

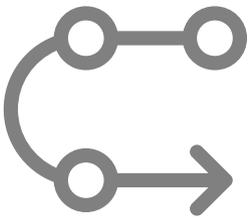


essco



HEAT PUMP SYSTEM ACCESSORIES (VALVES & CONTROLS)





Heat Pump System Accessories

Our range of valves and controls for heat pump systems is designed to keep installations efficient, protected and simple to manage.

From diverting and balancing to anti-freeze protection, each component plays a critical role in ensuring reliable performance throughout the heating season.

Our heat pump system accessories include -



- Anti-freeze valves for protection
- Diverter valves for flow control
- Mixing valves for temperature regulation
- Circulation units and manifolds for the control of separate zones
- Balancing valves for flow rate regulation
- Circulation pumps for hydronic distribution

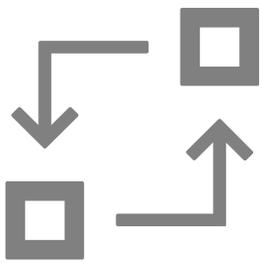
We can support you in the following ways -



- Comprehensive product information
- Excellent technical support (we can talk directly to your customer if required)
- First-class customer service
- Support with product set-up and commissioning
- Like-for-like products that match specification



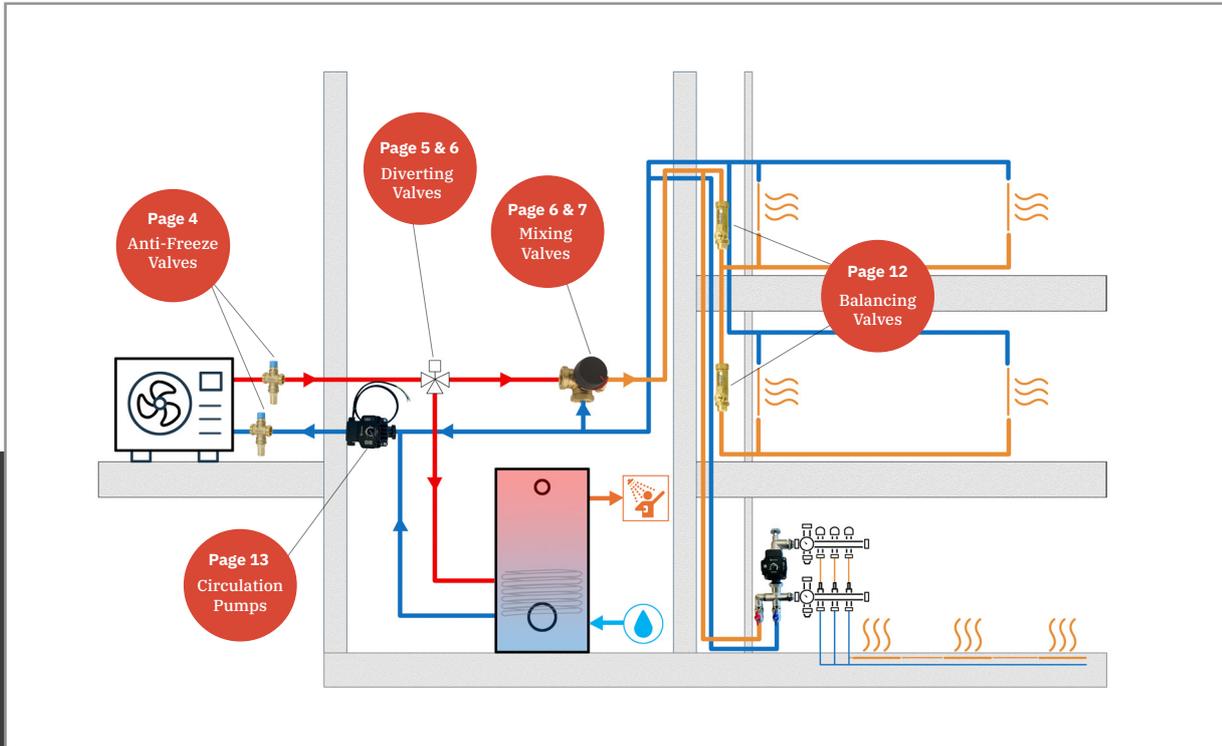
We are not a call centre; we are a friendly team ready to help.



