



VALVES & ACTUATORS | CONTROLS & METERS | PUMPS & PRESSURISATION



PRODUCT CATALOGUE



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ABB

B METERS
metering solutions

Bailey & Mackey Ltd

BANICO
controls

BELIMO

**BLACK /
TEKNIGAS**

COSTER

DAB
WATER TECHNOLOGY

Danfoss

**DISTECH
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EBARA

Electro Controls

ESBE

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SENTIENT CONTROL SOLUTIONS

SIEMENS

SOCIA
A WATTS Brand

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**S&S
NORTHERN**

**TITAN
PRODUCTS**

TREND

VAISALA

WATTS

wilo

I. Damper Actuators

I.



Damper Actuators

Part No	Torque (Nm)	Voltage (v)	Features
LM24A	5	24	2- or 3-position
LM24A-S	5	24	2- or 3-position c/w aux switch
LM24A-SR	5	24	2-10v output
LM230A	5	230	2- or 3-position
LM230A-S	5	230	2- or 3-position c/w aux switch
NM24A	10	24	2- or 3-position
NM24A-S	10	24	2- or 3-position c/w aux switch
NM24A-SR	10	24	2-10v output
NM230A	10	230	2- or 3-position
NM230A-S	10	230	2- or 3-position c/w aux switch
SM24A	20	24	2- or 3-position
SM24A-S	20	24	2- or 3-position c/w aux switch
SM24A-SR	20	24	2-10v output
SM230A	20	230	2- or 3-position
SM230A-S	20	230	2- or 3-position c/w aux switch
GM24A	40	24	2- or 3-position
GM24A-SR	40	24	2-10v output
GM230A	40	230	2- or 3-position



LM24A-S



Failsafe Damper Actuators

Part No	Torque (Nm)	Voltage (v)	Features
LF24	4	24	2-pos spring return
LF24-S	4	24	2-pos spring return c/w aux switch
LF24-SR	4	24	2-10v output spring return
LF230	4	230	2-pos
LF230-S	4	230	2-pos spring return c/w aux switch
NF24A	10	24	2-pos spring return
NF24A-S2	10	24	2-pos spring return c/w 2x aux switch
NF24A-SR	10	24	2-10v output spring return
NFA	10	24-240	2-pos spring return
NFA-S2	10	24-240	2-pos spring return c/w 2x aux switch
SF24A	20	24	2-pos spring return
SF24A-S2	20	24	2-pos spring return c/w 2x aux switch
SF24A-SR	20	24	2-10v output spring return
SFA	20	24-240	2-pos spring return
SFA-S2	20	24-240	2-pos spring return c/w 2x aux switch
GK24A-1	40	24	2-pos electrical failsafe
GK24A-SR	40	24	2-10v output electrical failsafe



SF24A-S2



Damper Accessories

Part No	Description	Compatibility
S1A	1x SPDT auxillary switch	Belimo Damper & Rotary Actuators
S2A	2x SPDT auxillary switch	Belimo Damper & Rotary Actuators
P140A	140Ω feedback potentiometer	Belimo Damper & Rotary Actuators
SGF24	0-100% positioner (panel)	Belimo Dampers ...SR (Modulating)
SGA24	0-100% positioner (surface)	Belimo Dampers ...SR (Modulating)
SGE24	0-100% positioner (din rail)	Belimo Dampers ...SR (Modulating)
KH8	Crank arm 6.2mm slot	Belimo Dampers
KG10A	Straight ball joint (10mm)	Belimo Dampers
KG8	90° angle ball joint (8mm)	Belimo Dampers
AV8-25	Spindle extension (250mm)	Belimo Dampers



S2A



ElectroControls**Damper Actuators**

Part No	Description	Torque (Nm)	Supply
E08-230	2/3 position damper actuator	8	230v
E08-24	2/3 position damper actuator	8	24v
E08-24M	0-10v modulating damper actuator	8	24v
E16-230	2/3 position damper actuator	16	230v
E16-24	2/3 position damper actuator	16	24v
E16-24M	0-10v modulating damper actuator	16	24v

**E08-24****Damper Actuators**

Part No	Joventa Part No	Torque (Nm)	Features
M9108-AGA-1N	DAS1	8	24v, on/off
M9108-AGC-1N	DAS1.S	8	24v, on/off, aux. switch
M9108-ADA-1N	DAS2	8	230v, on/off
M9108-ADC-1N	DAS2.S	8	230v, on/off, aux. switch
M9108-GGA-1N	DMS1.1	8	24v, 0-10v modulating
M9116-AGA-1N	DA1	16	24v, on/off
M9116-AGC-1N	DA1.S	16	24v, on/off, aux. switch
M9116-ADA-1N	DA2	16	230v, on/off
M9116-ADC-1N	DA2.S	16	230v, on/off, aux. switch
M9116-GGA-1N	DM1.1	16	24v, 0-10v modulating
M9132-AGA-1N	DAG1	32	24v, on/off
M9132-AGC-1N	DAG1.S	32	24v, on/off, aux. switch
M9132-ADA-1N	DAG2	32	230v, on/off
M9132-ADC-1N	DAG2.S	32	230v, on/off, aux. switch
M9132-GGA-1N	DMG1.1	32	24v, 0-10v modulating

**M9116-GGA****SIEMENS****Damper Actuators**

Part No	Features	Torque (Nm)	Damper Area
GEB341.1E	230v, 3-position	20	4m ²
GEB141.1E	24v, 3-position	20	
GEB161.1E	24v, 0-10v modulating	20	
GEB161.1E/MO	24v, Modbus	20	
GCA321.1E	230v, 2-position, spring return	18	3m ²
GCA121.1E	24v, 2-position, spring return	18	
GCA161.1E	24v, 0-10v, spring return	18	
GCA161.1E/MO	24v, 0-10v, Modbus, spring return	18	
GBB341.1E	230v, 3-position	25	5m ²
GBB141.1E	24v, 3-position	25	
GBB161.1E	24v, 0-10v modulating, pos. ind.	25	
GIB341.1E	230v, 3-position	35	6m ²
GIB141.1E	24v, 3-position	35	
GIB161.1E	24v, 0-10v modulating	35	
GIB161.1E/MO	24v, Modbus	35	

Accessories to Suit:

ASC77.1E	Auxiliary switch (single) for GEB/GCA/GBB & GIB... damper actuators
ASC77.2E	Auxiliary switch (double) for GEB/GCA/GBB & GIB... damper actuators

**GBB161.1E**

II. Zone Valves & Actuators

II.



Motorised Zone Valves

Part No	Type	Description
ZV22c	2-port zone	22mm compression, 230v KV 6.9 c/w aux microswitch
ZV28c	2-port zone	28mm compression, 230v KV 8.6 c/w aux microswitch
ZV1/2	2-port zone	½" bspf, 230v KV 3.0 c/w aux microswitch
ZV3/4	2-port zone	¾" bspf, 230v KV 6.9 c/w aux microswitch
ZV1	2-port zone	1" bspf, 230v KV 8.6 c/w aux microswitch
ZVD22c	3-port divert	22mm compression, 230v KV 6.0
ZVD28c	3-port divert	28mm compression, 230v KV 8.1
ZVD1/2	3-port divert	½" bspf, 230v KV 3.0
ZVD3/4	3-port divert	¾" bspf, 230v KV 6.0
ZVD1	3-port divert	1" bspf, 230v KV 8.1



ZVD1



Motorised Zone Valves

Part No	Description	Size	KVS (m³/h)	P/N 230v	P/N 24v
AMZ112	2-port, PN16	½"	17	082G5406	082G5400
AMZ112	2-port, PN16	¾"	28	082G5407	082G5401
AMZ112	2-port, PN16	1"	39	082G5408	082G5402
AMZ112	2-port, PN16	1¼"	84	082G5409	082G5403
AMZ112	2-port, PN16	1½"	156	082G5410	082G5404
AMZ112	2-port, PN16	2"	243	082G5411	082G5405
AMZ113	3-port, PN16	½"	4.3	082G5418	082G5412
AMZ113	3-port, PN16	¾"	8.3	082G5419	082G5413
AMZ113	3-port, PN16	1"	13	082G5420	082G5414
AMZ113	3-port, PN16	1¼"	21	082G5421	082G5415



AMZ113



Motorised 2-Port Zone Valves

Part No 230v	Part No 24v	Description	Size	KVS (m³/h)
EV1070M015	EA1070L015	2-port, PN10, aux sw & manual override	½"	17
EV1070M020	EA1070L020	2-port, PN10, aux sw & manual override	¾"	41
EV1070M025	EA1070L025	2-port, PN10, aux sw & manual override	1"	70
EV1070M032	EA1070L032	2-port, PN10, aux sw & manual override	1¼"	121
EV1070M040	EA1070L040	2-port, PN10, aux sw & manual override	1½"	121
EV1070M050	EA1070L050	2-port, PN10, aux sw & manual override	2"	292



EV107

Honeywell Home Motorised Zone Valves

Part No	Description	Size	KVS (m³/h)	Features
V4043H1056/U	2-port zone	22mm compr.	6.9	230v, spring-ret (NC), aux. sw
V4043H1106/U	2-port zone	28mm compr.	8.6	230v, spring ret (NC), aux. sw
V4043C1156/U	2-port zone	½" bspf	3.0	230v, spring ret (NC)
V4043H1007/U	2-port zone	¾" bspf	3.0	230v, spring ret (NC), aux. sw
V4043H1080/U	2-port zone	1" bspf	8.6	230v, spring ret (NC), aux. sw
V4044C1288/U	3-port divert	22mm compr.	6.0	230v, spring return (NC)
V4044C1569/U	3-port divert	28mm compr.	8.1	230v, spring return (NC)
V4044C1098/U	3-port divert	¾" bspf	6.0	230v, spring return (NC)
V4044C1494/U	3-port divert	1" bspf	8.1	230v, spring return (NC)
V4073A1039/U	3-port mid-pos	22mm compr.	6.0	230v, spring return (NC)
V4073A1088/U	3-port mid-pos	28mm compr.	8.1	230v, spring return (NC)
V4073A1062/U	3-port mid-pos	1" bspf	8.1	230v, spring return (NC)



V4044C





On/off Ball Valve

Part No	Description	Size	KVS (m ³ /h)	Suitable Actuators
R2015-S1	2-port	½"	15	LR.../LF...
R2020-S2	2-port	¾"	32	LR.../LF...
R2025-S2	2-port	1"	26	LR.../LF...
R2032-S3	2-port	1¼"	32	NR.../NRF...
R2040-S3	2-port	1½"	31	NR.../NRF...
R2050-S4	2-port	2"	49	SR.../SRF...
R3015-S1	3-port	½"	15	LR.../LRF...
R3020-S2	3-port	¾"	32	LR.../LRF...
R3025-S2	3-port	1"	26	LR.../LRF...
R3032-S3	3-port	1¼"	32	NR.../NRF...
R3040-S3	3-port	1½"	31	NR.../NRF...
R3050-S4	3-port	2"	49	SR.../SRF...



R20xx-S



Control Ball Valve

Part No	Description	Size	KVS (m ³ /h)	Suitable Actuators
R2015-P63-S1	2-port	½"	0.63	LR.../LF...
R2015-1-S1	2-port	½"	1	LR.../LF...
R2015-1P6-S1	2-port	½"	1.6	LR.../LF...
R2015-2P5-S1	2-port	½"	2.5	LR.../LF...
R2015-4-S1	2-port	½"	4	LR.../LF...
R2015-6P3-S1	2-port	½"	6.3	LR.../LF...
R2020-4-S2	2-port	¾"	4	LR.../LF...
R2020-6P3-S2	2-port	¾"	6.3	LR.../LF...
R2020-8P6-S2	2-port	¾"	8.6	LR.../LF...
R2025-6P3-S2	2-port	1"	6.3	LR.../LF...
R2025-10-S2	2-port	1"	10	LR.../LF...
R2025-16-S2	2-port	1"	16	LR.../LF...
R2032-16-S3	2-port	1¼"	16	NR.../NRF...
R2040-16-S3	2-port	1½"	16	NR.../NRF...
R2040-25-S3	2-port	1½"	25	NR.../NRF...
R2050-25-S4	2-port	2"	25	SR.../SRF...
R2050-40-S4	2-port	2"	40	SR.../SRF...
R3015-P63-S1	3-port	½"	0.63	LR.../LF...
R3015-1-S1	3-port	½"	1	LR.../LF...
R3015-1P6-S1	3-port	½"	1.6	LR.../LF...
R3015-2P5-S1	3-port	½"	2.5	LR.../LF...
R3015-4-S1	3-port	½"	4	LR.../LF...
R3020-4-S2	3-port	¾"	4	LR.../LF...
R3020-6P3-S2	3-port	¾"	6.3	LR.../LF...
R3025-6P3-S2	3-port	1"	6.3	LR.../LF...
R3025-10-S2	3-port	1"	10	LR.../LF...
R3032-16-S3	3-port	1¼"	16	NR.../NRF...
R3040-16-S3	3-port	1½"	16	NR.../NRF...
R3040-25-S4	3-port	1½"	25	SR.../SRF...
R3050-25-S4	3-port	2"	25	SR.../SRF...
R3050-40-S4	3-port	2"	40	SR.../SRF...
R3050-58-S4	3-port	2"	58	SR.../SRF...



R30xx-S



III. Ball Valves & Actuators



Potable Water Ball Valve



III.

Part No	Description	Size	KVS (m³/h)	Suitable Actuators
C215QPW-N	2-port WRAS	½"	16	CQ.../CQK...
R215PW-N	2-port WRAS	½"	16	LR.../LF...
R220PW-P	2-port WRAS	¾"	32	LR.../LF...
R225PW-Q	2-port WRAS	1"	40	LR.../LRF...
R232PW-Q	2-port WRAS	1¼"	63	NR.../NRF...
R240PW-R	2-port WRAS	1½"	100	SR.../SRF...
R250PW-S	2-port WRAS	2"	150	SR.../SRF...



R225PW-Q



Ball Valve Actuators

Part No	Torque (Nm)	Voltage (v)	Features
LR24A	5	24	2- or 3-position
LR24A-S	5	24	2- or 3-position c/w aux switch
LR24A-SR	5	24	2-10v output
LR230A	5	230	2- or 3-position
LR230A-S	5	230	2- or 3-position c/w aux switch
NR24A	10	24	2- or 3-position
NR24A-S	10	24	2- or 3-position c/w aux switch
NR24A-SR	10	24	2-10v output
NR230A	10	230	2- or 3-position
NR230A-S	10	230	2- or 3-position c/w aux switch
SR24A	20	24	2- or 3-position
SR24A-S	20	24	2- or 3-position c/w aux switch
SR24A-SR	20	24	2-10v output
SR230A	20	230	2- or 3-position
SR230A-S	20	230	2- or 3-position c/w aux switch



NR24A-SR

Failsafe

LF24	4	24	2-position s-return *REQ LINKAGE*
LF24-S	4	24	2-position s-return c/w aux *REQ LINKAGE*
LF24-SR	4	24	2-10v output spring return *REQ LINKAGE*
LF230	4	230	2-position spring return *REQ LINKAGE*
LF230-S	4	230	2-position s-return c/w aux *REQ LINKAGE*
NRF24A	10	24	2-position spring return
NRF24A-S2	10	24	2-position spring return c/w 2x aux switches
NRF24A-SR	10	24	2-10v output spring return
NRFA	10	24-240	2-position spring return
NRFA-S2	10	24-240	2-position spring return c/w 2x aux switches
SRF24A	20	24	2-position spring return
SRF24A-S2	20	24	2-position spring return c/w 2x aux switches
SRF24A-SR	20	24	2-10v output spring return
SRFA	20	24-240	2-position spring return
SRFA-S2	20	24-240	2-position spring return c/w 2x aux switches

Linkages to suit:

WLF "LF..." failsafe acts/Belimo R... ball/control valves (up to 1")

Accessories to suit:

S1A	1x SPDT auxillary switch	Belimo Damper & Rotary Actuators
S2A	2x SPDT auxillary switch	Belimo Damper & Rotary Actuators
P140A	140Ω feedback potentiometer	Belimo Damper & Rotary Actuators

For use with:

Notes:

- Above are all "spring close" (i.e. close on power fail). Please contact the office for "spring open" options.
- "LF..." actuators require "WLF" linkages to fit ball and control valves.



SRFA-S2





Ball Valves

III.

Part No	Description	Size	Kvs (m ³ /h)
VAI61.15-1	2-port ball valve, PN40	½" bspf	1.0
VAI61.15-1.6	2-port ball valve, PN40	½" bspf	1.6
VAI61.15-2.5	2-port ball valve, PN40	½" bspf	2.5
VAI61.15-4	2-port ball valve, PN40	½" bspf	4.0
VAI61.15-6.3	2-port ball valve, PN40	½" bspf	6.3
VAI61.15-10	2-port ball valve, PN40	½" bspf	10.0
VAI61.20-4	2-port ball valve, PN40	¾" bspf	4.0
VAI61.20-6.3	2-port ball valve, PN40	¾" bspf	6.3
VAI61.20-10	2-port ball valve, PN40	¾" bspf	10.0
VAI61.25-6.3	2-port ball valve, PN40	1" bspf	6.3
VAI61.25-10	2-port ball valve, PN40	1" bspf	10.0
VAI61.25-16	2-port ball valve, PN40	1" bspf	16.0
VAI61.32-10	2-port ball valve, PN40	1¼" bspf	10.0
VAI61.32-16	2-port ball valve, PN40	1¼" bspf	16.0
VAI61.32-25	2-port ball valve, PN40	1¼" bspf	25.0
VAI61.40-16	2-port ball valve, PN40	1½" bspf	16.0
VAI61.40-25	2-port ball valve, PN40	1½" bspf	25.0
VAI61.40-40	2-port ball valve, PN40	1½" bspf	40.0
VAI61.50-25	2-port ball valve, PN40	2" bspf	25.0
VAI61.50-40	2-port ball valve, PN40	2" bspf	40.0
VAI61.50-63	2-port ball valve, PN40	2" bspf	63.0
VBI61.15-1.6	3-port ball valve, PN40	½" bspf	1.6
VBI61.15-2.5	3-port ball valve, PN40	½" bspf	2.5
VBI61.15-4	3-port ball valve, PN40	½" bspf	4.0
VBI61.15-6.3	3-port ball valve, PN40	½" bspf	6.3
VBI61.20-4	3-port ball valve, PN40	¾" bspf	4.0
VBI61.20-6.3	3-port ball valve, PN40	¾" bspf	6.3
VBI61.25-10	3-port ball valve, PN40	1" bspf	10.0
VBI61.32-16	3-port ball valve, PN40	1¼" bspf	16.0
VBI61.40-25	3-port ball valve, PN40	1½" bspf	25.0
VBI61.50-40	3-port ball valve, PN40	2" bspf	40.00
VBI61.50-63	3-port ball valve, PN40	2" bspf	63.00



VAI61.32-10



VBI61.40-25



Ball Valve Actuators

Part No	Torque (Nm)	Features	To suit...*
GQD131.9A	2	24v, 3-position, spring return	VAI.../VBI... (½"-1")
GQD161.9A	2	24v, 0-10v modulating, spring return	VAI.../VBI... (½"-1")
GDB341.9E	5	230v, 3-position	VAI.../VBI... (½"-1")
GDB141.9E	5	24v, 3-position	VAI.../VBI... (½"-1")
GDB161.9E	5	24v, 0-10v modulating	VAI.../VBI... (½"-1")
GMA131.9E	7	24v, 3-position, spring return	VAI.../VBI... (½"-2")
GMA161.9E	7	24v, 0-10v modulating, spring return	VAI.../VBI... (½"-2")
GLB341.9E	10	230v, 3-position	VAI.../VBI... (½"-2")
GLB141.9E	10	24v, 3-position	VAI.../VBI... (½"-2")
GLB161.9E	10	24v, 0-10v modulating	VAI.../VBI... (½"-2")

Note: suitability of actuators depends upon closing pressure. Please check before ordering.



GLB161.9E



IV. Rotary Valves & Actuators



Rotary Valves

IV.

Part No	Description	Size	Kvs (m³/h)	Actuators	Ref
HRE3/20/6.3	3-port, PN6	¾" bspf	6.3	Belimo HT + link (p37)	065Z0418
HRE3/25/10	3-port, PN6	1" bspf	10	Belimo HT + link (p37)	065Z0419
HRE3/32/16	3-port, PN6	1¼" bspf	16	Belimo HT + link (p37)	065Z0420
HRE3/40/25	3-port, PN6	1½" bspf	25	Belimo HT + link (p37)	065Z0421
HRE3/50/40	3-port, PN6	2" bspf	40	Belimo HT + link (p37)	065Z0422
HFE3-50	3-port, PN6	50mm (FL)	60	Belimo SM + link (p37)	065Z0432
HFE3-65	3-port, PN6	65mm (FL)	90	Belimo SM + link (p37)	065Z0433
HFE3-80	3-port, PN6	80mm (FL)	150	Belimo SM + link (p37)	065Z0434
HFE3-100	3-port, PN6	100mm (FL)	225	Belimo SM + link (p37)	065Z0435
HFE3-125	3-port, PN6	125mm (FL)	280	Belimo SM + link (p37)	065Z0436
HFE3-150	3-port, PN6	150mm (FL)	400	Belimo SM + link (p37)	065Z0437



HRE3/40/25



Rotary Valves

Part No	Ports	Size	Kvs (m³/h)	Features
VRG131-20	3	¾" bspf	6.3	PN10, water -10/+110°C
VRG131-25	3	1" bspf	10	PN10, water -10/+110°C
VRG131-32	3	1¼" bspf	16	PN10, water -10/+110°C
VRG131-40	3	1½" bspf	25	PN10, water -10/+110°C
VRG131-50	3	2" bspf	40	PN10, water -10/+110°C
3F50	3	50mm (FL)	66	PN6, water -10/+110°C
3F65	3	65mm (FL)	100	PN6, water -10/+110°C
3F80	3	80mm (FL)	150	PN6, water -10/+110°C
3F100	3	100mm (FL)	225	PN6, water -10/+110°C
3F125	3	125mm (FL)	310	PN6, water -10/+110°C
3F150		150mm (FL)	420	PN6, water -10/+110°C
4F40	4	40mm (FL)	44	PN6, water -10/+110°C
4F50	4	50mm (FL)	60	PN6, water -10/+110°C
4F65	4	65mm (FL)	90	PN6, water -10/+110°C
4F80	4	80mm (FL)	150	PN6, water -10/+110°C
4F100	4	100mm (FL)	225	PN6, water -10/+110°C



VRG131



Rotary Valve Actuators

Part No	Supply	Features	Torque (Nm)	To fit
ARA656	230v	2-point c/w aux switch	6	VRG131 (to 2")
ARA664	24v	3-point c/w aux switch	6	VRG131 (to 2")
ARA652	230v	3-point c/w aux switch	6	VRG131 (to 2")
ARA659	24v	0-10v	6	VRG131 (to 2")



ARA656



Honeywell Rotary Valves

Part No	Description	Size	KVS (m ³ /h)
V5433A1031	3-port	¾" bspf	6.3
V5433A1049	3-port	1" bspf	10
V5433A1056	3-port	1¼" bspf	16
V5433A1064	3-port	1½" bspf	25
V5433A1072	3-port	2" bspf	40
Actuators to suit			
M6063L1009	230v 3-position, 7Nm		
M6063L4003	230v 3-position, 7Nm c/w aux switch		
M6063A1003	24v 3-position, 7Nm		
M6063A4007	24v 3-position, 7Nm c/w aux switch		



V5433A

IV.

