

# PVXC "VORTEX"

## Fixed installation pumps

for sewage water



### PERFORMANCE RANGE

- Flow rate up to **1200 l/min** (72 m<sup>3</sup>/h)
- Head up to **16 m**

### APPLICATION LIMITS

- **10 m** maximum immersion depth
- 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



AN30



YkPTECT-003

### 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
- Three-phase dual voltage pumps:
  - 230/400 V or
  - 400/690 V
- 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

– PVXCm 30/50 - HP 3

– PVXCm 30/70 - HP 3

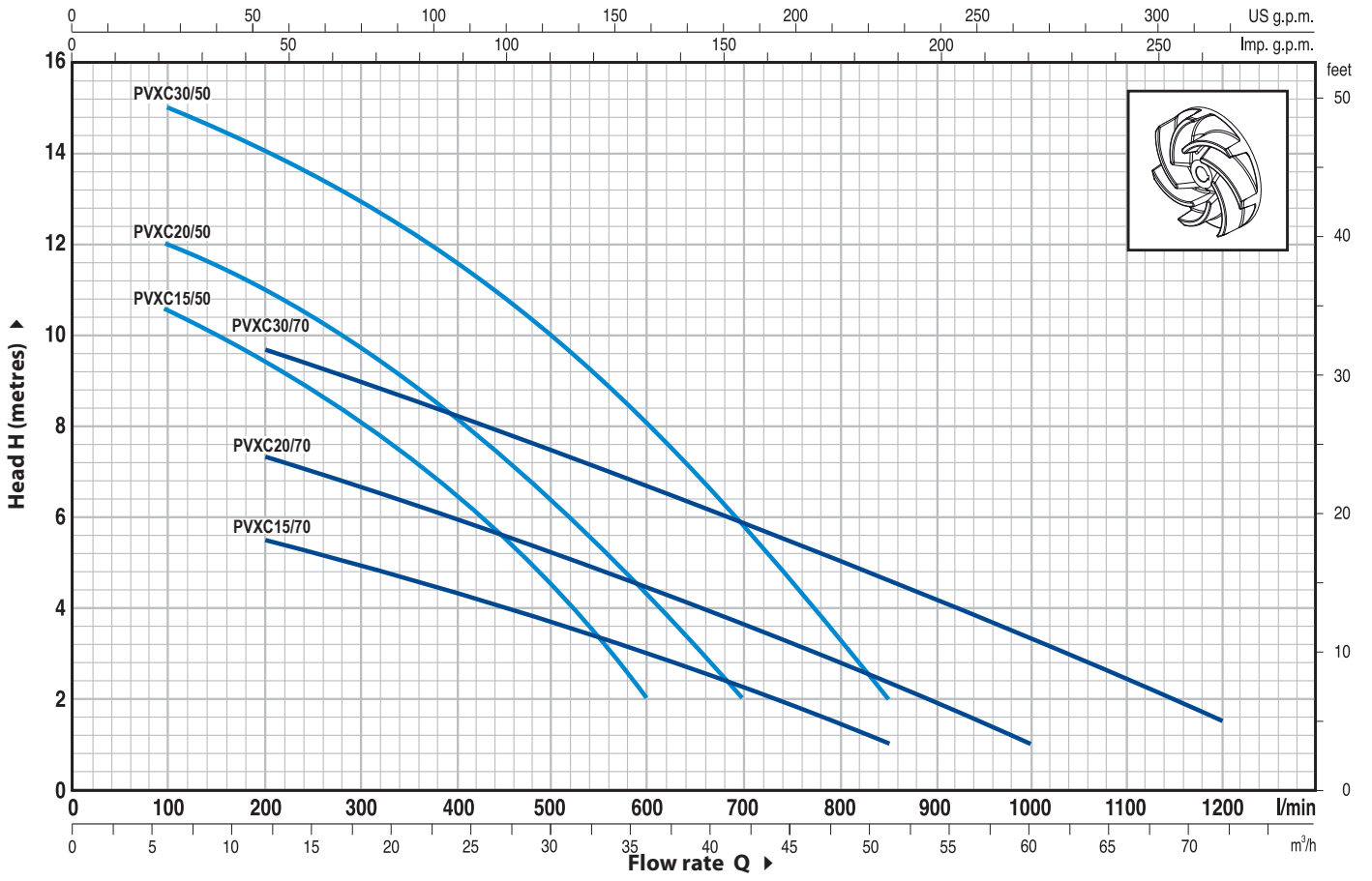
three-phase

– PVXC 15-20-30/50 - HP 1.5-2-3

– 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		m³/h	0	6	12	18	21	24	27	30	36	42	48	51	54	60	66	72		
				l/min	0	100	200	300	350	400	450	500	600	700	800	850	900	1000	1100	1200			
PVXCm 15/50	PVXC 15/50	1.1	1.5	H metres	11.5	10.5	9.5	8.2	7.2	6.5	5.6	4.5	2										
PVXCm 20/50	PVXC 20/50	1.5	2		13	12	11	9.5	9	8	7.2	6.5	4.5	2									
PVXCm 30/50	PVXC 30/50	2.2	3		16	15	14	13	12.3	11.5	10.8	10	8	5.9	3.3	2							
PVXCm 15/70	PVXC 15/70	1.1	1.5		6.5	-	5.5	5	4.7	4.4	4	3.7	3	2.2	1.5	1							