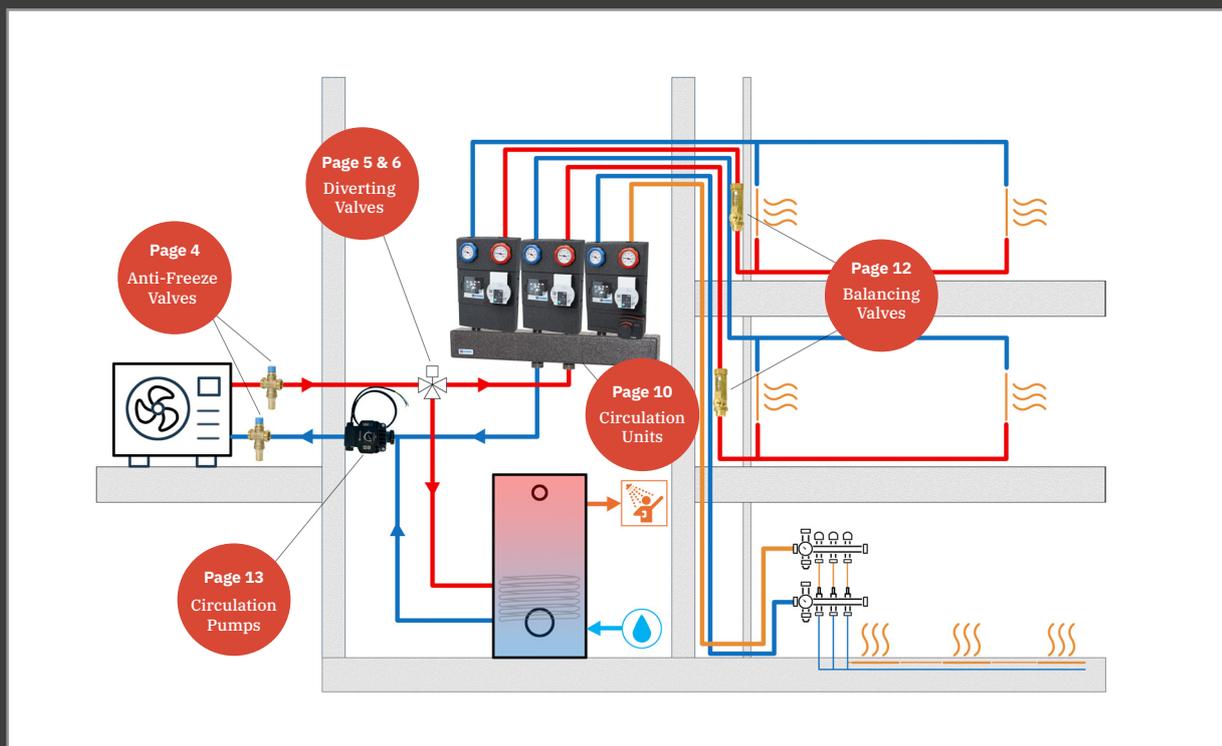
Typical System Set-Up

Here are some typical heat pump system drawings to guide your product selection for each customer.

Heating and Hot Water System - UFH and Radiators with Secondary Mixing



Heating and Hot Water System - UFH and Radiators with Circulation Units



Anti-Freeze Valves

ESBE Series VTN100



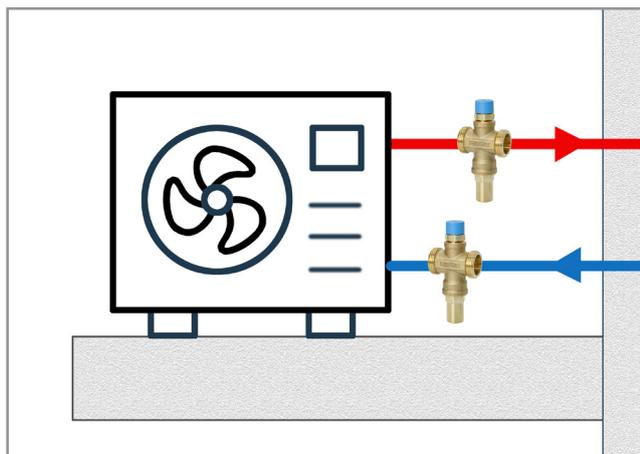
Features

- Provides protection from potential damage during freezing weather
- Opening temperature: 3°C (+/-1 °C)
- Max. discharge flow: 2 l/min at 1 °C and 3 bar
- Max pressure: 10 Bar
- Fast response to temperature changes
- Robust and maintenance free

Technical Details

ARTICLE NO.	DESCRIPTION	CONNECTION
35100100	VTN102	G1
35100200	VTN102	G1½

Installation Position



NEW
PRODUCT



Installation & Setup Guide



SCAN FOR SETUP
GUIDE

Ball Valves

ESBE Series MBA130 3-Port Diverting Valves



Features

- Provides 3-way diverting in heating/cooling systems
- DN25 and DN32 external thread screwed BSP
- Nickel plated brass ball valve
- Suitable for high flow rates
- 100% leak-tight
- Auxiliary switch included
- Complete with 2-Point control 230v (on/off)
- Max pressure: 32 Bar
- Running Speed: 40 Seconds