Satchwell 3-Rotary Shoe Valves

Part No	Size	CV	Suitable Actuators
MB1402	½" bspf	1.8	<i>Schneider MD + 9141071000 link (below) Or Belimo HT... + MS-NRS link (page 37) Or Belimo SM...A + ZMBA link (pages 4 & 27)</i>
MB1452	¾" bspf	4.0	
MB1502	1" bspf	8.0	
MB1552	1¼" bspf	12.0	
MB1602	1½" bspf	20.0	
MB1652	2" bspf	32.0	
MBX4401	½" bspf	1.8	
MBX4451	¾" bspf	4.0	
MBX4501	1" bspf	8.0	
MBX4551	1¼" bspf	12.0	
MBX4601	1½" bspf	20.0	
MBX4651	2" bspf	32.0	
MBF4732	65mm (flanged)	63.0	<i>Schneider MD + 9141070000 link (below) Or Belimo SM...A + ZMBFA link (pages 4 & 27)</i>
MBF4782	80mm (flanged)	80.0	
MBF4857	100mm (flanged)	120.0	
Linkages to Suit			
9141070000	To link Schneider MD actuator to Satchwell MBF valves		
9141071000	To link Schneider MD actuator to Satchwell MB/MBX valves		



MB1452



MBF4782

Schneider Electric Rotary Actuators

Part No	Torque (Nm)	Features	Application
MD20B-230	20	230v, reversing	Dampers, Satchwell MB/MBF
MD20B-24	20	24v, reversing	Dampers, Satchwell MB/MBF
MD20A-24	20	24v, 0-10v	Dampers, Satchwell MB/MBF
Linkage Kits			
LK2701	9141070000	Linkage kit for Satchwell MBF valves	
LK2702	9141071000	Linkage kit for Satchwell MB valves	



MD20B-230



SIEMENS

Rotary Shoe Valves

Part No	Description	Size	Kvs (m³/h)
VBF21.40	3-port rotary shoe, PN6	DN40 (flanged)	25
VBF21.50	3-port rotary shoe, PN6	DN50 (flanged)	40
VBF21.65	3-port rotary shoe, PN6	DN65 (flanged)	63
VBF21.80	3-port rotary shoe, PN6	DN80 (flanged)	100
VBF21.100	3-port rotary shoe, PN6	DN100 (flanged)	160
VBF21.125	3-port rotary shoe, PN6	DN125 (flanged)	550
VBF21.150	3-port rotary shoe, PN6	DN150 (flanged)	820



VBF21.50

SIEMENS

Rotary Shoe Valve Actuators

Part No	Torque	Features	To suit....
SAL31.00T10	10Nm	230v, 3-position	VBF21...*linkage required*
SAL81.00T10	10Nm	24v, 3-position	VBF21...*linkage required*
SAL61.00T10	10Nm	24v, 0-10v modulating	VBF21...*linkage required*

Linkage kits to suit:

ASK31N To link SAL... to VBF21... DN65-150

ASK32N To link SAL... To VBF21... DN40-50

Accessories to suit:

ASC10.51 Single auxiliary switch (max. 2x)

ASZ7.5/1000 Potentiometer 1000 Ohm



SAL61.00T10

SIEMENS

ACVATIX Magnetic Valves

Part No	Description	Size	Kvs (m³/h)	Features
MXG461.15-3/C	3-port, PN16, +1/+130°C	½" bspf	3.0	24vAC/DC, 0-10v
MXG461.20-5/C	3-port, PN16, +1/+130°C	¾" bspf	5.0	24vAC/DC, 0-10v
MXG461.25-8/C	3-port, PN16, +1/+130°C	1" bspf	8.0	24vAC/DC, 0-10v
MXG461.32-12/C	3-port, PN16, +1/+130°C	1¼" bspf	12.0	24vAC/DC, 0-10v
MXG461.40-20/C	3-port, PN16, +1/+130°C	1½" bspf	20.0	24vAC/DC, 0-10v
MXG461.50-30/C	3-port, PN16, +1/+130°C	2" bspf	30.0	24vAC/DC, 0-10v
MXF461.65-50	3-port, PN16, +1/+130°C	DN65 (flanged)	50.0	24vAC/DC, 0-10v
M3P80FY	3-port, PN16, +1/+120°C	DN80 (flanged)	80.0	24vAC, 0-10v
M3P100FY	3-port, PN16, +1/+120°C	DN100 (flanged)	100.0	24vAC, 0-10v

Accessories:

SEZ91.6 0-20v to 0-10v converter (min. 3-wire)



MXG461.50

NOTES:

1) The above magnetic valve products are sold as a complete valve & actuator unit. The elements cannot be sold separately.

2) Please contact the office if replacing phase-cut magnetic valve units with 0-10v. Power supply units are sold separately.



BELIMO®

Linear Valves

Part No	Description	Ports	Size	Kvs (m³/h)	Unions	Actuators
H414B	PN16 (+5/120°C)	2	½"	2.5	2x ZH4515	LV.../NKV...
H415B	PN16 (+5/120°C)	2	½"	4	2x ZH4515	LV.../NKV...
H420B	PN16 (+5/120°C)	2	¾"	6.3	2x ZH4520	LV.../NKV...
H425B	PN16 (+5/120°C)	2	1"	10	2x ZH4525	LV.../NKV...
H432B	PN16 (+5/120°C)	2	1¼"	16	2x ZH4532	NV.../NVK...
H440B	PN16 (+5/120°C)	2	1½"	25	2x ZH4540	NV.../NVK...
H450B	PN16 (+5/120°C)	2	2"	40	2x ZH4550	NV.../NVK...
H664N	PN16 (+5/120°C)	2	DN65 (FL)	58	N/A	NV.../NVK...
H665N	PN16 (+5/120°C)	2	DN65 (FL)	63	N/A	EV...
H679N	PN16 (+5/120°C)	2	DN80 (FL)	90	N/A	NV.../NVK...
H6100N	PN16 (+5/120°C)	2	DN100 (FL)	145	N/A	EV...
H6125S	PN16 (+5/120°C)	2	DN125 (FL)	220	N/A	EV...
H6150S	PN16 (+5/120°C)	2	DN150 (FL)	320	N/A	EV
H512B	PN16 (+5/120°C)	3	½"	1	3x ZH4515	LV.../NVK...
H515B	PN16 (+5/120°C)	3	½"	4	3x ZH4515	LV.../NVK...
H520B	PN16 (+5/120°C)	3	¾"	6.3	3x ZH4520	LV.../NVK...
H525B	PN16 (+5/120°C)	3	1"	10	3x ZH4525	LV.../NVK...
H532B	PN16 (+5/120°C)	3	1¼"	16	3x ZH4532	NV.../NVK...
H540B	PN16 (+5/120°C)	3	1½"	25	3x ZH4540	NV.../NVK...
H550B	PN16 (+5/120°C)	3	2"	40	3x ZH4550	NV.../NVK...
H764N	PN16 (+5/120°C)	3	DN65 (FL)	58	N/A	NV.../NVK...
H779N	PN16 (+5/120°C)	3	DN80 (FL)	90	N/A	NV.../NVK...
H7100N	PN16 (+5/120°C)	3	DN100 (FL)	145	N/A	EV...
H7125N	PN16 (+5/120°C)	3	DN125 (FL)	220	N/A	EV...
H7150N	PN16 (+5/120°C)	3	DN150 (FL)	320	N/A	EV...
Large linear valves supplied c/w actuators						
H6200W630/S7	PN16 2-10v 24v	2	DN200 (FL)	630	N/A	GV12-24-SR-T
H6250W1000/S7	PN16 2-10v 24v	2	DN250 (FL)	1000	N/A	GV12-24-SR-T
H7200W630-S7	PN16 2-10v 24v	3	DN200 (FL)	630	N/A	GV12-24-SR-T
H7250W1000-S7	PN16 2-10v 24v	3	DN250 (FL)	1000	N/A	GV12-24-SR-T



H6100N

VI.



H7150N

Other options are available; please contact the office for details.

BELIMO®

Linear Valve Actuators

Part No	Thrust (N)	Voltage (v)	Stroke (mm)	Features
LV24A-TPC	500	24	15	2- or 3-position
LV24A-SR-TPC	500	24	15	2-10v output
LV230A-TPC	500	230	15	2- or 3-position
NV24A-TPC	1000	24	20	2- or 3-position
NV24A-SR-TPC	1000	24	20	2-10v output
NV230A-TPC	1000	230	20	2- or 3-position
NV24A-MP-TPC	1000	24	20	Parameterisable
NVK24A-3-TPC	1000	24	20	3-position electrical failsafe
NVK24A-SR-TPC	1000	24	20	2-10v output electrical failsafe
SV24A-TPC	1500	24	20	3-position
SV24A-SR-TPC	1500	24	20	2-10v output
EV24A-TPC	2500	24	40	2- or 3-position
EV24A-SR-TPC	2500	24	40	2-10v output
Accessories to suit:				
S2A-H	2x auxiliary switches			

Suitability of actuators is dependent upon closing pressure. Please contact the office for details.



NVK24A-SR-TPC



VI. Linear Valves & Actuators



Linear Valves

Part No	Description	Size	KVS (m³/h)	Actuators	Reference
VRB2/15/4.0	2-port, PN16	½" bspf	4	AM...435/ AM...438	065Z0235
VRB2/20/6.3	2-port, PN16	¾" bspf	6.3	AM...435/ AM...438	065Z0236
VRB2/25/10	2-port, PN16	1" bspf	10	AM...435/ AM...438	065Z0237
VRB2/32/16	2-port, PN16	1¼" bspf	16	AM...435/ AM...438	065Z0238
VRB2/40/25	2-port, PN16	1½" bspf	25	AM...435/ AM...438	065Z0239
VRB2/50/40	2-port, PN16	2" bspf	40	AM...435/ AM...438	065Z0240
VRB3/15/0.63	3-port, PN16	½" bspf	0.63	AM...435/ AM...438	065Z0211
VRB3/15/1.0	3-port, PN16	½" bspf	1	AM...435/ AM...438	065Z0212
VRB3/15/1.6	3-port, PN16	½" bspf	1.6	AM...435/ AM...438	065Z0213
VRB3/15/2.5	3-port, PN16	½" bspf	2.5	AM...435/ AM...438	065Z0214
VRB3/15/4.0	3-port, PN16	½" bspf	4	AM...435/ AM...438	065Z0215
VRB3/20/6.3	3-port, PN16	¾" bspf	6.3	AM...435/ AM...438	065Z0216
VRB3/25/10	3-port, PN16	1" bspf	10	AM...435/ AM...438	065Z0217
VRB3/32/16	3-port, PN16	1¼" bspf	16	AM...435/ AM...438	065Z0218
VRB3/40/25	3-port, PN16	1½" bspf	25	AM...435/ AM...438	065Z0219
VRB3/50/40	3-port, PN16	2" bspf	40	AM...435/ AM...438	065Z0220
VF2/65/63	2-port, PN16	65mm (FL)	63	AM...435	065Z0281
VF2/80/100	2-port, PN16	80mm (FL)	100	AM...435	065Z0282
VF2/100/145	2-port, PN16	100mm (FL)	145	AM...55	065B3205
VF2/125/220	2-port, PN16	125mm (FL)	220	AM...55/AM...85	065B3230
VF2/150/320	2-port, PN16	150mm (FL)	320	AM...55/AM...85	065B3255
VF3/65/63	3-port, PN16	65mm (FL)	63	AM...435	065Z0261
VF3/80/100	3-port, PN16	80mm (FL)	100	AM...435	065Z0262
VF3/100/145	3-port, PN16	100mm (FL)	145	AM...55	065B1685
VF3/125/220	3-port, PN16	125mm (FL)	220	AM...55/AM...85	065B3125
VF3/150/320	3-port, PN16	150mm (FL)	320	AM...55/AM...85	065B3150



VRB2/50



VF3/100



Linear Valve Actuators

Part No	Thrust (N)	Stroke	Supply	Features	Reference
AMV435-24	400	20mm	24v	3-position	082H0162
AMV435-230	400	20mm	230v	3-position	082H0163
AME435	400	20mm	24v	0-10v output	082H0161
AMV438-24	450	15mm	24v	3-position, "Spring Up"	082H0122
AMV438-230	450	15mm	230v	3-position, "Spring Up"	082H0123
AME438	450	15mm	24v	0-10v output, "Spring Up"	082H0121
AMV55-24	2000	40mm	24v	3-position	082H3020
AMV55-230	2000	40mm	230v	3-position	082H3021
AME55-24	2000	40mm	24v	0-10v output	082H3022
AMV85-24	5000	40mm	24v	3-position	082G1450
AMV85-230	5000	40mm	230v	3-position	082G1451
AME85-24	5000	40mm	24v	0-10v output	082G1452



AMV85



Honeywell

Linear Valves

Part No	Description	Size	KVS	Stroke
V5011R1000	2-port, PN16	½" bspf	0.63	20mm
V5011R1018	2-port, PN16	½" bspf	1.0	20mm
V5011R1026	2-port, PN16	½" bspf	1.6	20mm
V5011R1034	2-port, PN16	½" bspf	2.5	20mm
V5011R1042	2-port, PN16	½" bspf	4.0	20mm
V5011R1059	2-port, PN16	¾" bspf	6.3	20mm
V5011R1067	2-port, PN16	1" bspf	10.0	20mm
V5011R1075	2-port, PN16	1¼" bspf	16.0	20mm
V5011R1083	2-port, PN16	1½" bspf	25.0	20mm
V5011R1091	2-port, PN16	2" bspf	40.0	20mm
V5328A1104	2-port, PN16	DN65 (FL)	63.0	20mm
V5328A1112	2-port, PN16	DN80 (FL)	100.0	20mm
V5328A1195	2-port, PN16	DN100 (FL)	160.0	38mm
V5328A1203	2-port, PN16	DN125 (FL)	250.0	38mm
V5328A1211	2-port, PN16	DN150 (FL)	360.0	38mm
V5013R1032	3-port, PN16	½" bspf	2.5	20mm
V5013R1040	3-port, PN16	½" bspf	4.0	20mm
V5013R1057	3-port, PN16	¾" bspf	6.3	20mm
V5013R1065	3-port, PN16	1" bspf	10.0	20mm
V5013R1073	3-port, PN16	1¼" bspf	16.0	20mm
V5013R1081	3-port, PN16	1½" bspf	25.0	20mm
V5013R1099	3-port, PN16	2" bspf	40.0	20mm
V5329A1079	3-port, PN16	DN65 (FL)	63.0	20mm
V5329A1087	3-port, PN16	DN80 (FL)	100.0	20mm
V5050A1090	3-port, PN16	DN100 (FL)	160.00	38mm
V5050A1108	3-port, PN16	DN125 (FL)	250.0	38mm
V5050A1116	3-port, PN16	DN150 (FL)	360.00	38mm



V5011R

VI.



V5328A



V5013R



V5050A

Honeywell

Linear Valve Actuators

Part No	Thrust	Stroke	Supply	Features
ML6420A3007	600N	20mm	24v	Raise/lower
ML6420A3015	600N	20mm	230v	Raise/lower
ML6425A3006	600N	20mm	24v	Spring return (stem extends)
ML6425B3005	600N	20mm	24v	Spring return (stem retracts)
ML7420A6009T	600N	20mm	24v	0-10v modulating
ML7425A6008	600N	20mm	24v	Spring return (stem extends), 0-10v
ML7425B6007	600N	20mm	24v	Spring return (stem retracts), 0-10v
ML7421A3004	1800N	20mm	24v	0-10v modulating, high torque
ML6421B3004	1800N	38mm	24v	Raise/ lower, manual op
ML6421B3012	1800N	38mm	230v	Raise/ lower, manual op
ML7421B3003	1800N	38mm	24v	0-10v modulating, manual op



ML6421B



VI. Linear Valves & Actuators

ISMACONTROLLI Linear 3-port Valves

Part No	Ports	Size	Kvs (m³/h)	Features	Actuators
VMB3	3	¾" bspf	6.3	PN16, water up to 120°C	MVB/MVE*
VMB4	3	1" bspf	10	PN16, water up to 120°C	MVB/MVE*
VMB5	3	1¼" bspf	16	PN16, water up to 120°C	MVB/MVE*
VMB6	3	1½" bspf	25	PN16, water up to 120°C	MVB/MVE*
VMB8	3	2" bspf	40	PN16, water up to 120°C	MVB/MVE*
VMB16-65	3	65mm (FL)	63	PN16, water up to 120°C	MVE510*/MVH*
VMB16-80	3	80mm (FL)	100	PN16, water up to 120°C	MVE510*/MVH*
VMB16-100	3	100mm (FL)	160	PN16, water up to 120°C	MVE510*/MVH*
VMB16-125	3	125mm (FL)	250	PN16, water up to 120°C	MVE510*/MVH*
VMB16-150	3	150mm (FL)	360	PN16, water up to 120°C	MVE510*/MVH*
3FGB65	3	65mm (FL)	63	PN16, water up to 150°C	MVE510/MVH
3FGB80	3	80mm (FL)	100	PN16, water up to 150°C	MVE510/MVH
3FGB100	3	100mm (FL)	130	PN16, water up to 150°C	MVE510/MVH
3FGB125	3	125mm (FL)	200	PN16, water up to 150°C	MVE510/MVH
3FGB150	3	150mm (FL)	300	PN16, water up to 150°C	MVE510/MVH



VMB6



3FGB150

ISMACONTROLLI Bronze Linear Valves

Part No	Ports	Size	Kvs (m³/h)	Features	Actuator
2TBB15T	2	½" bspf	2.5	PN16, max media temp 120°C	MVC.03/R
2TBB20T	2	¾" bspf	4	PN16, max media temp 120°C	MVC.03/R
2TBB25T	2	1" bspf	8	PN16, max media temp 120°C	MVC.03/R
2TBB32T	2	1¼" bspf	12	PN16, max media temp 120°C	MVC.03/R
2TBB40T	2	1½" bspf	21	PN16, max media temp 120°C	MVC.03/R
2TBB50T	2	2" bspf	33	PN16, max media temp 120°C	MVC.03/R
3TBB15T	3	½" bspf	2	PN16, max media temp 120°C	MVC.03/R
3TBB20T	3	¾" bspf	5	PN16, max media temp 120°C	MVC.03/R
3TBB25T	3	1" bspf	10	PN16, max media temp 120°C	MVC.03/R
3TBB32T	3	1¼" bspf	16	PN16, max media temp 120°C	MVC.03/R
3TBB40T	3	1½" bspf	25	PN16, max media temp 120°C	MVC.03/R
3TBB50T	3	2" bspf	38	PN16, max media temp 120°C	MVC.03/R



3TBB50T

ISMACONTROLLI Linear Valve Actuators

Part No	Thrust	Supply	Features	Compatible Valves
MVT403S	300N	24v	R/L (3 position)	VMT, VTT
MVT503S	300N	24v	0-10v output	VMT, VTT
MVB56	450N	24v	0-10v output	VMB, VSB (to 50mm)
MVB46	450N	24v	R/L	VMB, VSB (to 50mm)
MVB26	450N	230v	R/L	VMB, VSB (to 50mm)
MVE510	1000N	24v	0-10v, 5-60mm stroke	3FGB, VMB16 (w/ AG51)
MVE510-52	1000N	24v	0-10v output	VMB (w/ AG52)
MVE510-65	1000N	24v	0-10v output, IP65	VMB (w/ AG52)
MVH56	1500N	24v	0-10v	3FGB, VMB16 (w/ AG51)
MVH56FA	700N	24v	Spring return (up)	Please contact office
MVH56FC	700N	24v	Spring return (down)	Please contact office
MVE515-AG5162	1500N	24v	0-10v output, c/w linkage	Please contact office

Continued overleaf

Note: please contact the office for linkage kits to fit MVE/MVH actuators to valves from other manufacturers.





Linear Valve Actuators (cont.)

Part No	Thrust	Supply	Features	Compatible Valves
MVC203	300N	230v	R/L (3-pos)	2/3TBB, Satchwell (p19)
MVC403	300N	24v	R/L (3-pos)	2/3TBB, Satchwell (p19)
MVC503	300N	24v	0-10v output	2/3TBB, Satchwell (p19)
MVC503R		24v	0-10v output, spring return	2/3TBB, Satchwell (p19)
Accessories:				
D36	Auxillary switch *to suit MVB*			
AG51	Linkage kit *to suit MVE/VMB16, MVH/VMB16*			
AG52	Linkage kit *to suit MVE/VMB*			
AG73	Linkage kit *to suit MVC/Satchwell*			



MVC503R

VI.



Linear Valves

Part No	Description	Size	KVS (m³/h)
VG7802FT	3-port mixing, PN16, bronze body, brass trim	½" bspf	2.5
VG7802GT	3-port mixing, PN16, bronze body, brass trim	½" bspf	4.0
VG7802LT	3-port mixing, PN16, bronze body, brass trim	¾" bspf	6.3
VG7802NT	3-port mixing, PN16, bronze body, brass trim	1" bspf	10.0
VG7802PT	3-port mixing, PN16, bronze body, brass trim	1¼" bspf	16.0
VG7802RT	3-port mixing, PN16, bronze body, brass trim	1½" bspf	25.0
VG7802ST	3-port mixing, PN16, bronze body, brass trim	2" bspf	40.0
VG88G1S1N	3-port mixing, PN16, cast iron body	DN65 (flanged)	63.0
VG88H1S1N	3-port mixing, PN16, cast iron body	DN80 (flanged)	100.0
VG88J1S1N	3-port mixing, PN16, cast iron body	DN100 (flanged)	160.0
VG88K1S1N	3-port mixing, PN16, cast iron body	DN125 (flanged)	250.0
VG88L1S1N	3-port mixing, PN16, cast iron body	DN150 (flanged)	350.0



VG7802



Linear Valve Actuators

Part No	Torque	Features	To Suit...
VA-7700-1001	500N	24v, raise/lower	VG7802...
VA-7700-1003	500N	230v, raise/lower	VG7802...
VA-7706-1001	500N	24v, 0-10v modulating	VG7802...
VA1125-GGA-1	2500N	24v, 3-pos or 0-10v	VG88... (to DN150)
VA1220-GGA-1	2000N	24v, 3-pos or 0-10v, retracts on power fail	VG88... (to DN150)
VA1420-GGA-1	2000N	24v, 3-pos or 0-10v, extends on power fail	VG88... (to DN150)
Accessories to suit:			
VA1000-M230N	230v module		VA1...GGA-1 actuators
VA1000-S2	2x SPDT aux switches		VA1...GGA-1 actuators



VA-7700



resideo Linear Valves

VI.

Part No	Description	Size	Kvs (m ³ /h)	Suitable Actuators
DI15B0.63	2-Port, PN16	½" bspf	0.6	20mm stroke (below)
DI15B1.0	2-Port, PN16	½" bspf	1.0	20mm stroke (below)
DI15B1.6	2-Port, PN16	½" bspf	1.6	20mm stroke (below)
DI15B2.5	2-Port, PN16	½" bspf	2.5	20mm stroke (below)
DI15B4.0	2-Port, PN16	½" bspf	4	20mm stroke (below)
DI20B6.3	2-Port, PN16	¾" bspf	6.3	20mm stroke (below)
DI25B10	2-Port, PN16	1" bspf	10	20mm stroke (below)
DI32B16	2-Port, PN16	1¼" bspf	16	20mm stroke (below)
DI40B25	2-Port, PN16	1½" bspf	25	20mm stroke (below)
DI50B40	2-Port, PN16	2" bspf	40	20mm stroke (below)
DF65B63CI	2-Port, PN16	65mm (FL)	63	20mm stroke (below)
DF80B100CI	2-Port, PN16	80mm (FL)	100	20mm stroke (below)
DF100B160CI	2-Port, PN16	100mm (FL)	160	38mm stroke (below)
DF125B250CI	2-Port, PN16	125mm (FL)	250	38mm stroke (below)
DF150B360CI	2-Port, PN16	150mm (FL)	360	38mm stroke (below)
XI15B2.5	3-Port, PN16	½" bspf	2.5	20mm stroke (below)
XI15B4.0	3-Port, PN16	½" bspf	4	20mm stroke (below)
XI20B6.3	3-Port, PN16	¾" bspf	6.3	20mm stroke (below)
XI25B10	3-Port, PN16	1" bspf	10	20mm stroke (below)
XI32B16	3-Port, PN16	1¼" bspf	16	20mm stroke (below)
XI40B25	3-Port, PN16	1½" bspf	25	20mm stroke (below)
XI50B40	3-Port, PN16	2" bspf	40	20mm stroke (below)
XF32B16	3-Port, PN16	32mm (FL)	16	20mm stroke (below)
XF40B25	3-Port, PN16	40mm (FL)	25	20mm stroke (below)
XF50B40	3-Port, PN16	50mm (FL)	40	20mm stroke (below)
XF65B63	3-Port, PN16	65mm (FL)	63	20mm stroke (below)
XF80B100	3-Port, PN16	80mm (FL)	100	20mm stroke (below)
XF100B160	3-Port, PN16	100mm (FL)	160	38mm stroke (below)
XF125B250	3-Port, PN16	125mm (FL)	250	38mm stroke (below)
XF150B360	3-Port, PN16	150mm (FL)	360	38mm stroke (below)



DI..B...



DF..B...



XI..B...



XF..B...

resideo Linear Actuators

Part No	Torque	Stroke	Features
MLHFD060-00	600N	20mm	230v floating
MLHYD180-00	1800N	20mm	230v floating /0-10v
MLLYD060-00	600N	20mm	24v floating /0-10v
MLLYD180-00	1800N	20mm	24v floating /0-10v
Products due for release November 2026			
MLHYE180-00	1800N	38mm	230v floating/0-10v
MLLYE180-00	1800N	38mm	24v floating/0-10v

Spring return options are available; please contact the office for details.



MLLYD060



MLLYD180



Part No	Description	Size	CV	Stroke
VZ1401	2-Port	½" bspf	0.2	5.9mm
VZ1402	2-Port	½" bspf	0.5	5.9mm
VZ1403	2-Port	½" bspf	1	5.9mm
VZ1404	2-Port	½" bspf	2	5.9mm
VZ1451	2-Port	¾" bspf	4	5.9mm
VZ2501	2-Port	1" bspf	8	15.9mm
VZ2551	2-Port	1¼" bspf	12	15.9mm
VZ2601	2-Port	1½" bspf	20	15.9mm
VZ2651	2-Port	2" bspf	32	15.9mm
VZX4404	2-Port	½" bspf	2.0	12.7mm
VZX4451	2-Port	¾" bspf	4.0	12.7mm
VZX4501	2-Port	1" bspf	8.0	12.7mm
VZX4551	2-Port	1¼" bspf	12.0	12.7mm
VZX4601	2-Port	1½" bspf	20.0	12.7mm
VZX4651	2-Port	2" bspf	32.0	12.7mm
VSF1576	2-Port	32mm (flanged)	16	24.5mm
VSF1626	2-Port	40mm (flanged)	25	24.5mm
VSF1676	2-Port	50mm (flanged)	40	24.5mm
VZF1852	2-Port	100mm (flanged)	125	25.4mm
VZF1902	2-Port	125mm (flanged)	200	38mm
VZF1954	2-Port	150mm (flanged)	315	38mm
MZ3402	3-Port	½" bspf	2.5	9.5mm
MZ3452	3-Port	¾" bspf	4.0	9.5mm
MZ3501	3-Port	1" bspf	8.0	15.9mm
MZ3551	3-Port	1¼" bspf	12.0	15.9mm
MZ3601	3-Port	1½" bspf	20.0	15.9mm
MZ3651	3-Port	2" bspf	32.0	15.9mm
MZX4402	3-Port	½" bspf	2.5	12.7mm
MZX4452	3-Port	¾" bspf	4.0	12.7mm
MZX4501	3-Port	1" bspf	8.0	12.7mm
MZX4551	3-Port	1¼" bspf	12.0	12.7mm
MZX4601	3-Port	1½" bspf	20.0	12.7mm
MZX4651	3-Port	2" bspf	32.0	12.7mm
Packing Kits to suit:				
626-9-204	Gland, gland assembly & grease for VZX & MZX			
626-9-203	Gland, gland assembly & grease for VZ, (Mk2) MZ (Mk3) & VSF (to 1")			
626-9-310	Gland, gland assembly & grease for VZ (Mk1) & MZ (Mk1)			
626-9-311	Gland, gland assembly & grease for VZF & MZF			

Other packing kits are available; please contact the office for details.



