VEXO® X-POT® Compliance Packs

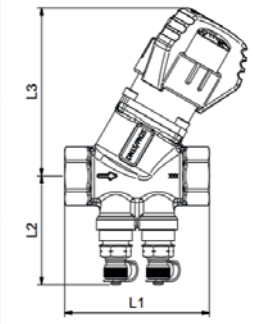
Code	VEXO® Ref	Description
V-COMP(CP)PACK	X-POT® Compact Compliance Pack	Compliance Pack for X-POT Compact®
V-XPOT6(CP)PACK	X-POT6® Compliance Pack	Compliance Pack for X-POT 6®
V-XPOTXP-LF(CP)PACK	X-POT® XP LF Compliance Pack	Compliance Pack for X-POT XP® Low Flow (Up to 2.875l/s)
V-XPOTXP-HF(CP)PACK	X-POT® XP HF Compliance Pack	Compliance Pack for X-POT XP® High Flow (Flanged)

VEXO® X-POT Compact® Compliance Pack

VEXO® X-POT Compact® Compliance Pack Components

Parameter	Description
1No. Dynamic Balancing Valve	Frese SIGMA Compact DN20 Low
1No. Dynamic Balancing Valve Insulation Jacket	Frese SIGMA Compact DN20 Insulation Cover
1No. VEXO® PD-Monitor®	VEXO® PD-Monitor® (MODBUS)

Operating Parameters - Frese SIGMA Compact DN20 Low

Parameter		Description	
Connection Size		DN20 BSP Female	
Valve Body		DZR Brass CW602N	
Flow Setting		PA6 (20% Glass)	
Spring		Stainless Steel	
Diaphragm		HNBR	
O-Rings		EPDM	
Operational Flow Rate		0.024 - 0.431 l/s (1.44 - 25.86 l/min)	
Maximum Differential Pressure		400 kPa	
Kvs		4.0	
Maximum Pressure Rating		25 Bar	
Glycolic Mixtures		Up to 50% (Ethylene and Propylene)	
Operating Temperatures		-10°C to 120°C	
Dimensions	**L1**	79mm	
	L2	57mm	
	L3	87mm	
Weight		0.6 KG	

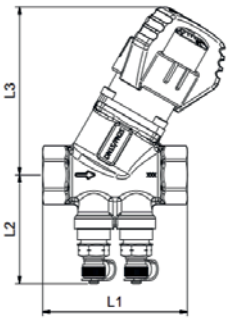
VEXO® X-POT 6® Compliance Pack

VEXO® X-POT 6® Compliance Pack Components

Parameter	Description
1No. Dynamic Balancing Valve	Frese SIGMA Compact DN32
1No. Dynamic Balancing Valve Insulation Jacket	Frese SIGMA Compact DN32 Insulation Cover
1No. VEXO® PD-Monitor®	VEXO® PD-Monitor® (MODBUS)

Operating Parameters - Frese SIGMA Compact DN20 Low

Parameter		Description
Connection Size		DN32 BSP Female
Valve Body		DZR Brass CW602N
Flow Setting		PA6 (20% Glass)
Spring		Stainless Steel
Diaphragm		HNBR
O-Rings		EPDM
Operational Flow Rate		0.056 - 1.389 l/s (3.36 - 83.34 l/min)
Maximum Differential Pressure		400 kPa
Kvs		10.9
Maximum Pressure Rating		25 Bar
Glycolic Mixtures		Up to 50% (Ethylene and Propylene)
Operating Temperatures		-10°C to 120°C
Dimensions	**L1**	104mm
	L2	68mm
	L3	110mm
Weight		1.4 KG

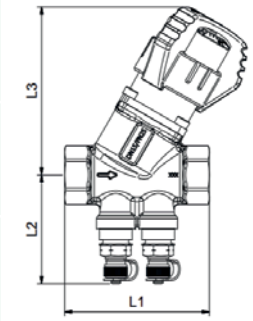


VEXO® X-POT XP® Low Flow (Up to 2.875 l/s) Compliance Pack

VEXO® X-POT XP® Low Flow Compliance Pack Components

Parameter	Description
1No. Dynamic Balancing Valve	Frese SIGMA Compact DN50
1No. Dynamic Balancing Valve Insulation Jacket	Frese SIGMA Compact DN50 Insulation Cover
1No. VEXO® PD-Monitor®	VEXO® PD-Monitor® (MODBUS)

