99	92	83	72	58	42	1618	74,5			
FZ621/9	7,5	10	16	112				103	99	92	83	72	58	42	1500	59			
OZ621/11	11	15	24,5	136				126	121	112	102	88	71	51	1814	86			
FZ621/11	11	15	23,3	136				126	121	112	102	88	71	51	1654	69			
OZ621/13	11	15	24,5	161				149	142	132	120	103	83	60	1903	88,5			
FZ621/13	11	15	23,3	161				149	142	132	120	103	83	60	1743	71,3			
OZ621/15	15	20	31	186				173	165	153	139	120	97	70	2081	103			
FZ621/15	15	20	31,3	186				173	165	153	139	120	97	70	1896	80			
OZ621/17	15	20	31	211				196	187	173	157	136	110	80	2169	105			
FZ621/17	15	20	31,3	211				196	187	173	157	136	110	80	1984	82,3			
OZ621/20	18,5	25	39	248				230	219	204	185	160	129	93	2394	121			
FZ621/20	18,5	25	38,5	248				230	219	204	185	160	129	93	2185	92			
OZ621/22	18,5	25	39	273				252	241	224	203	176	141	102	2483	123			
FZ621/22	18,5	25	38,5	273				252	241	224	203	176	141	102	2274	94,2			
OZ621/24	22	30	46	298				276	263	245	222	192	155	111	2662	136			
FZ621/24	22	30	45,3	298				276	263	245	222	192	155	111	2428	102			
OZ621/26	22	30	46	323				299	285	266	240	208	168	120	2751	138			
FZ621/26	22	30	45,3	323				299	285	266	240	208	168	120	2517	105			
OZ621/30	30	40	62	372				345	328	306	277	240	193	140	3039	155			
FZ621/30	30	40	63,5	372				345	328	306	277	240	193	140	2825	122			
OZ621/34	30	40	62	422				391	372	347	313	271	220	159	3217	160			
FZ621/34	30	40	63,5	422				391	372	347	313	271	220	159	3003	126			

All the Z611 - Z621 and Z621 series pumps have delivery port with G 2½" nominal diameter. The maximum external diameter is 147 mm.
Versions FZN6 AISI 316: available up to 22 kW

OZ6-FZ6 SERIES HYDRAULIC PERFORMANCE TABLE AT 2850 rpm, 50 Hz

ELECTRIC PUMP TYPE	POWER		RATED CURRENT 380-415 V A	Q = DELIVERY																LENGHT	ELECTRIC PUMP WEIGHT	
	kW	HP		m³/h	0	6	12	18	24	30	36	42	48	54	60	66	72	78				
				l/min	0	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300				
H = TOTAL HEAD METERS COLUMN OF WATER																					mm	kg
O4Z630/2	3	4	7,8	30	29	27	23	21	20	16	10								1226	33		
F4Z630/2	3	4	7,8	30	29	27	23	21	20	16	10								1211	33,5		
O4Z630/3	4	5,5	10	45	43	40	36	33	29	24	15								1414	39		
F4Z630/3	3,7	5	9,1	45	43	40	36	33	29	24	15								1361	38,5		
O4Z630/4	5,5	7,5	13,7	60	58	53	48	44	39	31	20								1641	45,5		
F4Z630/4	5,5	7,5	13,7	60	58	53	48	44	39	31	20								1625	47,5		
O4Z630/6	7,5	10	19,8	91	87	79	72	66	58	48	30								1941	54		
F4Z630/6	7,5	10	19,8	91	87	79	72	66	58	48	30								1919	55,5		
OZ630/2	3	4	7,6	30	29	27	23	21	20	16	10								1337	51,5		
FZ630/2	4	5,5	9,3	30	29	27	23	21	20	16	10								1284	49		
OZ630/3	3,7	5	8,8	45	43	40	36	33	29	24	15								1449	54		
FZ630/3	4	5,5	9,3	45	43	40	36	33	29	24	15								1396	51,5		
OZ630/4	5,5	7,5	12,5	60	58	53	48	44	39	31	20								1641	64,5		
FZ630/4	5,5	7,5	12,5	60	58	53	48	44	39	31	20								1541	57		
OZ630/6	7,5	10	17	91	87	79	72	66	58	48	30								1915	79,5		
FZ630/6	7,5	10	16	91	87	79	72	66	58	48	30								1797	64		
OZ630/9	11	15	24,5	137	130	118	108	99	87	71	43								2358	97		
FZ630/9	11	15	23,3	137	130	118	108	99	87	71	43								2198	80		
OZ630/12	15	20	31	183	174	158	144	132	117	95	59								2784	117		
FZ630/12	15	20	31,3	183	174	158	144	132	117	95	59								2599	94		
OZ630/15	18,5	25	39	228	217	198	180	165	146	119	73								3210	136		
FZ630/15	18,5	25	38,5	228	217	198	180	165	146	119	73								3001	108		
OZ630/18	22	30	46	274	260	237	216	198	174	142	88								3636	155		
FZ630/18	22	30	45,3	274	260	237	216	198	174	142	88								3402	121		
OZ630/21	30	40	62	320	304	276	252	230	204	167	102								4082	175		
FZ630/21	30	40	63,5	320	304	276	252	230	204	167	102								3868	142		
OZ630/24	30	40	62	365	348	315	288	263	233	190	118								4418	183		
FZ630/24	30	40	63,5	365	348	315	288	263	233	190	118								4204	149		
O4Z642/2	4	5,5	10	30				23	21	19	18	15	12	9					1302	36		
F4Z642/2	3,7	5	9,1	30				23	21	19	18	15	12	9					1249	36		
O4Z642/3	5,5	7,5	13,7	45				34	31	29	26	22	18	13					1529	43		
F4Z642/3	5,5	7,5	13,7	45				34	31	29	26	22	18	13					1513	45		
O4Z642/5	7,5	10	19,8	75				57	53	49	43	38	30	23					1829	52		
F4Z642/5	7,5	10	19,8	75				57	53	49	43	38	30	23					1807	53		
OZ642/2	3,7	5	8,8	30				23	21	19	18	15	12	9					1337	51,5		
FZ642/2	4	5,5	9,3	30				23	21	19	18	15	12	9					1284	49		
OZ642/3	5,5	7,5	12,5	45				34	31	29	26	22	18	13					1529	62		
FZ642/3	5,5	7,5	12,5	45				34	31	29	26	22	18	13					1429	54,7		
OZ642/5	7,5	10	17	75				57	53	49	43	38	30	23					1803	77		
FZ642/5	7,5	10	16	75				57	53	49	43	38	30	23					1685	61,5		
OZ642/7	11	15	24,5	105				80	74	68	60	52	43	32					2134	91		
FZ642/7	11	15	23,3	105				80	74	68	60	52	43	32					1974	73,8		
OZ642/9	15	20	31	135				103	96	87	78	67	55	41					2448	109		
FZ642/9	15	20	31,3	135				103	96	87	78	67	55	41					2263	86,3		
OZ642/10	15	20	31	151				114	106	97	86	75	60	47					2560	112		
FZ642/10	15	20	31,3	151				114	106	97	86	75	60	47					2375	88,8		
OZ642/12	18,5	25	39	181				137	127	116	103	90	74	55					2874	129		
FZ642/12	18,5	25	38,5	181				137	127	116	103	90	74	55					2665	100		
OZ642/15	22	30	46	226				171	159	145	130	111	92	70					3300	147		
FZ642/15	22	30	45,3	226				171	159	145	130	111	92	70					3066	114		
OZ642/17	30	40	62	257				194	180	164	148	128	103	79					3634	165		
FZ642/17	30	40	63,5	257				194	180	164	148	128	103	79					3420	132		
OZ642/19	30	40	62	287				217	201	184	165	142	117	89					3858	170		
FZ642/19	30	40	63,5	287				217	201	184	165	142	117	89					3644	137		
FZ642/22	37	50	73	332				251	233	213	191	164	135	103					4358	180		
FZ642/24	37	50	73	362				274	254	232	208	179	148	112					4582	185		
O4Z658/2	4	5,5	10	27						20	18	17	16	15	14	12	9		1302	36		
F4Z658/2	3,7	5	9,1	27						20	18	17	16	15	14	12	9		1249	36		
O4Z658/3	5,5	7,5	13,7	42						30	28	26	25	23	20	17	14		1529	43		
F4Z658/3	5,5	7,5	13,7	42						30	28	26	25	23	20	17	14		1513	45		
O4Z658/4	7,5	10	19,8	55						40	37	35	33	30	27	23	19		1717	49		
F4Z658/4	7,5	10	19,8	55						40	37	35	33	30	27	23	19		1695	50,5		
OZ658/2	3,7	5	8,8	27						20	18	17	16	15	14	12	9		1337	51,5		
FZ658/2	4	5,5	9,3	27						20	18	17	16	15	14	12	9		1284	49		
OZ658/3	5,5	7,5	12,5	42						30	28	26	25	23	20	17	14		1529	62		
FZ658/3	5,5	7,5	12,5	42						30	28	26	25	23	20	17	14		1429	54,7		
OZ658/4	7,5	10	17	55						40	37	35	33	30	27	23	19		1691	74,5		
FZ658/4	7,5	10	16	55						40	37	35	33	30	27	23	19		1573	59		
OZ658/6	11	15	24,5	83						60	56	52	49	46	41	35	28		2022	88,5		
FZ658/6	11	15	23,3	83						60	56	52	49	46	41	35	28		1862	71,3		
OZ658/8	15	20	31	110																		

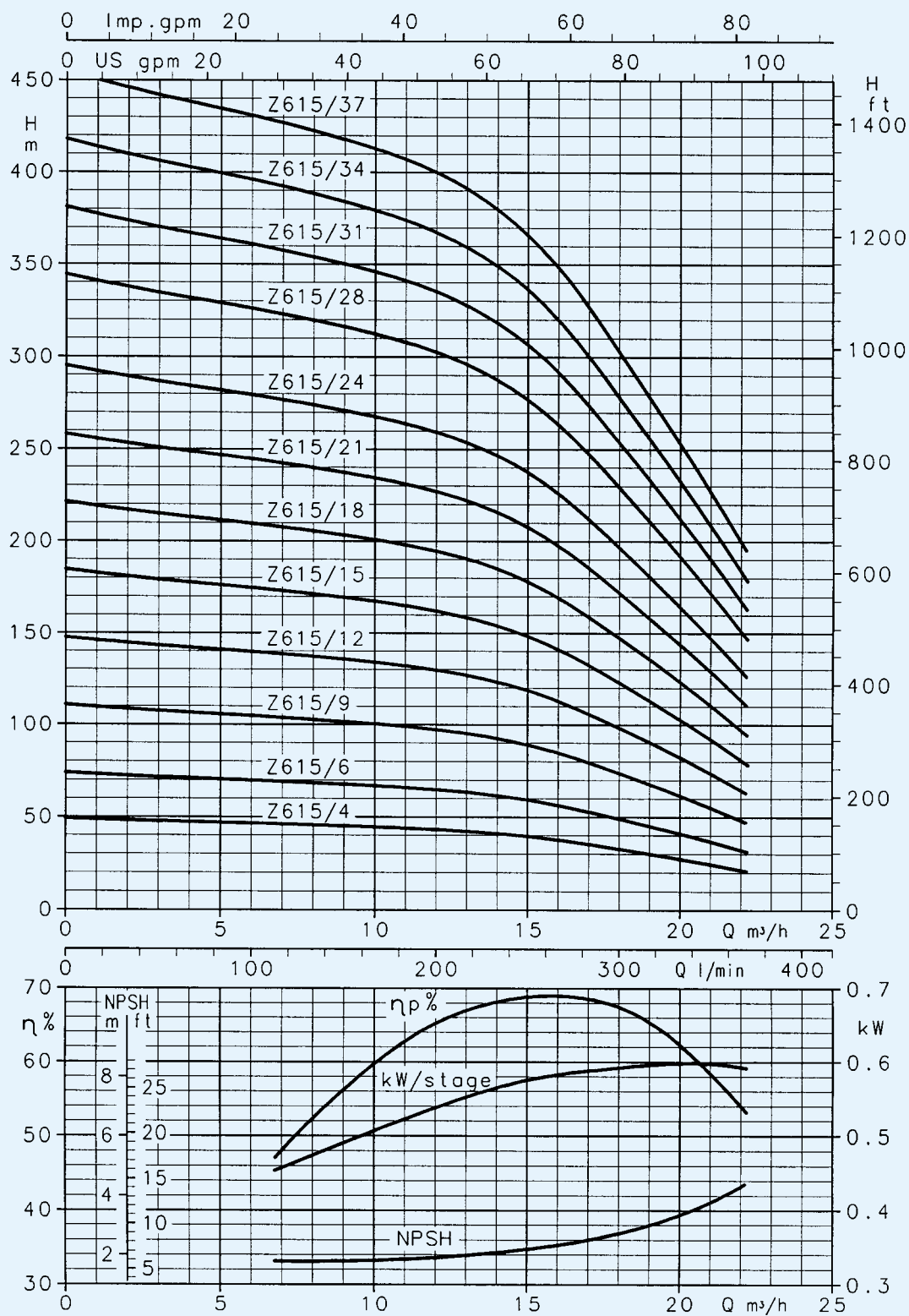
Z611 SERIES OPERATING CHARACTERISTICS AT 2850 rpm, 50 Hz



These performances are valid for liquids with density $\rho = 1.0 \text{ kg/dm}^3$ and kinematic viscosity $\gamma = 1 \text{ mm}^2/\text{sec}$.
Versions FZN6 AISI 316: available up to 22 kW

Z615 SERIES

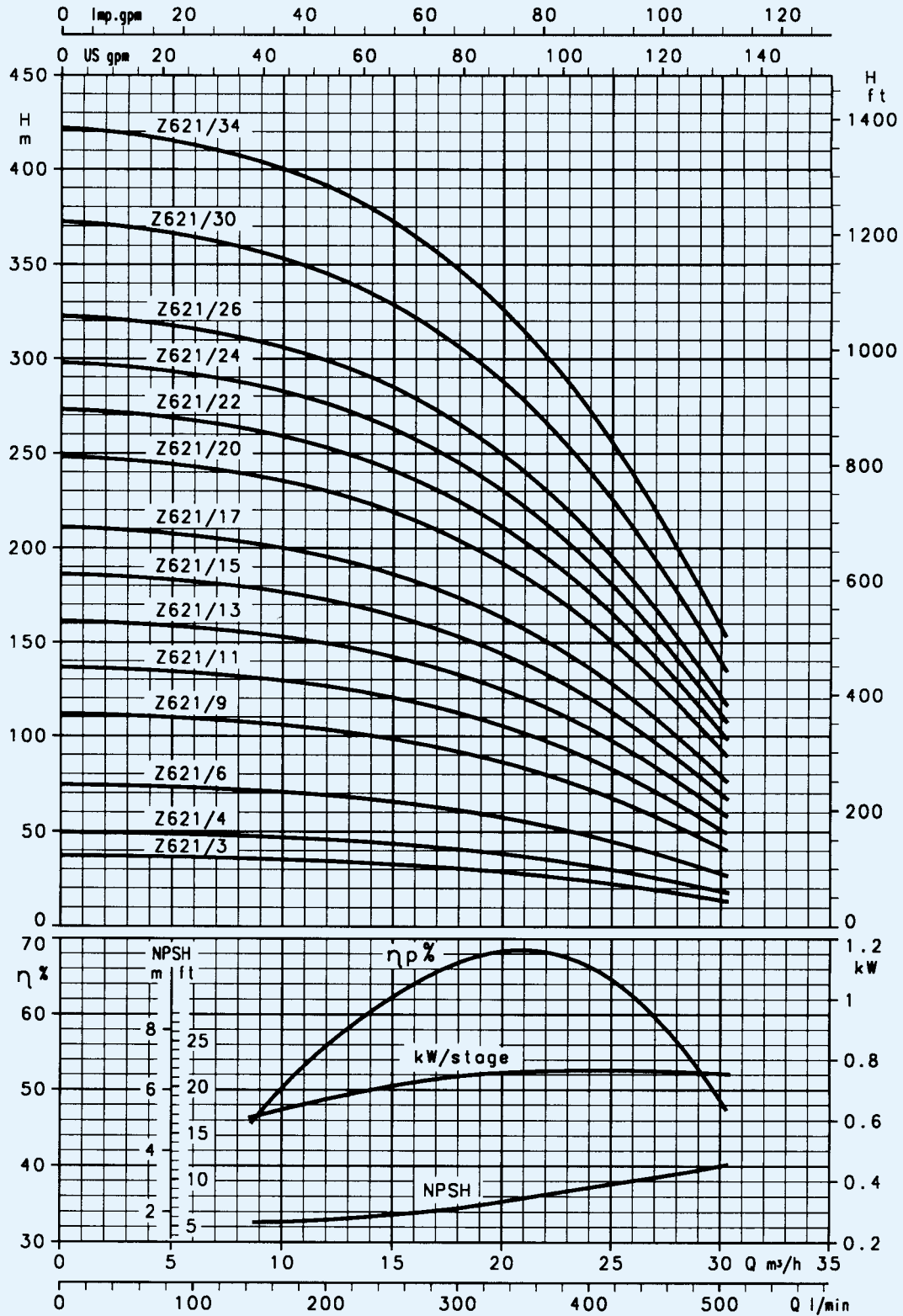
OPERATING CHARACTERISTICS AT 2850 rpm, 50 Hz



These performances are valid for liquids with density $\rho = 1.0 \text{ kg/dm}^3$ and kinematic viscosity $\gamma = 1 \text{ mm}^2/\text{sec}$.
 Versions FZN6 AISI 316: available up to 22 kW

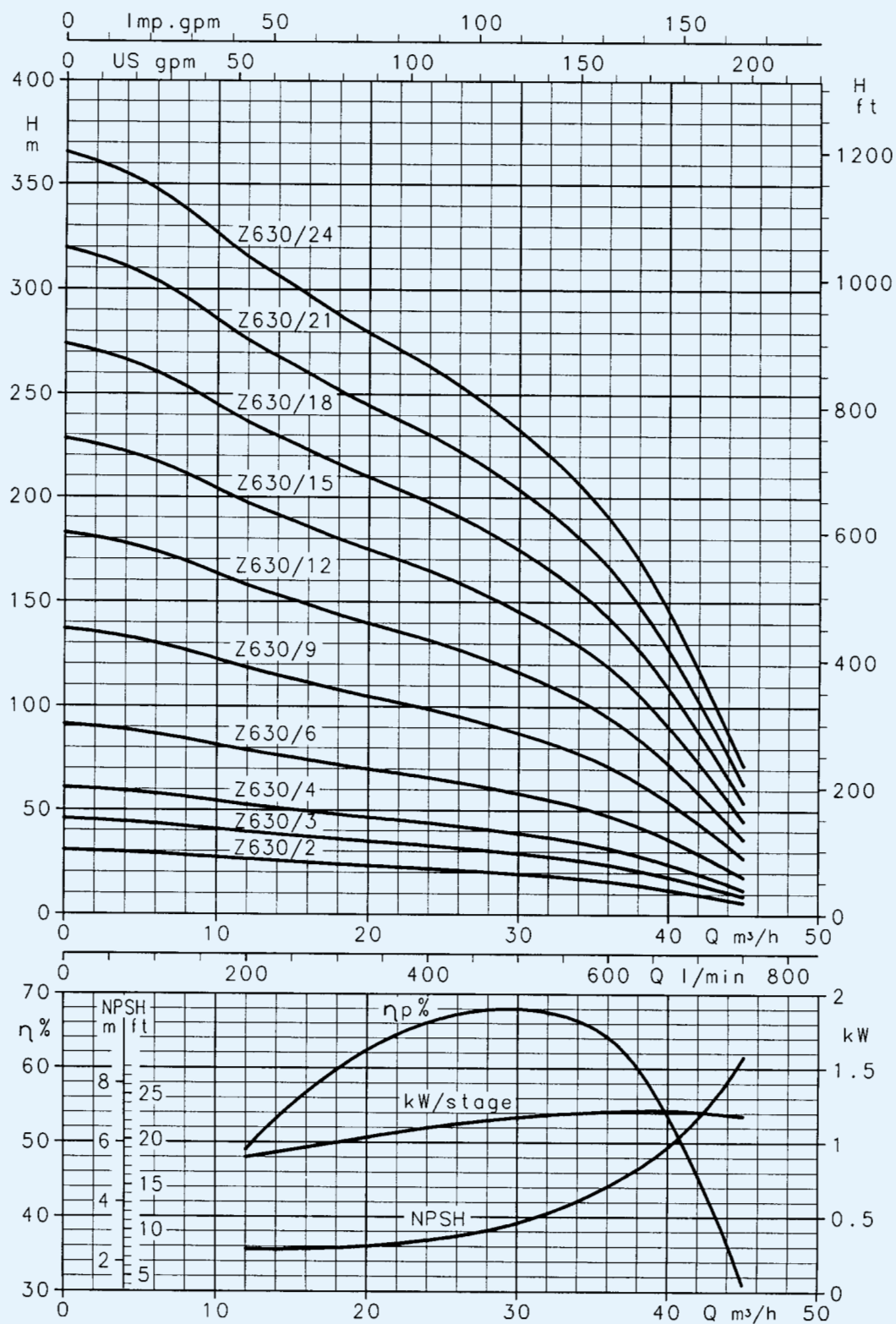
076-FZ6-FZN6

Z621 SERIES OPERATING CHARACTERISTICS AT 2850 rpm, 50 Hz



These performances are valid for liquids with density $\rho = 1.0 \text{ kg/dm}^3$ and kinematic viscosity $\gamma = 1 \text{ mm}^2/\text{sec}$.
Versions FZN6 AISI 316: available up to 22 kW

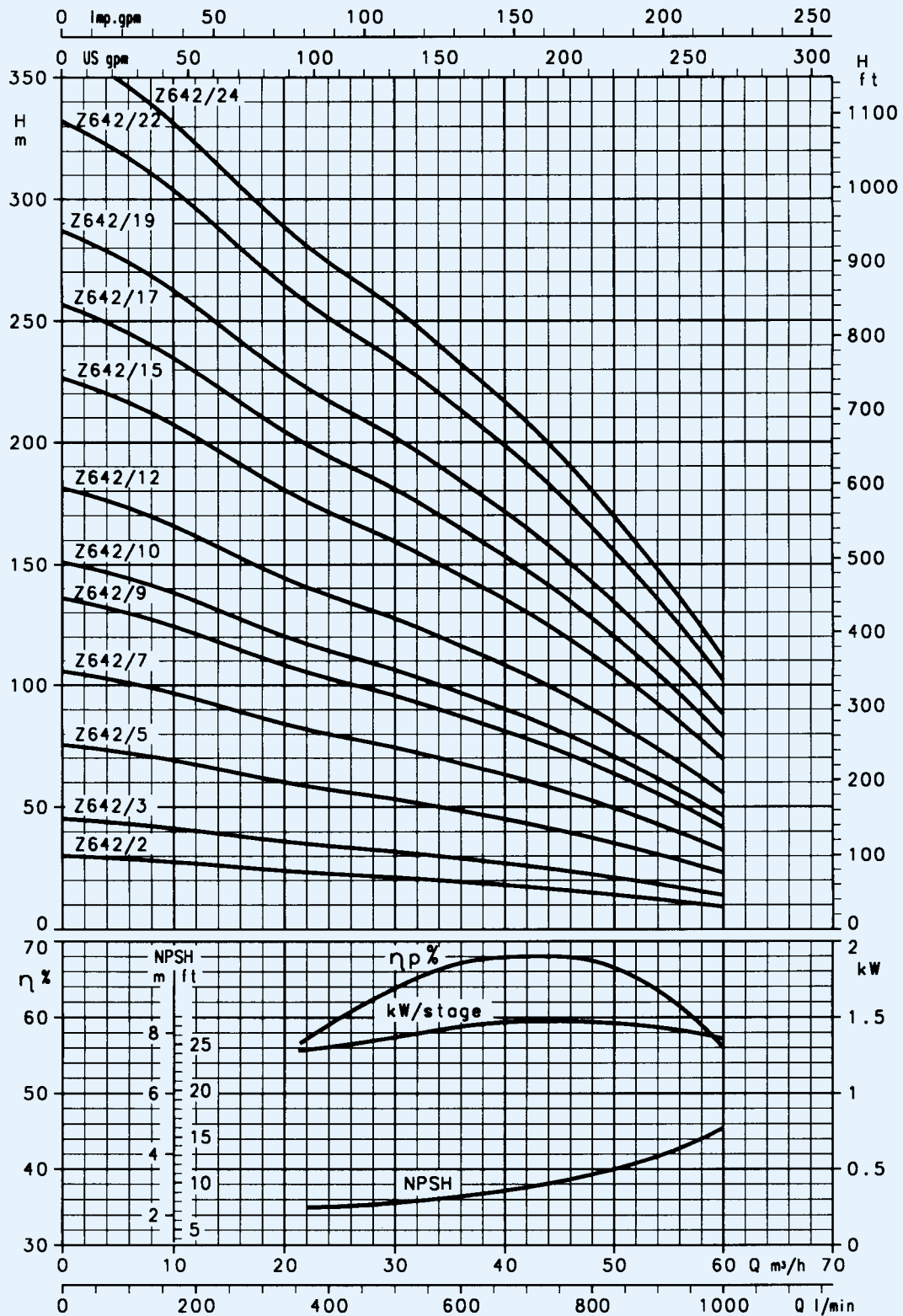
Z630 SERIES OPERATING CHARACTERISTICS AT 2850 rpm, 50 Hz



These performances are valid for liquids with density $\rho = 1.0 \text{ kg/dm}^3$ and kinematic viscosity $\gamma = 1 \text{ mm}^2/\text{sec}$.
Versions FZN6 AISI 316: available up to 22 kW

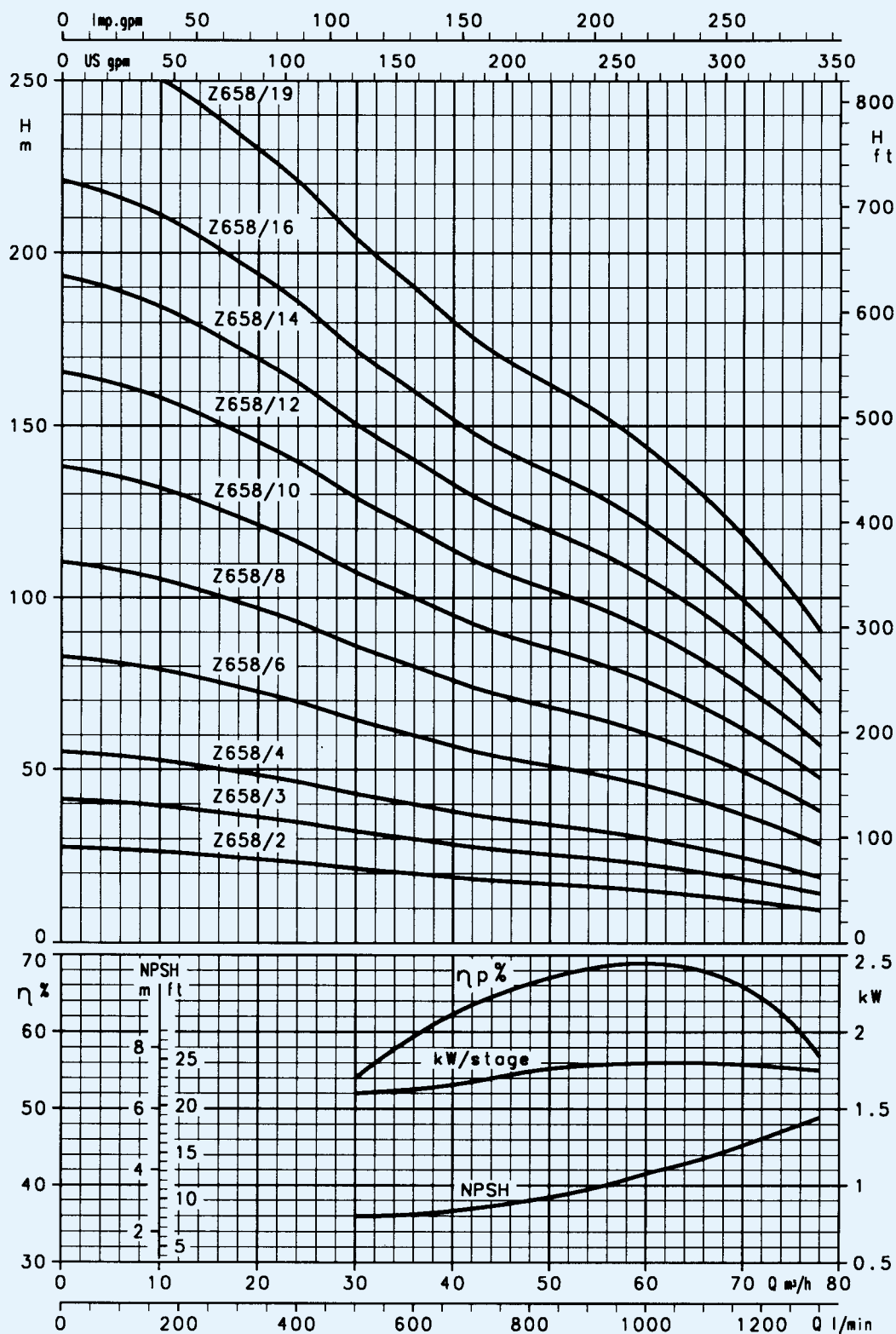
076-FZ6-FZN6

Z642 SERIES OPERATING CHARACTERISTICS AT 2850 rpm, 50 Hz



These performances are valid for liquids with density $\rho = 1.0 \text{ kg/dm}^3$ and kinematic viscosity $\gamma = 1 \text{ mm}^2/\text{sec}$.
Versions FZN6 AISI 316: available up to 22 kW

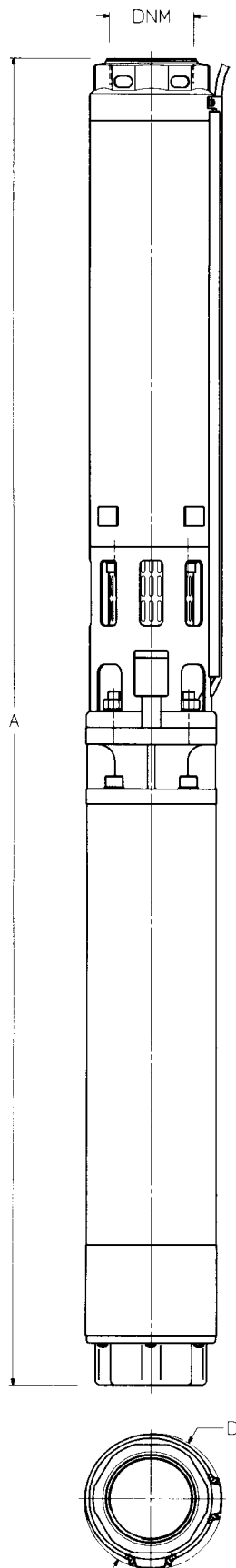
Z658 SERIES OPERATING CHARACTERISTICS AT 2850 rpm, 50 Hz



These performances are valid for liquids with density $\rho = 1.0 \text{ kg/dm}^3$ and kinematic viscosity $\gamma = 1 \text{ mm}^2/\text{sec}$.
Versions FZN6 AISI 316: available up to 22 kW

076-FZ6-FZN6

DIMENSIONS AND WEIGHTS



FZ

PUMP TYPE	OVERALL DIMENSIONS IN mm		DNM	WEIGHT kg
	A	D		
F4Z611/6	1195	ø138,5	G 2½"	35
F4Z611/8	1311	ø138,5	G 2½"	40
F4Z611/10	1542	ø138,5	G 2½"	48
F4Z611/12	1619	ø138,5	G 2½"	50
F4Z611/14	1767	ø138,5	G 2½"	56
F4Z611/16	1845	ø138,5	G 2½"	57

F4Z615/4	1117	ø138,5	G 2½"	33
F4Z615/6	1233	ø138,5	G 2½"	38
F4Z615/9	1502	ø138,5	G 2½"	47
F4Z615/12	1689	ø138,5	G 2½"	53

F4Z621/3	1094	ø138,5	G 2½"	32
F4Z621/4	1177	ø138,5	G 2½"	36
F4Z621/6	1418	ø138,5	G 2½"	44
F4Z621/9	1621	ø138,5	G 2½"	51

F4Z630/2	1211	ø138,5	G 3"	33
F4Z630/3	1361	ø138,5	G 3"	38
F4Z630/4	1625	ø138,5	G 3"	47
F4Z630/6	1919	ø138,5	G 3"	55

F4Z642/2	1249	ø138,5	G 3"	36
F4Z642/3	1513	ø138,5	G 3"	45
F4Z642/5	1807	ø138,5	G 3"	53

F4Z658/2	1249	ø138,5	G 3"	36
F4Z658/3	1513	ø138,5	G 3"	45
F4Z658/4	1695	ø138,5	G 3"	50

FZ611/6	1267	ø144	G 2½"	50
FZ611/8	1346	ø144	G 2½"	52
FZ611/10	1457	ø144	G 2½"	58
FZ611/12	1534	ø144	G 2½"	60
FZ611/14	1644	ø144	G 2½"	65
FZ611/16	1722	ø144	G 2½"	66
FZ611/19	1905	ø144	G 2½"	77
FZ611/21	1983	ø144	G 2½"	78
FZ611/24	2099	ø144	G 2½"	82
FZ611/28	2320	ø144	G 2½"	92
FZ611/31	2438	ø144	G 2½"	95
FZ611/34	2620	ø144	G 2½"	105
FZ611/37	2738	ø144	G 2½"	108

FZ615/4	1189	ø144	G 2½"	48
FZ615/6	1267	ø144	G 2½"	50
FZ615/9	1418	ø144	G 2½"	57
FZ615/12	1566	ø144	G 2½"	62
FZ615/15	1749	ø144	G 2½"	73
FZ615/18	1865	ø144	G 2½"	76
FZ615/21	2048	ø144	G 2½"	85
FZ615/24	2164	ø144	G 2½"	88
FZ615/28	2386	ø144	G 2½"	99
FZ615/31	2504	ø144	G 2½"	102
FZ615/34	2685	ø144	G 2½"	111
FZ615/37	2803	ø144	G 2½"	114

FZ621/3	1167	ø144	G 2½"	47
FZ621/4	1211	ø144	G 2½"	48
FZ621/6	1334	ø144	G 2½"	54
FZ621/9	1500	ø144	G 2½"	59
FZ621/11	1654	ø144	G 2½"	69
FZ621/13	1743	ø144	G 2½"	71
FZ621/15	1896	ø144	G 2½"	80
FZ621/17	1984	ø144	G 2½"	82
FZ621/20	2185	ø144	G 2½"	92
FZ621/22	2274	ø144	G 2½"	94
FZ621/24	2428	ø144	G 2½"	102
FZ621/26	2517	ø144	G 2½"	105
FZ621/30	2825	ø144	G 2½"	122
FZ621/34	3003	ø144	G 2½"	126

FZ630/2	1284	ø144	G 3"	49
FZ630/3	1396	ø144	G 3"	51
FZ630/4	1541	ø144	G 3"	57
FZ630/6	1797	ø144	G 3"	64
FZ630/9	2198	ø144	G 3"	80
FZ630/12	2599	ø144	G 3"	94
FZ630/15	3001	ø144	G 3"	108
FZ630/18	3402	ø144	G 3"	121
FZ630/21	3868	ø144	G 3"	142
FZ630/24	4204	ø144	G 3"	149

OZ

PUMP TYPE	OVERALL DIMENSIONS IN mm		DNM	WEIGHT kg
	A	D		
O4Z611/6	1210	ø138,5	G 2½"	35
O4Z611/8	1364	ø138,5	G 2½"	40
O4Z611/10	1558	ø138,5	G 2½"	46
O4Z611/12	1635	ø138,5	G 2½"	48
O4Z611/14	1789	ø138,5	G 2½"	55
O4Z611/16	1867	ø138,5	G 2½"	57

O4Z615/4	1131	ø138,5	G 2½"	33
O4Z615/6	1285	ø138,5	G 2½"	38
O4Z615/9	1518	ø138,5	G 2½"	45
O4Z615/12	1711	ø138,5	G 2½"	52

O4Z621/3	1109	ø138,5	G 2½"	32
O4Z621/4	1229	ø138,5	G 2½"	36
O4Z621/6	1434	ø138,5	G 2½"	42
O4Z621/9	1644	ø138,5	G 2½"	49

O4Z630/2	1226	ø138,5	G 3"	33
O4Z630/3	1414	ø138,5	G 3"	39
O4Z630/4	1641	ø138,5	G 3"	45
O4Z630/6	1941	ø138,5	G 3"	54

O4Z642/2	1302	ø138,5	G 3"	36
O4Z642/3	1529	ø138,5	G 3"	43
O4Z642/5	1829	ø138,5	G 3"	52

O4Z658/2	1302	ø138,5	G 3"	36
O4Z658/3	1529	ø138,5	G 3"	43
O4Z658/4	1717	ø138,5	G 3"	49

OZ611/6	1320	ø147	G 2½"	53
OZ611/8	1399	ø147	G 2½"	55
OZ611/10	1557	ø147	G 2½"	65
OZ611/12	1634	ø147	G 2½"	67
OZ611/14	1762	ø147	G 2½"	80
OZ611/16	1840	ø147	G 2½"	82
OZ611/19	2065	ø147	G 2½"	94
OZ611/21	2143	ø147	G 2½"	96
OZ611/24	2259	ø147	G 2½"	99
OZ611/28	2505	ø147	G 2½"	115
OZ611/31	2623	ø147	G 2½"	118
OZ611/34	2829	ø147	G 2½"	133
OZ611/37	2947	ø147	G 2½"	136

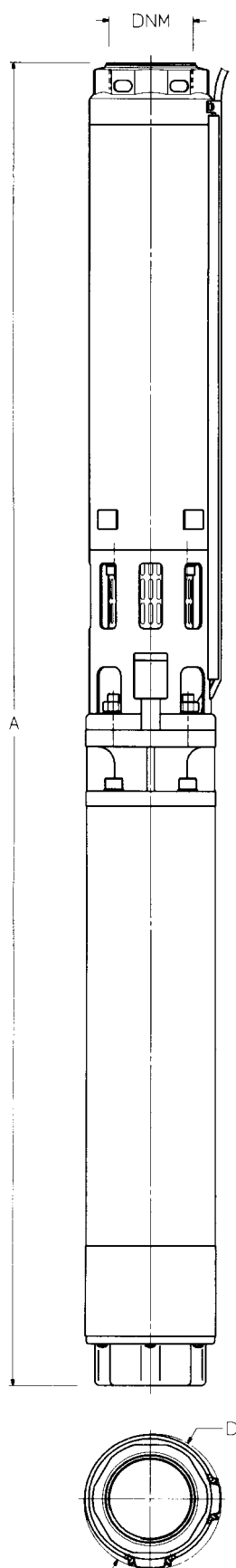
OZ615/4	1242	ø147	G 2½"	51
OZ615/6	1320	ø147	G 2½"	53
OZ615/9	1518	ø147	G 2½"	64
OZ615/12	1684	ø147	G 2½"	77
OZ615/15	1909	ø147	G 2½"	90
OZ615/18	2025	ø147	G 2½"	93
OZ615/21	2233	ø147	G 2½"	108
OZ615/24	2349	ø147	G 2½"	111
OZ615/28	2595	ø147	G 2½"	127
OZ615/31	2713	ø147	G 2½"	130
OZ615/34	2919	ø147	G 2½"	144
OZ615/37	3037	ø147	G 2½"	147

OZ621/3	1220	ø147	G 2½"	50
OZ621/4	1264	ø147	G 2½"	51
OZ621/6	1434	ø147	G 2½"	61
OZ621/9	1618	ø147	G 2½"	74
OZ621/11	1814	ø147	G 2½"	86
OZ621/13	1903	ø147	G 2½"	88
OZ621/15	2081	ø147	G 2½"	103
OZ621/17	2169	ø147	G 2½"	105
OZ621/20	2394	ø147	G 2½"	121
OZ621/22	2483	ø147	G 2½"	123
OZ621/24	2662	ø147	G 2½"	136
OZ621/26	2751	ø147	G 2½"	138
OZ621/30	3039	ø147	G 2½"	155
OZ621/34	3217	ø147	G 2½"	160

OZ630/2	1337	ø147	G 3"	51
OZ630/3	1449	ø147	G 3"	54
OZ630/4	1641	ø147	G 3"	64
OZ630/6	1915	ø147	G 3"	79
OZ630/9	2358	ø147	G 3"	97
OZ630/12	2784	ø147	G 3"	117
OZ630/15	3210	ø147	G 3"	136
OZ630/18	3636	ø147	G 3"	155
OZ630/21	4082	ø147	G 3"	175
OZ630/24	4418	ø147	G 3"	183

DIMENSIONS AND WEIGHTS

FZ



PUMP TYPE	OVERALL DIMENSIONS IN mm		DNM	WEIGHT kg
	A	D		
FZ642/2	1284	ø144	G 3"	49
FZ642/3	1429	ø144	G 3"	55
FZ642/5	1685	ø144	G 3"	62
FZ642/7	1974	ø144	G 3"	74
FZ642/9	2263	ø144	G 3"	86
FZ642/10	2375	ø144	G 3"	89
FZ642/12	2665	ø144	G 3"	100
FZ642/15	3066	ø144	G 3"	114
FZ642/17	3420	ø144	G 3"	132
FZ642/19	3644	ø144	G 3"	137
FZ642/22	4358	ø144	G 3"	180
FZ642/24	4582	ø144	G 3"	180

FZ658/2	1284	ø144	G 3"	
FZ658/3	1429	ø144	G 3"	55
FZ658/4	1573	ø144	G 3"	
FZ658/6	1862	ø144	G 3"	71
FZ658/8	2151	ø144	G 3"	
FZ658/10	2441	ø144	G 3"	96
FZ658/12	2730	ø144	G 3"	
FZ658/14	3084	ø144	G 3"	124
FZ658/16	3308	ø144	G 3"	
FZ658/19	4022	ø144	G 3"	172

OZ

PUMP TYPE	OVERALL DIMENSIONS IN mm		DNM	WEIGHT kg
	A	D		
OZ642/2	1337	ø147	G 3"	51
OZ642/3	1529	ø147	G 3"	62
OZ642/5	1803	ø147	G 3"	77
OZ642/7	2134	ø147	G 3"	91
OZ642/9	2448	ø147	G 3"	109
OZ642/10	2560	ø147	G 3"	112
OZ642/12	2874	ø147	G 3"	129
OZ642/15	3300	ø147	G 3"	147
OZ642/17	3634	ø147	G 3"	165
OZ642/19	3858	ø147	G 3"	170

OZ658/2	1337	ø147	G 3"	51
OZ658/3	1529	ø147	G 3"	62
OZ658/4	1691	ø147	G 3"	74
OZ658/6	2022	ø147	G 3"	88
OZ658/8	2336	ø147	G 3"	107
OZ658/10	2650	ø147	G 3"	124
OZ658/12	2964	ø147	G 3"	140
OZ658/14	3298	ø147	G 3"	158
OZ658/16	3522	ø147	G 3"	163

40S-OS6 SERIES

WITH REMOVABLE CONNECTOR

Submersible motors in cooling filling fluid suitable for use with foodstuffs. The choice of component materials ensures optimum operating performances, superior quality, reliability and ease of installation.

