





Control Box
Not included,
(see page 14)

- Rewindable stator and rotor immersed in dielectric fluid (FDA approved).
- Oversized axial and radial oil-lubricated bearings to guarantee longer life to the motor
- The pressure compensation inside the motor is ensured by a special internal diaphragm
- Sand protection to guarantee optimal operation even with sand in the borehole
- Motor bottom cover for extra protection
- Removable lead connector
- 100% tested motors

O3 PSC single-phase motor

Electric motors from series O3 are 2 pole asynchronous single-phase submersible motors, manufactured to Iso 9001 standards and designed to operate coupled to hydraulic parts with 4" Nema standard. They are made of materials suitable for contact with water and oil-cooled by FDA - Food Drug Administration approved dielectric fluid.

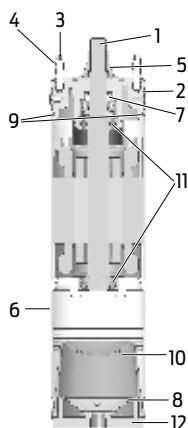
O3 motors require a start and run control box CBO, which includes capacitor and manual reset amperometric protection. It is recommended to install a control box equipped with an appropriate size capacitor (see page 14).

APPLICATIONS

O3 oil-cooled motors ensure reliable working in 4" or larger diameter wells and are designed to be used in for lifting, distribution, and pressurisation of water in water systems. O3 motors can be installed with a frequency inverter. Please contact ZDS Customer Service for more information.

Technical specification:

Protection requirements for O3 motors without control box:	EN 60947-4-1 trip time < 10 sec. at 5 x I _N
Single-phase O3 motor range:	0,37 - 2,2 kW
Voltage range:	220 - 230V / 50 Hz
Voltage tolerance 50Hz from nominal:	+6% / -10% U _n
Flange:	4" NEMA standard dimensions
Rotation:	CCW facing shaft end
Degree of protection:	IP 68
Insulation:	Cl. F
Rated ambient temp.:	max. 40° C
Required cooling flow:	min 8 cm/sec
Maximum quantity of suspended sand:	120 g/m ³
Maximum starts/h:	150, equally distributed
Mounting:	vertical/horizontal
Maximum immersion depth:	150 m
Thrust:	1.500 N; 2.500 N; 4.500 N (according to ranges)
Allowed range of water PH:	6,4-8,0
O3 cable size:	4x1,5 mm ² (Wras, ACS approved)



Pos.	COMPONENTS	MATERIALS
1	Shaft End	Stainless steel AISI 304/420
2	Top bracket	G20 Cast Iron - cataphoretic treatment
3	Stud	Stainless steel AISI 304
4	Nut	Stainless steel AISI 304
5	Rotating Sand Guard	NBR
6	Motor casing	Stainless steel AISI 304
7	Mechanical seal	Graphite /Ceramic
8	Bottom cover	Stainless steel AISI 304
9	O-Ring	NBR
10	Diaphragm	NBR
11	Bearing	Steel
12	Safety bottom cover	Technopolymer

O3 - 220-230V - SINGLE PHASE PSC MOTORS - CONTROL BOX NOT INCLUDED (see page 14)

Model	Price	Code	Cable (m)	V	Power		Thrust [N]	n _N [min ⁻¹]	I _N [A]	I _{START} [A]	η eff [%]	Cos φ (P.f.)	C450V (μ F)	T _{START} T _N	Lenght [mm]	Weight [kg]
					[kW]	[HP]										
O3.037.15	€ 247	197101010L	1.5	220-230	0.37	0.50	1500	2855	3.3 - 3.5	9.8 - 10.7	52	0.99	20	0.85	324	8.0
O3.055.15	€ 256	197101015L	1.5	220-230	0.55	0.75	1500	2840	4.4 - 4.6	12.8 - 13.9	60	0.99	25	0.64	339	8.7
O3.075.15	€ 270	197101020L	1.5	220-230	0.75	1	1500	2855	5.8 - 6.1	17.9 - 19.1	62	0.99	35	0.70	364	9.7
O3.110.25	€ 298	197101025L	1.5	220-230	1.1	1.5	2500	2855	7.8 - 8.0	23.8 - 24.7	66	0.99	40	0.62	399	11.3
O3.150.25	€ 355	197101030L	2.5	220-230	1.5	2	2500	2855	10.1 - 11.0	33.0 - 34.0	65	0.99	60	0.60	434	13.1
O3.150.45	€ 380	197101035L	2.5	220-230	1.5	2	4500	2855	10.1 - 11.0	33.0 - 34.0	65	0.99	60	0.60	457	13.7
O3.220.25	€ 423	197101040L	2.5	220-230	2.2	3	2500	2850	14.0 - 15.2	43.0 - 45.0	68	0.99	80	0.60	484	15.3
O3.220.45	€ 462	197101045L	2.5	220-230	2.2	3	4500	2850	14.0 - 15.2	43.0 - 45.0	68	0.99	80	0.60	507	15.8

Special requests listed separately



- Rewindable stator and rotor immersed in dielectric fluid (FDA approved).
- Oversized axial and radial oil-lubricated bearings to guarantee longer life to the motor
- The pressure compensation inside the motor is ensured by a special internal diaphragm
- Sand protection to guarantee optimal operation even with sand in the borehole
- Motor bottom cover for extra protection
- Removable lead connector
- 100% tested motors

OT three-phase motor

Electric motors from series OT are 2 pole asynchronous three-phase submersible motors, manufactured to Iso 9001 standards and designed to operate coupled to hydraulic parts with 4" Nema standard. They are made of materials suitable for contact with water and oil-cooled by FDA - Food Drug Administration approved dielectric fluid.

APPLICATIONS

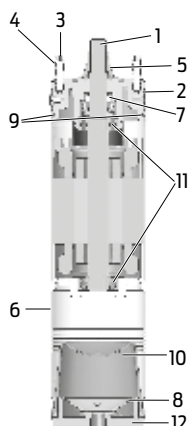
OT oil-cooled motors ensure reliable working in 4" or larger diameter wells and are designed to be used in for lifting, distribution, and pressurisation of water in water systems.

OT motors can be installed with a frequency inverter.

Please contact ZDS Customer Service for more information.

Technical specifications

For OT motors an overload protection and a control unit to start and run the motor must be installed according to:	EN 60947-4-1 trip time < 10 sec. at 5 x I _N
Three-phase OT motor range:	0,37 - 5,5 kW
Voltage range:	3 x 380-415V / 50 Hz
Voltage tolerance 50Hz from nominal:	+6% / -10% U _n
Flange:	4" NEMA standard dimensions
Rotation:	reversible
Degree of protection:	IP 68
Insulation:	Cl. F
Rated ambient temp.:	max. 40° C
Required cooling flow:	min 8 cm/sec
Maximum quantity of suspended sand:	120 g/m ³
Maximum starts/h:	150, equally distributed
Mounting:	vertical/horizontal
Maximum immersion depth:	150 m
Thrust:	1.500 N; 2.500 N; 4.500 N (according to ranges)
Allowed range of water PH:	6,4-8,0
OT cable size:	4x1,5 mm ² (Wras, ACS approved)



Pos.	COMPONENTS	MATERIALS
1	Shaft End	Stainless steel AISI 304/420
2	Top bracket	G20 Cast Iron - cataphoretic treatment
3	Stud	Stainless steel AISI 304
4	Nut	Stainless steel AISI 304
5	Rotating Sand Guard	NBR
6	Motor casing	Stainless steel AISI 304
7	Mechanical seal	Graphite /Ceramic
8	Bottom cover	Stainless steel AISI 304
9	O-Ring	NBR
10	Diaphragm	NBR
11	Bearing	Steel
12	Safety bottom cover	Technopolymer

OT - 380-415V - THREE-PHASE MOTORS

Model	Price	Code	Cable (m)	V	Power		Thrust	n _N	I _N	I _{START}	η eff	Cos φ	T _{START}	Lenght	Weight
					[kW]	[HP]									
OT.037.15	€ 259	184198010L	1.5	380-415	0.37	0.5	1500	2865-2885	1.5-1.7	6.5-7.4	58	0.66-0.56	4.1	313	7.5
OT.055.15	€ 266	184198015L	1.5	380-415	0.55	0.75	1500	2820-2855	1.6-1.8	7.6-8.3	64	0.77-0.67	3	324	8.0
OT.075.15	€ 273	184198020L	1.5	380-415	0.75	1	1500	2820-2850	2.3-2.6	10.3-11.2	66	0.75-0.63	3.2	339	8.8
OT.110.25	€ 316	184198025L	1.5	380-415	1.1	1.5	2500	2815-2840	3.1-3.6	14.0-15.2	69	0.76-0.64	3.7	364	9.9
OT.150.25	€ 355	184198030L	2.5	380-415	1.5	2	2500	2815-2840	4.1-4.6	19.6-21.4	71	0.77-0.66	3.7	399	11.6
OT.150.45	€ 424	184198035L	2.5	380-415	1.5	2	4500	2815-2840	4.1-4.6	19.6-21.4	71	0.77-0.66	3.7	422	12.2
OT.220.25	€ 375	184198040L	2.5	380-415	2.2	3	2500	2832-2865	5.2-5.4	24.2-27.0	74	0.86-0.76	2.2	434	13.1
OT.220.45	€ 449	184198045L	2.5	380-415	2.2	3	4500	2832-2865	5.2-5.4	24.2-27.0	74	0.86-0.76	2.2	457	13.8
OT.300.25	€ 564	184198050L	2.5	380-415	3	4	2500	2820-2855	7.0-7.2	33.7-36.8	75	0.85-0.76	3.2	434	13.9
OT.300.45	€ 599	184198055L	2.5	380-415	3	4	4500	2820-2855	7.0-7.2	33.7-36.8	75	0.85-0.76	3.2	457	14.5
OT.400.25	€ 618	184198060L	2.5	380-415	4	5.5	2500	2825-2860	9.3-9.8	42.9-46.8	76	0.84-0.75	2.8	484	16.3
OT.400.45	€ 660	184198065L	2.5	380-415	4	5.5	4500	2825-2860	9.3-9.8	42.9-46.8	76	0.84-0.75	2.8	507	16.9
OT.550.45	€ 824	184198070L	2.5	380-415	5.5	7.5	4500	2820-2850	12.2-12.6	56.8-62.0	78	0.80-0.70	2.7	572	20.5

Special requests listed separately

4" Hydraulic parts

Multistage centrifugal hydraulic parts designed to be used in 4" wells or larger, available in a wide range of deliveries and heads, are manufactured to ISO 9001 standards. They are suitable in applications for lifting, distribution, and pressurization of water in water systems.



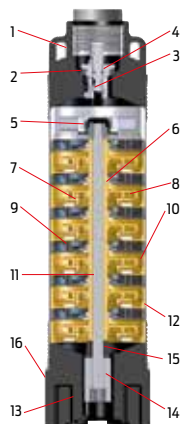
QS4P

4" Hydraulic parts with pump head and lower support in **TECHNOPOLYMER**.

