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 counter-flange, guide tube supports (the guide tubes are not included)
- **10 m** long power cable
- Float switch for single-phase versions

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

CE

CERTIFICATIONS

COMPANY WITH MANAGEMENT SYSTEM CERTIFIED BY DNV
ISO 9001: QUALITY
ISO 14001: ENVIRONMENT AND SAFETY

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

GUARANTEE

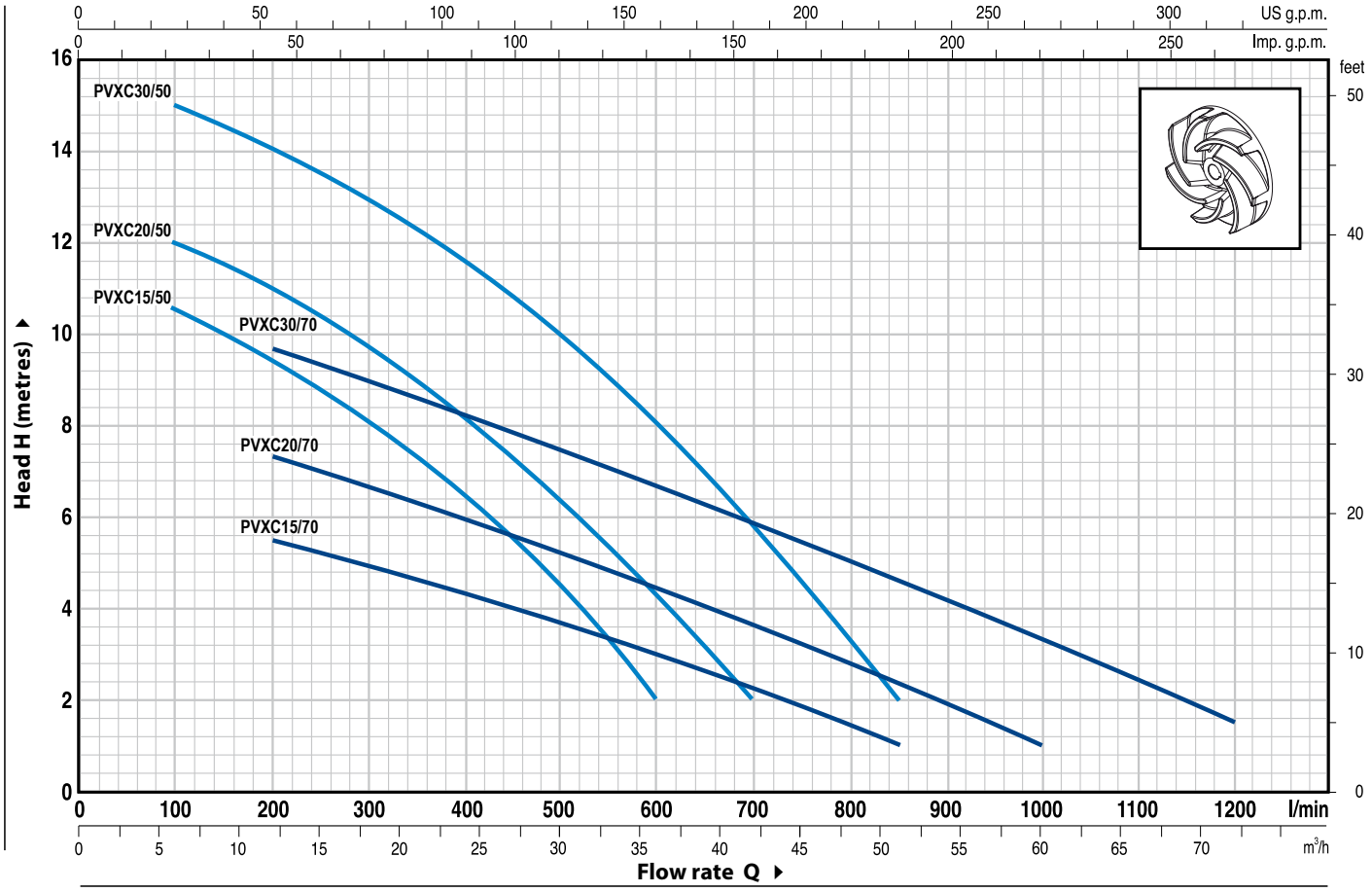
2 years subject to terms and conditions

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

60 Hz n= 3450 1/min



MODEL		POWER		Q	m³/h	0	6	12	18	21	24	27	30	36	42	48	51	54	60	66	72
Single-phase	Three-phase	kW	HP		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 Grade 3.