- ❑ **REWINDABLE STATOR**
- ❑ **ENVIRONMENTAL FRIENDLY COOLING FLUID (F.D.A. APPROVED)**
- ❑ **HIGH STARTING TORQUE**
- ❑ **ELECTRIC CABLE WITH REMOVAL CONNECTOR AVAILABLE FOR BOTH 40S-OS6.**
(THIS ALLOWS TO CHANGE THE DAMAGED CABLE AT SITE OR USE THE SAME CABLE IF CHANGING THE MOTOR ALONE).

SPECIFICATIONS

- Shaft extension and couplings in compliance with **NEMA** standards.
- **Rewindable stator.**
- Winding insulation: class B (40S)
class F (OS6).
- Protection grade: IP58.
- **Filling fluid** in compliance with standards concerning oils in contact with foodstuffs and with the purity requirements specified by the annex to G.U. no. 104 of 20/04/1973; it also complies with F.D.A. (FOOD AND DRUG ADMINISTRATION) standards.
- **Large compensation bellows** provide for the expansion of the internal liquid.
- Shaft supported by angular bearings.
- **Mechanical seal with sand protection.**
- Maximum immersion depth: 150 m (OS6).
- Maximum number of starts per hour, at regular intervals:
40S: 30 for direct start;
OS6: 15 for direct start;
20 for impedance start.
- Maximum allowable voltage fluctuations over the rated voltage: -10% / +6% 50 Hz
±10% 60 Hz.
- **Models:**
 - Single-phase 40S:
from 0,25 to 2,2 kW 220-230 V, 230-240 V, 50 Hz
from 0,37 to 2,2 kW 220-230 V, 60 Hz
from 0,37 to 1,1 kW 110-115 V, 0,5 Hz



- Three-phase 40S:
from 0,37 to 5,5 kW 220-240 V, 50 Hz
from 0,37 to 7,5 kW 380-415 V, 50 Hz
from 0,37 to 7,5 kW 380 V, 60 Hz
from 0,37 to 5,5 kW 220-230 V, 60 Hz
- Three-phase OS6:
from 3 to 30 kW 380-415 V, 50 Hz
from 3,7 to 15 kW 220-230 V, 60 Hz
from 3,7 to 30 kW 380 V, 60 Hz

Different voltages on request.

- OS6 motor version with dual cable outlet for star-delta starting is available on request, with 220-240 V for powers up to 15 kW (20 HP) and with 380-415 V, 50 Hz for all powers; up to 18.5 kW (25 HP) for the 60 Hz version.
- Horizontal operation:
 - Up to 2,2 kW for 40S
 - Up to 15 kW for OS6

MATERIALS

COMPONENT	MATERIAL
Outer sleeve	CrNi stainless steel (AISI 304)
Shaft extension	Stainless steel (AISI 303 for 40S) (AISI 304 for OS6)
Upper support	Pressed brass alloy (40S Version) Cast iron + CrNi (OS6 Version)
Mechanical seal	Carbon/Ceramic with sand labyrinth
Elastomers	nitrile rubber
Lower protection	Stainless steel (AISI 304) (40S Version) Cast iron + CrNi (OS6 Version)
Compensation bellows	Oilproof rubber
Cooling Fluid	ESSO MARCOL

40S SERIES

OPERATING CHARACTERISTICS AT 2850 rpm

MOTOR TYPE 380-415 V 50 HZ		RATED POWER		VOLTAGE V	CAPACITOR 450 V μF	OPERATING FEATURES AT RATED OUTPUT				DIRECT STARTING		MAX WATER TEMPERATURE °C	CABLE TYPE	
		kW	HP			SPEED rpm	EFF. %	cos φ	RATED CURRENT A	$\frac{Ca}{Cn}$	$\frac{Ia}{In}$		Nc x sect. (mm²)	L (m)
SINGLEPHASE 220-230 V	40S 02 M22	0,25	0,33	220 230	12,5	2835 2850	50 47	0,92 0,9	2,5 2,6	0,85 0,93	3,4 3,5	30	4x1,5	1,8
	40S 03 M22	0,37	0,5	220 230	16	2825 2840	53 53	0,94 0,92	3,5 3,6	0,76 0,83	3,1 3,2	30	4x1,5	1,8
	40S 05 M22	0,55	0,75	220 230	20	2815 2830	60 58	0,96 0,95	4,5 4,4	0,69 0,75	3,4 3,6	30	4x1,5	1,8
	40S 07 M22	0,75	1	220 230	30	2825 2840	60 59	0,98 0,97	5,7 5,6	0,85 0,93	3,4 3,6	30	4x1,5	1,8
	40S 11 M22	1,1	1,5	220 230	40	2820 2835	63 62	0,98 0,97	8,2 8,1	0,77 0,84	3,5 3,7	30	4x1,5	1,8
	40S 15 M22	1,5	2	220 230	50	2810 2825	66 65	0,98 0,97	10,5 10,3	0,67 0,73	3,2 3,4	30	4x1,5	1,8
	40S 22 M22	2,2	3	220 230	70	2805 2825	66 67	0,99 0,98	15,9 15,5	0,59 0,64	3,1 3,4	30	4x1,5	1,8
SINGLEPHASE 230-240 V	40S 02 M24	0,25	0,33	230 240	12,5	2835 2850	50 47	0,92 0,9	2,4 2,5	0,85 0,93	3,5 3,5	30	4x1,5	1,8
	40S 03 M24	0,37	0,5	230 240	16	2825 2840	53 53	0,94 0,92	3,4 3,5	0,76 0,83	3,1 3,1	30	4x1,5	1,8
	40S 05 M24	0,55	0,75	230 240	20	2815 2830	60 58	0,96 0,95	4,4 4,3	0,69 0,75	3,3 3,5	30	4x1,5	1,8
	40S 07 M24	0,75	1	230 240	30	2825 2840	60 59	0,98 0,97	5,5 5,4	0,85 0,93	3,4 3,6	30	4x1,5	1,8
	40S 11 M24	1,1	1,5	230 240	40	2820 2835	63 62	0,98 0,97	7,9 7,8	0,77 0,84	3,5 3,7	30	4x1,5	1,8
	40S 15 M24	1,5	2	230 240	50	2810 2825	66 65	0,98 0,97	10,1 9,9	0,67 0,73	3,4 3,4	30	4x1,5	1,8
	40S 22 M24	2,2	3	230 240	70	2805 2825	66 67	0,99 0,98	15,2 14,8	0,59 0,64	3,1 3,4	30	4x1,5	1,8

MOTOR TYPE THREEPHASE		RATED OUTPUT		VOLTAGE V	OPERATING FEATURES AT RATED OUTPUT				DIRECT STARTING		MAX WATER TEMPERATURE Ia °C	CABLE TYPE	
		kW	HP		SPEED rpm	EFF. %	cos φ	RATED A	CURRENT Cn	Ca In		(mm²)	Nc x sect. (m)
THREEPHASE 220-240 V	40S 03 T23	0,37	0,5	230	2850	65	0,7	1,9	2	4,3	30	4x1,5	1,8
	40S 05 T23	0,55	0,75	230	2840	66	0,75	2,8	1,79	3,9	30	4x1,5	1,8
	40S 07 T23	0,75	1	230	2855	65	0,75	3,7	1,92	4,3	30	4x1,5	1,8
	40S 11 T23	1,1	1,5	230	2825	72	0,76	5,2	2,71	4,9	30	4x1,5	1,8
	40S 15 T23	1,5	2	230	2840	71	0,76	7	2,59	4,9	30	4x1,5	1,8
	40S 22 T23	2,2	3	230	2825	72	0,76	10,3	2,75	4,4	30	4x1,5	1,8
	40S 30 T23	3	4	230	2835	75	0,75	13,5	3,17	4,9	30	4x1,5	2,5
	40S 40 T23	4	5,5	230	2840	77	0,78	17,3	3,16	5,3	30	4x1,5	2,5
40S 55 T23	5,5	7,5	230	2835	77	0,8	23,7	3,19	5,3	30	4x1,5	2,5	
THREEPHASE 380-415 V	40S 03 T40	0,37	0,5	400	2850	65	0,7	1,1	2,03	4,3	30	4x1,5	1,8
	40S 05 T40	0,55	0,75	400	2840	66	0,75	1,6	1,82	3,9	30	4x1,5	1,8
	40S 07 T40	0,75	1	400	2855	65	0,75	2,1	1,95	4,4	30	4x1,5	1,8
	40S 11 T40	1,1	1,5	400	2825	72	0,76	3	2,75	4,9	30	4x1,5	1,8
	40S 15 T40	1,5	2	400	2840	71	0,76	4	2,63	4,9	30	4x1,5	1,8
	40S 22 T40	2,2	3	400	2825	72	0,76	5,9	2,79	4,5	30	4x1,5	1,8
	40S 30 T40	3	4	400	2835	75	0,75	7,8	3,21	5	30	4x1,5	2,5
	40S 40 T40	4	5,5	400	2240	77	0,78	10	3,2	5,4	30	4x1,5	2,5
	40S 55 T40	5,5	7,5	400	2835	77	0,8	13,7	3,24	5,4	30	4x1,5	2,5
40S 75 T40	7,5	10	400	2825	76	0,73	19,8	3,2	4,8	30	4x1,5	2,5	

Cs/Cn = Starting torque/Rated torque

The maximum temperature regards motors operating in a 6" well or other installation which will ensure a minimum water circulation speed around the motor sleeve of at last 8 cm/sec.

Is/In Courant de démarrage/Courant nominal

OS6 SERIES OPERATING CHARACTERISTICS

MOTOR TYPE THREEPHASE 380-415 V 50 Hz	RATED OUTPUT		OPERATING CHARACTERISTICS AT RATED POWER				DIRECT START		MAX WATER TEMP. °C	CABLE	
	kW	HP	SPEED rpm	EFF. %	cos φ	RATED CURRENT A	$\frac{Ca}{Cn}$	$\frac{Ia}{In}$		ncxsect. (mm ²)	L (m)
OS6 400 T53	3	4	2800	75,0	0,82	7,6	5,2	6,6	30	4x4	3
OS6 500 T53	3,7	5	2800	74,0	0,82	8,8	3,5	6	30	4x4	3
OS6 750 T53	5,5	7,5	2830	78,0	0,83	12,5	4	6,6	30	4x4	3
OS6 1000 T53	7,5	10	2820	79,0	0,83	17	4,3	6,5	30	4x4	3
OS6 1500 T53	11	15	2830	81,0	0,83	24,5	4,8	7	30	4x4	3
OS6 2000 T53	15	20	2880	84,0	0,83	31	4,1	7	25	4x6	3
OS6 2500 T53	18,5	25	2850	83,0	0,83	39	3,5	6,3	25	4x6	3
OS6 3000 T53	22	30	2870	84,0	0,82	46	3,4	6,6	20	4x8	4
OS6 4000 T53	30	40	2850	83,0	0,85	62	2,4	5,8	20	4x8	4

I_s/I_n = Starting torque/Rated torque

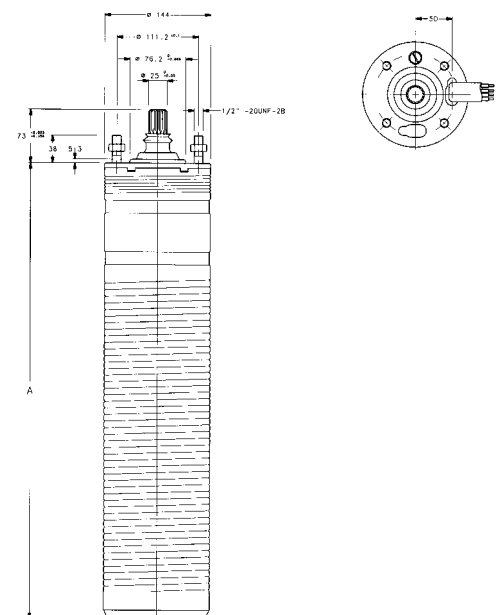
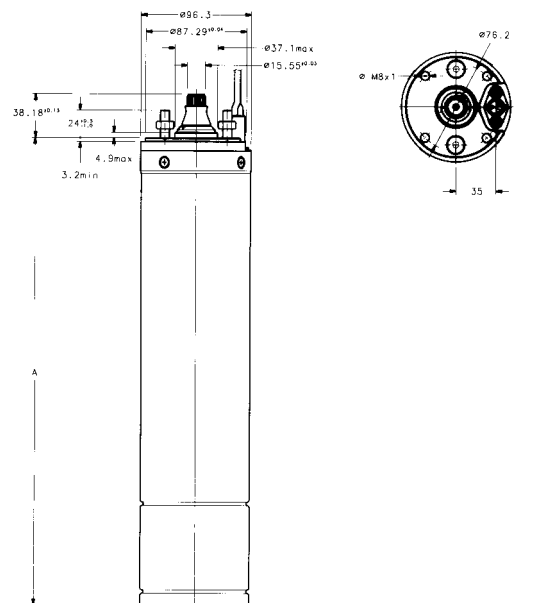
C_s/C_n = Starting current/Rated current

The Maximum temperature regards motors operating in a 6" well or other installation which will ensure a minimum water circulation speed around the motor sleeve of at least 0,2 m/sec.

MOTOR DIMENSION AND WEIGHTS

40S SERIES - 50 Hz

MOTOR TYPE	POWER kW	DIMENSIONS IN mm A	WEIGHT kg
40S02M22-24	0,25	336	8,3
40S03T23-40	0,37	336	8
40S03M22-24	0,37	356	9
40S05T23-40	0,55	356	9
40S05M22-24	0,55	384	10,5
40S07T23-40	0,75	384	10
40S07M22-24	0,75	406	11,5
40S11T23-40	1,1	406	11
40S11M22-24	1,1	435	12,5
40S15T23-40	1,5	435	12,5
40S15M22-24	1,5	463	14
40S22T23-40	2,2	463	13,5
40S22M22-24	2,2	568	18,5
40S30T23-40	3	530	20
40S 40T23-40	4	606	23
40S55T23-40	5,5	721	27
40S75T23-40	7,5	797	31



OS6 SERIES - 50 Hz

MOTOR TYPE	POWER kW	HP	DIMENSIONS IN mm A	WEIGHT kg
OS6 400	3	4	624	38
OS6 500	3,7	5	624	38
OS6 750	5,5	7,5	704	46
OS6 1000	7,5	10	754	56
OS6 1500	11	15	861	65
OS6 2000	15	20	951	77
OS6 2500	18,5	25	1041	89
OS6 3000	22	30	1131	100
OS6 4000	30	40	1241	113

F4-F6 SERIES

WATER FILLED MOTORS

The choice of component materials ensures optimum operating performances, superior quality, reliability and ease of installation.

SPECIFICATIONS

- **Stainless steel** outer sleeve.
- Shaft extension and coupling dimensions to **NEMA** standards.
- Watertight stator.
- Insulation class: B for F4 motors
F for F6 motors.
- Shaft supported by bearings lubricated by pre-charged liquid.
- **Lip seal for F4 motors, mechanical seal for F6 motors.**
- Maximum immersion depth: 350 m.
- Maximum number of starts per hour, evenly distributed: 20 for direct start.
- Versions:
 - Single-phase F4 from 0.25 to 2.2 kW**
220 V, 230 V, 240 V 50 Hz
 - Three-phase F4 from 0.37 to 5.5 kW**
380-415 V 50 Hz
 - Three-phase F4 7.5 kW**
380-400 V, 415 V 50 Hz
 - Three-phase F6 from 4 to 45 kW**
380-415 V 50 Hz
- **Removable supply cable** fitted with watertight connector.
- F6 motors with dual cable outlet for star-delta starting are available on request; three-phase 220 V and 500 V motors are also available.
- The maximum temperature (30°C) regards F4 motors operating in a 4" well or F6 motors operating in a 6" well, or in any other installation which will ensure a minimum water circulation speed around the motor sleeve of at least 8 cm/sec. for F4 and 16 cm/sec. for F6.



TABLE OF MATERIALS

PART	MATERIAL
Outer sleeve	CRNI STAINLESS STEEL (AISI 304)
Shaft extension	CRNI STAINLESS STEEL (AISI 303) FOR F4 UP TO 3 kW OS6 CRNICU STAINLESS STEEL (AISI 303) FOR F4 ABOVE 3 kW
Upper and lower support	NICR TREATED CAST IRON FOR F4 CAST IRON AND EPOXY COATING FOR F6
Mechanical seal	LIP SEAL (BUNA N) FOR F4 MECHANICAL CARBON/CERAMIC FOR F6
Elastomers	NITRILE RUBBER AND BUNA N
Lower protection	CRNI STAINLESS STEEL (AISI 304) FOR F4 UP TO 3 kW CRNI STAINLESS STEEL (AISI 303) FOR F4 ABOVE 3 kW F6
Compensating bellows	BUNA N FOR F4 UP TO 3 kW AND FOR F6 NITRILE RUBBER FOR F4 ABOVE 3 kW
Bearings	GRAPHITE
Cooling liquid	DISTILLED WATER + ANTIFREEZE

OPERATING CHARACTERISTICS OF F4 SINGLE-PHASE MOTORS

MOTOR TYPE	RATED POWER		RATED VOLTAGE A 50 Hz	CAPACITOR		OPERATING CHARACTERISTICS AT RATED POWER				DIRECT START		MAX. WATER TEMPERATURE °C	CABLE TYPE	
	kW	HP		μF	V	RATED CURRENT A	rpm	η%	cos φ	$\frac{C_s}{C_n}$	I _s		nc x sez. (mm ²)	L (m)
F4 033 S52	0,25	0,33	220-230	12,5	400	2,5	2865	53	0,87	1,00	8,6	30	4x1,5	1,5
F4 033 S52	0,25	0,33	240	12,5	400	2,3	2865	53	0,87	1,00	7,9	30	4x1,5	1,5
F4 050 S52	0,37	0,5	220-230	16	400	3,3	2860	58	0,88	0,73	11,7	30	4x1,5	1,5
F4 050 S52	0,37	0,5	240	16	400	3	2860	58	0,88	0,73	10,7	30	4x1,5	1,5
F4 075 S52	0,55	0,75	220-230	20	400	4,5	2860	63	0,92	0,62	16,9	30	4x1,5	1,5
F4 075 S52	0,55	0,75	240	20	400	4,1	2860	63	0,92	0,62	15,5	30	4x1,5	1,5
F4 100 S52	0,75	1	220-230	30	400	5,6	2850	66	0,95	0,68	21,5	30	4x1,5	1,5
F4 100 S52	0,75	1	240	30	400	5,1	2850	66	0,95	0,68	19,7	30	4x1,5	1,5
F4 150 S52	1,1	1,5	220-230	40	400	8,2	2860	68	0,94	0,66	30,3	30	4x1,5	1,5
F4 150 S52	1,1	1,5	240	40	400	7,5	2860	68	0,94	0,66	27,8	30	4x1,5	1,5
F4 200 S52	1,5	2	220-230	50	400	10,4	2840	71	0,94	0,65	38,4	30	4x1,5	1,5
F4 200 S52	1,5	2	240	50	400	9,5	2840	71	0,94	0,65	35,2	30	4x1,5	1,5
F4 300 S52	2,2	3	220-230	75	400	15,6	2840	70	0,96	0,50	55,6	30	4x1,5	1,5
F4 300 S52	2,2	3	240	75	400	14,3	2840	70	0,96	0,50	51	30	4x1,5	1,5

OPERATING CHARACTERISTICS OF F4 THREE-PHASE MOTORS

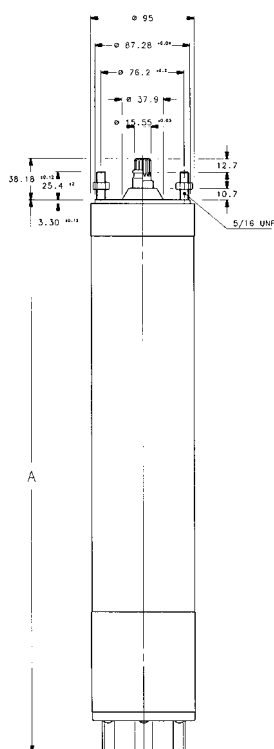
MOTOR TYPE	RATED POWER		RATED VOLTAGE A 50 Hz	OPERATING CHARACTERISTICS AT RATED POWER				DIRECT START		MAX. WATER TEMPERATURE °C	CABLE	
	kW	HP		RATED CURRENT A	rpm	η%	cos φ	$\frac{C_s}{C_n}$	I _s		nc x sez (mm ²)	L (m)
F4 050T534	0,37	0,5	380	1,1	2840	66	0,76	1,8	4,4	30	4x1,5	1,5
F4 050T534	0,37	0,5	415	1,2	2875	66	0,76	2,2	4,9	30	4x1,5	1,5
F4 075T534	0,55	0,75	380	1,6	2830	67	0,80	1,6	6	30	4x1,5	1,5
F4 075T534	0,55	0,75	415	1,7	2870	66	0,70	2	6,6	30	4x1,5	1,5
F4 100T534	0,75	1	380	2,1	2850	70	0,79	1,9	8,9	30	4x1,5	1,5
F4 100T534	0,75	1	415	2,2	2880	68	0,71	2,4	9,8	30	4x1,5	1,5
F4 150T534	1,1	1,5	380	3	2820	72	0,81	2,5	13,8	30	4x1,5	1,5
F4 150T534	1,1	1,5	415	3,1	2860	72	0,72	3,1	15,3	30	4x1,5	1,5
F4 200T534	1,5	2	380	3,9	2840	73	0,81	2,2	18,6	30	4x1,5	2,5
F4 200T534	1,5	2	415	4,1	2870	72	0,72	2,7	20,2	30	4x1,5	2,5
F4 300T534	2,2	3	380	5,8	2815	75	0,81	2,9	28,7	30	4x1,5	2,5
F4 300T534	2,2	3	415	6,3	2870	73	0,69	3,5	30,8	30	4x1,5	2,5
F4 400H534	3	4	380	7,5	2830	76	0,81	2,7	39,9	30	4x1,5	2,5
F4 400H534	3	4	415	8,2	2860	75	0,7	3,4	43,3	30	4x1,5	2,5
F4 500H534	3,7	5	380	9	2830	77	0,84	2,8	46	30	4x1,5	2,5
F4 500H534	3,7	5	415	9,4	2860	76	0,74	3,4	50	30	4x1,5	2,5
F4 550H534	4	5,5	380	9,8	2835	77	0,84	3	55	30	4x1,5	2,5
F4 550H534	4	5,5	415	10,3	2870	76	0,73	3,6	60	30	4x1,5	2,5
F4 750H534	5,5	7,5	380	13,5	2830	76	0,84	2,5	72	30	4x1,5	2,5
F4 750H534	5,5	7,5	415	14,2	2860	75	0,74	3	79	30	4x1,5	2,5
F41000H533	7,5	10	380	19	2820	77	0,79	3,2	105	30	4x1,5	2,5
F41000H533	7,5	10	400	19,8	2840	76	0,73	3,6	105	30	4x1,5	2,5
F41000H54	7,5	10	415	17,4	2820	77	0,79	4,1	96	30	4x1,5	2,5

OPERATING CHARACTERISTICS OF F6 THREE-PHASE MOTORS

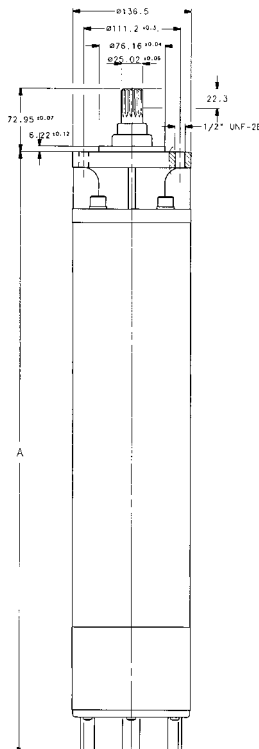
MOTOR TYPE	RATED POWER		RATED VOLTAGE A 50 Hz	OPERATING CHARACTERISTICS AT RATED POWER				DIRECT START		MAX. WATER TEMPERATURE °C	CABLE	
	kW	HP		RATED CURRENT A	rpm	$\eta\%$	$\cos \varphi$	$\frac{C_s}{C_n}$	I_s		nc x sez (mm ²)	L (m)
F 605T534	4	5,5	380	9,5	2840	77	0,85	1,3	52,3	30	4x4	4
F 605T534	4	5,5	415	9,3	2880	78,5	0,78	1,6	45,5	30	4x4	4
F 607T534	5,5	7,5	380	12,8	2850	78	0,85	1,6	60,5	30	4x4	4
F 607T534	5,5	7,5	415	12,8	2880	78	0,78	1,9	66	30	4x4	4
F 610T534	7,5	10	380	16,3	2850	79	0,87	1,7	83	30	4x4	4
F 610T534	7,5	10	415	16,2	2880	79	0,81	2,0	90,6	30	4x4	4
F 615T534	11	15	380	24	2860	81	0,87	1,9	126	30	4x8,4	4
F 615T534	11	15	415	24,1	2870	79,5	0,81	2,3	135,5	30	4x8,4	4
F 620T534	15	20	380	32	2850	82	0,86	2	164	30	4x8,4	4
F 620T534	15	20	415	31	2870	81	0,83	2,5	179	30	4x8,4	4
F 625T534	18,5	25	380	40	2850	82	0,87	2,2	220	30	4x8,4	4
F 625T534	18,5	25	415	38,5	2870	82	0,83	2,7	240	30	4x8,4	4
F 630T534	22	30	380	47	2840	82	0,88	2,1	255	30	4x8,4	4
F 630T534	22	30	415	45	2870	82,5	0,84	2,5	278	30	4x8,4	4
F 640T534	30	40	380	64,1	2860	82,5	0,85	2,4	373	30	4x8,4	4
F 640T534	30	40	415	62,5	2880	82,5	0,81	2,8	407	30	4x8,4	4
F 650T534	37	50	380	80	2840	83,5	0,86	2	390	30	4x8,4	4
F 650T534	37	50	415	73,5	2890	84,7	0,85	2,4	426	30	4x8,4	4
F 660T534	45	60	380	95	2850	83	0,86	2	488	30	4x8,4	4
F 660T534	45	60	415	89	2890	84,2	0,83	2,4	582	30	4x8,4	4

DIMENSIONS AND WEIGHTS OF F4-F6 MOTORS

F4" SERIES



F6" SERIES



F4 MOTORS 1x220 V/50 Hz

MOTOR TYPE	POWER kW	HP	DIMENSIONS IN mm A	WEIGHT kg
F4 033 S52	0,25	0,3	223	7,5
F4 050 S52	0,37	0,5	242,1	8,5
F4 075 S52	0,55	0,75	270,8	9,5
F4 100 S52	0,75	1	298,5	11
F4 150 S52	1,1	1,5	328	12
F4 200 S52	1,5	2	356	14,5
F4 300 S52	2,2	3	461	18,0

F4 MOTORS 3x400 V/50 Hz

MOTOR TYPE	POWER kW	HP	DIMENSIONS IN mm A	WEIGHT kg
F4 050 T533	0,37	0,5	223,0	7,5
F4 075 T533	0,55	0,75	242,1	8,5
F4 100 T533	0,75	1	270,8	9,5
F4 150 T534	1,1	1,5	298,5	11
F4 200 T534	1,5	2	327,2	12
F4 300 T534	2,2	3	356	13,5
F4 400 H534	3	4	514	20
F4 500 H534	3,7	5	552	22
F4 550 H534	4	5,5	590	23
F4 750 H534	5,5	7,5	704	29
F4 1000 H534	7,5	10	774	32

F6 MOTORS 3x400 V/50 Hz

MOTOR TYPE	POWER kW	HP	DIMENSIONS IN mm A	WEIGHT kg
F 605 T534	4	5,5	581,2	38
F 607 T534	5,5	7,5	614,4	40
F 610 T534	7,5	10	946,2	44,0
F 612 T534	9,3	12,5	978,7	47
F 615 T534	11	15	711,2	49,0
F 620 T534	15	20	776,2	56
F 625 T534	18,5	25	841,5	62,0
F 630 T534	22	30	906,5	69
F 640 T534	30	40	1036,6	85
F 650 T534	37	50	1405,0	115,0
F 660 T534	45	60	1557,5	130,0

S SERIES

SUBMERSIBLE PUMPS FOR 8" - 10" - 12" WELLS

APPLICATIONS

- Water supply from deep wells.
- Irrigation.
- Pressure boosting.
- Fire-fighting.
- Mines.

SPECIFICATIONS

- Multistage submersible electric pumps (with radial and semi-axial impellers).
- **Delivery:** up to **580 m³/h** (end of curve).
- **Head:** up to **450 m.**
- **Power:** up to **400 kW - 540 HP.**
- Standard models can pump clean, non-corrosive water (models for corrosive or salt water are available on request).
- **Maximum water temperature: 25°C** (higher temperatures on request)
- **Maximum** sand content: **25 g/m³.**
- **Vertical or horizontal operation.**
- Built-in non-return valve.
- Coupling and flange dimensions meet NEMA specifications

For more information please contact our sales network.



TABLE OF MATERIALS

PART	MATERIAL *			
	GB VERSION	STANDARD VERSION	GB 10" VERSION	B VERSION
Impeller	Bronze (G-CuSn10)	Cast iron (GG 25)	Bronze (G-CuSn10)	Bronze (G-CuSn10)
Diffuser	Cast iron (GG 25)	Cast iron (GG 25)	Cast iron (GG 25)	Bronze (G-CuSn10)
Motor support - Pump suction	Bronze (G-CuSn10)	Cast iron (GG 25)	Cast iron (GG 25)	Bronze (G-CuSn10)
Shaft	Stainless Steel	Stainless Steel	Stainless Steel	Stainless Steel

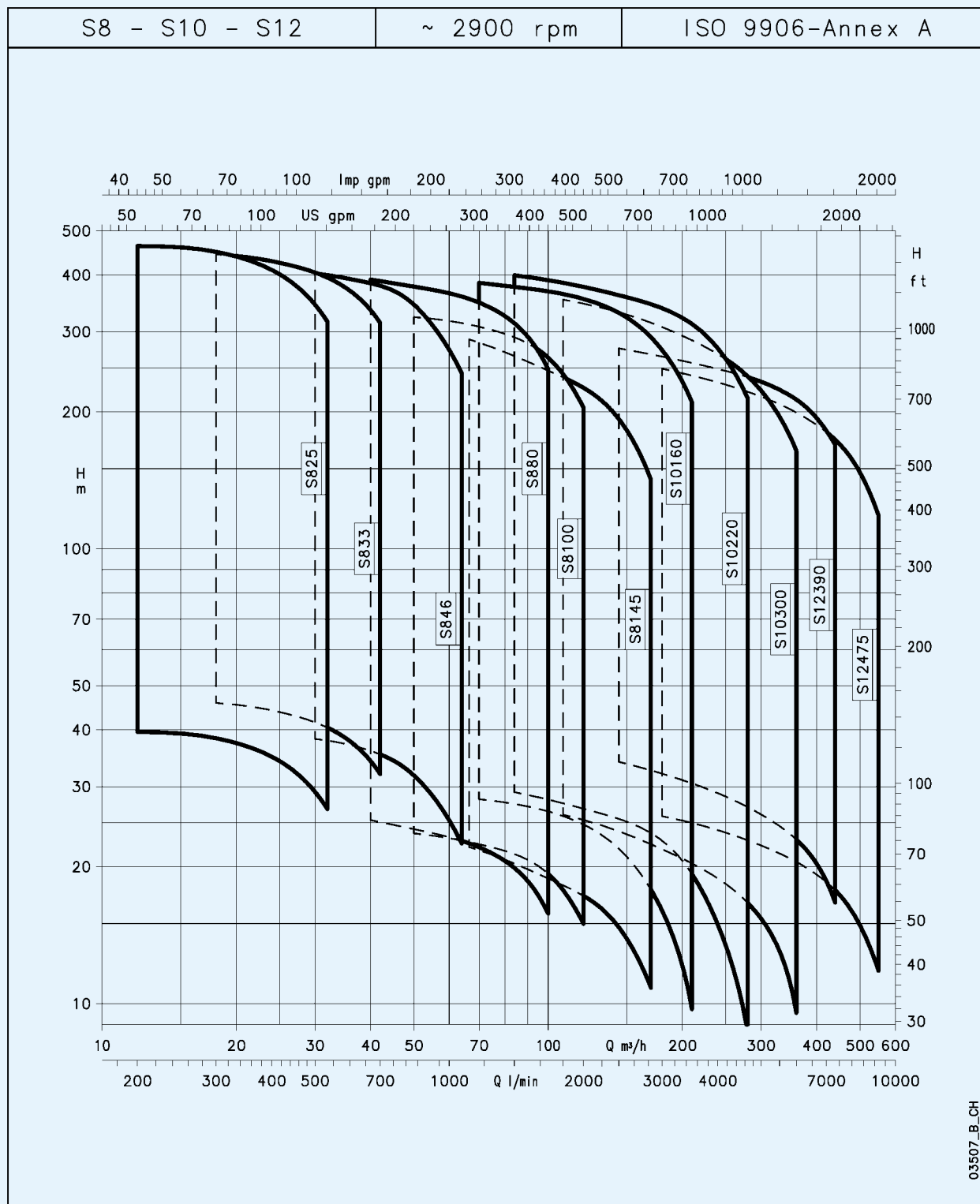
* GB = Cast iron - Bronze

* B = Bronze

S SERIES

OPERATING CHARACTERISTICS AT 2900 rpm, 50 Hz

S



These performances are valid for liquids with density $\rho = 1.0 \text{ kg/dm}^3$ and kinematic viscosity $\gamma = 1 \text{ mm}^2/\text{sec}$.

DOC SERIES

SUBMERSIBLE PUMPS

DOC pumps are versatile, corrosion-resistant and compact. Three basic versions are available with 0.3 to 0.7 kW power.

A DOC 7VX version with Vortex impeller is available.

APPLICATIONS

- Emptying of residential sump pits, rainwater tanks or laundry drainage.
- Garden and lawn irrigation, with suction from rainwater tanks.
- Emergency draining of flooded basements and garages.
- Transfer of water from tanks, cisterns and swimming pools.
- Water display, fountains.

SPECIFICATIONS

- **Maximum liquid temperature: 40°C** with partially submerged pump.
- **Dry motor.**
- Maximum immersion depth: 5 m.
- **Class B insulation.**
- **IP 68 protection.**
- The **DOC 3** pump has a delivery of **145 l/min**, head up to **7 m**, and passes **suspended solids up to 10 mm** in diameter. Only available in single-phase version.
- The **DOC 7** pump has a delivery of **225 l/min**, head up to **11 m**, and passes **suspended solids up to 10 mm** in diameter.
- The **DOC 7VX** pump has a delivery of **180 l/min**, head up to **7 m**, and can handle liquids with **suspended solids up to 20 mm** in diameter.
- A "shallow-suction device", that can be mounted on both the DOC3 and DOC7 models, is available on request. It ensures complete drainage of flooded floors (to 3 mm from floor).
- Versions:
 - Single-phase** 220 V 50 Hz 2 poles (2850 rpm).
 - Three-phase** 380-415 V 50 Hz 2 poles (2850 rpm).
- 60 Hz and without floats (SG) models are available on request or tube float switch.



- **The single-phase versions feature:**
 - Pre-assembled float** for automatic pump operation (version without float available on request SG).
 - Built-in capacitor.**
 - Thermal overload protection** to stop pump supply in case of overheating.