- Pump head and lower support made of special material, strong and resistant to acid water corrosion (low pH value) and ferrous water
- Extra mechanical resistance of the upper head is guaranteed by the double threaded stainless steel ring placed inside and outside of this component
- Integrated filter inside the lower support



QS4P



Pos.	COMPONENTS	MATERIALS
1	Upper head	PA 6.6
2	O-Ring	NBR
3	Complete valve	POM
4	Plate valve	POM
5	Shaft guide	NBR
6	Bearing	TPU
7	Floating ring	TPU
8	Impeller	Noryl and stainless steel
9	Difuser	Noryl
10	Stage box	Noryl
11	Pump shaft	Stainless steel AISI 304 (DIN 1.4301)
12	Outer sleeve	Stainless steel AISI 304 (DIN 1.4301)
13	Filter	PA 6.6
14	Coupling	Stainless steel AISI 304 (DIN 1.4301)
15	Spacer	Noryl
16	Pump support	PA 6.6
-	Cable cover	PVC



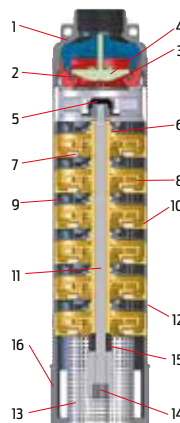
QS4X

4" Hydraulic parts with pump head and lower support in **STAINLESS STEEL**

- Pump head available in 1-1/4" or 2" outlet diameter
- Cover cable in stainless steel, to protect wires during installation
- Removable stainless steel filter



QS4X



* Removable

Pos.	COMPONENTS	MATERIALS
1	Upper head	Stainless steel AISI 304 (DIN 1.4301)
2	O-Ring	NBR
3	Complete valve	PA 6.6
4	Plate valve	PA 6.6
5	Shaft guide	NBR
6	Bearing	TPU
7	Floating ring	TPU
8	Impeller	Noryl and stainless steel
9	Difuser	Noryl
10	Stage box	Noryl
11	Pump shaft	Stainless steel AISI 304 (DIN 1.4301)
12	Outer sleeve	Stainless steel AISI 304 (DIN 1.4301)
13	Filter	* Stainless steel AISI 304 (DIN 1.4301)
14	Coupling	Stainless steel AISI 304 (DIN 1.4301)
15	Spacer	Noryl
16	Pump support	Stainless steel AISI 304 (DIN 1.4301)
-	Cable cover	Stainless steel AISI 304 (DIN 1.4301)

Technical specification QS4P - QS4X:

Pumped liquid:	clean, free of solids and abrasives, non-viscous, non-aggressive, non-crystallised and chemically neutral.
Flange:	4" NEMA standard dimensions
Rated ambient temperature:	max. 40° C
Maximum quantity of suspended sand:	120 g/m ³
Mounting:	vertical/horizontal
Maximum immersion depth:	150 m
Allowed range of water PH:	6,4 - 8,0
Outlet diameter:	1" ¼ G-F (1,2,3,5 series), 2" G-F (8,10 series)
Maximum pump overall diameter:	98 mm (cable cover included).
Maximum delivery (Q):	15.000 l/h
Maximum head (H):	300 m

QS4P and QS4X characteristics

Each single part of QS4P and QS4X has been designed with particular care to ensure the highest quality and reliability.

The pump impellers, diffusers, stage boxes, bushings and floating rings are made of special technopolymers, materials to improve performance, efficiency and to resist corrosion.

The check-valve is integrated into the upper head to allow the weight of the water column and any water hammer to be discharged without damaging the impellers and diffusers.

The check-valves have undergone very severe durability tests, to overcome 1.000.000 water hammers at 37 bar.

The stainless steel coupling shaft is oversized to resist better mechanical torque

The special design of the hydraulic part, allows the pump to work even in heavy sand conditions, up to maximum of 120 g/m³.

Thanks to its particular design, ZDS hydraulic part automatically eliminates any air contained in the submersible pump.



What is so special about the design of our hydraulic parts?

The internal construction of our hydraulic parts primarily consists of the following components: technopolymer impellers with stainless steel support rings, technopolymer diffusers and stageboxes, thermoplastic bushing and floating rings. ZDS has selected this unique design in order to make the pump much more resistant to sand and equivalent abrasives. Compared to conventional designs and similar products available on the market, the ZDS hydraulic part needs less starting torque to start pumping.

This is why the ZDS pump is a particularly good option when you are challenged with unstable power supply.



ErP Ready - MEI Index:

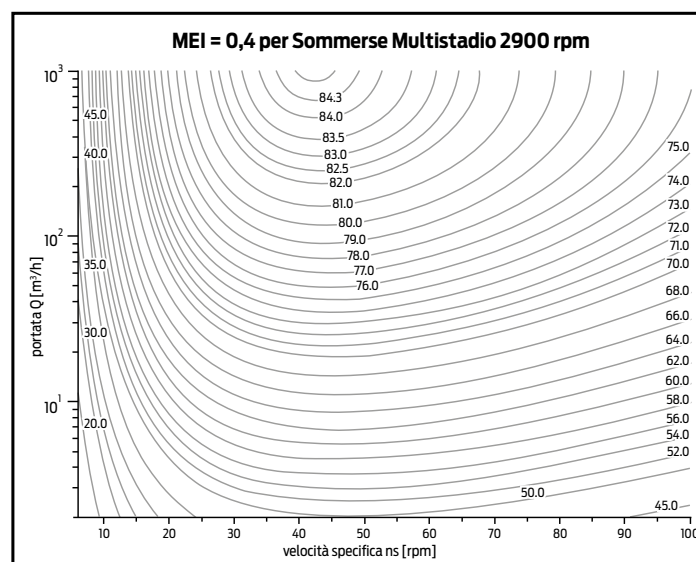
ZDS hydraulic parts from Series 1 to Series 5 are highly efficient and comply with the ErP Directive (Commission Regulation (EC) No 547/2012) which is effective from 1 January 2013. These hydraulic parts are classified/ graduated in a new energy efficiency index (MEI).

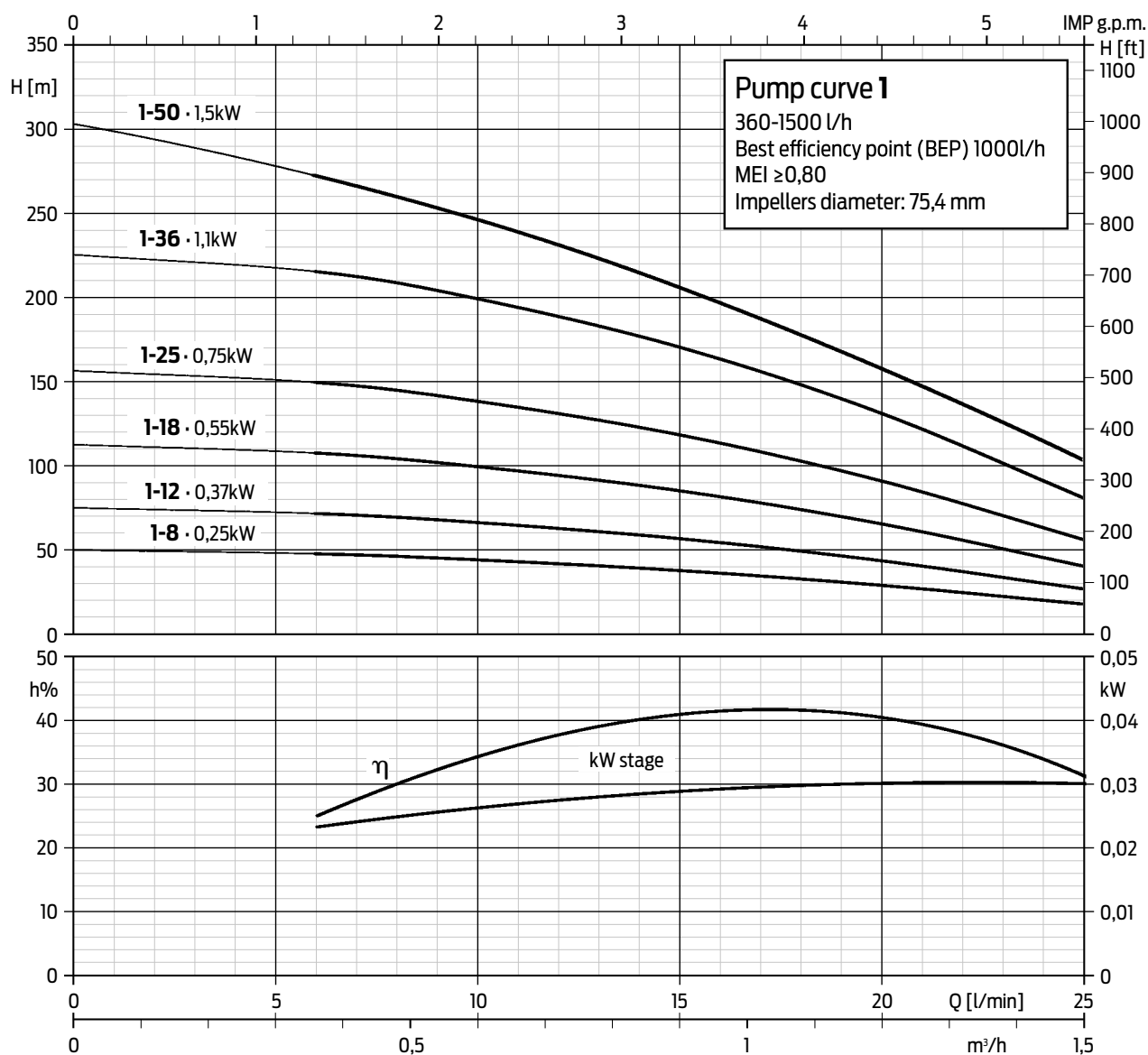
Minimum Efficiency Index (MEI) is the dimensionless scale unit for hydraulic pump efficiency at best efficiency point (BEP), part load and overload

The operation of ZDS hydraulic parts for clean water in variable points of the performance curve can be more efficient and cheap if it is controlled, for example, by an adjustable speed motor which adjusts the operation of the pump to the system.

Trimmed impeller diameter or lower efficiency than full impeller diameter. Impeller trimming will make the submersible pump work in a fixed point with lower energy consumption. Minimum Efficiency Index (MEI) is based on the full diameter impeller.

