



Section 20

HVAC Valves & Products

Herz Radiator Valves Type DR-T-90

Radiator Control valves with Pre-setting Function. Suitable for Conversion to Thermostatic Operation.



MATERIALS	
PART	MATERIAL
Body	Nickel Plated Brass
Seat	EPDM
Cone	Brass
Handwheel	ABS

SPECIFICATIONS	
Thread	BSP
MAX Working Temperature	120°C
MAX Working Pressure	16 Bar

Handwheel – Straight					
CODE	SIZE	PART No.	FACE TO FACE	HEIGHT	APPROX KG
HVRHWSTR/015	15	1682391	83	61	0.306
HVRHWSTR/020	20	1682392	98	61	0.405



Handwheel – Angle					
CODE	SIZE	PART No.	END TO CENTRE	HEIGHT	APPROX KG
HVRHWANG/015	15	1682491	54	56	0.278
HVRHWANG/020	20	1682492	63	56	0.365
HVRHWANG/025	25	1682473	74	65	0.412



Lockshield – Straight					
CODE	SIZE	PART No.	FACE TO FACE	HEIGHT	APPROX KG
HVRLSSTR/015	15	1682381	83	61	0.306
HVRLSSTR/020	20	1682382	98	61	0.405



Lockshield – Angle					
CODE	SIZE	PART No.	END TO CENTRE	HEIGHT	APPROX KG
HVRLSANG/015	15	1682481	54	56	0.278
HVRLSANG/020	20	1682482	63	56	0.365
HVRLSANG/025	25	1682486	74	65	0.412

Herz Radiator Valves Type DR-T-90

Thermostatic – Straight

CODE	SIZE	PART No.	FACE TO FACE	HEIGHT	APPROX KG
HVRTHSTR/015	15	1772391	83	38	0.306
HVRTHSTR/020	20	1772392	98	44	0.405



Thermostatic – Angle

CODE	SIZE	PART No.	END TO CENTRE	HEIGHT	APPROX KG
HVRTHANG/015	15	1772491	54	33	0.306
HVRTHANG/020	20	1772492	63	38	0.405



Thermostatic Head – Fits all the above valves

CODE	SIZE	PART No.	DIA	HEIGHT	APPROX KG
HVT/1723006	Fits All	1723006	48	86	0.127



Thermostatic Head – Hercules robust type. Anti-Vandalism, Anti-Theft & Unauthorised Operation. Fits all the above valves

CODE	SIZE	PART No.	END TO CENTRE	HEIGHT	APPROX KG
HVT/1986010	Fits All	1986010	52	86	0.236



Special tools used for mounting & setting. Set point is locked & sealed

Herz Isolating Regulating Valve Fixed Orifice Screwed ends

Herz Fig 4017M with Digital Presetting Display in Handwheel



MATERIALS	
PART	MATERIAL
Body	DR Brass
Balancing cone	DR Brass
Disc O-ring	EPDM
Disc Stem	DR Brass
Stem O-ring	EPDM
Stem	Brass
Bonnet	DR Brass
Handwheel	ABS
Test point / plug	DR Brass

SPECIFICATIONS	
Thread	BSP
Design	BS7350
MAX Working Temperature	120°C
MAX Working Pressure	20 Bar

Herz 4017M Balancing Valve Fixed Orifice					
CODE	SIZE	FACE TO FACE	HEIGHT	HANDWHEEL DIA	APPROX KG
HVS/14017-11	15 Low Flow	83	97	71	0.5
HVS/14017-21	15 Medium Flow	83	97	71	0.5
HVS/14017-01	15	83	97	71	0.5
HVS/14017-02	20	91	100	71	0.56
HVS/14017-03	25	100	110	71	0.86
HVS/14017-04	32	114	118	71	1.12
HVS/14017-05	40	125	130	71	1.7
HVS/14017-06	50	146	146	110	2.3

