

## Submersible pumps

-  Sewage 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

### 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
- QES control box for three-phase pumps
- Single-phase pumps without float switch
- Other voltages

### GUARANTEE

2 years subject to terms and conditions

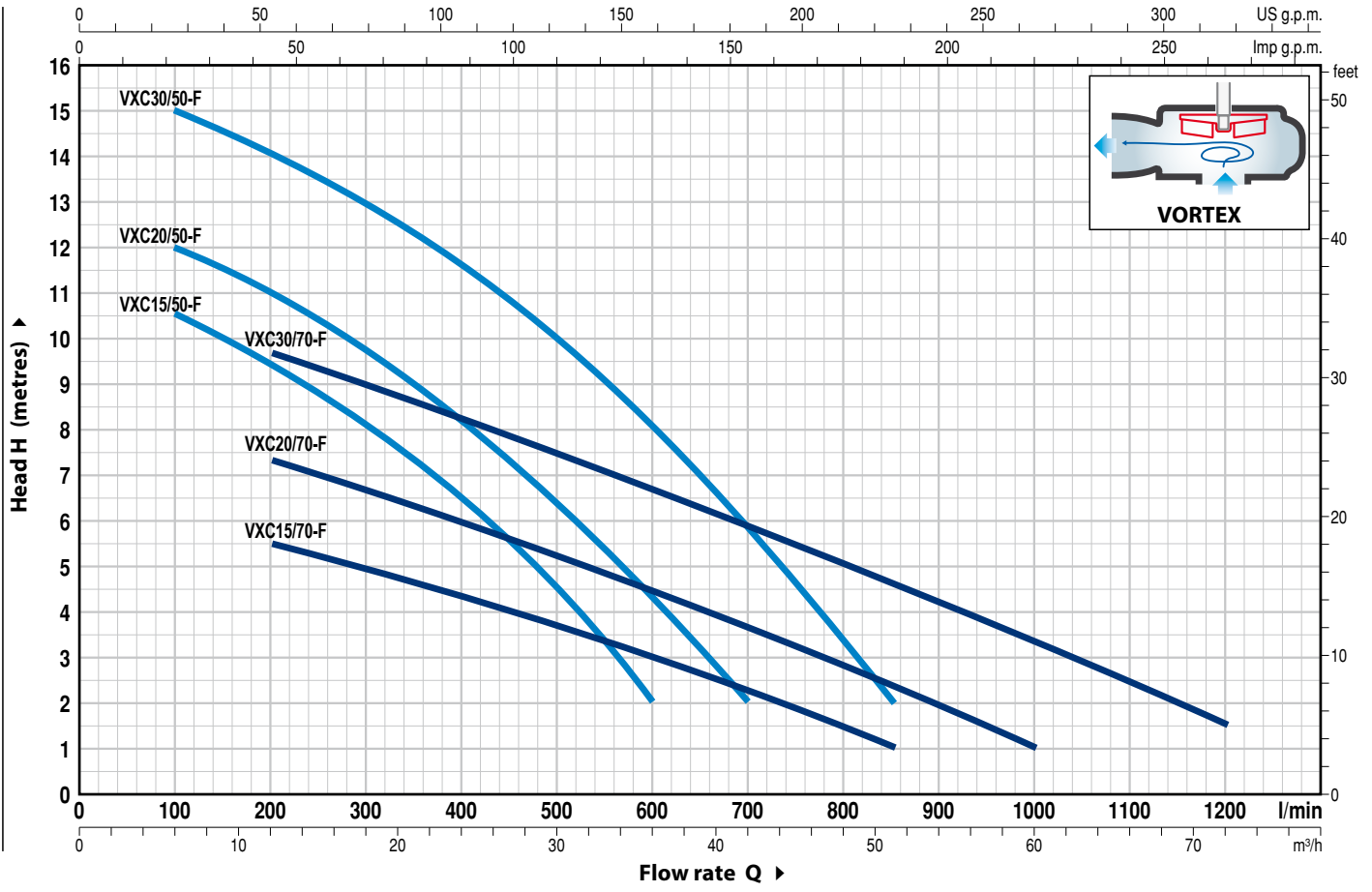
⇒ **For the following versions the incorporated thermal overload protector must be connected to the control box for the guarantee to be considered valid:**

single-phase  
– **VXCm 30/50-F**  
– **VXCm 30/70-F**

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

### CHARACTERISTIC CURVES AND PERFORMANCE DATA

60 Hz n= 3450 rpm



MODEL		POWER (P <sub>2</sub> )		Q	H metres																
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		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.