VZ2601

VI.



MZX4452



MV15B...+L7SV

Part No	Thrust	Supply	Features	Suitable Valves
SPA-AVUX	220N	24v	(Repl. AVUX5202) floating control	VZX, MZX
SPA-AVUE	220N	24v	(Repl. AVUE5304) 0-10v, direct acting	VEU, MEU, FEU, VZX, MZX
SPA-AVUM	220N	230v	(Repl. AVUM5601)	VZX, MZX
MV15B-24 & L7SV	1500N	24v	Floating control, inc. linkage	MZ, VZ, MJF, VSF, MZF, VZF
MV15B-230 & L7SV	1500N	230v	Floating control, inc. linkage	MZ, VZ, MJF, VSF, MZF, VZF
M800-L2SV	800N	24v	0-10v, inc. linkage	MZ, VZ, MJF, VSF, MZF, VZF
M800-S2-L2SV	800N	24v	0-10v, inc. Linkage & aux. switch	MZ, VZ, MJF, VSF, MZF, VZF
M700-S2-SRSU & L7SV	700N	24v	0-10v, "spring up", inc. linkage	MZ, VZ, MJF, VSF, MZF, VZF
M700-S2-SRSD & L7SV	700N	24v	0-10v, "spring down", inc. linkage	MZ, VZ, MJF, VSF, MZF, VZF



VI. Linear Valves & Actuators



Linear Valves & Actuators

Part No	Description	Size	Kvs (m³/h)	Unions Req'd
BUN015F330	3-port, PN16	½" bspf	1.0	3x 0361951015
BUN015F320	3-port, PN16	½" bspf	1.6	3x 0361951015
BUN015F310	3-port, PN16	½" bspf	2.5	3x 0361951015
BUN015F300	3-port, PN16	½" bspf	4.0	3x 0361951015
BUN020F300	3-port, PN16	¾" bspf	6.3	3x 0361951020
BUN025F300	3-port, PN16	1" bspf	10.0	3x 0361951025
BUN032F300	3-port, PN16	1¼" bspf	16.0	3x 0361951032
BUN040F300	3-port, PN16	1½" bspf	22.0	3x 0361951040
BUN050F200	3-port, PN16	2" bspf	28.0	3x 0361951050
BQD065F300	3-port, PN6	DN65 (flanged)	49.0	N/A
BQD080F300	3-port, PN6	DN80 (flanged)	78.0	N/A
BQD100F300	3-port, PN6	DN100 (flanged)	124.0	N/A

Unions:

361951015	Screw fittings DN15 for VUN/BUN vales
361951020	Screw fittings DN20 for VUN/BUN vales
361951025	Screw fittings DN25 for VUN/BUN vales
361951032	Screw fittings DN32 for VUN/BUN vales
361951040	Screw fittings DN40 for VUN/BUN vales
361951050	Screw fittings DN50 for VUN/BUN vales

Actuators to suit:

AVM105SF132	250N	24v, 2/3-position or 0-10v	To suit BUN...
AVM115SF132	500N	24v, 2/3-position or 0-10v	To suit BUN...
AVM321SF132	1000N	24v, 2/3-position or 0-10v	To suit BUN...
AVM234SF132	2500N	24v, 2/3-position or 0-10v	To suit BQD...
AVF234SF132	2000N	24v, 2/3-position or 0-10v, spring return	To suit BQD...



BUN020



AVM321



Linear Valves & Actuators

Part No	Description	Size	KVS (m³/h)
V311T/15/2.5	3-port, PN16, tight seal	½" bspf	2.5
V311T/15/4	3-port, PN16, tight seal	½" bspf	4
V311T/20/6.3	3-port, PN16, tight seal	¾" bspf	6.3
V311T/25/10	3-port, PN16, tight seal	1" bspf	10
V311T/32/16	3-port, PN16, tight seal	1¼" bspf	16
V311T/40/25	3-port, PN16, tight seal	1½" bspf	25
V311T/50/38	3-port, PN16, tight seal	2" bspf	38
V311/15/1.6	3-port, PN16	15mm (flanged)	1.6
V311/15/2.5	3-port, PN16	15mm (flanged)	2.5
V311/15/4	3-port, PN16	15mm (flanged)	4
V311/20/6.3	3-port, PN16	20mm (flanged)	6.3
V311/25/10	3-port, PN16	25mm (flanged)	10
V311/32/16	3-port, PN16	32mm (flanged)	16
V311/40/25	3-port, PN16	40mm (flanged)	25
V311/50/38	3-port, PN16	50mm (flanged)	38

Continued overleaf...



V311T



V311





Linear Valves & Actuators (cont.)

Part No	Description	Size	KVS (m³/h)
VG311F65C	3-port, PN16	65mm (flanged)	63
VG311F80C	3-port, PN16	80mm (flanged)	100
VG311F100C	3-port, PN16	100mm (flanged)	130
VG311F125C	3-port, PN16	125mm (flanged)	200
VG311F150C	3-port, PN16	150mm (flanged)	300
V321/65/63	3-port, PN16	65mm (flanged)	63
V321/80/100	3-port, PN16	80mm (flanged)	100
V321/100/160	3-port, PN16	100mm (flanged)	160
V321/125/250	3-port, PN16	125mm (flanged)	250
V321/150/320	3-port, PN16	150mm (flanged)	320
Actuators to suit:			
MV15B-230	1500N	230v, floating control	To suit V311, V321
MV15B-24	1500N	24v, floating control	To suit V311, V321
M800	800N	24v, 0-10v	To suit V311, V321
M800-S2	800N	24v, 0-10v, inc. aux. switch	To suit V311, V321
M700-S2-SRSU	700N	24v, 0-10v, "spring up"	To suit V311, V321
M700-S2-SRSD	700N	24v, 0-10v, "spring down"	To suit V311, V321



VI.

VG311F



MV15B



Linear 2-Port Valves

Part No	Description	Size	Kvs (m³/h)	Stroke	Actuators*
VVG44.15-1.6/C	2-port, PN16, +1/+120°C	½" bspf	1.6	5.5mm	SAS...
VVG44.15-2.5/C	2-port, PN16, +1/+120°C	½" bspf	2.5	5.5mm	SAS...
VVG44.15-4.0/C	2-port, PN16, +1/+120°C	½" bspf	4	5.5mm	SAS...
VVG44.20-6.3/C	2-port, PN16, +1/+120°C	¾" bspf	6.3	5.5mm	SAS...
VVG44.25-10/C	2-port, PN16, +1/+120°C	1" bspf	10	5.5mm	SAS...
VVG44.32-16/C	2-port, PN16, +1/+120°C	1¼" bspf	16	5.5mm	SAS...
VVG44.40-25/C	2-port, PN16, +1/+120°C	1½" bspf	25	5.5mm	SAS...
VVG41.13/C	2-port, PN16, -15*/150°C	½" bspf	1.6	20mm	SAX/SKD/SKB
VVG41.14/C	2-port, PN16, -15*/150°C	½" bspf	2.5	20mm	SAX/SKD/SKB
VVG41.15/C	2-port, PN16, -15*/150°C	½" bspf	4	20mm	SAX/SKD/SKB
VVG41.20/C	2-port, PN16, -15*/150°C	¾" bspf	6.3	20mm	SAX/SKD/SKB
VVG41.25/C	2-port, PN16, -15*/150°C	1" bspf	10	20mm	SAX/SKD/SKB
VVG41.32/C	2-port, PN16, -15*/150°C	1¼" bspf	16	20mm	SAX/SKD/SKB
VVG41.40/C	2-port, PN16, -15*/150°C	1½" bspf	25	20mm	SAX/SKD/SKB
VVG41.50/C	2-port, PN16, -15*/150°C	2" bspf	40	20mm	SAX/SKD/SKB
VVF32.40-25	2-port, PN10, -10*/150°C	DN40 (FL)	25	20mm	SAX/SKD/SKB
VVF32.50-40	2-port, PN10, -10*/150°C	DN50 (FL)	40	20mm	SAX/SKD/SKB
VVF32.65-63	2-port, PN10, -10*/150°C	DN65 (FL)	63	20mm	SAX/SKD/SKB
VVF32.80-100	2-port, PN10, -10*/150°C	DN80 (FL)	100	20mm	SAX/SKD/SKB
VVF32.100-160	2-port, PN10, -10*/150°C	DN100 (FL)	160	40mm	SKC...
VVF32.125-250	2-port, PN10, -10*/150°C	DN125 (FL)	250	40mm	SKC...
VVF32.150-400	2-port, PN10, -10*/150°C	DN150 (FL)	400	40mm	SKC...

NOTE: if below 5°C on V..G41/ V..F32, spindle heater is required. See overleaf for notes on suitable actuators.



VVG44.40



VVG41



VVF32



SIEMENS**Linear 2-Port Steam Valves**

Part No	Description	Size	Kvs (m ³ /h)	Stroke	Actuators*
VVF53.15-1.25	2-port, PN25, -20/220°C	DN15 (FL)	1.25	20mm	SAX**/SKB/SKD
VVF53.15-1.6	2-port, PN25, -20/220°C	DN15 (FL)	1.6	20mm	SAX**/SKB/SKD
VVF53.15-2	2-port, PN25, -20/220°C	DN15 (FL)	2.0	20mm	SAX**/SKB/SKD
VVF53.15-2.5	2-port, PN25, -20/220°C	DN15 (FL)	2.5	20mm	SAX**/SKB/SKD
VVF53.15-3.2	2-port, PN25, -20/220°C	DN15 (FL)	3.2	20mm	SAX**/SKB/SKD
VVF53.15-4	2-port, PN25, -20/220°C	DN15 (FL)	4.0	20mm	SAX**/SKB/SKD
VVF53.20-6.3	2-port, PN25, -20/220°C	DN20 (FL)	6.3	20mm	SAX**/SKB/SKD
VVF53.25-5	2-port, PN25, -20/220°C	DN25 (FL)	5.0	20mm	SAX**/SKB/SKD
VVF53.25-6.3	2-port, PN25, -20/220°C	DN25 (FL)	6.3	20mm	SAX**/SKB/SKD
VVF53.25-8	2-port, PN25, -20/220°C	DN25 (FL)	8.0	20mm	SAX**/SKB/SKD
VVF53.25-10	2-port, PN25, -20/220°C	DN25 (FL)	10.0	20mm	SAX**/SKB/SKD
VVF53.32-16	2-port, PN25, -20/220°C	DN32 (FL)	16	20mm	SAX**/SKB/SKD
VVF53.40-12.5	2-port, PN25, -20/220°C	DN40 (FL)	12.5	20mm	SAX**/SKB/SKD
VVF53.40-16	2-port, PN25, -20/220°C	DN40 (FL)	16.0	20mm	SAX**/SKB/SKD
VVF53.40-20	2-port, PN25, -20/220°C	DN40 (FL)	20.0	20mm	SAX**/SKB/SKD
VVF53.40-25	2-port, PN25, -20/220°C	DN40 (FL)	25.0	20mm	SAX**/SKB/SKD
VVF53.50-40	2-port, PN25, -20/220°C	DN50 (FL)	40.0	20mm	SAX**/SKB/SKD

**VVF53****SIEMENS****Linear 3-Port Valves**

Part No	Description	Size	Kvs (m ³ /h)	Stroke	Actuators*
VXG44.15-0.25/C	3-port, PN16, +1/+120°C	½" bspf	0.25	5.5mm	SAS...
VXG44.15-0.4/C	3-port, PN16, +1/+120°C	½" bspf	2.5	5.5mm	SAS...
VXG44.15-0.63/C	3-port, PN16, +1/+120°C	½" bspf	4.0	5.5mm	SAS...
VXG44.15-1.0/C	3-port, PN16, +1/+120°C	½" bspf	1.0	5.5mm	SAS...
VXG44.15-1.6/C	3-port, PN16, +1/+120°C	½" bspf	1.6	5.5mm	SAS...
VXG44.15-2.5/C	3-port, PN16, +1/+120°C	½" bspf	2.5	5.5mm	SAS...
VXG44.15-4.0/C	3-port, PN16, +1/+120°C	½" bspf	4.0	5.5mm	SAS...
VXG44.20-6.3/C	3-port, PN16, +1/+120°C	¾" bspf	6.3	5.5mm	SAS...
VXG44.25-10/C	3-port, PN16, +1/+120°C	1" bspf	10.0	5.5mm	SAS...
VXG44.32-16/C	3-port, PN16, +1/+120°C	1¼" bspf	16.0	5.5mm	SAS...
VXG44.40-25/C	3-port, PN16, +1/+120°C	1½" bspf	25.0	5.5mm	SAS...
VXG41.1301/C	3-port, PN16, -15*/150°C	½" bspf	1.6	20mm	SAX/SKD/SKB
VXG41.1401/C	3-port, PN16, -15*/150°C	½" bspf	2.5	20mm	SAX/SKD/SKB
VXG41.15/C	3-port, PN16, -15*/150°C	½" bspf	4.0	20mm	SAX/SKD/SKB
VXG41.20/C	3-port, PN16, -15*/150°C	¾" bspf	6.3	20mm	SAX/SKD/SKB
VXG41.25/C	3-port, PN16, -15*/150°C	1" bspf	10.0	20mm	SAX/SKD/SKB
VXG41.32/C	3-port, PN16, -15*/150°C	1¼" bspf	16.0	20mm	SAX/SKD/SKB
VXG41.40/C	3-port, PN16, -15*/150°C	1½" bspf	25.0	20mm	SAX/SKD/SKB
VXG41.50/C	3-port, PN16, -15*/150°C	2" bspf	40.0	20mm	SAX/SKD/SKB
VXF32.40-25	3-port, PN10, -10*/150°C	DN40 (FL)	25.0	20mm	SAX/SKD/SKB
VXF32.50-40	3-port, PN10, -10*/150°C	DN50 (FL)	40.0	20mm	SAX/SKD/SKB
VXF32.65-63	3-port, PN10, -10*/150°C	DN65 (FL)	63.0	20mm	SAX/SKD/SKB
VXF32.80-100	3-port, PN10, -10*/150°C	DN80 (FL)	100.0	20mm	SAX/SKD/SKB
VXF32.100-160	3-port, PN10, -10*/150°C	DN100 (FL)	160.0	40mm	SKC...
VXF32.125-250	3-port, PN10, -10*/150°C	DN125 (FL)	250.0	40mm	SKC...
VXF32.150-400	3-port, PN10, -10*/150°C	DN150 (FL)	400.0	40mm	SKC...

***NOTE:** if below 5°C on V..G41/ V..F32, spindle heater is required. Please see overleaf for notes on suitable actuators.

**VXG44.15****VXG41.40****VXF32.65**



Linear Valve Actuators

Part No	Thrust	Features	To suit...
SAS31.00	400N	230v, 3-position, 120s running time	5.5mm valves
SAS31.03	400N	230v, 3-position, 30s running time	5.5mm valves
SAS31.50	400N	230v, 3-position, spring-return, 120s running time	5.5mm valves
SAS31.53	400N	230v, 3-position, spring-return, 30s running time	5.5mm valves
SAS81.00	400N	24v, 3-position, 120s running time	5.5mm valves
SAS81.03	400N	24v, 3-position, 30s running time	5.5mm valves
SAS81.33	400N	24v, 3-position, spring return, 30s running time	5.5mm valves
SAS61.03	400N	24v, 0-10v, 30s running time	5.5mm valves
SAS61.53	400N	24v, 0-10v, spring return, 30s running time	5.5mm valves
SAX31.00	800N	230v, 3-position, 120s running time	20mm valves
SAX31.03	800N	230v, 3-position, 30s running time	20mm valves
SAX81.00	800N	24v, 3-position, 120s running time	20mm valves
SAX61.03	800N	24v, 0-10v, 30s running time	20mm valves
SKD32.50	1000N	230v, 3-position, 120s running time	20mm valves
SKD32.51	1000N	230v, 3-position, spring return, 120s running time	20mm valves
SKD82.50	1000N	24v, 3-position, 120s running time	20mm valves
SKD82.51	1000N	24v, 3-position, spring return, 120s running time	20mm valves
SKD60	1000N	24v, 0-10v, 30s running time	20mm valves
SKD62	1000N	24v, 0-10v, spring return, 30s running time	20mm valves
SKB32.50	2800N	230v, 3-position, 120s running time	20mm valves
SKB32.51	2800N	230v, 3-position, spring return, 120s running time	20mm valves
SKB82.50	2800N	24v, 3-position, 120s running time	20mm valves
SKB82.51	2800N	24v, 3-position, spring return, 120s running time	20mm valves
SKB60	2800N	24v, 0-10v, 30s running time	20mm valves
SKB62	2800N	24v, 0-10v, spring return, 30s running time	20mm valves
SKC32.60	2800N	230v, 3-position, 120s running time	40mm valves
SKC32.61	2800N	230v, 3-position, spring return, 120s running time	40mm valves
SKC82.60	2800N	24v, 3-position, 120s running time	40mm valves
SKC82.61	2800N	24v, 3-position, spring return, 120s running time	40mm valves
SKC60	2800N	24v, 0-10v, 30s running time	40mm valves
SKC62	2800N	24v, 0-10v, spring return, 30s running time	40mm valves
Accessories to suit:			
ASK30	Linkage kit for obsolete VXG45... valve		SAS... actuators
ASC10.51	Auxiliary switch (single)		SA... actuators
ASC9.3	Auxiliary switch (double)		SKD/B/C 32,82
ASC1.6	Auxiliary switch (single)		SKD/B/C 62
ASK50	Stroke inverter		SKD actuators
ASK51	Stroke inverter		SKB actuators

NOTES:

* Suitability of actuator depends upon max differential pressure; please check before ordering.

** SAX... actuators operate to a maximum of 130°C, NOT SUITABLE FOR STEAM.

VI.



SAS61.03



SKB62





Fan Coil Valves & Actuators

VII.

Part No	Description	Size	KVS (m³/h)	Reference
VZL2/15/0.4	2-port, PN16	DN15 (flat face)	0.4	065Z2071
VZL2/15/0.63	2-port, PN16	DN15 (flat face)	0.63	065Z2072
VZL2/15/1	2-port, PN16	DN15 (flat face)	1	065Z2073
VZL2/15/1.6	2-port, PN16	DN15 (flat face)	1.6	065Z2074
VZL2/20/2.5	2-port, PN16	DN20 (flat face)	2.5	065Z2075
VZL2/20/3.5	2-port, PN16	DN20 (flat face)	3.5	065Z2076
VZL2/15/0.4	2-port, PN16	DN15 (compression)	0.4	065Z2041
VZL2/15/0.63	2-port, PN16	DN15 (compression)	0.63	065Z2042
VZL2/15/1	2-port, PN16	DN15 (compression)	1	065Z2043
VZL2/15/1.6	2-port, PN16	DN15 (compression)	1.6	065Z2044
VZL2/20/2.5	2-port, PN16	DN20 (compression)	2.5	065Z2045
VZL2/20/3.5	2-port, PN16	DN20 (compression)	3.5	065Z2046
VZL4/15/0.4	4-port, PN16	DN15 (flat face)	0.4	065Z2091
VZL4/15/0.63	4-port, PN16	DN15 (flat face)	0.63	065Z2092
VZL4/15/1.0	4-port, PN16	DN15 (flat face)	1	065Z2093
VZL4/15/1.6	4-port, PN16	DN15 (flat face)	1.6	065Z2094
VZL4/20/2.5	4-port, PN16	DN20 (flat face)	2.5	065Z2095
VZL4/20/3.5	4-port, PN16	DN20 (flat face)	3.5	065Z2096
VZL4/15/0.4	4-port, PN16	DN15 (compression)	0.4	065Z2061
VZL4/15/0.63	4-port, PN16	DN15 (compression)	0.63	065Z2062
VZL4/15/1.0	4-port, PN16	DN15 (compression)	1	065Z2063
VZL4/15/1.6	4-port, PN16	DN15 (compression)	1.6	065Z2064
VZL4/20/2.5	4-port, PN16	DN20 (compression)	2.5	065Z2065
VZL4/20/3.5	4-port, PN16	DN20 (compression)	3.5	065Z2066
Actuators to Suit				
AMV130-24	24v raise/lower,	200N	5.5mm stroke	082H8036
AMV130-230	230v raise/lower	200N	5.5mm stroke	082H8037
AME130-24	24v 0-10v output	200N	5.5mm stroke	082H8044
TWA-ZL-NC-24	24v normally closed	105N	2.8mm stroke	082H3100
TWA-ZL-NO-24	24v normally open	105N	2.8mm stroke	082H3101
TWA-ZL-NC-230	230v normally closed	105N	2.8mm stroke	082H3102
AMV13SU-24	24v, spring up	300N	5.5mm stroke	082H3043
AMV13SU-230	230v, spring up	300N	5.5mm stroke	082H3042



VZL2



VZL4



AME130





Fan Coil Valves & Actuators

Part No	Description	Size	KVS (m ³ /h)
V5822A1022	2-port unit	15mm compression	0.4
V5822A1030	2-port unit	15mm compression	0.63
V5822A1048	2-port unit	15mm compression	1.0
V5822A1055	2-port unit	15mm compression	1.6
V5822A1063	2-port unit	22mm compression	2.5
V5822A1071	2-port unit	22mm compression	4.0
V5823C2017	4-port unit	15mm compression	0.4
V5823C2025	4-port unit	15mm compression	0.63
V5823C2033	4-port unit	15mm compression	1.0
V5823C2041	4-port unit	15mm compression	1.6
V5823C2157	4-port unit	22mm compression	2.5
V5823C2165	4-port unit	22mm compression	4.0
Actuators to suit:			
MT8-024-NC	90N, 24v, spring return (NC)		V5822A/23C
MT8-024-NO	90N, 24v, spring return (NO)		V5822A/23C
M7410C1007	180N, 24v, raise/lower		V5822A/23C
M7410E1002	180N, 24v, 0-10v		V5822A/23C
M7410E2026	180N, 24v, 0-10v, manual operation		V5822A/23C
M7410E4022	180N, 24v, 0-10v, manual operation, 2x aux switch		V5822A/23C

Please see page 61 for compatible fittings.



V5822A



M7410C

VII.



4-Port Fan Coil Valves & Actuators

Part No	Description	Size	Mix KVS (m ³ /h)	Bypass KVS (m ³ /h)
VG3410CS	4-port	G1/2" BSPP	0.63	0.40
VG3410DS	4-port	G1/2" BSPP	1.0	0.63
VG3410ES	4-port	G1/2" BSPP	1.6	1
VG3410FS	4-port	G1/2" BSPP	2.5	/
VG3410JS	4-port	G3/4" BSPP	2.5	1.6
VG3410KS	4-port	G3/4" BSPP	4	2.5
VG3410LS	4-port	G1" BSPP	6.3	4
VG3490CS	4-port	15mm compr.	0.63	0.4
VG3490DS	4-port	15mm compr.	1.0	0.63
VG3490ES	4-port	15mm compr.	1.6	1.0
VG3490FS	4-port	15mm compr.	2.5	1.6
Actuators to suit:				
VA-7087-21	125N Thermic, 24v open/close (normally open)			
VA-7087-23	125N Thermic, 230v open/close (normally open)			
VA-7480-0001	120N Electric, 24v floating control			
VA-7482-2001	120N Electric, 24v 0-10v modulating control			



VG3410



VA-7482



resideo
Fan Coil Valves & Actuators

Part No	Description	Size	Kvs (m ³ /h)	Suitable Actuators
VDE15B0.4MCS	2-port	15mm (compression)	0.4	MSLF/MSHF/MSLM
VDE15B0.63MCS	2-port	15mm (compression)	0.63	MSLF/MSHF/MSLM
VDE15B1.0MCS	2-port	15mm (compression)	1.0	MSLF/MSHF/MSLM
VDE15B1.6MCS	2-port	15mm (compression)	1.6	MSLF/MSHF/MSLM
VDE20B2.5MCS	2-port	22mm (compression)	2.5	MSLF/MSHF/MSLM
VDE20B4.0MCS	2-port	22mm (compression)	4.0	MSLF/MSHF/MSLM
VYE15B0.4MCS	4-port	15mm (compression)	0.4	MSLF/MSHF/MSLM
VYE15B0.63MCS	4-port	15mm (compression)	0.63	MSLF/MSHF/MSLM
VYE15B1.0MCS	4-port	15mm (compression)	1.0	MSLF/MSHF/MSLM
VYE15B1.6MCS	4-port	15mm (compression)	1.6	MSLF/MSHF/MSLM
VYE20B2.5MCS	4-port	22mm (compression)	2.5	MSLF/MSHF/MSLM
VYE20B4.0MCS	4-port	22mm (compression)	4	MSLF/MSHF/MSLM
Actuators to suit:				
MSLF-B018-151	180N	24v	Floating, manual override	
MSLF-B030-151	300N	24v	Floating, manual override	
MSHF-B018-151	180N	230v	Floating, manual override	
MSHF-B030-151	300N	230v	Floating, manual override	
MSLF-B018-150	180N	24v	3-position	
MSLF-B030-150	300N	24v	3-position	
MSLM-B018-150	180N	24v	0-10v	
MSLM-B030-150	300N	24v	0-10v	
MSLM-B018-151	180N	24v	0-10v, manual override	
MSLM-B030-151	300N	24v	0-10v, manual override	


MSLM-B0.
SAUTER
Fan Coil Valves & Actuators

Part No	Description	Size	Kvs (m ³ /h)
VUL010F630	2-port	15mm (compression)	0.4
VUL010F620	2-port	15mm (compression)	0.6
VUL010F610	2-port	15mm (compression)	1.0
VUL010F600	2-port	15mm (compression)	1.6
VUL015F310	2-port	¾" (flat-face)	2.5
BUL010F630	4-port	15mm (compression)	0.4
BUL010F620	4-port	15mm (compression)	0.6
BUL010F610	4-port	15mm (compression)	1.0
BUL010F600	4-port	15mm (compression)	1.6
BUL015F410	4-port	¾" (flat-face)	2.5
Actuators to suit:			
AXM217SF402	24v, 0-10v (motorised) 120N		
AXS315SF102	24v, 0-10v (thermic), normally closed 125N *REQ CABLE*		
AXM217F202	24v, raise/lower (motorised) 120N		
AXT301F112	24v, raise/lower (thermic), normally closed 100N		
AXT301F110	230v, raise/lower (thermic), normally closed 100N		
Accessories to suit:			
550600103	1m power cable 0-10v	To suit AXS315SF102	


VUL015

AXM217




Fan Coil Valves

Part No	Description	Size	Kvs (m³/h)
VVP47.10-0.63s	2-port, PN16	15mm (compression)	0.63
VVP47.10-1s	2-port, PN16	15mm (compression)	1.0
VVP47.10-1.6s	2-port, PN16	15mm (compression)	1.6
VVP47.15-2.5s	2-port, PN16	22mm (compression)	2.5
VVP47.10-0.4	2-port, PN16	½" (flat-face)	0.4
VVP47.10-0.63	2-port, PN16	½" (flat-face)	0.63
VVP47.10-1	2-port, PN16	½" (flat-face)	1.0
VVP47.10-1.6	2-port, PN16	½" (flat-face)	1.6
VVP47.15-2.5	2-port, PN16	¾" (flat-face)	2.5
VXP47.10-0.4	3-port, PN16	½" (flat-face)	0.4
VXP47.10-0.63	3-port, PN16	½" (flat-face)	0.63
VXP47.10-1	3-port, PN16	½" (flat-face)	1.0
VXP47.10-1.6	3-port, PN16	½" (flat-face)	1.6
VXP47.15-2.5	3-port, PN16	¾" (flat-face)	2.5
VMP47.10-0.63s	4-port, PN16	15mm (compression)	0.63
VMP47.10-1s	4-port, PN16	15mm (compression)	1.0
VMP47.10-1.6s	4-port, PN16	15mm (compression)	1.6
VMP47.15-2.5s	4-port, PN16	22mm (compression)	2.5
VMP47.10-0.4	4-port, PN16	½" (flat-face)	0.4
VMP47.10-0.63	4-port, PN16	½" (flat-face)	0.63
VMP47.10-1	4-port, PN16	½" (flat-face)	1.0
VMP47.10-1.6	4-port, PN16	½" (flat-face)	1.6
VMP47.15-2.5	4-port, PN16	¾" (flat-face)	2.5

Please see page 61 for compatible fittings.



