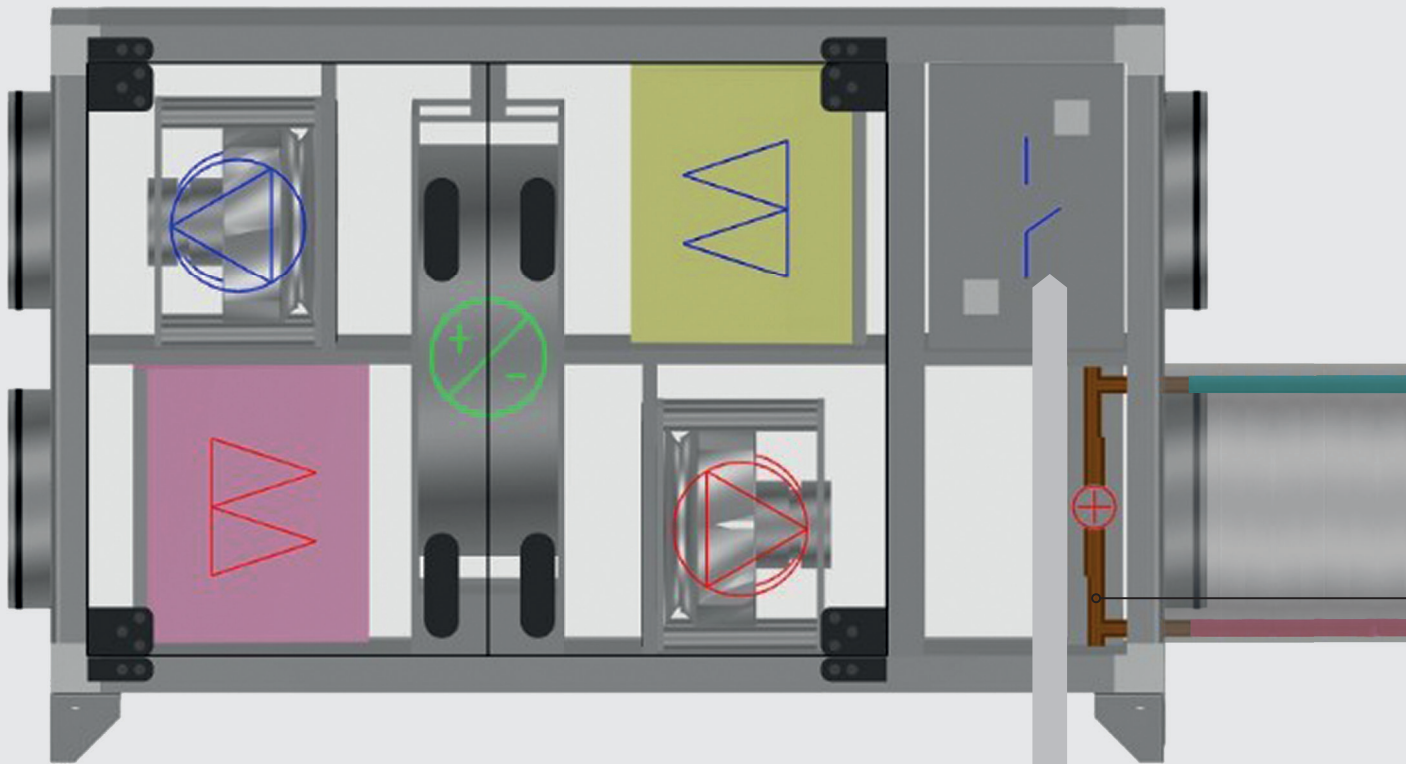


Shunt group heating for compact air handling unit

With adjustable KVS value

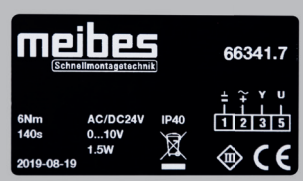




Systemair Topvex
air handling unit
as an example

Connection 24V actuator 0-10V

JE - Y (ST) Y 2 x 2 x 0,8 mm²



Cable labelling		Terminal block
[1] black	24V	G
[2] red	0V	G0
[3] white	0-10V	93

Connection circulation pump

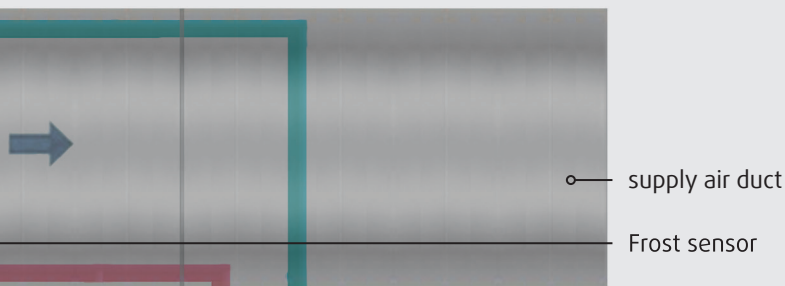
NYM-J 3 x 1,5 mm²



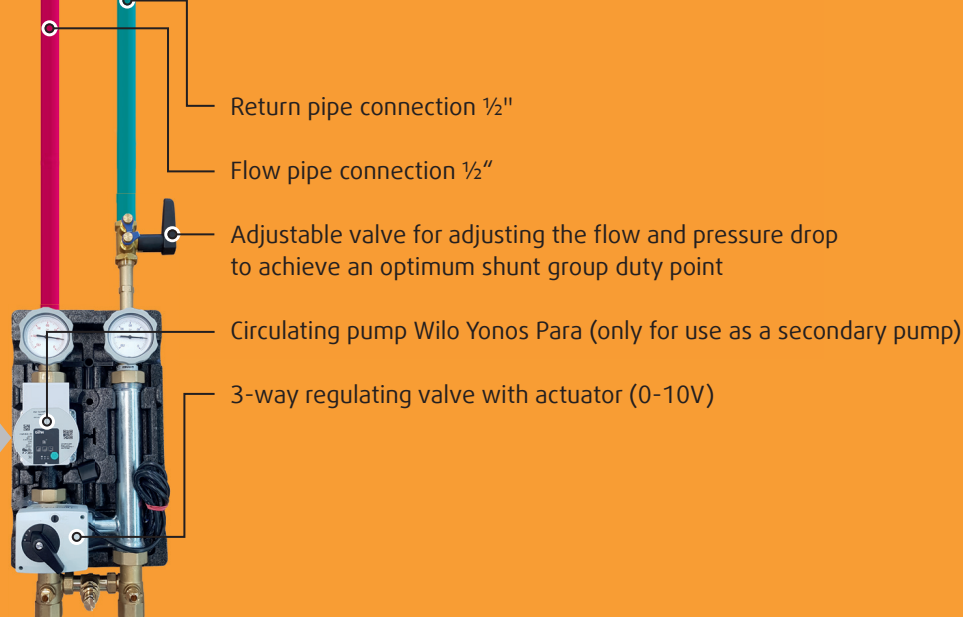
Cable labelling		Terminal block
[L] brown		WP
[N] blue		N
[PE] green/yellow		PE

What's a shunt group?

The shunt group is used for fast and convenient connection of air handling unit heating section to the primary heating system. The KVS value is freely adjustable and can therefore be adapted to any Systemair compact air handling unit.



Overview



Why using a shunt group, if you can assemble everything yourself?

Advantages at a glance:



Ready to use system

Let the professionals do the work for you: ready-made solution from experts. Suitable for all Systemair compact air handling units.



Adjustable KVS-value

A single shunt group for all Systemair compact air handling units as a result of the adjustable control valve.



Less installation work

Do not worry about the installation! Thanks to matched connection dimensions you have everything fitted fast and easy without any headaches.



