

## Submersible pumps

-  Filthy water
-  Domestic use
-  Civil use
-  Industrial use



### 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 (with a sufficiently long power cable)
- Maximum liquid temperature **+40 °C**
- Passage of solids:
  - up to **Ø 50 mm** for VXC /50-F
  - up to **Ø 70 mm** for VXC /70-F
- Minimum immersion depth for continuous service:
  - **390 mm** for VXC /50-F
  - **440 mm** for VXC /70-F

### CONSTRUCTION AND SAFETY STANDARDS

- **10 m** long power cable
- External float switch and control box for single-phase versions

EN 60335-1  
IEC 60335-1  
CEI 61-150

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



### CERTIFICATIONS

Company with management system certified DNV  
ISO 9001: QUALITY  
ISO 14001: ENVIRONMENT AND SAFETY



### INSTALLATION AND USE

The **VXC-F** series of pumps, manufactured from heavy gauge robust cast iron, resistant to abrasion and long lasting, are fitted with a VORTEX impeller and therefore suitable for drainage of **refluent water, water mixed with mud, liquids containing air or gas, and putrid muds**. They are recommended for fixed installations, when placed in suitable wells, in sewers, tunnels, wells, underground car parks, etc.

### OPTIONS AVAILABLE ON REQUEST

- Connection support KIT for PVXC
- **QES** control box for three-phase pumps
- Single-phase pumps without float switch
- Other voltages or 60 Hz frequency

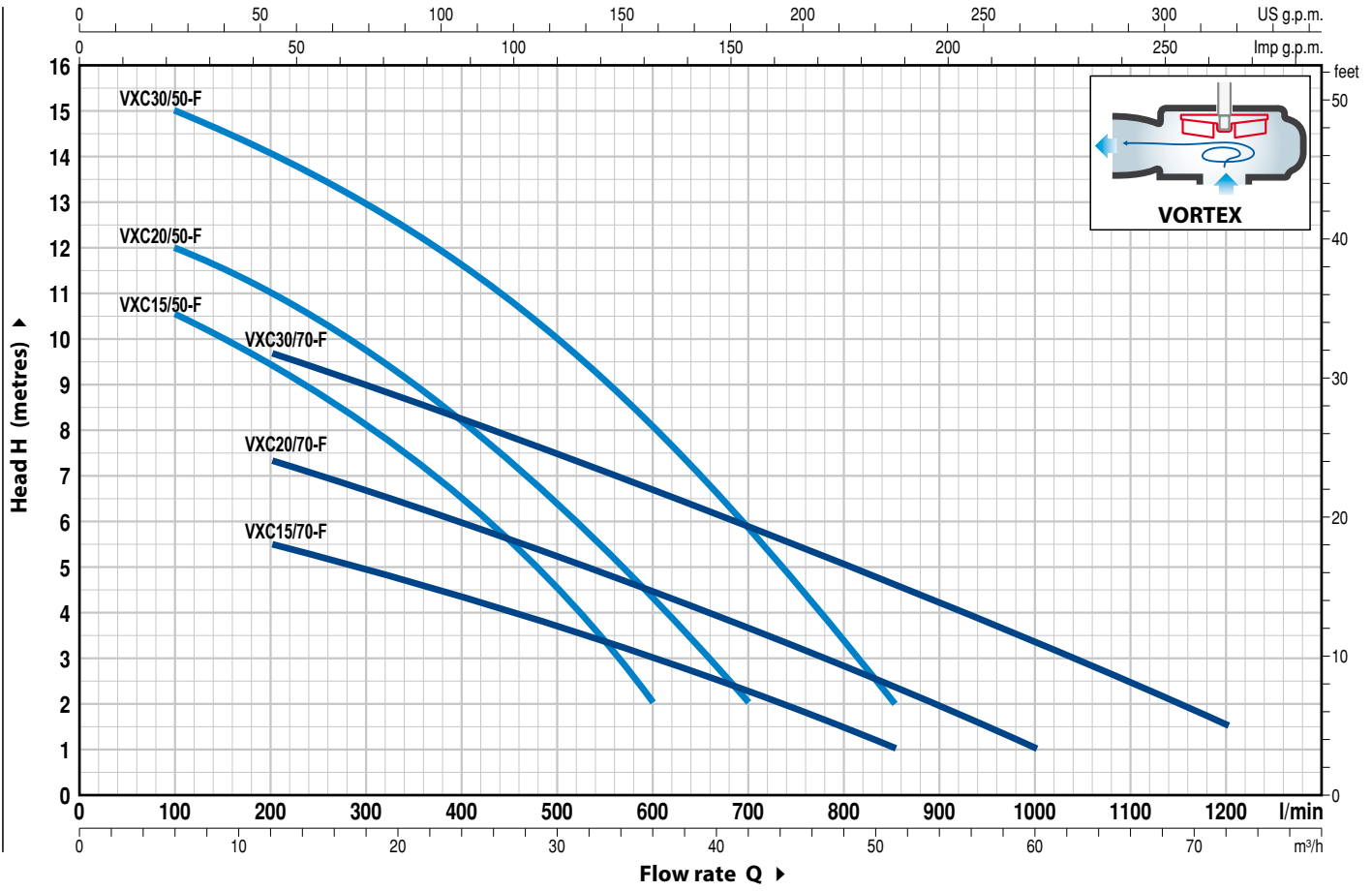
### GUARANTEE

➔ **For the following versions the incorporated thermal overload protector must be connected to the control box for the guarantee to be considered valid:**

single-phase	three-phase
– VXCm 30/50-F	– VXC 15-20-30/50-F
– VXCm 30/70-F	– VXC 15-20-30/70-F