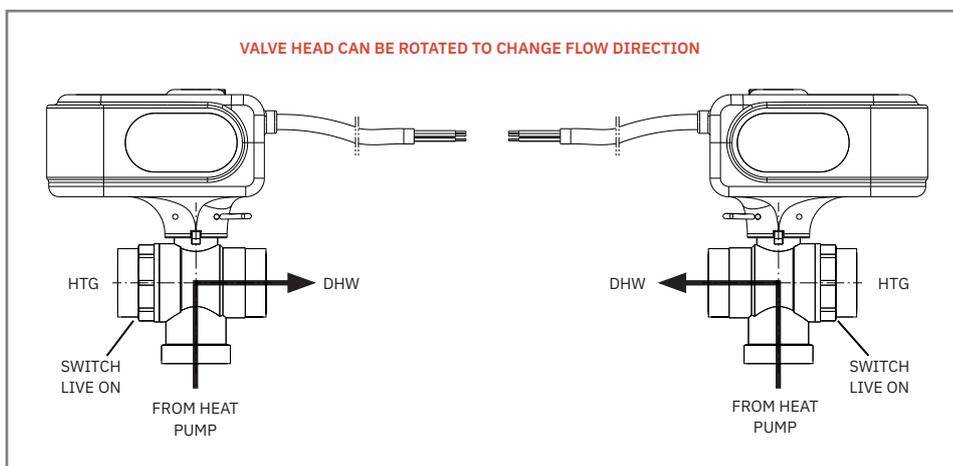
Technical Details - T-pattern only (basic diverting package)

ARTICLE NO.	DESCRIPTION	KVS	CONNECTION
43102500	MBA132 MMM 230VAC 2-P 10NM	9.6	G1
43102600	MBA132 MMM 230VAC 2-P 10NM	11.3	G1¼
43102100	MBA135 FFM 230VAC 2-P 10NM	9.6	G¾
43102200	MBA135 FFM 230VAC 2-P 10NM	11.3	G1



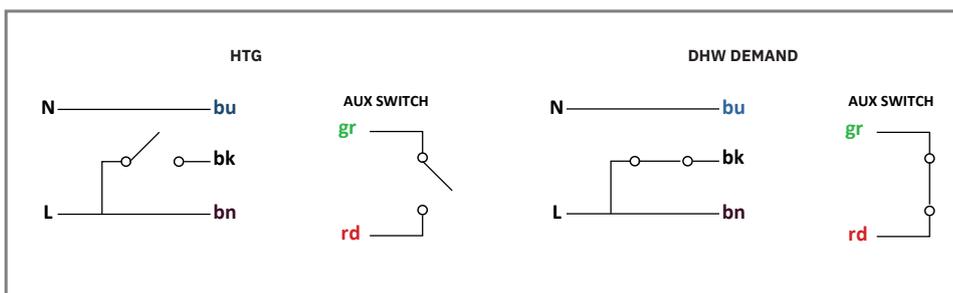
ESBE MBA 132

Drawings



ESBE MBA 135

Wiring Diagram



Installation & Setup Guide



SCAN FOR SETUP GUIDE

Rotary Valves & Actuators

ESBE Series VRG Mixing & Diverter Valves



Features

- DZR Brass construction
- Up to 10 bar (PN10) operating pressure
- Wide range of sizes from DN15 to DN50
- Connections to suit most pipe dimensions
- Compact, flexible and easy to install
- Perfect match with ESBE series ARA600 actuators
- Flexibility with porting
- Wide selection of Kvs to achieve minimal pressure drop

L-Pattern - Mixing & Diverting Internal Thread + Compression

ARTICLE NO.	DESCRIPTION	KVS	CONNECTION
11600900	VRG131 20	6.3	RP ¾"
11601000	VRG131 25	6.3	RP 1"
11601100	VRG131 25	10	RP 1"
11601200	VRG131 32	16	RP 1 ¼"
11603000	VRG133 20	6.3	CPF 22 MM (compression)
11603100	VRG133 25	10	CPF 28 MM (compression)
11603400	VRG131 40	25	RP 1 ½"
11603600	VRG131 50	40	RP 2"

Diverting



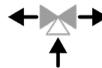
Mixing



T-Pattern - Diverting Internal Thread

ARTICLE NO.	DESCRIPTION	KVS	CONNECTION
11620100	VRG231 20	6.3	RP ¾"
11620200	VRG231 25	10	RP 1"
11620300	VRG231 32	16	RP 1 ¼"
11621400	VRG231 40	30	RP 1 ½"
11621600	VRG231 50	40	RP 2"

Diverting



Perfect for Higher Flow Rate Systems

Spring return valves are often used in central heating systems with a boiler as they are designed for lower flow rates, but these are not suitable for higher flow rate heat pump systems as they create a high pressure drop within the system.

To effectively divert flow from the heat pump to heating or hot water with low pressure drops, a higher KVS (flow rate) valve is required. ESBE diverter valves are designed for managing high flow rates with low delta T to maximise the efficiency of the system, reduce water hammer and avoid breakdowns.