Operating Parameters - Frese SIGMA Compact DN20 Low

Parameter		Description	
Connection Size		DN50 BSP Female	
Valve Body		Ductile Iron GJS-400	
Flow Setting		PA6 (20% Glass)	
Spring		Stainless Steel	
Diaphragm		HNBR	
O-Rings		EPDM	
Operational Flow Rate		0.250 - 2.875 l/s (15.0 - 172.5 l/min)	
Maximum Differential Pressure		400 kPa	
Kvs		20.3	
Maximum Pressure Rating		25 Bar	
Glycolic Mixtures		Up to 50% (Ethylene and Propylene)	
Operating Temperatures		-10°C to 120°C	
Dimensions	**L1**	138mm	
	L2	76mm	
	L3	131mm	
Weight		3.4 KG	

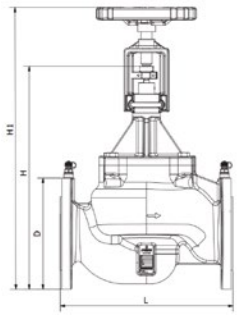
VEXO® X-POT XP® High Flow (Flanged) Compliance Pack

VEXO® X-POT XP® High Flow Compliance Pack Components

Parameter	Description
1No. Dynamic Balancing Valve	Frese SIGMA Compact DN50 Flanged
1No. Dynamic Balancing Valve Insulation Jacket	Frese SIGMA Compact DN50 VEXO® Branded Insulation Cover
1No. VEXO® PD-Monitor®	VEXO® PD-Monitor® (MODBUS)

Operating Parameters - Frese SIGMA Compact DN20 Low

Parameter		Description
Connection Size		DN50 Flanged PN16 / EN 1092-2
Valve Body		GJS-400 PN16
DP Controller		Stainless Steel
Spring		Stainless Steel
Diaphragm		Reinforced EPDM
O-Rings		EPDM
Operational Flow Rate		0.689 - 4.167 l/s (41.34 - 250 l/min)
Maximum Differential Pressure		800 kPa
Kvs		34.0
Maximum Pressure Rating		16 Bar
Glycolic Mixtures		Up to 50% (Ethylene and Propylene)
Operating Temperatures		0°C to 120°C
Dimensions	**L**	230mm
	H	367mm
	H1	480mm
	D	165mm
Weight		15.4 KG



VEXO® PD-Monitor® (As Supplied in Compliance Pack)

VEXO® PD-Monitor® Technical Data

Parameter	Description
Parameters	Differential Pressure
IP Protection	IP54
Mounting Position	Internal Wall – Frost Free
Display	Dot Matrix (Red)
Electrical Connections	0.9M Flying Lead (supplied) connected to Isolator (by others)
Power Supply	230V AC, 50Hz, 13.5mA
Dimensions	200mm x 150mm x 85mm (Enclosure)
Weight	1.3kg
Ambient Operating Temperatures	>5°C to 45°C, <90%RH
Pressure Sensor Cable	Packard Plug + cable (1.8m in length)
Pressure Sensor Material	ANSI 316L
Maximum Working Pressure (Sensors)	<30 Bar
Differential Pressure Setting Increments	0.1 Bar
Range of Pressure Differential	0.1 to 7 Bar
4-20mA Sensor Connections	1/4" BSP
Maximum Working Temperature (Sensor)	100°C
Minimum Working Temperature (Sensor)	40°C
Medium	Water / Liquids
CE / EMC Compatibility	IEC 610101: 2010 + A1: 2019 and EN 610101: 2010 + A1:2019
BMS Signal	MODBUS RS485 (Address List on Page 10) & 5amp Common Alarm Relay used to contact BMS System (Normally Open)

VEXO® PD-Monitor® Materials of Construction

Parameter	Description
Housing	Techno polymer GWPLAST 75
Pressure Sensor	ANSI 316L

