

MODULA

Description

MODULA is a compact and versatile valve system that combines the Frese range of dynamic flow, pressure and temperature control valves with isolation, flushing, draining and measurement components within a prefabricated, tested and ready to install terminal bypass unit.

MODULA integrates the following Frese valve solutions:

- OPTIMA Compact (Pressure Independent Control Valve - PICV)

Each unit can be supplied with isolation valves, strainer, drain and P/T plug.



Benefits

The MODULA Bypass Unit combines the many benefits of the OPTIMA Compact range in addition to:

Installation benefits

- Compact design for limited space availability
- Minimized installation and commissioning costs
- Allows easy flushing and coil isolation
- Easy lagging of spindle extensions

Operation benefits

- High comfort with minimized operation and maintenance costs
- Efficient flow, temperature and pressure control
- 5 modes of operation (see pages 5 and 6)

For further information on OPTIMA Compact, please refer to the relevant Datasheet.

Features

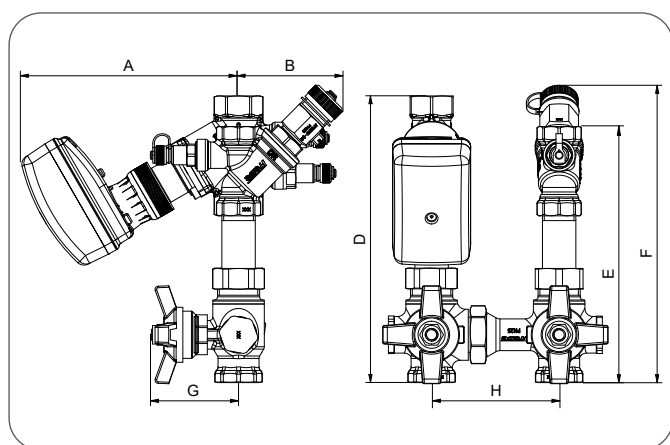
- Available in DN15, DN20 and DN25
- Available with 80 mm, 130 mm or 170 mm supply/return centres
- Integrated union joints for easy valve alignment
- Two T-handle isolation valves for flow, return and bypass
- Full flow valves on flow and return
- Spindle extensions available
- Combinations with strainer, drain, P/T plug available
- P/T plug on the flow for measuring the DP across the terminal unit
- Metering station for flow verification

MODULA

Technical data

Material:	DZR Brass, CW602N
Filter:	Stainless Steel
O-rings:	EPDM
Pressure class:	PN25
Strainer mesh:	32 (0.5 mm)
Medium temperature range:	0°C to 120°C

Dimensions



MODULA · OPTIMA Compact

mm	DN15	DN20	DN25	DN25L
A	136	136	139	154
B	66	78	84	84
D	180	185	189	206
E	161	170	184	184
F	186	195	209	209
G*	41/88			
H	80/130/170			