Information about the referential efficiency are available on www.zds-group.com





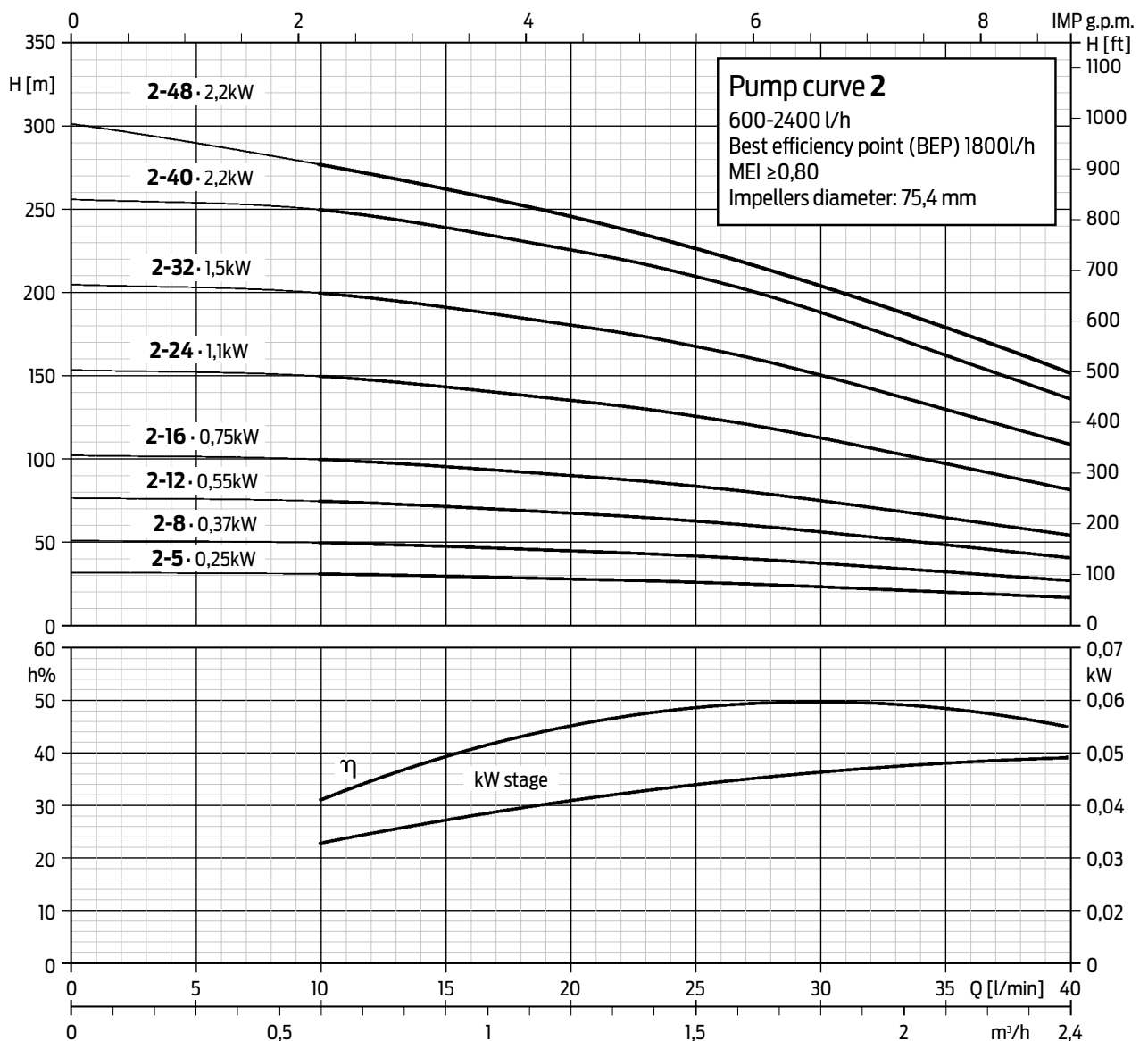
Upper head and lower support in TECHNOPOLYMER	HYDRAULIC TECHNO- POLYMER QS4P.1	Price	Code	HYDRAULIC CHARACTERISTICS (n~2850 min ⁻¹)					Lenght	Weight	COUPABLE MOTORS* 50Hz n~2850 min ⁻¹			
				Delivery (Q) – Ø Outlet diameter: 1" ¼ G-F							Power		Minimum Thrust	
				m³/h	0	0,36	0,6	1,2						1,5
				Pump curve 1	l/min	0	6	10			20	25	[mm]	[kg]
					H = total head in meters (dynamic total pressure)									
	QS4P.1-8	€ 155	181005008		50,2	48,0	44,4	29,2	18,0	357	2,5	0,25	0,33	1500
	QS4P.1-12	€ 192	181005012		75,4	72,0	66,6	43,8	27,0	437	3,0	0,37	0,5	1500
	QS4P.1-18	€ 237	181005018		113,0	108,0	99,9	65,7	40,5	557	3,9	0,55	0,75	1500
	QS4P.1-25	€ 291	181005025		157,0	150,0	138,8	91,3	56,3	697	4,8	0,75	1	1500

*Power and Minimum Thrust of a coupled motor must match the ones in the table above.

Upper head and lower support in STAINLESS STEEL	HYDRAULIC INOX	Price	Code	HYDRAULIC CHARACTERISTICS (n~2850 min ⁻¹)					Lenght	Weight	COUPABLE MOTORS* 50Hz n~2850 min ⁻¹			
	QS4X.1			Delivery (Q) – Ø Outlet diameter: 1" ¼ G-F							Power		Minimum Thrust	
	Pump curve 1	m³/h	0	0,36	0,6	1,2	1,5							
		l/min	0	6	10	20	25	[mm]	[kg]	kW	HP	F[N]		
	QS4X.1-8	€ 242	1810100081	H = total head in meters (dynamic total pressure)	50,2	48,0	44,4	29,2	18,0	357	3,5	0,25	0,33	1500
	QS4X.1-12	€ 262	1810100121		75,4	72,0	66,6	43,8	27,0	437	4,0	0,37	0,5	1500
	QS4X.1-18	€ 297	1810100181		113,0	108,0	99,9	65,7	40,5	557	4,8	0,55	0,75	1500
	QS4X.1-25	€ 359	1810100251		157,0	150,0	138,8	91,3	56,3	697	5,7	0,75	1	1500
	QS4X.1-36	€ 442	1810100361		226,1	216,0	199,8	131,4	81,0	950	7,6	1,1	1,5	2500
	QS4X.1-50	€ 578	1810100501		300	280	260	170	106	1230	9,9	1,5	2	3000

*Power and Minimum Thrust of a coupled motor must match the ones in the table above.

Special request listed separately



• 4" NEMA standard dimensions • Operating curves at: 2850min⁻¹ • Performance limits: ISO 9906 – annex A, mass production pump section

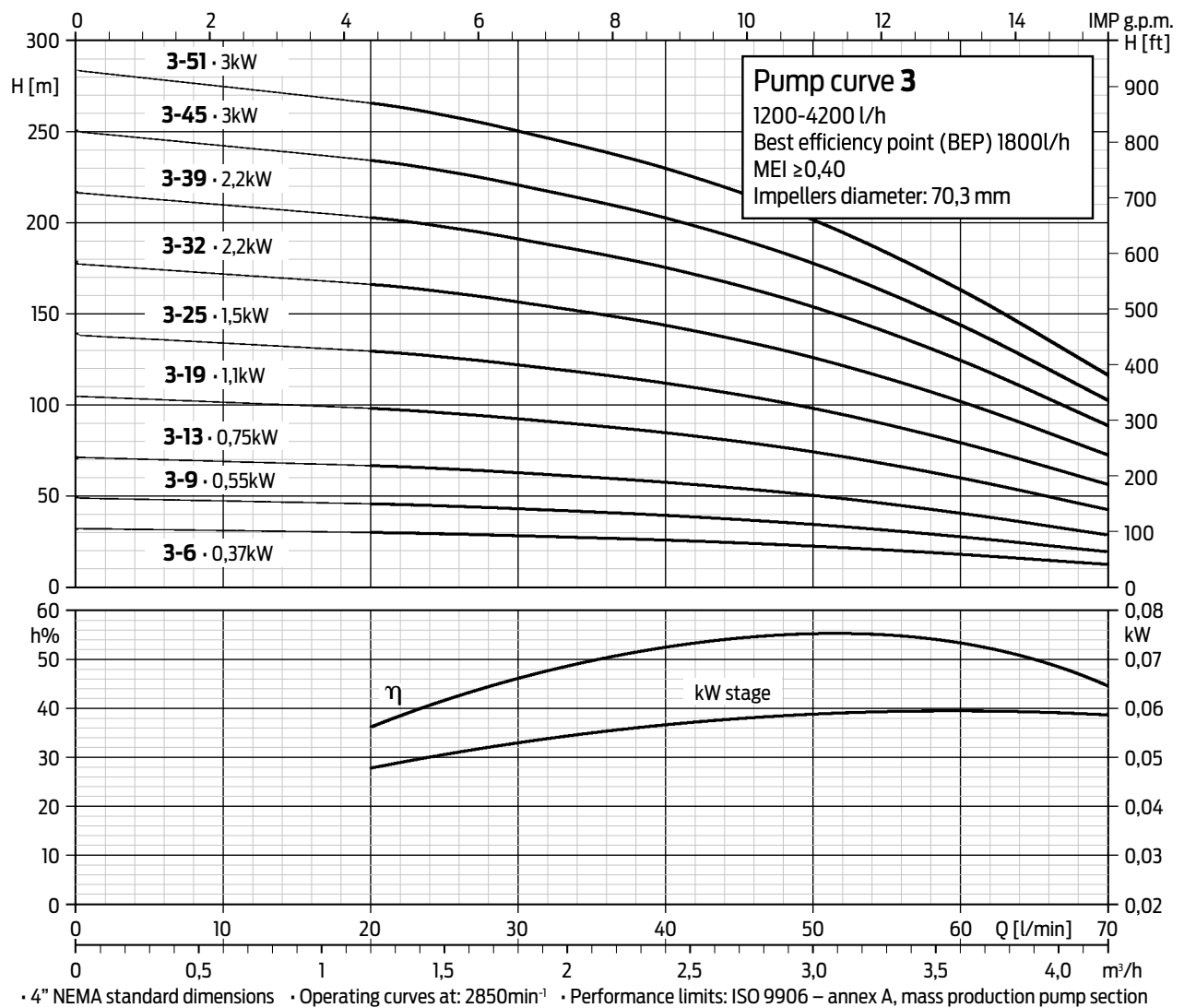
Upper head and lower support in TECHNOPOLIMER	HYDRAULIC TECHNO- POLYMER QS4P.2 Pump curve 2	Price	Code	HYDRAULIC CHARACTERISTICS (n~2850 min ⁻¹)							Lenght	Weight	COUPABLE MOTORS* 50Hz n~2850 min ⁻¹		
				Delivery (Q) – Ø Outlet diameter: 1" ¼ G-F									Power		Minimum Thrust
				m³/h	0	0,6	1,2	1,5	1,8	2,4					
				l/min	0	10	20	25	30	40	[mm]	[kg]	kW	HP	F[N]
				H = total head in meters (dynamic total pressure)											
	QS4P.2-5	€ 128	181005105		32,0	31,2	28,2	26,2	23,5	17,0	310	2,1	0,25	0,33	1500
	QS4P.2-8	€ 156	181005108		51,2	49,9	45,1	41,9	37,6	27,2	377	2,6	0,37	0,5	1500
	QS4P.2-12	€ 188	181005112		76,8	74,9	67,7	62,9	56,4	40,8	467	3,2	0,55	0,75	1500
	QS4P.2-16	€ 214	181005116		102,4	99,8	90,2	83,8	75,2	54,4	557	3,8	0,75	1	1500
	QS4P.2-24	€ 269	181005124		153,6	149,8	135,4	125,8	112,8	81,6	737	5,2	1,1	1,5	2500

*Power and Minimum Thrust of a coupled motor must match the ones in the table above.