Herz Isolating Regulating Valve Variable Orifice Screwed ends

Herz Fig 4217GM with Digital Presetting Display in Handwheel



MATERIALS	
PART	MATERIAL
Body	DR Brass
Balancing cone	DR Brass
Disc O-ring	EPDM
Disc Stem	DR Brass
Stem O-ring	EPDM
Stem	DR Brass
Bonnet	DR Brass

SPECIFICATIONS	
Thread	BSP
Design	BS7350
MAX Working Temperature	110°C
MAX Working Pressure	16 Bar

Herz 4217GM Balancing Valve Variable Orifice					
CODE	SIZE	FACE TO FACE	HEIGHT	HANDWHEEL DIA	APPROX KG
HVS/1421701	15	100	97	71	0.82
HVS/1421702	20	100	97	71	0.84
HVS/1421703	25	120	107	71	1.28
HVS/1421704	32	140	112	71	1.84
HVS/1421705	40	150	112	71	2.26
HVS/1421706	50	165	136	110	3.82
HVS/1421707	65	190	138	110	5.16
HVS/1421708	80	210	142	110	6.96

Herz Isolating Regulating Valve Variable Orifice Flanged Ends

Herz Fig 4218 GMF with Digital Presetting Display in Handwheel

MATERIALS	
PART	MATERIAL
Body	Cast Iron GKL250
Balancing cone	CI EPDM Coated
Stem	Brass/SS
Stem O-ring	EPDM
Bonnet	Cast Iron GKL250
Handwheel	DI
Test point / plug	DR Brass

SPECIFICATIONS	
Flanged	PN16
Design	BS7350
MAX Working Temperature	130°C
MAX Working Pressure	16 Bar



Herz 4218 GMF Balancing Valve Variable Orifice						
CODE	SIZE	FACE TO FACE	HEIGHT	HANDWHEEL DIA	APPROX KG	KVS
HVS/14218 47 GMF	65	290	145	110	14.4	60.3
HVS/14218 48 GMF	80	310	145	110	18	68.5
HVS/14218 49 GMF	100	350	190	190	30	99.5
HVS/14218 50 GMF	125	400	230	190	48	186.58
HVS/14218 51 GMF	150	480	264	190	67	279.05

Herz Fig 4218 GF with Digital Presetting Display in Handwheel

MATERIALS	
PART	MATERIAL
Body	Cast Iron GKL250
Balancing cone	CI EPDM Coated
Stem	Brass/SS
Stem O-ring	EPDM
Bonnet	DR Bass
Handwheel	ABS
Test point / plug	DR Brass

SPECIFICATIONS	
Flanged	PN16
Design	BS7350
MAX Working Temperature	130°C
MAX Working Pressure	16 Bar

Herz 4218 GF Balancing Valve Variable Orifice						
CODE	SIZE	FACE TO FACE	HEIGHT	HANDWHEEL DIA	APPROX KG	KVS
HVS/14218 83 GF	100	350	235	175	39	165
HVS/14218 84 GF	125	400	260	265	69	241
HVS/14218 85 GF	150	480	310	265	91	372
HVS/14218 86 GF	200	600	400	450	181	704



Frese Alpha Automatic Balancing Valves

Frese Alpha Dynamic Balancing Valve Screwed ends



MATERIALS	
PART	MATERIAL
Body	DR Brass
Cap	DR Brass
Orings	EPDM
Cartridge	Nickel Plated brass
Diaphragm	HNBR
Spring	Stainless Steel
Test Points	DR Brass

SPECIFICATIONS	
Ends	ISO228
Diff. Pressure Range	7-600 kPa
MAX Working Temperature	120°C
Pressure Class	25 Bar



Frese Alpha Valve Type 49 c/w Cartridge & Orifice					
CODE	SIZE	FACE TO FACE	HEIGHT	FLOW L/S	APPROX KG
FVA/015	15	77	94	0.007-0.680	0.5
FVA/020	20	77	94	0.007-0.680	0.5
FVA/025	25	77	94	0.007-0.680	0.6
FVA/025L	25L	123	126	0.188-3.154	1.45
FVA/032	32	123	126	0.188-3.154	1.45
FVA/040	40	123	126	0.188-3.154	1.45
FVA/050	50	123	126	0.188-3.154	1.6