VVP47.10



VMP47.10



Fan Coil Valve Actuators

Part No	Thrust	Features
SSF331.09H	200N	Electric, 230v, 3-position control
SSP81*	160N	Electric, 24v, 3-position control
SSF161.05HF	200N	Electric, 24v, 0-10v modulating
STP321.65L10	100N	Electro-thermic, 230v, 2-position/ PWM (normally open)
STP121.65L10	100N	Electro-thermic, 24v, 2-position/ PWM (normally open)
Accessories to suit:		
AL100	~	To link S...P to Staefa 2/3/4W valve

*Note: soon to be superseded. Please contact the office for details.



SSP81





Pressure-Independent Control Valves & Actuators

Part No	Description	Size	V nom (l/h)
C215QPT-B	2-port PICCV PN25 c/w test points	½"	210
C215QPT-D	2-port PICCV PN25 c/w test points	½"	420
C220QPT-F	2-port PICCV PN25 c/w test points	¾"	980
C225QPT-G	2-port PICCV PN25 c/w test points	1"	2100

Actuators to suit:

CQ24A	1NM, 24v, 2- or 3- position
CQ24A-SR	1NM, 24v 0-10v
CQ230A	1NM, 230v, 2- or 3- position
CQK24A	1NM, 24v, 2- or 3- position, failsafe (normally closed)
CQK24A-SR	1NM, 24v, 0-10v, failsafe (normally closed)



C215QPT

VIII.



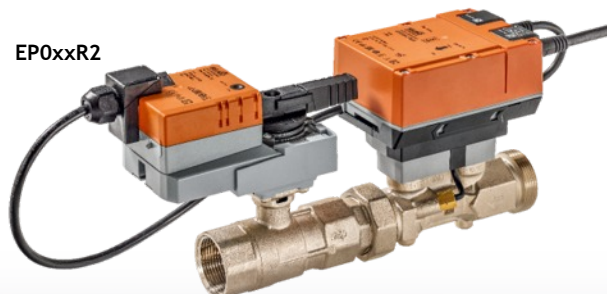
Electronic Pressure-Independent Control Valves & Actuators

Part No	Size	Vnom (l/s)	Description
EP015R2+BAC	½" *	0.42	PN25, 2-10v, MP-bus/Modbus/BACnet*
EP020R2+BAC	¾" *	0.69	PN25, 2-10v, MP-bus/Modbus/BACnet*
EP025R2+BAC	1" *	0.97	PN25, 2-10v, MP-bus/Modbus/BACnet*
EP032R2+BAC	1¼" *	1.67	PN25, 2-10v, MP-bus/Modbus/BACnet*
EP040R2+BAC	1½" *	2.78	PN25, 2-10v, MP-bus/Modbus/BACnet*
EP050R2+BAC	2" *	4.17	PN25, 2-10v, MP-bus/Modbus/BACnet*
EP065F2-16+BAC	DN65 (FL)	8.3	PN16, 2-10v, MP-bus/Modbus/BACnet
EP080F2-16+BAC	DN80 (FL)	11.7	PN16, 2-10v, MP-bus/Modbus/BACnet
EP100F2-16+BAC	DN100 (FL)	20.8	PN16, 2-10v, MP-bus/Modbus/BACnet
EP125F2-16+BAC	DN125 (FL)	33.3	PN16, 2-10v, MP-bus/Modbus/BACnet
EP150F2-16+BAC	DN150 (FL)	50	PN16, 2-10v, MP-bus/Modbus/BACnet
EP015R2+KBAC	½"	0.42	PN25, 2-10v, MP-bus/Modbus/BACnet, failsafe*
EP020R2+KBAC	¾"	0.69	PN25, 2-10v, MP-bus/Modbus/BACnet, failsafe*
EP025R2+KBAC	1"	0.97	PN25, 2-10v, MP-bus/Modbus/BACnet, failsafe*
EP032R2+KBAC	1¼"	1.67	PN25, 2-10v, MP-bus/Modbus/BACnet, failsafe*
EP040R2+KBAC	1½"	2.78	PN25, 2-10v, MP-bus/Modbus/BACnet, failsafe*
EP050R2+KBAC	2"	4.17	PN25, 2-10v, MP-bus/Modbus/BACnet, failsafe*
EP065F2+KBAC	DN65 (FL)	8.3	PN16, 2-10v, MP-bus/Modbus/BACnet, failsafe
EP080F2+KBAC	DN80 (FL)	11.7	PN16, 2-10v, MP-bus/Modbus/BACnet, failsafe
EP100F2+KBAC	DN100 (FL)	20.8	PN16, 2-10v, MP-bus/Modbus/BACnet, failsafe
EP125F2+KBAC	DN125 (FL)	33.3	PN16, 2-10v, MP-bus/Modbus/BACnet, failsafe
EP150F2+KBAC	DN150 (FL)	50	PN16, 2-10v, MP-bus/Modbus/BACnet, failsafe

Unions for screwed valves (*1x required per valve)

ZREV15F	DN15 - Rp ½"
ZREV20F	DN20 - Rp ¾"
ZREV25F	DN25 - Rp 1"
ZREV32F	DN32 - Rp 1¼"
ZREV40F	DN40 - Rp 1½"
ZREV50F	DN50 - Rp 2"

EP0xxR2



EPxxxF2





Energy Valves

Part No	Size	V nom (l/s)	Features
EV015R2+BAC	½" *	0.42	24v, 2-10v, MP-Bus, Modbus, BACnet
EV020R2+BAC	¾" *	0.69	24v, 2-10v, MP-Bus, Modbus, BACnet
EV025R2+BAC	1" *	0.97	24v, 2-10v, MP-Bus, Modbus, BACnet
EV032R2+BAC	1¼" *	1.67	24v, 2-10v, MP-Bus, Modbus, BACnet
EV040R2+BAC	1½" *	2.78	24v, 2-10v, MP-Bus, Modbus, BACnet
EV050R2+BAC	2" *	4.17	24v, 2-10v, MP-Bus, Modbus, BACnet
EV065F+BAC	DN65	8	24v, 2-10v, MP-Bus, Modbus, BACnet
EV080F+BAC	DN80	11	24v, 2-10v, MP-Bus, Modbus, BACnet
EV100F+BAC	DN100	20	24v, 2-10v, MP-Bus, Modbus, BACnet
EV125F+BAC	DN125	31	24v, 2-10v, MP-Bus, Modbus, BACnet
EV150F+BAC	DN150	45	24v, 2-10v, MP-Bus, Modbus, BACnet

Unions for screwed valves (*1x required per valve)

ZREV15F	DN15 - Rp ½"
ZREV20F	DN20 - Rp ¾"
ZREV25F	DN25 - Rp 1"
ZREV32F	DN32 - Rp 1¼"
ZREV40F	DN40 - Rp 1½"
ZREV50F	DN50 - Rp 2"

Note: Other options are available; including failsafe and MID-approved meter units (see page 42). Please contact the office for further details.



EV0xxR2

VIII.



Pressure-Independent Control Valves

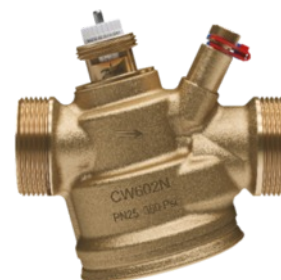
Part No	Size	Qnom (l/h)	Reference
ABQM15LF 4.0	DN15 (internal thread)	200	003Z8300
ABQM15 4.0	DN15 (internal thread)	650	003Z8301
ABQM15HF 4.0	DN15 (internal thread)	1,200	003Z8302
ABQM20 4.0	DN20 (internal thread)	1,100	003Z8303
ABQM20HF 4.0	DN20 (internal thread)	1,900	003Z8304
ABQM25 4.0	DN25 (internal thread)	2,200	003Z8305
ABQM25HF 4.0	DN25 (internal thread)	3,800	003Z8306
ABQM32 4.0	DN32 (internal thread)	3,600	003Z8307
ABQM32HF 4.0	DN32 (internal thread)	5,000	003Z8308
ABQM15LF 4.0	DN15 (EXT- see below for unions)	200	003Z8200
ABQM15 4.0	DN15 (EXT- see below for unions)	650	003Z8201
ABQM15HF 4.0	DN15 (EXT- see below for unions)	1,200	003Z8202
ABQM20 4.0	DN20 (EXT- see below for unions)	1,100	003Z8203
ABQM20HF 4.0	DN20 (EXT- see below for unions)	1,900	003Z8204
ABQM25 4.0	DN25 (EXT- see below for unions)	2,200	003Z8205
ABQM25HF 4.0	DN25 (EXT- see below for unions)	3,800	003Z8206
ABQM32 4.0	DN32 (EXT- see below for unions)	3,600	003Z8207
ABQM32HF 4.0	DN32 (EXT- see below for unions)	5,000	003Z8208
ABQM40	DN40 (EXT - see below for unions)	7,500	003Z0770
ABQM50	DN50 (EXT - see below for unions)	12,500	003Z0771

Unions to Suit (2x needed for screwed ABQMs up to DN50)

003Z0232	1x union to convert DN15 to ½" bspf
003Z0233	1x union to convert DN20 to ¾" bspf
003Z0234	1x union to convert DN25 to 1" bspf
003Z0235	1x union to convert DN32 to 1¼" bspf
003Z0279	1x union to convert DN40 to 1½" bspf
003Z0278	1x union to convert DN50 to 2" bspf



ABQM INT



ABQM EXT



VIII. Pressure-Independent Control Valves & Actuators



Pressure-Independent Control Valves (cont.)

Part No	Size	Qnom (l/h)	Reference
ABQM65	DN65 (FLANGED) PN16	20,000	003Z0773
ABQM65HF	DN65 (FLANGED) PN16	25,000	003Z0793
ABQM80	DN80 (FLANGED) PN16	28,000	003Z0774
ABQM80HF	DN80 (FLANGED) PN16	40,000	003Z0794
ABQM100	DN100 (FLANGED) PN16	38,000	003Z0775
ABQM100HF	DN100 (FLANGED) PN16	59,000	003Z0795
ABQM125	DN125 (FLANGED) PN16	115,000	003Z0725
ABQM125HF	DN125 (FLANGED) PN16	140,000	003Z0735
ABQM150	DN150 (FLANGED) PN16	155,000	003Z0726
ABQM150HF	DN150 (FLANGED) PN16	200,000	003Z0736
ABQM200	DN200 (FLANGED) PN16	320,000	003Z0727
ABQM200HF	DN200 (FLANGED) PN16	410,000	003Z0737
ABQM250	DN250 (FLANGED) PN16	380,000	003Z0728
ABQM250HF	DN250 (FLANGED) PN16	500,000	003Z0738
ABQM250-SHF	DN250 (FLANGED) PN16	600,000	003Z0739
ABQM250-SHF+	DN250 (FLANGED) PN16	670,000	003Z0840



ABQM FLANGED



AME110NL (GEN2)



Pressure-Independent Control Valve Actuators

Part No	Thrust	Supply	Features	To suit...	Reference
AMV110NL	130N	24v	3-position	ABQM/HERO DN15-32	082H8056
AME110NL (G2)	150N	24v	0-10v	ABQM/HERO DN15-32	082H8110
NOVOCON-S	90N	24v	0-10v/BACnet/Modbus	ABQM/HERO DN15-32	003Z8504
AME435QM	400N	24v	0-10v	ABQM DN40-100	082H0171
NOVOCON-M	550N	24v	0-10v/BACnet/Modbus	ABQM DN40-100	003Z8540
AME55QM	2000N	24v	0-10v	ABQM DN125-250	082H3078
NOVOCON-L	2000N	24v	0-10v/BACnet/Modbus	ABQM DN125-250	003Z8560

Note: other options are available, including thermic, failsafe & feedback signal versions.
Please contact the office for details.



OPTIMA Compact Pressure-Independent Control Valves

Part No	Size	Stroke	Flow Rate (L/H)	Features	Actuator
53-1370	DN15 (int)	5.0mm	65 - 370	C/w test plugs	Options below
53-1365	DN15 (int)	5.0mm	220 - 1,330	C/w test plugs	Options below
53-1368	DN20 (int)	5.0mm	220 - 1,330	C/w test plugs	Options below
53-1339	DN25 (int)	5.5mm	280 - 1,800	C/w test plugs	Options below
53-1373	DN25 (int)	5.5mm	600 - 3,609	C/w test plugs	Options below
53-1374	DN32 (int)	5.5mm	550 - 4,001	C/w test plugs	Options below
53-1375-01	DN40 (int)	15mm	1,370 - 9,500	C/w test plugs	24v 0-10v/3-pos
53-1376-01	DN50 (int)	15mm	1,400 - 11,500	C/w test plugs	24v 0-10v/3-pos

Actuators to suit DN15-32 (DN40 & DN50 actuator included with valve)

53-1180	24v 0-10v motorised, 8 seconds run time
53-1181	24v 3 pos/ on-off motorised, 8 seconds run time
53-1182	230v 3 post/ on-off motorised, 8 seconds run time
48-5529	24v 0-10v thermic, 30 seconds run time, failsafe (normally closed)
48-5527	24v on/off thermic, 180 seconds run time, failsafe (normally closed)
48-5528	230v on/off thermic, 180 seconds run time, failsafe (normally closed)



53-1374





ACVATIX Pressure-Independent Control Valves

Part No (PN25)	Size (bspf)	V100 (l/h)	Features	Actuators*
VPI46.15L0.2Q	½"	200	Int thread, c/w test points	STA...65/SSA
VPI46.15L0.4Q		370	Int thread, c/w test points	STA...65/SSA
VPI46.15L0.6Q		575	Int thread, c/w test points	STA...65/SSA
VPI46.15F1.4Q		1330	Int thread, c/w test points	STA...65/SSA
VPI46.20L0.6Q	¾"	575	Int thread, c/w test points	STA...65/SSA
VPI46.20F1.4Q		1,330	Int thread, c/w test points	STA...65/SSA
VPI46.20F1.8Q		1,800	Int thread, c/w test points	STA...65/SSA
VPI46.25F1.8Q	1"	1,800	Int thread, c/w test points	STA...65/SSA
VPI46.25F3.6Q		3,609	Int thread, c/w test points	STA...65/SSA
VPI46.32F4Q	1¼"	4,001	Int thread, c/w test points	STA...65/SSA
VPI46.40F9.5Q	1½"	9,500	Int thread, c/w test points	SAY...P03
VPI46.50F12Q	2"	11,500	Int thread, c/w test points	SAY...P03
VPF44.50F15	DN50	16	Flanged PN16, c/w test points	SAX...P03/SQV...P03
VPF44.50F25	DN50	24.6	Flanged PN16, c/w test points	SAX...P03/SQV...P03
VPF44.65F25	DN65	24.4	Flanged PN16, c/w test points	SAX...P03/SQV...P03
VPF44.65F35	DN65	37.7	Flanged PN16, c/w test points	SAX...P03/SQV...P03
VPF44.80F35	DN80	35.7	Flanged PN16, c/w test points	SAX...P03/SQV...P03
VPF44.80F45	DN80	49	Flanged PN16, c/w test points	SAX...P03/SQV...P03
VPF44.100F70	DN100	69.6	Flanged PN16, c/w test points	SQV...P03/SAV...P00
VPF44.100F90	DN100	90.9	Flanged PN16, c/w test points	SQV...P03/SAV...P00
VPF44.125F110	DN125	112	Flanged PN16, c/w test points	SQV...P03/SAV...P00
VPF44.125F135	DN125	132	Flanged PN16, c/w test points	SQV...P03/SAV...P00
VPF44.150F150	DN150	150	Flanged PN16, c/w test points	SQV...P03/SAV...P00
VPF44.150F200	DN150	208	Flanged PN16, c/w test points	SQV...P03/SAV...P00
VPF43.200F210	DN200	210	Flanged PN16, c/w test points	SQV...P03/SAV...P00
VPF43.200F280	DN200	280	Flanged PN16, c/w test points	SQV...P03/SAV...P00



VPI46.25...Q

VIII.



VPF43.200

Note: please see p5 of product datasheet for full details of compatibility (available on request).



ACVATIX Pressure-Independent Control Valve Actuators

Part No	Description	Thrust	Stroke	Features
STA321.65L10	Electrothermic	100N	4.5mm	230v, 2-position
STA121.65L10	Electrothermic	100N	4.5mm	24v, 2-position
STA161.65L10	Electrothermic	100N	4.5mm	24v, 0-10v modulating, 1m cable
SSA331.00	Electric	100N	5.5mm	230v, 3-position
SSA131.00	Electric	100N	5.5mm	24v, 3-position
SSA161.05HF	Electric	100N	5.5mm	24v, 0-10v modulating
SAY31P03	Electric	200N	20mm	230v, 3-position
SAY81P03	Electric	200N	20mm	24v, 3-position
SAY61P03	Electric	200N	20mm	24v, 0-10v modulating
SAX31P03	Electric	500N	20mm	230v, 3-position
SAX81P03	Electric	500N	20mm	24v, 3-position
SAX61P03	Electric	500N	20mm	24v, 0-10v modulating
SQV91P30	Electric	1100N	20mm	24v*, 0-10v modulating
SQV91P40	Electric	1100N	40mm	24v*, 0-10v modulating
SAV31P00	Electric	1100N	40mm	230v, 3-position
SAV81P00	Electric	1100N	40mm	24v, 3-position
SAV61P00	Electric	1100N	40mm	24v, 0-10v modulating
Accessories to suit:				
ASC10.51	Single aux. switch			SAY...P03, SAX...P03, SAV...P00
ASC10.42	Double aux. switch			SQV91P...

Note: other options, including failsafe versions, are available. Please contact the office for details.

* SQV can be converted to 230v with accessory. Please contact the office for details.





ACVATIX Intelligent Valve

Control valve with integrated energy management

VIII.

Part No	Ports	Size	Vmin (l/h)	V100 (l/h)	Features
EVG4U10A015	2	DN15*	450	1,500	24v 0-10v, Modbus RTU/BACnet UDP/IP
EVG4U10A020	2	DN20*	900	3,000	24v 0-10v, Modbus RTU/BACnet UDP/IP
EVG4U10A020	2	DN25*	1,350	4,500	24v 0-10v, Modbus RTU/BACnet UDP/IP
EVG4U10A032	2	DN32*	2,100	7,000	24v 0-10v, Modbus RTU/BACnet UDP/IP
EVG4U10A040	2	DN40*	3,450	11,500	24v 0-10v, Modbus RTU/BACnet UDP/IP
EVG4U10A050	2	DN50*	5,400	18,000	24v 0-10v, Modbus RTU/BACnet UDP/IP
EVF4U20A065	2	DN65	9,000	30,000	24v 0-10v, Modbus RTU/BACnet UDP/IP
EVF4U20A080	2	DN80	14,500	48,000	24v 0-10v, Modbus RTU/BACnet UDP/IP
EVF4U20A100	2	DN100	22,500	75,000	24v 0-10v, Modbus RTU/BACnet UDP/IP
EVF4U20A125	2	DN125	36,000	120,000	24v 0-10v, Modbus RTU/BACnet UDP/IP
EXG4U10A015	3	DN15*	360	1,200	24v 0-10v, Modbus RTU/BACnet UDP/IP
EXG4U10A020	3	DN20*	600	2,000	24v 0-10v, Modbus RTU/BACnet UDP/IP
EXG4U10A025	3	DN25*	960	3,200	24v 0-10v, Modbus RTU/BACnet UDP/IP
EXG4U10A032	3	DN32*	1,500	5,000	24v 0-10v, Modbus RTU/BACnet UDP/IP
EXG4U10A040	3	DN40*	2,400	8,000	24v 0-10v, Modbus RTU/BACnet UDP/IP
EXG4U10A050	3	DN50*	3,600	12,000	24v 0-10v, Modbus RTU/BACnet UDP/IP
EXF4U20A065	3	DN65	6,000	20,000	24v 0-10v, Modbus RTU/BACnet UDP/IP
EXF4U20A080	3	DN80	9,600	32,000	24v 0-10v, Modbus RTU/BACnet UDP/IP
EXF4U20A100	3	DN100	15,000	50,000	24v 0-10v, Modbus RTU/BACnet UDP/IP
*Unions to suit:					
ALG152	2x brass union G1"/R½"				<i>EVG4U10E015</i>
ALG202	2x brass union G1¼"/R¾"				<i>EVG4U10E020</i>
ALG252	2x brass union G1½"/R1"				<i>EVG4U10E025</i>
ALG322	2x brass union G2"/R1¼"				<i>EVG4U10E032</i>
ALG402	2x brass union G2¼"/R1½"				<i>EVG4U10E040</i>
ALG502	2x brass union G2¾"/R2"				<i>EVG4U10E050</i>
ALG153	3x brass union G1"/R½"				<i>EXG4U10E015</i>
ALG203	3x brass union G1¼"/R¾"				<i>EXG4U10E020</i>
ALG253	3x brass union G1½"/R1				<i>EXG4U10E025</i>
ALG323	3x brass union G2"/R1¼"				<i>EXG4U10E032</i>
ALG403	3x brass union G2¼"/R1½"				<i>EXG4U10E040</i>
ALG503	3x brass union G2¾"/R2"				<i>EXG4U10E050</i>



BELIMO® Butterfly Valves

Part No	Size	KVS (m³/h)	Features	Suitable Actuators
D640N	DN40	27	Wafer flange	SR...-5/ SRF...-5 *DIRECT MOUNTING*
D650N	DN50	30	Wafer flange	SR...-5/ SRF...-5 *DIRECT MOUNTING*
D665N	DN65	50	Wafer flange	SR...-5/ SRF...-5 *DIRECT MOUNTING*
D680N	DN80	75	Wafer flange	GR...-5/ GRK...-5 *DIRECT MOUNTING*
D6100W	DN100	220	Wafer flange	JRCA..T *LINKAGE REQ'D*
D6125W	DN125	310	Wafer flange	JRCA..T *LINKAGE REQ'D*
D6150W	DN150	550	Wafer flange	JRCA..T *LINKAGE REQ'D*
D6200W	DN200	820	Wafer flange	PRCA.../ PRKCA... *LINKAGE REQ'D*
D6250W	DN250	1300	Wafer flange	PRCA.../ PRKCA... *LINKAGE REQ'D*
D650NL	DN50	30	Lugged flange	SR...-5/ SRF...-5 *DIRECT MOUNTING*
D665NL	DN65	50	Lugged flange	SR...-5/ SRF...-5 *DIRECT MOUNTING*
D680NL	DN80	75	Lugged flange	GR...-5/ GRK...-5 *DIRECT MOUNTING*
D6100WL	DN100	220	Lugged flange	JRCA..T *LINKAGE REQ'D*
D6125WL	DN125	310	Lugged flange	JRCA..T *LINKAGE REQ'D*
D6150WL	DN150	550	Lugged flange	JRCA..T *LINKAGE REQ'D*
D6200WL	DN200	820	Lugged flange	PRCA.../ PRKCA... *LINKAGE REQ'D*
D6250WL	DN250	1300	Lugged flange	PRCA.../ PRKCA... *LINKAGE REQ'D*



IX.