Time saving

No need to search for the right components and no long waiting period until they reach you. From us you get a single package. Order – unpack – mount – finished



Money saving

You know the saying “time is money”? A shunt group may be more expensive to buy, but you don’t have to search for the right components. Moreover, a faster assembly is almost impossible. You will see!

easy – fast – uncomplicated



FAQ

Can the shunt group also be used for the integration of a cooling coil?

No, the shunt group is designed to be used with a hot water heating coil. The maximum medium temperature is 95 °C.

How is the shunt group electrically connected?

The integrated circulation pump only requires a 230V AC power supply. The actuator requires a 24V AC/DC power supply and is controlled by a 0-10V signal. There is no need for extra accessory to connect the shunt group to a Systemair modular or compact air handling unit.

Is the shunt group suitable for outdoor installation?

No, that would require an additional enclosure to protect the unit against exposure to weather and a filling with glycol for frost protection. The latter has an effect on the characteristics of the shunt. We do not recommend outdoor installation.

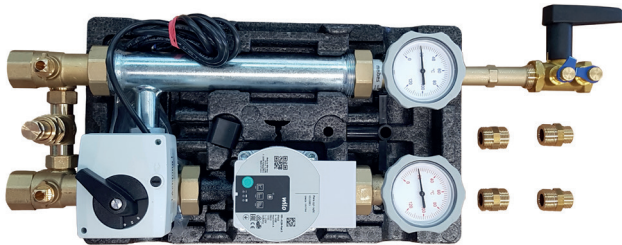
How to mount the shunt group best?

For mounting on the wall, screws and dowels are included.

What else needs to be considered?

During installation, ensure that there is a possibility of venting the system. The circulating pump should only be operated when the system is filled and vented.

Technical overview



Shunt group heater compact (item no. 199164)

Configuration of the shunt group

Option 1:

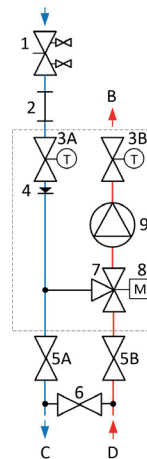
Adjustment using the type code of the air handling unit. Simply look for your type code in table 2 (page 8) and find the appropriate setting in the table. We have already done the calculation for you.

Option 2:

Setting based on a determined KVS value. If the required KVS value for adjustment is known, please refer to table 1 for the appropriate setting.

Features and advantages at a glance

- Ball valves with integrated thermometers
- 3-way valve with actuator 0-10V
- High-efficiency circulating pump
- Fully insulated with insulation shells
- Adjustable bypass
- Regulating valve for adjusting to the required KVS value



Position	
A	Return register
B	Forward register
C	Return heating
D	Supply heating
1	Ballorex Vario
2	Spacer
3A	Backflow ball valve with thermometer
3B	Inflow ball valve with thermometer
4	Gravity brake
5A	Backflow ball valve
5B	Inflow ball ball valve
6	Bypass valve (0 – 0,5 bar)
7	3-way mixing valve
8	Actuator for 3-way mixing valve
9	Pump WILO PARA 25-180/7-50/

Adjustment overview KVS value (table 1)

Adjustment	KVS m ³ /h
0,0	0,12
0,1	0,13
0,2	0,14
0,3	0,16
0,4	0,17
0,5	0,19
0,6	0,21
0,7	0,24
0,8	0,26
0,9	0,29

Adjustment	KVS m ³ /h
1,0	0,31
1,1	0,34
1,2	0,37
1,3	0,4
1,4	0,44
1,5	0,47
1,6	0,5
1,7	0,53
1,8	0,57
1,9	0,6

Adjustment	KVS m ³ /h
2,0	0,64
2,1	0,67
2,2	0,7
2,3	0,74
2,4	0,77
2,5	0,81
2,6	0,84
2,7	0,88
2,8	0,91
2,9	0,95

Adjustment	KVS m ³ /h
3,0	0,98
3,1	1,02
3,2	1,05
3,3	1,09
3,4	1,12
3,5	1,16
3,6	1,19
3,7	1,23
3,8	1,26
3,9	1,3