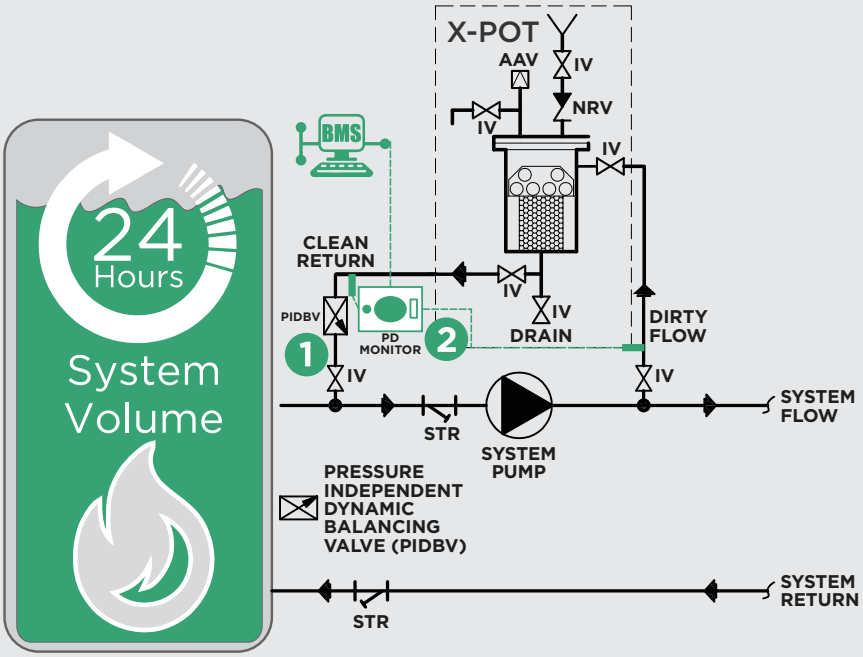
VEXO® PD-Monitor® Features

Parameter	Description
Application	The VEXO® PD-Monitor® is a flexible solution and ideally suited for commercial and industrial heating and cooling systems. Blockages in plant equipment such as filters, strainers, plate heat exchangers and heater coils can have a detrimental effect on the system efficiency and building comfort. VEXO® PD-Monitor® can be used to detect blockages and will alarm locally with audible buzzer and visual beacon and remotely via a BMS fault signal (relay / Modbus) when connected to a BMS system.

VEXO® X-POT® Compliance Pack

Feature	Description
Frese SIGMA Compact Dynamic Balancing Valve	The Frese SIGMA Compact is an externally adjustable dynamic balancing valve that provides simple, accurate and reliable flow limitation and isolation in heating and cooling systems.
Application	The Frese SIGMA Compact can be used in both heating and cooling systems for the effective distribution of flow in various sections of the system. The Frese SIGMA Compact can be used instead of traditional double regulating valves and can be installed in both variable flow systems and constant flow systems.
Operation	The Frese SIGMA Compact can be set to the required position easily by using the scale, to limit the flow rate in certain parts of a system, eliminating overflows and the unnecessary wastage of energy. The internal differential pressure control function of the Frese SIGMA Compact ensures that the set flow rate is limited irrespective of differential pressure fluctuations in the system. The hand wheel can be used to close the valve and to open it to the pre-set flow.
Pre-set Scale	Easy adjustment of the flow using the clear pre-set scale on the valve/ Hand Wheel (Pre-set Setpoints can be found in the Instruction Booklet).
Isolation	Hand wheel provides an isolation function up to 10 bar differential pressure.
Location	No minimum straight pipe lengths required before or after the valve.
PT Plugs	Builtin P/T plugs for needle system.

System Schematic Example



The schematic above shows an indicative example only. For further support please contact the VEXO® Technical Team: +44 (0)1767500150 / technical@vexoint.com