LAB-LIP SEAL SYSTEM

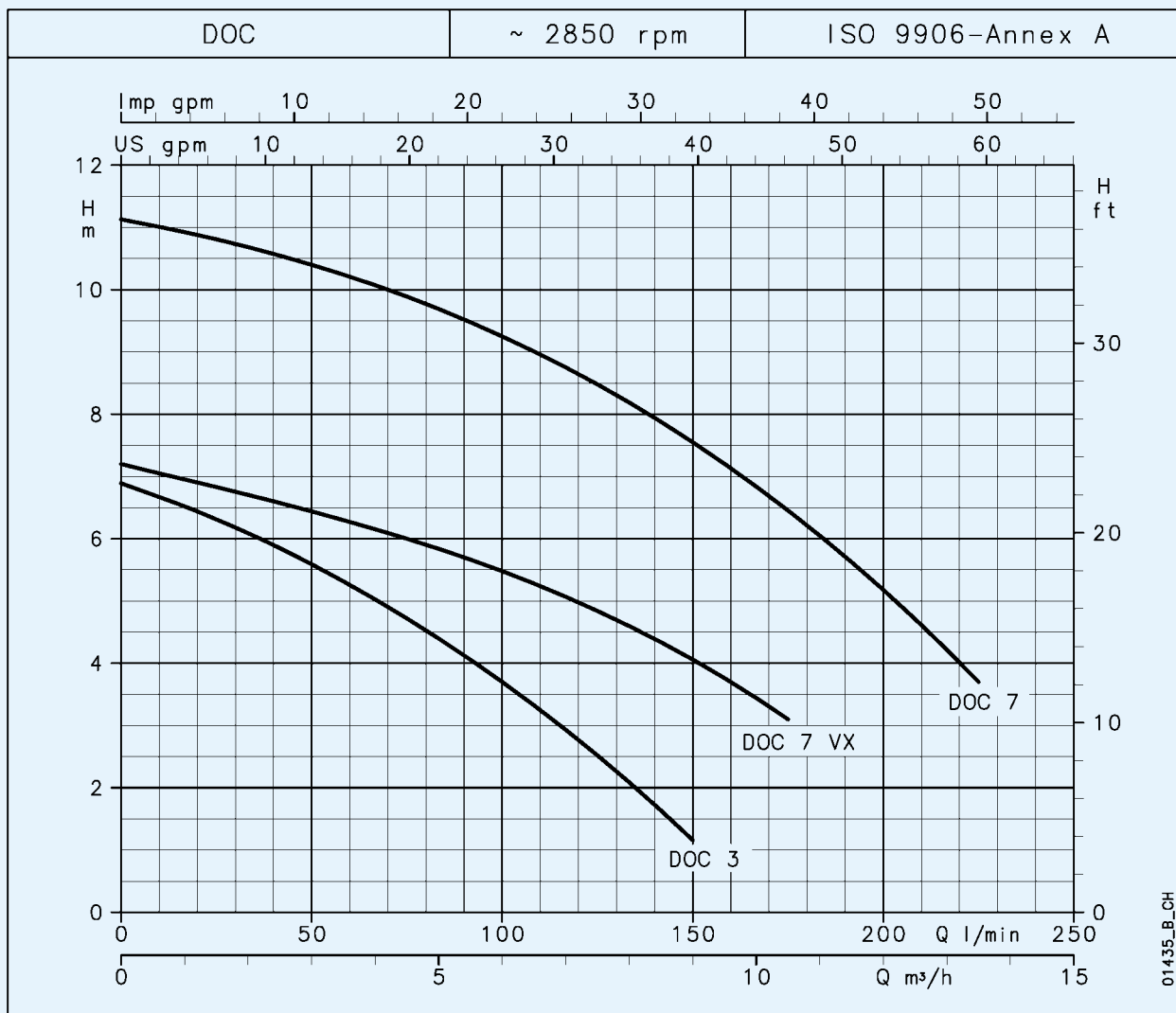
- The electric motor is protected by **three lip seals**.
An **impeller counterblade** system keeps solid particles away from the seal unit to prevent damage to the lip seals and ensure their long-lasting efficiency. A double **Labyrinth** and a **V-ring** on the shaft have also been provided.

TABLE OF MATERIALS

PART	MATERIAL
Pump body, Suction screen, Handle, Upper support, Impeller	NORYL TECHNOPOLYMER
Outer sleeve, Motor casing, Lower cover, Screws and tie-rods	STAINLESS STEEL (AISI 304 - DIN 1.4301)
Shaft extension	STAINLESS STEEL (AISI 416 - DIN 1.4005)
Elastomers	NITRILE RUBBER (NBR)

DOC SERIES

OPERATING CHARACTERISTICS AT 2850 rpm 50 Hz



PUMP TYPE	RATED POWER		Q = DELIVERY								
			l/min	25	50	75	100	125	150	175	225
			m³/h	1.5	3	4.5	6	7.5	9	10.5	13.5
	kW	HP	H = TOTAL HEAD METERS COLUMN OF WATER								
DOC3	0.25	0.33	6.9	6.3	5.6	4.7	3.7	2.5	1.2		
DOC7(T)	0.55	0.75	11.1	10.8	10.4	9.9	9.3	8.5	7.6	6.5	3.7
DOC7VX(T)	0.55	0.75	7.2	6.8	6.4	6.0	5.5	4.8	4.1	3.1	

These performances are valid for liquids with density $\rho = 1.0 \text{ kg/dm}^3$ and kinematic viscosity $\gamma = 1 \text{ mm}^2/\text{sec}$.

doc-2p50 a th

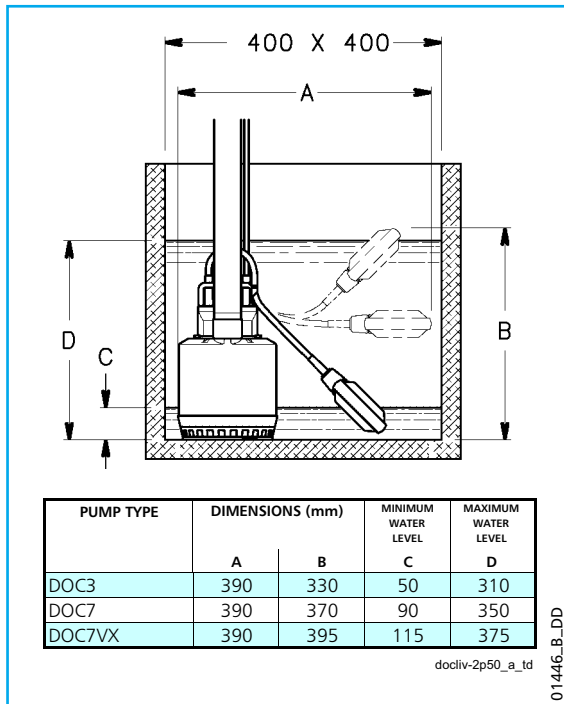
PUMP TYPE	INPUT POWER*	INPUT CURRENT*	CAPACITOR
SINGLE-PHASE		220-240 V	
	kW	A	$\mu\text{F} / 450 \text{ V}$
DOC 3	0.31	1.43	6.3
DOC 7	0.78	3.47	16
DOC 7VX	0.66	2.96	16

* Maximum value in specified range

PUMP TYPE	INPUT POWER*	INPUT CURRENT*	INPUT CURRENT*
THREE-PHASE		220-240 V	380-415 V
	kW	A	A
-	-	-	-
DOC 7T	0.79	2.82	1.63
DOC 7VXT	0.66	2.68	1.55

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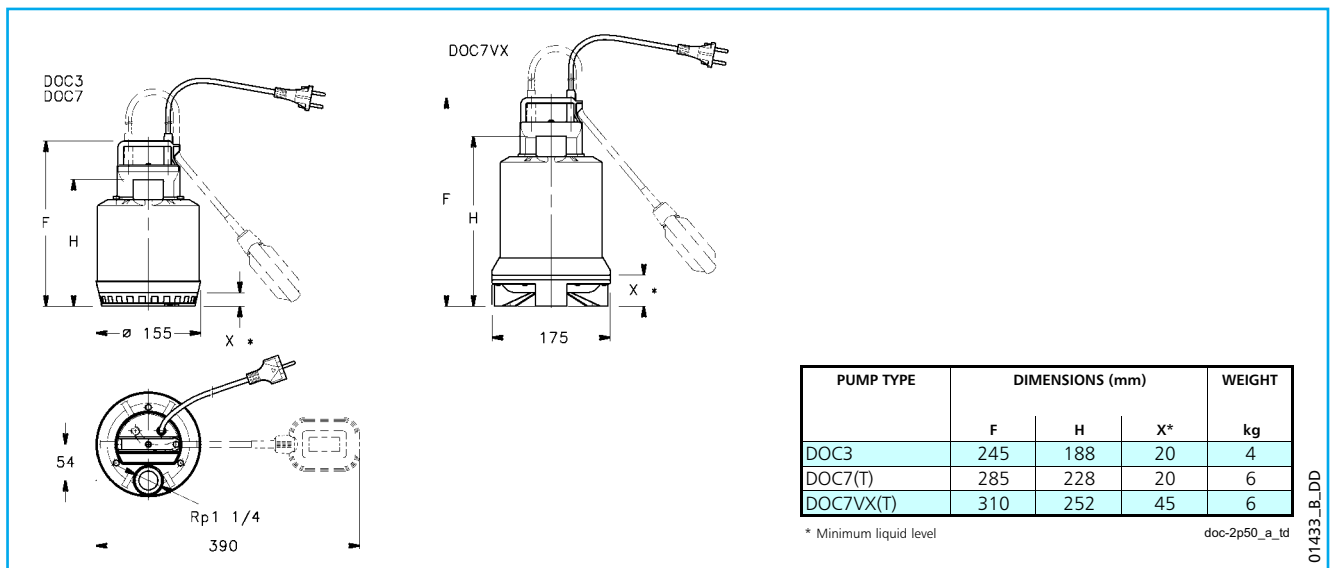
INSTALLATION DIAGRAM



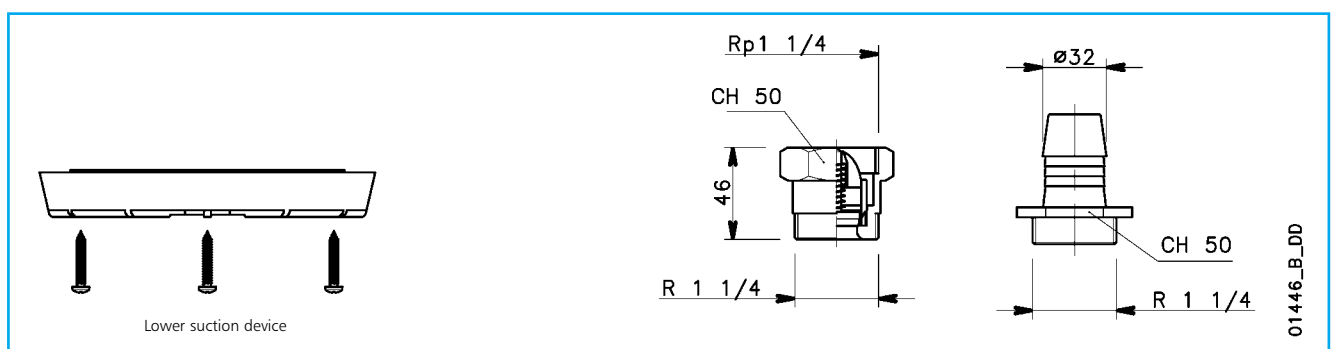
This float switch allows the pump to be used where standard float design cannot work due to insufficient space. The pump with this system can only be installed vertically and can only be used with clean water.

For pump installations that use the tube float switch, the level of start and stop are fixed, therefore they cannot be modified.

DOC SERIES DIMENSIONS AND WEIGHTS



ACCESSORIES



MINIBOX SERIES

PREFABRICATED COMPACT LIFTING STATIONS FOR DIRTY WATER

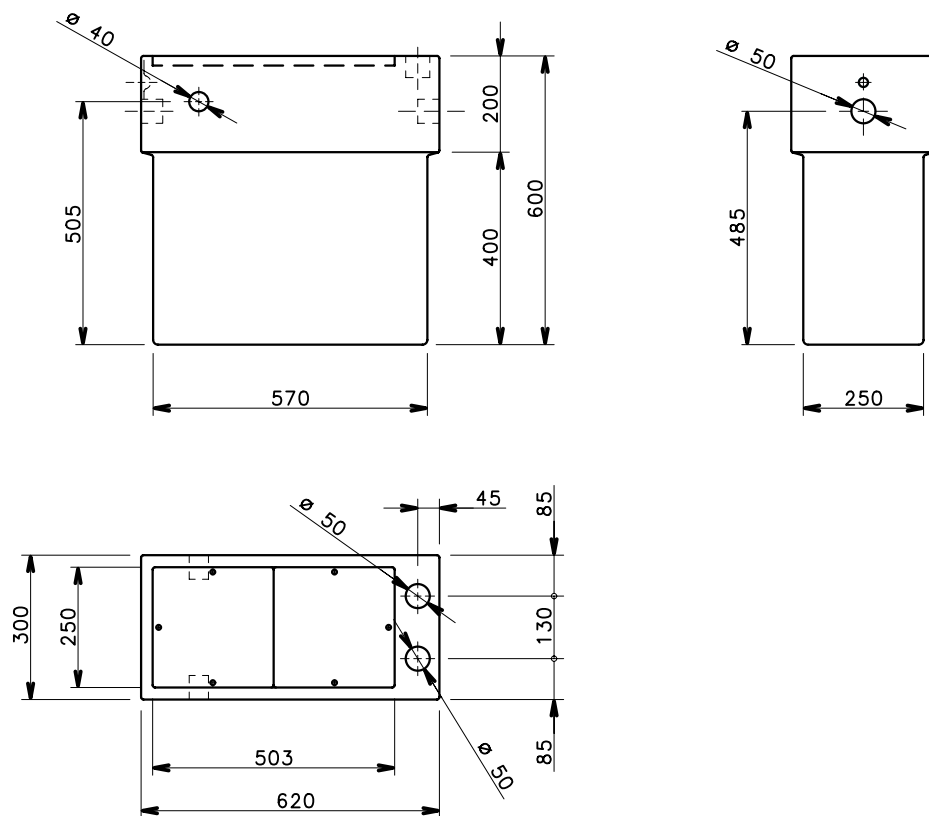
Minibox is a complete lifting station designed for removing domestic effluent excluding toilet waste where gravity drainage is not possible

SPECIFICATIONS

- It consists of an **85-litre** polyethylene **tank** housing a DOC electric pump and all its accessories.
- Installation is fast and easy, just connect the pipes and plug it in.
- Minibox can be installed above floor, buried underground or in concrete (to withstand passage of vehicles).
- Minibox is **equipped with a screen and sand filter basin** for the collection of water infiltration or runoff, as in the case of a garage ramp.
- An **optional watertight lid** (substituting the screen) can be installed for indoor use.
- The station includes:
 - **DOC submersible electric pump** equipped with a float for automatic operation.
 - 85-litre polyethylene **tank**.
 - 1 1/4" flexible tube equipped with a check valve; left- or right-hand connection.
 - Power **cord outlet**.
 - Three types of 40-mm diameter pipe inlets.
 - **Screens.**
 - **Basin** filled with sand and gravel to filter solid particles.
- The Minibox station can be equipped with a DOC3 (0.25 kW rating) or a **DOC7** pump (0.55 kW). For pump operating characteristics (delivery – head), see DOC pump section in this catalogue.
- **IP 68 protection.**

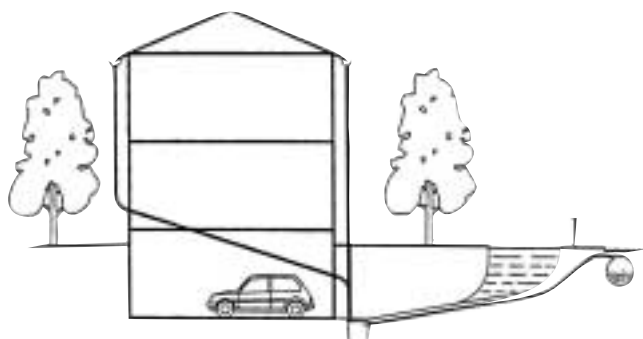


MINIBOX SERIES DIMENSIONS



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APPLICATION ILLUSTRATION



EXAMPLE OF MINIBOX APPLICATION

DIWA SERIES

SUBMERSIBLE PUMPS FOR DIRTY WATER

Submersible pumps for dirty water manufactured in AISI 304 stainless steel. Head up to 20 metres, delivery up to 425 l/min (25,2 m³/h).

Four basic models with 0.55 (0.75 HP) to 1.5 kW (2HP) rated power.

DRIVELUB SEAL SYSTEM

- ❑ **MOTOR COOLED BY PUMPED LIQUID**
- ❑ **DIFFUSER PLATE COATED WITH POLYURETHANE FOR MAXIMUM RESISTANCE TO ABRASION**
- ❑ **COMPACT AND LIGHTWEIGHT**

APPLICATIONS

- Draining of cellars, garages, basements.
- Draining of construction sites.
- Emptying of tanks and reservoirs.
- Lawn and garden irrigation.
- Fountains.
- Pumping of domestic wastewater (washing machines, showers, sinks).
- Emptying of tanks in industrial and ecological applications.
- Water display, fountains.

SPECIFICATIONS

- Liquid **temperature** up to **50°C**.
- **Open impeller.**
- Minimum level of pumped liquid: **25 mm**.
- **Suspended solids handled up to 8 mm.**
- **Maximum immersion depth: 7m.**
- 10 meters of HO7RN-F type neoprene power cord.
- **Dry motor** (class F insulation).
- **IP 68 protection.**
- Versions:
 - Single-phase** 220-240 V 50 Hz 2 poles with built-in overload protection.
 - Three-phase** 380-415 V 50 Hz 2 poles.
- **Motor power:**
 - 0.55 to 1.1 kW for single-phase version.
 - 0.55 to 1.5 kW for three-phase version.
- The single-phase versions feature:
 - Pre-assembled float** (version without float available on request).
 - Built-in capacitor** (except for DIWA 11 model with control box on cable).
 - Thermal overload protection.**
- 60 Hz and versions without float (SG) available.



DRIVELUB SEAL SYSTEM

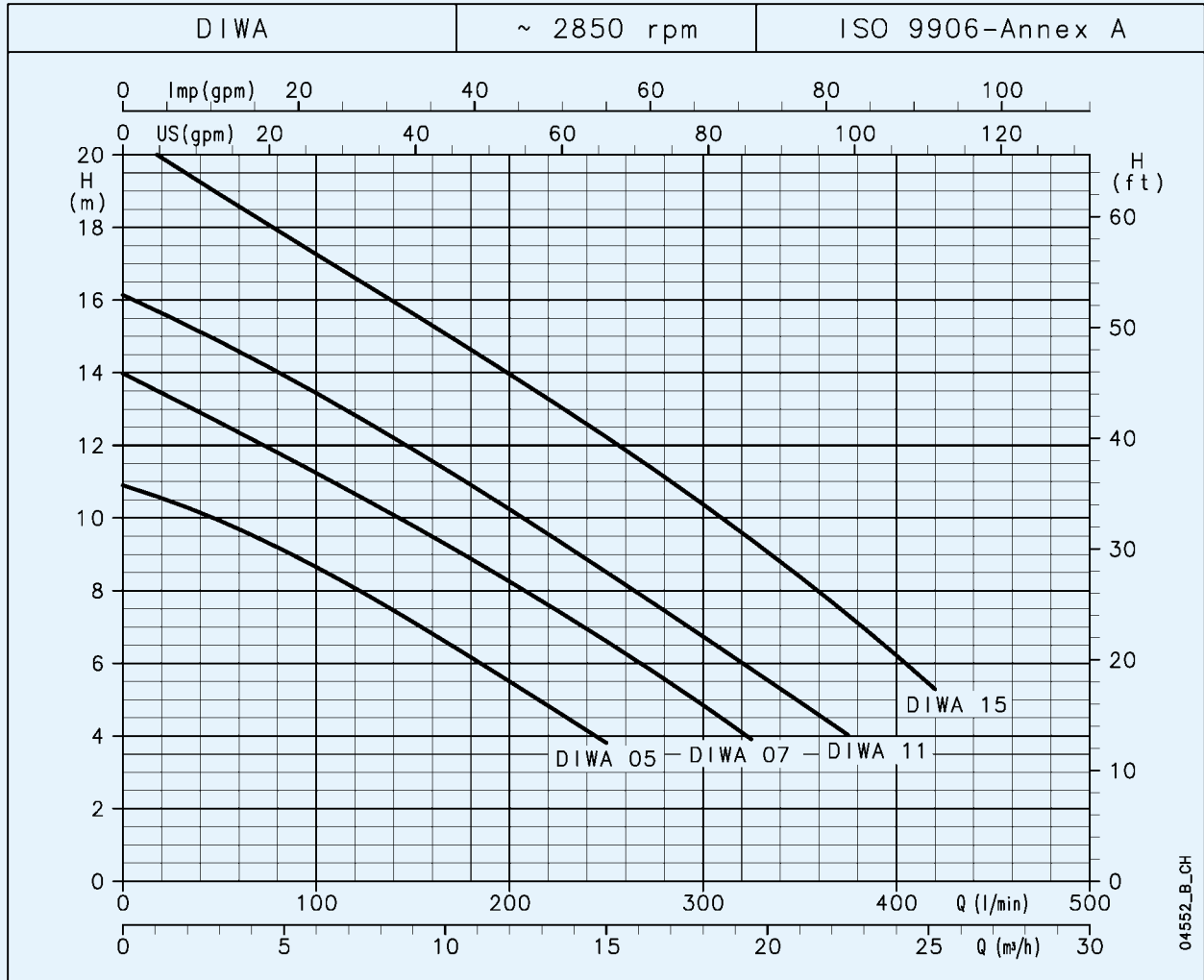
Watertight electric motor protected by multiple seal system with **oil chamber**.

A V-ring and **silicon carbide mechanical seal** (extremely resistant to wear and abrasion), as well as a **lip seal** which is continuously lubricated by the **DRIVELUB system**, provide an extremely efficient barrier against infiltration.

TABLE OF MATERIALS

PART	MATERIAL
Pump body Motor casing Outer sleeve Impeller Shaft extension Suction screen Nuts and bolts	STAINLESS STEEL (AISI 304 - DIN 1.4301)
Front diffuser plate	STAINLESS STEEL (AISI 304 - DIN 1.4301) COATED WITH POLYURETHANE ELASTOMER
Inner mechanical seal	SILICON CARBIDE/ SILICON CARBIDE
Upper lip seal, Elastomers	NITRILE RUBBER
Handle	STAINLESS STEEL (AISI 304 - DIN 1.4301) COATED WITH POLYACETAL RESINS

DIWA SERIES OPERATING CHARACTERISTICS AT 2850 rpm 50 Hz



PUMP TYPE	RATED POWER		Q = DELIVERY											
			l/min	100	125	150	175	200	225	250	300	325	375	420
	kW	HP	m³/h	6	7.5	9	10.5	12	13.5	15	18	19.5	22.5	25.2
H = TOTAL HEAD METERS COLUMN OF WATER														
DIWA 05(T)	0.55	0.75	10.9	8.6	7.9	7.1	6.3	5.5	4.7	3.8				
DIWA 07(T)	0.75	1	14.0	11.2	10.5	9.8	9.0	8.3	7.4	6.6	4.8	3.9		
DIWA 11(T)	1.1	1.5	16.1	13.4	12.7	11.9	11.1	10.2	9.4	8.5	6.7	5.8	4.0	
DIWA 15T	1.5	2	20.6	17.3	16.4	15.6	14.8	14.0	13.1	12.2	10.4	9.4	7.3	5.3

These performances are valid for liquids with density $\rho = 1.0 \text{ kg/dm}^3$ and kinematic viscosity $\gamma = 1 \text{ mm}^2/\text{sec}$.

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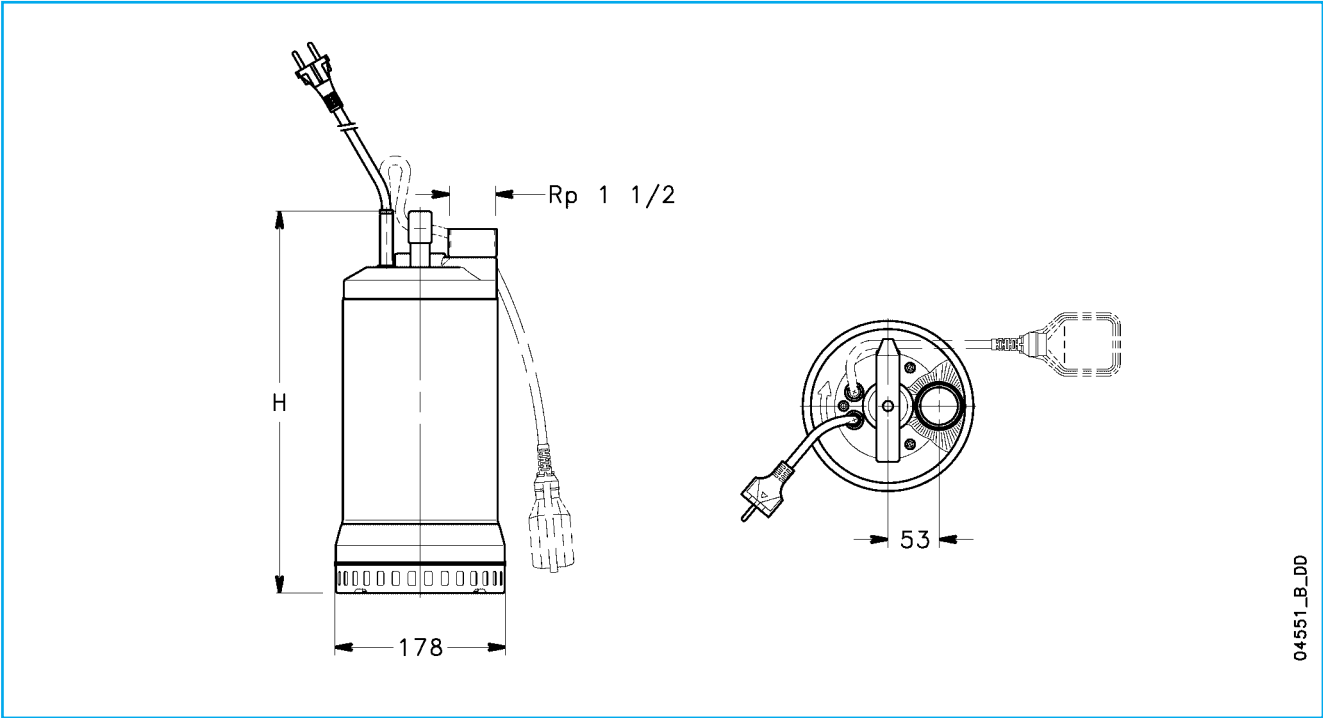
PUMP TYPE	INPUT POWER*	INPUT CURRENT*	CAPACITOR
SINGLE-PHASE		220-240 V	
	kW	A	$\mu\text{F} / 450 \text{ V}$
DIWA 05	0.79	3.92	16
DIWA 07	1.25	6.20	22
DIWA 11	1.53	6.83	30
-	-	-	-

* Maximum value in specified range

PUMP TYPE	INPUT POWER*	INPUT CURRENT*	INPUT CURRENT*
THREE-PHASE		220-240 V	380-415 V
	kW	A	A
DIWA 05T	0.72	2.56	1.48
DIWA 07T	1.2	4.26	2.46
DIWA 11T	1.44	4.64	2.68
DIWA 15T	2.05	6.74	3.89

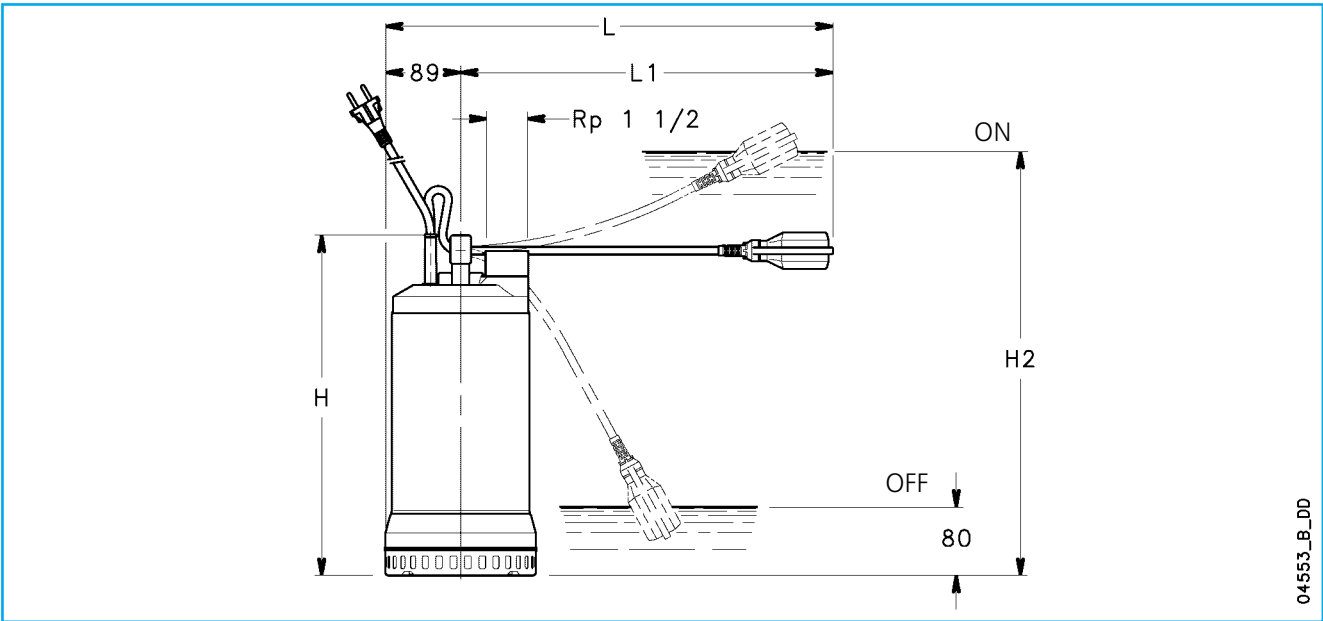
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DIWA SERIES DIMENSIONS AND WEIGHTS



PUMP TYPE	DIMENSIONS (mm)				WEIGHT
	H	H2	L	L1	kg
DIWA05	343	425	459	370	12
DIWA07	388	485	514	425	14.3
DIWA11	388	485	514	425	17
DIWA05T	343	-	-	-	11
DIWA07T	358	-	-	-	13
DIWA11T	388	-	-	-	15
DIWA15T	388	-	-	-	16.5

diwa-2p50_a_td



DN SERIES

SUBMERSIBLE PUMPS FOR DIRTY WATER

Drainage pumps with up to 20 metre head and up to 280 l/min (15 m³/h) delivery.

This range consists of three pumps with up to 0.75 kW (1HP) rated power.

APPLICATIONS

- Draining of flooded excavations and marshy ground.
- Irrigation from rainwater reservoirs, ditches, ponds and watercourses.

SPECIFICATIONS

- Open **impeller** with **abrasion-resistant** rubber coating.
- Squirrel cage **motor** in a dielectric non-toxic **oil cooled**, which ensures the lubrication of the ball bearings and more efficient cooling.
- **IP 68 protection.**
- Mechanical seal protected by sand labyrinth.
- Maximum **immersion depth: 5 m.**
- **Maximum liquid temperature.**
50°C with fully submerged pump.
25°C with partially submerged pump.
- Versions:
Single-phase 220-240 V 50 Hz, with built-in automatic reset overload protection and capacitor housed in a control box on the cable.
Three-phase 220-240 or 380-415 V 50 Hz.
 Overload protection to be provided by user and installed in the control box.

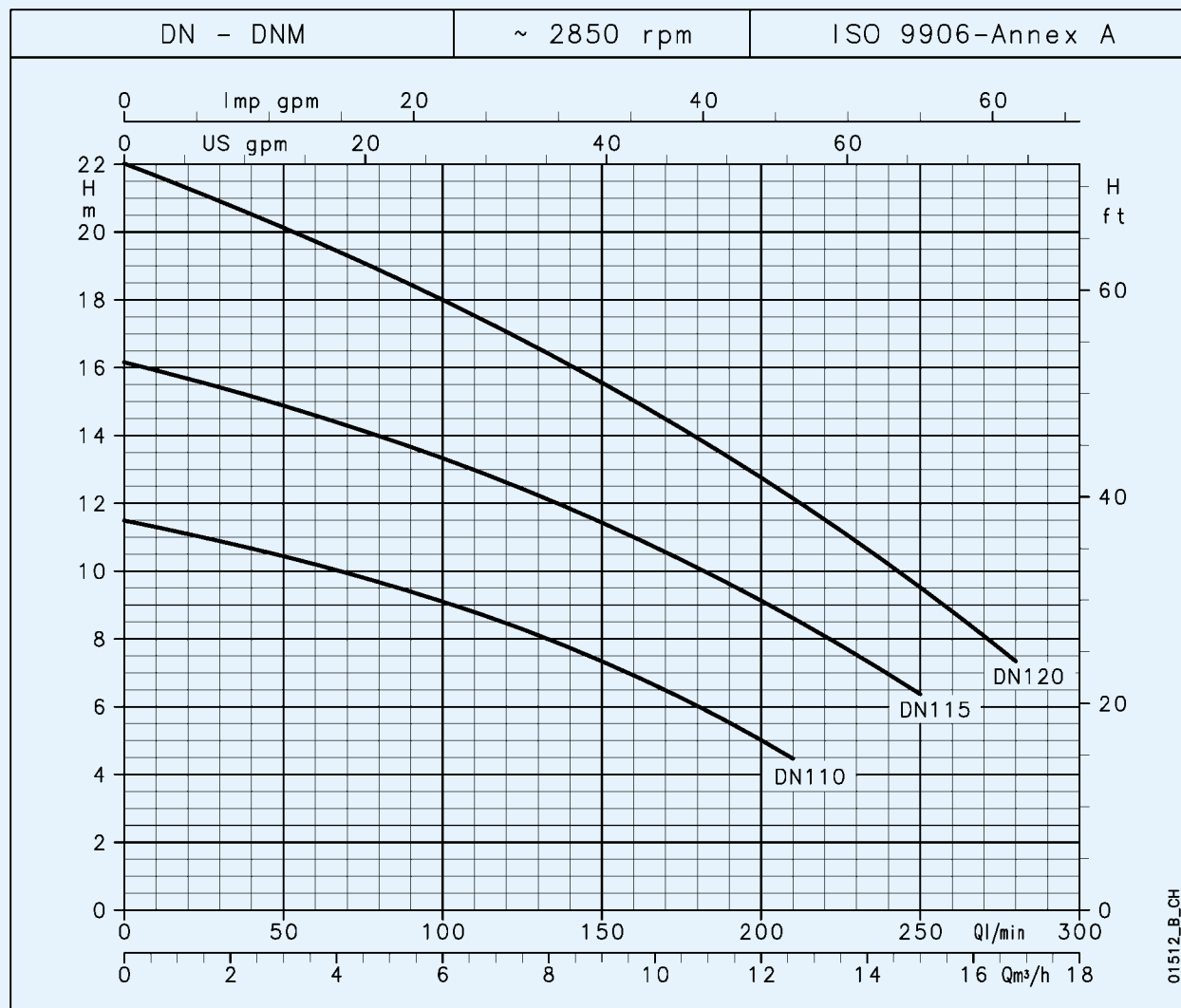


TABLE OF MATERIALS

PART	MATERIAL
Pump body	200 UNI ISO 185 CAST IRON*
Impeller	STEEL + NITRILE RUBBER
Wear flange, Suction screen, Motor casing	STAINLESS STEEL (AISI 304 - DIN 1,4301)
Mechanical seal	CARBON/CERAMIC/ NITRILE RUBBER
O-ring	NITRILE RUBBER
Shaft extension	STAINLESS STEEL (AISI 303 - DIN 1.4305)

* Cast iron, coated with polybutadiene varnish by electrophoresis at 180°C.

DN SERIES OPERATING CHARACTERISTICS AT 2850 rpm 50 Hz



PUMP TYPE	RATED POWER		Q = DELIVERY												
			l/min	0	25	50	75	100	125	150	175	210	225	250	280
	m³/h	0	1.5	3	4.5	6	7.5	9	10.5	12.6	13.5	15	16.8		
	H = TOTAL HEAD METERS COLUMN OF WATER														
DN(M) 110	0.6	0.8	11.5	11.0	10.4	9.8	9.1	8.3	7.3	6.3	4.5				
DN(M) 115	0.6	0.8	16.2	15.6	14.9	14.1	13.3	12.4	11.4	10.3	8.6	7.8	6.4		
DN(M) 120	0.75	1	22.0	21.1	20.1	19.1	18.0	16.8	15.6	14.2	12.1	11.2	9.5	7.3	

These performances are valid for liquids with density $\rho = 1.0 \text{ kg/dm}^3$ and kinematic viscosity $\gamma = 1 \text{ mm}^2/\text{sec}$.

dn-2p50_a th

PUMP TYPE	INPUT POWER*	INPUT CURRENT*	CAPACITOR
SINGLE-PHASE		220-240 V	
	kW	A	$\mu\text{F} / 450 \text{ V}$
DNM 110	0.68	3.56	25
DNM 115	0.90	4.28	25
DNM 120	1.03	4.77	25

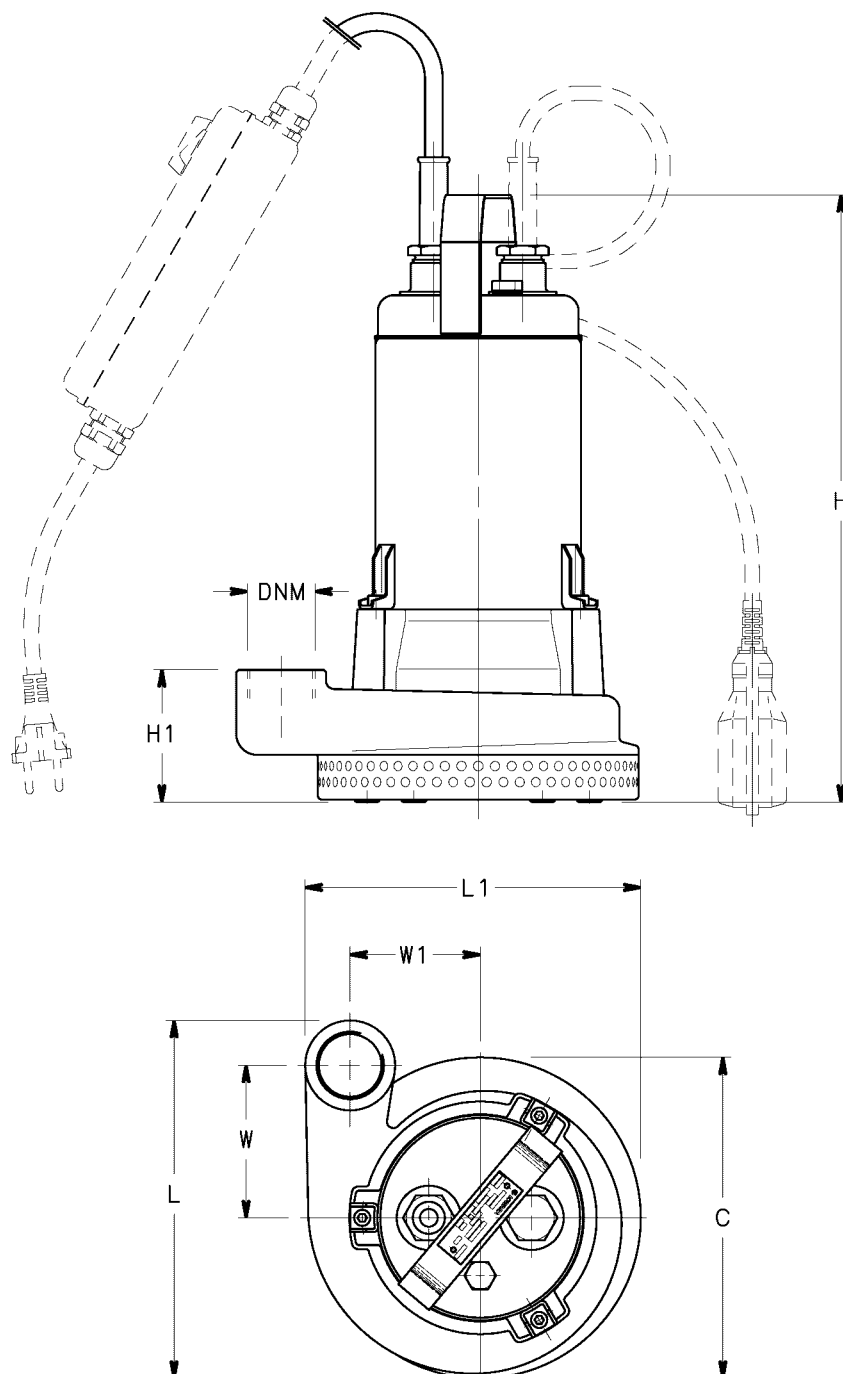
* Maximum value in specified range

PUMP TYPE	INPUT POWER*	INPUT CURRENT*	INPUT CURRENT*
THREE-PHASE		220-240 V	380-415 V
	kW	A	A
DN 110	0.66	-	2.00
DN 115	0.93	-	2.20
DN 120	1.09	4.05	2.34

dn-2p50_a_te

DN SERIES DIMENSIONS AND WEIGHTS

DN



01511_B_DD

PUMP TYPE	DIMENSIONS (mm)							DNM	WEIGHT kg
	C	H	H1	L	L1	W	W1		
DNM110-DN110	Ø 200	380	81	209	223	81	95	Rp 1 1/4	18.5
DNM115-DN115	Ø 200	380	81	209	223	81	95	Rp 1 1/4	18.5
DNM120-DN120	Ø 200	380	81	209	223	81	95	Rp 1 1/4	19.5

dn-2p50_a_id

DOMO SERIES

SUBMERSIBLE PUMPS WITH ENTRAINED SOLIDS

DOMO series electric pumps are available with twin-channel or vortex impeller (DOMO VX). Designed to handle suspended solids up to 50 mm in diameter (35 mm for DOMO 7 and DOMO 7VX).