PVXCm 20/70	PVXC 20/70	1.5	2		8.5	-	7.4	6.7	6.3	6	5.6	5.2	4.5	3.6	2.8	2.4	2	1					
PVXCm 30/70	PVXC 30/70	2.2	3		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			

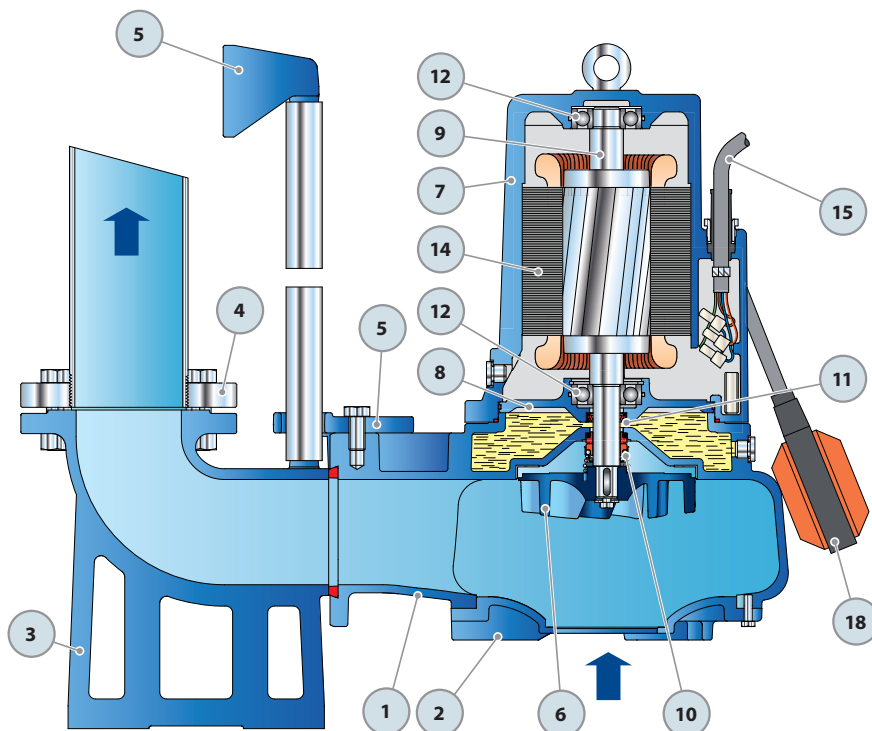
Q = Flow rate H = Total manometric head

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

# PVXC "VORTEX"

## POS. CONSTRUCTION CHARACTERISTICS

1	<b>PUMP BODY</b>	Cast iron, complete with flanged ports	
2	<b>SUCTION PLATE</b>	Cast iron	
3	<b>BASE PEDESTAL</b>	Cast iron	
4	<b>CONTERFLANGE</b>	Steel, complete with threaded ports in compliance with ISO 228/1	
5	<b>GUIDE TUBE SUPPORTS</b>	Cast iron	
6	<b>IMPELLER</b>	Cast iron VORTEX type	
7	<b>MOTOR CASING</b>	Cast iron	
8	<b>MOTOR CASING PLATE</b>	Cast iron	
9	<b>MOTOR SHAFT</b>	Stainless steel AISI 431	
10	<b>SHAFT WITH DOUBLE SEAL AND OIL CHAMBER</b>		
	<b>Seal</b>	<b>Shaft</b>	<b>Materials</b>
	<i>Model</i>	<i>Diameter</i>	<i>Stationary ring</i> <i>Rotational ring</i> <i>Elastomer</i>
	FN-20 DV	Ø 20 mm	Widia   Silicon carbide   NBR
11	<b>LIP SEAL</b>	Ø 20 x Ø 30 x H 7 mm	
12	<b>BEARINGS</b>	6304 ZZ - C3 / 6304 ZZ - C3	