## CHARACTERISTIC CURVES AND PERFORMANCE DATA

50 Hz n= 2900 rpm



MODEL		POWER (P <sub>2</sub> )		Q	Flow rate																	
Single-phase	Three-phase	kW	HP		m <sup>3</sup> /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		
VXCm 15/50-F	VXC 15/50-F	1.1	1.5	H metres	11.5	10.5	9.5	8.2	7.2	6.5	5.6	4.5	2									
VXCm 20/50-F	VXC 20/50-F	1.5	2		13	12	11	9.5	9	8	7.2	6.5	4.5	2								
VXCm 30/50-F	VXC 30/50-F	2.2	3		16	15	14	13	12.3	11.5	10.8	10	8	5.9	3.3	2						
VXCm 15/70-F	VXC 15/70-F	1.1	1.5		6.5	-	5.5	5	4.7	4.4	4	3.7	3	2.2	1.5	1						
VXCm 20/70-F	VXC 20/70-F	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				
VXCm 30/70-F	VXC 30/70-F	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 Grade 3B.

## ABSORPTION

MODEL	VOLTAGE	
Single-phase	230 V	240 V
VXCm 15/50-F	8.8 A	8.7 A
VXCm 20/50-F	10.2 A	10.1 A
VXCm 30/50-F	15.6 A	15.5 A
VXCm 15/70-F	8.7 A	8.6 A
VXCm 20/70-F	10.0 A	9.9 A
VXCm 30/70-F	15.0 A	14.9 A

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

## POS. COMPONENT CONSTRUCTION CHARACTERISTICS

1	<b>PUMP BODY</b>	Cast iron complete with flanged ports
2	<b>SUCTION PLATE</b>	Cast iron
3	<b>IMPELLER</b>	VORTEX type in cast iron with an Epoxy Electro Coating treatment
4	<b>MOTOR CASING</b>	Cast iron
5	<b>MOTOR CASING PLATE</b>	Cast iron
6	<b>MOTOR SHAFT</b>	Stainless steel AISI 431

### 7 TWO MECHANICAL SEALS SEPARATED BY AN OIL CHAMBER

Seal Model	Shaft Diameter	Position	Materials		
			Stationary ring	Rotational ring	Elastomer
STA-20	Ø 20 mm	Motor side	Ceramic	Graphite	NBR
STA-19	Ø 19 mm	Pump side	Silicon carbide	Silicon carbide	NBR

### 8 BEARINGS 6304 ZZ - C3 / 6304 ZZ - C3

### 9 CAPACITOR

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

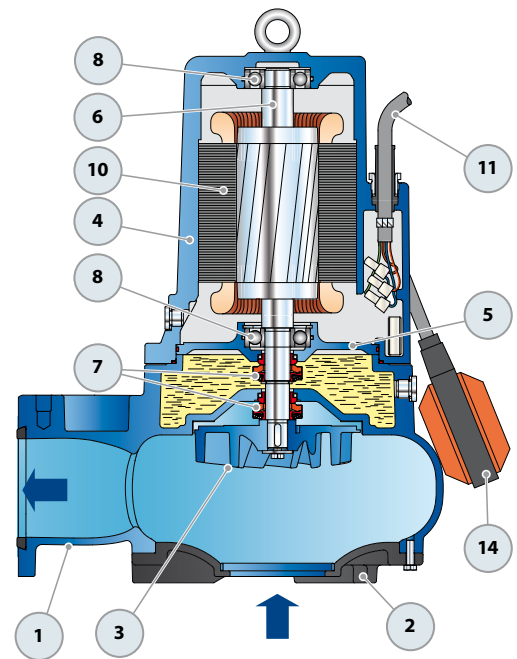
### 10 ELECTRIC MOTOR

**VXCm 15-20-F:** single-phase 230 V - 50 Hz with thermal overload protector incorporated into the winding

⇒ **VXCm 30-F:** single-phase 230 V - 50 Hz with thermal overload protector incorporated into the winding to be connected to the control box

⇒ **VXC-F:** three-phase 400 V - 50 Hz with thermal overload protector incorporated into the winding to be connected to the control box (supplied on demand)

- Insulation: class F
- Protection: IP X8



### 11 POWER CABLE

10 metres long "H07 RN-F" cable

### 12 CONTROL BOX per VXCm 15-20-F

(only for single-phase versions)

Complete with capacitor and manual reset motor protector

### 13 CONTROL BOX per VXCm 30-F

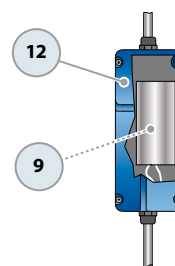
(only for single-phase versions)