VEXO® X-POT® Compact, 6 & XP Low Flow Compliance Pack

VEXO® PD-Monitor®

Pressure Venturi PIDBV

PIDBV Insulation Cover

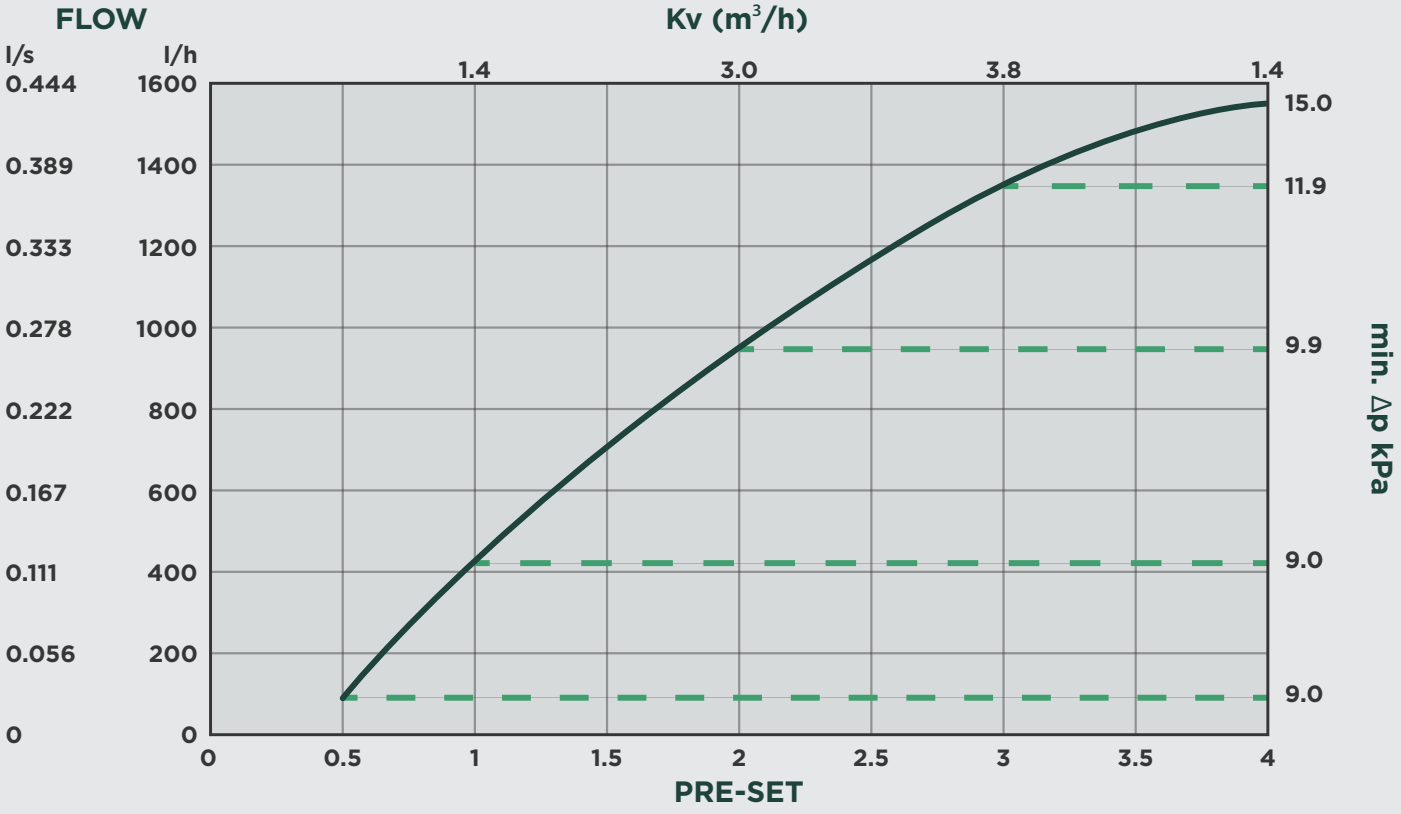
VEXO® X-POT® XP High Flow DN50 Compliance Pack

