

PVXC "VORTEX"

Fixed installation pumps

for sewage water



PERFORMANCE RANGE

- Flow rate up to **1200 l/min** (72 m³/h)
- Head up to **16 m**

APPLICATION LIMITS

- **10 m** maximum immersion depth with a sufficiently long power cable
- Maximum liquid temperature **+40 °C**
- Solids passage:
 - up to **Ø 50 mm** for PVXC 15-20-30/50
 - up to **Ø 70 mm** for PVXC 15-20-30/70
- Minimum immersion depth for continuous service:
 - **390 mm** for PVXC 15-20-30/50
 - **440 mm** for PVXC 15-20-30/70

CONSTRUCTION AND SAFETY STANDARDS

- Standard features: base pedestal, threaded delivery counterflange, guide tube supports
- **10 m** long power cable
- Float switch for single-phase versions

EN 60034-1
IEC 60034-1
CEI 2-3



CERTIFICATIONS



AI30



INSTALLATION AND USE

PVXC series pumps, made from heavy gauge cast iron offering exceptional sturdiness, abrasion resistance and durability, come equipped with a VORTEX impeller and are therefore suitable for draining **waste water, water mixed with mud, liquids containing air or gas**, as well as sludge. They are suitable for use in fixed sewer, tunnel, well and underground car park installations.

PATENTS - TRADE MARKS - MODELS

- Registered Community Design n° 342159-0017

OPTIONALS AVAILABLE ON REQUEST

- QES control box for three-phase pumps
- Single-phase pumps without float switch
- Other voltages or 60 Hz frequency