Upper head and lower support in STAINLESS STEEL	HYDRAULIC INOX	Price	Code	HYDRAULIC CHARACTERISTICS (n~2850 min ⁻¹)						Lenght	Weight	COUPABLE MOTORS* 50Hz n~2850 min ⁻¹			
	QS4X.2			Delivery (Q) – Ø Outlet diameter: 1" ¼ G-F								Power		Minimum Thrust	
	Pump curve 2	m³/h	0	0,6	1,2	1,5	1,8	2,4							
		l/min	0	10	20	25	30	40	[mm]	[kg]	kW	HP	F[N]		
	QS4X.2-5	€ 215	1810101051	H = total head in meters (dynamic total pressure)	32,0	31,2	28,2	26,2	23,5	17,0	310	3,1	0,25	0,33	1500
	QS4X.2-8	€ 233	1810101081		51,2	49,9	45,1	41,9	37,6	27,2	377	3,6	0,37	0,5	1500
	QS4X.2-12	€ 269	1810101121		76,8	74,9	67,7	62,9	56,4	40,8	467	4,1	0,55	0,75	1500
	QS4X.2-16	€ 287	1810101161		102,4	99,8	90,2	83,8	75,2	54,4	557	4,8	0,75	1	1500
	QS4X.2-24	€ 357	1810101241		153,6	149,8	135,4	125,8	112,8	81,6	737	5,9	1,1	1,5	2500
	QS4X.2-32	€ 417	1810101321		204,7	199,7	180,5	167,7	150,4	108,0	917	7,7	1,5	2	2500
	QS4X.2-40	€ 524	1810101401		255,9	249,6	225,6	209,6	188,0	136,0	1130	8,5	2,2	3	3000
	QS4X.2-48	€ 645	1810101481		300	290	258	235	208	150	1310	9,9	2,2	3	4000

*Power and Minimum Thrust of a coupled motor must match the ones in the table above.

Special request listed separately



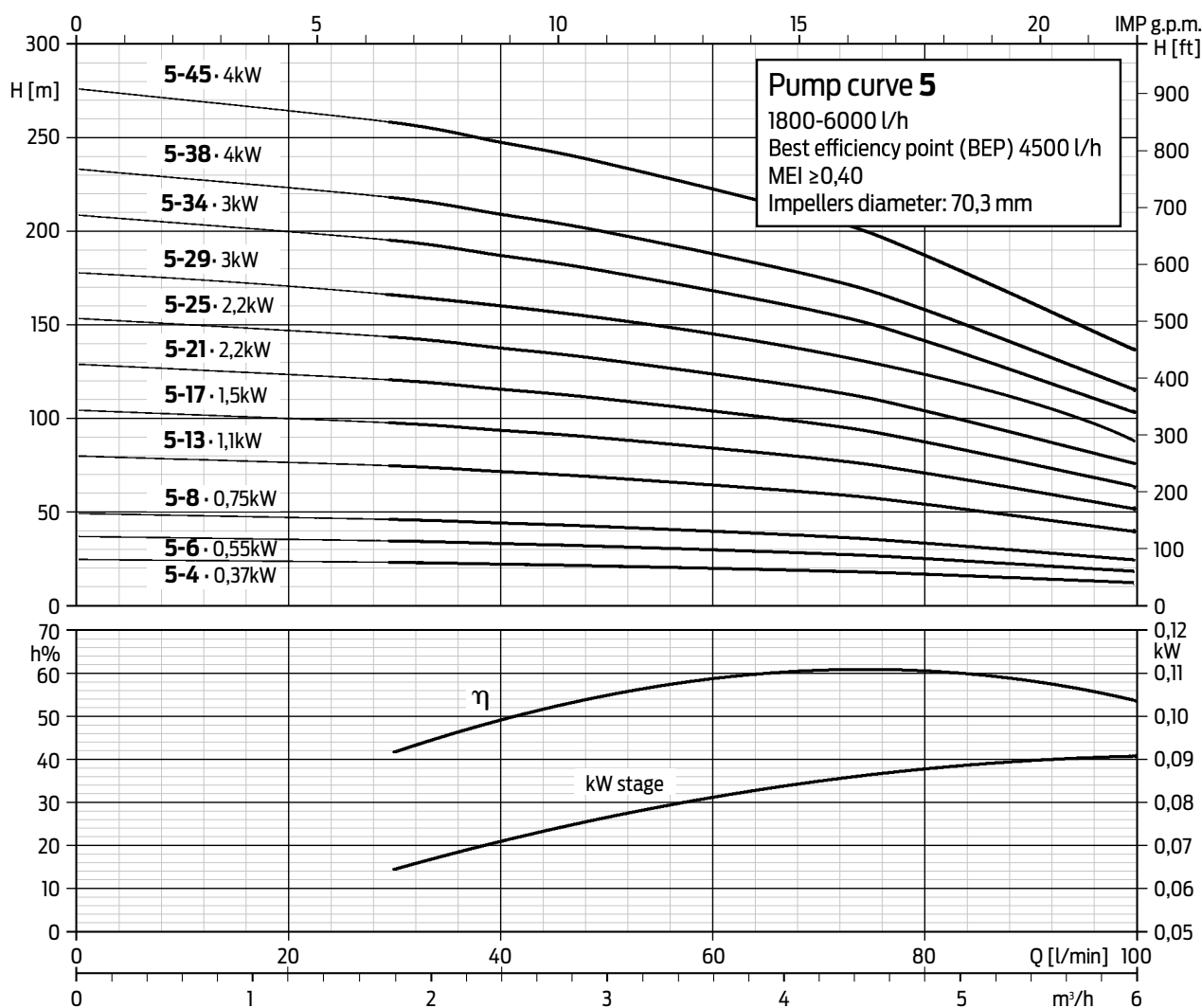
Upper head and lower support in TECHNOPOLYMER	HYDRAULIC TECHNO- POLYMER QS4P.3 Pump curve 3	Price	Code	HYDRAULIC CHARACTERISTICS (n~2850 min ⁻¹)								Lenght	Weight	COUPABLE MOTORS* 50Hz n~2850 min ⁻¹					
				Delivery (Q) – Ø Outlet diameter: 1" ¼ G-F										Power			Minimum Thrust		
				m³/h	0	1,2	1,5	1,8	2,4	3	4,2								
				l/min	0	20	25	30	40	50	70			[mm]	[kg]	kW		HP	F[N]
				H = total head in meters (dynamic total pressure)	33,3	31,2	30,4	29,4	27,0	23,7	13,7			392	2,6	0,37		0,5	1500
	QS4P.3-6	€ 144	181005206		50,0	46,8	45,6	44,1	40,5	35,6	20,6	490	3,2	0,55	0,75	1500			
	QS4P.3-9	€ 170	181005209		72,2	67,6	65,9	63,7	58,5	51,4	29,8	620	4,0	0,75	1	1500			
	QS4P.3-13	€ 208	181005213		105,5	98,8	96,3	93,1	85,5	75,1	43,5	815	5,6	1,1	1.5	1500			
	QS4P.3-19	€ 255	181005219		138,8	130,8	126,8	122,5	112,5	98,8	57,3	1010	6,8	1,5	2	2500			
	QS4P.3-25	€ 323	181005225																

*Power and Minimum Thrust of a coupled motor must match the ones in the table above.

Upper head and lower support in STAINLESS STEEL	HYDRAULIC INOX	Price	Code	HYDRAULIC CHARACTERISTICS (n~2850 min ⁻¹)								Lenght	Weight	COUPABLE MOTORS* 50Hz n~2850 min ⁻¹		
	QS4X.3			Delivery (Q) – Ø Outlet diameter: 1"¼ G-F										Power		Minimum Thrust
				m³/h	0	1,2	1,5	1,8	2,4	3	4,2			kW	HP	
	Pump curve 3	l/min	0	20	25	30	40	50	70	[mm]	[kg]	kW	HP	F[N]		
	H = total head in meters (dynamic total pressure)															
	QS4X.3-6	€ 226	1810102061		33,3	31,2	30,4	29,4	27,0	23,7	13,7	392	3,6	0,37	0,5	1500
	QS4X.3-9	€ 251	1810102091		50,0	46,8	45,6	44,1	40,5	35,6	20,6	490	4,1	0,55	0,75	1500
	QS4X.3-13	€ 287	1810102131		72,2	67,6	65,9	63,7	58,5	51,4	29,8	620	5,0	0,75	1	1500
	QS4X.3-19	€ 341	1810102191		105,5	98,8	96,3	93,1	85,5	75,1	43,5	815	6,6	1,1	1,5	1500
	QS4X.3-25	€ 401	1810102251		138,8	130,0	126,8	122,5	112,5	98,8	57,3	1010	7,5	1,5	2	2500
	QS4X.3-32	€ 473	1810102321		177,6	166,4	162,2	156,8	144,0	126,4	73,3	1270	9,6	2,2	3	2500
	QS4X.3-39	€ 646	1810102391		216,5	202,8	197,7	191,1	175,5	154,1	89,3	1497	11,0	2,2	3	3000
	QS4X.3-45	€ 751	1810102451		249,8	234,0	228,2	220,5	202,5	177,8	103,1	1725	12,4	3	4	4000
	QS4X.3-51	€ 823	1810102511		283,1	265,2	258,6	249,9	229,5	201,5	116,8	1920	14,1	3	4	4000

*Power and Minimum Thrust of a coupled motor must match the ones in the table above.