BELIMO® Butterfly Valve Actuators

Part No	Torque	Voltage	Features
SR24A-5	20Nm	24v	2- or 3- position
SR24A-SR-5	20Nm	24v	2-10v output
SR230A-5	20Nm	230v	2- or 3- position
GR24A-5	40Nm	24v	2- position
GR24A-SR-5	40Nm	24v	2-10v output
GR230A-5	40Nm	230v	2- position
JRCA-S2-T	90Nm	24-240vAC	2/3 pos, 2x aux switch
JRCA-BAC-S2-T	90Nm	24-240vAC	2/3 pos, 2-10v/BACnet/Modbus, 2x aux switch
PRCA-S2-T	160Nm	24-240vAC	2/3 pos, 35s running time, 2x aux switch
PRCA-BAC-S2-T	160Nm	24-240vAC	2/3 pos, BACNET, 35s running time, 2x aux switch
PRKCA-BAC-S2-T	160Nm	24-240vAC	2/3 pos, BACNET, failsafe, 2x aux switch
Linkage Kits to Suit:			
ZPR01	To fit PR... actuators to DN200 & DN250 butterfly valves		
ZJR01	To fit JR... actuators to DN125 & DN150 W/WL valves		
ZJR03	To fit JR... actuators to DN100 W/WL valves		



JRCA-BAC...

Note: other options are available; please contact the office for details.

BELIMO® 3-way Butterfly Valves

C/w 2x lugged butterfly valves, 2x actuators, 1x "t-piece"

Part No	Size	KVS (m³/h)	Voltage	Output	Features
D7100WL/BAC+ZD7100	DN100	160	24-230v	0-10v/BACnet/Modbus	2x aux switch
D7125WL/BAC+ZD7125	DN125	280	24-230v	0-10v/BACnet/Modbus	2x aux switch
D7150WL/BAC+ZD7150	DN150	380	24-230v	0-10v/BACnet/Modbus	2x aux switch
D7200WL/BAC+ZD7200	DN200	800	24-230v	0-10v/BACnet/Modbus	4x aux switch
D7250WL/BAC+ZD7250	DN250	1200	24-230v	0-10v/BACnet/Modbus	4x aux switch
D7300WL/BAC+ZD7300	DN300	1700	24-230v	0-10v/BACnet/Modbus	4x aux switch



IX. Butterfly Valves & Actuators



Motorised Butterfly Valves (Wafer)

Part No	Description	Size	Kvs (m³/h)	Code
VFH2/WAO-32	Wafer, PN16, 230V ON/OFF	DN 32	63	003Z2360
VFH2/WAO-40	Wafer, PN16, 230V ON/OFF	DN 40	72	003Z2363
VFH2/WAO-50	Wafer, PN16, 230V ON/OFF	DN 50	82	003Z2366
VFH2/WAO-65	Wafer, PN16, 230V ON/OFF	DN 65	207	003Z2369
VFH2/WAO-80	Wafer, PN16, 230V ON/OFF	DN 80	288	003Z2372
VFH2/WAO-100	Wafer, PN16, 230V ON/OFF	DN 100	569	003Z2375
VFH2/WAO-125	Wafer, PN16, 230V ON/OFF	DN 125	874	003Z2378
VFH2/WAO-150	Wafer, PN16, 230V ON/OFF	DN 150	1,348	003Z2380
VFH2/WAO-200	Wafer, PN16, 230V ON/OFF	DN 200	2,692	003Z2382
VFH2/WAO-250	Wafer, PN16, 230V ON/OFF	DN 250	5,550	003Z2384
VFH2/WAO-300	Wafer, PN16, 230V ON/OFF	DN 300	7,557	003Z2386
VFH2/WAO-350	Wafer, PN16, 230V ON/OFF	DN 350	10,212	003Z2388
VFH2/WAO-400	Wafer, PN16, 230V ON/OFF	DN 400	14,042	003Z2390
VFH2/WAO-450	Wafer, PN16, 230V ON/OFF	DN 450	18,600	003Z2392
VFH2/WAO-500	Wafer, PN16, 230V ON/OFF	DN 500	23,915	003Z2394
VFH2/WAO-600	Wafer, PN16, 230V ON/OFF	DN 600	36,946	003Z2396



IX.



Motorised Butterfly Valves (Lugged)

Part No	Description	Size	Kvs (m³/h)	Code
VFH2/LAO-50	Lugged, PN16, 230V ON/OFF	DN 50	82	003Z6366
VFH2/LAO-65	Lugged, PN16, 230V ON/OFF	DN 65	207	003Z6369
VFH2/LAO-80	Lugged, PN16, 230V ON/OFF	DN 80	288	003Z6372
VFH2/LAO-100	Lugged, PN16, 230V ON/OFF	DN 100	569	003Z6375
VFH2/LAO-125	Lugged, PN16, 230V ON/OFF	DN 125	874	003Z6378
VFH2/LAO-150	Lugged, PN16, 230V ON/OFF	DN 150	1,348	003Z6380
VFH2/LAO-200	Lugged, PN16, 230V ON/OFF	DN 200	2,692	003Z6382
VFH2/LAO-250	Lugged, PN16, 230V ON/OFF	DN 250	5,550	003Z6384
VFH2/LAO-300	Lugged, PN16, 230V ON/OFF	DN 300	7,557	003Z6386
VFH2/LAO-350	Lugged, PN16, 230V ON/OFF	DN 350	10,212	003Z6388
VFH2/LAO-400	Lugged, PN16, 230V ON/OFF	DN 400	14,042	003Z6390
VFH2/LAO-450	Lugged, PN16, 230V ON/OFF	DN 450	18,600	003Z6392
VFH2/LAO-500	Lugged, PN16, 230V ON/OFF	DN 500	23,915	003Z6394
VFH2/LAO-600	Lugged, PN16, 230V ON/OFF	DN 600	36,946	003Z6396



Motorised Butterfly Valves (Lugged)

Part No	Description	Size	Kvs (at 90°)
EA1185-050	Lugged, PN16, 24-240v actuator w/ manual override	DN 50	118
EA1185-065	Lugged, PN16, 24-240v actuator w/ manual override	DN 65	258
EA1185-080	Lugged, PN16, 24-240v actuator w/ manual override	DN 80	510
EA1185-100	Lugged, PN16, 24-240v actuator w/ manual override	DN 100	926
EA1185-125	Lugged, PN16, 24-240v actuator w/ manual override	DN 125	1,500
EA1185-150	Lugged, PN16, 24-240v actuator w/ manual override	DN 150	2,170
EA1185-200	Lugged, PN16, 24-240v actuator w/ manual override	DN 200	3,842
EA1185-250	Lugged, PN16, 24-240v actuator w/ manual override	DN 250	5,014





Butterfly Valves & Actuators

Wafer, 0.05% leakage

Part No	Description	Size	Kvs (m³/h)	Features
VFW41.40U	Wafer-type, PN6/10/16	DN 40	40	Leakage: 0.05% KVS
VFW41.50U	Wafer-type, PN6/10/16	DN 50	100	Leakage: 0.05% KVS
VFW41.65U	Wafer-type, PN6/10/16	DN 65	155	Leakage: 0.05% KVS
VFW41.80U	Wafer-type, PN6/10/16	DN 80	260	Leakage: 0.05% KVS
VFW41.100U	Wafer-type, PN6/10/16	DN 100	520	Leakage: 0.05% KVS
VFW41.125U	Wafer-type, PN6/10/16	DN 125	820	Leakage: 0.05% KVS
VFW41.150U	Wafer-type, PN6/10/16	DN 150	1600	Leakage: 0.05% KVS
VFW41.200U	Wafer-type, PN6/10/16	DN 200	4000	Leakage: 0.05% KVS
Actuators to suit:				
SAL31.03T10/F05	230v, 3-position	10Nm		
SAL81.03T10/F05	24v, 3-position	10Nm		
SAL61.03T10/F05	24v, 0-10v	10Nm		
Accessories to suit:				
ASK41NF04SP	Manual adjuster - lever			VFW/L DN40-65
ASK41NF05SP	Manual adjuster - lever			VFW/L DN80-125
ASK41NF07SP	Manual adjuster - lever			VFW/L DN150-200
ASC10.51	Auxiliary switch			



IX.



Butterfly Valves

Tight-closing

Part No	Description	Size	Kvs (m³/h)	Actuators
VFW41.40	Wafer, PN6/10/16	DN 40	40	SAL...T20/ SQL3...1E25
VFW41.50	Wafer, PN6/10/16	DN 50	100	
VFW41.65	Wafer, PN6/10/16	DN 65	155	
VFW41.80	Wafer, PN6/10/16	DN 80	260	SAL...T40/ SQL3...1E40
VFW41.100	Wafer, PN6/10/16	DN 100	520	
VFW41.125	Wafer, PN6/10/16	DN 125	820	
VFW41.150	Wafer, PN6/10/16	DN 150	1,600	SQL3...1E100
VFW41.200	Wafer, PN6/10/16	DN 200	4,000	
VFW41.250	Wafer, PN6/10/16	DN 250	4,550	
VFW41.300	Wafer, PN6/10/16	DN 300	7,200	SQL3...1E400
VFW41.350	Wafer, PN6/10/16	DN 350	10,250	
VFW41.400	Wafer, PN6/10/16	DN 400	14,100	
VFW41.450	Wafer, PN6/10/16	DN 450	18,500	SQL3...1E1200
VFW41.500	Wafer, PN10/16	DN 500	24,000	
VFW41.600	Wafer, PN16	DN 600	31,000	
VFL41.40	Lugged, PN10/16	DN 40	40	SAL...T20/ SQL3...1E25
VFL41.50	Lugged, PN10/16	DN 50	100	
VFL41.65	Lugged, PN10/16	DN 65	155	
VFL41.80	Lugged, PN10/16	DN 80	260	SAL...T40/ SQL3...1E40
VFL41.100	Lugged, PN10/16	DN 100	520	
VFL41.125	Lugged, PN10/16	DN 125	820	
VFL41.150	Lugged, PN10/16	DN 150	1,600	SQL3...1E100
VFL41.200	Lugged, PN16	DN 200	4,000	
VFL41.250	Lugged, PN16	DN 250	4,550	
VFL41.300	Lugged, PN16	DN 300	7,200	SQL3...1E400
VFL41.350	Lugged, PN16	DN 350	10,250	
VFL41.400	Lugged, PN16	DN 400	14,100	
VFL41.450	Lugged, PN16	DN 450	18,500	SQL3...1E1200
VFL41.500	Lugged, PN16	DN 500	24,000	
VFL41.600	Lugged, PN16	DN 600	31,000	



IX. Butterfly Valves & Actuators



Butterfly Valve Actuators VFW/VFL41 tight closing

Part No	Description	Aux Switches	Run Time (s)	Torque (Nm)	To suit...
SAL31.00T20	230v, 3-position	~	120	20	VFW/L DN 40-65
SAL81.00T20	24v, 3-position	~	120	20	
SAL61.00T20	24v, 0-10v	~	120	20	
SQL341E25	230v, 2/3-position	2x	17	25	
SQL361E25	230v, 0-10v	2x	17	25	
SAL31.00T40	230v, 3-position	~	120	40	VFW/L DN 80-125
SAL81.00T40	24v, 3-position	~	120	40	
SAL61.00T40	24v, 0-10v	~	120	40	
SQL341E40	230v, 2/3-position	2x	24	40	
SQL361E40	230v, 0-10v	2x	24	40	
SQL341E100	230v, 2/3-position	2x	39	100	VFW/L DN 150-200
SQL361E100	230v, 0-10v	~	39	100	
SQL341E400	230v, 2/3-position	2x	47	400	VFW/L DN 250-400
SQL361E400	230v, 0-10v	~	47	400	
SQL341E1200	230v, 2/3-position	2x	47	1200	VFW/L DN 450-600
SQL361E1200	230v, 0-10v	~	47	1200	
Valve/ Actuator Accessories to suit:					
ASK41NF04SP	Manual adjuster - lever				VFW/L DN40-65
ASK41NF05SP	Manual adjuster - lever				VFW/L DN80-125
ASK41NF07SP	Manual adjuster - lever				VFW/L DN150-200
ASK41NF10SP	Manual adjuster - worm gear				VFW/L DN250-400
ASC10.51	Single auxiliary switch (Max. 2x)				SAL...00T20/40
ASC10.21	Double auxiliary switch				SQL...E100/400/1200
ASZ7.5/1000	Potentiometer (0...1000ohm)				SAL31/81...00T20/40



Sylax Butterfly Valves

Part No	Size	Type	Features	Actuators
280-5100	50mm	Wafer (PN16)	REG 4 compliance	Please contact office
280-5110	65mm	Wafer (PN16)	REG 4 compliance	Please contact office
280-5120	80mm	Wafer (PN16)	REG 4 compliance	Please contact office
280-5130	100mm	Wafer (PN16)	REG 4 compliance	Please contact office



Note: other options are available; please contact the office for details.



BELIMO® Rotary Retrofit Actuators

Part No	Torque (Nm)	Voltage (v)	Features
HT24-3	10	24	3-position
HT24-3-S	10	24	3-position, 1x aux switch
HT24-SR	10	24	2-10v output
HT230-3	10	230	3-position
HT230-3-S	10	230	3-position, 1x aux switch
Accessories to suit:			
SNR2	1x aux switch (3-point, screw terminal only)		

Note: please see below for details of compatible valves and linkage kits.



BELIMO® Linear Retrofit Actuators

Part No	Thrust (N)	Stroke (mm)	Voltage (v)	Features
NV24A-RE	1000	20	24	2-/3-position
NV24A-MP-RE	1000	20	24	2-10v output, adjustable parameter
NVK24A-3-RE	1000	20	24	Failsafe, 3 position
NVK24A-MP-RE	1000	20	24	Failsafe, 2-10v output, adjustable parameter
NV230A-RE	1000	20	230	2-/3-position
NVK230A-3-RE	1000	20	230	Failsafe, 3-position
SVL24A-MP-RE	1500	50	24	2-10v output, adjustable parameter
SVL230A-RE	1500	50	230	2-/3-position
EV24A-RE	2500	50	24	2-/3-position
EV24A-MP-RE	2500	50	24	2-10v output, adjustable parameter
EV230A-RE	2500	50	230	2-/3-position
RV24A-MF-RE	4500	50	24	2-10v output
Accessories to suit:				
ZTH-EU	Programming/servicing tool for parameterisable actuators.			

Note: please contact the office for details of retrofit actuator compatibility and any required linkage kits.



X.

BELIMO® Actuator Linkage Kits

Linkage	Actuator	Valve Manuf.	Valve Range
WLF	LF...(p4)	Belimo	Ball valves (up to 1¼") (p7)
MS-NRE	HT...(above)	Esbe	3G...(obsolete)
MS-NRE6	HT...(above)	Esbe	VRG...(p10)
MS-NRED	HT...(above)	Danfoss	HRE3 (2012 onward) (p10)
MS-NRS	HT...(above)	Satchwell	MB (p11) MBX (p11)
MS-NRSF	HT...(above)	Satchwell	MBF (metric threaded spindles only) (p11)
MS-NRLX	HT...(above)	Siemens	VBG31...(obs) VBF...(to 50mm)(p12) VBI31...(obs)
MKES-D	SM...(p4)	Danfoss	HFE (p10)
MKESA	SM...(p4)	Esbe	3G (obs) 3F (p10)
ZMBFA	SM...(p4)	Satchwell	MBF (p11)
ZMBA	SM...(p4)	Satchwell	MB (p11) MBX (screwed) (p11)



XI. VAV & Underfloor Actuators



VAV Valves & Actuators

Part No	Description
VRD3	Dynamic air volume control
NMV-D3-MP	Compact velocity controller/actuator
AFP160	Air velocity probe (153mm)
VU0A-SR-ZME3A	0-10v actuator/ linkage (VU04)
VU04-B10	4-port ½"valve KVS1.0
VU04-B16	4-port ½"valve KVS1.6
VU04-B25	4-port ½"valve KVS2.5
LM24A-V	Damper actuator for VAV controller, 5Nm, 24v
NM24A-V	Damper actuator for VAV controller, 10Nm, 24v
Accessories to suit:	
ZTH-EU-MHS	Programming/servicing tool for parameterisable actuators



XI.



Electrothermic Underfloor Actuators

Part No	Supply	Features
22CX230NC2	230v	2-wire, normally closed c/w aux switch
22CX230NC4	230v	4-wire, normally closed c/w aux switch
22CX24NC2	24v	2-wire, normally closed c/w aux switch
22CX24NC4	24v	4-wire, normally closed c/w aux switch
22CX230NA2	230v	2-wire, normally open c/w aux switch
22CX230NA4	230v	4-wire, normally open c/w aux switch
22CX24NA2	24v	2-wire, normally open c/w aux switch
22CX24NA4	24v	4-wire, normally open c/w aux switch



Electrothermic Underfloor Actuators

Part No	Description
11B06	24v, 2-wire
O5E00	230v, 2-wire
O1D00	230v, 4-wire





Gas Solenoids

Part No	Connection	VA Rating	Max. Pressure	Face-to-Face
ZEV15	½" bspf	15	360 mbar	72mm
ZEV20	¾" bspf	22	360 mbar	86mm
ZEV25	1" bspf	22	360 mbar	100mm
ZEV32	1¼" bspf	42	360 mbar	150mm
ZEV40	1½" bspf	42	360 mbar	150mm
ZEV50	2" bspf	50	360 mbar	170mm
ZEVF65	65mm flanged	72	360 mbar	310mm
ZEVF80	80mm flanged	72	360 mbar	310mm
ZEVF100	100mm flanged	175	360 mbar	350mm
EVF125	125mm flanged	290	200 mbar	460mm
EVF150	150mm flanged	290	200 mbar	460mm
ZEVF200	200mm flanged	290	200 mbar	600mm

CPI switches to suit:

CPI-20/25	To suit ¾" & 1" bspf
CPI-32/40	To suit 1¼" & 1½" bspf
CPI-50	To suit 2" bspf
CPI-65F/80F	To suit 65mm & 80mm flanged
CPI-100F	To suit 100mm flanged
CPI-125/150/200	To suit ZEVF 125mm, 150mm and 200mm flanged
CPI-E125/150	To suit EVF 125mm and 150mm flanged

Note: these valves are supplied with 230v coils as standard. 24v options are available on request.



XII.



Powerseat Gas Safety Shut-off Valves

For air, oil and non-corrosive gases (Inc. town, natural and LPG)

Part No	Size	Max Flow @2.5 mbar DP	Max. Pressure (Forward Mbar)
PE6683	1½"	67	1000
PE6684	2"	80	1000
PE6685	2½"	150	350
PE6686	3"	165	350
PE6685FL4	65mm (FL)	100	350
PE6686FL4	80mm (FL)	100	350
PE6687FL4	100mm (FL)	220	250
PE6689FL4	150mm (FL)	510	500
BC66810FL4	200mm (FL)	1200	250
BC66811FL4	250mm (FL)	1430	250

Accessories to suit:

66RSR	Remote manual reset unit	All valves
66RS-230	Manual reset unit 230v	668 series
668S	230v head only	6683 & 6684
668LS	230v head only	6685 & 6686 screwed
668HS	230v head only	6685 & 6686 flanged
6687S	230v head only	6687FL4
6689S	230v head only	6689FL4
66810S	230v head only	66810FL4



XIII. Water/ Air/ Oil Solenoid Valves



Solenoid Valves for Water, Air & Oil (Normally closed)



Part No	Size	KV	Min Pressure	Max Pressure	Features
23D	½"	3	0.1Bar	20 Bar	WRAS approved, -10/+90°C
23E	¾"	8.4	0.1Bar	20 Bar	WRAS approved, -10/+90°C
23F	1"	9.6	0.1Bar	20 Bar	WRAS approved, -10/+90°C
23G	1¼"	25.2	0.1Bar	10 Bar	WRAS approved, -10/+90°C
23H	1½"	30	0.1Bar	10 Bar	WRAS approved, -10/+90°C
23I	2"	37.2	0.1Bar	10 Bar	WRAS approved, -10/+90°C
Coils to suit:					
C230	N/A	N/A	N/A	N/A	230v coil & din plug
C24	N/A	N/A	N/A	N/A	24v coil & din plug

230v solenoids supplied as standard. Please contact the office for details on alternatives.



XIII.



EV220S Solenoid Valves for Water, Air & Oil (Normally closed)



Part No	Size	KVs	Pressure	Features
042U491432	½"	4	0.2-10Bar	WRAS approved, -30/+100°C, 230v
042U491419	½"	4	0.2-10Bar	WRAS approved, -30/+100°C, 24v
042U491732	¾"	5	0.2-10Bar	WRAS approved, -30/+100°C, 230v
042U491719	¾"	5	0.2-10Bar	WRAS approved, -30/+100°C, 24v
042U492232	1"	7	0.2-10Bar	WRAS approved, -30/+100°C, 230v
042U492219	1"	7	0.2-10Bar	WRAS approved, -30/+100°C, 24v
042U493232	1¼"	15	0.2-10Bar	WRAS approved, -30/+100°C, 230v
042U494032	1½"	18	0.2-10Bar	WRAS approved, -30/+100°C, 230v
042U495032	2"	32	0.2-10Bar	WRAS approved, -30/+100°C, 230v

Other options are available; please contact the office for details.





Water Meters (c/w pulse output)



Part No	Description	Size	Flow Rate (m³/h)
285-1000	GMDI Cold water (max 50°C)	½"	2.5
285-1010	GMDI Cold water (max 50°C)	¾"	4
285-1020	GMDI Cold water (max 50°C)	1"	6.3
285-1030	GMDI Cold water (max 50°C)	1¼"	10
285-1040	GMDI Cold water (max 50°C)	1½"	16
285-1050	GMDI Cold water (max 50°C)	2"	25
285-1070	WDEK50 Cold water (max 50°C)	65mm	63
285-1080	WDEK50 Cold water (max 50°C)	80mm	100
285-1090	WDEK50 Cold water (max 50°C)	100mm	160
285-1100	WDEK50 Cold water (max 50°C)	125mm	160
285-1110	WDEK50 Cold water (max 50°C)	150mm	250
285-1120	WDEK50 Cold water (max 50°C)	200mm	400
285-2000	GMDI Hot water (max. 90°C)	½"	2.5
285-2010	GMDI Hot water (max. 90°C)	¾"	4
285-2020	GMDI Hot water (max. 90°C)	1"	6.3
285-2030	GMDI Hot water (max. 90°C)	1¼"	10
285-2040	GMDI Hot water (max. 90°C)	1½"	16
285-2050	GMDI Hot water (max. 90°C)	2"	25
285-2070	WDEK50 Hot water (max. 90°C)	65mm	63
285-2080	WDEK50 Hot water (max. 90°C)	80mm	100
285-2090	WDEK50 Hot water (max. 90°C)	100mm	160
285-2100	WDEK50 Hot water (max. 90°C)	125mm	160
285-2110	WDEK50 Hot water (max. 90°C)	150mm	250
285-2120	WDEK50 Hot water (max. 90°C)	200mm	400

Note: other options are available, including Mbus output. Please contact the office for details.



XIV.



Flow sensors with glycol compensation
(externally threaded, for water and water/glycol mixtures)

Part No	DN	Max Flow (m³/h)	Features
22PF-1UC	15	1.8	24v, 0-10v, MP-bus, BACnet, Modbus, MS/TP
22PF-1UD	20	3	24v, 0-10v, MP-bus, BACnet, Modbus, MS/TP
22PF-1UE	25	4.2	24v, 0-10v, MP-bus, BACnet, Modbus, MS/TP
22PF-1UF	32	7.2	24v, 0-10v, MP-bus, BACnet, Modbus, MS/TP
22PF-1UG	40	12	24v, 0-10v, MP-bus, BACnet, Modbus, MS/TP
22PF-1UH	50	18	24v, 0-10v, MP-bus, BACnet, Modbus, MS/TP

Unions to suit:

ZREV15F	1x union DN15 G¾" to Rp ½"	**2x unions req'd per unit**
ZREV20F	1x union DN20 G1" to Rp ¾"	**2x unions req'd per unit**
ZREV25F	1x union DN25 G1¼" to Rp 1"	**2x unions req'd per unit**
ZREV32F	1x union DN32 G1½" to Rp 1¼"	**2x unions req'd per unit**
ZREV40F	1x union DN40 G2" to Rp 1 ½"	**2x unions req'd per unit**
ZREV50F	1x union DN50 G2½" to Rp 2"	**2x unions req'd per unit**



XV. Energy Meters



Thermal Energy Meters - MID approved (externally threaded, for water)

Part No	DN	QP (m³/h)	Features
22PEM-1UC	15	1.5	MID-approved, 24v/ PoE, 2-10v, MP-Bus/Modbus/BACnet
22PEM-1UD	20	2.5	MID-approved, 24v/ PoE, 2-10v, MP-Bus/Modbus/BACnet
22PEM-1UE	25	3.5	MID-approved, 24v/ PoE, 2-10v, MP-Bus/Modbus/BACnet
22PEM-1UF	32	6	MID-approved, 24v/ PoE, 2-10v, MP-Bus/Modbus/BACnet
22PEM-1UG	40	10	MID-approved, 24v/ PoE, 2-10v, MP-Bus/Modbus/BACnet
22PEM-1UH	50	15	MID-approved, 24v/ PoE, 2-10v, MP-Bus/Modbus/BACnet

Unions to suit:-

ZREV15F	1x union DN15 G $\frac{3}{4}$ " to Rp $\frac{1}{2}$ "	**2x unions req'd per unit**
ZREV20F	1x union DN20 G1" to Rp $\frac{3}{4}$ "	**2x unions req'd per unit**
ZREV25F	1x union DN25 G1 $\frac{1}{4}$ " to Rp 1"	**2x unions req'd per unit**
ZREV32F	1x union DN32 G1 $\frac{1}{2}$ " to Rp 1 $\frac{1}{4}$ "	**2x unions req'd per unit**
ZREV40F	1x union DN40 G2" to Rp 1 $\frac{1}{2}$ "	**2x unions req'd per unit**
ZREV50F	1x union DN50 G2 $\frac{1}{2}$ " to Rp 2"	**2x unions req'd per unit**

Note: please contact the office for non-MID approved versions.