GUARANTEE

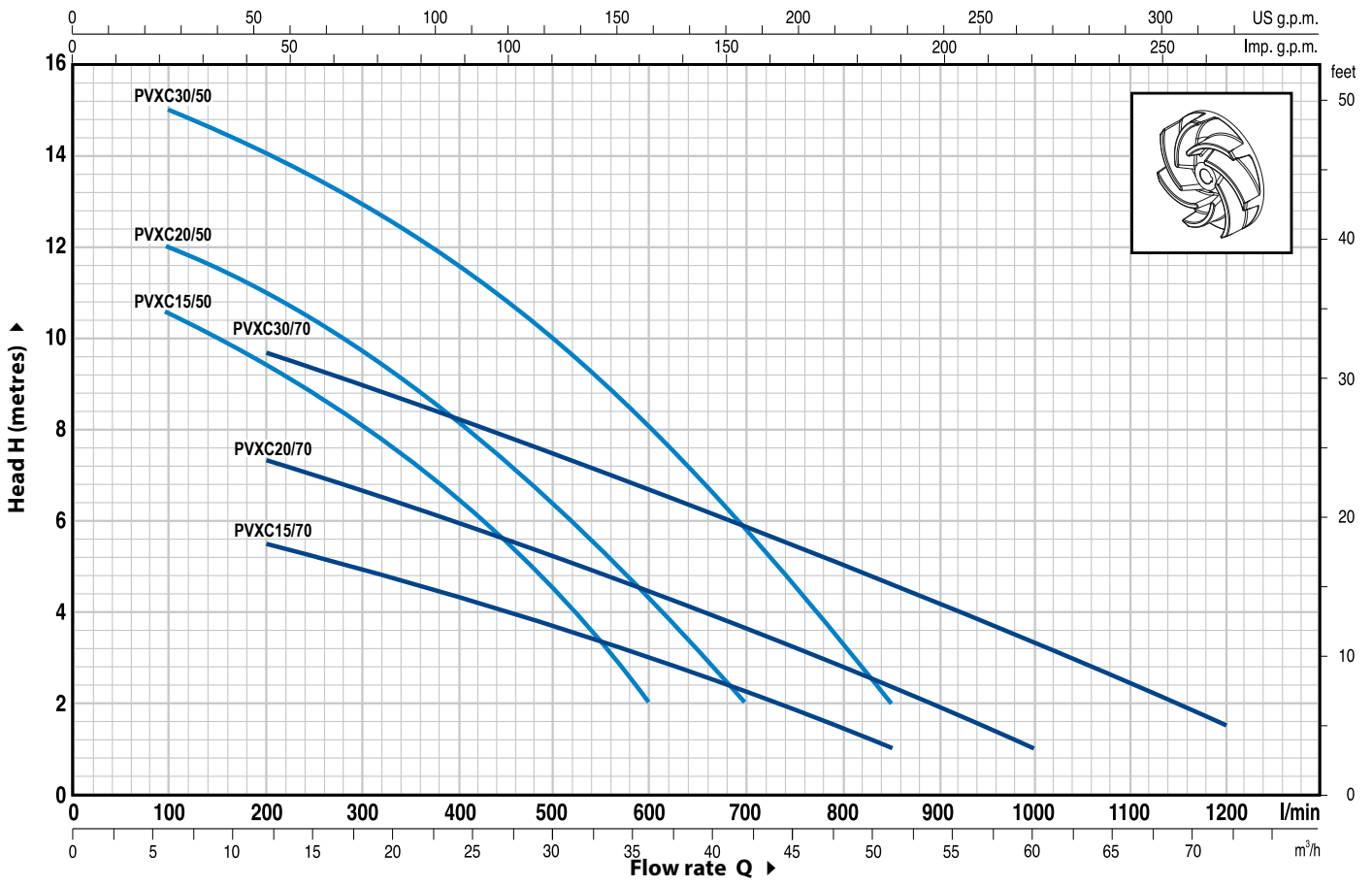
2 years subject to terms and conditions

For the following versions the built-in thermal overload protector must be connected to the control box in order for the guarantee to be considered valid:

- | | |
|----------------------|---------------------------------|
| single-phase | three-phase |
| – PVXCm 30/50 - HP 3 | – PVXC 15-20-30/50 - HP 1.5-2-3 |
| – PVXCm 30/70 - HP 3 | – PVXC 15-20-30/70 - HP 1.5-2-3 |

CHARACTERISTIC CURVES AND PERFORMANCE DATA

50 Hz n= 2900 1/min



MODEL		POWER		Q	Flow rate																
Single-phase	Three-phase	kW	HP		m ³ /h	0	6	12	18	21	24	27	30	36	42	48	51	54	60	66	72
PVXCm 15/50	PVXC 15/50	1.1	1.5	H metres	0	100	200	300	350	400	450	500	600	700	800	850	900	1000	1100	1200	
PVXCm 20/50	PVXC 20/50	1.5	2		11.5	10.5	9.5	8.2	7.2	6.5	5.6	4.5	2								
PVXCm 30/50	PVXC 30/50	2.2	3		13	12	11	9.5	9	8	7.2	6.5	4.5	2							
PVXCm 15/70	PVXC 15/70	1.1	1.5		16	15	14	13	12.3	11.5	10.8	10	8	5.9	3.3	2					
PVXCm 20/70	PVXC 20/70	1.5	2		6.5	-	5.5	5	4.7	4.4	4	3.7	3	2.2	1.5	1					
PVXCm 30/70	PVXC 30/70	2.2	3		8.5	-	7.4	6.7	6.3	6	5.6	5.2	4.5	3.6	2.8	2.4	2	1			
					11	-	9.7	9	8.6	8.2	7.8	7.5	6.7	5.8	5	4.6	4.2	3.3	2.5	1.5	

Q = Flow rate H = Total manometric head

Tolerance of characteristic curves in compliance with EN ISO 9906 App. A.

PVXC "VORTEX"

POS. CONSTRUCTION CHARACTERISTICS

1	PUMP BODY	Cast iron, complete with flanged ports	
2	SUCTION PLATE	Cast iron	
3	BASE PEDESTAL	Cast iron	
4	CONTERFLANGE	Steel, complete with threaded ports in compliance with ISO 228/1	
5	GUIDE TUBE SUPPORTS	Cast iron	
6	IMPELLER	Cast iron VORTEX type	
7	MOTOR CASING	Cast iron	
8	MOTOR CASING PLATE	Cast iron	
9	MOTOR SHAFT	Stainless steel AISI 431	
10	TWO MECHANICAL SEALS SEPARATED BY AN OIL CHAMBER		
	Seal	Shaft	Materials
	Model	Diameter	Stationary ring Rotational ring Elastomer
	STA-20	Ø 20 mm	Ceramic Graphite NBR
	STA-19	Ø 19 mm	Silicon carbide Silicon carbide NBR
11	BEARINGS	6304 ZZ - C3 / 6304 ZZ - C3	

POS. CONSTRUCTION CHARACTERISTICS

12 CAPACITOR

<i>Pump</i>	<i>Capacitance</i>
<i>Single-phase</i>	<i>(230 V or 240 V)</i>
PVXCm 15/50-70	31.5 µF 450 VL
PVXCm 20/50-70	50 µF 450 VL
PVXCm 30/50-70	60 µF 450 VL

13 ELECTRIC MOTOR

PVXCm 15-20: single-phase 230 V - 50 Hz with thermal overload protector built-in to the winding.