Rotary Valves & Actuators

ESBE Series VRG Mixing & Diverter Valves



Rotary Actuators to Suit VRG Valves - Diverting

ARTICLE NO.	2-POINT (ON/OFF) / SWITCH LIVE SIGNAL ONLY / DIVERTING ONLY
12120700	ESBE ARA635 230VAC 3NM 15S
12120800	ESBE ARA645 230VAC 6NM 30S
12120900	ESBE ARA655 230VAC 6NM 60S



Our ARA 2-point actuators are controlled via a permanent live and switch live (on/off) signal.

Rotary Actuators to Suit VRG Valves - Mixing

ARTICLE NO.	3-POINT POWER OPEN / POWER CLOSE & MODULATING (0-10)
12101700	ESBE ARA652 230VAC 6NM 60S AUX 3P
12101800	ESBE ARA662 230VAC 6NM 120S AUX 3P
12100800	ESBE ARA664 24VAC 6NM 120S AUX 3P
12520200	ESBE ARA659 24VAC 6NM 45-120S Modulating



Our ARA 3-point actuators are controlled via two separate live signals from your controller

Insulation Shells

ARTICLE NO.	INSULATION SHELL
16103800	ESBE VRI111 DN15/20
16103900	ESBE VRI111 DN25
16104000	ESBE VRI111 DN32
16104100	ESBE VRI111 DN40



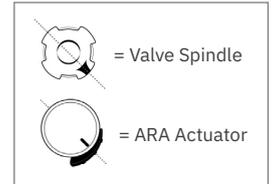
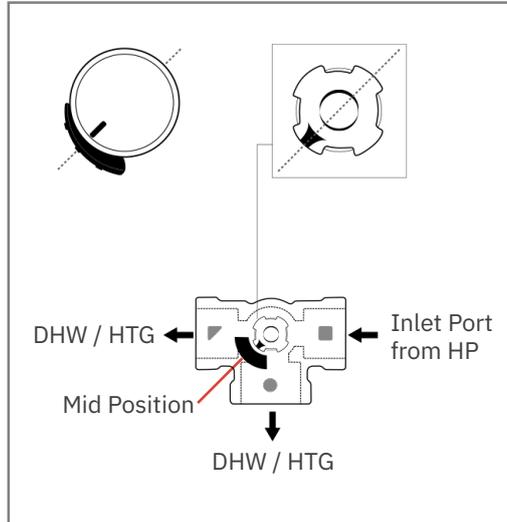
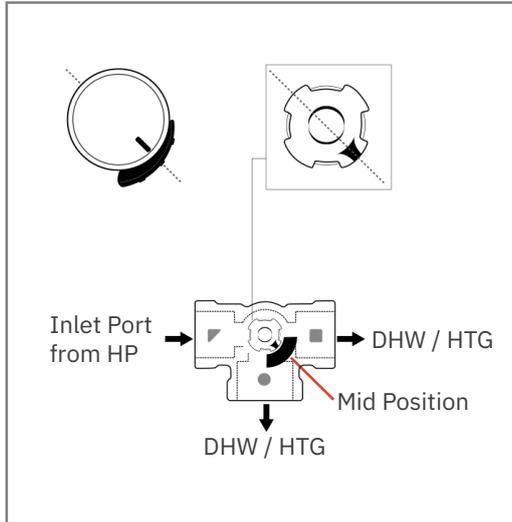
VRI insulation shells can reduce heat loss from the valve by up to 65%