Adjustment	KVS m ³ /h
4,0	1,33
4,1	1,37
4,2	1,4
4,3	1,44
4,4	1,48
4,5	1,51
4,6	1,55
4,7	1,59
4,8	1,63
4,9	1,66

Adjustment	KVS m ³ /h
5,0	1,7
5,1	1,74
5,2	1,78
5,3	1,82
5,4	1,87
5,5	1,91
5,6	1,95
5,7	1,99
5,8	2,04
5,9	2,08

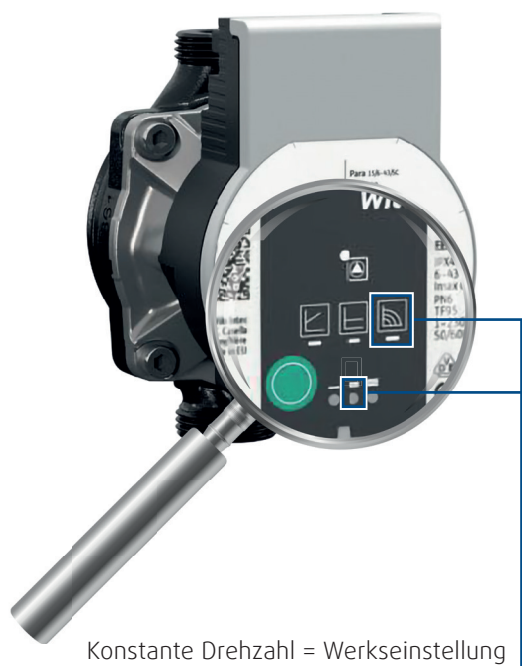
Adjustment	KVS m ³ /h
6,0	2,13
6,1	2,18
6,2	2,22
6,3	2,27
6,4	2,32
6,5	2,37
6,6	2,42
6,7	2,47
6,8	2,52
6,9	2,57

Adjustment	KVS m ³ /h
7,0	2,63
7,1	2,68
7,2	2,74
7,3	2,79
7,4	2,85
7,5	2,91
7,6	2,96
7,7	3,02
7,8	3,08
7,9	3,14

Adjustment	KVS m ³ /h
8,0	3,2
8,1	3,26
8,2	3,32
8,3	3,38
8,4	3,44
8,5	3,5
8,6	3,57
8,7	3,63
8,8	3,69
8,9	3,76

Adjustment	KVS m ³ /h
9,0	3,82
9,1	3,88
9,2	3,95
9,3	4,01
9,4	4,08
9,5	4,14
9,6	4,21
9,7	4,27
9,8	4,34
9,9	4,4

Commissioning of the shunt group



Pump setting

Constant Speed = factory setting 2nd stage
The compact pump is delivered with the setting 0.0 valve closed.

Commissioning of the shunt group heater compact

After installation and electrical connection, you need to check only tightness. Fill in and vent the system properly.

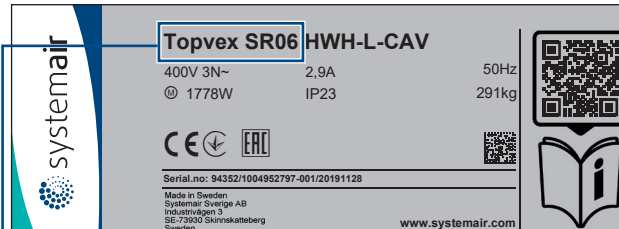
The pump has a ventilation function. To engage this function, push and hold the green control button for 3 seconds.

- ↳ Ventilation function starts, duration 10 minutes.
- ↳ The upper and lower LED rows flash alternately at intervals of one second.

Open all valves and thermometer ball valves.

Name plate

Observe the type designation of the name plate of the supplied ventilation unit.



Now look in Table 2 (page 8). Designation as for example Topvex SR06 find out and adjust the setting on the valve (3,8) using a 3 mm allen key. Finish!