*) Std Handle/**Ext Handle**

MODULA

Product Code Builder

										58	MODULA
										2	ALPHA
										3	EVA
										7	OPTIMA Compact
										V	OPTIMA Compact Veriflow*
										8	SIGMA Compact
										9	PV Compact
										10	Frese STBV
										1	DN15 - 80mm
										2	DN20 - 80mm
										3	DN25L - 80mm
										4	DN15 - 130mm
										5	DN20 - 130mm
										6	DN25L - 130mm
										7	DN15 - 170mm
										8	DN20 - 170mm
										9	DN25L - 170mm
										A	DN25 - 80mm
										B	DN25 - 130mm
										C	DN25 - 170mm
										1	T-piece with 1" P/T-plug*** + drain
										2	T-piece with 1" P/T-plug + drain and extension handle
										3	Strainer with 1" P/T-plug + drain
										4	Strainer with 1" P/T-plug + drain and extension handle
										5	T-piece with 1" P/T- plug/plug
										6	T-piece with 1" P/T- plug/plug and extension handle
										7	Strainer with 1" P/T- plug/plug
										8	Strainer with 1" P/T- plug/plug and extension handle
										9	Strainer extended with 1" P/T-plug + drain and extension handle
										10	Extended T-piece with 1" P/T-plug + drain and extension handle
										A	T-piece with 1" P/T-plug + drain (Left hand mount)
										B	T-piece with 1" P/T-plug + drain and extension handle (Left hand mount)
										C	Strainer with 1" P/T-plug + drain (Left hand mount)
										D	Strainer with 1" P/T-plug + drain and extension handle (Left hand mount)
										E	T-piece with 1" P/T-plug/plug (Left hand mount)
										F	T-piece with 1" P/T-plug/plug and extension handle (Left hand mount)
										G	Strainer with 1" P/T-plug/plug (Left hand mount)
										H	Strainer with 1" P/T-plug/plug and extension handle (Left hand mount)
										J	Strainer extended with 1" P/T-plug + drain and extension handle (Left hand mount)
										K	Extended T-piece with 1" P/T-plug + drain and extension handle (Left hand mount)
										X	Coupling with male connection loosely mounted on right side. Standard handles
										Y	Coupling with male connection loosely mounted on right side. Extension handles
										1	1" P/T Plugs on valve
										2	2" P/T Plugs on valve
										3	Plug
										4	Without P/T Plugs on valve
										L	Low
										H	High
										A	2,5 mm stroke (for OPTIMA Compact)
										C	5,0 mm stroke (for OPTIMA Compact)
										D	5,5 mm stroke (for OPTIMA Compact)
										Kvs (for STBV)	
										A	Couplings on piping side
										B	Metering station DN15UL Kvs Venturi 0.55 - 0.017-0.045 l/s, (Kv total: 0.61)**
										C	Metering station DN15L Kvs Venturi 1.15 - 0.031-0.074 l/s, (Kv total: 1.23)**
										D	Metering station DN15 Kvs Venturi 2.80 - 0.062-0.148 l/s, (Kv total: 3.63)**
										E	Metering station DN20 Kvs Venturi 5.33 - 0.138-0.325 l/s, (Kv total: 7.56)**
										F	Metering station DN25 Kvs Venturi 9.72 - 0.258-0.603 l/s, (Kv total: 13.61)**
										G	Metering station DN15XUL Kvs Venturi 0.263 - 0.0075-0.023 l/s, (Kv total: 0.25)**
58	X	X	X	X	X	X	X	X	X		

***) When using the KV-signal for flow measurement, the accuracy is $\pm 5\%$ (See OPTIMA Compact Veriflow Technote for detailed specifications)**

****) Tolerance of nominal Kvs: $\pm 3\%$ (test according to BS7350)**

****) In combination with a metering station the T-piece is without the P/T plug.**

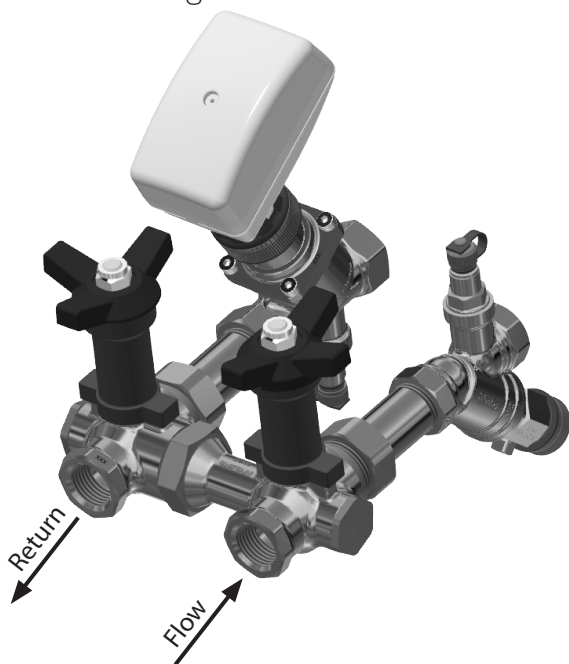
The flow ranges are a recommendation only. The measurement of higher flows is allowed, but the pressure loss on the selected metering station must be considered to avoid the excessive resistance.