Special request listed separately

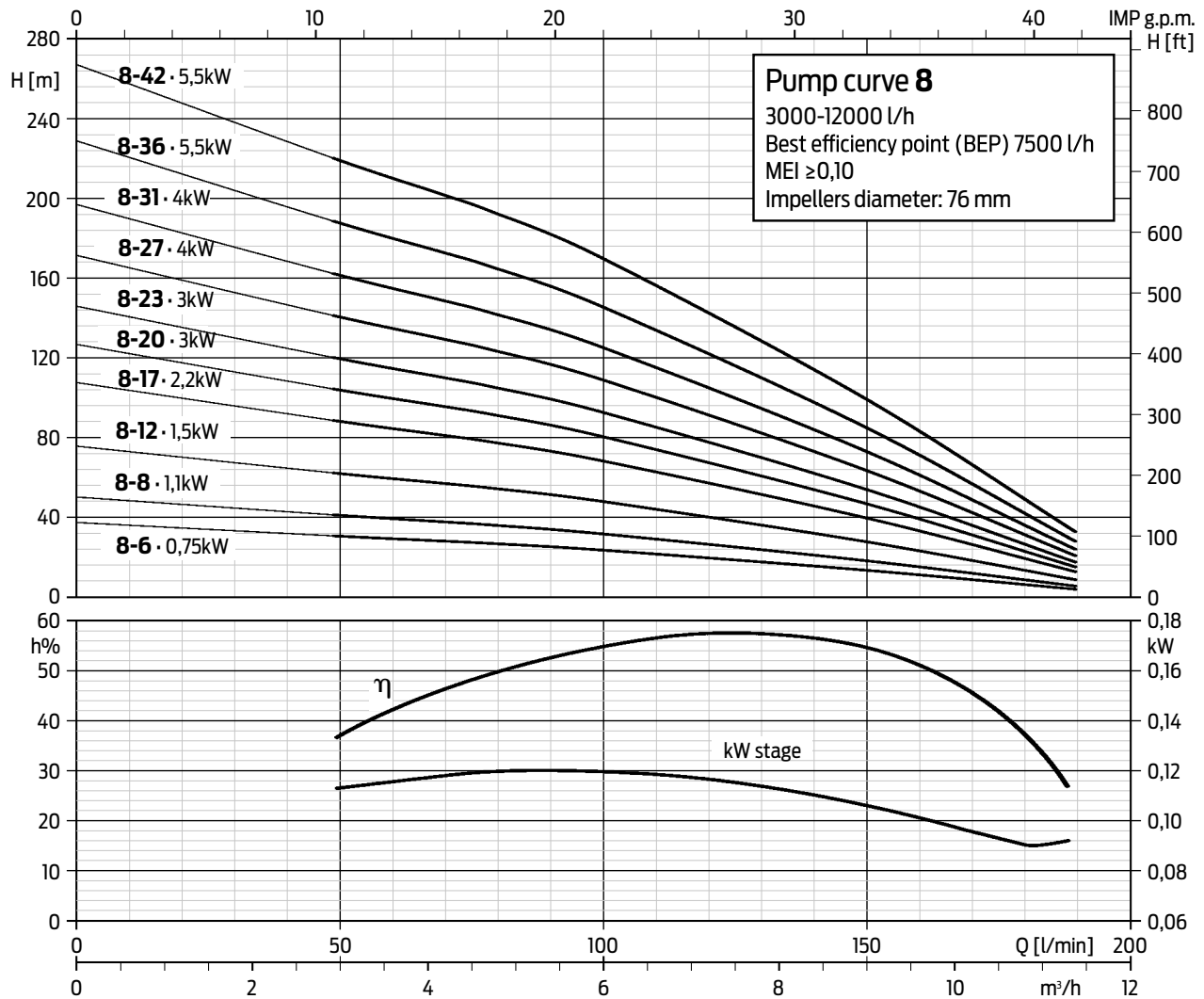


Upper head and lower support in TECHNOPOLYMER	HYDRAULIC TECHNO- POLYMER QS4P.5 Pump curve 5	Price	Code	HYDRAULIC CHARACTERISTICS (n~2850 min ⁻¹)								Lenght	Weight	COUPABLE MOTORS* 50Hz n~2850 min ⁻¹					
				Delivery (Q) – Ø Outlet diameter: 1" ¼ G-F										Power			Minimum Thrust		
				m³/h	0	1,8	2,4	3	4,2	4,8	6								
				l/min	0	30	40	50	70	80	100			[mm]	[kg]	kW		HP	F[N]
				H = total head in meters (dynamic total pressure)															
	QS4P.5-4	€ 127	181005304		24,5	22,9	22,0	21,0	18,5	16,7	12,1	327	2,2	0,37	0,5	1500			
	QS4P.5-6	€ 148	181005306		36,8	34,4	33,0	31,5	27,7	25,0	18,2	392	2,6	0,55	0,75	1500			
	QS4P.5-8	€ 168	181005308		49,1	45,8	44,0	42,0	37,0	33,3	24,2	457	3,0	0,75	1	1500			
	QS4P.5-13	€ 222	181005313		79,7	74,5	71,5	68,3	60,1	54,2	39,4	620	4,1	1,1	1,5	1500			
	QS4P.5-17	€ 254	181005317		104,7	97,4	93,5	89,3	78,5	70,8	51,5	750	5,3	1,5	2	2500			
	QS4P.5-21	€ 304	181005321		128,8	120,3	115,5	110,3	97,0	87,5	63,3	880	6,1	2,2	3	2500			
	QS4P.5-25	€ 344	181005325		153,3	143,3	137,5	131,3	115,5	104,2	75,8	1010	6,9	2,2	3	2500			

*Power and Minimum Thrust of a coupled motor must match the ones in the table above.

Upper head and lower support in STAINLESS STEEL	HYDRAULIC INOX	Price	Code	HYDRAULIC CHARACTERISTICS (n~2850 min ⁻¹)								Lenght	Weight	COUPABLE MOTORS*		
	QS4X.5			Delivery (Q) – Ø Outlet diameter: 1"¼ G-F										50Hz n~2850 min ⁻¹		
				m³/h	0	1,8	2,4	3	4,2	4,8	6			Power		Minimum Thrust
	Pump curve 5	l/min	0	30	40	50	70	80	100	[mm]	[kg]	kW	HP	F[N]		
	QS4X.5-4	€ 214	1810103041	H = total head in meters (dynamic total pressure)	24,5	22,9	22,0	21,0	18,5	16,7	12,1	327	3,2	0,37	0,5	1500
	QS4X.5-6	€ 229	1810103061		36,8	34,4	33,0	31,5	27,7	25,0	18,2	392	3,6	0,55	0,75	1500
	QS4X.5-8	€ 248	1810103081		49,1	45,8	44,0	42,0	37,0	33,3	24,2	457	4,0	0,75	1	1500
	QS4X.5-13	€ 297	1810103131		79,7	74,5	71,5	68,3	60,1	54,2	39,4	620	5,1	1,1	1,5	1500
	QS4X.5-17	€ 337	1810103171		104,3	97,4	93,5	89,3	78,5	70,8	51,5	750	6,0	1,5	2	2500
	QS4X.5-21	€ 382	1810103211		128,8	120,3	115,5	110,3	97,0	87,5	63,6	880	6,8	2,2	3	2500
	QS4X.5-25	€ 421	1810103251		153,3	143,3	137,5	131,3	115,5	104,2	75,8	1010	7,6	2,2	3	2500
	QS4X.5-29	€ 486	1810103291		177,9	166,2	159,5	152,3	134,0	120,8	87,9	1172	8,7	3	4	2500
	QS4X.5-34	€ 536	1810103341		208,5	194,8	187,0	178,5	157,1	141,7	103,0	1335	9,8	3	4	2500
	QS4X.5-38	€ 694	1810103381		233,1	217,1	209,0	199,5	175,6	158,3	115,1	1497	11,2	4	5,5	4000
	QS4X.5-45	€ 762	1810103451	276,0	257,9	247,5	236,3	207,9	187,5	136,4	1725	13,0	4	5,5	4000	

*Power and Minimum Thrust of a coupled motor must match the ones in the table above.
 Special request listed separately

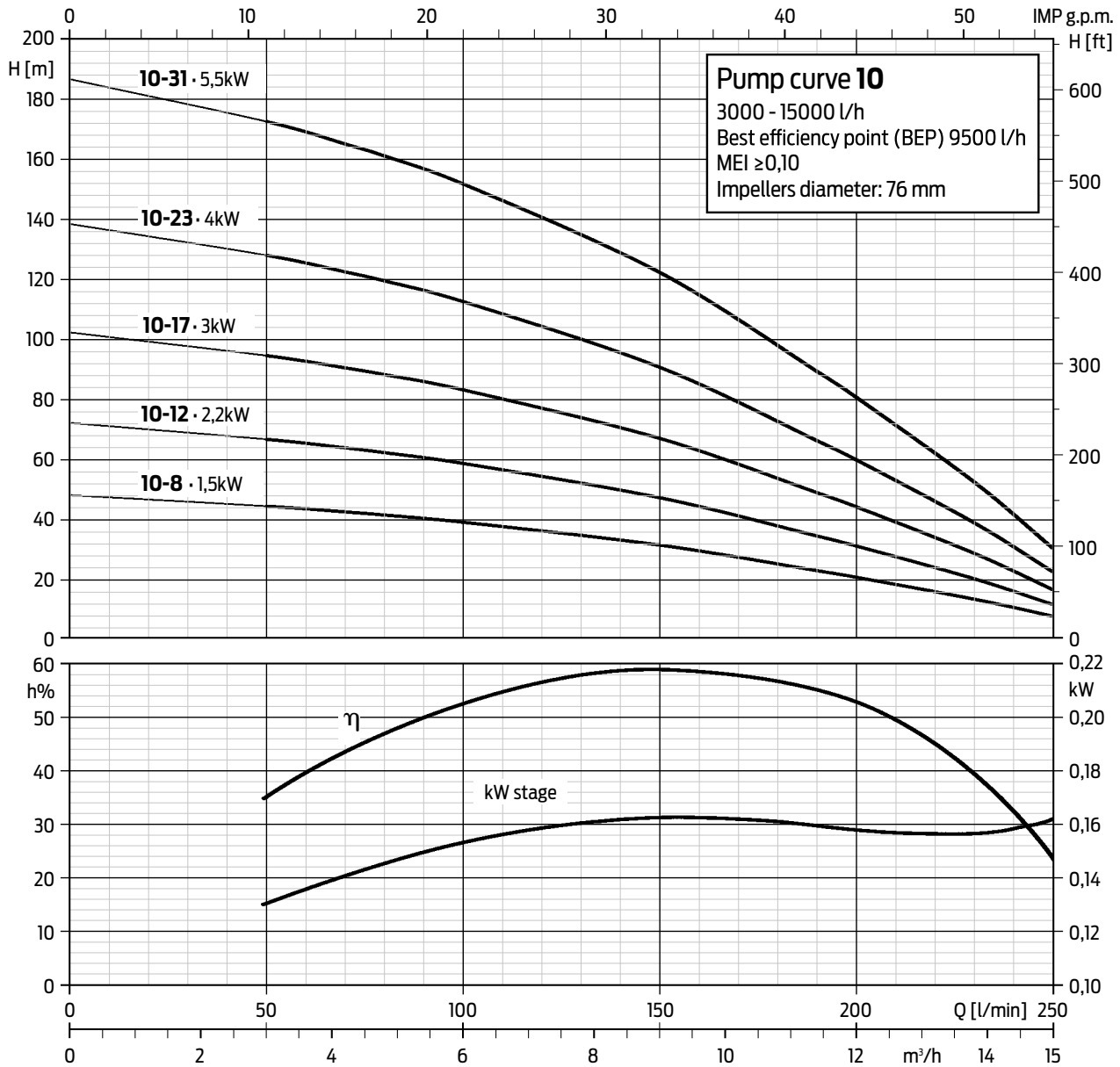


• 4" NEMA standard dimensions • Operating curves at: 2850 min⁻¹ • Performance limits: ISO 9906 – annex A, mass production pump section