Frese Alpha Valve as above but with Ball Valve & Union					
CODE	SIZE	FACE TO FACE	HEIGHT	FLOW L/S	APPROX KG
FVAB/015	15	129	94	0.007-0.680	0.87
FVAB/020	20	129	94	0.007-0.680	0.87
FVAB/025	25	129	94	0.007-0.680	0.87
FVAB/025L	25L	195	126	0.188-3.154	2.54
FVAB/032	32	195	126	0.188-3.154	2.54
FVAB/040	40	200	126	0.188-3.154	2.54

NB: Code refers to body only.

Frese Alpha Automatic Balancing Valve Wafer Ends

MATERIALS	
PART	MATERIAL
Body	DI GGG-40
Orings	EPDM
Cartridge Body	Nickel Plated brass
Diaphragm	HNBR
Spring	Stainless Steel
Test Points	DR Brass

SPECIFICATIONS	
Ends	Wafer
Diff. Pressure Range	13-600 kPa
MAX Working Temperature	110°C
Pressure Class	25 Bar



Frese Alpha Wafer Valve Type 49 c/w Cartridge & Orifice					
CODE	SIZE	FACE TO FACE	HEIGHT	FLOW	APPROX KG
FVA/50W	50	170	218	3,820-45,000	3.41
FVA/65	65	170	237	3,820-45,000	4.91
FVA/80	80	170	249	3,820-45,000	4.79
FVA/100	100	170	281	3,820-90,000	6.9
FVA/150	150	170	334	3,820-180,000	11.73

Frese 'S' Automatic Balancing Valve with Externally Adjustable Orifice

MATERIALS	
PART	MATERIAL
Body	DR Brass
DP Controller	PPS 40% glass
Orings	EPDM
Flow Setting	PPO
Diaphragm	HNBR
Spring	Stainless Steel
Test Points	DR Brass

SPECIFICATIONS	
Ends	ISO228
Diff. Pressure Range	8-400 kPa
MAX Working Temperature	120°C
Pressure Class	25 Bar



Frese 'S' Valve Hi Pressure for Differentials 16-400 kPa					
CODE	SIZE	FACE TO FACE	HEIGHT	FLOW L/S	APPROX KG
FS/015HP	15	96	96	0.011-0.306	0.9
FS/020HP	20	97	98	0.018-0.512	0.91
FS/025HP	25	103	102	0.025-0.653	1
FS/032HP	32	132	115	0.060-1.328	1.52
FS/040HP	40	144	119	0.049-2.067	2.55
FS/050HP	50	155	126	0.122-2.868	3.2

Frese 'S' Valve Low Pressure for Differentials 8-250 kPa					
CODE	SIZE	FACE TO FACE	HEIGHT	FLOW L/S	APPROX KG
FS/015LP	15	96	96	0.011-0.306	0.9
FS/020LP	20	97	98	0.018-0.512	0.91
FS/025LP	25	103	102	0.025-0.653	1

Frese Optima Modulating Control & Automatic Balancing Valve



MATERIALS	
PART	MATERIAL
Housing & Flow Setting	DR Brass
DP Controller	PPS 40% Glass
Orings	EPDM
Diaphragm	HNBR
Spring	Stainless Steel
Test Points	DR Brass

SPECIFICATIONS	
Ends	BSP
Diff. Pressure Range	400 kPa
MAX Working Temperature	120°C
Pressure Class	25 Bar

Frese Optima Valve C/W Actuator						
CODE (HIGH FLOW)	SIZE	FACE TO FACE	HEIGHT	HIGH FLOW L/H	LOW FLOW L/H	APPROX KG
FVOHF/015	15	65	145	244-1724	78-625	0.9
FVOHF/020	20	65	145	292-2039	131-1050	0.91
FVOHF/025	25	66	145	292-2039	231-1722	1
FVOHF/032	32	72	152	465-3056		1.52
FVOHF/040	40	87	219	2022-7105		2.55
FVOHF/050	50	93	225	2204-8586		3.2

NB: Code refers to body only.

