

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 one of the following Frese valve solutions:

- OPTIMA Compact (Pressure Independent Control Valve PICV)
- ALPHA (Dynamic Flow Limiting Valve)
- SIGMA Compact (Externally Adjustable Dynamic Flow Limiting Valve)
- EVA (combined Dynamic Flow Limiting and 2 Port On/ off Valve)
- 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 MODULA Bypass Unit combines the many benefits of the 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 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
- P/T plug on the flow for measuring the DP across the terminal unit
- · Metering station for flow verification

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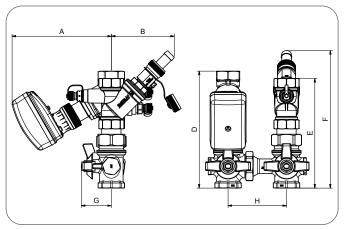


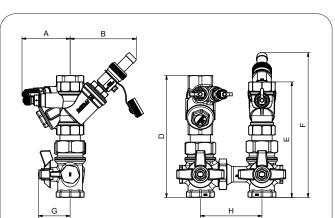
Technical data

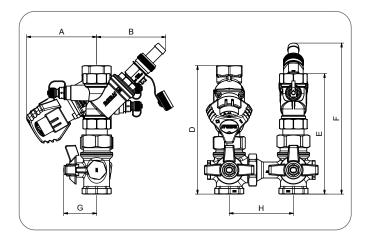
Material: DZR Brass, CW602N Filter: Stainless Steel

EPDM O-rings: **Pressure class:** PN25 **Strainer mesh:** 32 (0.5 mm) 0°C to 120°C Medium temperature range:

Dimensions







MODULA · OPTIMA Compact

mm	DN15	DN20	DN25	DN25L		
Α	117	117	120	135		
В	74	86	92	92		
D*	155/ 175	160/ 180	164 /184	181/201		
Е	136	150	165	165		
F	176	188	204	204		
G*	41/ 88					
Н	80/130/170					

*) Std Handle/Ext Handle

MODULA · ALPHA

mm	DN15	DN20	DN25				
Α	63/ 102 (1"PT/ 2"PT)						
В	74	86	92				
D	157	158	167				
Е	136	150	165				
F	176	188	204				
G*	41/88						
Н	80/130/170						

*) Std Handle/Ext Handle

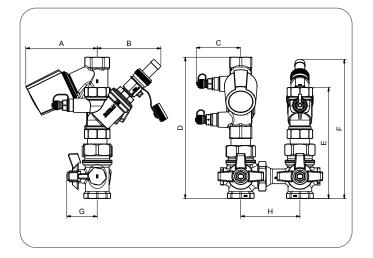
MODULA · SIGMA Compact

mm	DN15	DN20	DN25				
Α	87	87	110				
В	74	86	92				
D	155	160	166				
Е	136	150	165				
F	176	188	204				
G*	41/ 88						
Н	80/130/170						

*) Std Handle/Ext Handle



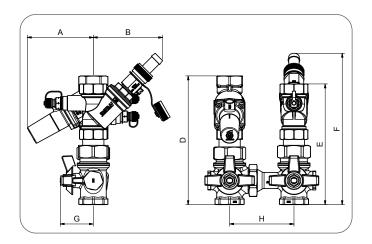
Dimensions



MODULA · EVA

mm	DN15	DN20	DN25				
Α		97					
В	74	86	92				
С		61					
D	182	191	202				
Е	136	150	165				
F	176	188	204				
G*	41/88						
Н	80/130/170						

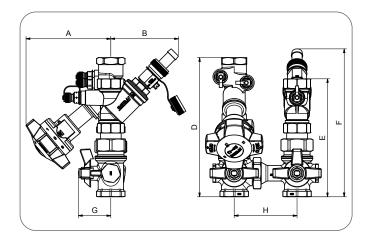
*) Std Handle/Ext Handle



MODULA · PV Compact

mm	DN15	DN20	DN25				
Α	82	82	134				
В	74	86	92				
D	155	160	166				
Е	136	150	165				
F	176	188	204				
G*	41/88						
Н	80/130/170						