VEXO® PD-Monitor®

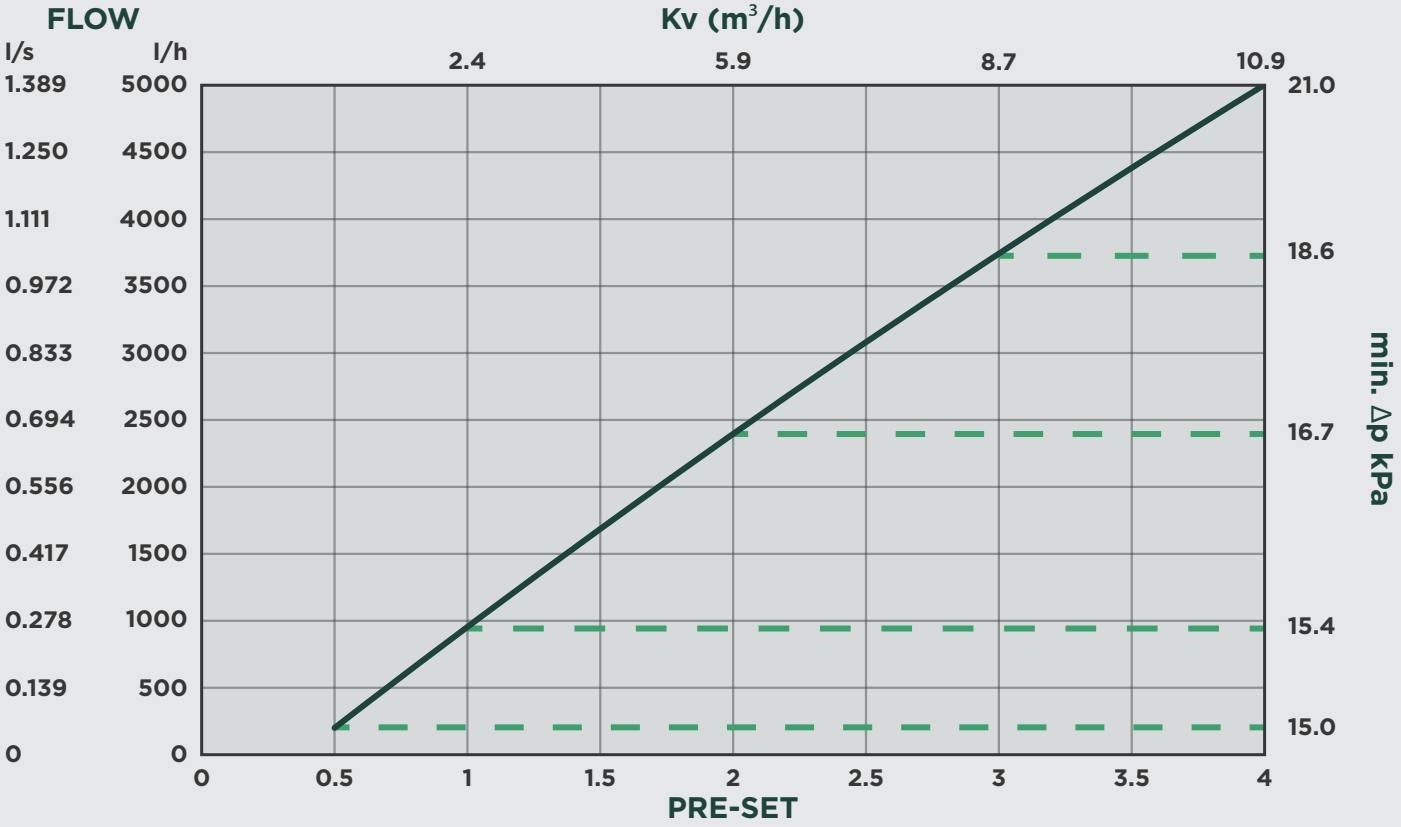
Pressure Venturi PIDBV

PIDBV Insulation Cover

