Installation TBBD mixing section GOLD SD

1. General

The TBBD mixing section is available for the GOLD SD in sizes 04-80.

The mixing section can be used when it is desirable use recirculated air for completely or partially heating a building while it is unoccupied.

Supply air units should be equipped with electric air heater or air heater for hot water.

The TBBD consists of a spiral tubular T-piece (sizes 04-12) or a rectangular duct with three connections for slip-clamp jointing (sizes 20-80).

The necessary quantity of spiral duct joints (sizes 04-12) or sets of slip clamps (sizes 14-80)is included in the supply.

The damper is always supplied with mounted damper actuator. These have modulated action.

The mixing section can be ordered with two or three dampers depending on its range of application. See the example to the right and below.

Sizes 05, 08 and 12

Example 1, two dampers

The mixing section is supplied with two mounted dampers on one spiral tubular T-piece. The connecting rod is fastened to the actuating arms of the damper and the common damper actuator. The linkage is connected on the right-hand side. The mixing section can easily be converted for connecting the linkage on the left-hand side.

Examples 2 and 3, three dampers

As example 1 + one unmounted damper with its own damper motor and one spiral tubular T-piece.

Sizes 20-80

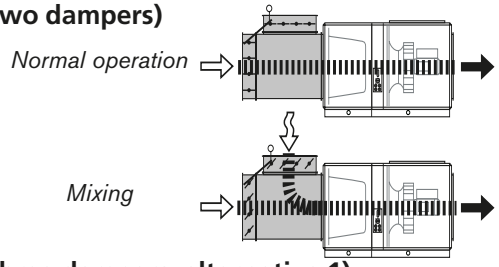
Example 1, two dampers

The mixing section is supplied with two unmounted dampers and one rectangular duct with three connections for slip-clamp jointing. The connecting rod for the common damper motor is supplied with the unit section for size 20-30 air handling units. The dampers of the size 40-80 unit sections each have their own damper motor. The mixing section can be mounted for connection on the right-hand or left-hand side.

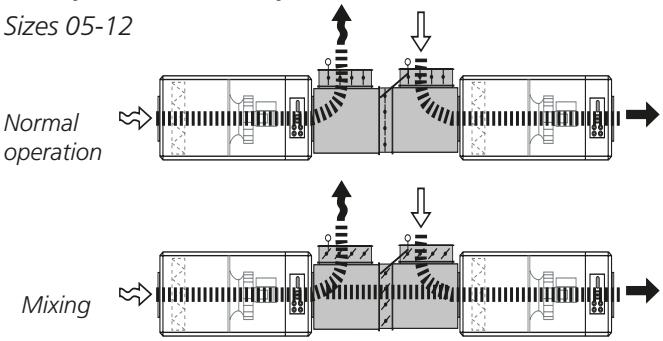
Example 3, three dampers, alternative 2

As example 1 + one unmounted damper with its own damper motor and one rectangular duct with three connections for slip-clamp jointing.

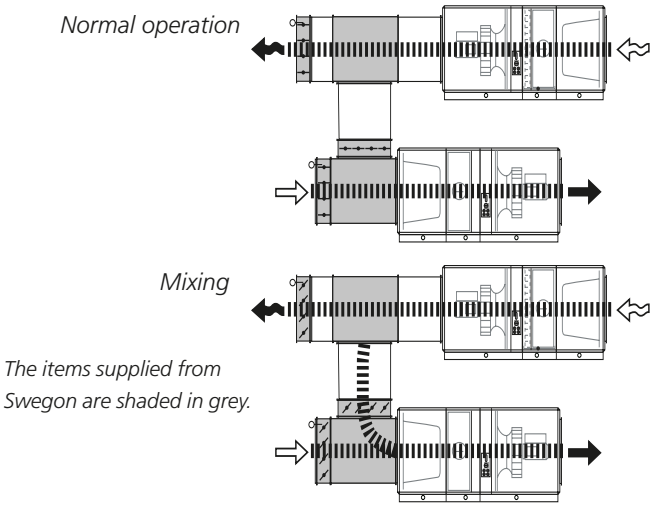
Example 1 (two dampers)

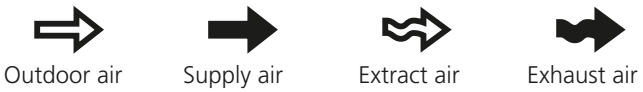


Example 2 (three dampers, alternative 1)



Example 3 (three dampers, alternative 2)





2. Installation

1. The mixing section must be installed where it will be accessible for inspection and the replacement of parts.

2. Install the mixing section against the air handling unit/ duct. Spiral joints for sizes 05, 08 and 12, and sets of slip-clamps for sizes 20-80 are to be used for installation. Fit the dampers to the mixing section or duct. For particulars of the variants, see the sketches on the previous page and the next page.