## 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 Single-phase	Capacitance (220 V)
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

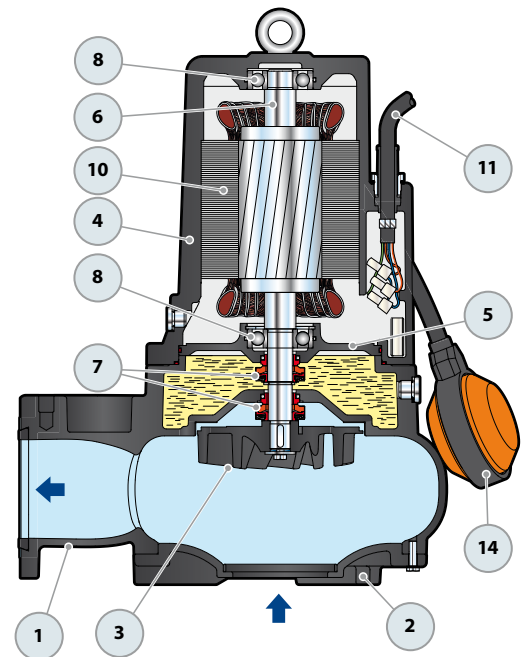
**VXCm 15-20-F:** single-phase 220 V - 60 Hz with thermal overload protector incorporated into the winding

⇒ **VXCm 30-F:** single-phase 220 V - 60 Hz with thermal overload protector incorporated into the winding to be connected to the control box

⇒ **VXC-F:** three-phase 380 V - 60 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

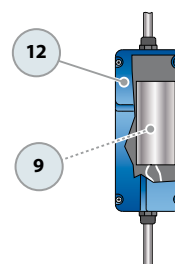
(only for single-phase versions)

QES 300 MONO series

### 14 FLOAT SWITCH

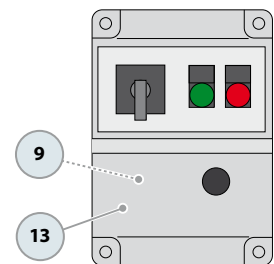
(only for single-phase versions)

#### Standard features



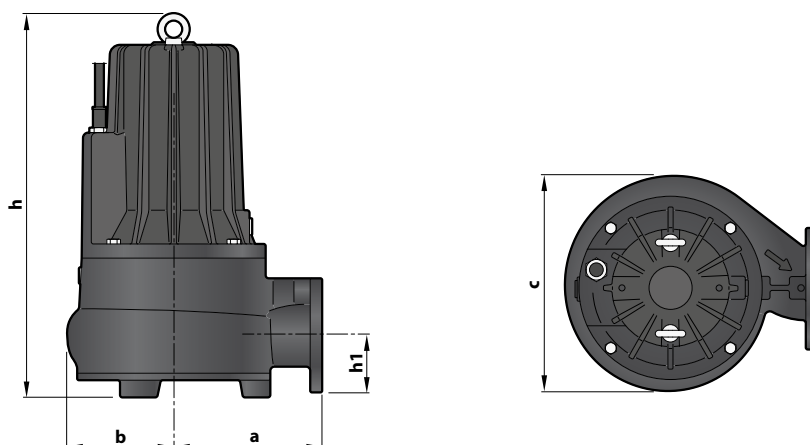
Control box for VXCm 15-20-F (HP 1.5-2.0)  
(only for single-phase versions)

