

## Frese MODULA Bypass Unit

### Description

Frese 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.

Frese MODULA integrates one of the following Frese valve solutions:

- Frese OPTIMA Compact (Pressure Independent Control Valve - PICV)
- Frese ALPHA (Dynamic Flow Limiting Valve)
- Frese SIGMA Compact (Externally Adjustable Dynamic Flow Limiting Valve)
- Frese EVA (combined Dynamic Flow Limiting and 2 Port On/off Valve)
- Frese PV Compact (Adjustable Differential Pressure Control Valve)
- Frese STBV range (Adjustable Manual Balancing Valve)

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

### Benefits

The Frese MODULA Bypass Unit combines the many benefits of the Frese OPTIMA Compact, ALPHA, SIGMA Compact, EVA, PV Compact and STBV 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 6 and 7)

For further information on the Frese OPTIMA Compact, ALPHA, SIGMA Compact, EVA, PV Compact and STBV solutions, please refer to the relevant Technotes.



### Features

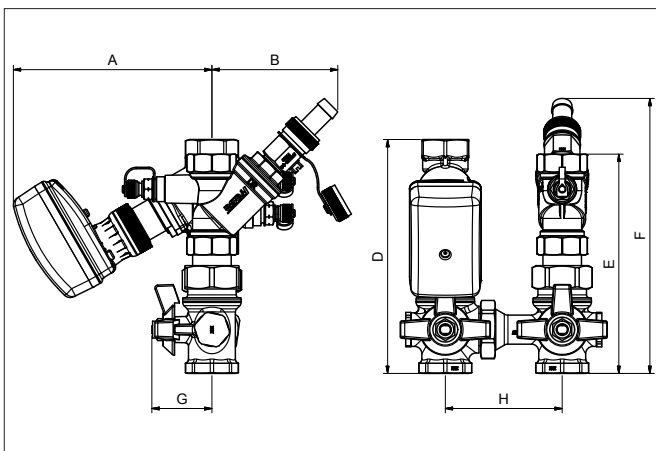
- Available in DN15, DN20 and DN25
- Available with 80 mm, 130 mm or 170 mm supply/return centres
- Integrated union joints for easy valve alignment
- Two T-handle isolation valves for flow, return and bypass
- Full flow valves on flow and return
- Spindle extensions available
- Combinations with strainer,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

# Frese MODULA Bypass Unit

## Technical data

**Material:** DZR Brass, CW602N  
**O-rings:** EPDM  
**Pressure class:** PN20  
**Medium temperature range:** 0°C to 120°C

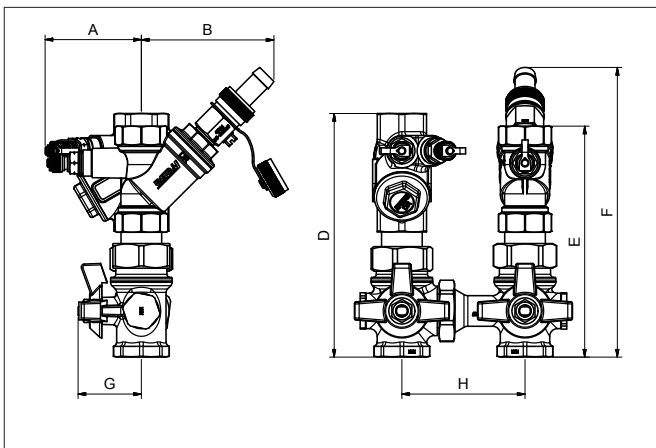
## Dimensions



### OPTIMA Compact MODULA

mm	DN15	DN20	DN25	DN25L
<b>A</b>	117	117	120	135
<b>B</b>	74	86	92	92
<b>D*</b>	155/175	160/180	164/184	181/201
<b>E</b>	136	150	165	165
<b>F</b>	176	188	204	204
<b>G*</b>	41/88			
<b>H</b>	80/130/170			