⇒ **PVXCm 30:** single-phase 230 V - 50 Hz with motor protector built-in to the winding to be connected to the control box

⇒ **PVXC:** three-phase 400 V - 50 Hz with motor protector built-in to the winding to be connected to the control box

– Insulation: F class

– Protection: IP X8

14 POWER CABLE

10 m long "H07 RN-F" cable

15 CONTROL BOX for PVXCm 15-20

(only for single-phase versions)

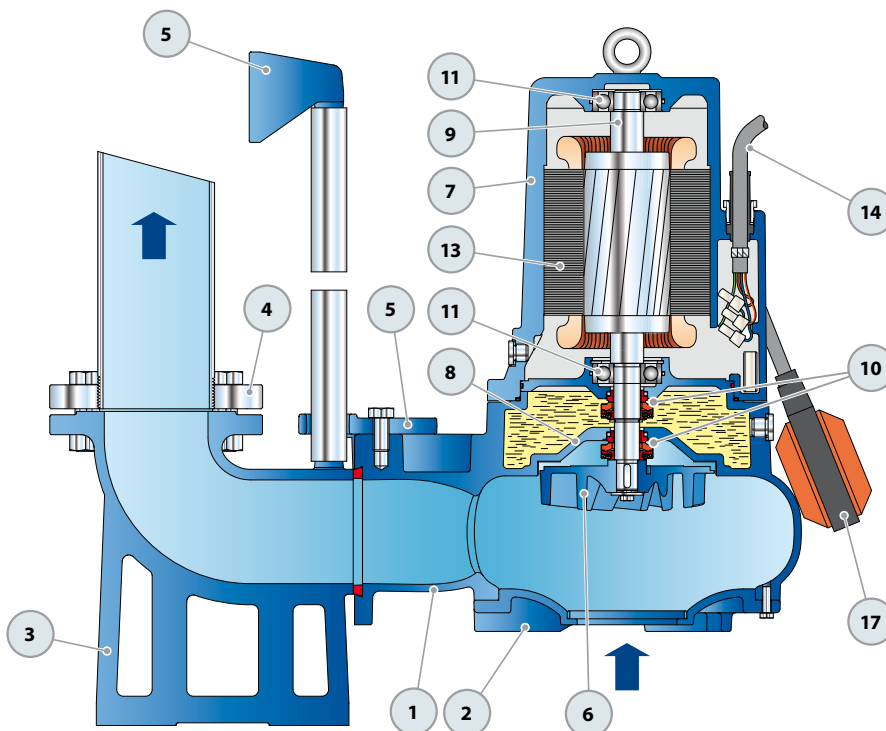
Complete with capacitor and manual reset motor protector

16 CONTROL BOX for PVXCm 30

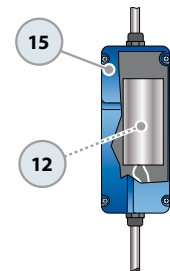
(only for single-phase versions)