Four basic models with 0.55 (0.75 HP) to 1.5 kW (2HP) rated power.

DRIVELUB SEAL SYSTEM.

APPLICATIONS

- Pumping of effluent (VX model handles also suspended filaments).
- Emptying of septic tanks and residential sumps.
- Draining of flooded basements and garages.
- Water display, fountains.

SPECIFICATIONS

- **Capacity** up to **40 m³/h**.
- **Head** up to **14,8 m**.
- **Continuous duty** with **35°C** liquids and fully submerged pump.
- **Dry motor** (class F insulation).
- **IP 68 protection**.
- **H07RN-F** type neoprene power **cord**.
- **Maximum immersion depth: 5 m**.
- Versions:
 - Single-phase** 220-240 V 50 Hz 2 poles.
 - Three-phase** 380-415 V 50 Hz 2 poles.
- **Motor power:**
 - 0.55 to 1.1 kW for single-phase versions.**
 - 0.55 to 1.5 kW for three-phase versions.**
- The single-phase versions feature:
 - Pre-assembled float** (version without float available on request).
 - Built-in capacitor** (except for DOMO 15 and DOMO 15 VX models with control box on cable).
 - Thermal overload protection.**
- The **DOMO 7** and **DOMO 7VX** versions feature:
 - Rp 1½" delivery port (female gas).
 - Handling of suspended **solids up to 35 mm** in diameter.
 - **Fiberglass-reinforced nylon impeller** (stainless steel impeller also available).



- The **DOMO 10-15-20** and **DOMO 10-15-20VX** versions feature:
 - **2" delivery port**, female ASP (can be turned into a flanged version if an optional accessory is installed).
 - Handling of suspended **solids up to 50 mm** in diameter.
 - **Stainless steel twin-channel or vortex impeller.**
 - **Tube float switch.**

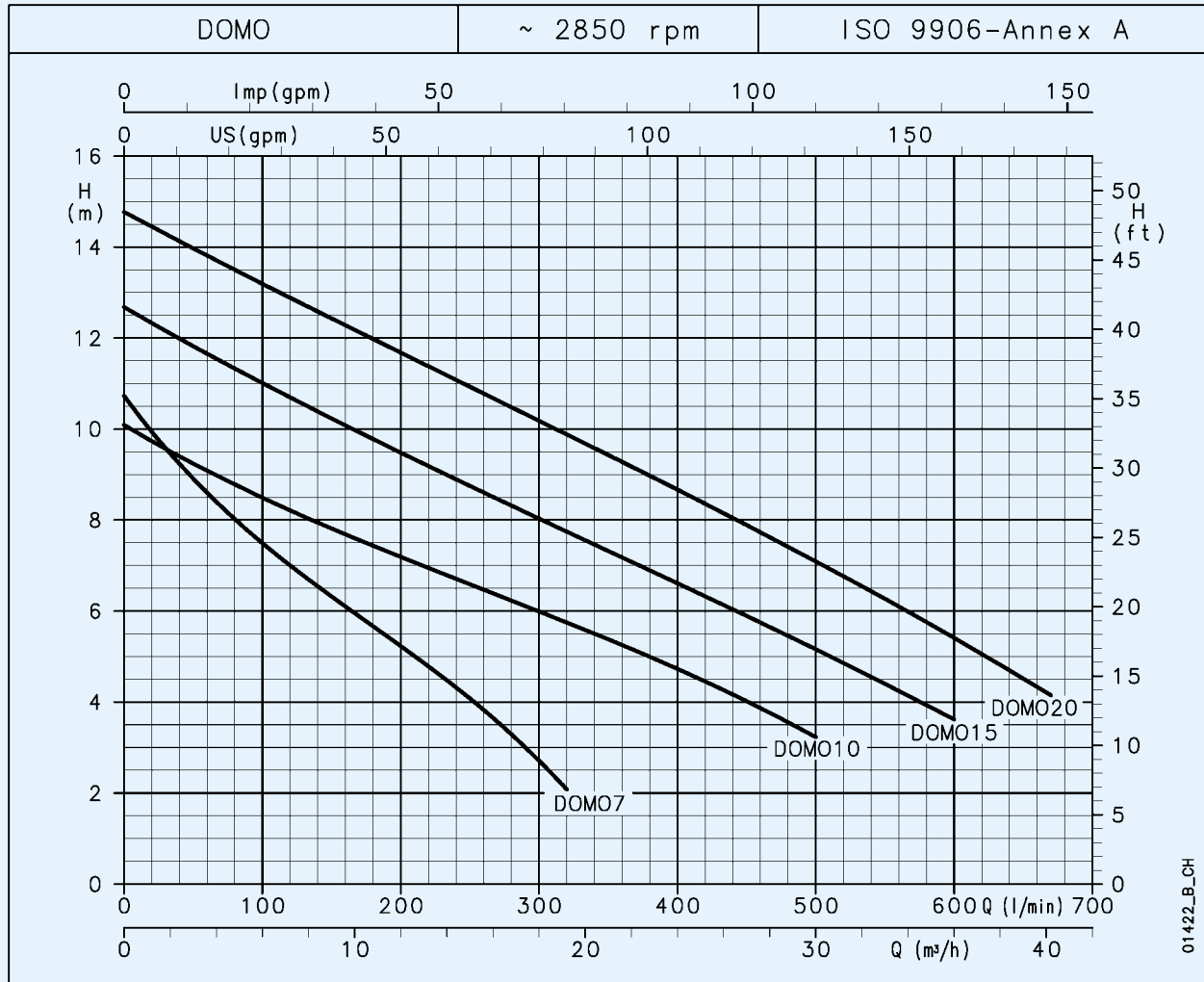
DRIVELUB SEAL SYSTEM

- Watertight electric motor protected by multiple seal system with **oil chamber**.
A V-ring and **silicon carbide mechanical seal** (extremely resistant to wear and abrasion), as well as a **lip seal** which is continuously lubricated by the **DRIVELUB system**, provide an extremely efficient barrier against infiltration.

TABLE OF MATERIALS

PART	MATERIAL
Pump body, Motor casing	STAINLESS STEEL (AISI 304 - DIN 1.4301)
DOMO 7 (VX) impeller	FIBREGLASS-REINFORCED NYLON
DOMO 10-15-20 (VX) impeller	STAINLESS STEEL (AISI 304 - DIN 1.4301)
Inner mechanical seal	SILICON CARBIDE/ SILICON CARBIDE
Upper lip seal	NITRILE RUBBER
Shaft extension	STAINLESS STEEL (AISI 304 - DIN 1.4301)
Handle	NYLON

DOMO SERIES (TWIN CHANNEL IMPELLER) OPERATING CHARACTERISTICS AT 2850 rpm 50 Hz



PUMP TYPE	RATED POWER		Q = DELIVERY												
			l/min	0	50	100	150	200	250	300	320	400	500	600	670
			m³/h	0	3	6	9	12	15	18	19.2	24	30	36	40.2
	kW	HP	H = TOTAL HEAD METERS COLUMN OF WATER												
DOMO 7(T)	0.55	0.75	10.7	8.9	7.5	6.3	5.2	4.1	2.7	2.1					
DOMO 10(T)	0.75	1	10.1	9.2	8.5	7.8	7.2	6.6	6.0	5.8	4.7	3.2			
DOMO 15(T)	1.1	1.5	12.7	11.8	11.0	10.2	9.5	8.8	8.0	7.8	6.6	5.2	3.6		
DOMO 20T	1.5	2	14.8	14.0	13.2	12.4	11.7	10.9	10.2	9.9	8.7	7.1	5.4	4.2	

These performances are valid for liquids with density $\rho = 1.0 \text{ kg/dm}^3$ and kinematic viscosity $\gamma = 1 \text{ mm}^2/\text{sec}$.

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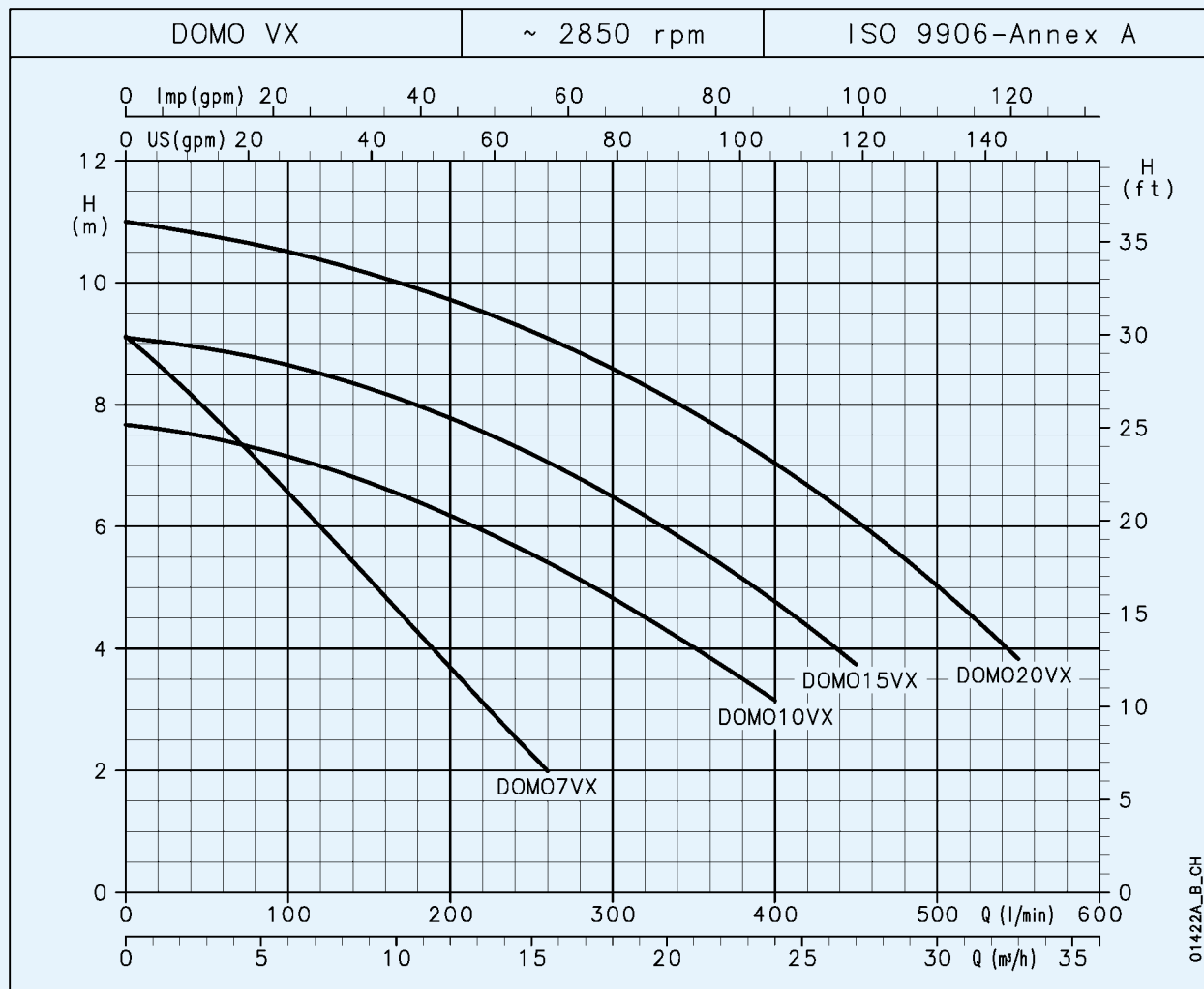
PUMP TYPE	INPUT POWER*	INPUT CURRENT*	CAPACITOR
SINGLE-PHASE		220-240 V	
	kW	A	$\mu\text{F} / 450 \text{ V}$
DOMO 7	0.80	3.94	16
DOMO 10	1.14	5.84	22
DOMO 15	1.58	7.02	30
-	-	-	-

* Maximum value in specified range

PUMP TYPE	INPUT POWER*	INPUT CURRENT*	INPUT CURRENT*
THREE-PHASE		220-240 V	380-415 V
	kW	A	A
DOMO 7T	0.73	2.58	1.49
DOMO 10T	1.09	4.09	2.36
DOMO 15T	1.49	4.73	2.73
DOMO 20T	1.96	6.6	3.81

domo-2p50_a_te

DOMO VX SERIES (VORTEX IMPELLER) OPERATING CHARACTERISTICS AT 2850 rpm 50 Hz



PUMP TYPE	RATED POWER		Q = DELIVERY												
			l/min	0	80	100	150	175	200	225	260	300	400	450	550
	m³/h	0	4.8	6	9	10.5	12	13.5	15.6	18	24	27	33		
	kW	HP	H = TOTAL HEAD METERS COLUMN OF WATER												
DOMO 7VX(T)	0.55	0.75	9.1	7.1	6.6	5.1	4.4	3.7	3.0	2.0					
DOMO 10VX(T)	0.75	1	7.7	7.3	7.1	6.7	6.5	6.2	5.9	5.4	4.8	3.1			
DOMO 15VX(T)	1.1	1.5	9.1	8.8	8.6	8.3	8.0	7.8	7.5	7.1	6.5	4.8	3.7		
DOMO 20VXT	1.5	2	11.0	10.6	10.5	10.2	9.9	9.7	9.5	9.1	8.6	7.0	6.1	3.8	

These performances are valid for liquids with density $\rho = 1.0 \text{ kg/dm}^3$ and kinematic viscosity $\gamma = 1 \text{ mm}^2/\text{sec}$.

domovx-2p50_a_th

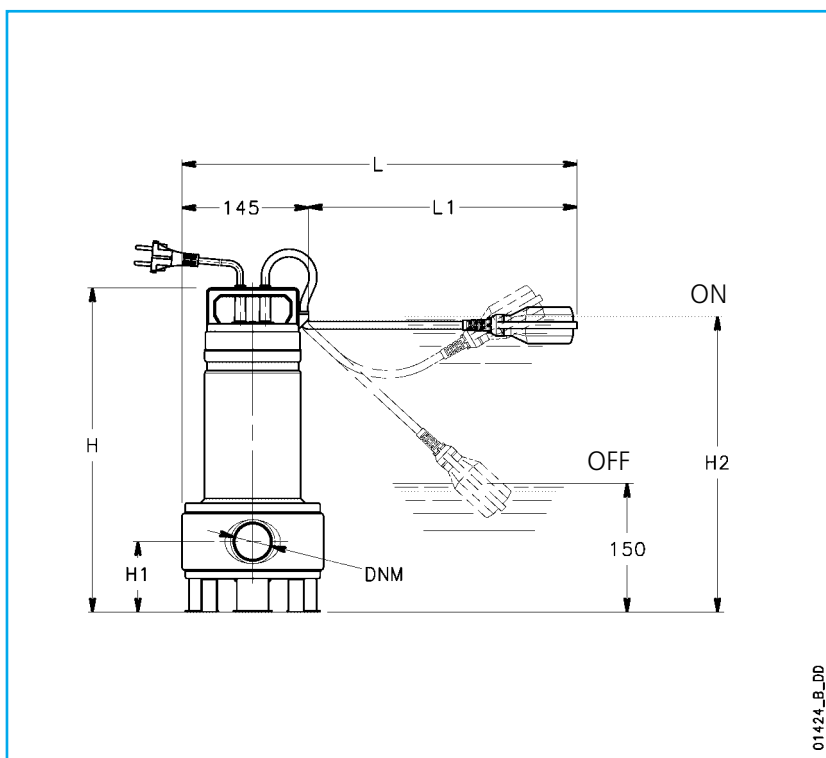
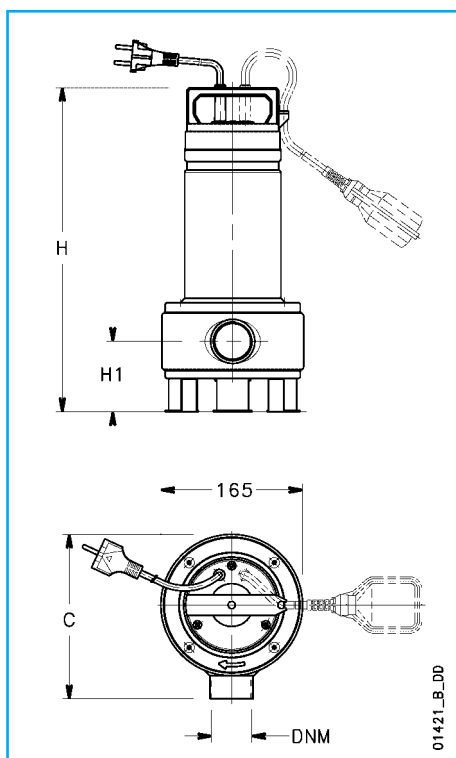
PUMP TYPE	INPUT POWER*	INPUT CURRENT*	CAPACITOR
SINGLE-PHASE		220-240 V	
	kW	A	$\mu\text{F} / 450 \text{ V}$
DOMO 7VX	0.79	3.91	16
DOMO 10VX	1.15	5.88	22
DOMO 15VX	1.36	6.11	30
-	-	-	-

* Maximum value in specified range

PUMP TYPE	INPUT POWER*	INPUT CURRENT*	INPUT CURRENT*
THREE-PHASE		220-240 V	380-415 V
	kW	A	A
DOMO 7VXT	0.71	2.56	1.48
DOMO 10VXT	1.10	4.09	2.36
DOMO 15VXT	1.26	4.31	2.49
DOMO 20VXT	1.74	6.22	3.59

domovx-2p50_a_th

DOMO SERIES DIMENSIONS AND WEIGHTS



PUMP TYPE	DIMENSIONS (mm)						DNM	WEIGHT kg
	H	H1	H2	L	L1	C		
DOMO7-DOMO7VX	386	88	370	420	275	193	Rp 1½	10
DOMO10-DOMO10VX	463	111.5	415	495	350	198	Rp 2	13.4
DOMO15-DOMO15VX	463	111.5	415	495	350	198	Rp 2	15.1
DOMO7T-DOMO7VXT	386	88	-	-	-	193	Rp 1½	8.7
DOMO10T-DOMO10VXT	433	111.5	-	-	-	198	Rp 2	11.4
DOMO15T-DOMO15VXT	463	111.5	-	-	-	198	Rp 2	13.4
DOMO20T-DOMO20VXT	463	111.5	-	-	-	198	Rp 2	14.4

domo-2p50_a_td



This float switch allows the pump to be used where standard float design cannot work due to insufficient space. The pump with this system can only be installed vertically and can only be used with clean water.

For pump installations that use the tube float switch, the level of start and stop are fixed, therefore they cannot be modified.

DL SERIES

SUBMERSIBLE PUMPS WITH ENTRAINED SOLIDS WASTE WATER

DL series electric pumps are available with single-channel or Vortex impeller (DLV).

Designed to handle with entrained solids wastewater, with head up to 21 m and delivery up to 120 m³/h.

APPLICATIONS

- Pumping of sewage with suspended solids and filaments.
- Emptying of sumps, septic tanks and wastewater discharge tanks.
- Draining of flooded excavations and marshy ground.
- Water display, fountains.

SPECIFICATIONS

- Squirrel cage **motor** in a dielectric non-toxic **oil cooled**, which ensures the lubrication of the ball bearings and more efficient cooling.
- **2-pole** (0.6 to 1.5 kW) and **4-pole** (1.8 to 4 kW) motors.
- **Mechanical seal** protected by **sand labyrinth**.
- Maximum immersion depth: 5 m.
- **IP 68 protection**.
- **Maximum temperature of pumped liquid:**
50°C with **fully submerged pump**.
25°C with **partially submerged pump**.
- **Passes solids up to:**
45 mm (DL 80, 90, 105, Minivortex, Vortex).
50 mm (DL 109, 125, 160, DLV 100, 115).
60 mm (DL 180, 200).
65 mm (DLV 120, 140, 160).
- Versions:
Single-phase 220-240 V 50 Hz, with built-in automatic reset overload protection and capacitor box with on/off switch.
Three-phase 220-240 or 380-415 V 50 Hz for pumps up to 4 kW.
 Overload protection to be provided by user (installed in the control box).
- Pre-assembled float available on request (single-phase versions DL...CG, DLV...CG).



TABLE OF MATERIALS

2 POLES PUMPS: DL 80, 90, 105, 109, 125; MINIVORTEX and VORTEX, DLV 100, 115

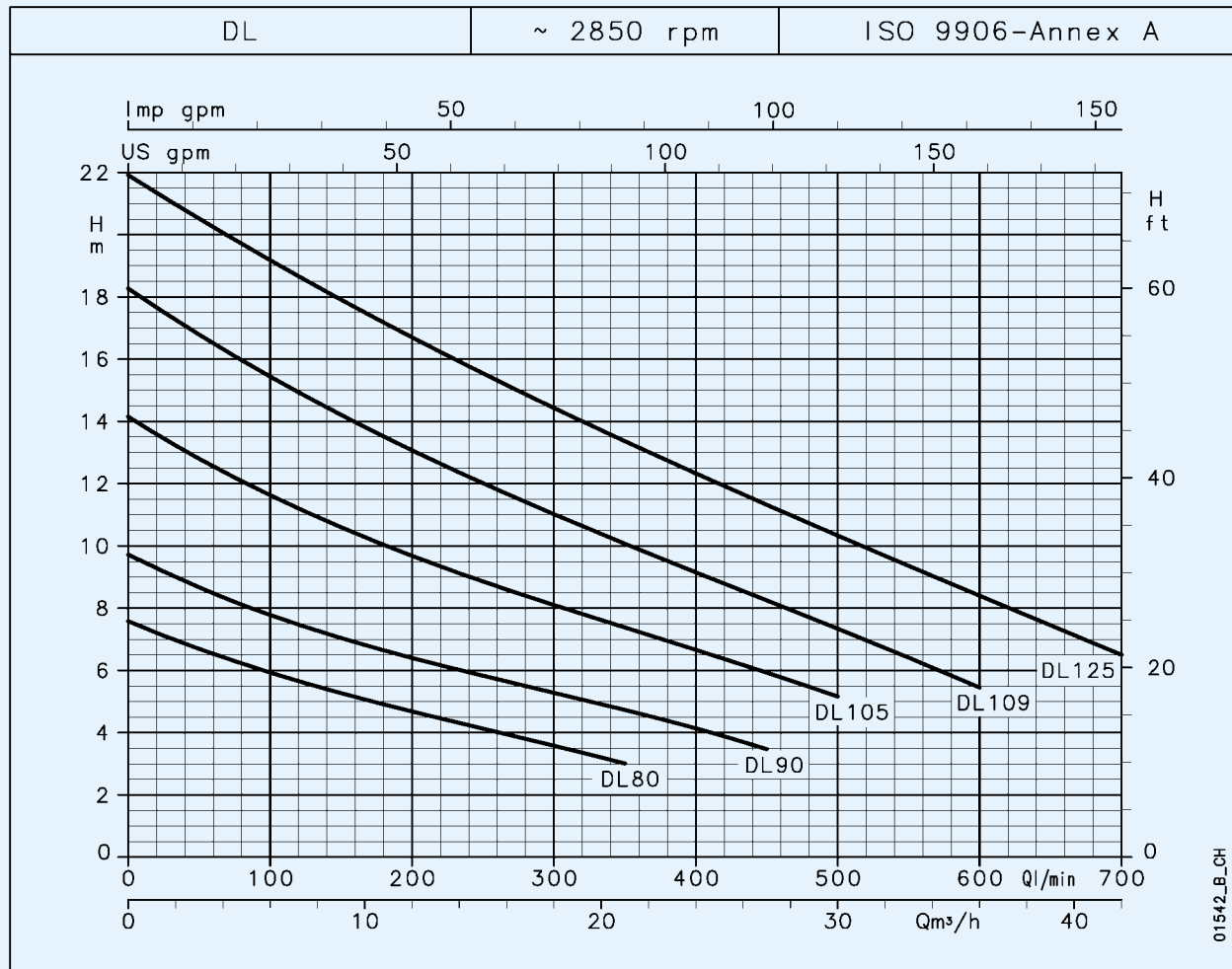
PART	MATERIAL
Pump body	200 UNI ISO 185 CAST IRON*
Impeller	STAINLESS STEEL (AISI 304 - DIN 1.4301) 200 UNI ISO 185 CAST IRON* FOR MINIVORTEX AND VORTEX
Suction flange, Support feet, Shaft (extension), Motor casing	STAINLESS STEEL (AISI 304 - DIN 1.4301)
O-Ring	NITRILE RUBBER
Mechanical seal	CARBON/CERAMIC/ NITRILE RUBBER
Delivery seal (DL 109, 125 and DLV 100, 115)	200 UNI ISO 185 CAST IRON*

4 POLES PUMPS: DL 160, 180, 200 and DLV 120, 140, 150

PART	MATERIAL
Pump body, Impeller, Motor-pump support	200 UNI ISO 185 CAST IRON*
Shaft	STAINLESS STEEL (AISI 420 - DIN 1.4021)
Motor casing, Motor cover, Handle tie rod with bracket, Base	STAINLESS STEEL (AISI 304 - DIN 1.4301)
Mechanical seal	TUNGSTENE CARBIDE/ TUNGSTENE CARBIDE/ FPM
O-Ring	NITRILE RUBBER

* Cast iron coated with polybutadiene varnish by electrophoresis at 180°C.

DL SERIES (SINGLE-CHANNEL IMPELLER) OPERATING CHARACTERISTICS AT 2850 rpm 50 Hz



PUMP TYPE	RATED POWER		Q = DELIVERY												
			l/min	0	100	150	200	250	300	350	400	450	500	600	700
			m³/h	0	6	9	12	15	18	21	24	27	30	36	42
	kW	HP	H = TOTAL HEAD METERS COLUMN OF WATER												
DL(M) 80	0.6	0.8	7.6	5.9	5.3	4.7	4.1	3.6	3.0						
DL(M) 90	0.6	0.8	9.7	7.8	7.0	6.4	5.8	5.3	4.7	4.1	3.5				
DL 105	1.1	1.5	14.1	11.6	10.6	9.7	8.9	8.1	7.4	6.7	5.9	5.2			
DL(M) 109	1.1	1.5	18.3	15.4	14.2	13.1	12.0	11.0	10.1	9.2	8.2	7.3	5.4		
DL 125	1.5	2	21.9	19.2	17.9	16.7	15.5	14.4	13.4	12.3	11.3	10.3	8.4	6.5	

These performances are valid for liquids with density $\rho = 1.0 \text{ kg/dm}^3$ and kinematic viscosity $\gamma = 1 \text{ mm}^2/\text{sec}$.

dl-2p50_a_th

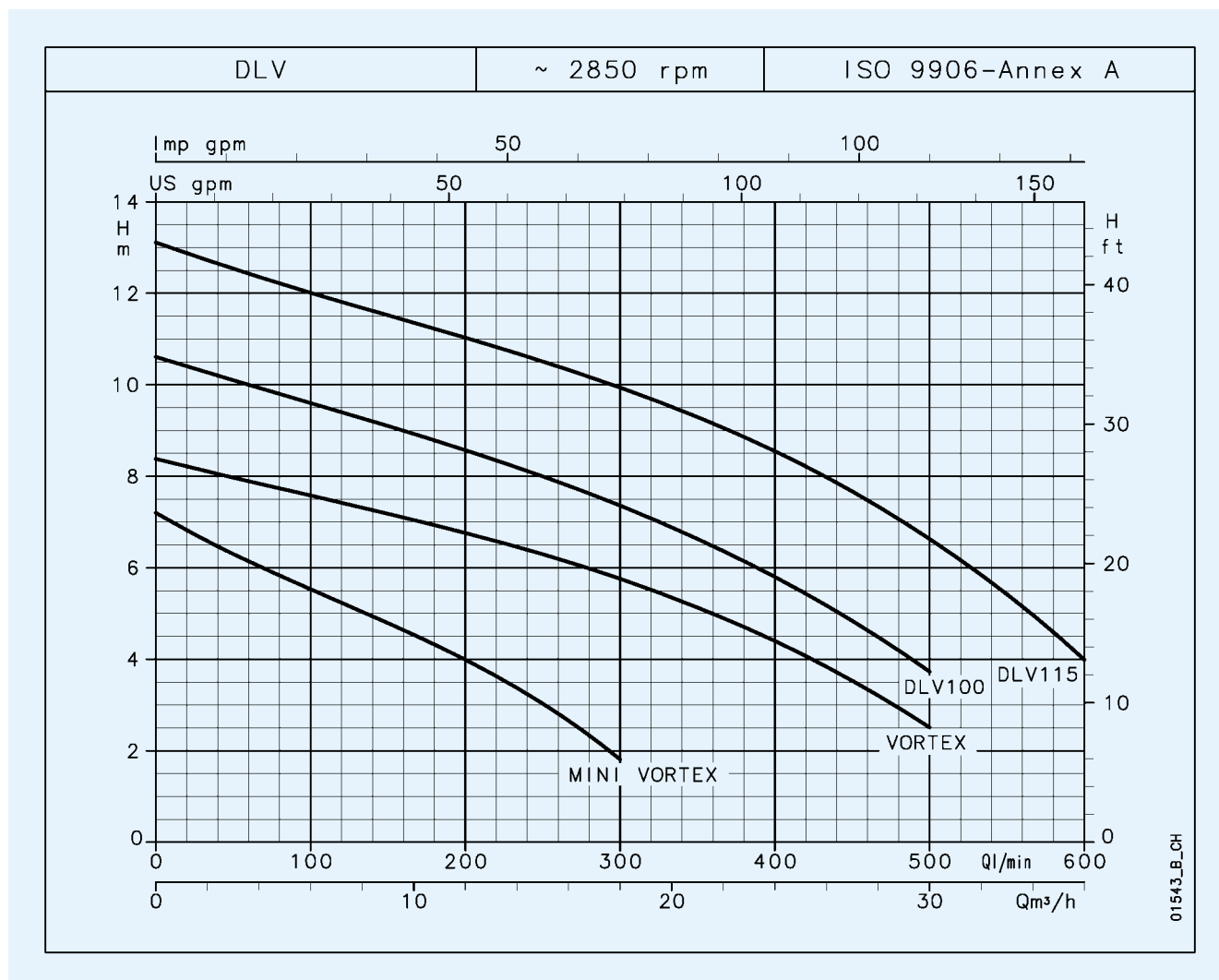
PUMP TYPE	INPUT POWER*	INPUT CURRENT*	CAPACITOR
SINGLE-PHASE		220-240 V	
	kW	A	$\mu\text{F} / 450 \text{ V}$
80	0.79	3.91	25
90	0.89	4.27	25
-	-	-	-
109	1.55	6.87	35
-	-	-	-

* Maximum value in specified range

PUMP TYPE	INPUT POWER*	INPUT CURRENT*	INPUT CURRENT*
THREE-PHASE		220-240 V	380-415 V
	kW	A	A
80	0.8	-	2.09
90	0.92	3.81	2.2
105	1.43	4.66	2.69
109	1.54	5.44	3.14
125	2.14	6.58	3.8

dl-2p50_a_te

DLV SERIES (VORTEX IMPELLER) OPERATING CHARACTERISTICS AT 2850 rpm 50 Hz



PUMP TYPE	RATED POWER		Q = DELIVERY											
			l/min	50	100	150	200	250	300	350	400	450	500	600
			m³/h	3	6	9	12	15	18	21	24	27	30	36
	kW	HP	H = TOTAL HEAD METERS COLUMN OF WATER											
MINI VORTEX(M)	0.6	0.8	7.2	6.3	5.5	4.8	4.0	3.0	1.8					
VORTEX	1.1	1.5	8.4	8.0	7.6	7.2	6.8	6.3	5.8	5.1	4.4	3.5	2.5	
DLV(M) 100	1.1	1.5	10.6	10.1	9.6	9.1	8.6	8.0	7.4	6.6	5.8	4.8	3.7	
DLV 115	1.5	2	13.1	12.5	12.0	11.5	11.0	10.5	9.9	9.3	8.5	7.7	6.6	4.0

These performances are valid for liquids with density $\rho = 1.0 \text{ kg/dm}^3$ and kinematic viscosity $\gamma = 1 \text{ mm}^2/\text{sec}$.

dlv-2p50_a_te

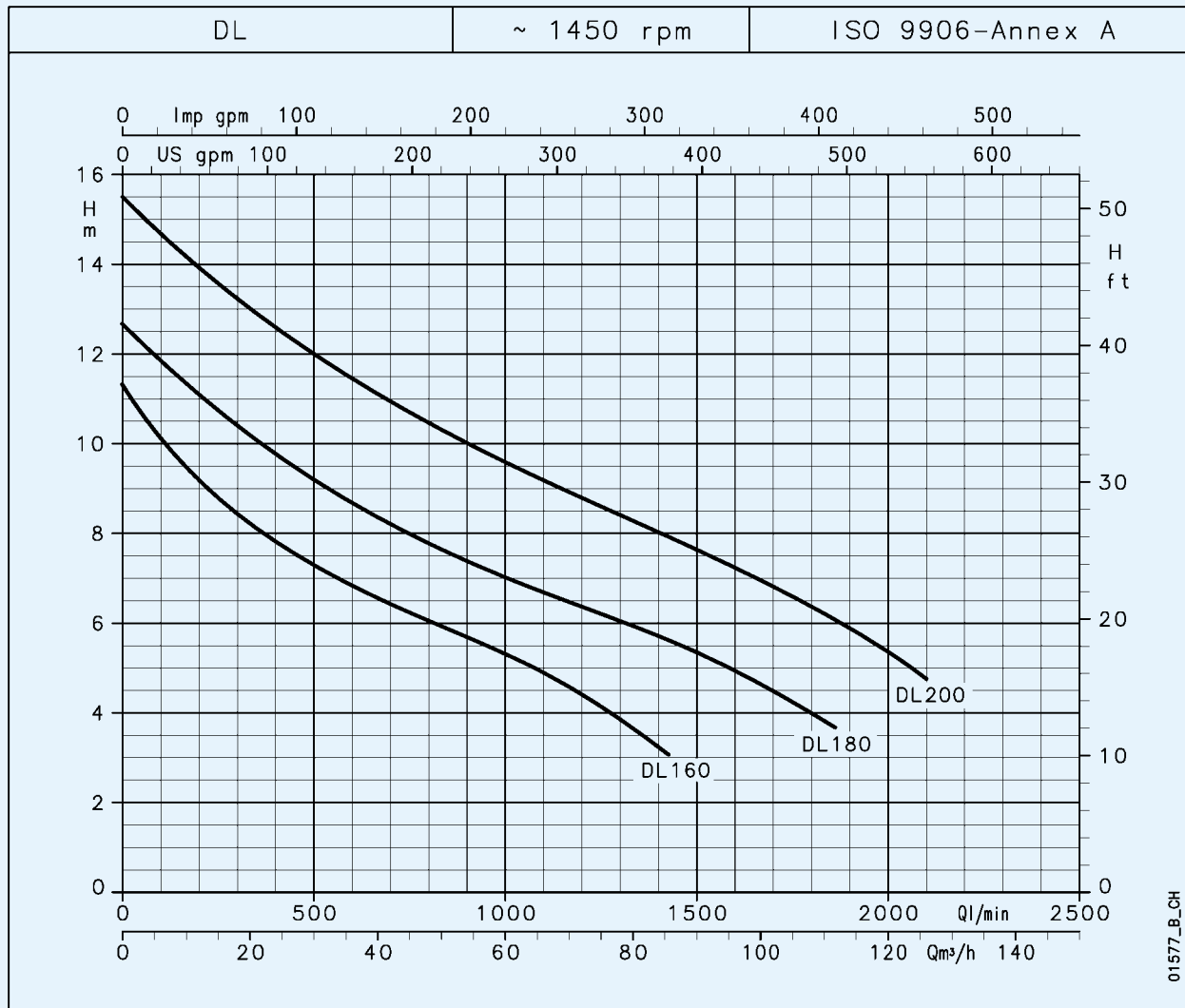
PUMP TYPE	INPUT POWER*	INPUT CURRENT*	CAPACITOR
SINGLE-PHASE		220-240 V	
	kW	A	$\mu\text{F} / 450 \text{ V}$
MINI VORTEX M	1.05	4.82	25
-	-	-	-
DLVM100	1.64	7.30	35
-	-	-	-

* Maximum value in specified range

PUMP TYPE	INPUT POWER*	INPUT CURRENT*	INPUT CURRENT*
THREE-PHASE		220-240 V	380-415 V
	kW	A	A
MINI VORTEX	1.10	-	2.36
VORTEX	1.66	5.11	2.95
DLV 100	1.65	5.63	3.25
DLV 115	2.25	6.81	3.93

dlv-2p50_a_te

SERIE DL (SINGLE-CHANNEL IMPELLER) OPERATING CHARACTERISTICS AT 1450 rpm 50 Hz



PUMP TYPE	RATED POWER		Q = DELIVERY							
			l/min	500	750	1000	1250	1400	1750	2000
	kW	HP	m³/h	30	45	60	75	84	105	120
H = TOTAL HEAD METERS COLUMN OF WATER										
DL 160	1.85	2.5	11.3	7.3	6.3	5.3	4.0			
DL 180	2.75	3.75	12.7	9.2	8.0	7.0	6.2	5.7	4.2	
DL 200	4	5.5	15.5	12.0	10.7	9.6	8.6	8.0	6.2	5.3