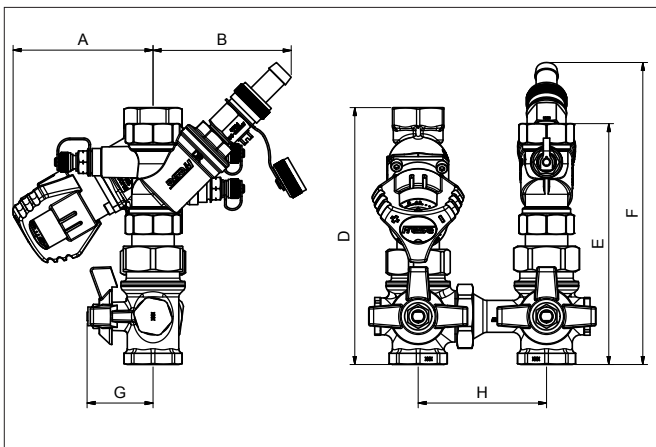
\*) Std Handle/**Ext Handle**



### ALPHA MODULA

mm	DN15	DN20	DN25
<b>A</b>	63/102 (1"PT/2"PT)		
<b>B</b>	74	86	92
<b>D</b>	157	158	167
<b>E</b>	136	150	165
<b>F</b>	176	188	204
<b>G*</b>	41/88		
<b>H</b>	80/130/170		

\*) Std Handle/**Ext Handle**



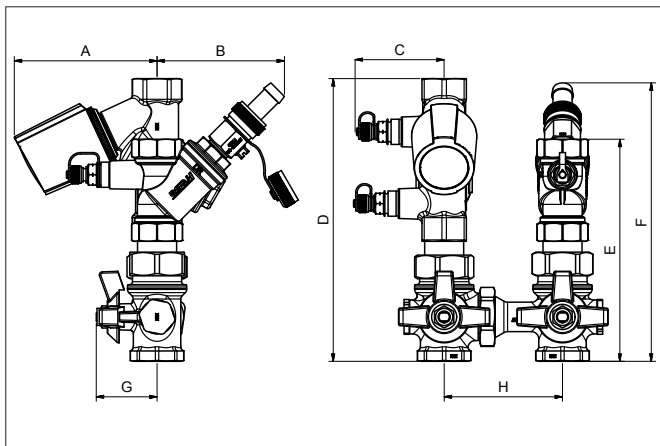
### SIGMA Compact MODULA

mm	DN15	DN20	DN25
<b>A</b>	87	87	110
<b>B</b>	74	86	92
<b>D</b>	155	160	166
<b>E</b>	136	150	165
<b>F</b>	176	188	204
<b>G*</b>	41/88		
<b>H</b>	80/130/170		

\*) Std Handle/**Ext Handle**

# Frese MODULA Bypass Unit

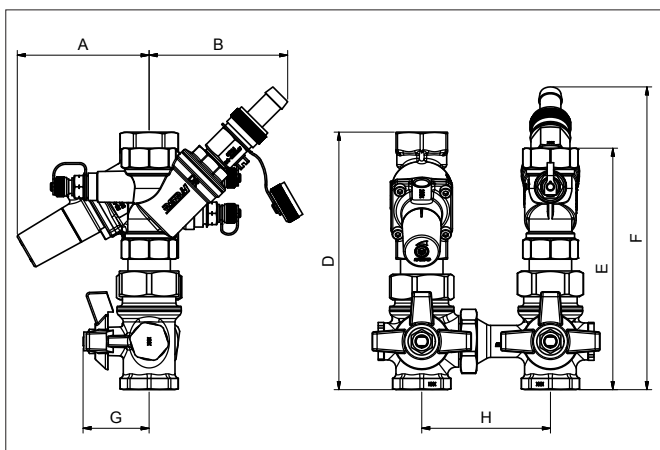
## Dimensions



### EVA MODULA

mm	DN15	DN20	DN25
<b>A</b>	97		
<b>B</b>	74	86	92
<b>C</b>	61		
<b>D</b>	182	191	202
<b>E</b>	136	150	165
<b>F</b>	176	188	204
<b>G*</b>	41/88		
<b>H</b>	80/130/170		

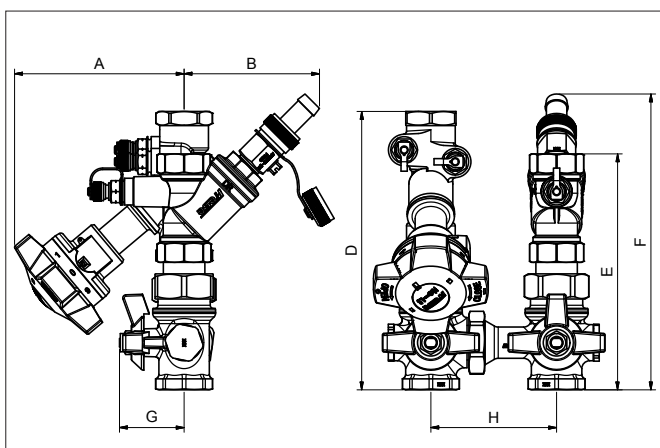
\*) Std Handle/**Ext Handle**



### PV Compact MODULA

mm	DN15	DN20	DN25
<b>A</b>	82	82	134
<b>B</b>	74	86	92
<b>D</b>	155	160	166
<b>E</b>	136	150	165
<b>F</b>	176	188	204
<b>G*</b>	41/88		
<b>H</b>	80/130/170		