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**	

Pump	*Capacitance*
Single-phase	*(220 V)*
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**	

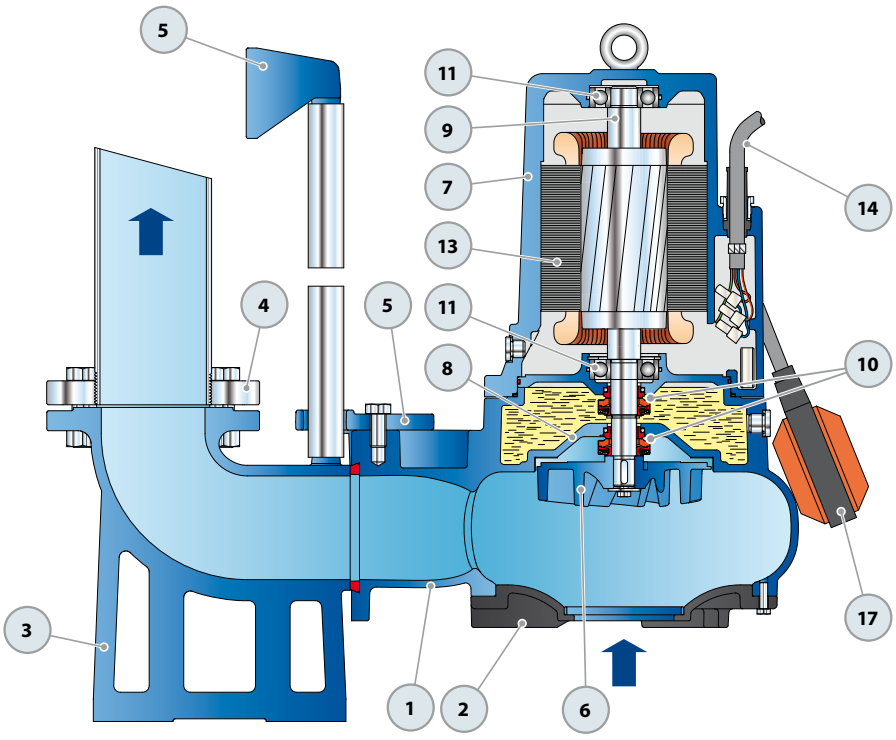
PVXCm 15-20: single-phase 220 V - 60 Hz with thermal overload protector built-in to the winding.

➠ **PVXCm 30**: single-phase 220 V - 60 Hz with motor protector built-in to the winding to be connected to the control box

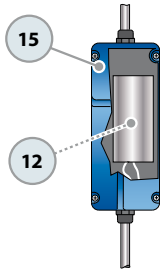
➠ **PVXC**: three-phase 380 V - 60 Hz with motor protector built-in to the winding to be connected to the control box