These performances are valid for liquids with density $\rho = 1.0 \text{ kg/dm}^3$ and kinematic viscosity $\gamma = 1 \text{ mm}^2/\text{sec}$.

dl4-4p50_a_th

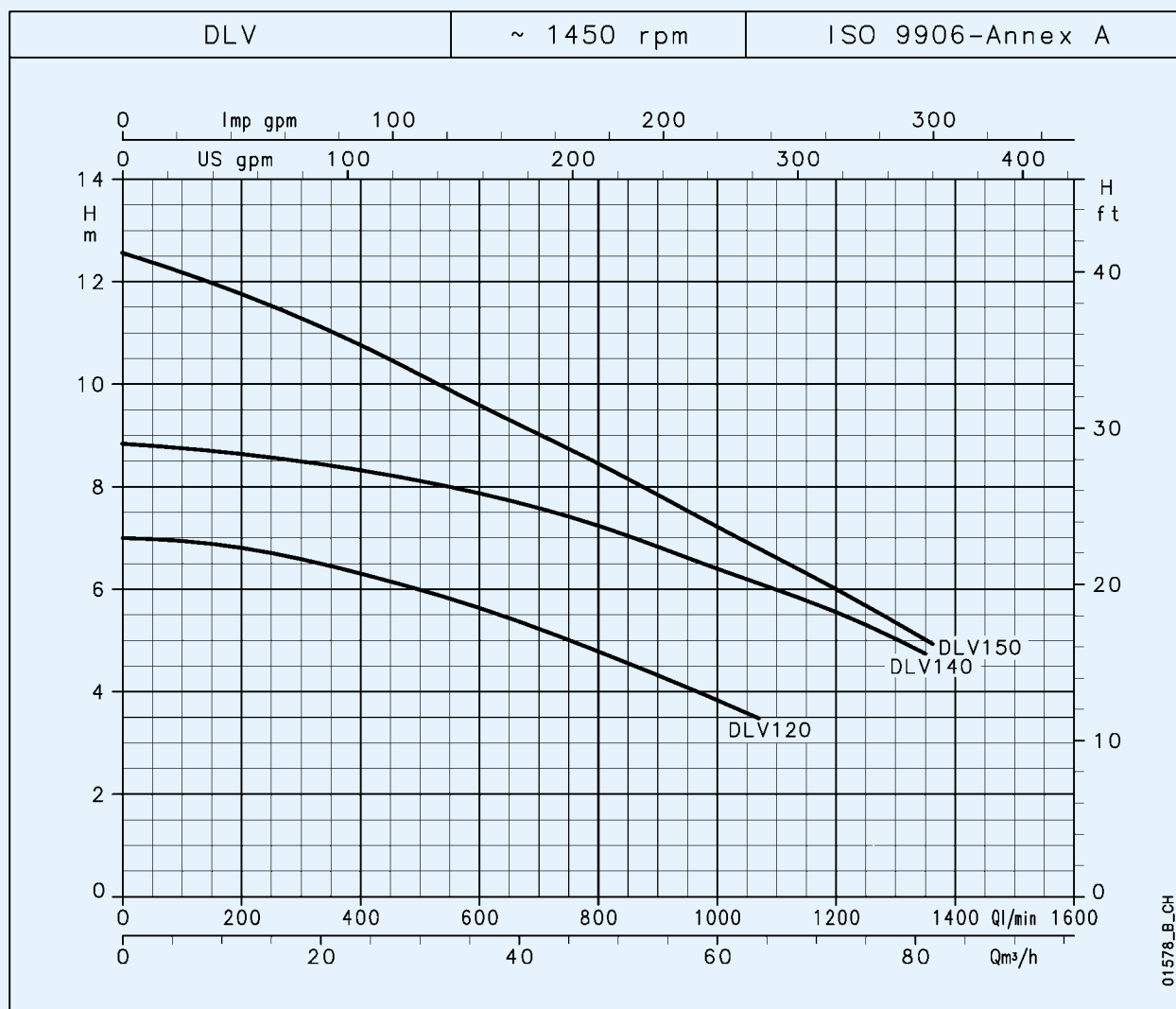
PUMP TYPE	INPUT POWER*	INPUT CURRENT*	CAPACITOR
SINGLE-PHASE		220-240 V	
	kW	A	$\mu\text{F} / 450 \text{ V}$
-	-	-	-
-	-	-	-
-	-	-	-

* Maximum value in specified range

PUMP TYPE	INPUT POWER*	INPUT CURRENT*	INPUT CURRENT*
THREE-PHASE		220-240 V	380-415 V
	kW	A	A
DL160	2.1	6	3.5
DL180	3.2	10	5.8
DL200	4.7	15	8.7

dl4-4p50_a_te

DLV SERIES (VORTEX IMPELLER) OPERATING CHARACTERISTICS AT 1450 rpm 50 Hz



PUMP TYPE	RATED POWER		Q = DELIVERY							
			l/min	500	750	1000	1250	1400	1750	2000
			m³/h	30	45	60	75	84	105	120
	kW	HP	H = TOTAL HEAD METERS COLUMN OF WATER							
DLV 120	1.85	2.5	7.0	6.7	6.0	5.0	3.8			
DLV 140	2.75	3.75	8.8	8.6	8.1	7.4	6.4	6.0	5.3	4.7
DLV 150	4	5.5	12.5	11.5	10.2	8.7	7.2	6.6	5.7	5.0

These performances are valid for liquids with density $\rho = 1.0 \text{ kg/dm}^3$ and kinematic viscosity $\gamma = 1 \text{ mm}^2/\text{sec}$.

dlv-4p50_a_th

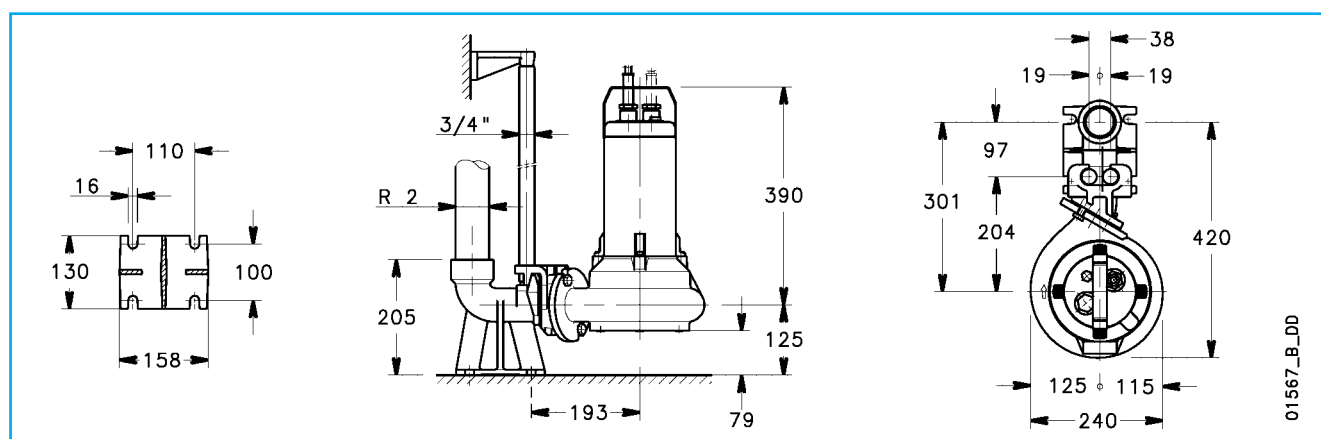
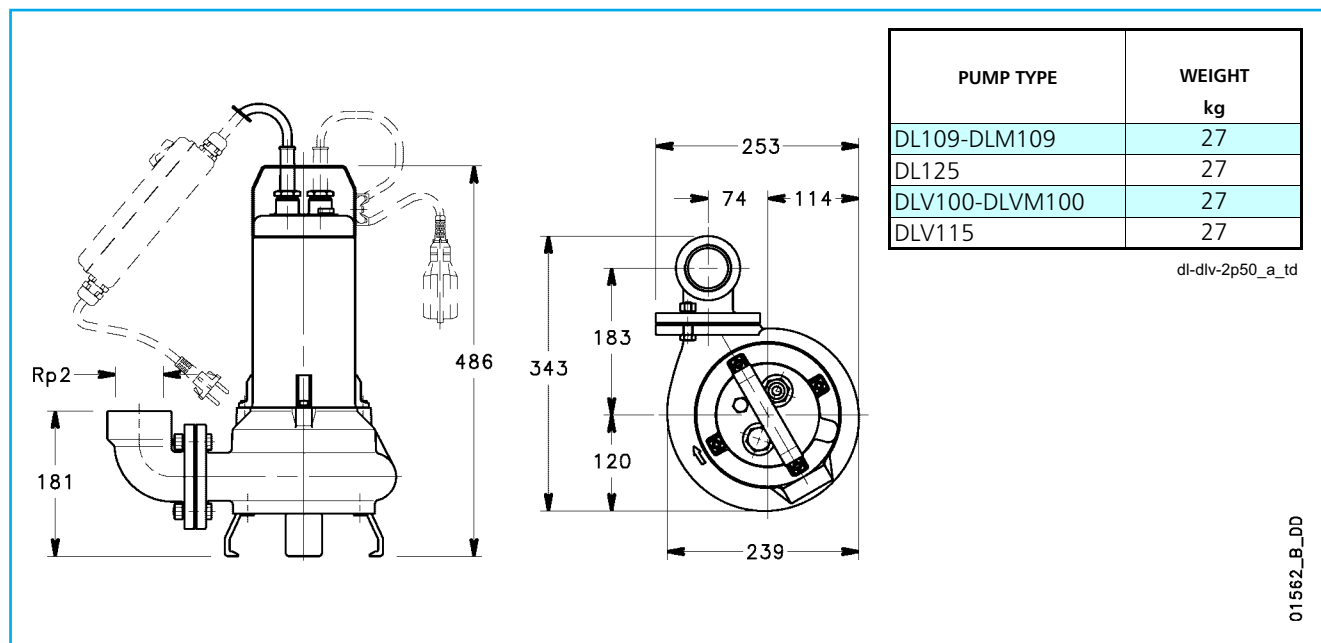
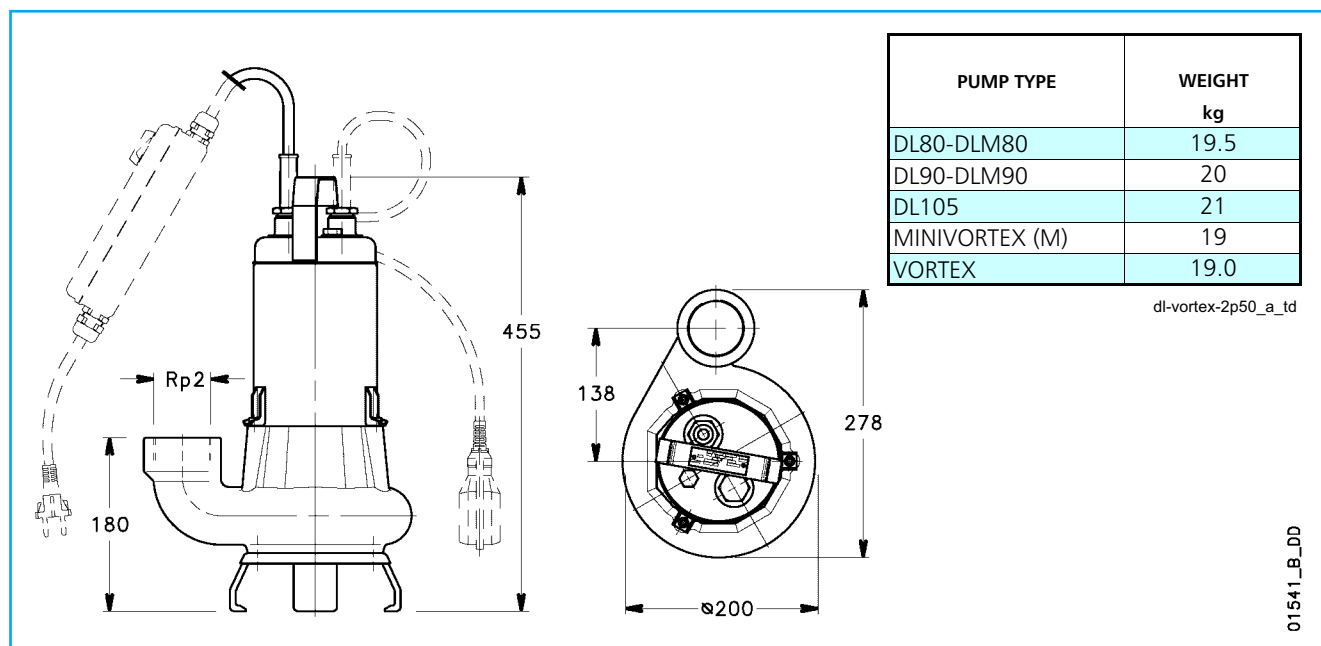
PUMP TYPE	INPUT POWER*	INPUT CURRENT*	CAPACITOR
SINGLE-PHASE		220-240 V	
	kW	A	$\mu\text{F} / 450 \text{ V}$
-	-	-	-
-	-	-	-
-	-	-	-

* Maximum value in specified range

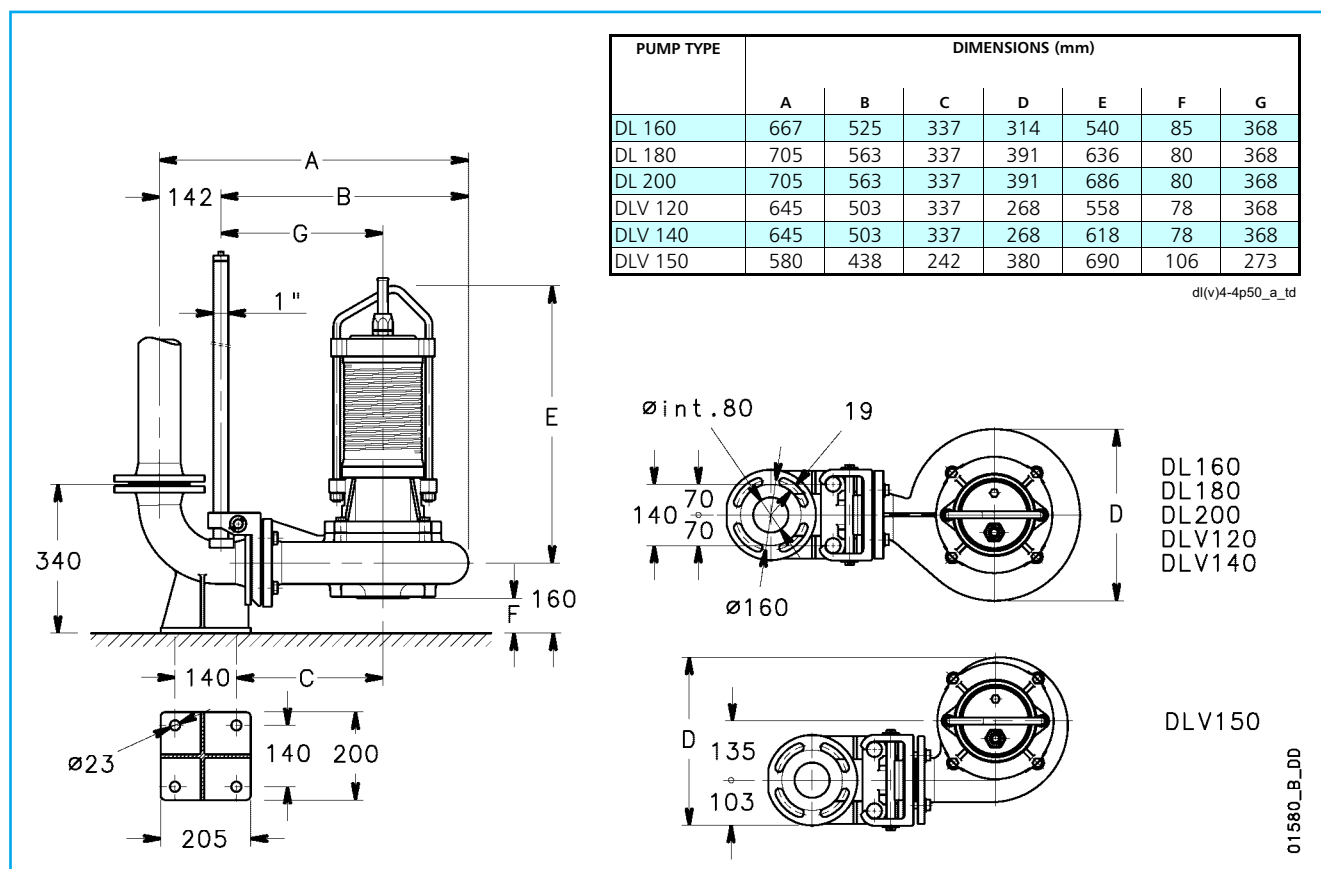
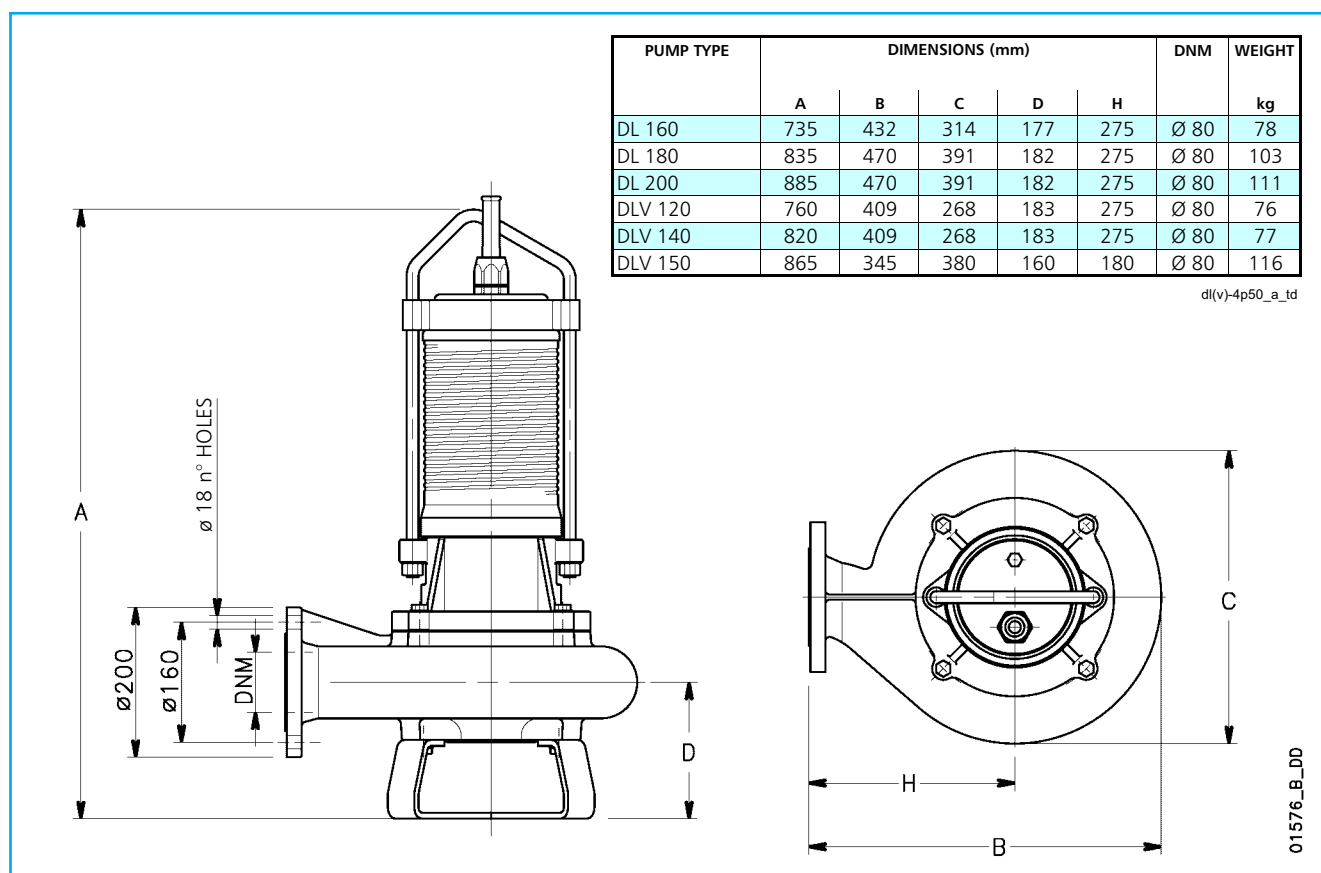
PUMP TYPE	INPUT POWER*	INPUT CURRENT*	INPUT CURRENT*
THREE-PHASE		220-240 V	380-415 V
	kW	A	A
DLV120	2.3	7.8	4.5
DLV140	3.4	11.2	6.5
DLV150	4.9	16.5	9.5

dlv-4p50_a_te

2 POLES DL(V) SERIES DIMENSIONS AND WEIGHTS



4 POLES DL(V) SERIES DIMENSIONS AND WEIGHTS



GL-GLV SERIES

SUBMERSIBLE ELECTRIC PUMPS FOR WASTE WATERS

APPLICATIONS

- Circulation of sewage water containing suspended solids.
- Emptying of domestic waste water tanks, dirty water from cesspools and sewage water in general.
- Drainage of excavations and marshy grounds.

FEATURES

- Manufactured in cast iron - shaft and impeller in 304 stainless steel.
- **Motor stator installed** non-toxic, dielectric **oil** for the lubrication of the ball bearings and improved cooling.
- **Volute pump casing.**
- **Mechanical seal** protected by **sand-proof labyrinth.**
- Maximum depth of **immersion: 5 meters.**
- Maximum liquid **temperature: 50°C** with **pump wholly submersed.**
30°C with **pump partially submersed.**
- Motor class F - IP68 - 2900 rpm.
- Single-channel or vortex impeller - cross-section Ø 50 mm.
- Starting panel in the single-phase version.
- Version:
Single-phase 220-230 V 50 Hz.
Three-phase 220-240 V, 50 Hz or 380-415 V 50 Hz.

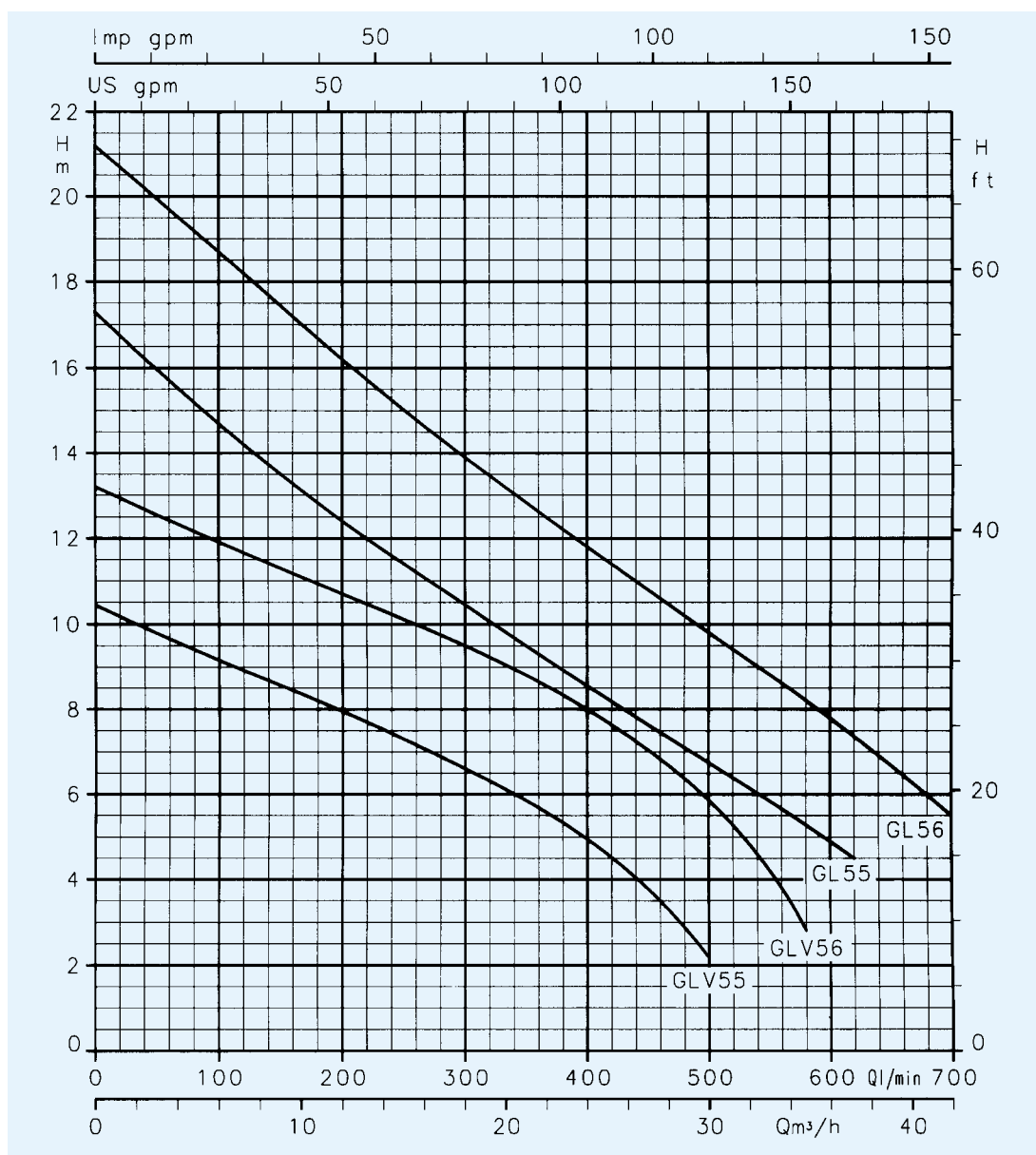


TABLE OF MATERIALS

COMPONENT	MATERIAL
Pump casing	CAST IRON* 200 UNI ISO 185
Impeller	CrNi STEEL (AISI 304)
Suction flange	CrNi STEEL (AISI 304)
Support foot	CrNi STEEL (AISI 304)
O-Ring	NITRILE RUBBER
Mechanical seal	CARBON/CERAMIC/ NITRILE RUBBER
Shaft extension	CrNi STEEL (AISI 304)
Motor casing	CAST IRON* 200 UNI ISO 185

* Cast iron with polybutadiene surface treatment for electrophoresis at 180°C

WORKING FEATURES AT 2850 rpm



PUMP TYPE		IMPELLER TYPE	kW kW	HP	ABSORBED POWER IN AMP.		CAPACITOR		MOTOR RATED CURRENT			Q = CAPACITY							
SINGLE-PHASE 220-240 V 50 Hz	THREE-PHASE 220-240/ 380-415 V 50 Hz				SINGLE- PHASE	THREE- PHASE	μF	V	SINGLE- PHASE 220- 240 V	THREE-PHASE 220- 240 V	380- 415 V	l/min	100	200	300	400	500	600	700
												m³/h	6	12	18	24	30	36	42
H = HEAD IN METERS OF COLUMN OF WATER																			
GLVM 55	GLV 55	VORTEX	1,5	1,1	1,7	1,7	30	450	8,3	5,6	3,2	9	8	6,5	5	2			
	GLV 56	VORTEX	2	1,5	–	2,2	–	–	–	6,6	3,8	12	10,5	9,5	8	6			
GLM 55	GL 55	CHANNEL	1,5	1,1	1,75	1,75	30	450	8,5	5,7	3,3	14,5	12,5	10,5	8,5	6,5	5		
	GL 56	CHANNEL	2	1,5	–	2,2	–	–	–	6,6	3,8	18,5	16	14	12	10	8	5,5	

These performances are valid for liquids with density $\rho = 1.0 \text{ kg/dm}^3$ and kinematic viscosity $\gamma = 1 \text{ mm}^2/\text{sec}$.

SINGLEBOX

DOUBLEBOX SERIES

PREFABRICATED LIFTING STATIONS WITH ENTRAINED SOLIDS WASTE WATER

The ideal solution when domestic wastewater must be delivered to sewer mains located at a higher level, or where gravity drainage is not possible.

SPECIFICATIONS

- The pumping station, installed in the basement or buried outdoors, collects domestic effluent (toilet included) without any need for initial treatment.
- **SINGLEBOX** consists of a **230-litre** polyethylene basin housing a vortex (DLV) or single-channel (DL) sewage pump, a control box and float. It is a complete pumping station equipped with a lowering device.
- Where greater capacity is required use **DOUBLEBOX**, a prefabricated lifting station which has **twice the capacity of Biobox (450 litres)** and is designed to house two pumps. The operating principle is the same but it produces higher heads.
- The system consists of:
 - 230-litre** (450 for Doublebox) polyethylene basin with screw down lid.
 - Cable glands** for power supply cords (and float) and installation of cables under the cover.
 - 2" delivery pipe.**
 - Six inlets** for discharge or ventilation.
 - DOMO or DL submersible pump**, vortex or channel type.
 - Lowering device.**
 - Vent** or emergency drain **plug.**
 - Control box.**
- IP 68 protection.
- Accessories available on request:
 - Pump kit available to be put into box
 - Ball valve
 - Alarm float.
- For operating characteristics (delivery – head) see DOMO and DL pump section in this catalogue.



TECHNICAL DATA

SINGLEBOX		CHARACTERISTICS					FEATURED COMPONENTS			ACCESSORIES			
		kW	HP	Q max (l/min)	H max (m)	Impeller type	Control panel QDR	Float switch pre-assembled on pump	Float switch (5-m cable)	Non-return valve	Emergency float switch	Siren	Flashing light
SINGLEBOX DOMO 7 SINGLEBOX DOMO 7VX SINGLEBOX DOMO 10 SINGLEBOX DOMO 10VX SINGLEBOX DOMO 15 SINGLEBOX DOMO 15VX SINGLEBOX DOMO 7T SINGLEBOX DOMO 7VXT SINGLEBOX DOMO 10T SINGLEBOX DOMO 10VXT SINGLEBOX DOMO 15T SINGLEBOX DOMO 15VXT SINGLEBOX DOMO 20T SINGLEBOX DOMO 20VXT	FIXED PVC PIPE FITTINGS	SINGLE-PHASE						X		X	Check with sales network		
		0.55	0.75	320	10.7	TWIN CHANNEL		X		X			
		0.55	0.75	260	9.1	VORTEX		X		X			
		0.75	1	500	10.1	TWIN CHANNEL		X		X			
		0.75	1	400	7.7	VORTEX		X		X			
		1.1	1.5	600	12.7	TWIN CHANNEL		X		X			
		1.1	1.5	450	9.1	VORTEX		X		X			
		THREE-PHASE					X		X	X	X	X	X
		0.55	0.75	260	9.1	VORTEX	X		X	X	X	X	X
		0.75	1	500	10.1	TWIN CHANNEL	X		X	X	X	X	X
		0.75	1	400	7.7	VORTEX	X		X	X	X	X	X
		1.1	1.5	600	12.7	TWIN CHANNEL	X		X	X	X	X	X
		1.1	1.5	450	9.1	VORTEX	X		X	X	X	X	X
		1.5	2	670	14.8	TWIN CHANNEL	X		X	X	X	X	X
		1.5	2	550	11	VORTEX	X		X	X	X	X	X
		SINGLE-PHASE						X		X	Check with sales network		
		0.75	1	400	7.7	VORTEX		X		X			
		1.1	1.5	600	12.7	TWIN CHANNEL		X		X			
		1.1	1.5	450	9.1	VORTEX		X		X			
		THREE-PHASE					X		X	X	X	X	X
		0.75	1	400	7.7	VORTEX	X		X	X	X	X	X
		1.1	1.5	600	12.7	TWIN CHANNEL	X		X	X	X	X	X
		1.1	1.5	450	9.1	VORTEX	X		X	X	X	X	X
		1.5	2	670	14.8	TWIN CHANNEL	X		X	X	X	X	X
		1.5	2	550	11	VORTEX	X		X	X	X	X	X
SINGLEBOX DLM 80 SINGLEBOX DLM 90 SINGLEBOX MINI VORTEX M SINGLEBOX DLM 109 SINGLEBOX DLVM 100 SINGLEBOX DL 80 SINGLEBOX DL 90 SINGLEBOX MINI VORTEX SINGLEBOX DL 105 SINGLEBOX DL 109 SINGLEBOX DLV 100 SINGLEBOX VORTEX SINGLEBOX DL 125 SINGLEBOX DLV 115	DROP CABLE	SINGLE-PHASE						X		X	Check with sales network		
		0.6	0.8	450	9.7	SINGLE CHANNEL		X		X			
		0.6	0.8	300	7.2	VORTEX		X		X			
		1.1	1.5	600	18.3	SINGLE CHANNEL		X		X			
		1.1	1.5	500	10.6	VORTEX		X		X			
		THREE-PHASE					X		X	X	X	X	X
		0.6	0.8	450	9.7	SINGLE CHANNEL	X		X	X	X	X	X
		0.6	0.8	300	7.2	VORTEX	X		X	X	X	X	X
		1.1	1.5	500	14.1	SINGLE CHANNEL	X		X	X	X	X	X
		1.1	1.5	600	18.3	SINGLE CHANNEL	X		X	X	X	X	X
		1.1	1.5	500	10.6	VORTEX	X		X	X	X	X	X
		1.1	1.5	500	8.4	VORTEX	X		X	X	X	X	X
		1.5	2	700	21.9	SINGLE CHANNEL	X		X	X	X	X	X
		1.5	2	600	13.1	VORTEX	X		X	X	X	X	X

sbox_models_a_sc

Notes	Single-phase model pumps come with start capacitor, overload protection, float switch and cord with plug. Versions with control panel and accessories are available on request
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TECHNICAL DATA

DOUBLEBOX		CHARACTERISTICS					FEATURED COMPONENTS			ACCESSORIES			
		kw	HP	Q max (l/min)	H max (m)	Impeller type	* Control panel	Float switch pre-assembled on pump	Float switch (5-m cable)	Non-return valve	Emergency float switch	Siren	flashing light
DATA REFERS TO 2 PUMPS RUNNING SIMULTANEOUSLY													
DOUBLEBOX DOMO 7 DOUBLEBOX DOMO 7VX DOUBLEBOX DOMO 10 DOUBLEBOX DOMO 10VX DOUBLEBOX DOMO 15 DOUBLEBOX DOMO 15VX DOUBLEBOX DOMO 7T DOUBLEBOX DOMO 7VXT DOUBLEBOX DOMO 10T DOUBLEBOX DOMO 10VXT DOUBLEBOX DOMO 15T DOUBLEBOX DOMO 15VXT DOUBLEBOX DOMO 20T DOUBLEBOX DOMO 20VXT	FIXED PVC PIPE FITTINGS	SINGLE-PHASE	2x0.55	2x0.75	640	10.7	TWIN CHANNEL		X		X	Check with sales network	
			2x0.55	2x0.75	520	9.1	VORTEX		X		X		
			2x0.75	2x1	1000	10.1	TWIN CHANNEL		X		X		
			2x0.75	2x1	800	7.7	VORTEX		X		X		
			2x1.1	2x1.5	1200	12.7	TWIN CHANNEL		X		X		
			2x1.1	2x1.5	900	9.1	VORTEX		X		X		
		THREE-PHASE	2x0.55	2x0.75	640	10.7	TWIN CHANNEL	X		X	X	X	X
			2x0.55	2x0.75	520	9.1	VORTEX	X		X	X	X	X
			2x0.75	2x1	1000	10.1	TWIN CHANNEL	X		X	X	X	X
			2x0.75	2x1	800	7.7	VORTEX	X		X	X	X	X
			2x1.1	2x1.5	1200	12.7	TWIN CHANNEL	X		X	X	X	X
			2x1.1	2x1.5	900	9.1	VORTEX	X		X	X	X	X
	DROP CABLE	SINGLE-PHASE	2x0.75	2x1	1000	10.1	TWIN CHANNEL		X		X	Check with sales network	
			2x0.75	2x1	800	7.7	VORTEX		X		X		
			2x1.1	2x1.5	1200	12.7	TWIN CHANNEL		X		X		
			2x1.1	2x1.5	900	9.1	VORTEX		X		X		
		THREE-PHASE	2x0.75	2x1	1000	10.1	TWIN CHANNEL	X		X	X	X	X
			2x0.75	2x1	800	7.7	VORTEX	X		X	X	X	X
			2x1.1	2x1.5	1200	12.7	TWIN CHANNEL	X		X	X	X	X
			2x1.1	2x1.5	900	9.1	VORTEX	X		X	X	X	X
		SINGLE-PHASE	2x1.5	2x2	1340	14.8	TWIN CHANNEL	X		X	X	X	X
			2x1.5	2x2	1100	11	VORTEX	X		X	X	X	X
		THREE-PHASE	2x0.6	2x0.8	700	7.6	SINGLE CHANNEL	X		X	X	X	X
			2x0.6	2x0.8	900	9.7	SINGLE CHANNEL	X		X	X	X	X
			2x0.6	2x0.8	600	7.2	VORTEX	X		X	X	X	X
			2x1.1	2x1.5	1200	18.3	SINGLE CHANNEL	X		X	X	X	X
		THREE-PHASE	2x1.1	2x1.5	1000	10.6	VORTEX	X		X	X	X	X
			2x0.6	2x0.8	700	7.6	SINGLE CHANNEL	X		X	X	X	X
			2x0.6	2x0.8	900	9.7	SINGLE CHANNEL	X		X	X	X	X
			2x0.6	2x0.8	600	7.2	VORTEX	X		X	X	X	X
		THREE-PHASE	2x1.1	2x1.5	1000	14.1	SINGLE CHANNEL	X		X	X	X	X
			2x1.1	2x1.5	1200	18.3	SINGLE CHANNEL	X		X	X	X	X
			2x1.1	2x1.5	1000	10.6	VORTEX	X		X	X	X	X
			2x1.1	2x1.5	1000	8.4	VORTEX	X		X	X	X	X
		THREE-PHASE	2x1.5	2x2	1400	21.9	SINGLE CHANNEL	X		X	X	X	X
			2x1.5	2x2	1200	13.1	VORTEX	X		X	X	X	X

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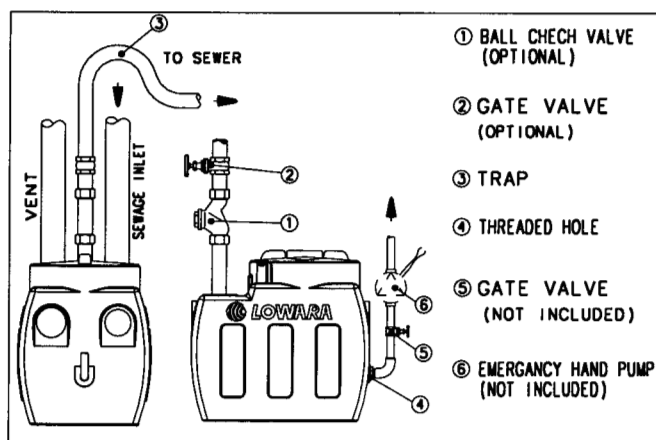
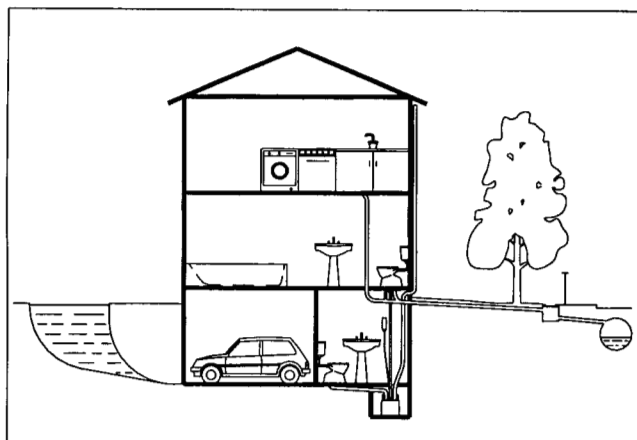
Notes

Single-phase model pumps come with start capacitor, overload protection, float switch and cord with plug.