Belimo Energy Valve™ - MID approved

Part No	Size (RP)	QP (m³/h)	Features
EV015R2+MID	$\frac{1}{2}$ "	1.5	MID, (15-120°C), 24v, 2-10v, MP-Bus/Modbus/BACnet
EV020R2+MID	$\frac{3}{4}$ "	2.5	MID, (15-120°C), 24v, 2-10v, MP-Bus/Modbus/BACnet
EV025R2+MID	1"	3.5	MID, (15-120°C), 24v, 2-10v, MP-Bus/Modbus/BACnet
EV032R2+MID	1 $\frac{1}{4}$ "	6	MID, (15-120°C), 24v, 2-10v, MP-Bus/Modbus/BACnet
EV040R2+MID	1 $\frac{1}{2}$ "	10	MID, (15-120°C), 24v, 2-10v, MP-Bus/Modbus/BACnet
EV050R2+MID	2"	15	MID, (15-120°C), 24v, 2-10v, MP-Bus/Modbus/BACnet

Unions to suit:-

ZREV15F	1x union DN15 G $\frac{3}{4}$ " to Rp $\frac{1}{2}$ "	**1x union req'd per unit**
ZREV20F	1x union DN20 G1" to Rp $\frac{3}{4}$ "	**1x union req'd per unit**
ZREV25F	1x union DN25 G1 $\frac{1}{4}$ " to Rp 1"	**1x union req'd per unit**
ZREV32F	1x union DN32 G1 $\frac{1}{2}$ " to Rp 1 $\frac{1}{4}$ "	**1x union req'd per unit**
ZREV40F	1x union DN40 G2" to Rp 1 $\frac{1}{2}$ "	**1x union req'd per unit**
ZREV50F	1x union DN50 G2 $\frac{1}{2}$ " to Rp 2"	**1x union req'd per unit**

Note: please see page 29 or contact the office for other versions.



XV.



Sono 40 Energy Meters

Type	Size	QP (m³/h)	Features
Sono 40	DN15	1.5	LTHW or CHW w/ battery, pulse/MBUS, unions, adaptor
Sono 40	DN20	2.5	LTHW or CHW w/ battery, pulse/MBUS, unions, adaptor
Sono 40	DN25	3.5	LTHW or CHW w/ battery, pulse/MBUS, unions, pockets
Sono 40	DN25	6	LTHW or CHW w/ battery, pulse/MBUS, unions, pockets
Sono 40	DN40	10	LTHW or CHW w/ battery, pulse/MBUS, unions, pockets
Sono 40	DN50 (FL)	15	LTHW or CHW c/w battery, pulse/ MBUS & pockets
Sono 40	DN65 (FL)	25	LTHW or CHW c/w battery, pulse/ MBUS & pockets
Sono 40	DN80 (FL)	40	LTHW or CHW c/w battery, pulse/ MBUS & pockets
Sono 40	DN100 (FL)	60	LTHW or CHW c/w battery, pulse/ MBUS & pockets
Sono 3500	DN125 (FL)	100	LTHW/CHW, 230v, pulse/MBus c/w pockets
Sono 3500	DN150 (FL)	150	LTHW/CHW, 230v, pulse/MBus c/w pockets
Sono 3500	DN200 (FL)	250	LTHW/CHW, 230v, pulse/MBus c/w pockets
Sono 3500	DN250 (FL)	400	LTHW/CHW, 230v, pulse/MBus c/w pockets
Sono 3500	DN300 (FL)	560	LTHW/CHW, 230v, pulse/MBus c/w pockets

Other PSU & comms modules available, including Modbus, BACnet and LoRa WAN. Max 3x comms modules in parallel. Please contact the office for further details.



kamstrup**Multical 403 Meters**

Part No	Type	Size	QP (m³/h)	Features
403Wx1xxx	Heat	½"	.6	1.5m sensors, pockets, unions, PSU
403Wx4xxx	Heat	½"	1.5	1.5m sensors, pockets, unions, PSU
403Wx7xxx	Heat	¾"	1.5	1.5m sensors, pockets, unions, PSU
403WxAxxx	Heat	¾"	2.5	1.5m sensors, pockets, unions, PSU
403WxDxxx	Heat	1"	3.5	1.5m sensors, pockets, unions, PSU
403WxFxxx	Heat	1"	6	1.5m sensors, pockets, unions, PSU
403WxHxxx	Heat	1½"	10	1.5m sensors, pockets, unions, PSU
403WxKxxx	Heat	50mm(FL)	15	1.5m sensors, pockets & PSU
403Cx1xxx	Cooling	½"	.6	1.5m sensors, pockets, unions, PSU
403Cx4xxx	Cooling	½"	1.5	1.5m sensors, pockets, unions, PSU
403Cx7xxx	Cooling	¾"	1.5	1.5m sensors, pockets, unions, PSU
403CxAxxx	Cooling	¾"	2.5	1.5m sensors, pockets, unions, PSU
403CxDxxx	Cooling	1"	3.5	1.5m sensors, pockets, unions, PSU
403CxHxxx	Cooling	1"	6	1.5m sensors, pockets, unions, PSU
403CxHxxx	Cooling	1½"	10	1.5m sensors, pockets, unions, PSU
403CxKxxx	Cooling	50mm(FL)	15	1.5m sensors, pockets & PSU

Other options are available, including BACnet. Please contact the office for details.

kamstrup**Multical 603 Meters**
(c/w Ultraflow 54 (heat) or 44 (cooling))

Part No	Type	Size	QP (m³/h)	Features
65-5-CEHF-XXX	Heat	¾"	2.5	1.5m sensors, pockets, unions, wall bracket, PSU
65-5-CGJG-XXX	Heat	1"	3.5	1.5m sensors, pockets, unions, wall bracket, PSU
65-5-CHJH-XXX	Heat	1¼"	6	1.5m sensors, pockets, unions, wall bracket, PSU
65-5-CJJJ-XXX	Heat	1½"	10	1.5m sensors, pockets, unions, wall bracket, PSU
65-5-CKCE-XXX	Heat	50mm	15	1.5m sensors, pockets, wall bracket, PSU
65-5-CLCG-XXX	Heat	65mm	25	1.5m sensors, pockets, wall bracket, PSU
65-5-CMCH-XXX	Heat	80mm	40	1.5m sensors, pockets, wall bracket, PSU
65-5-FACL-XXX	Heat	100mm	60	1.5m sensors, pockets, wall bracket, PSU
65-5-FBCL-XXX	Heat	100mm	100	1.5m sensors, pockets, wall bracket, PSU
65-5-FBCM-XXX	Heat	125mm	100	1.5m sensors, pockets, wall bracket, PSU
65-4-CGJG-XXX	Cooling	1"	3.5	1.5m sensors, pockets, unions, wall bracket, PSU
65-4-CHJH-XXX	Cooling	1¼"	6	1.5m sensors, pockets, unions, wall bracket, PSU
65-4-CJJJ-XXX	Cooling	1½"	10	1.5m sensors, pockets, unions, wall bracket, PSU
65-4-CKCE-XXX	Cooling	50mm	15	1.5m sensors, pockets, wall bracket, PSU
65-4-CLCG-XXX	Cooling	65mm	25	1.5m sensors, pockets, wall bracket, PSU
65-4-CMCH-XXX	Cooling	80mm	40	1.5m sensors, pockets, wall bracket, PSU
65-4-FACL-XXX	Cooling	100mm	60	1.5m sensors, pockets, wall bracket, PSU
65-4-FBCL-XXX	Cooling	100mm	100	1.5m sensors, pockets, wall bracket, PSU
65-4-FBCM-XXX	Cooling	125mm	100	1.5m sensors, pockets, wall bracket, PSU

Other options are available, including BACnet. Please contact the office for details.



XV. Energy Meters



Multical 603 Heat/Cooling Meters (c/w Ultraflow 85 body)



Part No	Type	Size	QP (m³/h)	Features
65-85-FCDN	Heat/Cooling PN16	150mm	150	1.5m sensors, pockets, wall bracket, PSU
65-85-FDDN	Heat/Cooling PN16	150mm	250	1.5m sensors, pockets, wall bracket, PSU
65-85-FDDP	Heat/Cooling PN16	200mm	250	1.5m sensors, pockets, wall bracket, PSU
65-85-FEDP	Heat/Cooling PN16	200mm	400	1.5m sensors, pockets, wall bracket, PSU
65-85-FEDR	Heat/Cooling PN16	250mm	400	1.5m sensors, pockets, wall bracket, PSU
65-85-FFDR	Heat/Cooling PN16	250mm	600	1.5m sensors, pockets, wall bracket, PSU
65-85-FFDS	Heat/Cooling PN16	300mm	600	1.5m sensors, pockets, wall bracket, PSU
65-85-FGDS	Heat/Cooling PN16	300mm	1000	1.5m sensors, pockets, wall bracket, PSU

Other options are available, including BACnet and PN25. Please contact the office for details.



XV.



Clamp-on Meters - Micronics

Part No	Description	Features
U1000-HM	Heat meter for pipes OD 25-225mm, 0-85°C	C/w 24v supply, 2x sensors, Modbus RTU
U3000	Water meter for 0.1m/s to 20m/s flow	C/w LED display
U4000	Water meter for 0.1m/s to 20m/s flow	C/w LED display, built-in data logger

Please contact the office for further details or for a tailored quote.



Domestic Heat and Cooling Energy Meters

Part No	Size	QP (m³/h)	Features
WSM506-BE	¾"	.6	M-bus, battery powered, return-mounted
WSM515-BE	¾"	1.5	M-bus, battery powered, return-mounted
WSM525-BE	1"	2.5	M-bus, battery powered, return-mounted

Other options are available, including BACnet and PN25. Please contact the office for details.





Gas Detection Equipment

For methane, LPG or CO

Part No	Description	Features
RFG361	Gas detector 1x sensor, 1x relay out	IP40, adjustable alarm
RFG651	1-channel detector, 2x relay out	230v, adjustable alarm thresholds
RFG652	2-channel gas detector, 2x relay out	230v, adjustable alarm thresholds
RFG653	3-channel gas detector, 2x relay out	230v, adjustable alarm thresholds
RFG442	Gas detector max. 3 remote sensors, 4x relay out	12/24vAC Modbus, adj. thresholds
RFG448	Gas detector max. 3 remote sensors, 4x relay out	230v Modbus, adj. thresholds

Accessories & sensors to suit:

SRS150	Natural gas sensor *to suit RFG series*	To suit RFG... series
SRS350	CO sensor *to suit RFG series*	To suit RFG... series
ACD316	Facia panel-mounting kit *to suit RFG361*	To suit RFG361
ACD644	Facia panel-mounting kit *to suit RFG6...series*	To suit RFG6.. series
ACD615	Wall-mounting kit *to suit RFG6...series*	To suit RFG6.. series

Other options are available; please contact the office for details.



Gas Detection Equipment

For a range of explosive & toxic gases

Part No	Description	Features
BX150K	1-channel, panel mount, alarm	0-300ppm (CO) or 0-20% LEL (CH4/LPG)
GS100M	1-channel, panel/wall, alarm	0-300ppm (CO) or 0-20% LEL (CH4/LPG)
GS300MC	3-channel, panel/wall, traffic light	0-300ppm (tox), 0-20% LEL (exp'sive), 0-25% (O ₂)
BX444MC	4-channel, panel/wall, traffic light	0-300ppm (tox), 0-20% LEL (exp'sive), 0-25% (O ₂)

Sensors to suit:

SGM595	Natural gas/propane sensor	To suit all detectors above.
CO100AR	Carbon monoxide (CO) sensor	To suit all detectors above, or standalone.

Standalone detector:

CHCO	CH ₄ & CO sensor, traffic light	0-300ppm(CO), 0-20% LEL (CH ₄)
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Other options are available; please contact the office for details.



XVI.



XVI. Gas Detection Equipment

FLAMEFAST CONTROLS Gas Safety Systems

Part No	Description	Sensors	Features
BG-PO	Boilerguard	FGD/FGS (≤ 16)	LCD indication
BG-PT00	Boilerguard & gas proving	FGD/FGS (≤ 16)	LCD ind, c/w pressure transmitter
GG-PT00	Gasguard & gas proving	TR-CO2TL	LCD ind, c/w pressure trans, IGEM/UP/11
SG-PT00	Serviceguard gas/water/elec isol'n	TR-CO2TL	LCD ind, c/w pressure trans, IGEM/UP/11

A range of space and duct sensors is available to suit, for a variety of gasses. Please contact the office for details.



S&S NORTHERN

Merlin Gas Proving & Detection Units For boiler rooms

Part No	Application	Sensors	Features
1000BH	Gas proving/ detection	Max 2	W/ pressure transmitter, key switch
GDP2	2 zone gas detection	Max 6	LED indication
GDP2X	2 zone gas detection	Max 8	Digital screen
GDPX+	4 zone gas detection	Max 16	Digital screen, remote monitor (LAN)

Sensors to suit (range of gases available, most common options listed below):

Detector	Natural gas/CO/LPG/CO ₂	24vAC/DC	Audible alarm, traffic light indication
Detector-X	Natural gas/CO/LPG/CO ₂	24vDC	Audible alarm, traffic light, Modbus
Detector-i	Natural gas/CO/LPG/CO ₂	24vAC/DC	Audible alarm, traffic light, 0-10v
Detector-iS	Natural gas/CO/LPG/CO ₂	24vAC/DC	Audible alarm, traffic light, 0-10v

Note: other options are available; please contact the office for details.



XVI.

S&S NORTHERN

Merlin Gas Proving Units For science labs

Part No	Application	Features
1000V	Gas proving w/ fan interlock	W/ pressure transmitter, key switch
1000V+	Gas proving w/ fan interlock & electric isolation	W/ pressure transmitter, key switch
1000VW+	Gas proving w/ fan int'lock, elec. & water isol'n	W/ pressure transmitter, key switch

Accessories to suit:

CO2-X	CO ₂ temp & monitor, alarm & pre-alarm output, 2x 0-10v output signal, digital display
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22RTM Room Sensors & P-22RTM Operating Units

With active CO₂ sensing



Part No	<<Measuring>>				Features	Output
	CO ₂ (ppm)	RH (%)	Temp (°C)	Dew Point		
22RTM-18-1	0-2000	0-100	0/+50	0/+50	Traffic light LED, display app	3x 0-10v/4-20mA
P-22RTM-1900D-1	0-2000	0-100	0/+50	0/+50	E-paper touch display & TLF LED	3x 0-10v
P-22RTM-1U00A-2	0-2000	0-100	0/+50	0/+50	Traffic light LED, display app	Modbus/BACnet
P-22RTM-1U00D-2	0-2000	0-100	0/+50	0/+50	E-paper touch display & TLF LED	Modbus/BACnet



Duct Sensors

With active CO₂ sensing



Part No	<<Measuring>>				Features	Output
	VOC (%)	CO ₂ (ppm)	RH (%)	Temp (°C)		
22DC-11	/	0-2000	/	/	IP65, 180mm probe	0-10v
22DC-13	/	0-2000	/	/	IP65, 180mm probe	4-20mA
22DTC-11	/	0-2000	/	0/+50°C	IP65, 180mm probe	0-10v
22DTC-13	/	0-2000	/	0/+50°C	IP65, 180mm probe	4-20mA
22DTM-11	/	0-2000	0-100	0/+50°C	IP65, 180mm probe	0-10v
22DTM-1106	/	0-2000	0-100	0/+50°C	IP65, 180mm probe, LCD display	0-10v
22DTM-15	/	0-2000	0-100	0/+50°C	IP65, 180mm probe	Modbus
22DTM-16	/	0-2000	0-100	0/+50°C	IP65, 180mm probe	BACnet
22DCV-11	0-100	0-2000	/	0/+50°C	IP65, 180mm probe	0-10v
22DCM-11	0-100	0-2000	/	0/+50°C	IP65, 180mm probe	0-10v



Smart Room Sensors

Well Building & Reset Air Compliant



Part No	<< Measuring >>								Output	Features
	PM1 (µg/m³)	PM2.5 (µg/m³)	PM5 (µg/m³)	PM10 (µg/m³)	TVOC (AQI)	CO ₂ (ppm)	RH (%)	Temp (°C)		
PMR25-MOD-TS-CO2	0-1000	0-1000	0-1000	0-1000	0-500	0-10,000	0-100	0/+50	Modbus	Touchscreen
PMR25-BAC-TS-CO2	0-1000	0-1000	0-1000	0-1000	0-500	0-10,000	0-100	0/+50	BACnet	Touchscreen
QER10-MOD-LCD-RH-VOC	/	/	/	/	0-500*	0-10,000	0-100*	0/+50	Modbus	LCD display
QER10-BAC-LCD-RH-VOC	/	/	/	/	0-500*	0-10,000	0-100*	0/+50	BACnet	LCD display
QER10-LCD-RH-VOC	/	/	/	/	0-500*	0-10,000	0-100*	0/+50	0-10v	LCD display
QER10-MOD-LCD	/	/	/	/	/	0-10,000	/	0/+50	Modbus	LCD display
QER10-BAC-LCD	/	/	/	/	/	0-10,000	/	0/+50	BACnet	LCD display
QER10-LCD	/	/	/	/	/	0-10,000	/	0/+50	0-10v	LCD display
VER10-MOD-LCD	/	/	/	/	0-500	/	0-100	0/+50	Modbus	LCD display
VER10-BAC-LCD	/	/	/	/	0-500	/	0-100	0/+50	BACnet	LCD display
VER10-LCD	/	/	/	/	0-500	/	0-100	0/+50	0-10v	LCD display

Various customisation options are available for the above sensors, including 230v power supply, PIR sensing, different interface/ comms, and LoRaWAN wireless models. Please contact the office for full details.



PMR25-xxx-TS



*230v power supply now available;
please contact the office for details*



XVII. Air Quality Sensors

SIEMENS

Indoor Air Quality & CO₂ Monitors

LoRaWAN BACnet Modbus

	Part No	<< Measuring >>						Power Supply	Output	Features
		PM2.5 (µg/m³)	PM10 (µg/m³)	TVOC (µg/m³ ppb) 0-45450 0-9000	CO ₂ (ppm)	RH (%)	Temp (°C)			
Space	QPA2260	/	/	/	400-5000	/	/	24v	2x 0-10vDC	
	QPA2360	/	/	/	400-5000	0-100	0...50/-35...+35	24v	0-10vDC	
	QPA2360D	/	/	/	0-2,000	0-100	0...50/-35...+35	24v	0-10vDC	Value display
	QNA2700D.BA2	0-1000	0-1000	20-36,000	400-5,000	0-100	0/+90	USB C/24v	BACnet MSTP	LED traffic light
	QNA2700D.BA1	0-1000	0-1000	20-36,000	400-5,000	0-100	0/+90	PoE IEEE...	BACnet IP	LED traffic light
	QNA2820D.EU	0-1000	0-1000	20-36,000	400-5,000	0-100	0/+90	USB C/24v	LoRaWAN	LED traffic light
Duct	QPM2100	/	/	/	0-2,000	/	/	24v	0-10vDC	
	QPM2160	/	/	/	0-2,000	/	0...50/-35...+35	24v	0-10vDC	
	QPM2162	/	/	/	0-2,000	0-100	0...50/-35...+35	24v	0-10vDC	



QPM2162



QNA2700D

Sontay®

Indoor Air Quality Monitors and CO₂ Space & Duct Sensors

Modbus

XVII.

	Part No	<< Measuring >>								Output	Features
		PM2.5 (µg/m³)	PM10 (µg/m³)	TVOC (mg/m³)	TVOC (ppb)	HCHO (mg/m³)	CO ₂ (ppm)	RH (%)	Temp (°C)		
Space	GS-IAQ-S	0-500	0-800	0-3.5	/	0-0.6	0-5000	0-99	-20/+60	Modbus RTU	Traffic light
	GS-AQ-S-LCD	/	/	/	0-1000	/	/	/	0/+40	0-10v/4-20mA	LCD screen
	GS-CO2-AQ-S	/	/	/	0-1000	/	0-2000	/	0/+40	0-10v/4-20mA	
	GS-CO2-S	/	/	/	/	/	0-2000	/	0/+40	0-10v/4-20mA	
	RF-LW-RHT-CO2-S	/	/	/	/	/	0-2000	0-100	-20/+70	LoRaWAN	
	RF-LW-CO2-T-S	/	/	/	/	/	0-2000	/	-20/+70	LoRaWAN	
	GS-CO2-S-UN	/	/	/	/	/	0-2000	/	/	0-10v/4-20mA	
	GS-AQ-D	/	/	/	0-1000	/	/	/	-20/+50	0-10v/4-20mA	
Duct	GS-CO2-AQ-D	/	/	/	0-1000	/	0-2000	/	0/+40	0-10v/4-20mA	
	GS-CO2-D	/	/	/	/	/	0-2000	/	-20/+50	0-10v/4-20mA	
	GS-CO2-D-UN	/	/	/	/	/	0-2000	/	/	0-10v/4-20mA	

Various customisation options are available for the above sensors, including different displays and humidity measuring. Please contact the office for full details.



GS-IAQ-S





Indoor Air Quality Monitors

Part No	<< Measuring >>							Power Supply	Output	Features
	PM1 (µg/m³)	PM2.5 (µg/m³)	PM10 (µg/m³)	TVOC (ppb)	CO ₂ (ppm)	RH (%)	Temp (°C)			
RSCO2TH1	/	/	/	/	400-5000	0-100	0/+50	24v	0-10v	Blank
RSCO2TH2	/	/	/	/	400-5000	0-100	0/+50	24v	0-10v	Traffic light LED
RSCO2TH3	/	/	/	/	400-5000	0-100	0/+50	24v	0-10v	TFT Display
RSCO2TH3-MOD	/	/	/	/	400-5000	0-100	0/+50	24v	Modbus	TFT Display
RSCO2TH3-BAC	/	/	/	/	400-5000	0-100	0/+50	24v	BACnet	TFT Display
RSPM1	/	0-100/-500	/	/	/	/	/	24v	0-10v	Blank
RSVOC1	/	/	/	L/M/H	/	/	/	24v	0-10v	Blank
RSIAQ-BAC	0-1000	0-1000	0-1000	20-36,000	400-5000	0-99	0/+50	24v/230v	BACnet	Blank
RSIAQS-BAC	0-1000	0-1000	0-1000	20-36,000	400-5000	0-99	0/+50	24v/230v	BACnet	Traffic light display
RSIAQ-MOD	0-1000	0-1000	0-1000	20-36,000	400-5000	0-99	0/+50	24v/230v	Modbus	Blank
RSIAQS-MOD	0-1000	0-1000	0-1000	20-36,000	400-5000	0-99	0/+50	24v/230v	Modbus	Traffic light display

Various customisation options are available for the above sensors, including different displays, power supplies, comms and measuring options. Please contact the office for full details.



TITAN
PRODUCTS

XVII.

Indoor CO₂ Space & Duct Sensors

	Part No	Measuring			Power Supply	Output	Features
		CO ₂ (ppm)	RH (%)	Temp (°C)			
Space	TP-RS-CO2RHT-V-10k3	0-2000	0-100	0/+50	24VAC	0-10v, 10k3 (temp)	Slimline enclosure
	TP-RS-CO2RHT-V-10k3-H	0-2000	0-100	0/+50	24VAC	0-10v, 10k3 (temp)	Halo LED
	TP-RS-CO2RHT-BMS	0-2000	0-100	0/+50	24VAC	BACnet/ Modbus	Slimline enclosure
	TP-RS-CO2RHT-BMS-H	0-2000	0-100	0/+50	24VAC	BACnet/ Modbus	Halo LED
	TP-RS-CO2RHT-TPZ	0-2000	0-100	0/+50	Battery	Wireless TPZ	30-60m transmission , Halo LED
	TP-IND-CO2	L/M/H	/	/	Battery	N/A	Wireless , Halo LED
Duct	TP-DS-CO2RHT-V-10K3	0-2000	/	/	24VAC/DC	0-10v, 10k3	IP65 Duct Mount
	TP-DS-CO2RHT-BMS	0-2000	/	/	24VAC/DC	BACnet/ Modbus	IP65 Duct Mount



XVIII. Temperature, Humidity & Other Environmental Sensors

SPARTAN CONTROLS Thermostats

Part Number	Type	Supply	Setpoint	Features
TS-90B3	Outside frost stat	230v	-5/+25°C	Enclosed IP65, SPDT contact
CAPSTAT 030	Capillary	230v	-30/+30°C	1m capillary
LF55T	Capillary	230v	-15/+15°C	6m average, IP43, auto reset
SFT1/W	Capillary	230v	-15/+15°C	6m average, IP65, auto reset
SFS-2	Capillary	230v	-15/+15°C	6m average, IP43, manual reset
SFS-2W	Capillary	230v	-15/+15°C	6m average, IP65, manual reset
CAPSTAT 0120	Capillary	230v	0/+120°C	1m capillary
SRFS	Space frost stat	230v	-15/+15°C	
SRS-1	Space	230v	+5/+30°C	Exposed dial
SIT-1	Immersion	230v	0/+90°C	IP40 c/w pocket
Accessories to suit:				
DFC-6	X6 clips to suit SFS...			