*) Std Handle/Ext Handle



MODULA · Frese STBV

mm	DN15	DN20	DN25				
Α	112	108	125				
В	74	86	92				
D	167	177	183				
Е	136	150	165				
F	176	188	204				
G*	41						
Н	80/130/170						

^{*)} Only std. handle possible



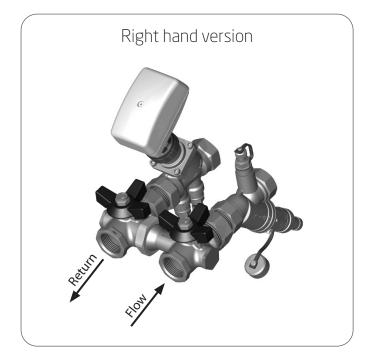
Product Code Builder

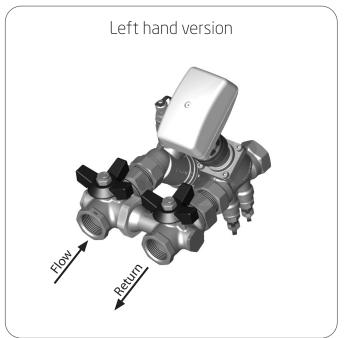
								58	MODULA					
								2	ALPHA					
						-	3	EVA						
							-		OPTIMA Compact					
						-		OPTIMA Compact Veriflow*						
							-	8	SIGMA Compact					
							-	<u> </u>	PV Compact					
							-	10	Frese STBV					
											D1145 400			
							-	1	DN15 - 80mm	4	DN15 - 130mn		7	DN15 - 170mm
							-	2	DN20 - 80mm	5	DN20 - 130mn		8	DN20 - 170mm
							-	3	DN25L - 80mm	6	DN25L - 130m		9	DN25L - 170mm
								Α	DN25 - 80mm	В	DN25 - 130mn	n	С	DN25 - 170mm
							-	1	T-piece with 1" P/T-plug*** +					
							-	2	T-piece with 1" P/T-plug + dr			n handle		
							-	3	Strainer with 1" P/T-plug + di					
							_	4	Strainer with 1" P/T-plug + di		se and extension	n handle		
							_	5	T-piece with 1" P/T- plug/plu					
							_	6	T-piece with 1" P/T- plug/plu		extension handle	e		
							_	7	Strainer with 1" P/T- plug/plu					
							_	8	Strainer with 1" P/T- plug/plu					
							_	9	Strainer extended with 1" P/					
							_	10	Extended T-piece with 1" P/T				ndle	
							_	A	T-piece with 1" P/T-plug + dr					
			В						T-piece with 1" P/T-plug + dr				nand r	mount)
							_	C	Strainer with 1" P/T-plug + di					
				D					Strainer with 1"P/T-plug + di			n handle (Left	hand	mount)
				<u>E</u>					T-piece with 1"P/T-plug/plug					
							_	F	T-piece with 1" P/T-plug/plug and extension handle (Left hand mount)					
							_	G	Strainer with 1" P/T-plug/plu					
							-	Н	Strainer with 1" P/T-plug/plu					
							-	J	Strainer extended with 1" P/					
							-	K	Extended T-piece with 1" P/T					
							-	X	Coupling with male connect					
			_					Υ	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					
									High					
								A	2,5 mm stroke (for OPTIMA C	ompa	-+)			
							-		5,0 mm stroke (for OPTIMA C				K,	vs (for STBV)
							-		5,5 mm stroke (for OPTIMA C				IXV	, s (101 S1D4)
						[,	Jinpat	,			
							_	A	Couplings on piping side		1055 005	0.0451/ "		CALVA
							_	<u>B</u>	Metering station DN15UL Kv					
							-		Metering station DN15L Kvs					
							-	D	Metering station DN15 Kvs V					
							-	E	Metering station DN20 Kvs V					
							-	F	Metering station DN25 Kvs Venturi 9.72 - 0.258-0.603 l/s, (Kv total: 13.61)** Metering station DN15XUL Kvs Venturi 0.263 - 0.0075-0.023 l/s, (Kv total: 0.25)**					
\dashv		<u></u>						G	Metering station DN 15XUL K	vs ven	turi 0.263 - 0.00	7/3-U.U23 I/S, (K	v tota	II. U.ZO)""
58	X	Х	X	X	X	X	X							
							_	*) V	Vhen using the KV-sigr	nal fo	r flow measu	urement, th	e ac	curacy is ±5% (See
							tiol		TIMA Compact Veriflov					•
			Ħ			S	sta		Tolerance of nominal K			-		
			Jen			\$	ng							
			por			tic	eri	***) In combination with a	a met	ering statio	n tne T-piec	e is v	without the P/T plug.
			side component		ır.	stroke/static Kvs	Met	The	e flow ranges are a reco	nmm,	andation onl	v The mess	iiran	nent of higher flows is
4		ter	e CC	ρŢ	w/Pressure)ke	J/sk		_			•		_
DDULA		e/Center	sid	plug	Pre	strc	ling		wed, but the pressure I			a metering	stati	on must be considered
8	Ve	/e/	×	<u>×</u>) N	OPTIMA Compact Veriflow Technote for detailed specifications) ***) 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