– 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**	

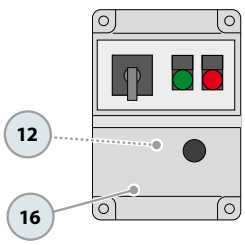


Standard features



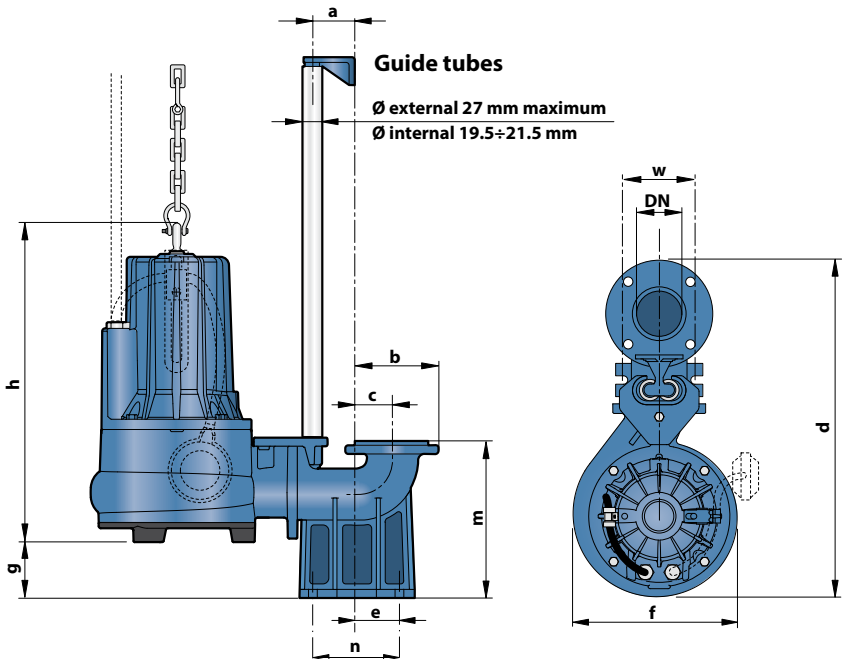
Control box for PVXCm 15-20 (HP 1.5-2.0) (only for single-phase versions)

Standard features

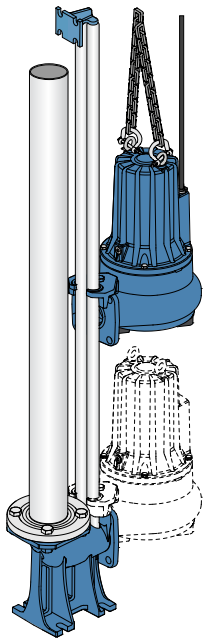


Control box for PVXCm 30 (HP 3.0) (only for single-phase versions)

DIMENSIONS AND WEIGHT



Typical installation



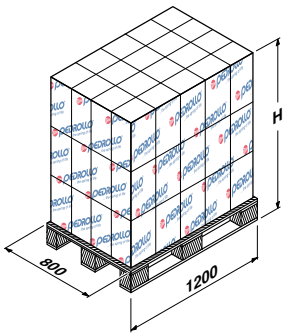
MODEL		PORT	solids passage	DIMENSIONS mm											kg*	
Single-phase	Three-phase	DN		a	b	c	d	e	f	g	h	m	n	w	1~	3~
PVXCm 15/50	PVXC 15/50	2½"	Ø 50 mm	60	116	51	490	62	248	52	442	198	120	72	**47.3**	**46.0**
PVXCm 20/50	PVXC 20/50														**48.4**	**47.1**
PVXCm 30/50	PVXC 30/50										457 / 442				**52.3**	**49.2**
PVXCm 15/70	PVXC 15/70	3"	Ø 70 mm		150	70	570	85	268	92	458	255	130	112	**54.0**	**52.7**
PVXCm 20/70	PVXC 20/70														**55.1**	**53.8**
PVXCm 30/70	PVXC 30/70										472 / 458				**59.1**	**55.9**

(*weight includes counterflanges)

ABSORPTION

MODEL	VOLTAGE (single-phase)
Single-phase	220 V
PVXCm 15/50	**10.0** A
PVXCm 20/50	**13.0** A
PVXCm 30/50	**18.0** A
PVXCm 15/70	**9.0** A
PVXCm 20/70	**12.6** A
PVXCm 30/70	**18.0** A

MODEL	VOLTAGE (three-phase)		
Three-phase	220 V	380 V	440 V
PVXC 15/50	**8.0** A	**4.7** A	**3.8** A
PVXC 20/50	**9.3** A	**5.4** A	**4.4** A
PVXC 30/50	**12.0** A	**7.0** A	**5.7** A
PVXC 15/70	**7.5** A	**4.5** A	**3.7** A
PVXC 20/70	**9.4** A	**5.5** A	**4.7** A
PVXC 30/70	**11.5** A	**6.6** A	**5.5** A

PALLETIZATION

MODEL		GROUPAGE / CONTAINER			
		n°	H (mm)	kg	
Single-phase	Three-phase	pumps		1~	3~
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