Example of product code: 587-12-1-L-A-A

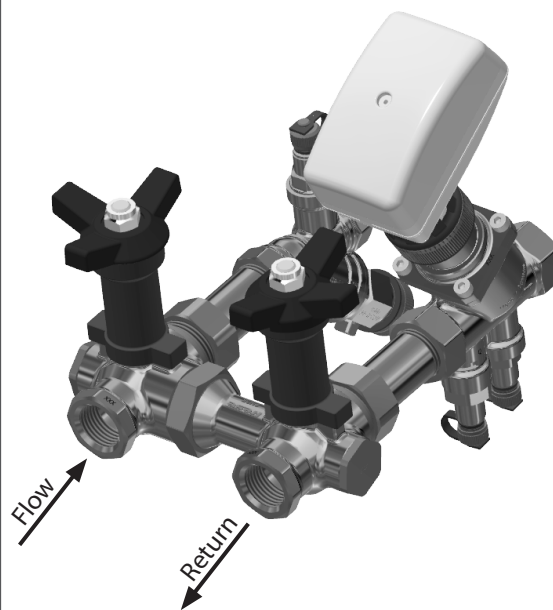
MODULA

Versions

Right hand version



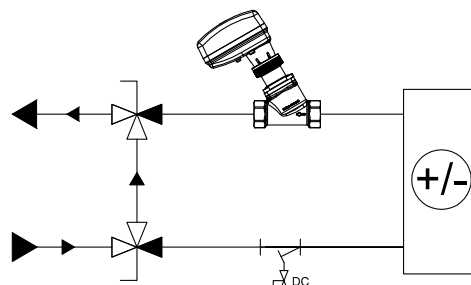
Left hand version



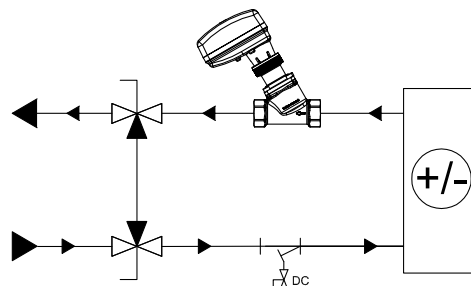
MODULA

Modes of Operation - Right Hand Version

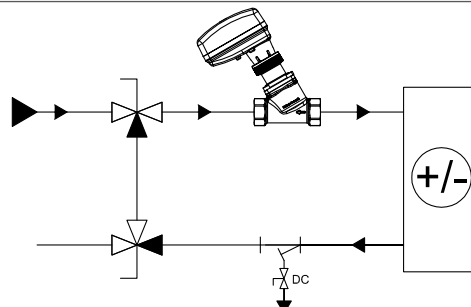
Mode 1
Isolation & Flushing bypass



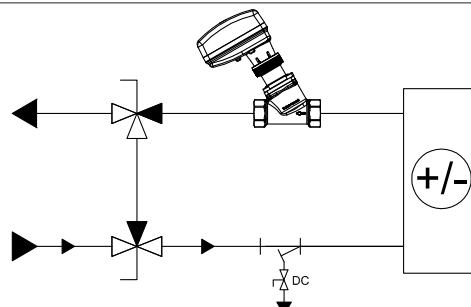
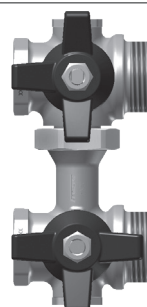
Mode 2
Normal operation



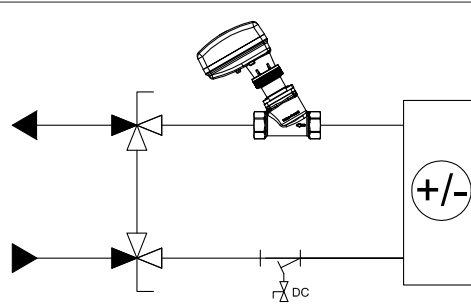
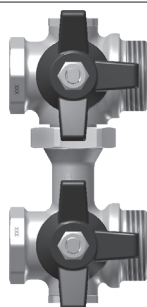
Mode 3
Back flushing