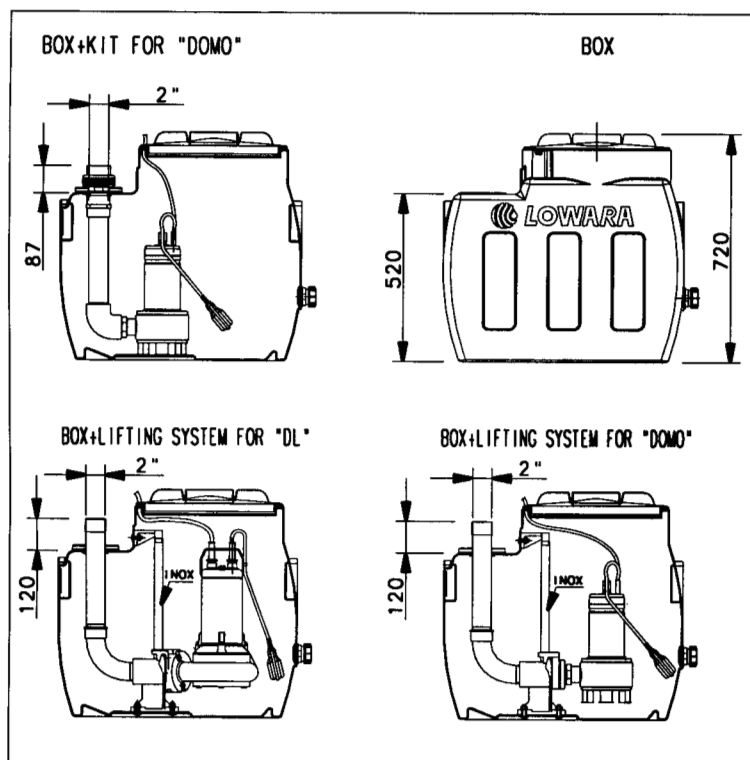
Versions with control panel and accessories are available on request.

* The panel for the single-phase versions is 9QDRM2. The panel for the three-phase versions is 9QDR2

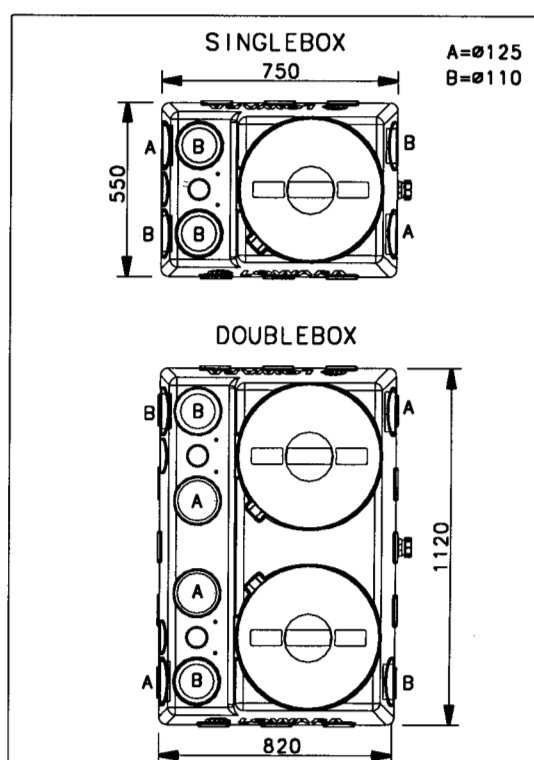
APPLICATION EXAMPLES



VERSIONS



MODELS



FDL - FXDL FBDL SERIES

SUBMERSIBLE PUMPS FOR WITH ENTRAINED SOLIDS WASTE WATER

Sewage pumps with power up to 22 kW (30 HP).
Available in **cast iron (FDL)**, **AISI 316 stainless steel (FXDL)**, **B10 bronze (FBDL)**.

FDLV and FXDLV versions with vortex impeller are also available.

APPLICATIONS

- Handling of sewage, liquids, waste water and industrial sludge.
- Draining of flooded excavations and marshy ground.
- Pumping of aggressive liquids (FXDL version) in the chemical industry.
- Pumping of salt water (FBDL version).
- Water display, fountains.

SPECIFICATIONS

- **Maximum liquid temperature: 25-40°C** (see hydraulic performance table)
- **Maximum immersion depth: 20 m.**
- **Passes solids 6 to 100 mm** in diameter (see hydraulic performance table)
- Double seal system, silicon carbide/silicon carbide inner seal, ceramic/carbon or O-ring upper seal, with oil chamber in between.
- Adjustable bottom cover to compensate for impeller wear and ensure stable hydraulic performances.
- **Dry motor** (class F insulation).
- 2-, 4-, 6-pole versions.
- Large-sized motor bearings.
- Power cord: 10 m, H07RN-F type.
- Moisture measuring probe in oil chamber and stator thermal protection probe on most models (see electrical data table).
- FXDL models are equipped with a threaded stainless steel cable gland for the installation of a power cord protection tube.

ACCESSORIES

- Lowering device.
- Delivery coupling.
- Tripod base
- Ball check valve
- Float for laden water
- Command and control boxes.



FDL



FXDL

FBDL

TABLE OF MATERIALS

FDL (V)

PART	MATERIAL
Impeller, Pump body, Motor casing, Casing wear plate, Upper cover	FDL (V) 250 CAST IRON
Shaft	STAINLESS STEEL (AISI 430)
Bearings	PERMANENTLY LUBRICATED BALL TYPE
Upper mechanical seal	CARBON/CERAMIC O-RING
Inner mechanical seal	SILICON CARBIDE/SILICON CARBIDE
Gaskets	FPM
Nuts and bolts	STAINLESS STEEL (AISI 304)

FXDL (V) - FBDL

PART	MATERIAL	
Impeller, Pump body, Motor casing, Volute bottom, Upper cover	FXDL (V)	FBDL
	STAINLESS STEEL (AISI 316)	B10 STEEL BRONZE
Shaft	STAINLESS STEEL (AISI 630)	
Bearings	PERMANENTLY LUBRICATED BALL TYPE	
Upper mechanical seal	CARBON/CERAMIC OR O-RING	
Inner mechanical seal	SILICON CARBIDE/SILICON CARBIDE	
Gaskets	NITRILE RUBBER	
Nuts and bolts	STAINLESS STEEL (AISI 316)	

FDL-FDLV SERIES ELECTRICAL DATA, 50 Hz

PUMP TYPE	INPUT POWER	rpm	RATED CURRENT IN Amp.			PEAK CURRENT Isp (A)		POWER CORD TYPE	STATOR THERMAL PROTECTION**	MOISTURE DETECTION PROBE IN GIL CHAMBER**
			220-240 V Δ	380-415 V Y	Δ	220-240 V	380-415 V			
THREEPHASE	kW									
FDL 61-42	1,7	1450	5,4	3,1	—	24		4 x 1,5	NOT	NOT
FDL 62-41	2,6	1450	8,2	4,7	—	36	21	4 x 2,5	NOT	NOT
FDL 64-22	3,5	2850	10	5,8		65	38	4 x 2,5	NOT	NOT
FDL 65-22	5,2	2850	15,3	8,8		78	45	7 x 2,5	YES	YES
FDL 66-21	6,6	2850	19,4	11,2		99	57	7 x 2,5	YES	YES
FDL 81-41	2	1450	6	3,5		27	16	4 x 2,5	NOT	NOT
FDL 82-41	2,8	1450	8,7	5		39	22	4 x 2,5	NOT	NOT
FDL 102-61	3	950	10,5	6		47	27	7 x 2,5	YES	YES
FDL 104-42	4,3	1450	14	8,10		59	34	4 x 2,5	NOT	NOT
FDL 106-41	5,7	1450			10,4		57	12 x 2,5	YES	YES
FDL 107-41	5,9	1450			10		55	12 x 2,5	YES	YES
FDL 107-42	6,5	1450			11,5		63	12 x 2,5	YES	YES
FDL 109-42	9,6	1450			18,5		142	10 x 4	YES	YES
FDL 109-41	11,2	1450			21,5		165	10 x 4	YES	YES
FDL 152-41	15,5	1450			28,5		220	12 x 2,5	YES	YES
FDL 153-43	23,5	1450			41,5		270	10 x 4	YES	YES
FDL 153-42	30,6	1450			54		351	10 x 4	YES	YES

PUMP TYPE	INPUT POWER	rpm	RATED CURRENT In Amp. 220-240 V	CAPACITOR		PEAK CURRENT Isp (A)	POWER CORD TYPE	STATOR THERMAL PROTECTION**	MOISTURE DETECTION PROBE IN OIL CHAMBER
				μF	V				
SINGLE-PHASE	kW								
FDLM 81-41	1,7	1450	8,1	31,5	450	34	4 x 2,5	NOT	NOT

PUMP TYPE	INPUT POWER	rpm	RATED CURRENT In Amp.			PEAK CURRENT Isp (A)		POWER CORD TYPE	STATOR THERMAL PROTECTION**	MOISTURE DETECTION PROBE IN OIL CHAMBER**
			220-240 V Δ	380-415 V Y	Δ	220-240 V	380-415 V			
THREE-PHASE	kW									
FDLV 61-42	1,5	1450	4,8	2,8		22	13	4 x 2,5	NOT	NOT
FDLV 61-41	1,6	1450	5	2,9		23	13	4 x 2,5	NOT	NOT
FDLV 62-41	2,5	1450	8	4,6		35	21	4 x 2,5	NOT	NOT
FDLV 81-43	1,5	1450	4,9	2,8		22	13	4 x 2,5	NOT	NOT
FDLV 81-42	1,6	1450	5,2	3		24	14	4 x 2,5	NOT	NOT
FDLV 81-41	1,9	1450	5,8	3,3		27	15	4 x 2,5	NOT	NOT
FDLV 82-42	2,4	1450	7,7	4,4		34	20	4 x 2,5	NOT	NOT
FDLV 82-41	2,8	1450	8,7	5		39	22	4 x 2,5	NOT	NOT
FDLV 83-41	3,2	1450	9,5	5,5		42	25	4 x 2,5	NOT	NOT
FDLV 84-22	4,5	2850	13,6	7,9		70	41	7 x 2,5	YES	YES
FDLV 85-21	6	2850	17,3	10		89	51	7 x 2,5	YES	YES
FDLV 104-41	4,3	1450	14,2	8,2		59	35	4 x 2,5	YES	YES
FDLV 106-42	5,4	1450			9,5		53	12 x 2,5	YES	YES
FDLV 106-41	6,8	1450			12		66	12 x 2,5	YES	YES
FDLV 152-42	24,7	1450			45		293	10 x 4	YES	YES
FDLV 153-41	29,5	1450			53,4		348	10 x 4	YES	YES

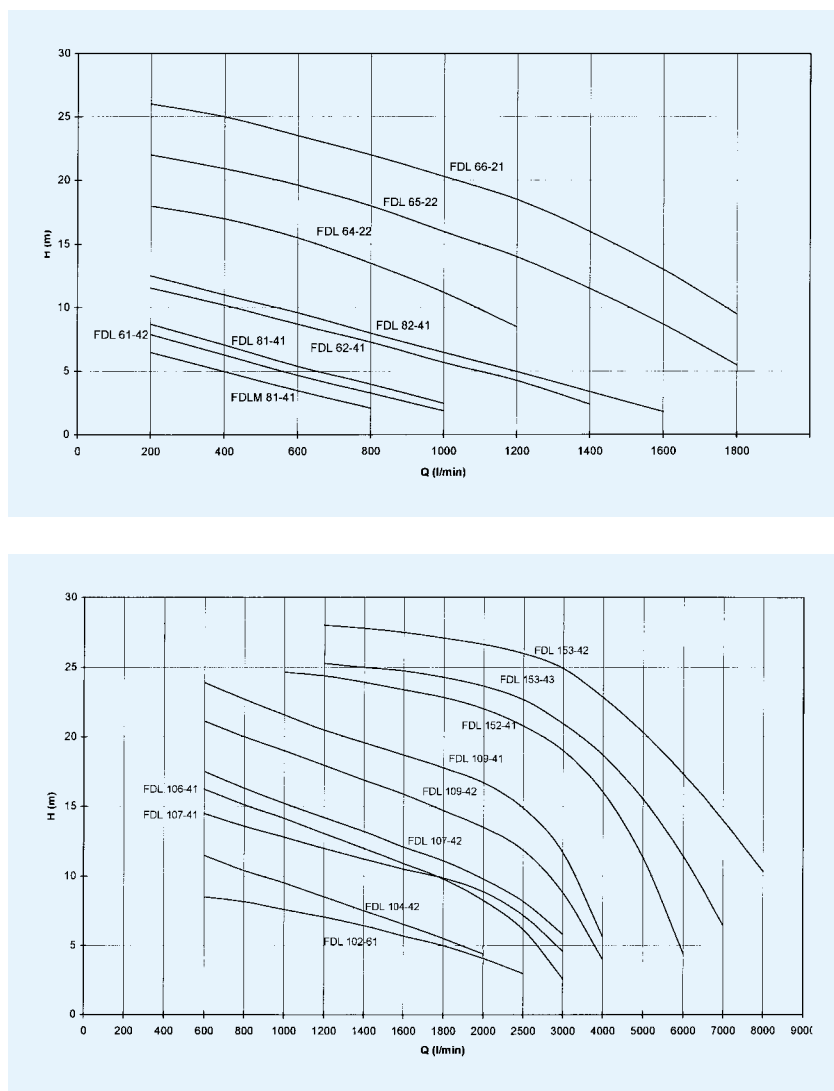
PUMP TYPE	INPUT POWER	rpm	RATED CURRENT In Amp. 220-240 V	CAPACITOR		PEAK CURRENT Isp (A)	POWER CORD TYPE	STATOR THERMAL PROTECTION**	MOISTURE DETECTION PROBE IN OIL CHAMBER**
				μF	V				
SINGLE-PHASE	kW								
FDLVM 81-43	1,6	1450	8	31,5	450	34	4 x 2,5	NOT	NOT

FXDL-FBDL SERIES ELECTRICAL DATA, 50 Hz

PUMP TYPE	INPUT POWER	rpm	RATED CURRENT In Amp.		PEAK CURRENT Isp (A)		POWER CORD TYPE	STATOR THERMAL PROTECTION**	MOISTURE DETECTION PROBE IN OIL CHAMBER
			220-240 V Δ	380-415 V Y	220-240 V	380-415 V			
TRIPHASEE	kW								
FXDLV 41-21	0,8	2850	2,8	1,6	13	7	4 x 1,5	NOT	NOT
FXDL 41-21	1	2850	3,3	1,9	15	9	4 x 1,5	NOT	NOT
FXDL 53-22	3,2	2850	9,5	5,5	62	36	4 x 2,5	NOT	NOT
FXDL 62-22	1,7	2850	5	2,9	26	15	4 x 2,5	NOT	NOT
FXDL 62-21	2,4	2850	7,6	4,4	50	29	4 x 2,5	NOT	NOT
FXDL 64-22	3,8	2850	11,6	6,7	76	44	4 x 2,5	NOT	NOT
FBDL 62-22	1,7	2850	5	2,9	26	15	4 x 2,5	NOT	NOT
FBDL 62-21	2,2	2850	6,4	3,7	42	24	4 x 2,5	NOT	NOT
FBDL 64-22	4,5	2850	10	5,8	65	38	4 x 2,5	NOT	NOT
FBDL 66-21	6,6	2850	19,4	12,2	99	57	7 x 2,5	YES	YES

** On standard version.

FDL SERIES (CHANNEL IMPELLER) OPERATING CHARACTERISTICS, 50 Hz

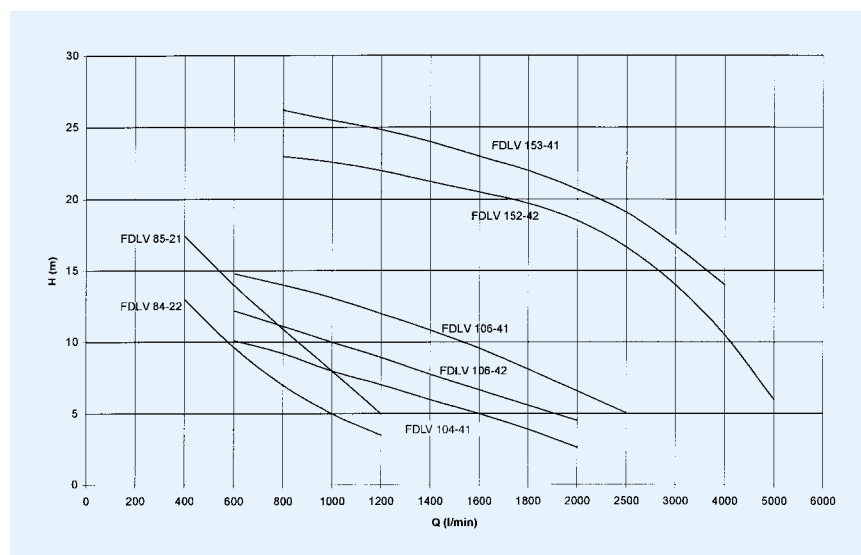
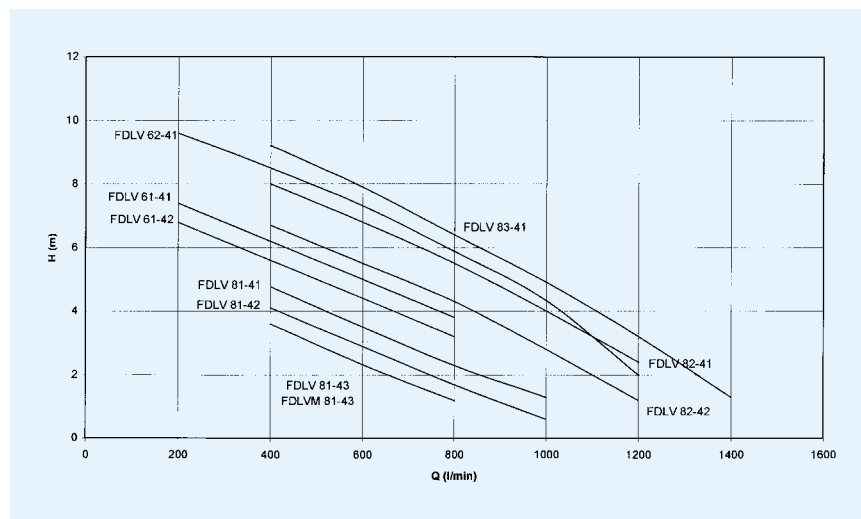


HYDRAULIC PERFORMANCE TABLE, 50 Hz

PUMP TYPE	INPUT POWER		Q = DELIVERY																DNM	SOLIDS HANDLED	MAX. LIQUID TEMP	
			l/min	200	400	600	800	1000	1200	1400	1600	1800	2000	2500	3000	4000	5000	6000				7000
	m³/h	12	24	36	48	60	72	84	96	108	120	150	180	240	300	360	420					
	H = TOTAL HEAD METERS COLUMN OF WATER																					
FDL 61-42	1,7	1450	7,8	6,5	5,3	4	2,6												65	65	40	
FDL 62-41	2,6	1450	11,5	10	8,7	7,4	6,2	4,8	3,3	2									65	65	40	
FDL 64-22	3,5	2850	18	17	15,5	13,5	11,2	8,5											70	30	30	
FDL 65-22	5,2	2850	21,5	20	19	17	16	14	12										70	30	30	
FDL 66-21	6,6	2850	26	25	24	22	20	18	16	13									70	30	30	
FDLM 81-41	1,7	1450	6,5	5	3,5	2,1													80	52	40	
FDL 81-41	2	1450	9	7	5,3	4	2,5												80	52	40	
FDL 82-41	2,8	1450	12	11	9,2	7,5	6,5	5	3,7	2,5									80	76	40	
FDL 102-61	3	950	8,8	8,6	8,2	7,5	7,2	6,9	6,5	5,6	5,2	4,6	3						100	80	40	
FDL 104-42	4,3	1450	14	13	11,5	10,2	9	8	7	6,2	5	4,1							100	—	—	
FDL 106-41	5,7	1450	19	17	16	15	14	13	12	11	10	8	6	3					100	78	40	
FDL 107-41	5,9	1450		15	14,3	13,6	13	12,6	11,5	10,8	9,9	9,2	7,2	5					100	100	40	
FDL 107-42	6,5	1450		18	17	16	15	14	13	12	10	8	5						100	60	40	
FDL 109-42	9,6	1450					20	18,5	17	16	15,4	14,2	13,7	12	9				100	90	40	
FDL 109-41	11,2	1450					23	21,5	20	19	17	16,5	16	14	12	7			100	90	40	
FDL 152-41	15,5	1450					21,5	20,5	20	18,8	18	17	16,5	15	13,5	10	6		150	100	40	
FDL 153-43	23,5	1450					25,8	25,5	25,1	24,6	24	23,8	23,5	22,5	21,5	19,4	17	14	11	150	100	40
FDL 153-42	30,6	1450					28,5	28,2	28	27,8	27,6	27,5	27	26	25	23	20,5	17,5	14	150	100	25

These performances are valid for liquids with density $\rho = 1.0 \text{ kg/dm}^3$ and kinematic viscosity $\gamma = 1 \text{ mm}^2/\text{sec}$.

FDLV SERIES (VORTEX IMPELLER) OPERATING CHARACTERISTICS, 50 Hz



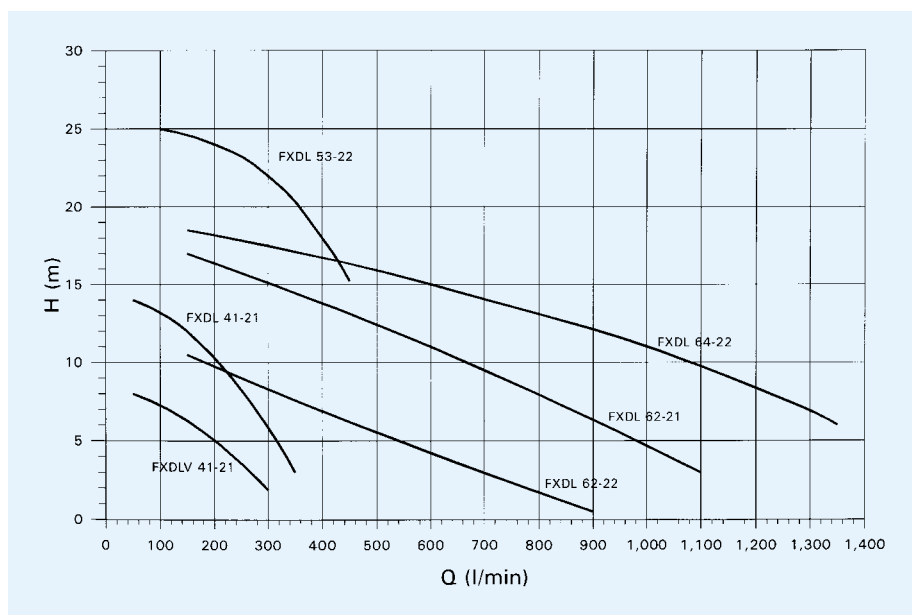
HYDRAULIC PERFORMANCE TABLE, 50 Hz

PUMP TYPE	INPUT POWER		Q = DELIVERY															DNM	SOLIDS HANDLED	MAX. LIQUID TEMP. °C
			l/min	200	400	600	800	1000	1200	1400	1600	1800	2000	2500	3000	4000	5000			
			m³/h	12	24	36	48	60	72	84	96	108	120	150	180	240	300			
H = TOTAL HEAD METERS COLUMN OF WATER																			(mm)	
FDLV 61-42	1,5	1450	6,8	5,8	4,4	2,5												65	50	40
FDLV 61-41	1,6	1450	7,4	6,4	5	3,2												65	50	40
FDLV 62-41	2,5	1450	8,6	7,8	6,6	5	3,8	2,3										65	50	40
FDLVM 81-43	1,6	1465	4,8	3,6	2,4	1,2												80	50x60	40
FDLV 81-43	1,5	1450	4,5	3,4	2,2	1,2												80	50x60	40
FDLV 81-42	1,6	1450	5,1	4,1	3	1,7	0,6											80	50x60	40
FDLV 81-41	1,9	1450	5,9	4,8	3,5	2,3	1,3											80	50x60	40
FDLV 82-42	2,4	1400	7,6	6,7	5,5	4,3	2,8	1,2										80	60x50	40
FDLV 82-41	2,8	1400	9	8	6,8	5,2	4	2,4										80	60x50	40
FDLV 83-41	3,2	1400	10,6	9,2	7,9	6,2	5	3,2	1,3									80	50	40
FDLV 84-22	4,5	2860	16	13	10	7	5	3,5										80	50	40
FDLV 85-21	6	2860	22	18	14	11	8	5										80	50	40
FDLV 104-41	4,3	1450		11	9,6	8,5	8,1	7	6	5	3,8							100	70x90	40
FDLV 106-42	5,4	1450		13	12,2	11	10,5	9,2	8,5	7,2	6,2	5						100	70x90	40
FDLV 106-41	6,8	1450		15,2	14,8	13,5	12,8	12	10,5	9,2	8,2	7	3,5					100	70x90	40
FDLV 152-42	24,7	1460				23	22,8	22	20,5	20	19,5	18,5	16	14	10,5	6		150	100	25
FDLV 153-41	30	1460				26,2	25,5	24,5	23	22,5	22	21	18,2	17	13			150	100	25

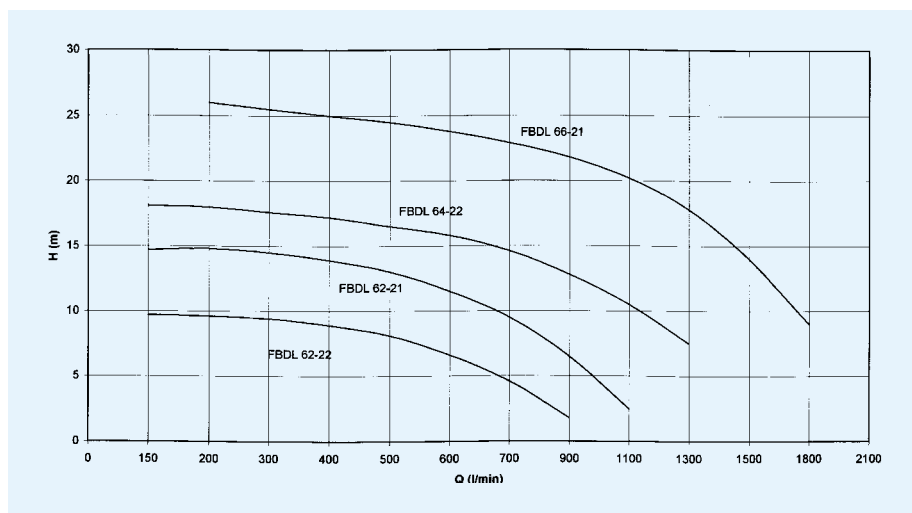
These performances are valid for liquids with density $\rho = 1.0 \text{ kg/dm}^3$ and kinematic viscosity $\gamma = 1 \text{ mm}^2/\text{sec}$.

FXDL (V) SERIES OPERATING CHARACTERISTICS, 50 Hz

FXDL (V)



FBDL



HYDRAULIC PERFORMANCE TABLE, 50 Hz

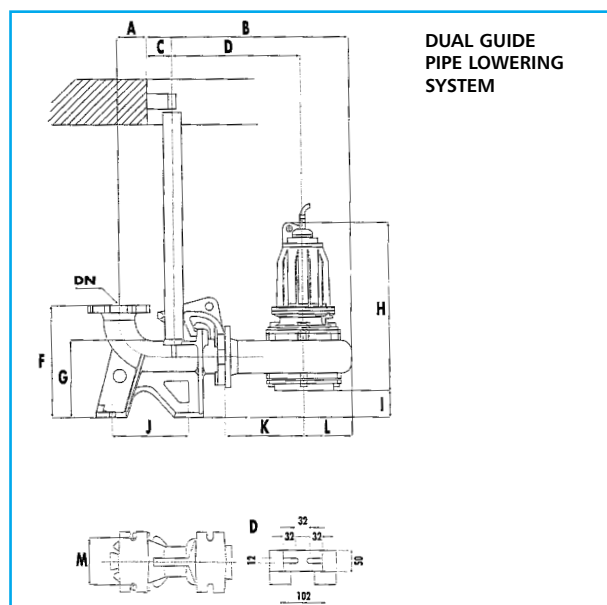
PUMP TYPE	INPUT POWER		Q = DELIVERY																DNM	SOLIDS HANDLED	TEMP. MAX. LIQUIDO
			l/min	50	100	150	200	300	400	500	600	700	900	1100	1300	1500	1800				
			m³/h	3	6	9	12	18	24	30	36	42	54	66	78	90	108				
			H = TOTAL HEAD METERS COLUMN OF WATER																		
	kW	rpm																		(mm)	°C
FXDLV 41-21	0,8	2850	8	7,5	6,3	5	1,8											1"½	30	40	
FXDL 41-21	1	2850	14,8	13,5	12	10	5,5											1"½	6	40	
FXDL 53-22	3,2	2860		25,2	24,8	23,8	22	18										2"	6	25	
FXDL 62-22	1,7	2850		11,1	10,5	9,5	8,6	7,5	6,2	5	3,5							70	30	40	
FXDL 62-21	2,4	2860			17	16,5	15,1	13,5	12,5	11	9	6,5	3					70	30	40	
FXDL 64-22	3,8	2860			18,5	18	17,4	17	16	15	14	12	9,5	6,9				70	30	25	
FBDL 62-22	1,7	2850			11	10,1	9	7,5	6,8	5,5	4,6	1,8						70	30	40	
FBDL 62-21	2,2	2850			16,5	15,9	14,5	13	11,5	10,5	9	5,9	2,5					70	30	40	
FBDL 64-22	3,5	2850			18,1	18	17,6	17	16,2	15,5	14,8	12,5	10	7,5				70	30	30	
FBDL 66-21	6,6	2850				26	25,5	26	24,5	24	23	21	19	17,5	14	9		70	30	30	

These performances are valid for liquids with density $\rho = 1.0 \text{ kg/dm}^3$ and kinematic viscosity $\gamma = 1 \text{ mm}^2/\text{sec}$.

FDL (V) - FXDL (V) - FBDL SERIES DIMENSIONS AND WEIGHTS

INSTALLATION WITH DUAL GUIDE PIPE LOWERING SYSTEM

PUMP TYPE	A	B	C	D	F	G	H	I	J	K	L	M	DN	kg
FDL 64 - 22	95	464	85	410	370	256	494	62	250	190	143	160	70	50
FDL 66 - 21 et FDL 65 - 22	95	464	85	410	370	256	570	62	250	190	143	160	70	70
FDL 81 - 41	95	657	85	416	370	256	565	85	250	250	156	160	80	67
FDL 82 - 41	95	657	85	416	370	256	590	85	250	250	156	160	80	71
FDL 102 - 61	105	761	85	466	400	266	620	80	250	300	210	160	100	118
FDL 106 - 41	105	761	85	466	400	266	620	80	250	300	210	160	100	116
FDL 107 - 41	105	711	85	436	400	266	730	50	250	270	190	160	100	125
FDL 107 - 42	105	761	85	466	400	266	715	80	250	300	210	160	100	134
FDL 109 - 41 et 42	105	720	85	440	400	266	826	80	250	280	195	160	100	138
FDL 152 - 41	138	931	85	566	252	373	825	90	300	400	280	200	150	280
FDL 153 - 43	138	931	85	566	525	373	955	90	300	400	280	200	150	328
FDL 153 - 42	138	931	85	466	525	373	955	90	300	400	280	200	150	328
FDLV 61 - 41 et FDLV 62 - 41	65	528	85	299	385	300	510	140	180	225	145	205	65	50
FDL 61 - 42 et FDL 62 - 41	65	528	85	299	385	300	510	140	180	225	145	205	65	50
FDLM 81 - 41	95	657	85	416	370	256	565	85	250	250	156	160	80	67
FDLV 81 - 43	95	646	85	411	370	256	510	122	250	245	150	160	80	57
FDLV 81 - 42	95	646	85	411	370	256	510	122	250	245	150	160	80	57
FDLV 81 - 41	95	646	85	411	370	256	510	122	250	245	150	160	80	57
FDLV 82 - 42	95	646	85	411	370	256	545	122	250	245	150	160	80	61
FDLV 82 - 41	95	646	85	411	370	256	545	122	250	245	150	160	80	61
FDLV 83 - 41	95	646	85	411	370	256	545	122	250	245	150	160	80	62
FDLV 84 - 22	95	649	85	414	370	256	621	60	250	248	150	160	80	70
FDLV 85 - 21	95	649	85	414	370	256	621	60	250	248	150	160	80	70
FDLV 104 - 41	105	711	85	446	400	266	642	90	250	280	180	160	100	115
FDLV 106 - 41	105	711	85	446	400	266	720	90	250	280	180	160	100	120
FDLV 152 - 42	138	965	85	616	525	373	1014	125	300	450	264	200	150	330
FDLV 153 - 41	138	965	85	616	525	373	1014	125	300	450	264	200	150	330
FDLV M 81 - 43	95	646	85	411	370	256	510	122	250	245	150	160	80	57
FXDLV 41 - 21							422			135	105		1 1/2"	30
FXDL 41 - 21							422			135	105		1 1/2"	30
FXDL 53 - 22							440			205	140		2"	45
FXDL 62 - 22							440			143	121		70	40
FXDL 62 - 21							494			190	143		70	51
FXDL 64 - 21							494			190	143		70	51
FBDL 62 - 22							440			143	121		70	39
FBDL 62 - 21							494			191	143		70	52
FBDL 64 - 22							494			190	143		70	52
FBDL 66 - 21							570			190	143		70	70



A slide and DN 70-80-100-150 seal is available on request for coupling of FDL and FDLV series to lowering systems with one guide pipe.

NOTE: the pump drawing is purely indicative. For more information please contact our sales network.

"GRINDER" SERIES

SUBMERSIBLE PUMP FOR DIRTY WATER CONTAINING SOLIDS

Manufactured in cast iron, open multi-channel impeller with a grinder.

Powers up to 7,5 kW (10 HP).

APPLICATIONS

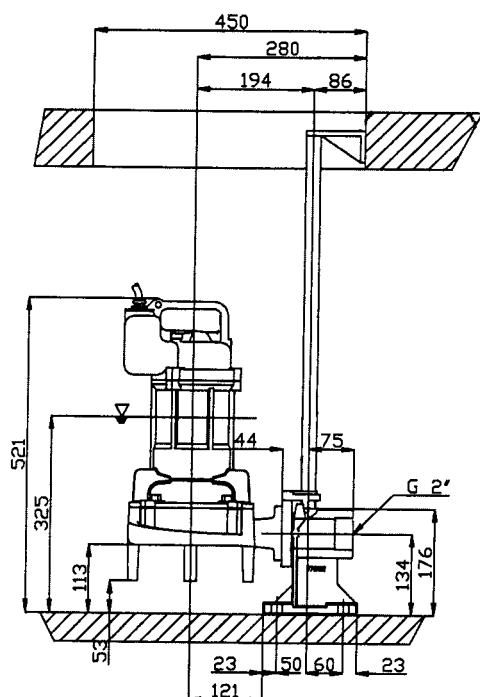
- Capacities up to 1 ÷ 4,4 L/s head up to 15 ÷ 50 m.
- Pump operates with a grinder for dirty water that contains fibres and solids.

SPECIFICATIONS

- 10 metres of cable with 7 wires.
- Mechanical seal system (2 mechanical seals).
- Dry motor, class F, 2poles (2850 rpm).
- Single phase version up to 2 kW with float switch (FDLTM).

OPTIONAL ACCESSORIES

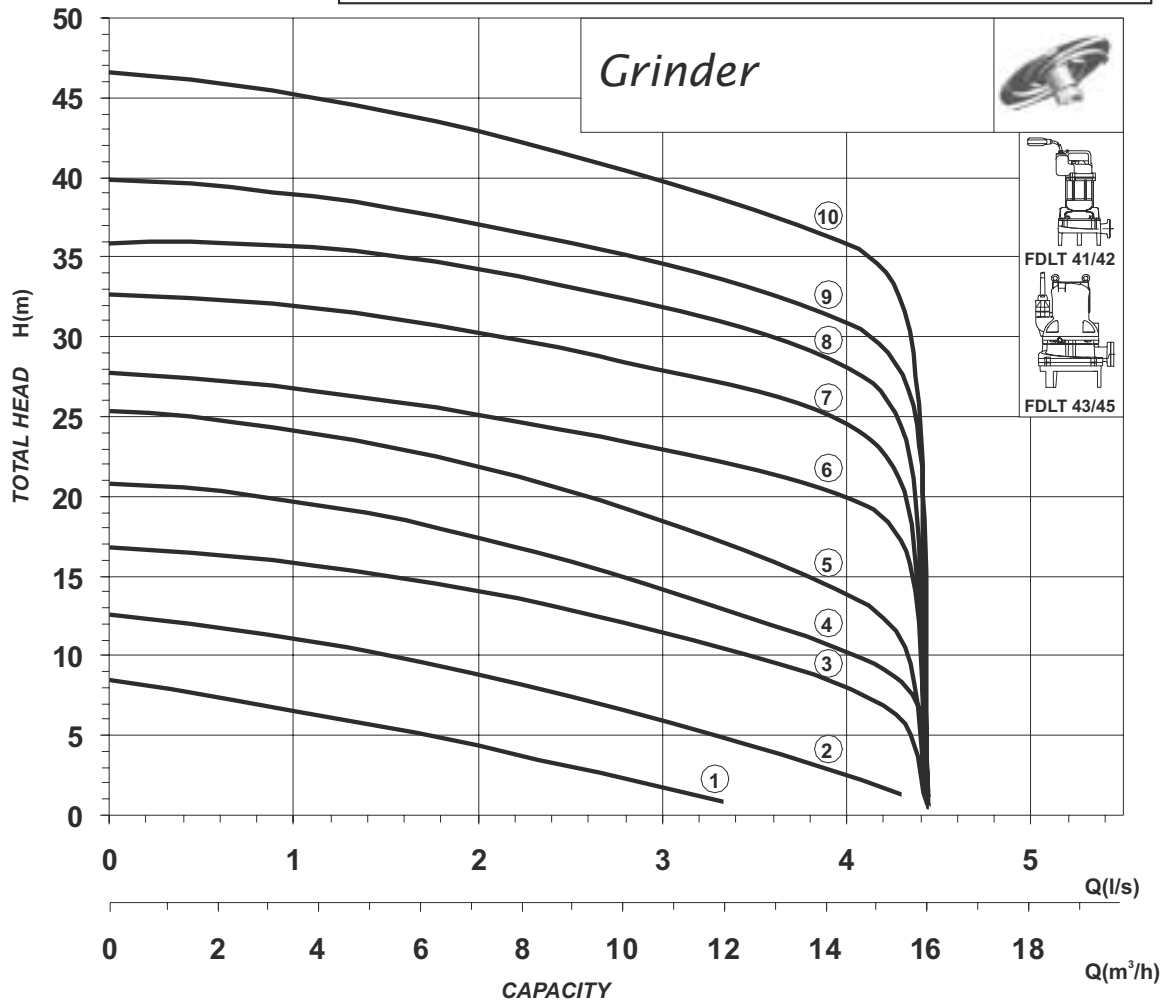
-  Explosion proof version (according to EN 50014).
- Cast iron support foot 2" (50 mm).
- Cast iron counterflange 1 1/2" (40 mm).
- Cast iron elbow 1 1/2" (40 mm).