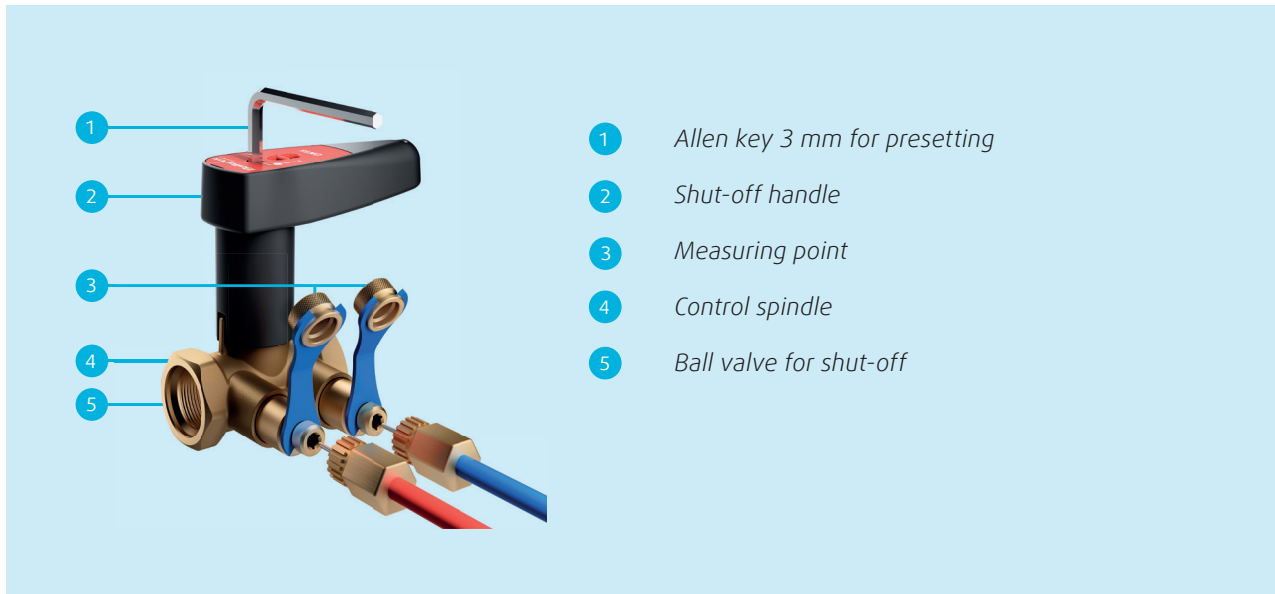
Functions after short pressing of the green control button

- Select control type
- Selection of the characteristic curve (1, 2, 3) within the control type

Functions after long pressing of the green control button

- Press for 3 seconds ⇔ activate venting function
- Press for 5 seconds ⇔ enable manual restart
- Press for 8 seconds ⇔ lock/unlock button

Valve setting



Topvex settings overview (table 2)

Item no. shunt group	Device type	Valve setting
199164	Topvex TR 03	1,4
	Topvex TR 04	2,5
	Topvex TR 06	3,6
	Topvex TR 09	6,4
	Topvex TR 12	8,6
	Topvex TR 15	8,7
	Topvex SR 03	2,1
	Topvex SR 04	2,6
	Topvex SR 06	3,8
	Topvex SR 09	7,6
	Topvex SR 11	8,9
	Topvex FR 03	1,9
	Topvex FR 06	3,6
	Topvex FR 08	6,8
	Topvex FR 11	9,0
	Topvex SXC 03	1,2
	Topvex SXC 04	1,5
	Topvex SXC 06	2,0
	Topvex TXC 03	1,2
	Topvex TXC 04	1,4
	Topvex TXC 06	1,9
	Topvex FC 02	0,7
	Topvex FC 04	1,5
	Topvex FC 06	2,8
	Topvex SC 03	2,1
	Topvex SC 04	2,6
	Topvex SC 06	3,8
Topvex SC 08	7,6	
Topvex SC 11	8,9	



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