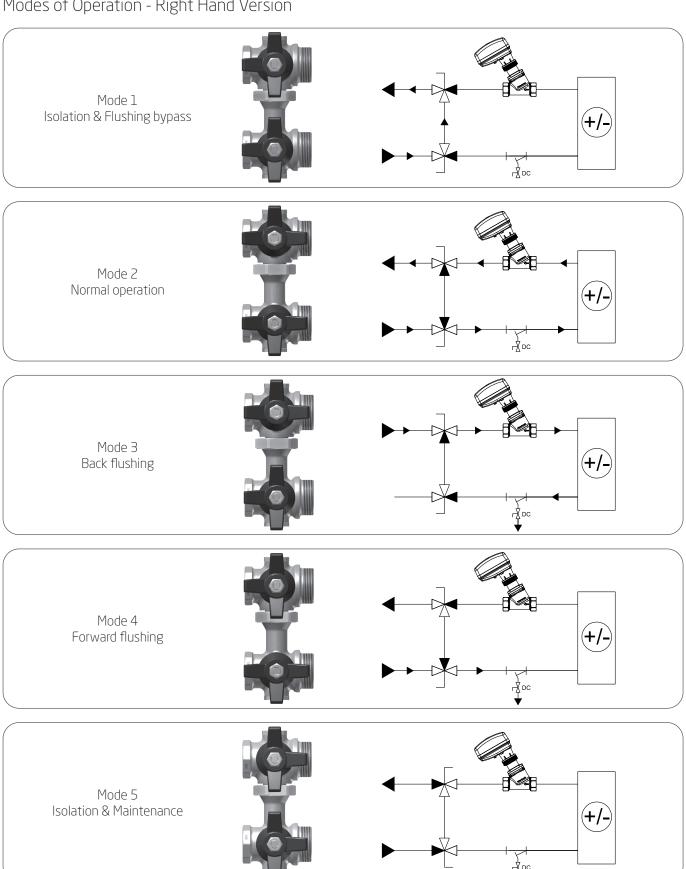
Versions







Modes of Operation - Right Hand Version





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

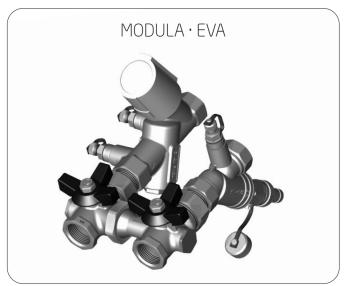


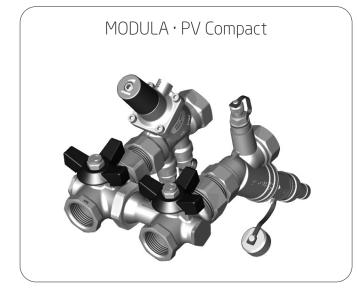
MODULA Types (shown with standard handles)









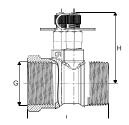






Accessories

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	38-0865
	Left	DN25	38-0866
	Right	DN25L	38-0867
	Left	DINZOL	38-0868

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

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

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