Typical Application Schematics

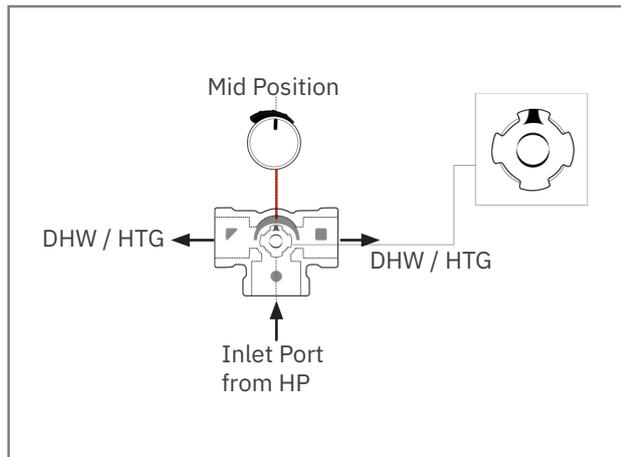
Diverting Applications



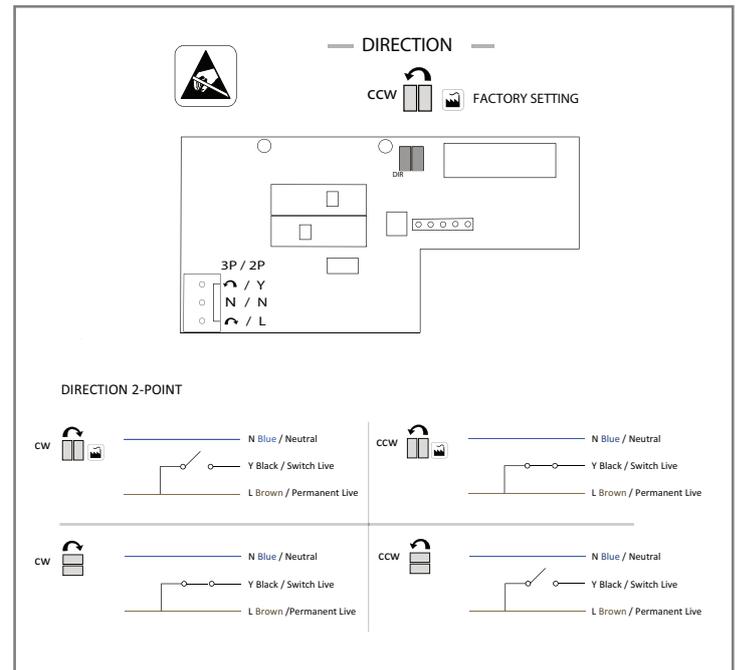
VRG 131 – L Pattern Diverting Valve



VRG 231 – T Pattern Diverting Valve



ARA Actuator - Internal Jumper



All ESBE actuators are pre-set in mid-position.

During set-up, ensure that the valve spindle is in between the two outlet ports prior to mounting the actuator.

Installation & Setup Guides



SCAN FOR VRG 130
SETUP GUIDE



SCAN FOR VRG 230
SETUP GUIDE



SCAN FOR ARA600
2-POINT GUIDE

To change the switch live direction of travel for DHW demand, an internal jumper within the actuator will need to be altered 90 degrees.

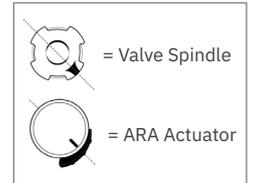
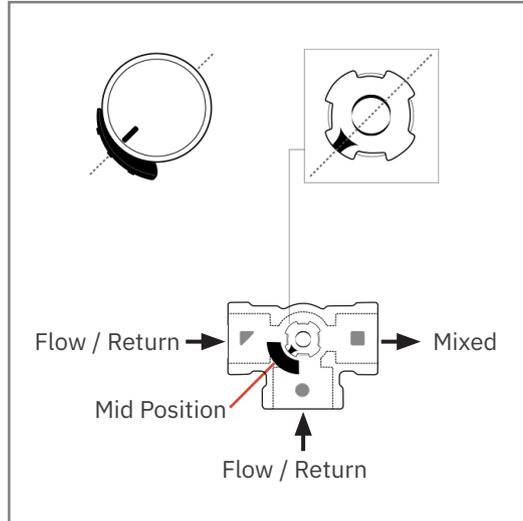
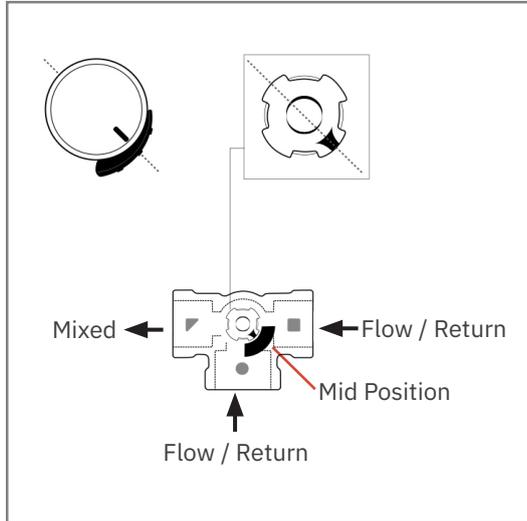
Please refer to page 8 of the ARA 2-point Actuator Instruction Manual for further details.