Frese Optima Electro-Mechanical Actuators

Electrical, Modulating, Normally Closed



Technical Data-To Suit Valve Sizes 15-32mm	
Protection Class	IP 40 to EN 60529
Frequency	50/60Hz
Control Signal	0-10VDC or 3 Position
Actuating Force	250N
Running Time	75s or 150s
Manual Operation	3mm Hex Key
Weight	350g

Technical Data-To Suit Valve Sizes 40-50mm	
Protection Class	IP 54 to EN 60529
Frequency	50Hz
Control Signal	0-10VDC, or 3 Position
Actuating Force	400N
Running Time	43s or 170s
Manual Operation	Handle
Weight	600g

Frese Optima Electro Mechanical Actuators		
CODE	SUITS VALVE SIZE	OPERATION
FOA53-1049	15-32mm	24V, 0-10V (Includes conv piece)
FOA53-1045	15-32mm	24V, 0-10V
FOA53-1046	15-32mm	24V 3 position
FOA53-1052	40-50mm	24V, 0-10V
FOA53-1053	40-50mm	24V 3 position
FOA53-1054	40-50mm	230V 3 position

Frese Optima 'Compact' Modulating Control & Automatic Balancing Valve

MATERIALS	
PART	MATERIAL
Housing & Flow Setting	DR Brass
DP Controller	PPS 40% Glass
Orings	EPDM
Diaphragm	HNBR
Spring	Stainless Steel
Test Points	DR Brass

SPECIFICATIONS	
Ends	BSP
Max Diff. Pressure	400 kPa
MAX Working Temperature	120°C
Pressure Class	25 Bar

Frese Optima Compact Valve C/W Actuator							
CODE	SIZE	FACE TO FACE	HEIGHT WITH ELECTRO ACTUATOR	HEIGHT WITH THERMO ACTUATOR	HIGH FLOW L/H	LOW FLOW L/H	APPROX KG
FVOC53-1320	10	65	129	102		30-200	0.45
FVOC53-1329	10	65	129			65-370	0.45
FVOC53-1362	15	75	129	102		30-200	0.52
FVOC53-1370	15	75	129			65-370	0.52
FVOC53-1364	15	75	129	102	100-575		0.52
FVOC53-1372	20	79	129	102	100-575		0.54
FVOC53-1367	20	79	129	102	160-990		0.54
FVOC53-1368	20	79	129		220-1330		0.54
FVOC53-1373	25	100	144		600-3609		1.14
FVOC53-1374	32	104	144		550-4001		1.27

PT Plugs are optional. Size 10mm only available in M/M ends.



Frese Optima 'Compact' Thermo Actuators



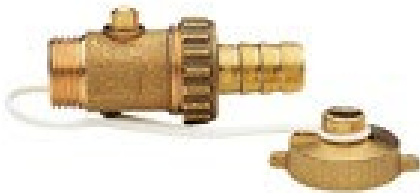
Modulating 0-10V To Suit Valve Sizes 15-32mm	
Protection Class	IP40
Frequency	50/60Hz
Control Signal	0-10V DC or 3 Pos.
Actuating Force	100N
Running Time	75s & 150s
Manual Operation	3mm Key
Weight	350g

On/Off 24V & 230V To Suit Valve Sizes 15-32mm	
Protection Class	IP54
Frequency	50/60Hz
Control Signal	0-10V DC or On/Off
Actuating Force	100N
Running Time	120s & 180S
Manual Operation	NA
Weight	100g