QES 300 MONO series

### 14 FLOAT SWITCH

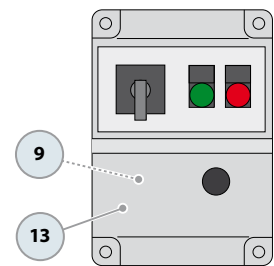
(only for single-phase versions)

#### Standard features



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

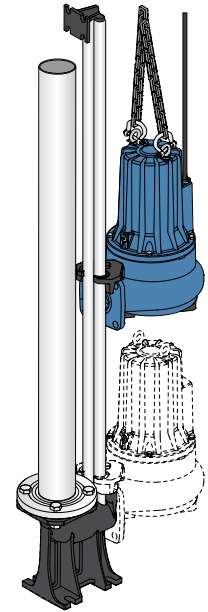
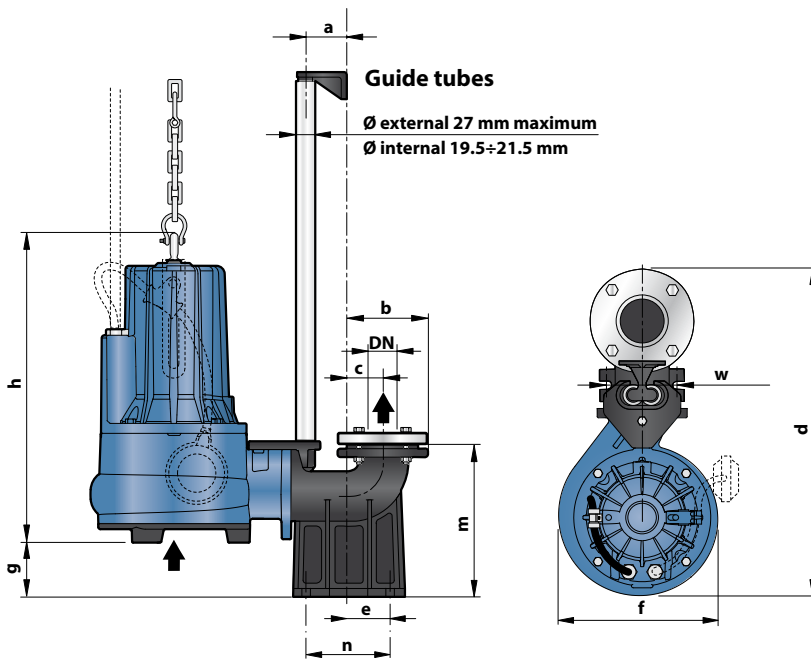
#### Standard features



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

## DIMENSIONS AND WEIGHT (VXC-F pumps with connection support KIT)

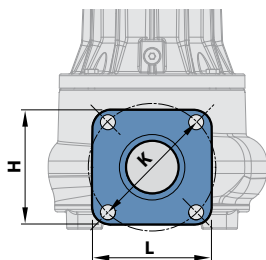
### Standard installation



MODEL		CONTERFLANGE DN	Passage of solids	DIMENSIONS mm											
Single-phase	Three-phase			a	b	c	d	e	f	g	h	m	n	w	
PVXCm 15/50	PVXC 15/50	2½"	Ø 50 mm	60	116	51	490	62	248	52	442	198	120	72	
PVXCm 20/50	PVXC 20/50										457 / 442				
PVXCm 30/50	PVXC 30/50														
PVXCm 15/70	PVXC 15/70	3"	Ø 70 mm		60	150	70	570	85	268	92	458	255	130	112
PVXCm 20/70	PVXC 20/70											472 / 458			
PVXCm 30/70	PVXC 30/70														

MODEL		Weight of VXC-F pumps kg		Weight of connection support KIT kg	Weight of PVXC kg	
Single-phase	Three-phase	1~	3~		1~	3~
PVXCm 15/50	PVXC 15/50	36.9	35.6	9.8	46.7	45.4
PVXCm 20/50	PVXC 20/50	38.0	36.7		47.8	46.5
PVXCm 30/50	PVXC 30/50	41.9	38.7		51.7	48.5
PVXCm 15/70	PVXC 15/70	41.4	40.1	15.2	56.6	55.3
PVXCm 20/70	PVXC 20/70	42.5	41.2		57.7	56.4
PVXCm 30/70	PVXC 30/70	46.4	43.2		61.6	58.4

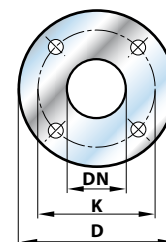
### PORT FLANGE



MODEL	L mm	H mm	K mm	HOLES	
				N.	Ø (mm)
VXC /50-F	140	130	145	4	17
VXC /70-F	140	140			

### COUNTERFLANGE

(INCLUDED IN THE CONNECTION SUPPORT KIT)



MODEL	DN CONTERFLANGE	D mm	K mm	HOLES	
				N.	Ø (mm)
PVXC /50	2½"	165	125	4	18
PVXC /70	3"	190	150		