Typical Application Schematics

Mixing Applications



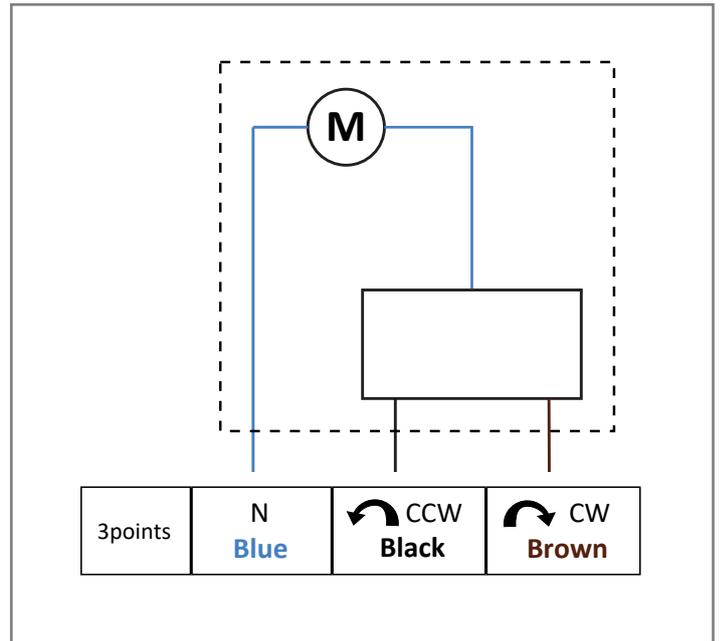
VRG 131 – L Pattern Mixing Valve



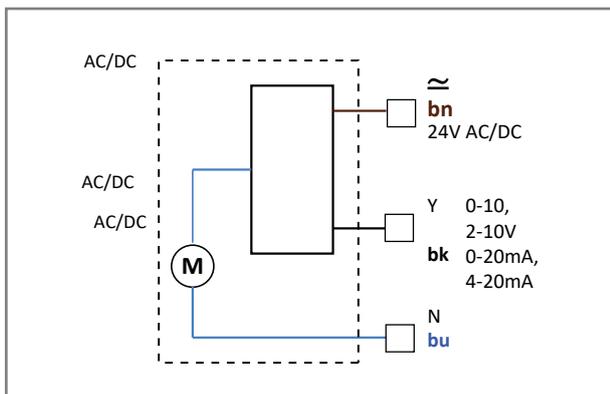
All ESBE actuators are pre-set in mid-position.

During set-up, ensure that the valve spindle is in between the two outlet ports prior to mounting the actuator.

ARA Actuator - 3-Point Wiring



ARA Actuator - Proportional Wiring



Installation & Setup Guides



SCAN FOR VRG 130
SETUP GUIDE



SCAN FOR VRG 230
SETUP GUIDE



SCAN FOR ARA600
PROPORTIONAL
GUIDE



SCAN FOR ARA600
3-POINT GUIDE

Circulation Units

ESBE Series GDA & GRA



GDA Features

- Direct supply circulation unit
- High efficiency circulation pump
- Pre-tested and ready to use
- One-size-fits-all – auto adapt function on board

Technical Details

ARTICLE NO.	MODEL
61001100	ESBE GDA211 DIRECT-25-Wilo
61001200	ESBE GDA211 DIRECT-32-Wilo
61001300	ESBE GDA212 DIRECT-25-Grundfos
61001400	ESBE GDA212 DIRECT-32-Grundfos



ESBE Series GDA

GRA Features

- 3-point / Modulating circulation unit for heating circuits
- Controlled by Building Management System (BMS)
- Outstanding flow control thanks to the progressive characteristic of the valve
- 3-way rotary progressive mixing valve and actuator
- Ready to use with most standard controllers
- One-size-fits-all (auto adapt + progressive characteristic)

Technical Details

ARTICLE NO.	DESCRIPTION
61042100	ESBE GRA211 ARA661+VRG432-25-Wilo
61042200	ESBE GRA211 ARA661+VRG432-32-Wilo
61042300	ESBE GRA212 ARA661+VRG432-25-Grundfos
61042400	ESBE GRA212 ARA661+VRG432-32-Grundfos



ESBE Series GRA

Installation & Setup Guide



SCAN FOR SETUP
GUIDE

Circulation Unit Manifolds

ESBE Series GMA



GMA Features

- Available with or without hydraulic separation of heating circuit from heat source
- Pressure class PN6
- Available for 2, 3 and on request for 4 or 5 circuits
- Thermal separation for more efficient system performance
- Colour coding for easy and quick product installation
- GMA410 and GMA500 can connect to a safety group or flow sensor

Technical Details - Manifolds Without Lower Loss Header Function

ARTICLE NO.	MODEL	NO. OF CIRC UNITS	CONNECTIONS	
			TO SYSTEM	FROM HEAT SOURCE
66001200	ESBE GMA421	2	RN 1½"	G 1½"
66001300	ESBE GMA431	3		
66001400	ESBE GMA441	4		
66001500	ESBE GMA451	5		



Technical Details - Manifolds With Lower Loss Header Function

ARTICLE NO.	MODEL	NO. OF CIRC UNITS	CONNECTIONS	
			TO SYSTEM	FROM HEAT SOURCE
66001600	ESBE GMA521	2	RN 1½"	G 1½"
66001700	ESBE GMA531	3		



Installation & Setup Guide



SCAN FOR SETUP
GUIDE

TacoSetter Balancing Valves

TacoSetter Inline & SD 100



Features

- Compact balancing valves for heating circuits
- Accurate control of flow rates from 0.3 to 650l/min
- PN10 pressure rating
- TacoSetter Inline 100 +/- 10% BSRIA accuracy tested
- TacoSetter SD 100 +/- 5% BSRIA accuracy tested
- Manufactured in EU
- Easy read display
- Maintenance free
- Available with external and compression thread