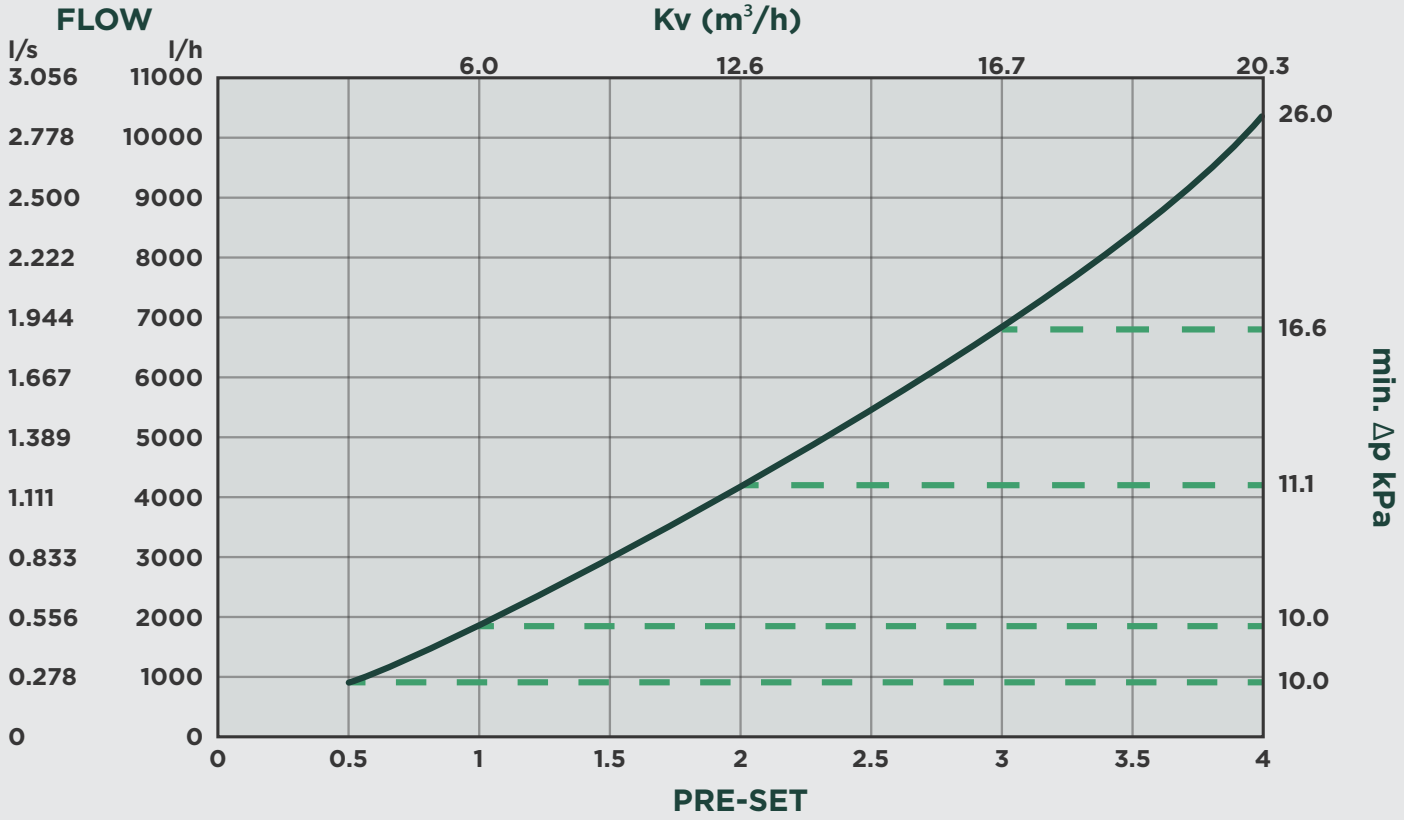
X-POT Compact® Frese SIGMA Compact Setpoints