\*) Std Handle/**Ext Handle**



### STBV MODULA

mm	DN15	DN20	DN25
<b>A</b>	112	108	125
<b>B</b>	74	86	92
<b>D</b>	167	177	183
<b>E</b>	136	150	165
<b>F</b>	176	188	204
<b>G*</b>	41		
<b>H</b>	80/130/170		

\*) Only std. handle possible

# Frese MODULA Bypass Unit

## Product Code Builder

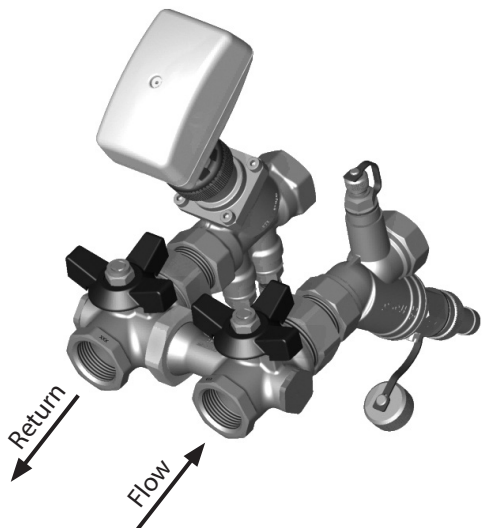
58	MODULA					
2	Frese ALPHA					
3	Frese EVA					
7	Frese OPTIMA Compact					
8	Frese SIGMA Compact					
9	Frese PV Compact					
10	Frese STBV					
1	DN15 - 80mm	4	DN15 - 130mm	7	DN15 - 170mm	
2	DN20 - 80mm	5	DN20 - 130mm	8	DN20 - 170mm	
3	DN25L - 80mm	6	DN25L - 130mm	9	DN25L - 170mm	
A	DN25 - 80mm	B	DN25 - 130mm	C	DN25 - 170mm	
1	T-piece with 1" P/T-plug + drain and hose					
2	T-piece with 1" P/T-plug + drain, hose and extension handle					
3	Strainer with 1" P/T-plug + drain and hose					
4	Strainer with 1" P/T-plug + drain, hose 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/plug and extension handle					
A	T-piece with 1" P/T-plug + drain and hose (Left hand mount)					
B	T-piece with 1" P/T-plug + drain, hose and extension handle (Left hand mount)					
C	Strainer with 1" P/T-plug + drain and hose (Left hand mount)					
D	Strainer with 1" P/T-plug + drain, hose 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/plug 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)				Kvs (for STBV)	
C	5,0 mm stroke (for OPTIMA Compact)					
D	5,5 mm stroke (for OPTIMA Compact)					
58	X	X	X	X	X	X
	Valve	Size/Center	Flow side component	Valve plug	Flow/Pressure	PICV stroke/static Kvs