Technical Details

ARTICLE NO.	TACOSSETTER INLINE 100	KVS	CONNECTION
223.1238.000	DN15 (2-8 L/Min Range)	1.8	3/4" Eurcon x 3/4" Eurocon
223.1239.000	DN15 (3-12 L/Min Range)	1.85	3/4" Eurcon x 3/4" Eurocon
223.1300.000	DN20 (4-15 L/Min Range)	5.0	1" x 1" G Thread
223.1302.000	DN20 (8-30 L/Min Range)	5.0	1" x 1" G Thread
223.1305.000	DN20 (10-40 L/Min Range)	5.0	1" x 1" G Thread

ARTICLE NO.	TACOSSETTER SD 100	KVS	CONNECTION
223.2262.000	DN15 (2-8 L/Min Range)	1.95	1/2" x 1/2" Female BSP
223.2360.000	DN20 (4-15 L/Min Range)	3.3	3/4" x 3/4" Female BSP
223.2362.000	DN20 (8-30 L/Min Range)	5.0	3/4" x 3/4" Female BSP
223.2460.000	DN25 (6-20 L/Min Range)	5.1	1" x 1" Female BSP
223.2461.000	DN25 (10-40 L/Min Range)	8.1	1" x 1" Female BSP
223.2561.000	DN32 (20-70 L/Min Range)	17.0	1 1/4" x 1 1/4" Female BSP
223.2661.000	DN40 (30-120 L/Min Range)	30.0	1 1/2" x 1 1/2" Female BSP
223.2861.000	DN50 (50-200 L/Min Range)	54.0	2" x 2" Female BSP



Installation & Setup Guides



SCAN FOR
TACOSSETTER
INLINE SETUP
GUIDE



SCAN FOR
TACOSSETTER SD
SETUP GUIDE

Taconova Circulation Pumps

PWM Enabled



Features

- 5 year warranty for peace of mind
- EEI (energy efficiency index) provides low running costs and reduced emissions
- Anti-blocking feature reduces unnecessary call-outs
- Venting function automatically releases air out of the system to assist with commissioning
- LEDs for clear fault diagnosis
- DN25 and DN15 (130mm) for quick replacement
- 8M head pressure
- PWM enabled
- Manufactured in the EU



Technical Details

ARTICLE NO.	DESCRIPTION	MAX PUMP HEAD (M)	CONNECTION
EC0005A001	TacoFlow3 DUO 25-85/130 PP	8.5	DN25 / G1 ½"
EW0005-002	PWM Cable	-	-

Installation & Setup Guide



SCAN FOR SETUP
GUIDE



Two-Way Ball Valves

High Flow Zone Valves (Full Bore)



essco

Features

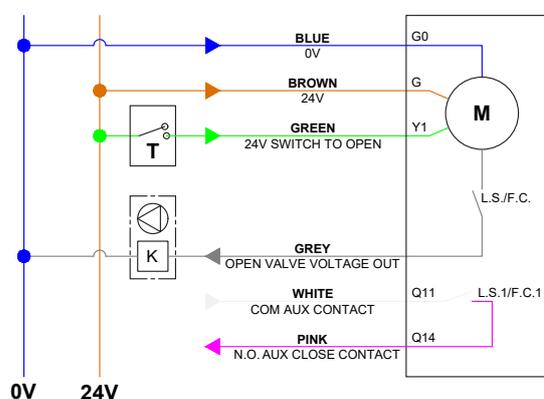
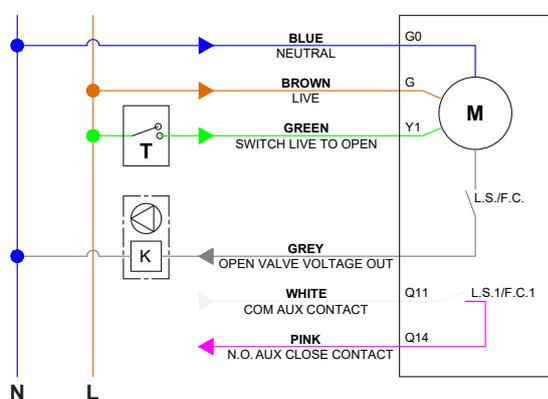
- DN15 to DN50 internal thread screwed BSP
- Nickel plated brass ball valve
- 100% leak-tight
- Complete with 2-Point control 230v or 24v AC
- Features electric actuator with output switch
- Max pressure: 10 Bar
- Actuator rating: IP54
- Temperature range: -20°C to 70°C
- Running Speed: 60 Seconds
- Torque: 13Nm
- Equal percentage flow control
- Position indicator
- Manual operation via unlock button
- Output switches

