ZDS pump Innovation

P/X.H3H

SINGLE-PHASE SUBMERSIBLE PUMP FOR INSTALLATION IN OPEN CIRCUIT SYSTEMS FOR HEAT PUMPS

4" complete submersible pump, made of ZDS hydraulic part, Franklin single-phase encapsulated PSC water-cooled motor, supply cable in different lenghts and ZDS CBH electrical start panel (which includes start and run capacitor).

HYDRAULIC PART

- QS4P technopolymer or QS4X stainless steel ZDS hydraulic part, with floating ring technology and reinforced impeller.
- **Great reliability with the integrated non-return valve.**
- **Special design and selected materials to ensure optimal resistance against sand and other abrasives.**
- **Improved impellers design, which requires less starting torque to the motor.**

MOTOR

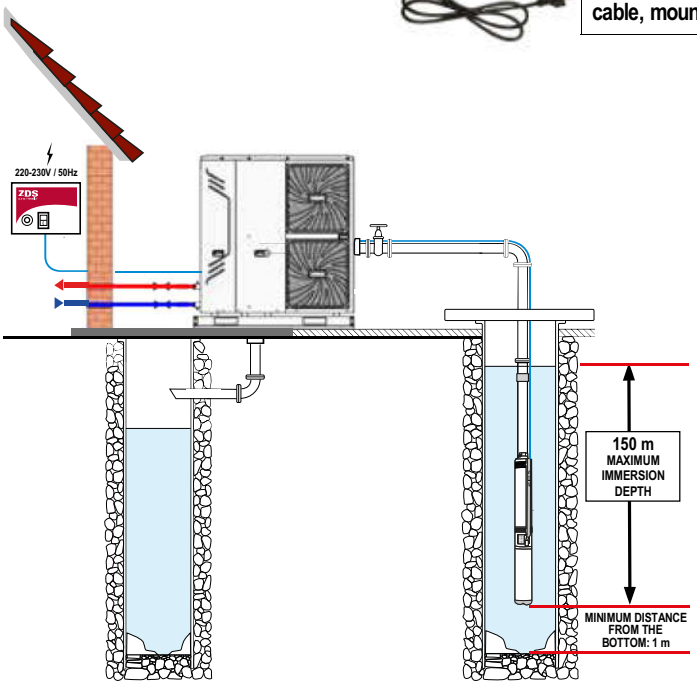
- **2 pole asynchronous single-phase PSC encapsulated water-cooled Franklin motor.**
- **Axial and radial water-lubricated bearings.**
- **Hermetically resin sealed stator.**
- Pre-filled with non-contaminating antifreeze **lubricant liquid.**
- **Removable lead connector.**
- **Supply cable according to drinking water regulations (ACS), available in different lenghts.**

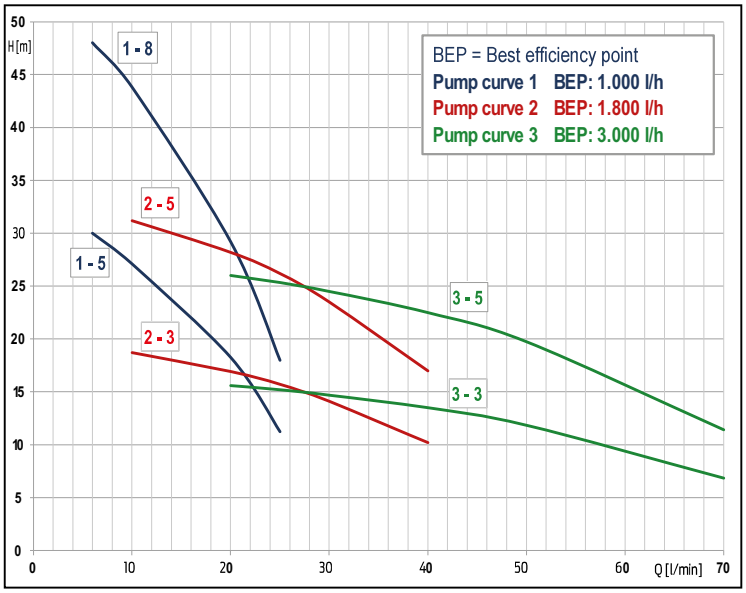
TECHNICAL SPECIFICATIONS

Power range:	0,25 kW
Voltage range:	1x220 - 230V / 50 Hz
Voltage tolerance 50Hz from nominal:	+6 / -10 U_N
Degree of protection:	IP 68
Insulation:	Cl. B
Rated ambient temperature:	max 30 C
Required cooling flow:	min 8 cm/sec
Maximum quantity of suspended sand:	120 g/m
Maximum starts/h:	20, equally distributed
Mounting:	vertical/horizontal
Maximum immersion depth:	150 m
Allowed range of water PH:	6,4 - 8,0
Outlet diameter:	1" 1/4 G-F
Maximum delivery (Q):	4.200 l/h
Maximum head (H):	50 m

CBH - Electric start panel

Motor start and operation system with capacitor, equipped with thermal amperometric protection against current overload, ON/OFF illuminated switch, terminal box, cable glands, power supply cable, mounting accessories.