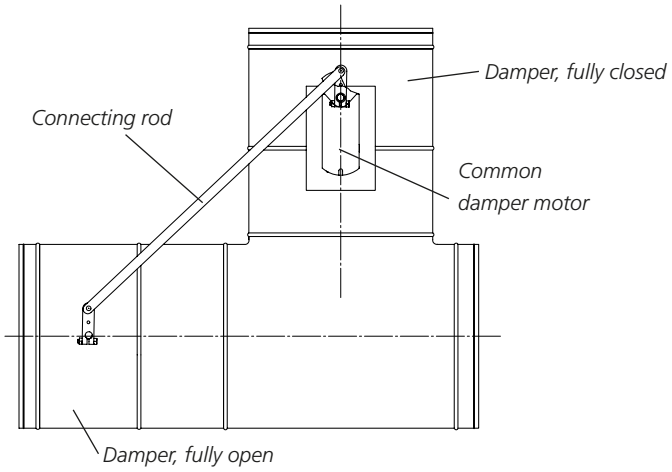
3. When fitting the connecting rod to the actuating arms, make sure that one damper is fully open and the other damper is fully closed to insure correct mixture ratio. Make sure that the connecting rod's actuating arm does not slip on the damper spindle.

4. Insulate the mixing section/duct in accordance with local standards for ventilation ductwork.

TBBD sizes 05, 08, 12

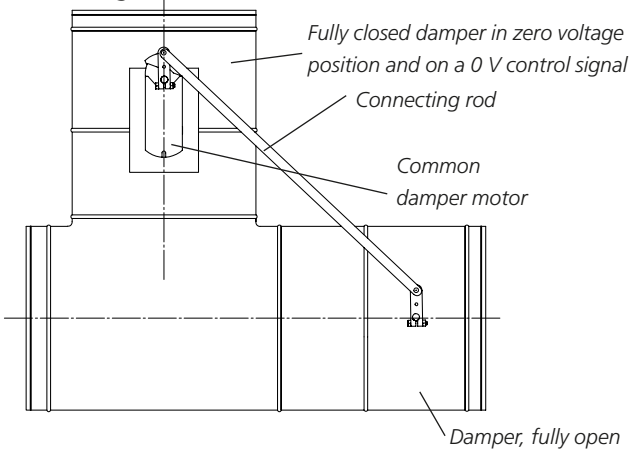
Right-hand connection side

Delivery version.

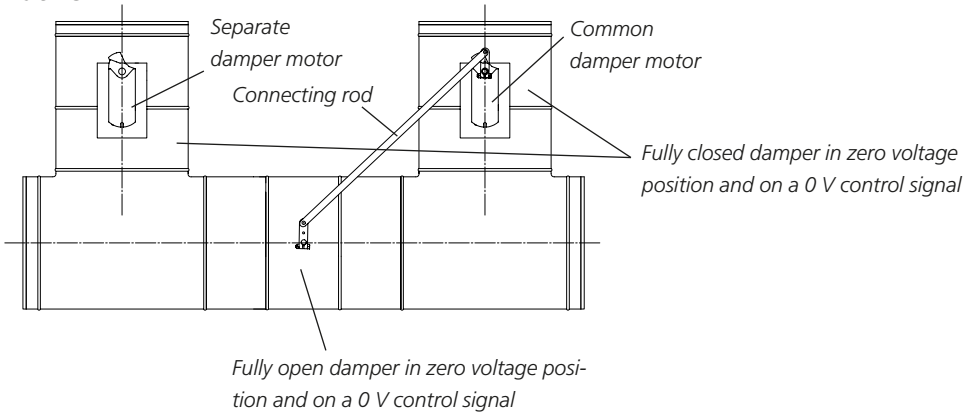


Left-hand connection side

Remove the connecting rod. Move the damper. Refit the connecting rod.