Technical Details

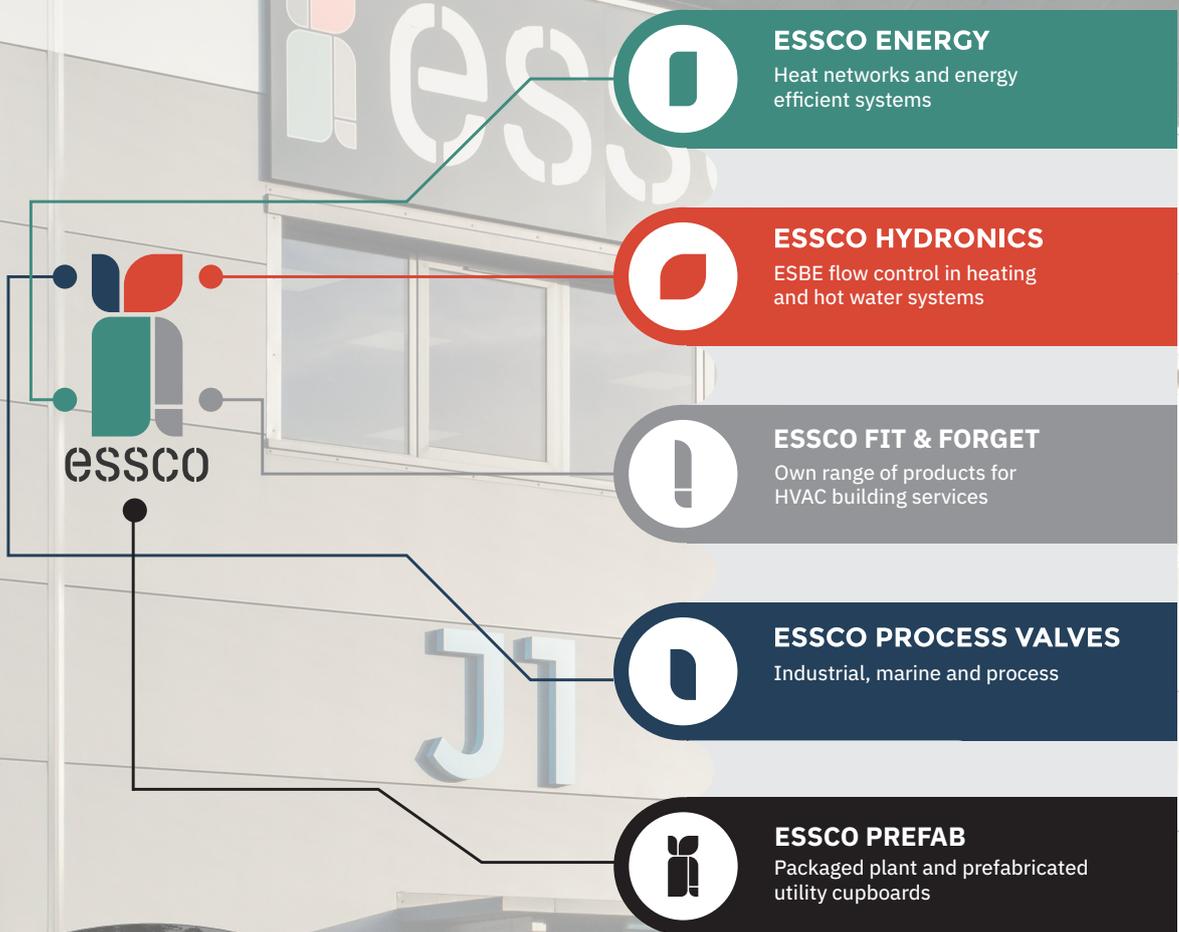
ARTICLE NO.	DESCRIPTION	CONNECTION (INTERNAL THREAD BSP)	VOLTAGE
ESS-2291N-230V-015	2-PORT COMMERCIAL ZONE VALVE PACKAGE, BALL VALVE + ACTUATOR	15MM / DN15	230V
ESS-2291N-230V-020		20MM / DN20	230V
ESS-2291N-230V-025		25MM / DN25	230V
ESS-2291N-230V-032		32MM / DN32	230V
ESS-2291N-230V-040		40MM / DN32	230V
ESS-2291N-230V-050		50MM / DN50	230V
ESS-2296N-24V-015		15MM / DN15	24V
ESS-2296N-24V-020		20MM / DN20	24V
ESS-2296N-24V-025		25MM / DN25	24V
ESS-2296N-24V-032		32MM / DN32	24V
ESS-2296N-24V-040	40MM / DN32	24V	
ESS-2296N-24V-050	50MM / DN50	24V	



Wiring Diagrams



HVAC PRODUCTS AND PROCESS VALVES THAT YOU CAN DEPEND ON



“We only sell products that we believe in.”





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