#### Standard features



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

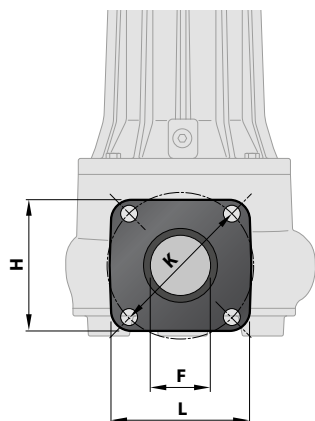
## DIMENSIONS AND WEIGHT



MODEL		Passage of solids	DIMENSIONS mm					kg	
Single-phase	Three-phase		a	b	c	h	h1	1~	3~
VXCm 15/50-F	VXC 15/50-F	Ø 50 mm	169	122	248	442	65	35.7	34.7
VXCm 20/50-F	VXC 20/50-F					457 / 442		37.0	35.4
VXCm 30/50-F	VXC 30/50-F					457 / 442		40.6	37.2
VXCm 15/70-F	VXC 15/70-F	Ø 70 mm	205	131	268	458	70	36.4	35.4
VXCm 20/70-F	VXC 20/70-F					472 / 458		38.3	36.6
VXCm 30/70-F	VXC 30/70-F					472 / 458		42.4	39.0

## PORT FLANGE

MODEL	F mm	K mm	L mm	H mm	HOLES	
					N°	Ø (mm)
VXC /50-F	58	145	140	130	4	17
VXC /70-F	76		140	140		

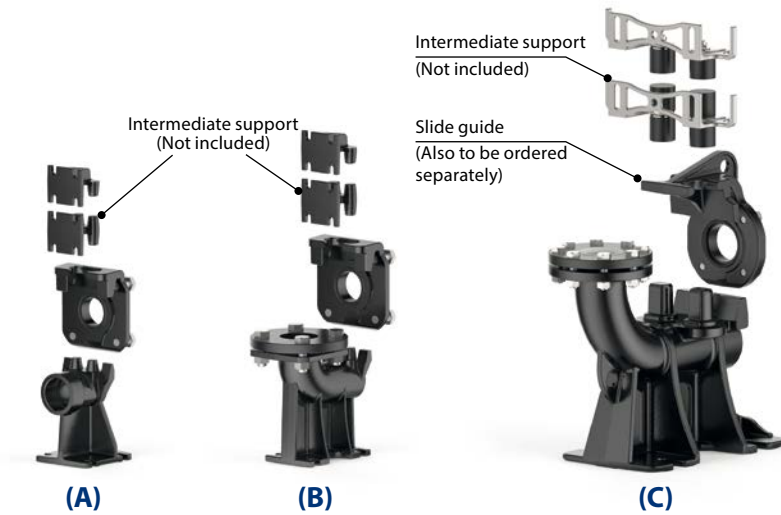


## ABSORPTION

MODEL	VOLTAGE
Single-phase	220 V
VXCm 15/50-F	10.0 A
VXCm 20/50-F	13.0 A
VXCm 30/50-F	18.0 A
VXCm 15/70-F	9.2 A
VXCm 20/70-F	12.6 A
VXCm 30/70-F	18.0 A

MODEL	VOLTAGE		
Three-phase	220 V	380 V	440 V
VXC 15/50-F	7.0 A	4.0 A	3.1 A
VXC 20/50-F	9.3 A	5.4 A	3.8 A
VXC 30/50-F	12.0 A	7.2 A	5.0 A
VXC 15/70-F	7.5 A	4.5 A	3.7 A
VXC 20/70-F	9.4 A	5.5 A	4.7 A
VXC 30/70-F	11.5 A	6.6 A	5.5 A

# BASE PEDESTAL KIT VXC-F – MC-F



## A) HORIZONTAL DELIVERY VERSION WITH ¾" GUIDE TUBES

For <b>VXC /50-F, MC /50-F</b>	Cod. ASSVXCF050	DN <b>2"</b>
--------------------------------	-----------------	--------------

Kit consisting of:

- footing connection
- slide guide with screws and seals
- support for the guide tubes

## B) VERTICAL DELIVERY VERSION WITH ¾" GUIDE TUBES

For <b>VXC /50-F, MC /50-F</b>	Cod. ASSVXCF050V	DN <b>2½"</b>
For <b>VXC /70-F, MC /70-F</b>	Cod. ASSVXCF070V	DN <b>3"</b>

Kit consisting of:

- footing connection complete with counterflange
- slide guide with screws and seals
- support for the guide tubes

## C) VERTICAL DELIVERY VERSION WITH 2" GUIDE TUBES

For <b>VXC /50-F, MC /50-F</b>	Cod. ASSVXCF0703V	DN <b>3"</b>
For <b>VXC /70-F, MC /70-F</b>		

Kit consisting of:

- footing connection complete with counterflange
- slide guide with screws and seals
- support for the guide tubes