QES 300 MONO series

17 FLOAT SWITCH

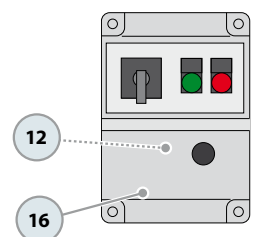


Standard features



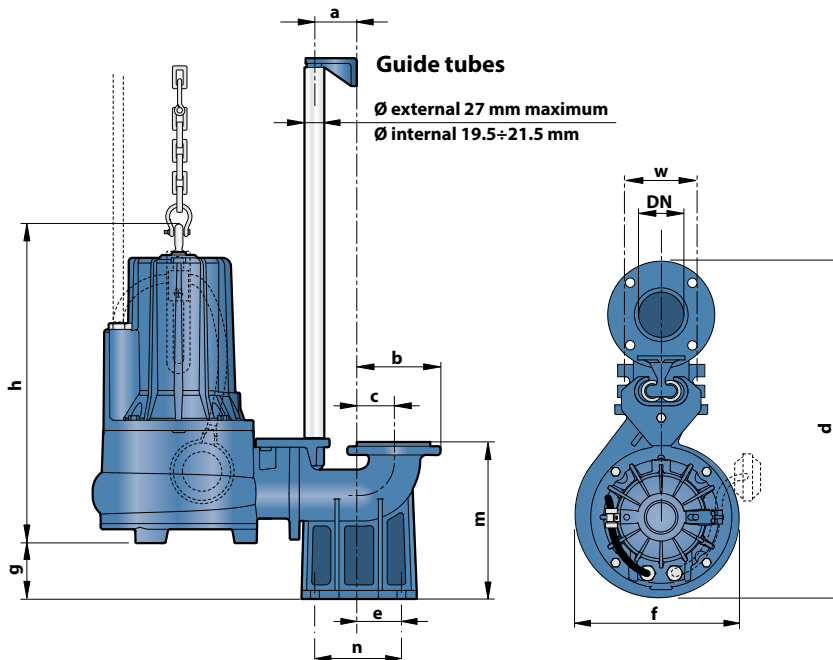
Control box for PVXCm 15-20 (HP 1.5-2.0) (only for single-phase versions)

Standard features

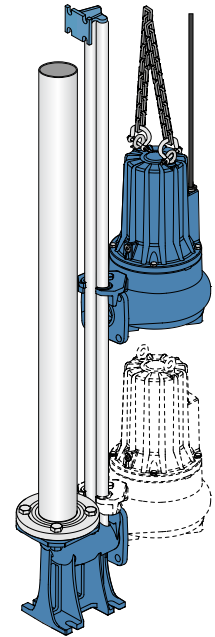


Control box for PVXCm 30 (HP 3.0) (only for single-phase versions)

DIMENSIONS AND WEIGHT



Typical installation



MODEL		PORT DN	solids passage	DIMENSIONS mm										kg*		
Single-phase	Three-phase			a	b	c	d	e	f	g	h	m	n	w	1~	3~
PVXCm 15/50	PVXC 15/50	2½"	Ø 50 mm	60	116	51	490	62	248	52	442	198	120	72	47.3	46.0
PVXCm 20/50	PVXC 20/50										457 / 442				48.4	47.1
PVXCm 30/50	PVXC 30/50										54.0				52.7	
PVXCm 15/70	PVXC 15/70	3"	Ø 70 mm		150	70	570	85	268	92	458	255	130	112	55.1	53.8
PVXCm 20/70	PVXC 20/70										472 / 458				59.1	55.9
PVXCm 30/70	PVXC 30/70										59.1				55.9	

(*weight includes counterflanges)

ABSORPTION

MODEL	VOLTAGE (single-phase)	
Single-phase	230 V	240 V
PVXCm 15/50	8.8 A	8.8 A
PVXCm 20/50	10.2 A	10.2 A
PVXCm 30/50	15.6 A	15.6 A
PVXCm 15/70	8.7 A	8.7 A
PVXCm 20/70	10.0 A	10.0 A
PVXCm 30/70	15.0 A	15.0 A

MODEL	VOLTAGE (three-phase)					
Three-phase	230 V	400 V	690 V	240 V	415 V	720 V
PVXC 15/50	5.9 A	3.4 A	2.0 A	5.9 A	3.4 A	2.0 A
PVXC 20/50	7.3 A	4.2 A	2.4 A	7.3 A	4.2 A	2.4 A
PVXC 30/50	9.9 A	5.7 A	3.3 A	9.9 A	5.7 A	3.3 A
PVXC 15/70	5.7 A	3.3 A	1.9 A	5.7 A	3.3 A	1.9 A
PVXC 20/70	7.3 A	4.2 A	2.4 A	7.3 A	4.2 A	2.4 A
PVXC 30/70	9.5 A	5.5 A	3.2 A	9.5 A	5.5 A	3.2 A

PALLETIZATION

MODEL		GROUPAGE / CONTAINER			
Single-phase	Three-phase	n° pumps	H (mm)	kg	
PVXCm 15/50	PVXC 15/50	24	1751	1153	1122
PVXCm 20/50	PVXC 20/50	24	1751	1179	1148
PVXCm 30/50	PVXC 30/50	24	1751	1273	1197
PVXCm 15/70	PVXC 15/70	12	1304	665	650
PVXCm 20/70	PVXC 20/70	12	1304	679	663
PVXCm 30/70	PVXC 30/70	12	1304	727	688