Example of product code: **587-12-1-LA**

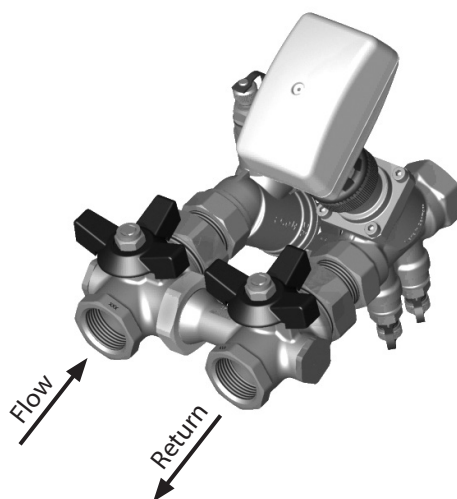
# Frese MODULA Bypass Unit

## Versions

Right hand version

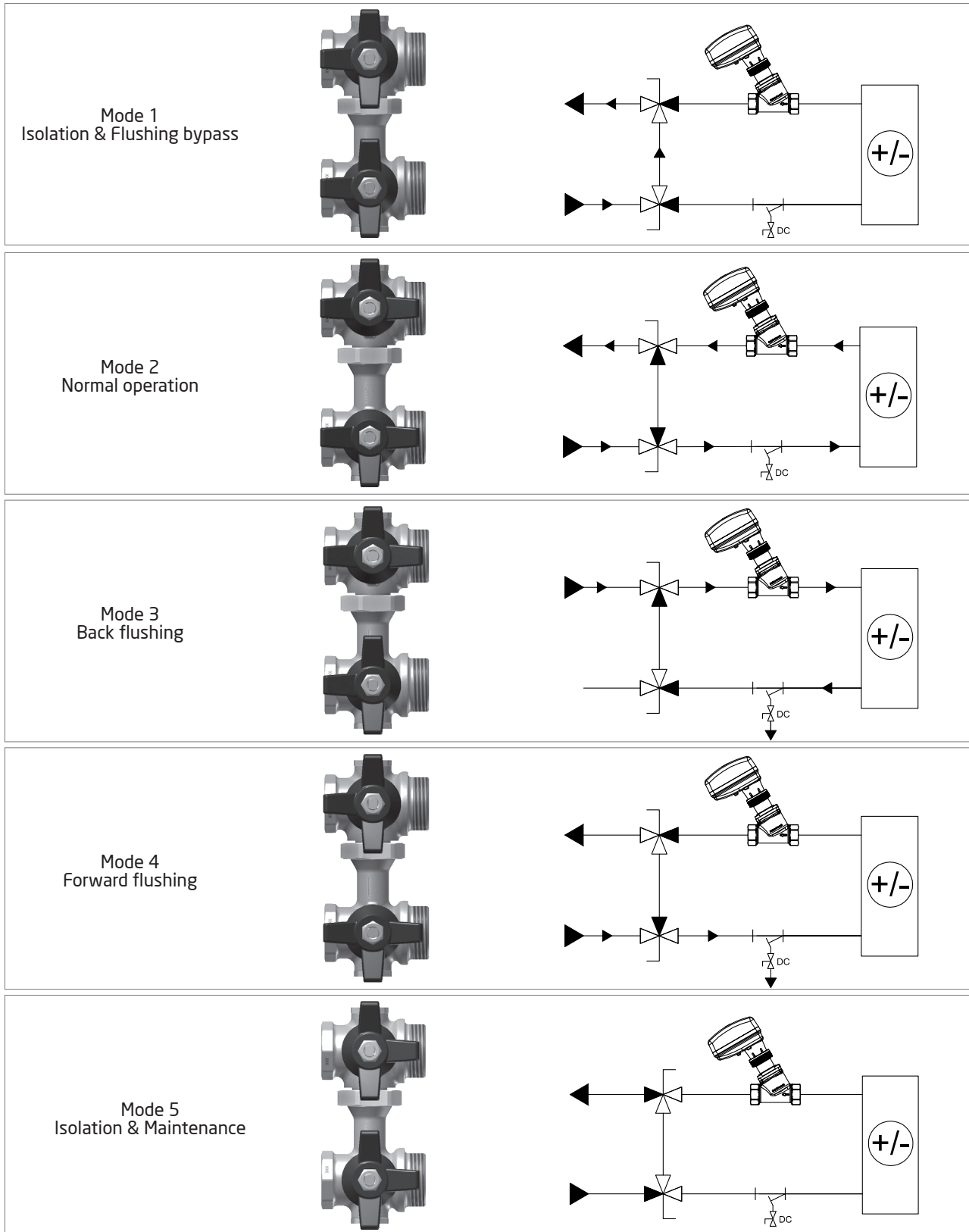


Left hand version



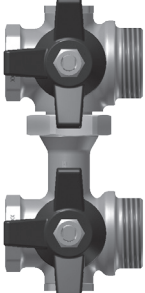
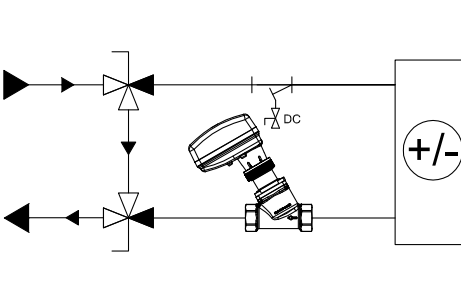

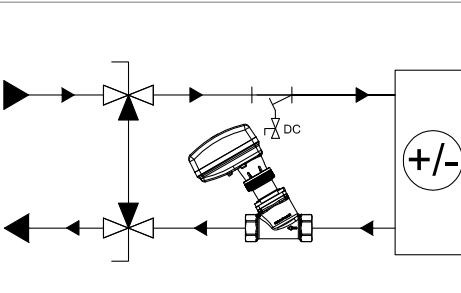
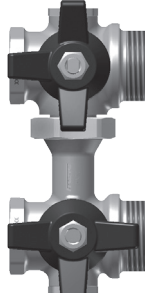
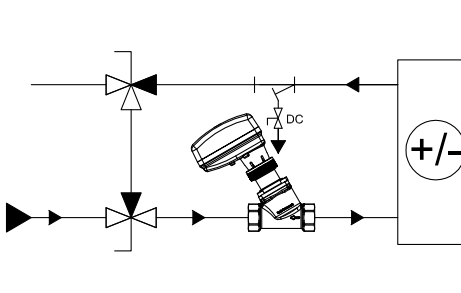