Mode 4
Forward flushing



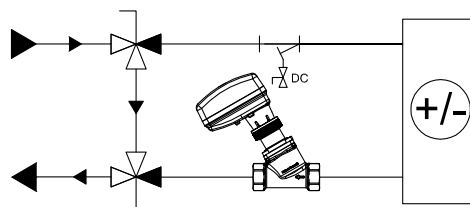
Mode 5
Isolation & Maintenance



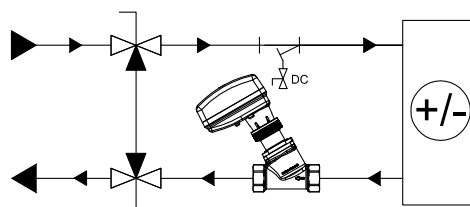
MODULA

Modes of Operation - Left Hand Version

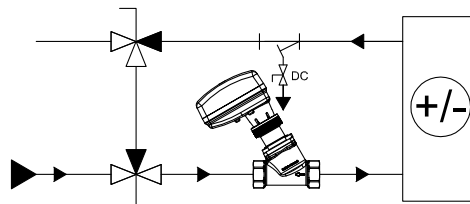
Mode 1
Isolation & Flushing bypass



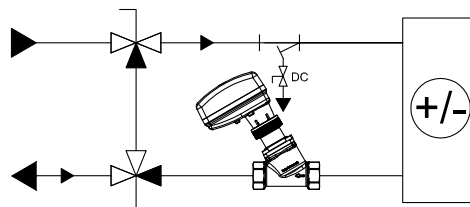
Mode 2
Normal operation



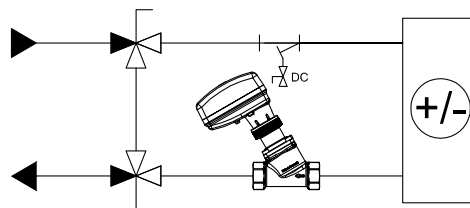
Mode 3
Back flushing



Mode 4
Forward flushing




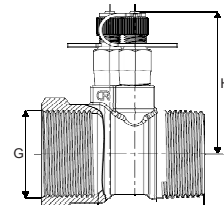
Mode 5
Isolation & Maintenance




MODULA


Accessories


Metering station	Dimension	L [mm]	H [mm]	G
	DN15	60	57	1/2"
	DN20	62	60	3/4"
	DN25	68	64	1"



MODULA insulation*	MODULA type	MODULA dimension	Insulation Covers Frese no.
	Right	DN15 DN20 DN25	38-0865
	Left		38-0866
	Right	DN25L	38-0867
	Left		38-0868

*MODULA insulation covers are for MODULA with OPTIMA Compact PICVs only. For more details please refer to the MODULA Insulation Covers technote.

Hose Connection	Dimension	Frese no.
	DN15	46-9012

Frese Flexible Hose	Dimension	Lenght [mm]	Frese no.
	DN15	300	48-0050
		450	48-0051
		600	48-0052
	DN20	300	48-0053
		450	48-0054
		600	48-0055
	DN25	300	48-0056
		450	48-0057
		600	48-0058

For more details please refer to the Frese Flexible Hose technote.

Specification Text - MODULA

The valve system shall combine a dynamic or a static balancing valve with a fixed 80 mm, 130 mm or 170 mm distance supply/return component.

The bypass unit shall have two integral isolation valves and a PT Drain or PT strainer on the supply side.

The bypass unit shall have a pressure class of PN25.

The medium temperature range shall be 0°C to 120°C.

All material shall be DZR brass, CW602N.

Frese A/S assumes no responsibility for errors, if any, in catalogues, brochures, and other printed matter. Frese A/S reserves the right to modify its products without prior notice, including already ordered products, if this does not alter existing specifications. All registered trademarks in this material are the property of Frese A/S. All rights reserved.

Vexve Denmark | Frese A/S
Tel: +45 58 56 00 00