### SLIDE GUIDE (Also to be ordered separately)

For <b>VXC /50-F, MC /50-F</b>	Cod. ASSFL070
For <b>VXC /70-F, MC /70-F</b>	

Complete with screws and seals

### INTERMEDIATE SUPPORT (To be ordered separately)

Cod. 859SV340INTFA	For guide tubes Ø ¾"
Cod. 859SV349INTFA	For guide tubes Ø 2"

### GUIDE TUBES (AISI 304 stainless steel)

For <b>VXC /50-F, MC /50-F</b>	Cod. 54SARTG005	Ø ¾"
For <b>VXC /70-F, MC /70-F</b>	Cod. 54SARTG006	Ø 2"

**In order to ensure stability, insert the intermediate support:**

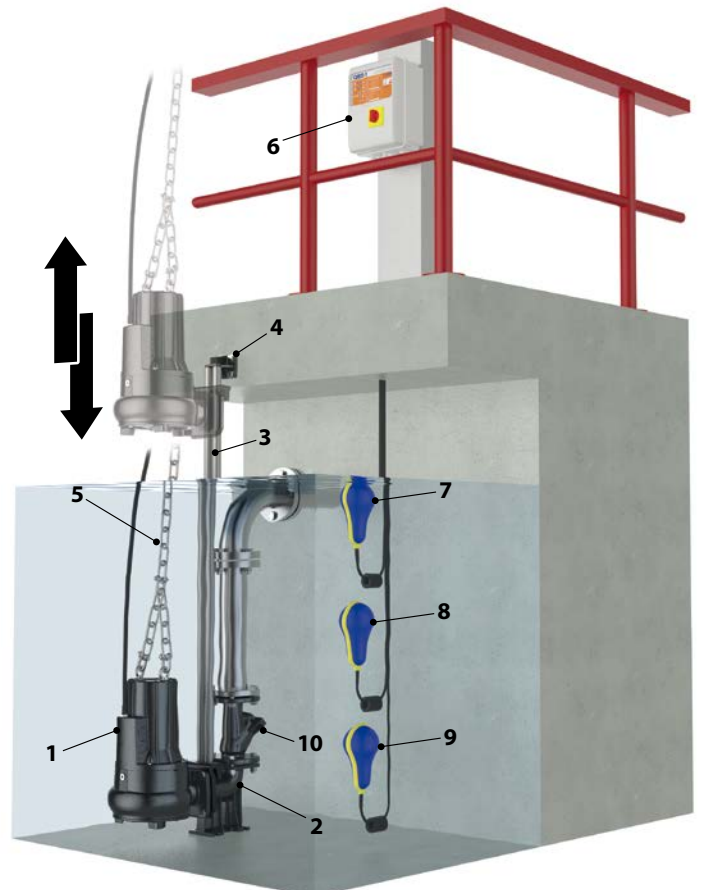
- every 2 metres with ¾" guide tubes (compulsory)
- every 3 metres with 2" guide tubes (recommended)

Maximum length of the tube plank: 6 metres

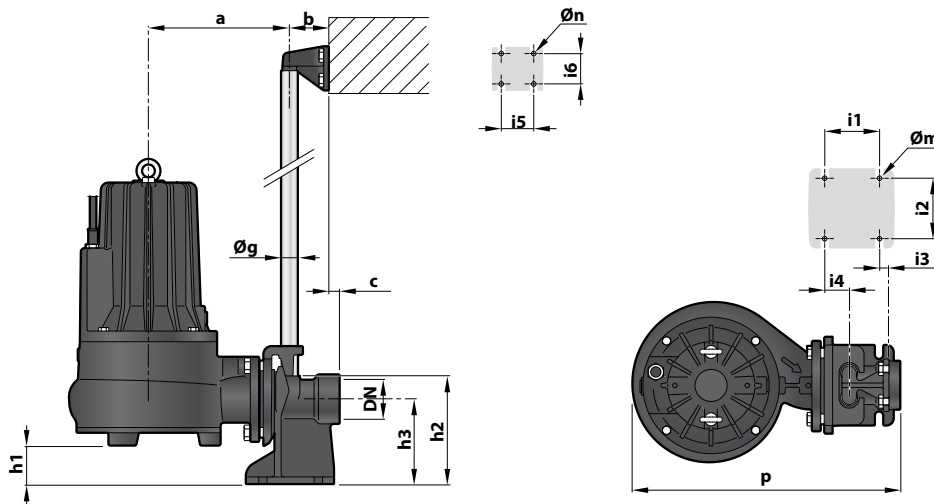


## STANDARD INSTALLATION

1. Pump
2. Footing connection
3. Guide tubes
4. Support for the guide tubes
5. Lifting chain
6. Control box
7. Alarm float switch
8. Starting float switch
9. Stop float switch
10. Non-return valve