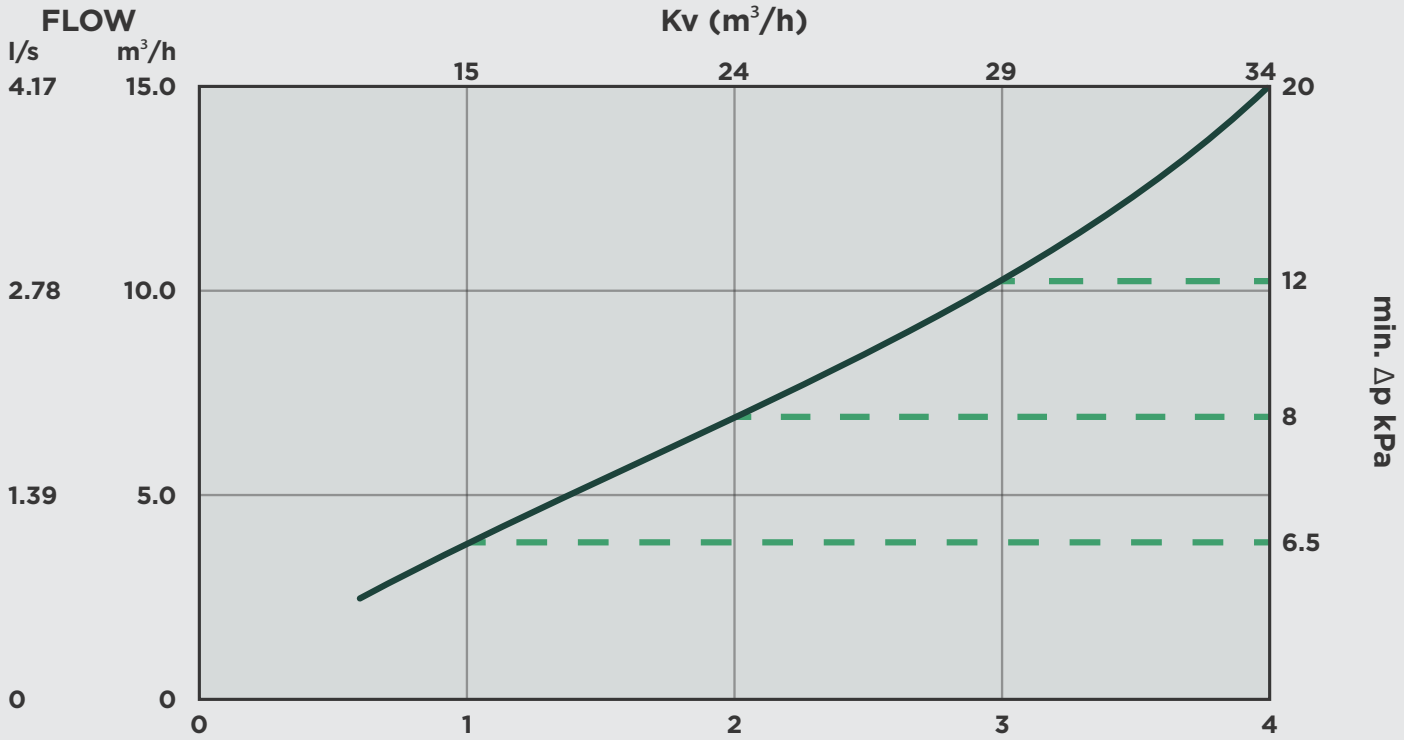
X-POT 6® Frese SIGMA Compact Setpoints



X-POT XP® Low Flow Frese SIGMA Compact Setpoints



X-POT XP® High Flow Frese SIGMA Compact Setpoints



MODBUS Address List

Preliminary Settings	
Baud Rate	9600
Word Length	8
Parity	NO
Stop Bits	1

Addresses

X Variable Address	Denomination	Description	Format	Type	Data Conversion	Units	Variable Range
40001	Pressure Sensor 1	Value of Sensor 1	Word	Read		Decimal of Bar/PSI	
40002	Pressure Sensor 2	Value of Sensor 2	Word	Read		Decimal of Bar/PSI	
40003	Current	Value of the actual current through pump	Word	Read		mA	
40006	Pump Relay	Status of Pump Relay	Word	Read	0=OFF | 1=ON		
40007	Filter Pump Alarm Relay	Status of Pump Alarm Relay	Word	Read	0=OFF | 1=ON		
40008	General Alarm Relay	Status of General Alarm Relay	Word	Read	0=OFF | 1=ON		
40009	Buzzer	Status of Buzzer	Word	Read	0=OFF | 1=ON		
40013	Filter Blocked Alarm	Status of Filter Blocked Alarm	Word	Read	0=Alarm Not Present 1= Alarm Present		
40014	Pump Failure Alarm	Status of Pump Failure Alarm	Word	Read	0=Alarm Not Present 1= Alarm Present		
40015	Sensor 1 Alarm	Status of Sensor 1 Alarm	Word	Read	0=Alarm Not Present 1= Alarm Present		
40016	Sensor 2 Alarm	Status of Sensor 2 Alarm	Word	Read	0=Alarm Not Present 1= Alarm Present		
40023	Par. Pressure Differential	Value of the parameter	Word	Read/ Write		Decimal of Bar/PSI	1 -> 70
40024	Par. Alarm Relay Contact	Value of the parameter	Word	Read/ Write	0=Normally Open 1=Normally Close		0 -> 1
40025	Par. Minimum Pressure	Value of the parameter	Word	Read/ Write		Decimal of Bar/PSI	0 -> Par. Maximum Pressure
40026	Par. Maximum Pressure	Value of the parameter	Word	Read/ Write		Decimal of Bar/PSI	Par. Minimum Pressure -> 30
40027	Par. Current Sense	Value of the parameter	Word	Read/ Write	4=Not Active 5=Active		4 -> 5
40028	Par. Bar/PSI Unit	Value of the parameter	Word	Read/ Write	2=Bar 3=PSI		2 -> 3
40029	Par. Buzzer Enabled	Value of the parameter	Word	Read/ Write	4=Not Active 5=Active		4 -> 5
40030	Par. ID Number	Value of the parameter	Word	Read/ Write			0 -> 99
40031	Par. Pump Hours	Value of the parameter	Word	Read/ Write		Hours	0 -> 9999
40032	Par. Alarm Counter	Value of the parameter	Word	Read/ Write			0 -> 1000

VEXO X-POT Disposal Methods

Feature	Description
Unit	Unit is classed as electrical waste due to fitted electrical components. VEXO offer a takeback scheme in line with the WEEE regulations. Please contact VEXO to arrange collection.