PRODUCT NOT AVAILABLE FOR THE EUROPEAN MARKET

Upper head and lower support in STAINLESS STEEL	HYDRAULIC INOX	Price	Code	HYDRAULIC CHARACTERISTICS (n=2850 min ⁻¹)						Lenght	Weight	COUPABLE MOTORS* 50Hz n=2850 min ⁻¹			
	QS4X.8			Delivery (Q) – Ø Outlet diameter: 2" G-F								[mm]	[kg]	Power	
				m³/h	0	3,0	4,8	6,0	9,0	11,4	kW			HP	
				l/min	0	50	80	100	150	190					
	Pump curve 8														
	QS4X.8-6	€ 248	1810104061	H = total head in meters (dynamic total pressure)	38,4	31,5	27,7	24,5	14,4	4,8	512	4,2	0,75	1	1500
	QS4X.8-8	€ 277	1810104081		51,2	42,0	36,9	32,7	19,2	6,4	617	4,8	1,1	1,5	1500
	QS4X.8-12	€ 327	1810104121		76,8	63,0	55,3	49,0	28,8	9,6	827	6,2	1,5	2	1500
	QS4X.8-17	€ 416	1810104171		108,8	89,3	78,4	69,4	40,8	13,6	1122	7,8	2,2	3	2500
	QS4X.8-20	€ 449	1810104201		128,0	105,0	92,2	81,7	48,0	16,0	1280	8,9	3	4	2500
	QS4X.8-23	€ 485	1810104231		147,2	120,8	106,0	93,9	55,2	18,4	1437	9,8	3	4	2500
	QS4X.8-27	€ 648	1810104271		172,8	141,8	124,5	110,2	64,8	21,6	1680	11,4	4	5,5	2500
	QS4X.8-31	€ 697	1810104311		198,4	162,8	142,9	126,6	74,4	24,8	1890	12,6	4	5,5	2500
	QS4X.8-36	€ 837	1810104361		230,4	189,0	166,0	147,0	86,4	28,8	2185	14,4	5,5	7,5	4000
	QS4X.8-42	€ 911	1810104421		268,8	220,5	193,6	171,5	100,8	33,6	2500	16,3	5,5	7,5	4000

*Power and Minimum Thrust of a coupled motor must match the ones in the table above.
 Special request listed separately



• 4" NEMA standard dimensions • Operating curves at: 2850min⁻¹ • Performance limits: ISO 9906 – annex A, mass production pump section

PRODUCT NOT AVAILABLE FOR THE EUROPEAN MARKET

Upper head and lower support in STAINLESS STEEL	HYDRAULIC INOX QS4X.10	Price	Code	HYDRAULIC CHARACTERISTICS (n~2850 min ⁻¹)										Lenght	Weight	COUPABLE MOTORS* 50Hz n~2850 min ⁻¹		
	Delivery (Q) – Ø Outlet diameter: 2" G-F										Power		Minimum Thrust					
	m³/h			0	3.0	4.8	6.0	9.0	11.4	13.8	15.0	kW	HP			F[N]		
	l/min			0	50	80	100	150	190	230	250							
	Pump curve 10			[mm]	[kg]													
	QS4X.10 - 8	€ 282	1810105081	H = total head in meters (dynamic total pressure)	48,2	44,4	41,6	39,2	31,6	23,1	13,6	7,9	617	4,8	1,5	2	1500	
	QS4X.10 - 12	€ 331	1810105121		72,3	66,6	62,4	58,8	47,4	34,7	20,4	11,9	827	6,2	2,2	3	1500	
	QS4X.10 - 17	€ 417	1810105171		102,4	94,4	88,4	83,3	67,2	47,1	28,9	16,8	1122	7,8	3	4	2500	
	QS4X.10 - 23	€ 545	1810105231		138,6	127,7	119,6	112,7	90,9	66,4	39,1	22,8	1437	9,8	4	5,5	2500	
	QS4X.10 - 31	€ 703	1810105311		186,8	172,1	161,2	151,9	122,5	89,5	52,7	30,7	1890	12,7	5,5	7,5	4000	

*Power and Minimum Thrust of a coupled motor must match the ones in the table above.
 Special request listed separately

QPGo.P

4" complete solution made by ZDS hydraulic part, 2-wire single-phase oil-cooled O2 motor and supply cable (different lengths available). These complete solutions, manufactured to ISO 9001 standards, are available up to the maximum delivery of 6.000 l/h and 150 m head. The O2 motor does not require a start and run control box, as the capacitor is built into it. The QPGo.P complete solutions are designed to be used in applications for lifting, distribution, and pressurisation of water in water systems.

Technical Specifications:

O2 motor range:	0,37 - 1,5 kW
Voltage range:	220-230V / 50 Hz
Voltage tolerance 50Hz from nominal:	+6% / -10% U _N
Degree of protection:	IP 68
Insulation:	Cl. F
Rated ambient temperature:	max. 40° C
Required cooling flow:	min. 8 cm/sec
Maximum quantity of suspended sand:	120 g/m ³
Maximum starts/h:	150, equally distributed
Mounting:	vertical/horizontal
Maximum immersion depth:	100 m
Allowed range of water PH:	6,4-8,0
Outlet diameter:	1" ¼ G-F
Maximum delivery (Q):	6.000 l/h
Maximum head (H):	150 m

- 2-wire single-phase oil-cooled O2 motor
- Maximum immersion depth: 100 m
- Maximum delivery (Q): 6.000 l/h
- Acs approved cable

MOTOR'S PROTECTIONS



Thermal protection

The manual reset thermal protection system stops the QPGo.P complete solution in case of overheating due of a not correct installation.



Overload

The manual reset amperometric protection protects the QPGo.P complete solution from overload, when partially or totally blocked.

Model	Cable 1,5 m		Cable 15 m		Cable 30 m		Cable 45 m		Power		P.C.*	C.C.**	Start	Hydraulic data (n°2850 min ⁻¹)							Lenght (mm)	Weight (Kg)
	Price	Code	Price	Code	Price	Code	Price	Code	kW	HP				Flow (Q) - Ø Outlet diameter: 1"¼ G-F								
														I _n	A Start	m³/h	0	0.6	1.5	2.4		
													I _n Start	l/min	0	10	25	40	70	100		
QPGo.P.1-12	€ 556	197300112L	€ 604	197300112L1	€ 641	197300112L2	€ 691	197300112L3	0,37	0,5	0,72	3,3-3,5	9,7	H Total head in meters (dynamic total pressure)	75,4	66,6	27				827	12,9
QPGo.P.1-18	€ 611	197300118L	€ 659	197300118L1	€ 696	197300118L2	€ 746	197300118L3	0,55	0,75	0,95	4,4-4,6	12,2		113	99,9	40,5				974	15,1
QPGo.P.1-25	€ 689	197300125L	€ 737	197300125L1	€ 774	197300125L2	€ 824	197300125L3	0,75	1	1,24	5,8-6,1	16,6		157	150	56,3				1131	17,2
QPGo.P.2-8	€ 520	197300208L	€ 568	197300208L1	€ 605	197300208L2	€ 655	197300208L3	0,37	0,5	0,73	3,3-3,5	8,9		51,2	49,9	41,9	27,2			767	12,5
QPGo.P.2-12	€ 562	197300212L	€ 610	197300212L1	€ 647	197300212L2	€ 697	197300212L3	0,55	0,75	0,97	4,4-4,6	12,2		76,8	74,9	62,9	40,8			884	14,4
QPGo.P.2-16	€ 612	197300216L	€ 660	197300216L1	€ 697	197300216L2	€ 747	197300216L3	0,75	1	1,27	5,8-6,1	16,6		102,4	99,8	83,8	54,4			991	16,2
QPGo.P.2-24	€ 697	197300224L	€ 745	197300224L1	€ 782	197300224L2	€ 951	197300224L3	1,1	1,5	1,70	7,8-8,0	24		153,6	149,8	125,8	81,6			1202	18,9
QPGo.P.3-9	€ 544	197300309L	€ 592	197300309L1	€ 629	197300309L2	€ 679	197300309L3	0,55	0,75	0,93	4,4-4,6	12,2		50		45,6	40,5	20,6		907	14,4
QPGo.P.3-13	€ 606	197300313L	€ 654	197300313L1	€ 691	197300313L2	€ 741	197300313L3	0,75	1	1,24	5,8-6,1	16,6		72,2		65,9	58,5	29,8		1054	16,4
QPGo.P.3-19	€ 683	197300319L	€ 731	197300319L1	€ 768	197300319L2	€ 937	197300319L3	1,1	1,5	1,66	7,8-8,0	24		105,5		96,3	85,5	43,5		1280	19,3
QPGo.P.5-8	€ 566	197300508L	€ 614	197300508L1	€ 651	197300508L2	€ 701	197300508L3	0,75	1	1,23	5,8-6,1	16,6	49,1			44	37	33,3	891	15,4	
QPGo.P.5-13	€ 650	197300513L	€ 698	197300513L1	€ 735	197300513L2	€ 904	197300513L3	1,1	1,5	1,70	7,8-8,0	24	79,7			71,5	60,1	39,4	1085	17,8	
QPGo.P.5-17	€ 710	197300517L	€ 781	197300517L1	€ 846	197300517L2	On request		1,5	2	2,25	10,4-10-6	34	104,3			93,5	78,5	51,5	1306	20,9	

*Special requests listed separately



Kit Well Made of Re-Start&Go Pressure Control, Sand Filter and Flexible pipe

Re-Start&Go pressure control

Electronic device for direct start, stop and protection of the pump against dry running. It keeps a constant working flow, thanks to the inner sensor and start up adjustable pressure switch. The water movement or the pressure decreasing (down the 1,5 bar factory adjustable value) starts the motor. In case of dry running, the RE-start&Go tries up to 9th automatic restarts attempts in programmed schedules time. The last attempt is set every two hours without a maximum limit. • Inlet diameter Ø = 1" • Outlet diameter Ø = 1" • Manual start switch (RESET) • Information led: POWER, ON (running), FAILURE • Degree of protection: IP65 • Maximum working temperature: 60°C • Factory set starting pressure value 1,5 bar (adjustable 1,5-3 bar) • Max working pressure: 8 bar • Manometer included • Voltage: 220/240V (50/60Hz) • Working: single-phase • Max load: 1,1 kW

Flexible steel pipe Recommended to avoid excessive vibrations or frictions on the pipelines. • Inlet/outlet: f-f

Screen Filter Plastic screen filter with replaceable cartridge for wide range of filtration applications.

• Casing material: polypropylene body, EPDM gaskets • Screen Type: Inox 100 mesh • Inlet/outlet: 1" BSP threads, male/male • Max working pressure: 10 bar (145 PSI) • Filtering capacity: 6 m3/h • Cartridge Ø: 50 x 150 mm

Kit tank Made of Kit well and Kios 1.

The KIOS kit is the "easy-fix" for horizontal installations of submersible pumps. It ensures the proper cooling of the motor and it comes with an oversized filter to avoid blockage by leaves or small stones. The KIOS kit can be mounted to a surface and has comfortable handles for easy carrying.