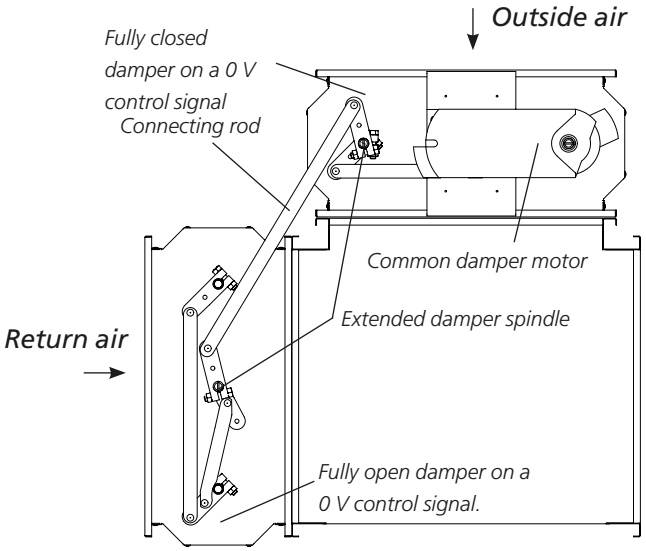


Mixing section with three dampers, alternative 1

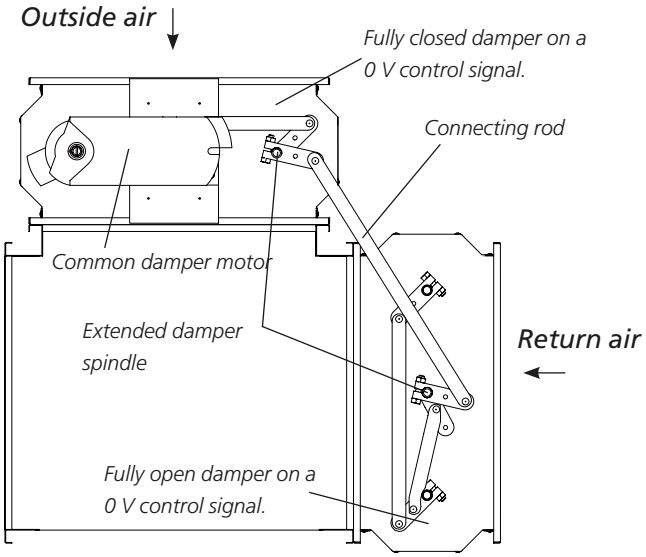


TBBD sizes 20, 30

Right-hand connection side

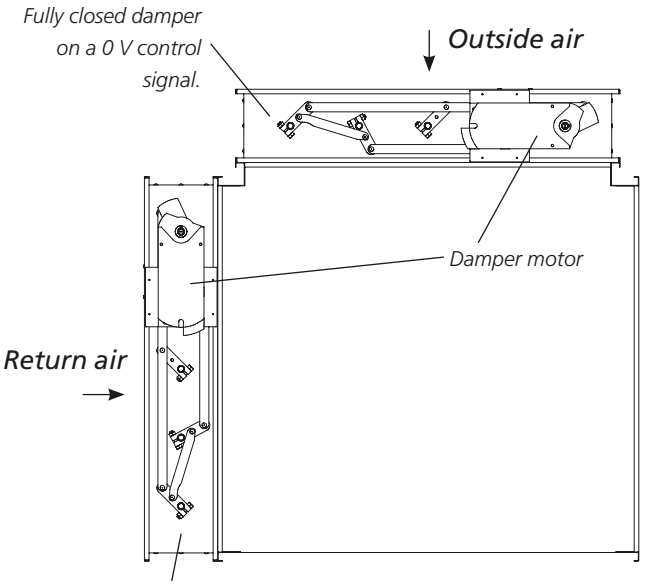


Left-hand connection side



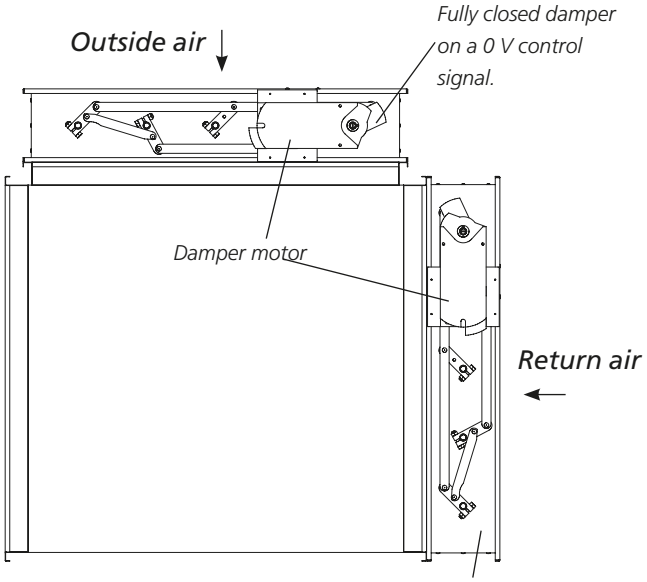
TBBD sizes 40, 60, 80

Right-hand connection side



Fully open damper on a 0 V control signal. The direction of travel of the damper actuator must be changed. See Item 6.

Left-hand connection side

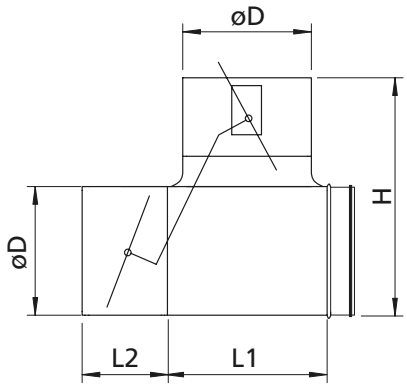


Fully open damper on a 0 V control signal.