220-230 V	Model	Power		P.C.*	C.C.**	Hydraulic performance (n~2.850 min^{-1})										Cable 1,5 m		Cable 15 m		Cable 30 m	
					I_N	m³/h	0	0,36	0,6	1,2	1,5	1,8	2,4	3	4,2						
		kW	HP		(A)	l/min	0	6	10	20	25	30	40	50	70		CODE		CODE		CODE
Upper head and lower support in STAINLESS STEEL	X.1-5.H3H	0,25	0,33	366	2	Total head in meters = H= dynamic total pressure	31,4	30	27,8	18,3	11,3						196100105		196100105L		196100105L1
	X.1-8.H3H	0,25	0,33	480	2,3		50,2	48	44,4	29,2	18						196100108		196100108L		196100108L1
	X.2-3.H3H	0,25	0,33	366	2		19,2		18,7	16,9	15,7	14,1	10,2				196100203		196100203L		196100203L1
	X.2-5.H3H	0,25	0,33	480	2,3		32		31,2	28,2	26,2	23,5	17				196100205		196100205L		196100205L1
	X.3-3.H3H	0,25	0,33	400	2,1		16,7			15,6	15,2	14,7	13,5	11,9	6,9		196100303		196100303L		196100303L1
Upper head and lower support in TECHNOPOLYMER	P.1-5.H3H	0,25	0,33	366	2		31,4	30	27,8	18,3	11,3						196101105		196101105L		196101105L1
	P.1-8.H3H	0,25	0,33	480	2,3		50,2	48	44,4	29,2	18						196101108		196101108L		196101108L1
	P.2-3.H3H	0,25	0,33	366	2		19,2		18,7	16,9	15,7	14,1	10,2				196101203		196101203L		196101203L1
	P.2-5.H3H	0,25	0,33	480	2,3		32		31,2	28,2	26,2	23,5	17				196101205		196101205L		196101205L1
	P.3-3.H3H	0,25	0,33	400	2,1		16,7			15,6	15,2	14,7	13,5	11,9	6,9		196101303		196101303L		196101303L1

***Power consumption **Current consumption**

P/X.HTH

THREE-PHASE SUBMERSIBLE PUMP FOR INSTALLATION IN OPEN CIRCUIT SYSTEMS FOR HEAT PUMPS

ZDS pump innovation

4" complete submersible pump, made of ZDS hydraulic part, Franklin three-phase encapsulated water-cooled motor and supply cable in different lenghts. It requires a start, operation and protection system.

HYDRAULIC PART

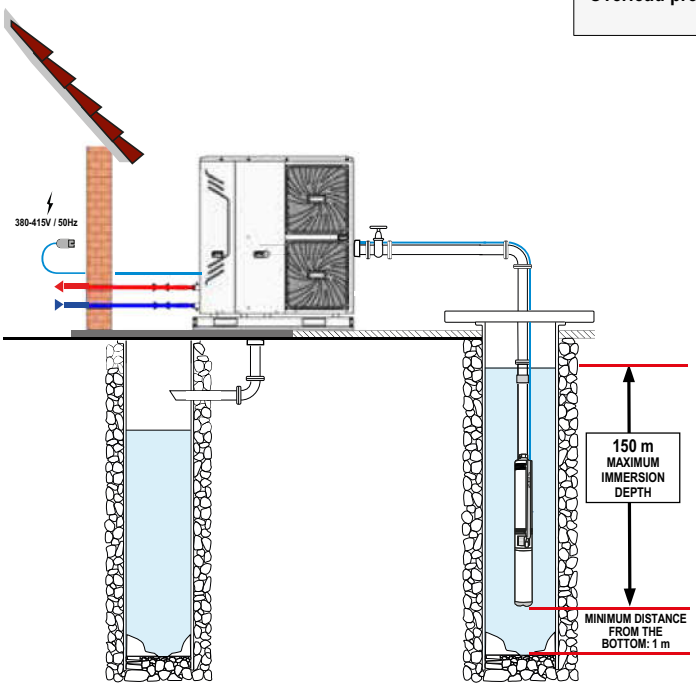
- QS4P technopolymer or QS4X stainless steel ZDS hydraulic part, with floating ring technology and reinforced impeller.
- **Great reliability with the integrated non-return valve.**
- **Special design and selected materials to ensure optimal resistance against sand and other abrasives.**
- **Improved impellers design, which requires less starting torque to the motor.**