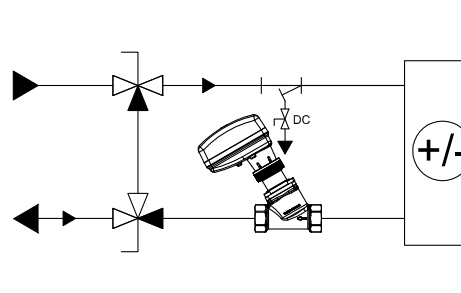
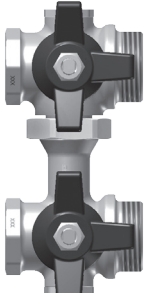
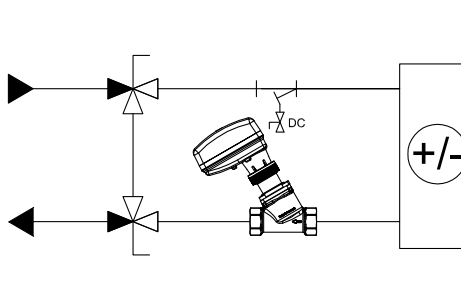
## Frese MODULA Bypass Unit

### Modes of Operation - Right Hand Version



# Frese MODULA Bypass Unit

## Modes of Operation - Left Hand Version

<p>Mode 1 Isolation &amp; Flushing bypass</p>		
<p>Mode 2 Normal operation</p>		
<p>Mode 3 Back flushing</p>		
<p>Mode 4 Forward flushing</p>		
<p>Mode 5 Isolation &amp; Maintenance</p>		



## Frese MODULA Bypass Unit

### MODULA Types (shown with standard handles)

Frese OPTIMA Compact MODULA



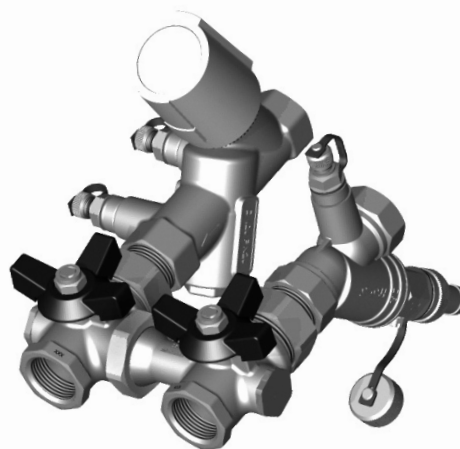
Frese ALPHA MODULA



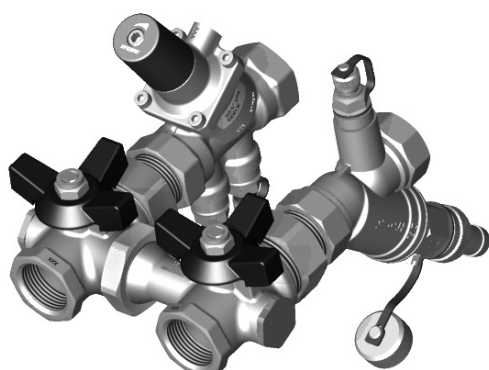
Frese SIGMA Compact MODULA



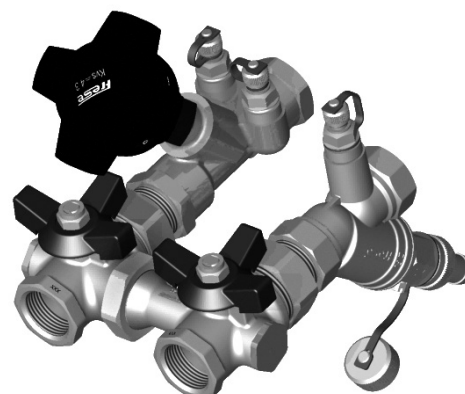
Frese EVA MODULA



Frese PV Compact MODULA



Frese STBV MODULA





## Frese MODULA Bypass Unit

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### Specification Text - Frese MODULA

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The valve system shall combine a dynamic or a static balancing valve with a fixed 80mm, 130mm or 170mm 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 PN20.

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

All material shall be DZR brass, CW602N.

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