LF55T



SRS-1

SPARTAN CONTROLS Electronic Thermostats

Part Number	Type	Supply	Setpoint	Features
CAD-1DS	Din rail mounting	24v or 230v	-5/+95°C	1x 240v 10(5)A relay
Sensors to suit:				
CAD-R	Space/ room	IP20 84mm(H) x 84mm (W) x 24mm (D)		
CAD-I	Immersion	IP65 150mm x 6mm probe (requires pocket)		
CAD-O	Outside	IP65 80mm (Dia) x 50mm (D) housing		
CAD-D	Duct	IP65 150mm x 6mm probe		
CAD-S	Strap-on	IP65 150mm x 50mm housing, 150mm strap		
CAD-F	Fly lead	IP65 38mm x 6mm probe, 2m cable		
CAD-BB	Black bulb	IP20 84mm (H) x 84mm (W) x 40mm (D)		
CAD-AV	Space twin element	IP20 84mm (H) x 84mm (W) x 24mm (D)		
CAD-POT	Set point adj.	C/w scales (-5/+45°C, +25/+95°C, -4/+4°C)		



CAD-1DS



CAD-POT

SPARTAN CONTROLS Environmental Sensors

Part Number	Measuring	Type	Features
RHTR3-T1	Humidity & temp	Space	0-100% RH, 3% accuracy 24v supply, IP65, select out
RHTD3	Humidity & temp	Duct	0-100% RH, 3% accuracy 24v supply, IP65, select out
RHTO3	Humidity & temp	Outside	0-100% RH, 3% accuracy 24v supply, IP65, select out
WSU4	Wind speed		
WSS2	Wind speed & direction		



XVIII.





Temperature Sensors

Part Number	Type	Compatibility	Features
TR1	Space/room	Trend 10K3A1	IP30 84mm x 84mm x 24mm
TD	Duct	Trend 10K3A1	IP65 150mm x 6mm probe
TI	Immersion	Trend 10K3A1	IP65 150mm x 6mm probe
TO	Outside	Trend 10K3A1	IP65 80mm x 50mm
TS	Strap-on	Trend 10K3A1	IP65 up to 150mm pipe
TF	Flylead/ cable	Trend 10K3A1	38mm x 6mm, 2m cable
CR	Space/ room	Cylon PT1000	84mm x 84mm x 24mm
CD	Duct	Cylon PT1000	IP65 150mm x 6mm probe
CI	Immersion	Cylon PT1000	IP65 150mm x 6mm probe
CO	Outside	Cylon PT1000	IP65 80mm x 50mm
CS	Strap-on	Cylon PT1000	IP65 up to 150mm pipe
SR	Space/ room	Satchwell "T" series	84mm x 84mm x 24mm
SI	Immersion	Satchwell "T" series	IP65 150mm x 6mm probe
SO	Outside	Satchwell "T" series	IP65 80mm x 50mm
SS	Strap-on	Satchwell "T" series	IP65 up to 150mm pipe
SD	Duct	Satchwell "T" series	IP65 150mm x 6mm probe
TE-ITAC	Immersion	Satchwell 1.8K3A1	IP65 150mm x 6mm probe
TE-OTAC	Outside	Satchwell 1.8K3A1	IP65 80mm x 50mm
TE-RTAC	Space/ room	Satchwell 1.8K3A1	84mm x 84mm x 24mm
TE-STAC	Strap-on	Satchwell 1.8K3A1	IP65 up to 150mm pipe
TE-IH	Immersion	Honeywell 20K6A1	IP65 150mm x 6mm probe
TE-OH	Outside	Honeywell 20K6A1	IP65 80mm x 50mm
TE-RH	Space/ room	Honeywell 20K6A1	84mm x 84mm x 24mm
TE-SH	Strap-on	Honeywell 20K6A1	IP65 up to 150mm pipe
Accessories to suit:			
POC-1	150mm pocket for immersion sensor		Brass
POC-2	150mm pocket for immersion sensor		Stainless Steel



TI



TO



Temperature Control

Part Number	Type	Supply	Setpoint	Output	Features
P-22RTH-1800D-1	Room stat	24v	0/+50°C	0-10v/4-20mA	Temp & RH, e-paper display
P-22RTH-1U00D-2	Room stat	24v	0/+50°C	Modbus/BACnet	Temp & RH, e-paper display
P-22RT-1800D-1	Room stat	24v	0/+50°C	0-10v/4-20mA	Temp, e-paper display
01ATS-1050B	Frost stat	24v	-10/+15°C	SPDT	6m capillary, auto reset
01ATS-105XC	Frost stat	24v	-10/+15°C	SPDT	6m capillary, manual reset
20DTS-1P5	Frost stat	24v	+1/10°C	0-10v	6m capillary, auto/manual reset
01DH-10N	Duct humidistat	24v	15/95%	SPDT	150mm probe



P-22RT

XVIII.



Humidity & Temperature Sensors

Part Number	Measuring	Type	Range	Output	Features
22RTH-18-1	Humidity/ temp	Room	0-100%, 0/+50°C	0-10v/m-20mA	Display app
P-22RTH-1U00A2	Humidity/ temp	Room	0-100%, 0/+50°C	Modbus/BACnet	Display app
22DTH-11M	Humidity/ temp	Duct	Multirange	0-10v	24v, IP65, 140mm probe
22DTH-13M	Humidity/ temp	Duct	Multirange	4-20mA	24v, IP65, 140mm probe
22DTH-15M	Humidity/ temp	Duct	Multirange	Modbus	24v, IP65, 140mm probe
22DTH-16M	Humidity/ temp	Duct	Multirange	BACnet	24v, IP65, 140mm probe
22UTH-11	Humidity/ temp	Outside	Multirange	0-10v	24v, IP65
22UTH-13	Humidity/ temp	Outside	Multirange	4-20mA	24v, IP65
22UTH-11X	Humidity/ temp	Outside	Multirange	0-10v	24v, IP65, radiation shield
22UTH-13X	Humidity/ temp	Outside	Multirange	4-20mA	24v, IP65, radiation shield



22DTH



XVIII. Temperature, Humidity & Other Environmental Sensors



Passive & Active Temperature Sensors

Part Number	Type	Thermistor	Active Output	Features
01RT-1L-0	Room	Trend 10k3	/	Passive, 0/+50°C
01UT-1L	Outdoor	Trend 10k3	/	Passive, IP65, -35/+50°C
01DT-1LH	Duct/immersion	Trend 10k3	/	Passive, IP65, -50/+150°C, 50mm probe
01DT-1LL	Duct/immersion	Trend 10k3	/	Passive, IP65, -50/+150°C, 100mm probe
01DT-1LN	Duct/immersion	Trend 10k3	/	Passive, IP65, -50/+150°C, 150mm probe
01DT-1LP	Duct/immersion	Trend 10k3	/	Passive, IP65, -50/+150°C, 200mm probe
01DT-1LR	Duct/immersion	Trend 10k3	/	Passive, IP65, -50/+150°C, 300mm probe
01DT-1LT	Duct/immersion	Trend 10k3	/	Passive, IP65, -50/+150°C, 450mm probe
01CT-1LH	Cable	Trend 10k3	/	Passive, IP65, -35/+100°C, 50mm probe
01ST-1L3	Strap-on	Trend 10k3	/	Passive, IP65, -35/+100°C, 2m cable
22RT-19-1	Room	/	0-10v/4-20mA	Display app, 0/+50°C
P-22RT-1800D-1	Room	/	0-10v/4-20mA	E-paper touch display, 0/+50°C
22UT-12	Outdoor	/	0-5v/0-10v	Active, IP65, selectable ranges
22UT-14	Outdoor	/	4-20mA	Active, IP65, selectable ranges
22DT-12N	Duct/immersion	/	0-5v/0-10v	Active, IP65, selectable ranges, 150mm
22DT-14N	Duct/immersion	/	4-20mA	Active, IP65, selectable ranges, 150mm
22CT-12H	Cable	/	0-5v/0-10v	Active, IP65, selectable ranges, 50mm
22CT-14H	Cable	/	4-20mA	Active, IP65, selectable ranges, 50mm
22HT-12	Strap-on	/	0-5v/0-10v	Active, IP65, multirange, Ø20-110mm
22HT-14	Strap-on	/	4-20mA	Active, IP65, multirange, Ø20-110mm
Pockets to suit:				
Brass	Stainless Steel			To Suit
A-22P-A18	A-22P-A06	Pocket	50mm	01DT-...H/22DT-...H
A-22P-A20	A-22P-A08	Pocket	100mm	01DT-...L/22DT-...L
A-22P-A22	A-22P-A10	Pocket	150mm	01DT-...N/22DT-...N
A-22P-A24	A-22P-A12	Pocket	200mm	01DT-...P/22DT-...P
A-22P-A26	A-22P-A14	Pocket	300mm	01DT-...R/22DT-...R
A-22P-A28	A-22P-A16	Pocket	450mm	01DT-...T/22DT-...T



01DT-1LN



22RT-19-1



22CT-12

XVIII.



Room Temperature Controllers

Part No	Application	Setpoint	Supply	Comms	Output	Features
TCR10-BAC-TS	Heat & cooling	0/+50°C	24v	BACnet	4x 0-10v, 1x relay	LCD touchscreen
TCR12-BAC-TS	Heat & cooling	0/+50°C	24v	BACnet	4x 0-10v, 2x 24vAC	LCD touchscreen, 2x UI, slimline
TCR14-BAC-TS	Heat & cooling	0/+50°C	230v	BACnet	3x 0-10v, 1x 230v relay	LCD touchscreen, 1x UI, slimline
TCR10-MOD-TS	Heat & cooling	0/+50°C	24v	Modbus	4x 0-10v, 1x relay	LCD touchscreen
TCR12-MOD-TS	Heat & cooling	0/+50°C	24v	Modbus	4x 0-10v, 2x 24vAC	LCD touchscreen, 2x UI, slimline
TCR14-MOD-TS	Heat & cooling	0/+50°C	230v	Modbus	3x 0-10v, 1x 230v relay	LCD touchscreen, 1x UI, slimline

Note. Other options available, including CO₂, humidity & VOC monitoring and control, as well as various output and interface options, including LoRaWAN. Please contact the office for details, including pricing.



SIEMENS Thermostats

Part No	Type	Application	Setpoint	Supply	Features
RAA11	Room	For heating OR cooling	+8/+30°C	24...250v	Tamperproof
RAA21	Room	For heating OR cooling	+8/+30°C	24...250v	
RAK-TW5-AB200	Imm/strap	Frost protection - auto reset	-10/+50°C	24...250v	1600mm capillary, IP65
RAK-TW.1000HB	Imm/strap	Limit stat - auto reset	+15/+95°C	24...250v	700mm capillary, IP65
RAK-TW.1200B-H	Imm/strap	Limit stat - auto reset	+40/+120°C	24...250v	700mm capillary, IP43
RAK-TB.1410B-M	Imm/strap	Limit stat - manual reset	+50/+70°C	24...250v	700mm capillary, IP43
RAK-TB.1420S-M	Imm/strap	Limit stat - manual reset	+60/+80°C	24...250v	700mm capillary, IP43
RAK-ST.1430S-M	Imm/strap	Limit stat - manual reset	+80/+100°C	24...250v	1600mm capillary, IP43
QAX31.1	Room	For use w/ Desigo controllers	0/+40°C	Controller	Adjustable set point
QAX34.3	Room	For use w/ Desigo controllers	0/+40°C	Controller	PPS2 interface & LCD
RDG100	Room	For fan coil/ heat pump	0/+49°C	230v	LCD display
RDG100T	Room	For fan coil/ heat pump	0/+49°C	230v	LCD & 7-day timeswitch
RDG160T	Room	For fan coil/ heat pump	0/+49°C	24v, 0-10v	LCD & 7-day timeswitch



RAA21

SIEMENS Controllers & Sensors

Part No	Description	Supply	Features
RLA162	Room temperature control	24v	2x 0-10v outputs, +8/+30°C
RLE162	Immersion temperature control	24v	2x 0-10v outputs, -10/+130°C
RLM162	Duct temperature control	24v	2x 0-10v outputs, 0/+50°C
RVL480	Zone or boiler control	230v	*various applications*
RVL481	Zone or boiler control & HWS	230v	*various applications*
RVL482	Zone, boiler, HWS control	230v	*various app'ns inc boiler sequencing*
RVP201.0	Residential heating controller	230v	*no communication module included*
RVP340	1x heating circuit control	230v	*various applications*
RVP350	1x heating circuit & DHW control	230v	*various applications*
RVP360	2x heating circuit & DHW control	230v	*various applications*
RWD62	Universal controller	24v	Panel-mount, 2x 0-10v outputs
RWD82	Universal controller	24v	Panel-mount, 1x 0-10v, 1x 2-point output
RCC30	Temp control - 4-pipe fan coil	230v	Setpoint range +8/+30°C
RXB21.1/FC10	Temp control - 2/4-pipe fan coil	230v	R/L output, volt-free relay for fan speed



RVP340

XVIII.

Sensors & accessories to suit:

QAA2120	Temperature	Room	0/+50°C	<i>RVL/RVP controllers</i>
QAC22	Temperature	Outside	-35/+50°C	<i>RVL/RVP, RLA/RLE controllers</i>
QAD22	Temperature	Clamp-on	-30/+130°C	<i>RVL/RVP controllers</i>
QAE2120.010	Temperature	Immersion	-30/+130°C	<i>RVL/RVP controllers</i>
QAH11.1	Temperature	Cable	-20/+70°C	<i>RCC30</i>
QAP22	Temperature	Flylead	-25/+95°C	
QAM2120.040	Temperature	Duct	-50/+80°C	
QAF64.2-J	Frost	Duct	0/+15°C	
QFA2260	Temp/ humidity	Room	0/+50°C, 0-100%	
QFM2160	Temp/ humidity	Duct	0/+50°C, - 35/+35°C, 0-100%	
AUZ3.1	Timeswitch	24h analogue		<i>RVP201</i>
SEZ91.6	Phasecut interface	0-10v output		



QFM2160



XVIII. Temperature, Humidity & Other Environmental Sensors



Thermostats & Frost Stats

Part No	Type	Range	Features
ST-RSTAT1	Room thermostat	+10/+30°C	230v, SPST, exposed dial
ST-RSTAT1	Room thermostat	+5/+30°C	230v, SPST, tamperproof
ST-TY92-C1F	Room frost stat	-15/+15°C	230v, SPST
ST-FRE-1	Capillary frost stat	-30/+10°C	230/24v, 6m capillary, auto reset
ST-FRE-2	Capillary frost stat	-30/+10°C	230/24v, 6m capillary, manual reset



ST-RSTAT1



Temperature & Humidity Sensors



Part No	Type	Range	Output	Features
TT-S-A	Space	-10/+60°C	10K3A1, Trend, Cylon, Distech	
TT-D-A	Duct	-30/+100°C	10K3A1, Trend, Cylon, Distech	
TT-O-A	Outside	-30/+100°C	10K3A1, Trend, Cylon, Distech	
TT-I-A	Immersion	-30/+100°C	10K3A1, Trend, Cylon, Distech	150mm
TT-I-A-65	Immersion	-30/+100°C	10K3A1, Trend, Cylon, Distech	65mm
TT-I-A-250	Immersion	-30/+100°C	10K3A1, Trend, Cylon, Distech	250mm
TT-C-A	Clamp-on	-30/+100°C	10K3A1, Trend, Cylon, Distech	
TT-555-A	Flying lead	-10/+60°C	10K3A1, Trend, Cylon, Distech	
TT-BB-A	Black bulb	-10/+60°C	10K3A1, Trend, Cylon, Distech	
RF-LW-T-S	Space	-20/+70°C	LoRaWAN	
RF-LW-T-D	Duct	-20/+70°C	LoRaWAN	
RF-LW-T-O	Outside	-20/+70°C	LoRaWAN	
RF-LW-T-I	Immersion	-20/+70°C	LoRaWAN	150mm
RF-LW-T-C	Clamp-on	-20/+70°C	LoRaWAN	
RF-LW-T-555	Fly Lead	-20/+70°C	LoRaWAN	
RH-S	Space RH/T	0/+40°C, 0-100%	4-20mA or 0-10v	±3%
RH-S-UN	Space RH	0-100%	4-20mA or 0-10v	
RH-D	Duct RH/T	-20/+50°C, 0-100%	4-20mA or 0-10v	±3%
RH-D-UN	Duct RH	0-100%	4-20mA or 0-10v	
RF-LW-RH-S	Space RH/T	-20/+70°C/ 0-100%	LoRaWAN	
RF-LW-RH-D	Duct RH/T	-20/+70°C/ 0-100%	LoRaWAN	
RF-LW-RH-O	Outside RH/T	-20/+70°C/ 0-100%	LoRaWAN	



TT-S-A



RF-LW-T



TT-PO

Accessories to Suit

TT-PO-521	Stainless steel 150mm immersion pocket	TT-I-A, RF-LW-T-I
TT-PO-521-65	Stainless steel 65mm immersion pocket	TT-I-A-65
TT-PO-521-250	Stainless steel 250mm immersion pocket	TT-I-A-250
RF-LW-HUB-100	100x pt LoRaWAN hub	RF-LW

Note. Other outputs (incl. Thermistor types) are available; please contact the office for details.



Light Level & Occupancy Sensors

Part No	Type	Description
LL-P-V	Light level	External light level sensor
LL-C-V	Light level	Ceiling mounted internal light level sensor
OC-C-LVN	Occupancy	Ceiling-mounted PIR occupancy detector
OC-W-LV	Occupancy	Wall-mounted PIR occupancy detector



OC-C-LVN





FCU Controllers and Temperature & Humidity Sensors

	Part No	Type	Range	Output	Features
Controllers	FCU-503	Controller	5/+40°C	4x DO, 3x AO, 2x RO	BACnet, 5x 10K3 input
	RDU-Touch/B	Touchscreen	/	/	Setpoint adjuster unit
	TP-NM-D	Router	/	/	Netmaster MS/TP to IP
Temperature Sensors	TP-RS-10K3	Space	-10/+60°C	10K3A1	Slimline enclosure
	TPTDS/S	Duct	-10/+70°C	10K3A1	IP65, 150mm
	TPTOS	Outside	-50/+70°C	10K3A1	IP65
	TPTIS/NP	Immersion	-40/+110°C	10K3A1	IP65, 125mm
	TPTIS/NP/65	Immersion	-40/+110°C	10K3A1	IP65, 65mm
	TPTCS	Clamp-on	-40/+70°C	10K3A1	Ø 25-125mm
	TPTVAV/S	Flying lead	-10/+70°C	10K3A1	2m lead
	TP-RS-BB-10K3	Black bulb	-10/+60°C	10K3A1	Wall mount
Humidity Sensors	TP-RS-RHT-MA-10K3	Space	0/50°C, 0-100%	10K3A1, dual 4-20mA	24v, Slimline encl
	TP-RS-RHT-V-10K3	Space	0/50°C, 0-100%	10K3A1, dual 0-10v	24v, Slimline encl
	TP-RS-RHT-BMS	Space	0/50°C, 0-100%	1x DO, Modbus/BACnet	24v, Slimline encl
	TP-DS-RHT-MA-10K3	Duct	0/50°C, 0-100%	10K3A1, 4-20mA	24v, IP65
	TP-DS-RHT-V-10K3	Duct	0/50°C, 0-100%	10K3A1, 0-10v	24v, IP65
	TP-DS-RHT-BMS	Duct	0/50°C, 0-100%	1x DO, Modbus/BACnet	24v, IP65
	TP-OS-RHT-MA-10K3	Outside	-20/+50°C, 0-100%	10K3A1, 4-20mA	24v, IP65
	TP-OS-RHT-V-10K3	Outside	-20/+50°C, 0-100%	10K3A1, 0-10v	24v, IP65
	TP-OS-RHT-BMS	Outside	-20/+50°C, 0-100%	1x DO, Modbus/BACnet	24v, IP65
Accessories to Suit:					
	TPSP65	65mm stainless steel pocket			TPTIS/NP/65
	TPSP125	125mm stainless steel pocket			TPTIS/NP



TPTIS



TP-RS-RHT



TP-RS-BB

Note. Other outputs (incl. Thermistor types) are available; please contact the office for details.



Temperature Sensors

	Part No	Type	Range	Output	Features
Temperature	TB/TS	Space	0/+40°C	10K3A1	
	TB/TS/K	Space	0/+40°C	10K3A1	C/w adjusting knob
	TB/TO	Outside	-30/+50°C	10K3A1	IP67
	TB/TC	Clamp-on	-30/+100°C	10K3A1	IP67, c/w jubilee clip
	TB/TI-S	Immersion/duct	-30/+110°C	10K3A1	IP67, standard: 150mm
	TB/TI-L	Duct	-30/+110°C	10K3A1	IP67, long: 400mm
Humidity	T/TFR-4	Fly lead	-10/+50°C	10K3A1	IP67, 4m lead
	HT/S	Space	0/+40°C, 0-100%	10K3A1, 2x 0-10v	±3% RH accuracy
	LFH10-2B65	Duct	-5/+50°C, 0-100%	10K3A1, 2x 0-10v	±3% RH accuracy
Accessories to suit:					
	WB150	Brass pocket			150mm
	WS150	Stainless steel pocket			150mm



TB/TS/K



T/TFR-4



Temperature, Humidity & Weather Transmitters

Part No	Type	Range	Output	Description
TMW82	Room - temp	-5/+55°C	4-20mA	2-wire, IP30
TMD82	Duct - temp	-40/+60°C	4-20mA	2-wire, IP65
HMW82	Room - RH & T	-5/+55°C, 0-100%	4-20mA	2-wire, IP30
HMW83	Room - RH & T	-5/+55°C, 0-100%	0-10v	3-wire, IP30
HMS82	Outside - RH & T	-40/+60°C, 0-100%	4-20mA	2-wire, radiation shield
HMS83	Outside - RH & T	-40/+60°C, 0-100%	0-10v	3-wire, radiation shield
WXT53x	Weather transmitter; air pressure, temp, humidity, rainfall, wind speed & direction			



WXT53x



XIX. Pressure Sensors & Switches



Air Differential Pressure Switches

Part No	Range	Electrical	Features
LF32-02	0.2-2 mbar	230v 5(1)A	IP54 *requires SDK1 kit*
LF32-03	0.3-3 mbar	250v 1.5 (0.4)A	IP54 *requires SDK1 kit*
LF32-05	0.5-5 mbar	230v 1(0.5)A	IP54 *requires SDK1 kit*
930-85	2-10 mbar	250v 1.5(0.4)A	IP54 *requires SDK1 kit*
LF32-02/W	0.2-2 mbar	230v 1(0.5)A	IP65 *requires SDK1 kit*
LF32-03/W	0.3-3 mbar	250v 1.5(0.4)A	IP65 *requires SDK1 kit*
LF32-05/W	0.5-5 mbar	230v 1(0.5)A	IP65 *requires SDK1 kit*
930-85-W	2-10 mbar	250v 1.5(0.4)A	IP65 *requires SDK1 kit*
AFS262	0.13-5 mbar	230v 10(2)A	IP30 metal *requires SDK2 kit*
AFS222	0.5-30 mbar	230v 10(2)A	IP30 metal *requires SDK2 kit*
AFS262/HT	0.13-5 mbar	230v 10(2)A	IP30 max 300°C c/w 2m copper tube & metal duct flanges

Accessories to suit:-

SDK1	Fitting kit (2x spigots + 2m tubing)	<i>*to suit SCL...*</i>
SDK2	Fitting kit (2x spigots + 2m tubing)	<i>*to suit AFS...*</i>
30M-8/5	30m roll 8x5 mm PVC tubing	
CU1/4	¼" copper tube (sold per metre)	
SDA1	Plastic 80mm spigot	<i>*to suit 8x5 mm tubing*</i>
SDA2	Brass duct adaptor ¼"	<i>*to suit ¼" bsp copper tube*</i>
TEE1	Plastic tee	<i>*to suit 5mm I.D. tubing*</i>



LF32



AFS262/HT



Liquid Static & Differential Pressure Switches

Part No	Range	Electrical	Features
37001	0-6 bar	230v 16(10)A	IP30, ¼" bsp, adj. diff
F1381-1	-1/+1 bar	230v 5(2)A	½" bspm, 0.05 bar diff
F1381-4	0.1-4 bar	230v 5(2)A	½" bspm, 0.1 bar diff
F1381-11	0.3-11 bar	230v 5(2)A	½" bspm, 0.3 bar diff
SCL-DP2	0.1-2 bar	230v 5(2)A	¼" bspm
FD113S	0.2-4 bar	230v 5(2)A	¼" bspf
SCL250	40-250 mbar	230v 5(2)A	⅛" bspf
SCL1000	0.007-1 bar	230v 5(2)A	⅛" bspf
SCL4000	0.2-4 bar	230v 5(2)A	⅛" bspf
H1382P-250	15-250 mbar	250v 10A	⅛" bspf
H1382P-1	0.07-1 bar	250v 10A	⅛" bspf
H1382P-4	0.2-4 bar	250v 10A	⅛" bspf

Fitting Kits (comprising 2x switch fitting, 2m tubing, 2x male fittings for system)

WDPS-KIT1	¼" fitting kit *to suit SCL250/1000/4000 & H1382P*
WDPS-KIT2	¼" fitting kit *to suit FD*
WDPS-KIT3	¼" fitting kit *to suit SCL-DP2*



37001



SCL1000

XIX.