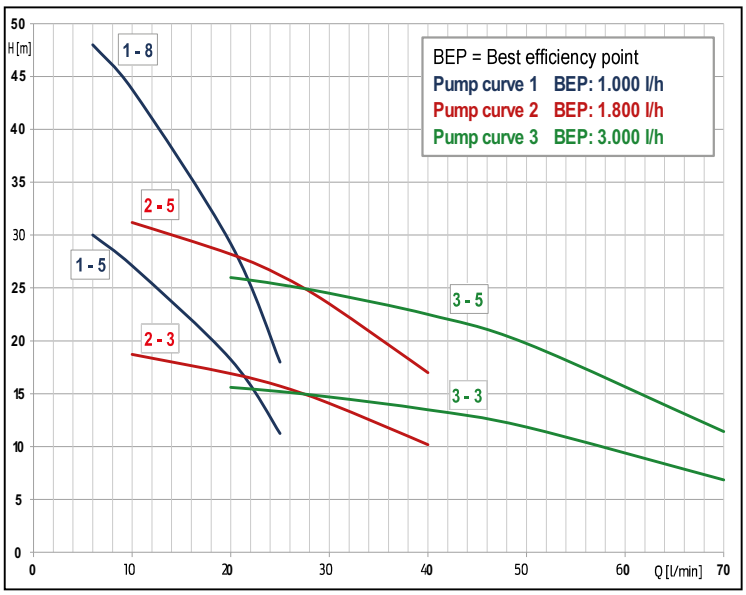
MOTOR

- **2 pole asynchronous three-phase encapsulated water-cooled Franklin motor.**
- **Axial and radial water-lubricated bearings.**
- **Hermetically resin sealed stator.**
- Pre-filled with non-contaminating **antifreeze lubricant liquid.**
- **Removable lead connector.**
- **Supply cable according to drinking water regulations (ACS), available in different lenghts.**

TECHNICAL SPECIFICATIONS

Power range:	**0,25 kW**
Voltage range:	**3x380 - 415V / 50 Hz**
Voltage tolerance 50Hz from nominal:	**+6 / -10 U_N**
Degree of protection:	**IP 68**
Insulation:	**Cl. B**
Rated ambient temperature:	**max 30 C**
Required cooling flow:	**min 8 cm/sec**
Maximum quantity of suspended sand:	**120 g/m**
Maximum starts/h:	**20, equally distributed**
Mounting:	**vertical/horizontal**
Maximum immersion depth:	**150 m**
Allowed range of water PH:	**6,4 - 8,0**
Outlet diameter:	**1" 1/4 G-F**
Maximum delivery (Q):	**4.200 l/h**
Maximum head (H):	**50 m**
Overload protection requirements according to:	EN 60947-4-1 trip time < 10 sec. at $5xI_N$





380-415 V	Model	Power		P.C.*	C.C.**	Hydraulic performance (n~2.850 min^{-1})										Cable 1,5 m		Cable 15 m		Cable 30 m	
		kW	HP		I_N (A)	m³/h / l/min	0 / 0	0,36 / 6	0,6 / 10	1,2 / 20	1,5 / 25	1,8 / 30	2,4 / 40	3 / 50	4,2 / 70		CODE		CODE		CODE
Upper head and lower support in STAINLESS STEEL	X.1-5.HTH	0,25	0,33	240	0,55	Total head in meters = H= dynamic total pressure	31,4	30	27,8	18,3	11,3						184100105		184100105L		184100105L1
	X.1-8.HTH	0,25	0,33	360	0,70		50,2	48	44,4	29,2	18						184100108		184100108L		184100108L1
	X.2-3.HTH	0,25	0,33	240	0,55		19,2		18,7	16,9	15,7	14,1	10,2				184100203		184100203L		184100203L1
	X.2-5.HTH	0,25	0,33	360	0,70		32		31,2	28,2	26,2	23,5	17				184100205		184100205L		184100205L1
	X.3-3.HTH	0,25	0,33	270	0,59		16,7			15,6	15,2	14,7	13,5	11,9	6,9		184100303		184100303L		184100303L1
	X.3-5.HTH	0,25	0,33	425	0,77		27,8			26	25,3	24,5	22,5	19,8	11,4		184100305		184100305L		184100305L1
Upper head and lower support in TECHNOPOLYMER	P.1-5.HTH	0,25	0,33	240	0,55		31,4	30	27,8	18,3	11,3						184101105		184101105L		184101105L1
	P.1-8.HTH	0,25	0,33	360	0,70		50,2	48	44,4	29,2	18						184101108		184101108L		184101108L1
	P.2-3.HTH	0,25	0,33	240	0,55		19,2		18,7	16,9	15,7	14,1	10,2				184101203		184101203L		184101203L1
	P.2-5.HTH	0,25	0,33	360	0,70		32		31,2	28,2	26,2	23,5	17				184101205		184101205L		184101205L1
	P.3-3.HTH	0,25	0,33	270	0,59		16,7			15,6	15,2	14,7	13,5	11,9	6,9		184101303		184101303L		184101303L1
	P.3-5.HTH	0,25	0,33	425	0,77		27,8			26	25,3	24,5	22,5	19,8	11,4		184101305		184101305L		184101305L1

***Power consumption **Current consumption**