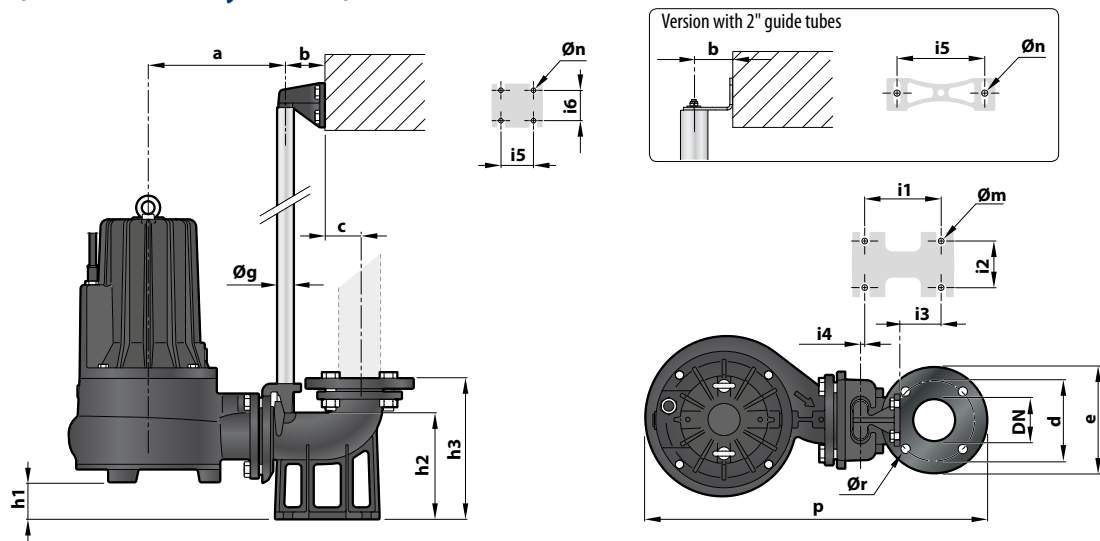


### DIMENSIONS (Horizontal delivery version)



MODEL	Passage of solids mm	PORT DN	DIMENSIONS mm																
			a	b	c	p	h1	h2	h3	i1	i2	i3	i4	i5	i6	Øg	Øm	Øn	
VXC /50-F	Ø 50	2"	215	61	17	44	60	165	130	85	94	16	40	50	48	¾"	12	11	
MC /50-F																			

### DIMENSIONS (Vertical delivery version)



#### Version with ¾" guide tubes

MODEL	Passage of solids mm	PORT DN	DIMENSIONS mm																		
			a	b	c	d	e	p	h1	h2	h3	i1	i2	i3	i4	i5	i6	Øg	Øm	Øn	Ør
VXC /50-F	Ø 50	2½" (PN10)	212	61	52	125	165	528	57	164	215	120	72	62	3	50	48	¾"	14	11	18
MC /50-F																					
VXC /70-F	Ø 70	3" (PN6)	247	61	69	150	190	603	94	216	279	130	112	84	15	50	48	¾"	14	11	18
MC /70-F																					

#### Version with 2" guide tubes

MODEL	Passage of solids mm	PORT DN	DIMENSIONS mm																		
			a	b	c	d	e	p	h1	h2	h3	i1	i2	i3	i4	i5	i6	Øg	Øm	Øn	Ør
VXC /50-F	Ø 50	3" (PN10)	318	86	95	160	200	720	137	265	392	250	150	34	-	187	-	2"	22	13	18
MC /50-F																					
VXC /70-F	Ø 70	3" (PN10)	354	86	95	160	200	765	132	265	392	250	150	34	-	187	-	2"	22	13	18
MC /70-F																					