Grinder system FDLT

SUBMERSIBLE ELECTRIC PUMPS GRINDER, 1"1/2, R.P.M. 2850

Construction in CAST IRON G250 UNI ISO 185



Curve N°	Pump Type	Input Power kW	Nom. Current A	Power Supply	Rotation Speed R.P.M.	Free Passage mm	Outlet Diameter mm	Weight Kg	Installation
1	FDLMT 41-23	0,8	3,7	1ph 230V- 50 Hz	2850	6	40	33	S-R
1	FDLT 41-23	0,8	2,3	3ph 400V- 50 Hz	2850	6	40	33	S-R
2	FDLMT 41-22	1,1	4,5	1ph 230V- 50 Hz	2850	6	40	34	S-R
2	FDLT 41-22	1,1	2,5	3ph 400V- 50 Hz	2850	6	40	33	S-R
3	FDLMT 41-21	1,4	6,3	1ph 230V- 50 Hz	2850	6	40	34	S-R
3	FDLT 41-21	1,4	2,9	3ph 400V- 50 Hz	2850	6	40	34	S-R
4	FDLMT 42-22	1,5	7,1	1ph 230V- 50 Hz	2850	6	40	34	S-R
4	FDLT 42-22	1,5	3	3ph 400V- 50 Hz	2850	6	40	34	S-R
5	FDLMT 42-21	2	9,1	1ph 230V- 50 Hz	2850	6	40	34	S-R
5	FDLT 42-21	2	3,8	3ph 400V- 50 Hz	2850	6	40	34	S-R
6	FDLT 43-22	2,5	4,5	3ph 400V- 50 Hz	2850	7	40	45	S-R
7	FDLT 43-21	3,2	5,5	3ph 400V- 50 Hz	2850	7	40	45	S-R
8	FDLT 44-22	3,8	7	3ph 400-690 V- 50 Hz	2850	7	40	60	S-R
9	FDLT 44-21	4,2	7,5	3ph 400-690 V- 50 Hz	2850	7	40	60	S-R
10	FDLT 45-21	4,9	8,6	3ph 400-690 V- 50 Hz	2850	7	40	60	S-R

Note:

S: Fixing kit

R: Lowering device with sliding guides

DIGGER SERIES

SUBMERSIBLE PUMPS FOR CONTRACTORS

Submersible pumps for dirty water containing large quantities of sand.

Head up to 14 m and delivery up to 300 l/min. (18 m³/h).

Liquid end made of abrasion-resistant polyurethane technopolymer.

APPLICATIONS

- Draining of building yards.
- Draining of sumps not containing large suspended solids.
- Industrial pumping of liquids containing abrasive substances.

SPECIFICATIONS

- Open impeller made of polyurethane technopolymer.
- Delivery port: DN 50 (2") fitting
- **Passes solids** up to **6 mm** in diameter.
- **Maximum temperature** of pumped liquid: **35°C**.
- **Maximum immersion depth: 5 m**.
- **10 meters** of H07RN-F type neoprene power **cord** with plug.
- Single-phase versions with 0.40 and 0.75 kW rated power.
- Double mechanical seal (SiC/SiC + carbon/ceramic) with oil chamber.
- Single-phase models are available in the automatic version (with float) and manual version (without float).
- **Dry motor (class F insulation).**
- Built-in capacitor and thermal overload protection.
- "Shallow-suction device", a rubber ring that allows complete drainage of a flooded surface, is available on request. It can be mounted on Digger 4 and Digger 8.



TABLE OF MATERIALS

PART	MATERIAL
Pump body, Stator housing, Shaft	STAINLESS STEEL AISI 304 - (DIN 1.4301)
Impeller	DIE-CAST POLYURETHANE WITH STEEL CORE
Diffuser	POLYURETHANE
Upper pump section	TECHNOPOLYMER
O-ring	NBR

DIMENSIONS AND WEIGHTS

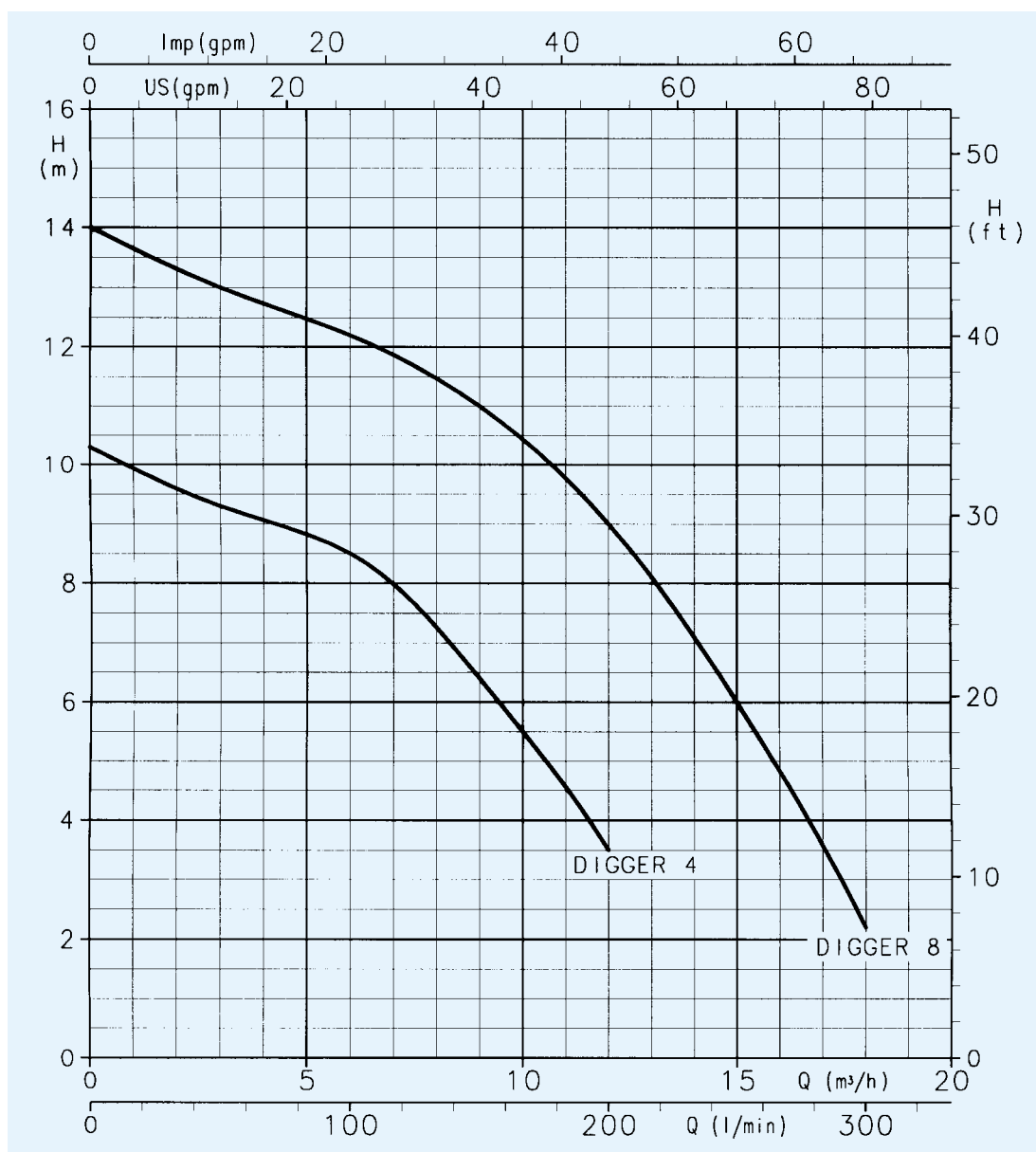
PUMP TYPE	DIAMETER	HEIGHT	WEIGHT * kg
DIGGER 4	185	415	9
DIGGER 8	185	450	12

* Without cable

DIGGER SERIES

OPERATING CHARACTERISTICS AT 2850 rpm 50 Hz

DIGGER



PUMP TYPE SINGLE-PHASE 220-240 V 50 Hz	kW	HP	INPUT POWER SINGLE-PHASE 220-240 V	CAPACITOR		INPUT CURRENT IN AMP. SINGLE-PHASE 220-240 V	Q = DELIVERY							
				μF	V		l/min	0	50	100	150	200	250	300
							m³/h	0	3	6	9	12	15	18
							H = TOTAL HEAD METERS COLUMN OF WATER							
DIGGER 4	0,4	0,55	0,77	14	450	3,4	10,5	9,5	8,5	6,2	3,5	1		
DIGGER 8	0.75	1.00	1.15	22	450	5.1	14	13	12.2	11	9	5.6	2.3	

These performances are valid for liquids with density $\rho = 1.0 \text{ kg/dm}^3$ and kinematic viscosity $\gamma = 1 \text{ mm}^2/\text{sec}$.

QSM SERIES

SINGLE-PHASE ELECTRIC PANEL

Applications

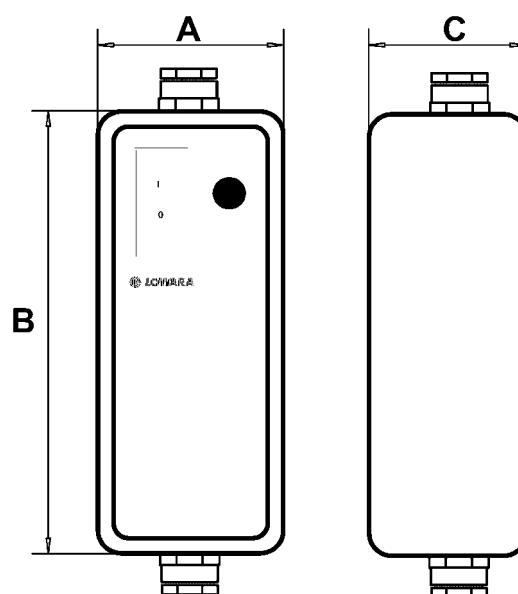
Protection and control of a 4" single-phase borehole pump.

SPECIFICATIONS

- Main switch for manual control.
- Supply voltage: 1 x 220-230 V $\pm$ 5%.
- Frequency: 50 Hz.
- Power: 0.25 to 1.1 kW.
- Direct motor start.
- Protection class: IP 44.
- Ambient temperature: -5 to +40 °C (limit specified by EN standard 60439-1).
- Maximum relative humidity: 50% at +40°C, provided that no condensation occurs (limit specified by EN standard 60439-1).
- Wall mounted.
- Plastic enclosure.
- Incorporated capacitor.
- Double-pole main switch.
- Thermal protector inside panel.

SPECIAL VERSIONS AVAILABLE ON REQUEST

- QSM PF version with overvoltage protection (lightning protector)
- QSM SP version without thermal protector inside panel for Scuba series pumps, featuring incorporated protector only for 0.55, 0.9 and 1.1 kW versions.



PANEL TYPE	RATED POWER		RATED CURRENT	CAPACITOR		DIMENSIONS A x B x C mm	WEIGHT WITH PACKING kg	COMPATIBLE PUMPS	COMPATIBLE MOTORS
	kW	HP		μ F	V				
QSM02	0,25	0,33	2,8	12,5	450	80 x 210 x 65	0,43	GS	40S
QSM03	0,37	0,5	3,6	16	450				
QSM05	0,55	0,75	5	20	450				
QSM07	0,75	1	6,3	30	450				
QSM11	1,1	1,5	9,2	40	450				

Line protection to be provided by user.

QPC SERIES

SINGLE-PHASE ELECTRIC PANEL

Applications

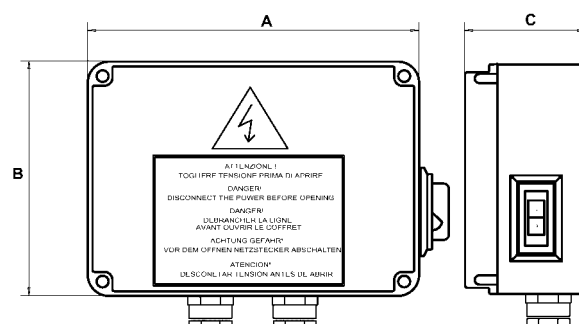
Protection and control of a 4" single-phase borehole pump.

SPECIFICATIONS

- Main switch for manual control.
- Supply voltage: 1 x 220-230 V $\pm 5\%$.
- Frequency: 50 Hz.
- Power: 0.25 to 2.2 kW.
- Direct motor start.
- Protection class: IP 54.
- Ambient temperature: -5 to +40 °C (limit specified by EN standard 60439-1).
- Maximum relative humidity: 50% at +40°C, provided that no condensation occurs (limit specified by EN standard 60439-1).
- Wall mounted using brackets provided.
- Plastic enclosure
- Incorporated capacitor
- Main switch with thermal protector (manual reset) and power ON indicator light

OPTIONAL ACCESSORIES

- 109890770 109890770 DPF single-phase module for overvoltage protection (lightning protector)



PANEL TYPE	RATED POWER		RATED CURRENT	CAPACITOR		DIMENSIONS A x B x C mm	WEIGHT WITH PACKING kg	COMPATIBLE PUMPS	COMPATIBLE MOTORS
	kW	HP	A	μF	V				
QPC 02	0,25	0,33	3	12,5	450	200 x 150 x 80	1,1	GS	4OS F4
QPC 03	0,37	0,5	4	16	450				
QPC 05	0,55	0,75	5	20	450				
QPC 07	0,75	1	6	30	450				
QPC 11	1,1	1,5	9	40	450				
QPC 15	1,5	2	11	50	450				
QPC 22	2,2	3	16	70	450				

Line protection to be provided by user.

QPCS SERIES

SINGLE-PHASE ELECTRIC PANEL

Applications

Protection and control of a 4" single-phase borehole pump.

SPECIFICATIONS

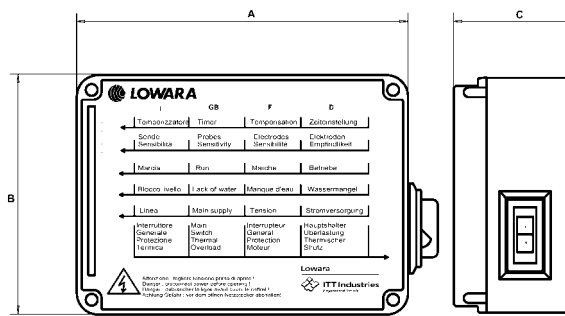
- Automatic control through an external contactor.
- Supply voltage: 1 x 220-230 V ± 5 %.
- Frequency: 50 Hz.
- Power: 0.25 to 2.2 kW.
- 12 Vac low voltage auxiliary circuit.
- Direct motor start.
- Protection class: IP 54.
- Ambient temperature: -5 to +40 °C (limit specified by EN standard 60439-1).
- Maximum relative humidity: 50% at +40°C, provided that no condensation occurs (limit specified by EN standard 60439-1).
- Wall mounted using the brackets provided.
- Plastic enclosure with see-through cover
- Capacitor (incorporated)
- Main switch with thermal protector (manual reset) and power ON indicator light
- Power, pump running and dry running indicator LEDs.
- Overvoltage protection.
- Dry running control through probes, float or minimum pressure switch.

OPTIONAL ACCESSORIES

- Kit n. 3 electrodes (probes) without cable, code RLE901400
- Float
- Pressure switch



CONTROL
PANELS



PANEL TYPE	RATED POWER		RATED CURRENT	CAPACITOR		DIMENSIONS A x B x C mm	WEIGHT WITH PACKING kg	COMPATIBLE PUMPS	COMPATIBLE MOTORS
	kW	HP		μF	V				
QPCS 02	0,25	0,33	3	12,5	450	200 x 150 x 80	1,3	GS	4OS F4
QPCS 03	0,37	0,5	4	16	450				
QPCS 05	0,55	0,75	5	20	450				
QPCS 07	0,75	1	6	30	450				
QPCS 11	1,1	1,5	9	40	450				
QPCS 15	1,5	2	11	50	450				
QPCS 22	2,2	3	16	70	450				

Line protection to be provided by user.

QMC SERIES

SINGLE-PHASE ELECTRIC PANEL

Applications

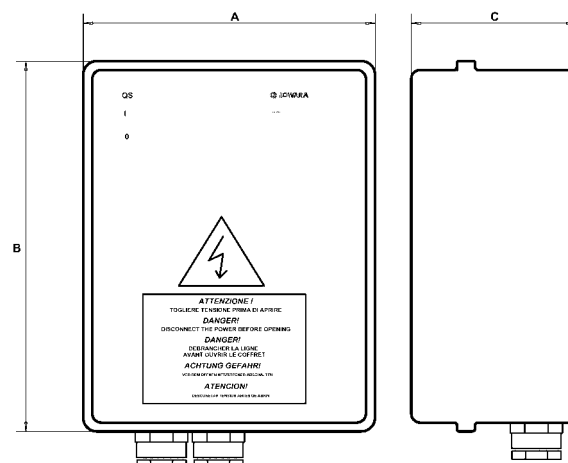
Protection and control of a 4" single-phase borehole pump.

SPECIFICATIONS

- Main switch for manual control.
- Supply voltage: 1 x 220-230 V $\pm$ 5%.
- Frequency: 50 Hz.
- Power: 0.25 to 2.2 kW.
- Direct motor start.
- Protection class: IP 54.
- Ambient temperature: -5 to +40 °C (limit specified by EN standard 60439-1).
- Maximum relative humidity: 50% at +40°C, provided that no condensation occurs (limit specified by EN standard 60439-1).
- Wall mounted.
- Metal enclosure
- Capacitor (incorporated)
- Main switch with thermal protector (manual reset) and power ON indicator light

OPTIONAL ACCESSORIES

- 109890770 DPF single-phase module for overvoltage protection (lightning protector)



PANEL TYPE	RATED POWER		RATED CURRENT A	CAPACITOR		DIMENSIONS A x B x C mm	WEIGHT WITH PACKING kg	COMPATIBLE PUMPS	COMPATIBLE MOTORS
	kW	HP		μ F	V				
QMC/02	0,25	0,33	3	12,5	450	170 x 200 x 105	2,5	GS	4OS F4
QMC/03	0,37	0,5	4	16	450				
QMC/05	0,55	0,75	5	20	450				
QMC/07	0,75	1	6	30	450				
QMC/11	1,1	1,5	9	40	450				
QMC/15	1,5	2	11	50	450	235 x 265 x 150			
QMC/22	2,2	3	16	70	450				

Line protection to be provided by user.

QMCS SERIES

SINGLE-PHASE ELECTRIC PANEL

Applications

Protection and control of a 4" single-phase borehole pump.

SPECIFICATIONS

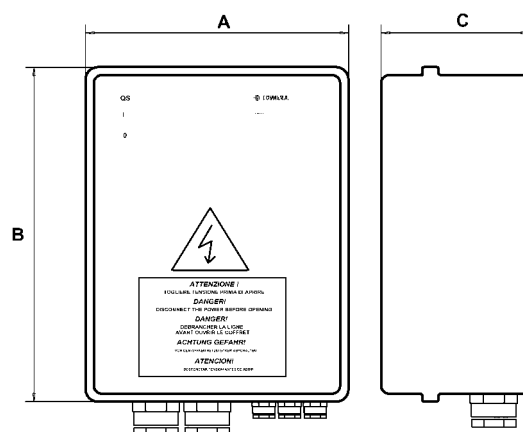
- Automatic control through an external contactor.
- Supply voltage: 1 x 220-230 V $\pm 5\%$.
- Frequency: 50 Hz.
- Power: 0.25 to 2.2 kW.
- Direct motor start.
- Protection class: IP 54.
- Ambient temperature: -5 to +40 °C (limit specified by EN standard 60439-1).
- Maximum relative humidity: 50% at +40°C, provided that no condensation occurs (limit specified by EN standard 60439-1).
- Wall mounted.
- Metal enclosure
- Capacitor (incorporated)
- Main switch with thermal protector (manual reset) and power ON indicator light
- Dry running control through probe, float or minimum pressure switch (to be ordered separately).

OPTIONAL ACCESSORIES

- 109890770 DPF single-phase module for overvoltage protection (lightning protector)
- 109890690 SLD series 24V level kit Probe module for protection against dry running (set of three electrodes included in the supply)



CONTROL
PANELS



PANEL TYPE	RATED POWER		RATED CURRENT	CAPACITOR		DIMENSIONS A x B x C mm	WEIGHT WITH PACKING kg	COMPATIBLE PUMPS	COMPATIBLE MOTORS
	kW	HP		μF	V				
QMCS/02	0,25	0,33	3	12,5	450	235 x 265 x 150	4	GS	4OS F4
QMCS/03	0,37	0,5	4	16	450				
QMCS/05	0,55	0,75	5	20	450				
QMCS/07	0,75	1	6	30	450				
QMCS/11	1,1	1,5	9	40	450				
QMCS/15	1,5	2	11	50	450	250 x 320 x 150			
QMCS/22	2,2	3	16	70	450				

Line protection to be provided by user.

QM SERIES

SINGLE-PHASE ELECTRIC PANEL

Applications

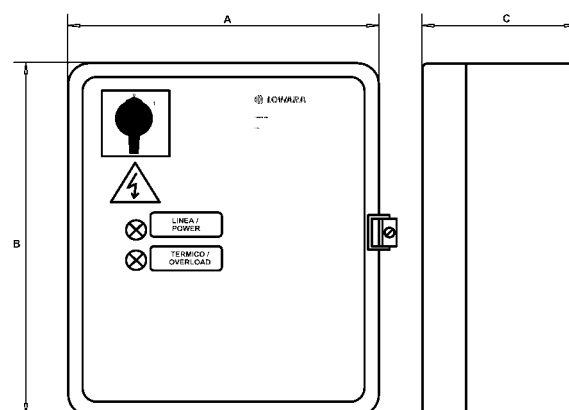
Protection and control of a single-phase surface pump.

SPECIFICATIONS

- Control through an external contactor.
- Supply voltage: 1 x 230 V $\pm$ 5 %.
- Frequency: 50/60 Hz.
- Power: 0.25 to 2.2 kW.
- Direct motor start.
- Protection class: IP 54.
- Ambient temperature: -5 to +40 °C (limit specified by EN standard 60439-1).
- Maximum relative humidity: 50% at +40°C, provided that no condensation occurs (limit specified by EN standard 60439-1).
- Wall mounted
- Metal enclosure
- Ready for installation of dry running control float or pressure switch (to be ordered separately)
- Power and thermal overload indicator lights

OPTIONAL ACCESSORIES

- 109890740 VR1 single-phase varistor module overvoltage protection (lightning protector)
- 109890690 SLD series 24V level kit
Probe module for protection against dry running (set of three electrodes included in the supply)



PANEL TYPE	RATED POWER		APPLICATION RANGE	DIMENSIONS A x B x C	WEIGHT WITH PACKING kg	COMPATIBLE PUMPS	
	kW	HP	A			SURFACE	
QM/02	0,25	0,33	1.4-2.3	235x265x150	5,8	BG	LQ
QM/03	0,37	0,5	2.0-3.3			HM	FH
QM/05	0,55	0,75	3.0-5.0			HMS	SH
QM/07	0,75	1	4.5-7.5			CAM	SV
QM/11	1,1	1,5	6.0-10.0			CEAM	SVI
QM/22	2,2	3	9.0-15.0			COM	

Line protection to be provided by user.

For proper selection, make sure that the ampere input of the electric motor falls within the application range shown in the table.

QTD SERIES

THREE-PHASE ELECTRIC PANEL

Applications

Protection and control of a three-phase surface or borehole pump.

SPECIFICATIONS

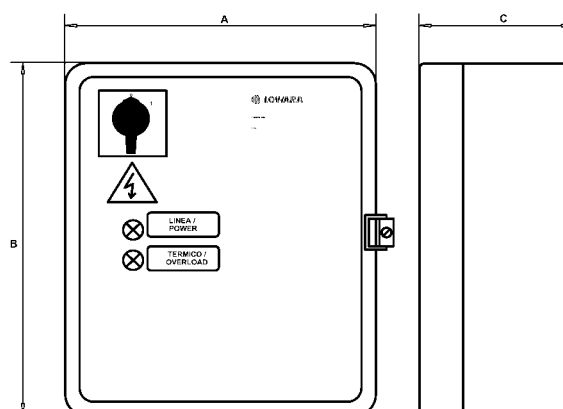
- Control through an external enable contact
- Supply voltage: 3 x 400 V ± 10 %.
- Frequency: 50/60 Hz.
- Power: 0.37 to 9.2 kW.
- Direct motor start.
- Protection class: IP 54.
- Ambient temperature: -5 to +40 °C (limit specified by EN standard 60439-1).
- Maximum relative humidity: 50% at +40°C, provided that no condensation occurs (limit specified by EN standard 60439-1).
- Wall mounted
- Metal enclosure
- Ready for installation of dry running control float or pressure switch (to be ordered separately)
- Power and thermal overload indicator lights

OPTIONAL ACCESSORIES

- 109890760 VR3 three-phase module for overvoltage protection (lightning protector)
- 109890690 SLD series 24V level kit
Probe module for protection against dry running (set of three electrodes included in the supply)



CONTROL
PANELS



PANEL TYPE	RATED POWER		APPLICATION RANGE	DIMENSIONS A x B x C mm	WEIGHT WITH PACKING kg	COMPATIBLE PUMPS		COMPATIBLE MOTORS
	kW	HP	A			SURFACE	BOREHOLE	
QTD/03	0,37	0,5	0.9-1.5	235x265x150	5,8	BG	SCUBA	4OS
QTD/05	0,55	0,75	1.4-2.3			HM,HMS	GS	OS6
QTD/11	1,1	1,5	2.0-3.3			CA,CEA	OZ	F4
QTD/15	1,5	2	3.0-5.0			CO, LQ	FZ	F6
QTD/22	2,2	3	4.5-7.5			FH	TV	
QTD/30	3	4	6.0-10.0			SH		
QTD/40	4	5,5	9.0-12.0			SVI		
QTD/55	5,5	7,5	9.0-15.0			SVI		
QTD/92	9,2	12,5	14.0-23.0			SFC		

Line protection to be provided by user.

For proper selection, make sure that the ampere input of the electric motor falls within the application range shown in the table.

Q3D SERIES

THREE-PHASE ELECTRIC PANEL

Applications

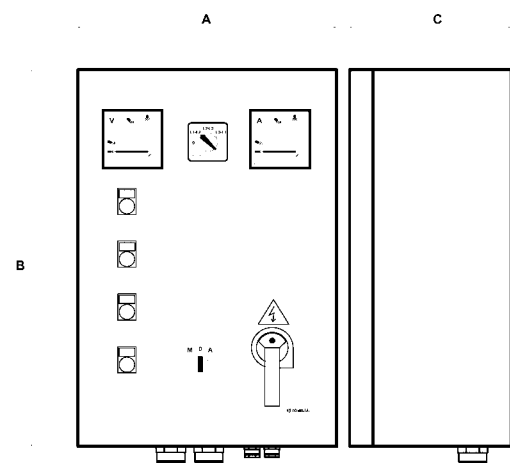
Protection and control of a three-phase surface or borehole pump.

SPECIFICATIONS

- Manual control through Auto/Man selector switch.
- Automatic control through an external enable contact.
- Supply voltage: 3 x 400 V $\pm 10\%$. Frequency: 50/60 Hz.
- 24 Vac low voltage auxiliary circuit.
- Power: 0.37 to 37 kW.
- Direct start.
- Protection class: IP 54.
- Ambient temperature: -5 to +40 °C (limit specified by EN standard 60439-1).
- Maximum relative humidity: 50% at +40°C, provided that no condensation occurs (limit specified by EN standard 60439-1).
- Wall mounted.
- Metal enclosure.
- Power - pump running - thermal overload - dry running indicator lights.
- Manual-reset thermal relay for overload protection, sensitive to phase failure.
- Ready for installation of dry running control float or pressure switch (to be ordered separately).
Can be fitted with electronic protection module with electrodes.

OPTIONAL ACCESSORIES

- 109890690 SLD series 24V level kit
Probe module for protection against dry running (set of three electrodes included in the supply)
- Float.
- Pressure switch.
- SCA3 (109890780) electronic module kit for overvoltage protection of three-phase line (lightning protector).



PANRL TYPE	RATED POWER		APPLICATION RANGE	DIMENSIONS A x B x C	WEIGHT WITH PACKING Kg	COMPATIBLE PUMPS		COMPATIBLE MOTORS
	kW	HP	A			SURFACE	BOREHOLE	
Q3D/03	0,37	0,5	0,9-1,5	400 x 500 x 200	40	BG HM, HMS CA, CEA CO, LQ FH SH SVI SVI SFC	SCUBA GS OZ FZ TV	4OS OS6 F4 F6
Q3D/05	0,5	0,75	1,4-2,3					
Q3D/11	1,1	1,5	2,0-3,3					
Q3D/15	1,5	2,0	3,0-5,0					
Q3D/22	2,2	3,0	4,5-7,5					
Q3D/30	3	4,0	6,0-10,0					
Q3D/40	4	5,5	9,0-12,0					
Q3D/55	5,5	7,5	9,0-15,0					
Q3D/92	9,2	12,5	14,0-23,0					
Q3D/110	11	15	20,0-32,0					
Q3D/150	15	20	28,0-38,0	400 x 600 x 200	50			
Q3D/220	22	30	35,0-50,0					
Q3D/300	30	40	45,0-63,0					
Q3D/370	37	50	60,0-80,0					

Line protection to be provided by user.

For proper selection, make sure that the ampere input of the electric motor falls within the application range shown in the table.

Q3Y SERIES

THREE-PHASE ELECTRIC PANEL

Applications

Protection and control of a three-phase surface pump.

SPECIFICATIONS

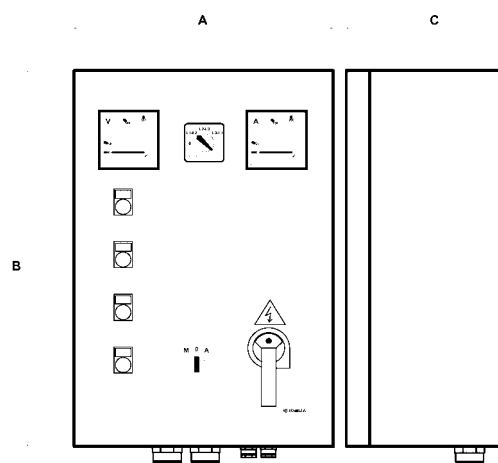
- Manual control through Auto/Man selector switch.
- Automatic control through an external enable contact.
- Supply voltage: 3 x 400 V ± 10 %. Frequency: 50/60 Hz.
- 24 Vac low voltage auxiliary circuit.
- Power: 4 to 110 kW.
- Star-delta starting.
- Protection class: IP 54.
- Ambient temperature: -5 to +40 °C (limit specified by EN standard 60439-1).
- Maximum relative humidity: 50% at +40°C, provided that no condensation occurs (limit specified by EN standard 60439-1).
- Wall mounted.
- Metal enclosure.
- Power - pump running - thermal overload - dry running indicator lights.
- Manual-reset thermal relay for overload protection, sensitive to phase failure.
- Ready for installation of dry running control float or pressure switch (to be ordered separately).
Can be fitted with electronic protection module with electrodes.

OPTIONAL ACCESSORIES

- 109890690 SLD series 24V level kit
Probe module for protection against dry running (set of three electrodes included in the supply)
- Float.
- Pressure switch.
- SCA3 (109890780) electronic module kit for overvoltage protection of three-phase line (lightning protector).



CONTROL
PANELS



PANEL TYPE	RATED POWER		APPLICATION RANGE	DIMENSIONS A x B x C	WEIGHT WITH PACKING	COMPATIBLE PUMPS	
	kW	HP				A	mm
Q3Y/40	4	5,5	8,0-12,0	400 x 600 x 250	45	FH SH SV SFC	Specify double cable outlet for all three-phase versions
Q3Y/55	5,5	7,5	11,0-16,0				
Q3Y/92	7,5 - 9,2	10 - 12,5	16,0-24,0				
Q3Y/110	11	15	24,0-32,0				
Q3Y/150	15	20	30,0-40,0	500 x 700 x 250	50		
Q3Y/220	18,5 - 22	25 - 30	35,0-50,0				
Q3Y/300	30	40	50,0-62,0	600 x 900 x 250	60		
Q3Y/370	37	50	60,0-80,0				
Q3Y/550	45 - 55	60 - 75	80,0-110,0	600 x 1300 x 300 floor	80/100		
Q3Y/750	75	100	90,0-140,0				
Q3Y/900	90	125	135,0-180,0	600 x 1500 x 300 floor	100/120		
Q3Y/1100	110	150	180,0-250,0				

Line protection to be provided by user.

For proper selection, make sure that the ampere input of the electric motor falls within the application range shown in the table.

Q3I SERIES

THREE-PHASE ELECTRIC PANEL

Applications

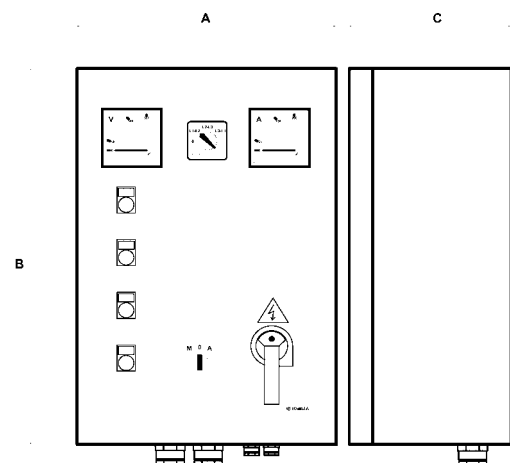
Protection and control of a three-phase surface or borehole pump.

SPECIFICATIONS

- Manual control through Auto/Man selector switch.
- Automatic control through an external enable contact.
- Supply voltage: $3 \times 400 \text{ V} \pm 10 \%$. Frequency: 50/60 Hz.
- 24 Vac low voltage auxiliary circuit.
- Power: 5.5 to 110 kW.
- Impedance start.
- Protection class: IP 54.
- Ambient temperature: -5 to $+40^\circ\text{C}$ (limit specified by EN standard 60439-1).
- Maximum relative humidity: 50% at $+40^\circ\text{C}$, provided that no condensation occurs (limit specified by EN standard 60439-1).
- Wall mounted.
- Metal enclosure.
- Power - pump running - thermal overload - dry running indicator lights.
- Manual-reset thermal relay for overload protection, sensitive to phase failure.
- Ready for installation of dry running control float or pressure switch (to be ordered separately).
Can be fitted with electronic protection module with electrodes.

OPTIONAL ACCESSORIES

- 109890690 SLD series 24V level kit
Probe module for protection against dry running (set of three electrodes included in the supply)
- Float.
- Pressure switch.
- SCA3 (109890780) electronic module kit for overvoltage protection of three-phase line (lightning protector).



PANEL TYPE	RATED POWER		APPLICATION RANGE	DIMENSIONS A x B x C	WEIGHT WITH PACKING kg	COMPATIBLE PUMPS		COMPATIBLE MOTORS
	kW	HP				A	SURFACE	
Q3I/55	5,5	7,5	9,0-15,0	400 x 600 x 250	50	FH SH SV SFC	GS OZ FZ TV	4OS F4 F6
Q3I/92	7,5 - 9,2	10 - 12,5	14,0-23,0					
Q3I/110	11	15	20,0-32,0					
Q3I/150	12,5 - 15	17 - 20	28,0-38,0	500 x 700 x 250	70			
Q3I/220	18,5 - 22	25 - 30	35,0-47,0					
Q3I/300	30	40	46,0-62,0					
Q3I/370	37	50	60,0-78,0	600 x 900 x 250	90			
Q3I/550	45 - 55	60 - 75	75,0-110,0					
Q3I/750	75	100	90,0-140,0					
Q3I/900	90	125	120,0-180,0	600 x 1500 x 300 floor	100/150			
Q3I/1100	110	150	180,0-250,0					

Line protection to be provided by user.

For proper selection, make sure that the ampere input of the electric motor falls within the application range shown in the table.

Q3A SERIES

THREE-PHASE ELECTRIC PANEL

Applications

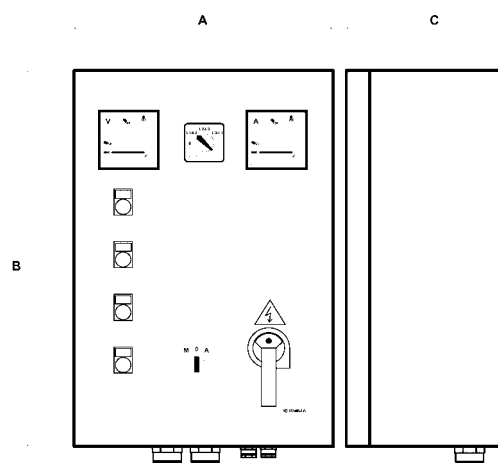
Protection and control of a three-phase surface or borehole pump.

SPECIFICATIONS

- Manual control through Auto/Man selector switch.
- Automatic control through an external enable contact.
- Supply voltage: 3 x 400 V ± 10 %. Frequency 50/60 Hz.
- 24 Vac low voltage auxiliary circuit.
- Power: 5.5 to 110 kW.
- Autotransformer start.
- Protection class: IP 54.
- Ambient temperature: -5 to +40 °C (limit specified by EN standard 60439-1).
- Maximum relative humidity: 50% at +40°C, provided that no condensation occurs (limit specified by EN standard 60439-1).
- Wall mounted.
- Metal enclosure.
- Power - pump running - thermal overload - dry running indicator lights.
- Manual-reset thermal relay for overload protection, sensitive to phase failure.
- Ready for installation of dry running control float or pressure switch (to be ordered separately).
Can be fitted with electronic protection module with electrodes.

OPTIONAL ACCESSORIES

- 109890690 SLD series 24V level kit
Probe module for protection against dry running (set of three electrodes included in the supply)
- Float.
- Pressure switch.
- SCA3 (109890780) electronic module kit for
- overvoltage protection of three-phase line (lightning protector).



PANEL TYPE	RATED POWER		APPLICATION RANGE	DIMENSIONS A x B x C	WEIGHT WITH PACKING kg	COMPATIBLE PUMPS		COMPATIBLE MOTORS
	kW	HP				A	SURFACE	
Q3A/55	5,5	7,5	9,0-15,0	500 x 700 x 250	50	FH SH SV SFC	GS OZ FZ TV	4OS F4 F6
Q3A/92	7,5 - 9,2	10 - 12,5	14,0-23,0					
Q3A/110	11	15	20,0-32,0					
Q3A/150	12,5 - 15	17 - 20	28,0-38,0					
Q3A/220	18,5 - 22	25 - 30	35,0-47,0	600 x 900 x 300	80			
Q3A/300	30	40	46,0-62,0	600 x 1300 x 300 floor				
Q3A/370	37	50	60,0-78,0					
Q3A/550	45 - 55	60 - 75	75,0-110,0	600 x 1500 x 300 floor	100/150			
Q3A/750	75	100	90,0-140,0	600 x 1700 x 400 floor				
Q3A/900	90	125	120,0-180,0					
Q3A/1100	110	150	180,0-250,0					

Line protection to be provided by user.