Air Differential Pressure Sensors

Part No	Range	Output	Features
22ADP-18Q	Multirange (to 250Pa)	0-10v/4-20mA	IP65, 24vAC/DC
22ADP-184	Multirange (to 2500 Pa)	0-10v/4-20mA	IP65, 24vAC/DC
22ADP-186	Multirange (to 7000 Pa)	0-10v/4-20mA	IP65, 24vAC/DC
22ADP-15Q	Multirange (to 250Pa)	Modbus/ 0-10v	IP65, 24vAC/DC
22ADP-154	Multirange (to 2500 Pa)	Modbus/ 0-10v	IP65, 24vAC/DC
22ADP-156	Multirange (to 7000 Pa)	Modbus/ 0-10v	IP65, 24vAC/DC
22ADP-164	Multirange (to 2500 Pa)	BACnet/ 0-10v	IP65, 24vAC/DC



22ADP



Liquid Static & Differential Pressure Sensors

	Part No	Range	Output	Features
Static	22WP-114	0-4 bar	0-10v	IP65, 24vAC/DC
	22WP-115	0-6 bar	0-10v	IP65, 24vAC/DC
	22WP-116	0-10 bar	0-10v	IP65, 24vAC/DC
	22WP-117	0-16 bar	0-10v	IP65, 24vAC/DC
	22WP-134	0-4 bar	4-20mA	IP65, 24vDC
	22WP-135	0-6 bar	4-20mA	IP65, 24vDC
	22WP-136	0-10 bar	4-20mA	IP65, 24vDC
Differential	22WP-137	0-16 bar	4-20mA	IP65, 24vDC
	22WDP-111	0-1 bar	0-10v	IP65, 24vAC/DC
	22WDP-112	0-2.5 bar	0-10v	IP65, 24vAC/DC
	22WDP-114	0-4 bar	0-10v	IP65, 24vAC/DC
	22WDP-115	0-6 bar	0-10v	IP65, 24vAC/DC
	22WDP-131	0-1 bar	4-20mA	IP65, 24vDC
	22WDP-132	0-2.5 bar	4-20mA	IP65, 24vDC
	22WDP-134	0-4 bar	4-20mA	IP65, 24vDC
	22WDP-135	0-6 bar	4-20mA	IP65, 24vDC
	22PDP-185	0-5 Bar	0-10v/ 0-5v/ 4-20mA	IP65/ NEMA 4x, LCD display
	22PDP-186	0-10 Bar	0-10v/ 0-5v/ 4-20mA	IP65/ NEMA 4x, LCD display
	22PDP-189	0-35 Bar	0-10v/ 0-5v/ 4-20mA	IP65/ NEMA 4x, LCD display



22WP...



22WDP...



22PDP...

XIX.



Air Differential Pressure Transmitters

Part No	Range	Output	Features
QBM2030-1U	Multirange (to 100Pa)	0-10v	IP54, 24v supply
QBM2030-5	Multirange (to 500Pa)	0-10v	IP54, 24v supply
QBM2030-30	Multirange (to 3000 Pa)	0-10v	IP54, 24v supply
QBM2130-1U	Multirange (to 100Pa)	4-20mA	IP54, 24v supply
QBM2130-5	Multirange (to 500Pa)	4-20mA	IP54, 24v supply
QBM2130-30	Multirange (to 3000 Pa)	4-20mA	IP54, 24v supply



QBM2130





Air Differential Pressure: Monitors, Switches & Transmitters

Part No	Type	Range	Output	Features
PA-FLTR	Monitor	Multirange (max 6220Pa)	4-20mA/0-10v	IP54 Halo LED
PA-DPS-88	DP Switch	20-300 Pa (10Pa diff)	Switch	IP54 c/w kit
PA-DPS-83	DP Switch	50-500 Pa (20Pa diff)	Switch	IP54 c/w kit
PA-DPS-85	DP Switch	200-1000 Pa (100Pa diff)	Switch	IP54 c/w kit
PA-DPT-01	DP Transmitter	Multirange (max 500Pa)	4-20mA/0-10v	IP65 c/w kit
PA-DPT-02	DP Transmitter	Multirange (max 2500Pa)	4-20mA/0-10v	IP65 c/w kit



PA-FLTR



PA-DPT-01



PL-520



PL-692



Liquid Static & Differential Pressure Sensors

Part No	Range	Output	Features
PL-520-4	0-4 bar	4-20mA	IP65, 24v supply
PL-520-6	0-6 bar	4-20mA	IP65, 24v supply
PL-520-10	0-10 bar	4-20mA	IP65, 24v supply
PL-520-4-V	0-4 bar	0-10v	IP65, 24v supply
PL-520-6-V	0-6 bar	0-10v	IP65, 24v supply
PL-520-10-V	0-10 bar	0-10v	IP65, 24v supply
PL-692-0.4	0-400 mbar	4-20mA	IP65, 24v supply
PL-692-1	0-1 bar	4-20mA	IP65, 24v supply
PL-692-2.5	0-2.5 bar	4-20mA	IP65, 24v supply
PL-692-4	0-4 bar	4-20mA	IP65, 24v supply
PL-692-6	0-6 bar	4-20mA	IP65, 24v supply
PL-692-0.4-v	0-400 mbar	0-10v	IP65, 24v supply
PL-692-1-v	0-1 bar	0-10v	IP65, 24v supply
PL-692-2.5-v	0-2.5 bar	0-10v	IP65, 24v supply
PL-692-4-v	0-4 bar	0-10v	IP65, 24v supply
PL-692-6-v	0-6 bar	0-10v	IP65, 24v supply



Air Differential Pressure Transmitters

Part No	Range	Output	Features
TPDPT8/125	Multirange (up to 125 Pa)	4-20mA/0-10v	24v AC/DC supply
TPDPT8/500	Multirange (up to 500 Pa)	4-20mA/0-10v	24v AC/DC supply
TPDPT8/2500	Multirange (up to 2500 Pa)	4-20mA/0-10v	24v AC/DC supply
TPDPT8/125-COM	Multirange (up to 125 Pa)	Modbus/BACnet	24v AC/DC supply
TPDPT8/500-COM	Multirange (up to 500 Pa)	Modbus/BACnet	24v AC/DC supply



TPDPT8



Differential Pressure Transmitters & Switches

Part No	Type	Range	Output	Features
DPTE252	Air DP Transmitter	0...250 Pa	4-20mA	IP54, 24v AC/DC supply
DPTE502	Air DP Transmitter	0...500 Pa	4-20mA	IP54, 24v AC/DC supply
DPTE50S	Air DP Transmitter	-50/+50 Pa	0-10v/ 4-20mA	IP54, 24v AC/DC supply
DPTE500S	Air DP Transmitter	-500/+500 Pa	0-10v/ 4-20mA	IP54, 24v AC/DC supply
DPS200	Air DP Switch	20...200 Pa	Switch	IP54, c/w fitting kit
DPS400	Air DP Switch	40...400 Pa	Switch	IP54, c/w fitting kit
DPSL200	Liquid/Gas DP Switch	40...200 mbar	Switch	IP54, max. pressure 10 Bar
DPSL1000	Liquid/Gas DP Switch	150...1000 mbar	Switch	IP54, max. pressure 10 Bar



DPTE500S



DPSL200





Inverter Drives

Rating (kW)	Description	Part No (IP21)	Part No (IP55)
1.1	ACH580-01-03A4-4 (+B056 for IP55) 400v	157-1000	157-2000
1.5	ACH580-01-04A1-4 (+B056 for IP55) 400v	157-1010	157-2010
3	ACH580-01-07A3-4 (+B056 for IP55) 400v	157-1020	157-2020
4	ACH580-01-09A5-4 (+B056 for IP55) 400v	157-1030	157-2030
5.5	ACH580-01-12A7-4 (+B056 for IP55) 400v	157-1040	157-2040
7.5	ACH580-01-018A-4 (+B056 for IP55) 400v	157-1050	157-2050
11	ACH580-01-026A-4 (+B056 for IP55) 400v	157-1060	157-2060
15	ACH580-01-033A-4 (+B056 for IP55) 400v	157-1070	157-2070
22	ACH580-01-046A-4 (+B056 for IP55) 400v	157-1080	157-2080
30	ACH580-01-062A-4 (+B056 for IP55) 400v	157-1090	157-2090
37	ACH580-01-073A-4 (+B056 for IP55) 400v	157-1100	157-2100

Other options are available; please contact the office for further details.



Inverter Drives

Rating (kW)	Description	Part No (IP20)	Part No (IP55)
1.1	FC-102 with H3 filter, Modbus/BACnet	131B5468	131N9572
1.5	FC-102 with H3 filter, Modbus/BACnet	131B5469	131U0963
2.2	FC-102 with H3 filter, Modbus/BACnet	131B5470	131U0964
3	FC-102 with H3 filter, Modbus/BACnet	131B5471	1310965
4	FC-102 with H3 filter, Modbus/BACnet	131B5472	131U0966
5.5	FC-102 with H3 filter, Modbus/BACnet	131B5473	131L9238
7.5	FC-102 with H3 filter, Modbus/BACnet	131B5474	131L9239
11	FC-102 with H3 filter, Modbus/BACnet	131F8307	131L9240
15	FC-102 with H3 filter, Modbus/BACnet	131F8308	131L9241
18.5	FC-102 with H3 filter, Modbus/BACnet	131G0433	131L9242
22	FC-102 with H3 filter, Modbus/BACnet	131F9921	131L9243

Other options are available; please contact the office for further details.



Inverter Drives

Part No	Rating (kW)	IP	Description
G120P-1.1/32A+BOP-2	1.1	IP20	Sinamics G120P VSD with Bop-2 panel
G120P-1.5/32A+BOP-2	1.5	IP20	Sinamics G120P VSD with Bop-2 panel
G120P-2.2/32A+BOP-2	2.2	IP20	Sinamics G120P VSD with Bop-2 panel
G120P-3/32A+BOP-2	3	IP20	Sinamics G120P VSD with Bop-2 panel
G120P-4/32A+BOP-2	4	IP20	Sinamics G120P VSD with Bop-2 panel
G120P-11/32A+BOP-2	11	IP20	Sinamics G120P VSD with Bop-2 panel
G120P-15/32A+BOP-2	15	IP20	Sinamics G120P VSD with Bop-2 panel
G120P-18.5/32A+BOP-2	18.5	IP20	Sinamics G120P VSD with Bop-2 panel
G120P-22/32A+BOP-2	22	IP20	Sinamics G120P VSD with Bop-2 panel
G120P-30/32A+BOP-2	30	IP20	Sinamics G120P VSD with Bop-2 panel
G120P-37/32A+BOP-2	37	IP20	Sinamics G120P VSD with Bop-2 panel
G120P-1.1/35A+BOP-2	1.1	IP55	Sinamics G120P VSD with Bop-2 panel
G120P-1.5/35A+BOP-2	1.5	IP55	Sinamics G120P VSD with Bop-2 panel
G120P-2.2/35A+BOP-2	2.2	IP55	Sinamics G120P VSD with Bop-2 panel
G120P-3/35A+BOP-2	3	IP55	Sinamics G120P VSD with Bop-2 panel
G120P-4/35A+BOP-2	4	IP55	Sinamics G120P VSD with Bop-2 panel
G120P-11/35A+BOP-2	11	IP55	Sinamics G120P VSD with Bop-2 panel
G120P-15/35A+BOP-2	15	IP55	Sinamics G120P VSD with Bop-2 panel
G120P-18.5/35A+BOP-2	18.5	IP55	Sinamics G120P VSD with Bop-2 panel
G120P-22/35A+BOP-2	22	IP55	Sinamics G120P VSD with Bop-2 panel
G120P-30/35A+BOP-2	30	IP55	Sinamics G120P VSD with Bop-2 panel
G120P-37/35A+BOP-2	37	IP55	Sinamics G120P VSD with Bop-2 panel

Other options are available; please contact the office for further details.



XX.



XXI. Ancillary Products

Proportional/ Integral Action Controller

Part No	Description	Features
CAD-1PI	Single output, din rail mounted	24v supply, 0-10v output *NOT EXPANDABLE*
CAD-PI	Single output, din rail mounted	24v supply, 0-10v output *EXPANDABLE: see CAD-XM1A*
CAD-XM1A	Output expansion module	Use up to 2x with CAD-PI for total 3x 0-10v outputs
CAD-POT	Adjustable potentiometer	Facia-mounted *to suit CAD... controllers*



CAD-PI

BMS Modules

(suitable for din rail mounting)

Part No	Description
RM1-24DC	24v DC single relay, 12(3)a
RM1-24AC	12v AC single relay, 12(3)a
RM1-230AC	230v AC single relay, 12(3)a
IOVR1	0-10v input, single relay, 10(3)a
IOR2	0-10v input, raise/lower, high/low module
IOR3	0-10v input, 3-stage relay output
IOR4	0-10v input, 4-stage relay output
IOR6	0-10v input, 6-stage relay output
PCM2-30	Dual output phasecut module (30vA), 0-10v input
PCM1/120	Phasecut module (120vA), 0-10v input
IO-DIM4	4-input digital multiplexor
IOD6	6-input digital multiplexor
ALM10-24	10-way 24v alarm integrator
ALM10-230	10-way 230v alarm integrator
RIBXKTF	Current switch, 0.25-150A range, max. 30v AC/DC SPST
CAD-AP	Remote alarm unit: 230v, 24v or 0-10v (c/w sounder, mute, lamp)
BB1	Black box for CAD-AP for wall mounting



IOR...



IO-DIM4

Transformers

Part No	Electrical	Va rating	Features
PS-25-L	230v AC/ 24v AC	25vA	Enclosed, c/w flyleads
SEM621	230v AC/ 24v AC	30vA	Din rail mounted
STX50	230v AC/ 24v AC	50vA	Panel mounted
STX100	230v AC/ 24v AC	100vA	Panel mounted
STX160	230v AC/ 24v AC	150vA	Panel mounted
STX250	230v AC/ 24v AC	250vA	Panel mounted



SEM621

Thyristor Controllers

Part No	Type	Electrical	KW	Mounting
EY1-3	1-phase	230v supply 0-10v signal 230v load	3.5	Din rail
EY1-7	1-phase	230v supply 0-10v signal 230v load	7	Din rail
EY3-10	3-phase	230v supply 0-10v signal 415v load	10	Din rail
EY3-20	3-phase	230v supply 0-10v signal 415v load	20	Din rail
EY3-28	3-phase	230v supply 0-10v signal 415v load	28	Din rail
EY3-36	3-phase	230v supply 0-10v signal 415v load	36	Din rail
EY3-54	3-phase	230v supply 0-10v signal 415v load	54	Bracket
EY3-86	3-phase	230v supply 0-10v signal 415v load	86	Bracket



EY3-20

Knock-off Buttons and Electric Thermal Links

Part No	Description
KOB	Emergency knock-off button (plastic)
MKOB	Emergency knock-off button (metal)
KRKOB	Key-reset knock-off button
SKOB	Shrouded knock-off button
ETL	Electric thermal fuse link



KRKOB

XXI.



Fireman Switches and Indication Units

Part No	Description	Dimensions (w/h/d)
FIRE-SW1	Fireman's switch - auto/off/extract only	180 x 180 x 100mm
FIRE-SW2	Fireman's switch (flush mounting)- normal/off/extract	140 x 140 x 103mm
FIRE-SW3	Fireman's switch (key operated) - normal/off/extract	87 x 87 x 40mm

Accessories to suit:

BB2	Surface mounting box *to suit FIRE-SW3*
KEYGUARD	Keyguard *to suit FIRE-SW3*
CAD-AP	Alarm panel (240v/ 24v/ 0-10v rising or falling for alarm)

Note: bespoke fireman switches are available. Please contact the office for details.



FIRE-SW3

Duct Smoke Detection

Part No	Description
SL-2000P	Photoelectric smoke detector
FASTUBE PROBE	*to suit ionisation/ photoelectric*



SL-2000P

Leak Detection

Part No	Description	Electrical	Features
AX-WLD2-24	Leak detection module	24v	Total 200m cable per zone, *sensors req'd*
AX-WLD2-230	Leak detection module	230v	Total 200m cable per zone, *sensors req'd*

Accessories to suit:

PS31	Rod set (3x 1m)	N/A	*Use with AX-WLD2*
CAD-LDC	Leak detection cable	N/A	*Use with AX-WLD2*- sold per metre
CAD-RS	Rain sensor	N/A	*Use with AX-WLD2...*
CAD-PS	Point sensor	N/A	*Use with AX-WLD2...*



AX-WLD

Flow & Level Switches

Part No	Description	Electrical	Features
SAFS	Air flow paddle switch	250v 15(8)A	IP65, range: 1-9 m/s
SWFS	Water flow paddle switch	250v 15(8)A	IP65, range: 1-91 m³/h
MAC-3	Liquid level switch	230v 10(4)A	Vertical, 5m cable
MINIMATIC	Liquid level switch	230v 10(4)A	5m cable, WRAS approved
SWFS-LEV1	Liquid level switch	230v 15(8)A	Horizontal, 1" bspm
S01DB-F84	Liquid level switch	240v 5(2)A	Horizontal, high/low alarm



MAC-3

Rain Hoods

Part No	Description	Features
RH-1	Rain hood	290mm x 270mm, velcrose & rope tie seal
RH-2	Rain hood	470mm x 310mm, velcrose & rope tie seal
RH-3	Rain hood	430mm x 390mm, velcrose & rope tie seal
RH-4	Rain hood	250mm x 230mm, velcrose & rope tie seal



RH-1

Brass Fittings

Uses include: adapting 15/22mm fan coil valves to copper pipe, converting "bsp" valves to copper pipe, etc.

Part No	Description
BBZ1004	15mm nut & olive (for 15mm fan coil valves etc)
BBZ1006	22mm nut & olive (for 22mm fan coil valves etc)
BBZ1100	½" flat face FI coupler for ½" "flat face" fan coil valves
BBZ1103	¾" flat face FI coupler for ¾" "flat face" fan coil valves
BBZ1050	15mm x ½" MI coupler
BBZ1053	22mm x ¾" MI coupler
BBZ1055	28mm x 1" MI coupler
BBZ1056	35mm x 1¼ MI coupler



BBZ1004



XXII. Water Boosting & Pressurisation Units

Spartan Cold Water Booster Sets

- For industrial and commercial applications
- Single, twin or multiple pump sets
- Flow rates up to 40 l/s
- Pressures up to 15 Bar
- 1450 RPM model available

Please contact the office for a tailored quote.



Single pump, inverter-controlled



Twin pump, inverter-controlled



Three pump, inverter-controlled

Additional options:-

- Inverter-controlled pumps
- Pressure-regulating valves for switch-controlled models
- Built-in dry run protection
- Suction break-tank low-level switch
- Anti-vibration mountings
- Flexible pipe connections

Aquarius Water Booster System

- Digital accuracy, intelligent proactive electronic control
- Low energy consumption
- Ultra-compact, low noise
- Suits a wide range of pressure and flow rates
- Innovative leak-proof design
- Structurally reinforced, frost-proof tank
- Stainless steel pump
- Quick and simple installation
- Supplied with separate expansion vessel



Connections

Supply: ¾" bspm
Discharge: 1" bspf
Overflow: 1½"

Electrical: 220-240vAC

Dimensions: 595mm x 845mm x 585mm (WxHxD)

Please contact the office for a tailored quote.

Spartan Aquamaster Wall-Mounted Pressurisation Sets

The Spartan Aquamaster sets are compact, sealed, wall-mounted units ideal for low volume systems. They can be connected quickly and easily on site in even the most confined spaces, and can be supplied with duplicate pumps for standby operation.

Standard options include:-

Aquamaster Standard (230-1020) -

Supplied with break tank, valve and single fully rated pump, volt-free contacts for high/low pressure, pressure and mains power switches and pressure gauge.

Aquamaster Micro Single (230-1030) -

Supplied as above, but with microprocessor control.

Aquamaster Micro Twin (230-1010) -

Supplied with twin pumps and microprocessor control.

Specification:

Fill pressure: 0.5 - 4.0 Bar
Electrical: 240v, 1-phase
Full load current (FLC): 1A
Weight: 8Kg
Dimensions (HxWxD): 320mm x 355mm x 205mm



Outside view (Micro)



Inside view (Micro)



Spartan “Spa-Base” Open Pressurisation Unit

The Spartan “Spa-Base” unit is an open pressurisation unit supplied complete with break tank and valve, single pump, a fused-spur power switch and a system pressure gauge.

A high/low pressure kit to suit the unit is also available.

Please see table on page for prices. Please note that prices do not include the cost of the expansion vessel, which must be sized and purchased separately. Please see table below for details.

Other non-standard options include 3-phase supply and higher-head pumps for cold fill pressures above 3.0 Bar. Please contact the office for a tailored quote.

Specification:

Fill pressure: 0.5 - 3.0 Bar

Electrical: 240v, 1-phase

Full load current (FLC): 2.6A

Connections:

Water supply: ½” bsp
System: ½” bsp

Weight: 25Kg

Dimensions (LxHxD):
710mm x 425mm x 450mm



Spartan “Spa-Base” Unit

“RD” Series Expansion Vessels

For use on heating, chilled & potable water systems 0-99°C

Part No	Pressure Rating	Volume	Connection	Height	Diameter
RD5	10 Bar	5 litres	¾”	316 mm	160 mm
RD8	10 Bar	8 litres	¾”	321 mm	200 mm
RD18	10 Bar	18 litres	¾”	379 mm	274 mm
RD24V	10 Bar	24 litres	1”	450 mm	300 mm
RD24H	10 Bar	24 litres	1”	480 mm	270 mm
RD60	10 Bar	60 litres	1”	860 mm	380 mm
RD80	10 Bar	80 litres	1”	800 mm	450 mm
RD100	10 Bar	100 litres	1”	960 mm	450 mm
RD200	10 Bar	200 litres	1½”	1280 mm	550 mm
RD300	10 Bar	300 litres	1½”	1430 mm	630 mm
RD500	10 Bar	500 litres	1½”	1610 mm	750 mm
RD750	10 Bar	750 litres	1½”	2267 mm	750 mm
RD24H16	16 Bar	24 litres	1”	480 mm	270 mm
RD24V16	16 Bar	24 litres	1”	450 mm	300 mm
RD100V16	16 Bar	100 litres	1”	960 mm	450 mm
RD200V16	16 Bar	200 litres	1½”	1280 mm	550 mm
RD300V16	16 Bar	300 litres	1½”	1430 mm	630 mm
RD500V16	16 Bar	500 litres	1½”	1610 mm	750 mm
RD750V16	16 Bar	750 litres	1½”	2267 mm	750 mm
RD1000V16	16 Bar	1000 litres	1½”	2080 mm	850 mm



“RD” 10 Bar



“RD” 16 Bar

XXII.

XXIII.



XXIV. Pump Accessories

Pressurisation Unit Replacement Pumps

Part No	Description
Hydra PKM80-1	230v, 5 Bar
Lowara PABLRM15	230v, 4 Bar
Lowara PSAM70/A	230v, 4 Bar
EP77 Aquamaster Pump	230v



PABLRM15

Safety Valves, Gauges and Accessories

Part No	Description	Range
AAV1	3/8" automatic air vent	110°C
SV15	1/2" pressure safety valve	3 Bar
SV22	3/4" pressure safety valve	3 Bar
SV25	1" pressure safety valve	3 Bar
SPG-1	1 1/2" dial pressure gauge	0-6 Bar
SPTG-1	Temperature/ pressure gauge	0-120°C/ 0-6 Bar
STG-1	Horizontal temperature gauge	0-120°C
SSVG-1	1/2" safety valve & gauge	3 Bar/ 0-6 Bar gauge
SPT1	Strap-on thermometer	0-120°C
37001	1/4" MI pressure switch	0-6 Bar



SPTG-1

Liquid Level Switches

Part No	Description	Electric	Features
MAC-3	Vertical 5m cable	240v 10(4)A	Suspended by own cable
SWFS-LEV1	Horizontal	230v 15(8)A	1" bsp horizontal
MINIMATIC	Horizontal	230v 10(4)A	WRAS approved, 5m cable



MAC3

Pressure Reducing Valves

Part No	Size	Max Pressure	Max Temp
D06F-1B	1"	25 Bar in, 1.5-6 Bar out (adjustable)	40°C
D06F-11/4B	1 1/4"	26 Bar in, 1.5-6 Bar out (adjustable)	40°C
D06F-11/2B	1 1/2"	27 Bar in, 1.5-6 Bar out (adjustable)	40°C
D06F-2B	2"	28 Bar in, 1.5-6 Bar out (adjustable)	40°C

Accessories to Suit:

M07M-10 Back-entry pressure gauge, 0-10 Bar, 63mm dial



D06F...B

Flexible Connections PN16 (Untied)

Part No	Size	Max Pressure	Temp Range
FLEX32	32 mm	16 Bar	-20/+100°C
FLEX40	40 mm	16 Bar	-20/+100°C
FLEX50	50 mm	16 Bar	-20/+100°C
FLEX65	65 mm	16 Bar	-20/+100°C
FLEX80	80 mm	16 Bar	-20/+100°C
FLEX100	100 mm	16 Bar	-20/+100°C



FLEX50

Note: tied flexible connections are available, as well as PN6 versions. Please contact the office for details.

XXIV.





DAB EVOPLUS circulator pumps

....for commercial heating and air conditioning systems

single or twin head



Ebara CD/CDX/CDXL centrifugal pumps

...for a range of domestic and commercial applications

single or dual impeller
single or three-phase



Grundfos MAGNA circulator pumps

...for heating and cooling applications in commercial buildings

cast iron or stainless steel
single or twin head
optional CIM modules (MAGNA 3)



Lowara ECOCIRC XLplus circulator pumps

...for hot and cold media including geothermal and solar systems

cast iron or bronze
single or twin head
Modbus and BACnet options



Wilo Yonos MAXO circulator pumps

...the compact standard pump for commercial buildings

single or double pump



XXV.



Notes



Notes





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