Model	Price	Code
Kit Well	€ 177	082515301



Model	Price	Code
Kit tank	€ 343	082515302

ZDJet.P

4" complete solution made of ZDS hydraulic part, 2-wire single-phase encapsulated water-cooled H2 motor and supply cable (different lengths available). These complete solutions, manufactured to ISO 9001 standards, are available up to the maximum delivery of 6.000 l/h and 150 m head. Start and run capacitor is already integrated in the motor. The ZDJet.P complete solutions are designed to be used for lifting, distribution, and pressurisation of water in water systems.

Technical Specifications:

H2 motor range:	0,37 - 1,5 kW
Voltage range:	220-230V / 50 Hz
Voltage tolerance 50Hz from nominal:	+6% / -10% U _N
Degree of protection:	IP 68
Insulation:	Cl. F
Rated ambient temperature:	max. 35° C
Required cooling flow:	min. 8 cm/sec
Maximum quantity of suspended sand:	120 g/m ³
Maximum starts/h:	150, equally distributed
Mounting:	vertical/horizontal
Maximum immersion depth:	150 m
Allowed range of water PH:	6,4-8,0
Outlet diameter:	1" ¼ G-F
Maximum delivery (Q):	6.000 l/h
Maximum head (H):	150 m

- 2-wire single-phase encapsulated water cooled motor
- Maximum immersion depth: 150 m
- Maximum delivery (Q): 6.000 l/h
- Acs approved cable

MOTOR'S PROTECTIONS



Thermal protection

The thermal protection system stops the ZDJet.P complete solution in case of overheating due to a not correct installation.



Overload

The manual reset amperometric protection protects the ZDJet.P complete solution from overload, when partially or totally blocked.

Model	Cable 1,5 m		Cable 15 m		Cable 30 m		Cable 45 m		Power		P.C.*	C.C.** I _n (A)	Start A Start I _n Start	Hydraulic data (n°2850 min ⁻¹)							Lenght (mm)	Weight (Kg)	
	Price	Code	Price	Code	Price	Code	Price	Code	kW	HP				Flow (Q) - Ø Outlet diameter: 1"¼ G-F									
														m³/h l/min	0 0	0.6 10	1.5 25	2.4 40	4.2 70	6 100			
ZDJet.P.1-12	€ 665	196025112	€ 713	196025112L	€ 750	196025112L	€ 800	196025112L2	0,37	0,5	0,72	3,3-3,5	9,7	H Total head in meters (dynamic total pressure)	75,4	66,6	27				827	12,9	
ZDJet.P.1-18	€ 738	196025118	€ 786	196025118L	€ 823	196025118L	€ 873	196025118L2	0,55	0,75	0,95	4,4-4,6	14		113	99,9	40,5				974	15,1	
ZDJet.P.1-25	€ 823	196025125	€ 871	196025125L	€ 908	196025125L	€ 958	196025125L2	0,75	1	1,24	5,8-6,1	17,5		157	150	56,3				1131	17,2	
ZDJet.P.2-8	€ 629	196025208	€ 677	196025208L	€ 714	196025208L	€ 764	196025208L2	0,37	0,5	0,73	3,3-3,5	9,7		51,2	49,9	41,9	27,2				767	12,5
ZDJet.P.2-12	€ 689	196025212	€ 737	196025212L	€ 774	196025212L	€ 824	196025212L2	0,55	0,75	0,97	4,4-4,6	14		76,8	74,9	62,9	40,8				884	14,4
ZDJet.P.2-16	€ 746	196025216	€ 794	196025216L	€ 831	196025216L	€ 881	196025216L2	0,75	1	1,27	5,8-6,1	17,5		102,4	99,8	83,8	54,4				991	16,2
ZDJet.P.2-24	€ 886	196025224	€ 933	196025224L	€ 970	196025224L	€ 1.139	196025224L2	1,1	1,5	1,70	7,8-8,0	25		153,6	149,8	125,8	81,6				1202	18,9
ZDJet.P.3-9	€ 671	196025309	€ 719	196025309L	€ 756	196025309L	€ 806	196025309L2	0,55	0,75	0,93	4,4-4,6	14		50		45,6	40,5	20,6			907	14,4
ZDJet.P.3-13	€ 740	196025313	€ 788	196025313L	€ 825	196025313L	€ 875	196025313L2	0,75	1	1,24	5,8-6,1	17,5		72,2		65,9	58,5	29,8			1054	16,4
ZDJet.P.3-19	€ 872	196025319	€ 919	196025319L	€ 956	196025319L	€ 1.125	196025319L2	1,1	1,5	1,66	7,8-8,0	25		105,5		96,3	85,5	43,5			1280	19,3
ZDJet.P.5-8	€ 700	196025508	€ 748	196025508L	€ 785	196025508L	€ 835	196025508L2	0,75	1	1,23	5,8-6,1	17,5	49,1			44	37	33,3		891	15,4	
ZDJet.P.5-13	€ 839	196025513	€ 886	196025513L	€ 923	196025513L	€ 1.092	196025513L2	1,1	1,5	1,70	7,8-8,0	25	79,7			71,5	60,1	39,4		1085	17,8	
ZDJet.P.5-17	€ 883	196025517	€ 954	196025517L	€ 1.019	196025517L	On request		1,5	2	2,25	10,4-10,6	35	104,3			93,5	78,5	51,5		1306	20,9	

*Special requests listed separately



Kit Well Made of Re-Start&Go Pressure Control, Sand Filter and Flexible pipe

Re-Start&Go pressure control

Electronic device for direct start, stop and protection of the pump against dry running. It keeps a constant working flow, thanks to the inner sensor and start up adjustable pressure switch. The water movement or the pressure decreasing (down the 1,5 bar factory adjustable value) starts the motor. In case of dry running, the RE-start&Go tries up to 9th automatic restarts attempts in programmed schedules time. The last attempt is set every two hours without a maximum limit. • Inlet diameter Ø = 1" • Outlet diameter Ø = 1" • Manual start switch (RESET) • Information led: POWER, ON (running), FAILURE • Degree of protection: IP65 • Maximum working temperature: 60°C • Factory set starting pressure value 1,5 bar (adjustable 1,5-3 bar) • Max working pressure: 8 bar • Manometer included • Voltage: 220/240V (50/60Hz) • Working: single-phase • Max load: 1,1 kW

Flexible steel pipe Recommended to avoid excessive vibrations or frictions on the pipelines. • Inlet/outlet: f-f

Screen Filter Plastic screen filter with replaceable cartridge for wide range of filtration applications.

• Casing material: polypropylene body, EPDM gaskets • Screen Type: Inox 100 mesh • Inlet/outlet: 1" BSP threads, male/male • Max working pressure: 10 bar (145 PSI) • Filtering capacity: 6 m3/h • Cartridge Ø: 50 x 150 mm

Kit tank Made of Kit well and Kios 1.

The KIOS kit is the "easy-fix" for horizontal installations of submersible pumps. It ensures the proper cooling of the motor and it comes with an oversized filter to avoid blockage by leaves or small stones. The KIOS kit can be mounted to a surface and has comfortable handles for easy carrying.

Model	Price	Code
Kit Well	€ 177	082515301



Model	Price	Code
Kit tank	€ 343	082515302


 Control Box
not included

220-230V SINGLE-PHASE PSC MOTORS - CONTROL BOX NOT INCLUDED

Franklin Code	Price	Code	Power		Cable (m)	Thrust [N]	I _n [A]	η _{eff} [%]	Cosφ [P.f]	C450v [P.f]	Lenght [mm]	Weight [kg]
			kW	HP								
254 803 6700L	€ 335	196191105L	0.25	0.37	1.5	3000	2.4	51-50	0.92	12.5	214	7.3
254 805 6700L	€ 337	196191110L	0.37	0.5	1.5	3000	3.3	54-54	0.9	16.0	228	7.9
254 807 6700L	€ 361	196191115L	0.55	0.75	1.5	3000	4.3	63-63	0.94	20.0	253	9.1
254 808 6700L	€ 388	196191120L	0.75	1	1.5	3000	5.7	61-59	1.0	35.0	282	10
254 809 6700L	€ 449	196191125L	1.1	1.5	1.5	3000	8.4	65-63	0.92	40.0	306	11.1
254 810 6700L	€ 549	196191130L	1.5	2	1.5	3000	10.7	68-66	0.95	50.0	338	12.6
254 811 6700L	€ 686	196191135L	2.2	3	2.5	4000	14.7	70-68	0.97	70.0	436	17.4

* CBH not included, it is recommended to install a control box equipped with an appropriate size capacitor.

380-415V THREE-PHASE MOTORS

Franklin Code	Price	Code	Power		Cable (m)	Thrust [N]	I _n [A]	η _{eff} [%]	Cosφ [P.f]	Lenght [mm]	Weight [kg]
			kW	HP							
234 761 6700L	€ 346	184192010L	0.37	0.5	1.5	3000	1.1-1.1	66	0.79-0.71	214	6.3
234 762 6700L	€ 353	184192015L	0.55	0.75	1.5	3000	1.6-1.7	68	0.79-0.70	228	7.2
234 763 6700L	€ 375	184192020L	0.75	1	1.5	3000	2.0-2.1	70	0.81-0.73	248	8
234 724 6700L	€ 432	184192025L	1.1	1.5	1.5	3000	2.8-2.9	74	0.82-0.74	282	9.3
234 725 6700L	€ 504	184192030L	1.5	2	1.5	3000	3.9-4.0	73	0.83-0.73	306	10.3
234 726 6700L	€ 618	184192035L	2.2	3	2.5	4000	5.4-5.8	75	0.82-0.72	338	11.8
234 764 6700L	€ 737	184192040L	3	4	3	4000	7.4-7.9	77	0.82-0.72	393	14.3
234 765 3421L	€ 1.002	184192045L	4	5.5	3	6500	9.7-10.4	78	0.82-0.72	543	21.8
234 728 3421L	€ 1.163	184192050L	5.5	7.5	3	6500	12.6-12.8	79	0.85-0.77	652	28.7
234 729 3421L	€ 1.667	184192055L	7.5	10	3	6500	17.2-17.6	79	0.86-0.77	730	32.7

Control Box to start and protect Single-phase 4" PSC submersible motors



Technical Specifications:

Electric control box in thermoplastic shell, protection standard IP 54
 Power inlet 1x 230 V - ffl10% 50Hz and start and run capacitor included
 1,5 m cable with European plug included
 Inlet for connection to pressure switches or floats
 Manually resettable amperometric protection cut-off
 Environmental temperature during use: from -10°C to +40°C.