For proper selection, make sure that the ampere input of the electric motor falls within the application range shown in the table.

Q3SF SERIES

THREE-PHASE ELECTRIC PANEL

Applications

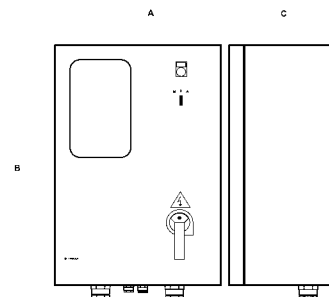
Protection and control of a three-phase surface or borehole pump.

SPECIFICATIONS

- Manual control through Auto/Man selector switch.
- Automatic control through an external enable contact.
- Supply voltage: $3 \times 400 \text{ V} \pm 10 \%$. Frequency 50/60 Hz.
- 24 Vac low voltage auxiliary circuit.
- Power: 5.5 to 110 kW.
- Soft start with torque control.
- Protection class: IP 54.
- Ambient temperature: -5 to $+40^\circ\text{C}$ (limit specified by EN standard 60439-1).
- Maximum relative humidity: 50% at $+40^\circ\text{C}$, provided that no condensation occurs (limit specified by EN standard 60439-1).
- Wall mounted.
- Metal enclosure.
- Dry running indicator light.
- Power-running-failure indicator LEDs on starter keypanel.
- 0-1 selector switch for activation of bypass contactor.
- Ready for installation of dry running control float or pressure switch (to be ordered separately).
- Can be fitted with electronic protection module with electrodes.

STATIC STARTER CHARACTERISTICS

- Static starter for gradual starting and stopping, featuring: keypanel with liquid crystal display, showing the following values: voltage, current input, $\cos \phi$, operating hours, number of starts, last twenty messages regarding system status (events / alarms).
Phase failure - phase sequence - out of range frequency protections on power supply line.
Low voltage protection on auxiliary circuits.
Overheating - overload - malfunction protections on starter.
Overload - jammed rotor - current asymmetry protections on motor side.
Short circuit protections on inputs and outputs.
RS232 interface for remote control and RS485 for use of remote keypanel.
Incorporated bypass contactor.



OPTIONAL ACCESSORIES

- 109890690 SLD series 24V level kit Probe module for protection against dry running (set of three electrodes included in the supply)
- Float.
- Pressure switch.
- SCA3 (109890780) electronic module kit for overvoltage protection of three-phase line (lightning protector).

PANEL TYPE	RATED POWER		APPLICATION RANGE	DIMENSIONS A x B x C	WEIGHT WITH PACKING	COMPATIBLE PUMPS		COMPATIBLE MOTORS
	kW	HP				A	SURFACE	
Q3SF/75	5,5-7,5	7,5-10	8,5-17	500 x 700 x 250	70	FH SH SV SFC	OZ FZ TV	F6
Q3SF/150	9,2-15	12,5-20	15-30					
Q3SF/220	18,5-22	25-30	28-45					
Q3SF/300	30	40	42-60	600 x 900 x 300	90			
Q3SF/370	37	50	55-75					
Q3SF/450	45	60	70-85					
Q3SF/550	55	75	80-110					
Q3SF/590	59	80	105-125					
Q3SF/750	75	100	120-142	600 x 1700 x 400 pavimento	120			
Q3SF/900	90	122	135-190					
Q3SF/1100	110	150	185-245					

Line protection to be provided by user.

For proper selection, make sure that the ampere input of the electric motor falls within the application range shown in the table.

QDRM SERIES single-phase

QDR SERIES three-phase

ELECTRICAL PANEL FOR DRAINAGE PUMPS

Applications

Protection and control of a single- or three-phase drainage pump.

SPECIFICATIONS

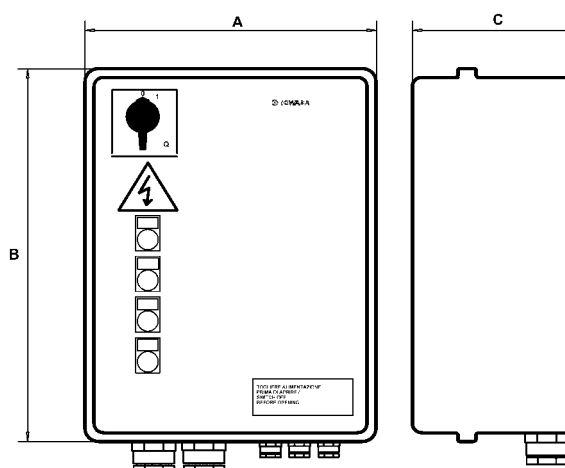
- Automatic control through electromechanical floats
- Supply voltage: 1 x 230 V $\pm 10\%$ (single-phase)
3 x 400 V $\pm 10\%$ (three-phase)
- Frequency: 50/60 Hz.
- Power: 0.25 to 2.2 kW for single-phase version.
- Power: 0.37 to 9.2 KW for three-phase version.
- Direct motor start.
- Protection class: IP 54.
- Ambient temperature: -5 to +40 °C (limit specified by EN standard 60439-1).
- Maximum relative humidity: 50% at +40°C, provided that no condensation occurs (limit specified by EN standard 60439-1).
- Wall mounted
- Metal enclosure
- Power, thermal overload, high level indicator lights.

OPTIONAL ACCESSORIES

- Audible or visual signalling device, 12 VDC 0.5 A max (inside the electric panel there is a connection terminal) for high-level alarm.
109890740 VR1 single-phase module (for QDRM) for overvoltage protection (lightning protector) 109890760 VR3 three-phase module (for QDR) for overvoltage protection (lightning protector).



CONTROL
PANELS



TANEL TYPE	RATED POWER		APPLICATION RANGE	DIMENSIONS A x B x C	WEIGHT WITH PACKING	COMPATIBLE PUMPS
	kW	HP	A	kg		DRAINAGE
QDRM/02	0,25	0,33	1,4-2,3	235x265x150	6,3	All the pumps that are equipped with a capacitor (incorporated) or with one that is integrated in an external container can be supplied without pre-assembled float.
QDRM/03	0,37	0,5	2,0-3,3			
QDRM/05	0,55	0,75	3,0-5,0			
QDRM/07	0,75	1	4,5-7,5			
QDRM/11	1,1	1,5	6,0-10,0			
QDRM/22	2,2	3	9,0-15,0			

TANEL TYPE	RATED POWER		APPLICATION RANGE	DIMENSIONS A x B x C	WEIGHT WITH PACKING	COMPATIBLE PUMPS
	kW	HP	A	kg		DRAINAGE
QDR/03	0,37	0,5	0,9-1,5	235x265x150	6,3	DOC DIWA DN DOMO DL FDL* FXDL* FBDL*
QDR/05	0,55	0,75	1,4-2,3			
QDR/11	1,1	1,5	2,0-3,3			
QDR/15	1,5	2	3,0-5,0			
QDR/22	2,2	3	4,5-7,5			
QDR/30	3	4	6,0-10,0			
QDR/40	4	5,5	9,0-12,0			
QDR/55	5,5	7,5	9,0-15,0			
QDR/92	9,2	12,5	14,0-23,0			

Line protection to be provided by user.

* Electric pump without thermal stator protection or water control probe in oil bath.

For proper selection, make sure that the ampere input of the electric motor falls within the application range shown in the table.

9QDRM2 SERIES single-phase

9QDR2 SERIES three-phase

ELECTRICAL PANEL FOR DRAINAGE PUMPS

Applications

Protection and control of two single- or three-phase drainage pumps.

SPECIFICATIONS

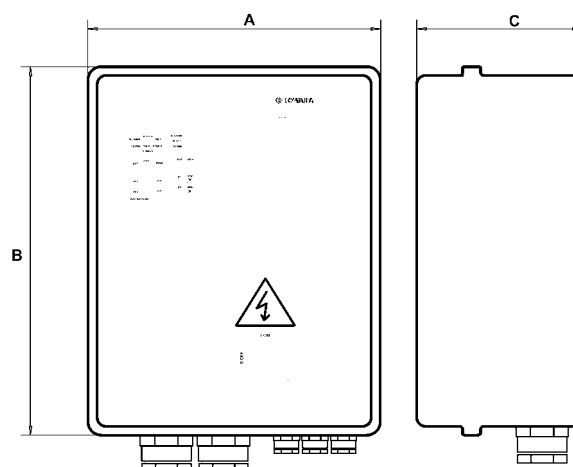
- Automatic control through electromechanical floats
- Supply voltage: 1 x 230 V $\pm 10\%$ (single-phase)
3 x 400 V $\pm 10\%$ (three-phase)
- Frequency: 50/60 Hz.
- Power: 0.25 to 2.2 kW for single-phase version.
- Power: 0.37 to 9.2 KW for three-phase version.
- Direct motor start.
- Protection class: IP 54.
- Ambient temperature: -5 to +40 °C (limit specified by EN standard 60439-1).
- Maximum relative humidity: 50% at +40°C, provided that no condensation occurs (limit specified by EN standard 60439-1).
- Wall mounted
- Metal enclosure.
- Electronic board with power, overload, high-level alarm, pump on/off indicator LEDs.

OPTIONAL ACCESSORIES

- Audible or visual signalling device, 12 VDC 0.3 A max (inside the electric panel there are two connection terminals) for high-level alarm.
- 109890740 VR1 single-phase module (for 9QDRM2) for overvoltage protection (lightning protector) 109890760 VR3 three-phase module (for 9QDR2) for overvoltage protection (lightning protector) 109391130 signal relay board kit (power, auto/man, on/off, overload, high level).



CONTROL
PANELS



PANEL TYPE	RATED POWER		APPLICATION RANGE A	DIMENSIONS A x B x C	WEIGHT WITH PACKING kg	COMPATIBLE PUMPS DRAINAGE
	kW	HP				
9QDRM2/02	0,25	0,33	1,0-1,6	260x380x150	9,4	All the pumps that are equipped with a capacitor (incorporated) or with one that is integrated in an external container can be supplied without pre-assembled float.
9QDRM2/03	0,37	0,5	1,6-2,5			
9QDRM2/05	0,55	0,75	2,5-4,0			
9QDRM2/07	0,75	1	4,0-6,5			
9QDRM2/11	1,1	1,5	6,3-10,0			
9QDRM2/22	2,2	3	9,0-14,0			

PANEL TYPE	RATED POWER		APPLICATION RANGE A	DIMENSIONS A x B x C	WEIGHT WITH PACKING kg	COMPATIBLE PUMPS DRAINAGE
	kW	HP				
9QDR2/03	0,37	0,5	0,63-1,0	260x380x150	9,4	DOC DIWA DN DOMO DL FDL* FXDL* FBDL*
9QDR2/05	0,55	0,75	1,0-1,6			
9QDR2/11	1,1	1,5	1,6-2,5			
9QDR2/15	1,5	2	2,5-4,0			
9QDR2/22	2,2	3	4,0-6,5			
9QDR2/30	3	4	6,3-10,0			
9QDR2/40	4	5,5	9,0-14,0			
9QDR2/55	5,5	7,5	13,0-18,0			
9QDR2/92	9,2	12,5	17,0-23,0	300x400x180		

Line protection to be provided by user.

* Electric pump without thermal stator protection or water control probe in oil bath.

For proper selection, make sure that the ampere input of the electric motor falls within the application range shown in the table.

QCL5 SERIES

LEVEL CONTROL PANEL

Applications

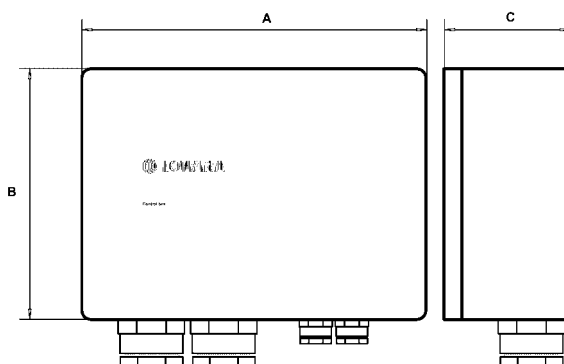
Accessory for electric pump control panels, suitable for tank filling or drainage applications or for activation of audible or visual alarms.

SPECIFICATIONS

- Automatic control through probes.
- Supply voltage: 1 x 230 V $\pm 10\%$ or 1 x 24 V $\pm 10\%$.
- Frequency: 50/60 Hz.
- Voltage to probes: 15 VAC at 0.5 mA max.
- Switch contact: 48 VAC at 3 A max (250 W max).
- Protection class: IP 55.
- Ambient temperature: -5 to +40 °C (limit specified by EN standard 60439-1).
- Maximum relative humidity: 50% at +40°C, provided that no condensation occurs (limit specified by EN standard 60439-1).
- Wall mounted.
- Electrodes suitable for water at a maximum temperature of 40°C.
- Plastic enclosure
- Set of three electrodes included in the supply

OPTIONAL ACCESSORIES

- Drop cable with circular cross section.



For connection of the electrodes to the panel we recommend the following cross sections:

LENGTH mt		CABLE CROSS SECTION mm ²
0	50	0,50
50	100	0,75
100	200	1,00
200	400	2,50
400	oltre	4,00

Three-pole cables can be used for short lengths.

Otherwise we recommend the use of unipolar cables placed at suitable distances from each other to prevent the capacitive effect of the cable from interfering with the proper operation of the electronic module.

CODE	PANEL TYPE	VOLTAGE V	OUTPUT CONTACTS	CONTACT CAPACITY	DIMENSIONS A x B x C mm	WEIGHT WITH PACKING kg
108328400	QCL5/230V	1x220-230 50/60 Hz	no-c-nc	48 V a 3 A	90x130x60	0,5
108328300	QCL5/24V	1x24 50/60 Hz				

Line protection to be provided by user.

QCL10 SERIES

LEVEL CONTROL PANEL

Applications

Accessory for electric pump control panels, suitable for tank filling or drainage applications or for activation of audible or visual alarms. It can be used as control panel for small electric pumps.

SPECIFICATIONS

- Automatic control through probes.
- Supply voltage: 1 x 230 V $\pm 10\%$, or 1 x 230 V $\pm 10\%$ + 1 x 24V $\pm 10\%$
- Frequency: 50/60 Hz.
- Voltage to probes: 15 VAC at 0.5 mA max.
- Protection class: IP 55.
- Ambient temperature: -5 to +40 °C (limit specified by EN standard 60439-1).
- Maximum relative humidity: 50% at +40°C, provided that no condensation occurs (limit specified by EN standard 60439-1).
- Wall mounted.
- Electrodes suitable for water at a maximum temperature of 40°C.
- Plastic casing.
- Set of three electrodes included in the supply.

OPTIONAL ACCESSORIES

- Drop cable with circular cross section.

SPECIAL VERSIONS AVAILABLE ON REQUEST

- Version with magnetothermal double-pole switch (QCLP10/)

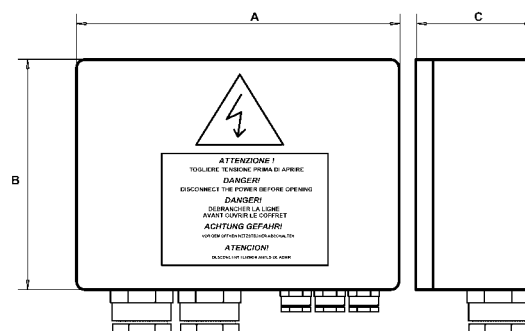
For connection of the electrodes to the panel we recommend the following cross sections:

LENGTH		CABLE CROSS SECTION
mt		mm ²
0	50	0,50
50	100	0,75
100	200	1,00
200	400	2,50
400	oltre	4,00

Three-pole cables can be used for short lengths. Otherwise we recommend the use of unipolar cables placed at suitable distances from each other to prevent the capacitive effect of the cable from interfering with the proper operation of the electronic module.

CODE	PANEL TYPE	VOLTAGE		CONTACTOR	CONTACT CAPACITY	DIMENSIONS A x B x C mm	WEIGHT WITH PACKING kg	COMPATIBLE PUMPS
		Main V	Secondary V					
108328700	QCL10/230V	1x220-230 50/60 Hz	–	AC3	230 V a 9 A	190x140x80	1	All single-phase pumps up to 9A are equipped with an incorporated capacitor
108328600	QCL10/24V	1x220-230 50/60 Hz	1x24 50/60 Hz					

Line protection to be provided by user.



QCLP10 SERIES

LEVEL CONTROL

PANEL

Applications

Accessory for electric pump control panels, suitable for tank filling or drainage applications or for activation of audible or visual alarms. It can be used as control panel for small electric pumps.

SPECIFICATIONS

- Automatic control through probes.
- Supply voltage: 1 x 230 V $\pm 10\%$, or 1 x 230 V $\pm 10\%$ + 1 x 24V $\pm 10\%$
- Frequency: 50/60 Hz.
- Voltage to probes: 15 VAC at 0.5 mA max.
- Protection class: IP 55.
- Ambient temperature: -5 to +40 °C (limit specified by EN standard 60439-1).
- Maximum relative humidity: 50% at +40°C, provided that no condensation occurs (limit specified by EN standard 60439-1).
- Wall mounted.
- Electrodes suitable for water at a maximum temperature of 40°C.
- Enclosure made of plastic material, with clear door enabling access to the magnetothermal switch.
- Set of three electrodes included in the supply.

OPTIONAL ACCESSORIES

- Drop cable with circular cross section.

For connection of the electrodes to the panel we recommend the following cross sections:

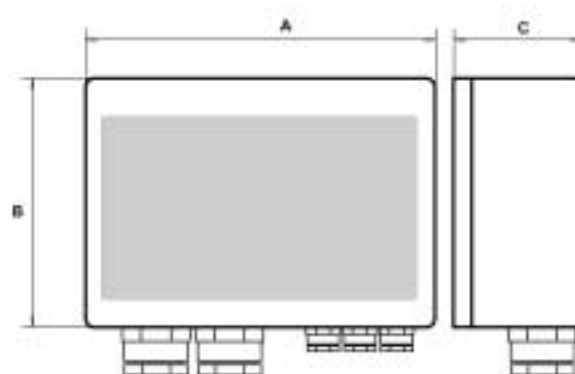
LENGTH mt		CABLE CROSS SECTION mm ²
0	50	0,50
50	100	0,75
100	200	1,00
200	400	2,50
400	oltre	4,00

Three-pole cables can be used for short lengths.

Otherwise we recommend the use of unipolar cables placed at suitable distances from each other to prevent the capacitive effect of the cable from interfering with the proper operation of the electronic module.

CODE	PANEL TYPE	VOLTAGE		CONTACTOR	CONTACT CAPACITY	MAGNETO-THERMAL SWITCH	DIMENSIONS A x B x C mm	WEIGHT WITH PACKING kg	COMPATIBLE PUMPS
		Main V	Secondary V						
108329000	QCLP10/230V	1x220-230 50/60 Hz	— —	AC3	230 V a 9 A	C 10 A Icn 6 KA	195x200x112	1,5	All single-phase pumps up to 9A are equipped with an incorporated capacitor
108328900	QCPL10/24V	1x220-230 50/60 Hz	1x24 50/60 Hz						

Line protection to be provided by user.



SLD SERIES

LEVEL PROBE MODULE

Applications

Accessory for electric panels.

SPECIFICATIONS

- Electronic module for probe utilisation as protection against dry running.
- Supply voltage: 1 x 24 V $\pm$ 10 % for model SLD/24.
- Frequency: 50/60 Hz.
- Absorbed power: 2 VA.
- Voltage to probes: 15 VAC at 0.5 mA max.
- Switch contact: 24 VAC at 5 A max (250 W max).
- Designed for assembly on Lowara electric panels featuring DIN bar.
- Electrodes suitable for water at a maximum temperature of 40°C.

CONSTRUCTION CHARACTERISTICS

- Module made of plastic material with DIN bar attachment.
- Cables with quick-coupling connectors.
- Set of three electrodes included in the supply.
- Electrodes with nylon 6 body, stainless steel sensitive element, brass washer and nitrile rubber seal.

OPTIONAL ACCESSORIES

- Drop cable with circular cross section.



For connection of the electrodes to the panel we recommend the following cross sections:

LENGTH mt		CABLE CROSS SECTION mm ²
0	50	0,50
50	100	0,75
100	200	1,00
200	400	2,50
400	oltre	4,00

Three-pole cables can be used for short lengths.

Otherwise we recommend the use of unipolar cables placed at suitable distances from each other to prevent the capacitive effect of the cable from interfering with the proper operation of the electronic module.

CODE	TYPE	VOLTAGE V	CONTACT CAPACITY	APPLICATIONS	DIMENSIONS A x B x C mm
109890690	Kit SLD/24	1 x 24 50/60 Hz	24 V at 5 A	QMCS-QM QTD Q3D-Q3Y Q2A-Q3I Q3SF	90 x 35 x 60

DPF SERIES

PROTECTION AGAINST LIGHTNING

Applications

Accessory for electric panels.

SPECIFICATIONS

- Varistor for overvoltage protection of single-phase lines.
To be connected between phase and neutral wires.
- Operating voltage: 460 VAC.
- Maximum varistor voltage: 750 V with 100 A peak current.

CODE	TYPE	VOLTAGE V	APPLICATION
109890770	DPF	1x220-240	QSM - QMC - QMCS QSMSP - QPC

VR SERIES

SPECIFICATIONS

- Lightning arresters for protection of three-phase lines.
To be connected between the phases and earth conductor.
- Operating voltage: 500 VAC.
- Max varistor voltage: 2.5 kV with 40 kA peak current.
- Designed for assembly on Lowara electric panels featuring DIN bar.

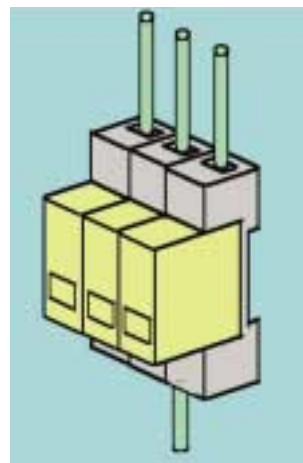
CODE	TYPE	VOLTAGE V	APPLICATION
109890740	KIT VR1	1 x 220-230	QDRM - 9QDRM2 QM
109890760	KIT VR3	3 x 400 50/60 Hz	QTD - QDR 9QDR2

SCA3 SERIES

SPECIFICATIONS

- Lightning arresters for protection of three-phase lines.
To be connected between the phases and earth conductor.
- Operating voltage: 500 VAC.
- Max varistor voltage: 2.5 kV with 40 kA peak current.
- Designed for assembly on Lowara electric panels featuring DIN bar.

CODE	TYPE	VOLTAGE V	APPLICATION
109890780	KIT SCA3	3 x 400 50/60 Hz	Q3Y - Q3A - Q3I - Q3SF Q3D

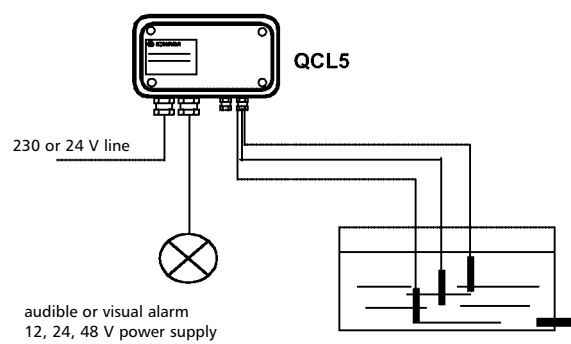
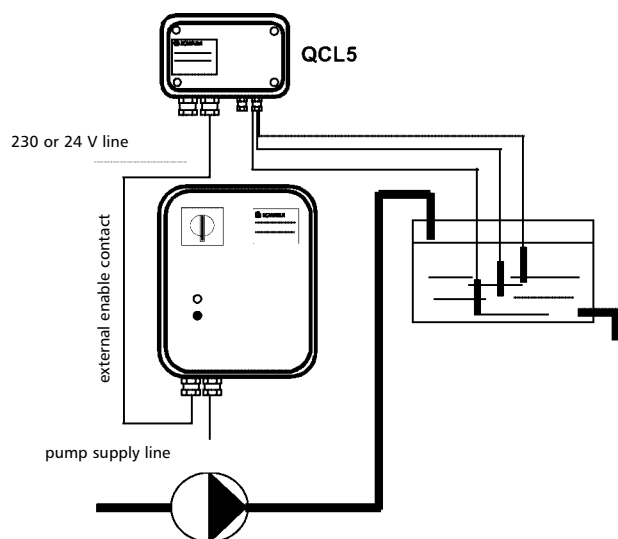


LEVEL CONTROL

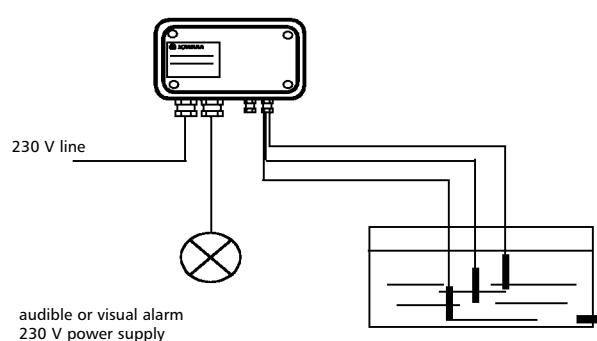
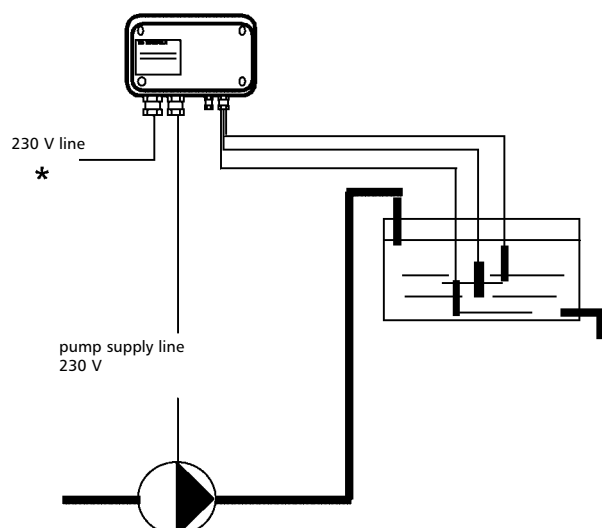
APPLICATIONS

- Level control panels enable the operation of Lowara pumps for tank filling or drainage applications.
- These panels can also be used for signalling high or low level conditions through the medium of audible or visual alarms.

QCL5 Series



QCL10 and QCLP10 Series



* as an alternative, 230V main line plus 24 V secondary line for low voltage supply of probe module

HYDROVAR® FREQUENCY CONVERTERS

Hydrovar® is a microprocessor based pumping system controller that manages your pump performance to match a wide range of system conditions and requirements.

APPLICATIONS

- Pressure regulation in the water systems of civil, residential and industrial buildings.
- Handling of liquids in conditioning systems where it is necessary to boost pressure in pipes with excessive flow resistance.
- Water treatment and process engineering for constant delivery when pressure variations occur.

SPECIFICATIONS

- **Single phase** models:

Hydrovar HV 2/.. Series

Power: 1.5 ÷ 2.2 kW.

Mains voltage U: 1x230 V, ±10%, 50-60 Hz

Motor voltage U1: 3x230 V 50-60 Hz

- **Three-phase** models:

Hydrovar HV 3/.. series

Power: 2.2 ÷ 45 kW.

Mains voltage U: 3x400 V, ±10%, 50-60 Hz.

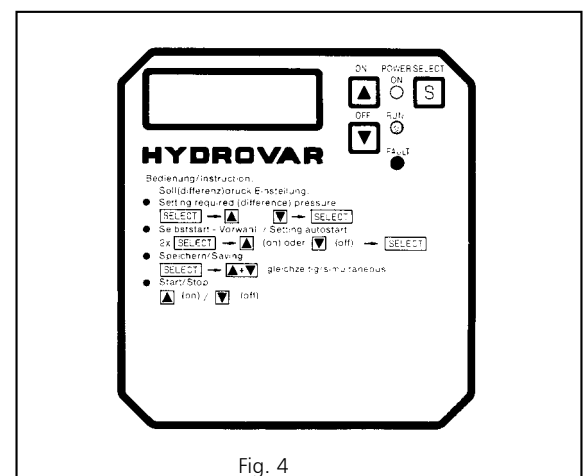
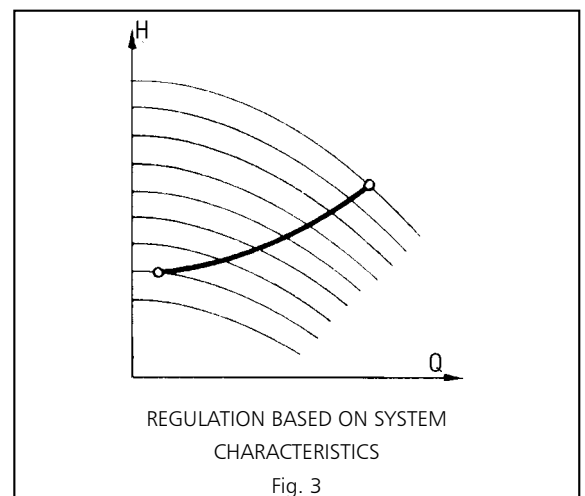
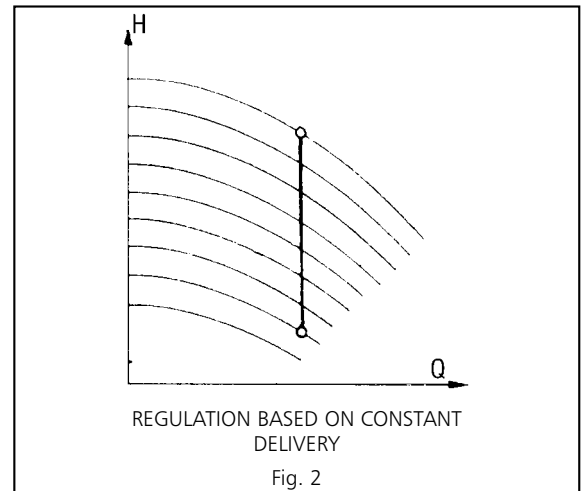
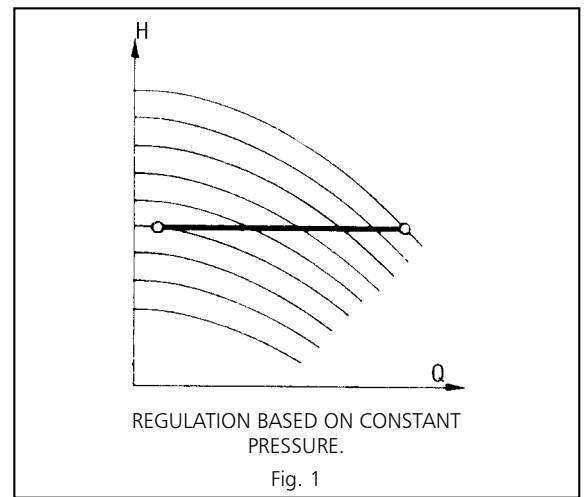
Motor voltage U1: 3x400 V 50-60 Hz.

- Ambient **temperature from 5°C to 40°C.**
- 50% humidity at 40°C.
- **IP 55 protection** up to 11 kW.
IP 54 protection for higher power.
- Built-in anti-condensate device.
- **Designed to connect up to 4 Hydrovars.**
- Individually interface with a computer through an **RS485 system.**
- Display with directions in **7 selectable languages.**



THE TECHNOLOGY CONTROL AND REGULATION

- The HYDROVAR integrated frequency converter features automatic regulation of the speed of an asynchronous three-phase electric motor, by interpreting either a pressure or a differential pressure or a delivery signal (Fig. 1 and 2).
A patented control system disconnects the pump in case of a decrease in user demand.
- The pump delivery is detected indirectly through the speed, enabling the pressure, or the differential pressure, to be regulated according to the rate of consumption, based on the pre-set system characteristic parameters (Fig. 3).
- Besides the autonomous regulation possibilities described above, the pump with the HYDROVAR device can also be connected to an external system on which the regulation parameters must be set.
- The HYDROVAR device is equipped with connection terminals for remote start and stop, for operating and failure signals, and for the transmission of an analogue signal (speed or actual value of the regulation signal) to a central control station.
It is also equipped with an RS 485 interface connection for communication with a central process control system.
- To prevent access and tampering by unauthorized personnel, the set parameters can be partially or fully protected by password. The activation or deactivation of the pump and the setting of the required parameters are obtained directly through the command keys, with messages appearing on the frequency converter's LCD display.
Three differently coloured diode indicator lights signal "ON", "RUN" and "FAULT" (Fig. 4).
Seven different languages can be selected for the information appearing on the display.
- In case of coupled systems, the microprocessor contained in each regulation unit automatically controls the pumps' sequential operation based on system requirements. It also controls their cyclic connection in series and automatic switch in case of malfunction, without requiring any supplementary control devices.
- The frequency converter supplies a sinusoidal evaluation output voltage, modulated by impulse length. It operates with controlled synthesis of the sinusoidal current and dynamic current limitation. The high 8 kHz impulse frequency prevents the development of undesired motor noise. With the harmonic filter any reactions in the low voltage areas are avoided (in compliance with EN 5501). The cooling of the frequency converter is ensured by the pump motor fan or, in the wall-mounted version, the fan located in its base.



WALL-MOUNTED HYDROVAR®

The Hydrovar® with powers up to 22 kW can be mounted on a wall with an additional mounting kit including a cooling fan.

The models from 30 to 45 kW are available only in wall mounted version.

CHARACTERISTICS

- **Available power: 1.5 to 45 kW**
- Models/mains voltage and motor: see Hydrovar specifications.
- **Maximum permissible length** of shielded **cable** for motor-Hydrovar connection: **20 m** senza filtri addizionali **150 m** con filtri addizionali

AVAILABLE MODELS

TYPE	RATED POWER	INPUT CURRENT	VOLTAGE	MOTOR VOLTAGE
HV	kW	A	V	V
2.1	1,5	7	1 x 230	3 x 230
2:2	2,2	9	1 x 230	3 x 230
3.2	2,2	5,7	3 x 400	3 x 400
3.3	3	7,3	3 x 400	3 x 400
3.4	4	9	3 x 400	3 x 400
3.5	5,5	12	3 x 400	3 x 400
3.7	7,5	15,5	3 x 400	3 x 400
3.11	11	22	3 x 400	3 x 400
3.15	15	30	3 x 400	3 x 400
3.18	18,5	37	3 x 400	3 x 400
3.22	22	44	3 x 400	3 x 400
3.30	30	58	3 x 400	3 x 400
3.37	37	71	3 x 400	3 x 400
3.45	45	85	3 x 400	3 x 400



2.2 - 11.0 kW



15.0 - 22.0 kW



30 - 45 kW

HYDROVAR

SVH MULTISTAGE PUMPS

DESCRIPTION

- SSV series multi-stage vertical centrifugal pumps (see specific section in this catalogue) with in-line suction and delivery ports. Stainless steel impeller, diffuser and pump body.
- Static frequency converter mounted directly on the motor, with forced cooling provided by the motor fan.
- Pressure transmitter for regulation based on system characteristics, in the standard version.

TECHNICAL DATA

Single-phase models:

- Power: 1.5 - 2.2 kW.
Mains voltage U: 1x230 V $\pm$ 10%, 50÷60 Hz.
Motor voltage U1: 3x230 V, 50 Hz.

Three-phase models

- Power: 2.2 - 22 kW.
Mains voltage U: 3x400 V $\pm$ 10%, 50÷60 Hz.
Motor voltage U1: 3x400 V, 50 Hz.
- **Max. delivery: 72 m³/h.**
- **Max. head: 247 m.**
- **See specific catalogues or contact the Lowara sales network for more information on the performance and dimensions of the various models.**

FCEH IN-LINE PUMPS

DESCRIPTION

- SFC series in-line centrifugal pumps (see specific section in this catalogue) with in-line suction and delivery ports.
- Static frequency converter mounted directly on the motor, with forced cooling provided by the motor fan.
- Pressure transmitter for regulation based on system characteristics, in the standard version.

TECHNICAL DATA

Single-phase models:

- Power: 1.5 - 2.2 kW.
Mains voltage U: 1x230 V $\pm$ 10%, 50÷60 Hz.
Motor voltage U1: 3x230 V, 50 Hz.

Three-phase models:

- Power: 2.2 - 22 kW.
Mains voltage U: 3x400 V $\pm$ 10%, 50÷60 Hz.
Motor voltage U1: 3x400 V, 50 Hz.
- **Max. delivery: 190 m³/h.**
- **Max. head: 90 m.**
- **See specific catalogues or contact the Lowara sales network for more information on the performance and dimensions of the various models.**



DIAPHRAGM PRESSURE VESSELS

HYDROSPHERE AND HYDROTUBE

DESCRIPTION	CAPACITY L	Ps bar	MAX. OPERATING TEMP. C°	DIMENSIONS mm		WEIGHTS Kg	CONNECTION
				HEIGHT	LENGHT (L) DIAMETER (D)		
8L HYDROTUBE	8	10	+40	320	D 210	4	Rp 1"
24L HYDROSPHERE	5	+40	420	D 360	5	Rp 1"	
24L VERTICAL HYDROTUBE	24	8	+40	470	D 270	5	Rp 1"
24L HYDROTUBE STANDS	24	8	+40	290	L 470	5,5	Rp 1"

Ps = Operating pressure

Cylindrical tanks with epoxy-coated outer shell.

Non-toxic natural rubber interchangeable diaphragm meets D.M. 21/03/73 specifications.

CE tested model does not require sales declaration, initial installation inspection or subsequent routine checks. Supplied with certificate, pressure gauge and safety valve.

Maximum operating pressure: 10 bar.

Factory pre-charge: 1.5 bar

EXPORT version available for foreign markets.

LEGEND

u - Delivery/user

v - Safety valve/Pressure gauge/Pressure switch

DIAPHRAGM: **A** 60 - 80 EXPORT

B 100 - 200 - 300

500 - 750 - 1000 EXPORT

60 - 100 - 200

300 - 500 TESTED



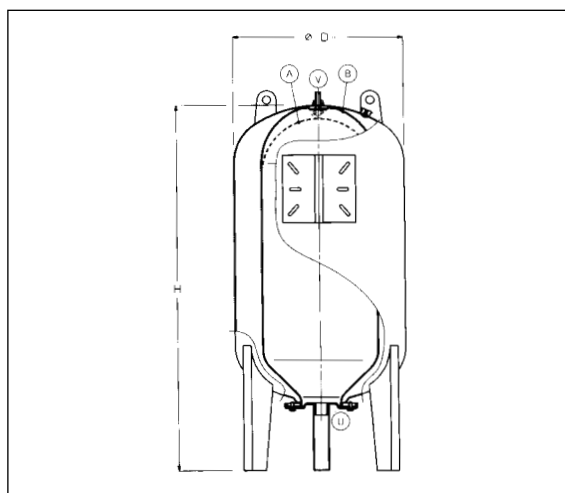
HYDROSPHERE



HYDROTUBE WITH STANDS



HYDROTUBE



ACCESSORIES



DROP CABLES



FLOATS



CABLE SPLICING TAPE



BALL CHECK VALVES (FOR LADEN WATER)



RESIN-FILLED SPLICING KIT



LOWERING AND LIFTING EQUIPMENT



HEAT-SHRINK SPLICING KIT



PRESSURE SWITCHES



FLEXIBLE PIPES



LEVEL INDICATORS



AIR FEEDERS



MEDIUM-DELIVERY WATER FILTERS (UP TO 10 m³/h)



HIGH-DELIVERY WATER FILTERS (UP TO 30 m³/h)



WATER SOFTENERS



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