## POS. CONSTRUCTION CHARACTERISTICS

### 13 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

### 14 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 68

### 15 POWER CABLE

10 m long "H07 RN-F" cable

### 16 CONTROL BOX for PVXCm 15-20

(only for single-phase versions)

Complete with capacitor and manual reset motor protector

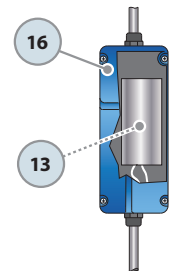
### 17 CONTROL BOX for PVXCm 30

(only for single-phase versions)

QES 300 MONO series

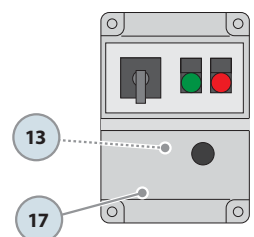
### 18 FLOAT SWITCH

#### Standard features



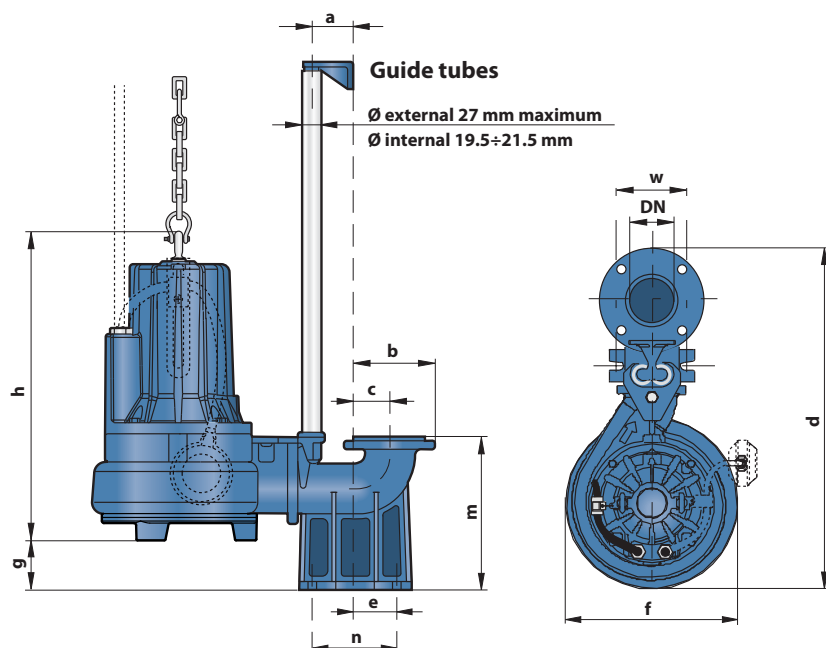
Control box for PVXCm 15-20 (HP 1.5-2.0)  
(only for single-phase versions)

#### Standard features

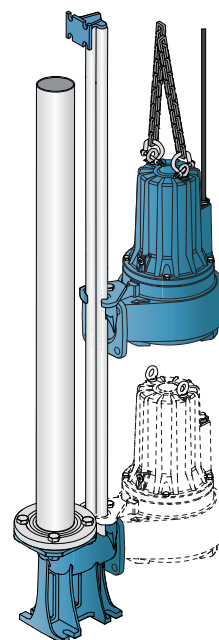


Control box for PVXCm 30 (HP 3.0)  
(only for single-phase versions)

## 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	250	52	330	198	120	72	46.9	44.7	
PVXCm 20/50	PVXC 20/50										445/430				48.0	46.9	
PVXCm 30/50	PVXC 30/50										49.7				48.9		
PVXCm 15/70	PVXC 15/70	3"	Ø 70 mm		60	150	70	570	85	270	87	446	255	130	112	53.6	50.7
PVXCm 20/70	PVXC 20/70											460/446				56.0	55.5
PVXCm 30/70	PVXC 30/70											60.0				57.6	

(\*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 (single-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	1715	1143	1090
PVXCm 20/50	PVXC 20/50	24	1715	1169	1142
PVXCm 30/50	PVXC 30/50	24	1715	1210	1191
PVXCm 15/70	PVXC 15/70	12	1280	660	625
PVXCm 20/70	PVXC 20/70	12	1280	689	683
PVXCm 30/70	PVXC 30/70	12	1280	737	708