Frese Optima Compact Actuators			
CODE	SUITS VALVE STROKE	OPERATION	TYPE
FOA48-5520	2.5 & 4.0	ON/OFF 24V	THERMO
FOA48-5522	4.0	24V , 0-10V	THERMO
FOA48-5523	2.5	24V , 0-10V	THERMO
FOA53-1056	5.5	24V , 0-10V LIN	ELECTRO MECHANICAL
FOA53-1057	5.5	24V 3 POSITION	ELECTRO MECHANICAL
FOA53-1059	5.5	24V , 0-10V LOG	ELECTRO MECHANICAL

Bonomi Fill & Drain Cock

Complete with Hose Tail & Cap



MATERIALS	
PART	MATERIAL
Body & Ball	Brass
Seat	PTFE
Hose Tail & Cap	Brass

SPECIFICATIONS	
Thread	BSP
MAX Working Temperature	90°C
MAX Working Pressure	10 Bar

Bonomi Fill & Drain Cock SO430SO4				
CODE	SIZE	LENGTH	HEIGHT	APPROX KG
BVD/015	15	71	18	0.108

Frese Fill & Drain Cock in DZR material

MATERIALS	
PART	MATERIAL
Body & Ball	DR Brass
Seat	PTFE
Hose Tail & Cap	DR Brass

SPECIFICATIONS	
Thread	BSP
MAX Working Temperature	120°C
MAX Working Pressure	16 Bar



Frese Fill & Drain Cock 35-1137				
CODE	SIZE	LENGTH	HEIGHT	APPROX KG
FVD/015	15	71	18	0.108
FHU	Hose Union for Frese Drain Cock – ordered separately			

Herz Binder Test Points

MATERIALS	
PART	MATERIAL
Body	DR Brass
Seat	EPDM
Cap	DR Brass

SPECIFICATIONS	
Thread	BSP
MAX Working Temperature	120°C
MAX Working Pressure	16 Bar



Herz Binder Test Point 1028402					
CODE	SIZE	LENGTH	HEIGHT	APPROX KG	CAP COLOUR
HVTPR/008	8	32	NA	0.028	Red
HVTPB/008	8	32	NA	0.028	Blue

Herz Binder Test Point with Drain 1028422					
CODE	SIZE	LENGTH	HEIGHT	APPROX KG	CAP COLOUR
HVTPRDR/008	8	32	NA	0.042	Red
HVTPBDR/008	8	32	NA	0.042	Blue



Frese Extended Binder Test Points



MATERIALS	
PART	MATERIAL
Body	DR Brass
Seat	EPDM
Cap	DR Brass

SPECIFICATIONS	
Thread	BSP
MAX Working Temperature	120°C
MAX Working Pressure	16 Bar

Frese Extended Binder Test Points				
CODE	SIZE	LENGTH	HEIGHT	APPROX KG
FPT/50x8	8x50	60	NA	0.06
FPT/100x8	8x100	110	NA	0.08

Itap Manual Air Release valve



MATERIALS	
PART	MATERIAL
Body	Brass Nickel Plated
Oring	PTFE
Handle	ABS

SPECIFICATIONS	
Thread	BSP
MAX Working Temperature	110°C
MAX Working Pressure	10 Bar

Air Release Valve ITAP 194				
CODE	SIZE	LENGTH	HEIGHT	APPROX KG
HVAR/008	8	33	NA	0.0234

Herz Orifice Plate Stainless Steel Body



MATERIALS	
PART	MATERIAL
Body	SS A276 304
Extensions	SS A276 304
Test Points	DR Brass

SPECIFICATIONS	
Design	BS1042
Flow Accuracy to	BS7350
MAX Working Temperature	120°C
MAX Working Pressure	16 Bar

Herz Orifice Plate HV2740				
CODE	SIZE	FACE TO FACE	HEIGHT Incl. TP	APPROX KG
HOP/065	65	20	158	1.9
HOP/080	80	20	166	2.2
HOP/100	100	20	176	2.7
HOP/125	125	20	191	3.2
HOP/150	150	20	204	3.8
HOP/200	200	20	232	5.5
HOP/250	250	20	258	7
HOP/300	300	20	287	10