CBO for ZDS O3 PSC oil-cooled single-phase motors

Model	Price	Code	Power	Amperometric protection	Capacitor	Weight
			kW	I _{max} [N]	[μF]	[kg]
CBO.037	€ 82	082515041	0.37	4	20	0.7
CBO.055	€ 87	082515059	0.55	5	25	0.8
CBO.075	€ 87	082515079	0.75	7	35	0.8
CBO.110	€ 112	082515114	1.1	10	40	0.8
CBO.150	€ 115	082515154	1.5	12	60	0.9
CBO.220	€ 119	082515224	2.2	18	80	1.0

CBH for FRANKLIN PSC water-cooled single-phase motors

Model	Price	Code	Power	Amperometric protection	Capacitor	Weight
			kW	I _{max} [N]	[μF]	[kg]
CBH.025	€ 82	082515028	0.25	4	12.5	0.8
CBH.037	€ 82	082515040	0.37	4	16	0.8
CBH.055	€ 82	082515058	0.55	5	20	0.8
CBH.075	€ 87	082515078	0.75	7	35	0.8
CBH.110	€ 112	082515113	1.1	10	40	0.8
CBH.150	€ 119	082515153	1.5	12	50	1.0
CBH.220	€ 127	082515223	2.2	18	70	1.1

1. Application.

These Terms and Conditions shall apply to the purchase of goods (hereinafter also the "Goods") by the client ("Buyer"), manufactured and marketed by ZDS S.r.l., a company registered in Italy under number IT04141260283, whose registered office is at Via Grecia 8, 35127 Padua (hereinafter the "Seller" or "ZDS"). Any offer, order confirmation and delivery made by the Seller shall be regulated by these Terms and Conditions, unless agreed differently in writing between the Buyer and the Seller.

2. Finalization.

The sale shall be considered completed when the Buyer's order for Goods is confirmed in writing by the Seller. The orders shall be considered completed if accepted in writing by the Seller, and only if containing the necessary information to identify the Goods; it is understood that the Seller reserves the right to accept or refuse the Buyer's order at its unquestionable discretion.

If the Buyer orders by phone, the order is considered accepted when (a) the order confirmation is signed by the Buyer, (b) the order confirmation is accepted by the Buyer by e-mail, sms, whatsapp or similar, (c) the order confirmation is accepted by the Buyer by telefax. Possible cancellations or changes of the order made by the Buyer, will not have effect if not previously authorized or subsequently approved in writing by the Seller. The execution of this sales agreement conventionally takes place at the Seller's place.

3. Delivery terms.

Unless otherwise agreed in writing, delivery terms will be agreed on the order confirmation on a case-by-case basis referring. All the dates indicated as delivery terms, are to be considered as purely indicative. Any eventual delay on the delivery, shall not give the Buyer any right to cancel the order or to claim compensation for any kind of damage, and ZDS will not be liable for any costs caused by the delayed delivery. By accepting a delayed delivery, the Buyer waives in any case for any claim in relation to the delay. Any possible interruptions in the manufacturing arising with regards to force majeure, will cancel any responsibility of the Seller for the delay, which has the right to withdraw from the contract without the Buyer to be entitled to any payment in compensation. If the delivery fails for any responsibility of the Buyer, the Seller shall charge him an amount as payment for the transport and stock costs incurred.

If the Goods (i) are delivered with broken or lifted seal, (ii) are of a different quantity from the shipping document, (iii) have tampered boxes/pallets, the Buyer:

- 1 - shall accept the Goods with reserve, has to write this on the shipping document, has to inform the carrier,
- 2 - must inform the Seller in writing within 8 (eight) days from the delivery and must check the Goods within 8 (eight) days from delivery.

4. Prices.

Unless otherwise agreed in writing, the Seller's current pricelist will be applied to every order confirmation. The specified prices shall be net; any applicable value added tax, shipping, customs clearance, insurance, packaging, etc. shall be added at the rate applicable and borne by the Buyer. In case of delayed delivery of the Goods due to the Buyer's responsibility, any price increase occurred after the order confirmation will be charged to the Buyer. The Buyer, whether reselling the products, undertakes not to apply a lower price than the one paid for purchasing the Goods from the Seller. In case of breach of undertakings, as a penalty under art.1382 of the Italian Civil Code, the Buyer shall pay the Seller an amount equal to the value of goods (as indicated in the invoice) without prejudice to any greater damages.

5. Payment terms.

Unless otherwise agreed in writing, the payment of the Goods will be made by advanced bank transfer. The payment shall be notified by forwarding to the Seller the bank receipt via e-mail or telefax. Without the bank receipt the Seller shall suspend any further deliveries to the Buyer and cancel the pending orders from the Buyer after 30 days from order confirmation. Term payments shall be made at the due date indicated on the relevant invoice, without deduction. In any case it is understood that the payment takes place at the Seller's domicile in Padua, Italy.

6. Non-payment.

In case of non-payment or partial payment, the Seller has the right to suspend the production and the shipment of the Goods until the payment in full is received. On the contrary the Seller has the right to terminate the agreement, without prejudice to any greater damages.

7. Limitation and delayed payment.

For any reason the Buyer shall not be entitled to suspend or to delay the payment of the Goods, or to raise any objection before the payment of the Goods' is supplied in full. In case of delayed payment, the Seller has the right to receive the total amount of the invoice (without any deducted discounts), together with the default interest as a penalty under art.1382 of the Italian Civil Code, without prejudice to any greater damages. In any case the Seller has the right to terminate the agreement for the Goods not yet delivered or to delay the current order process, upon the settlement of any outstanding debit position.

8. Seller's withdrawal.

The Seller has the right to withdraw the agreement at any time and at its unquestionable judgement, or to require any guarantees to execute it, if any change in the solvency or liquidity positions of the Buyer happens (inability, dissolution or conversion, amendments of the Buyer, suspension of payments, insolvency proceedings, protests, etc.), without prejudice to any greater damages.

9. Claims and warranties.

ZDS products and electronic devices are tested before delivery, in order to guarantee their longer lifetime and a full service for customers. The warranty on ZDS products covers manufacturing and materials defects. The warranty period starts on the date of purchase, proved by purchase documents within 24 months. For goods supplied through intermediary or distributor, the warranty period of 24 months shall commence on the effective date of purchase by the final Buyer (proved by purchase documents), up to maximum 48 months beginning from the date of manufacture. Franklin products are covered by Franklin warranty of 24 months from purchase date, proved by purchase documents. In the absence of the purchase document, the warranty is limited to 30 months from the date of product manufacture. In case of warranty request the Buyer shall proceed as described below. It is necessary to fill up the "Warranty application form" which can be found inside the product box, and forward it where the product was purchased, within 8 days since the discovery. As an alternative the "Warranty application form" can be filled online at the address www.zdsgroup.com/en/report. It is mandatory to forward the form together with a copy of the purchase document of the claimed item. The reseller can directly solve the claim or can forward the form, with the referred purchase document, to ZDS (or can fill it online at the address www.zdsgroup.com/en/report). ZDS will instruct its service point to assist the Buyer or to authorize the return shipment of the claimed product. In case of authorized return shipment, it is normally expected that the claimed product is sent back complete and properly packed by the Buyer to the purchasing point. The replacement with a new product or the eventual repair, will take place only after ZDS technical inspection. All transport costs are generally at Buyer's expenses.

The warranty is not valid in the following situations:

- not compliance between the received product and the information given on the "Warranty application form";
- in case the product has been tampered, disassembled or is incomplete of some parts;
- when damages are caused by incorrect transport condition, and the transport has been carried out by the Buyer;
- when damages are caused by not closely following the product use and installation instructions;
- in case of wrong electrical connections or wrong hydraulic installations;
- when damages are caused by incorrect size of the power supply cable's extension;
- if the application is not included in the technical specifications;
- if the product is used with liquids other than those referred, and so incompatible with its construction materials;
- if the product is used with an excessive quantity of sand or other foreign bodies in the liquid;
- when damages are caused by galvanic currents;
- if the product is damaged by inappropriate or non authorized devices, such as frequency converter or power generators;
- when non authorized technical modifications are made on the product;
- if the system's electrical or hydraulic features are not suitable to the product;
- if electrical protection is insufficient;
- to normal material damages overtime;
- in case of incorrect or excessive use of the product;
- in case of wrong technical choice of the product;
- if the installation doesn't follow existing standards;
- in case of natural events or disasters (fires, lightning, etc.).

In case the warranty is granted, ZDS will repair or replace the defective product as soon as possible.

No warranty is valid when products are new, never installed before and still in the original packaging.

The warranty never includes the possibility of compensation. The granting of the warranty does not give the right to ask for direct and indirect damages caused by ZDS products. Any problem related to the warranty does not authorize the client to suspend contractual obligations.

10. Returns.

Goods may not be returned without the prior written agreement of the Seller, and without its authorisation number marked on the shipping document and on the external packaging. In any case the returned Goods must be intact and must be returned with appropriate packaging. The Seller shall inspect the returned Goods to ascertain the existence of the defect and its responsibility and only then will replace the Goods considered defective. Goods returned without any authorisation shall not allow the Buyer to issue a debit note. In any case, costs and risks of Goods' returning are borne in full by the Buyer.

11. Seller's responsibilities' limitation.

The Seller's warranties and responsibilities shall be limited to the ones established by these Terms and Conditions, except as provided by mandatory and not derogated rules beyond the control of the parties. Without prejudice to cases of intent and/or gross negligence, in any case the Seller shall not be liable for any loss or damages of any nature, direct or indirect, including any loss of profits or consequential damages suffered or incurred by the Buyer for whatever reason. In any case, the Seller's overall maximum responsibility of each supply can never exceed the value of the supply (cost of the products).

12. Privacy, ban of disclosure, industrial and intellectual property rights

The Buyer undertakes to consider all the data, documents, materials and information, in whatever form and on whatever medium, received or obtained by the Seller, as strictly private and confidential and of exclusive property, physical and intellectual, of the Seller.

The Buyer is committed to take all necessary measures not to damage the Seller and not to affect the confidentiality and secrecy of the above mentioned data, documents, materials and information.

These information include past, current and future activities regarding the company, the research, the development, the commercial activities, non-commercial activities, the products, the services, the technical knowledge, but also information on clients, projects, plans, organization and business projects. The Buyer shall be prohibited to disclose and communicate in any way all the information received by the Seller.

The confidential information and knowledge shall not be in full or in part copied or reproduced, if not for business requirements closely related to the Goods' purchasing. The technical data, performance details and characteristics stated in all ZDS official documents refer to indicative and non-binding data. ZDS reserves the right to amend the documentation without prior notice. At any time ZDS reserves the right to make changes to the products, design, construction or composition of the products, or the materials or equipment used in the products, whenever it should be considered necessary, without prior notice to the Buyer.

13. Fortuitous event and majeure force.

The Seller shall be liable for any failure or delay in performing their obligations towards the Buyer, where such failure or delay results from any cause that is beyond its reasonable control or in any case due to fortuitous event or majeure force. Such causes include, but are not limited to: missed or delayed delivery of raw materials from suppliers, strikes and other industrial actions, terrorism acts, power failure, transport difficulties or any other event that is beyond the control of the Seller.

14. Law and jurisdiction.

These Terms and Conditions are ruled by 1980's Vienna Convention on the international sale of goods. Italian Civil Code will be applied for matters outside Vienna Convention. Any dispute, controversy, proceedings or claim between the Seller and the Buyer, relating to these Terms and Conditions shall fall within the jurisdiction of the court of Padua. As an alternative the Seller has the right to appeal to the Buyer's court. Only in respect to debt recovery, the Seller has the right to proceed with enforceable European order for payment if the Buyer is registered in any of the European Union State.