3. Dimensions

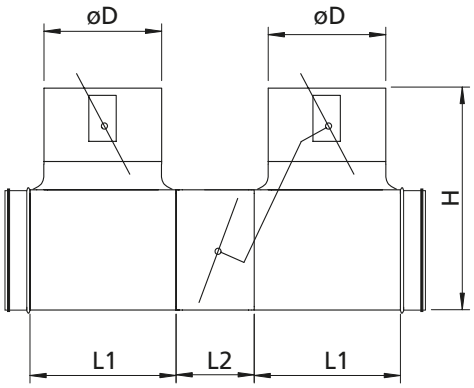
TBBD sizes 05, 08

Two dampers



GOLD SD, size	TBBD, size	L1	L2	H	øD
04/05	05	363	140	480	315
08	08	510	210	635	400
12	12	552	210	750	500

Three dampers, alternative 1



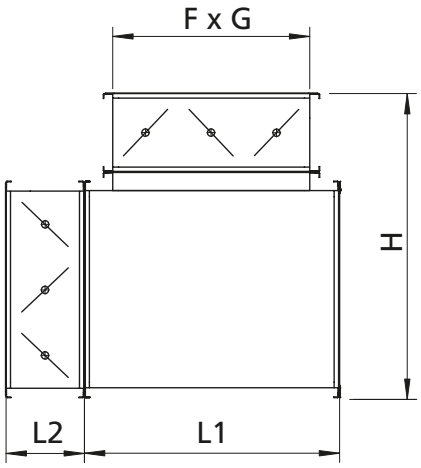
GOLD SD, size	TBBD, size	L1	L2	H	øD
04/05	05	363	140	480	315
08	08	510	210	635	400
12	12	552	210	750	500

Three dampers, alternative 2

The dimensions of the component parts supplied by Swegon can be read in the sketches above.

TBBD sizes 20, 30, 40, 60, 80

Two dampers



GOLD SD, size	TBBD, size	L1	L2	H	F x G
14/20	20	520	220	670	400 x 1000
25/30	30	620	220	770	500 x 1200
35/40	40	720	220	870	600 x 1400
50/60	60	920	220	1070	800 x 1600
70/80	80	1120	220	1270	1000 x 1800

Three dampers, alternative 2

The dimensions of the component parts supplied by Swegon can be read in the sketch above.

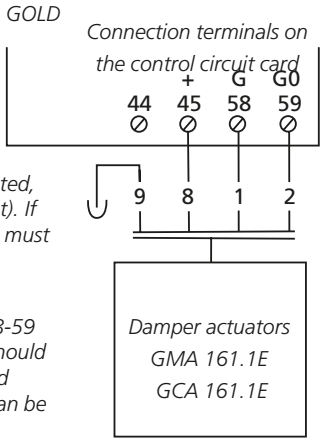
4. Electrical Connections

The electrical connections are to be wired by a qualified electrician in accordance with local electrical safety regulations.

The damper motor has a 0.9 metre long 4 x 0.75 mm power supply cable. [2] .

24 V supply voltage on terminals 58-59 and 60-61. The max. permissible load on these terminals is 32 VA.

Option 1
The actuator should not close the damper if the air handling unit stops.

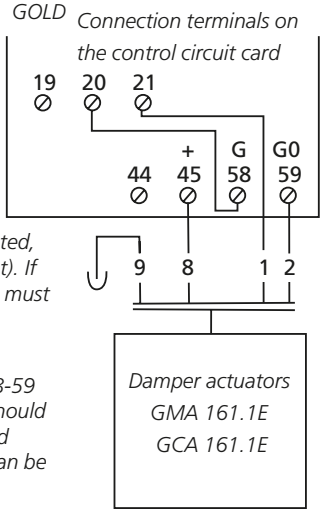


Connecting wire No. 9 must be insulated, do not connect (energized, 0-10 V out). If several damper motors are used, they must be connected in parallel.

Applies to GOLD size 100/120 only: If the total load on wiring terminals 58-59 and 60-61 is higher than 16 VA,you should wire the leads to terminals 201 (G) and 202 (G0). Wiring terminals 201-202 can be loaded with a total of max. 48 VA.

The damper normally operates by means of motorized damper actuation to open and close the damper blades. (actuating time: 90 seconds).

Option 2
The actuator should close the damper if the air handling unit stops.
If the damper actuator should close the damper if the air handling unit is stopped, then a 24 V supply voltage cable can be wired via the GOLD air handling unit's service contact.



Connecting wire No. 9 must be insulated, do not connect (energized, 0-10 V out). If several damper motors are used, they must be connected in parallel.

Applies to GOLD size 100/120 only: If the total load on wiring terminals 58-59 and 60-61 is higher than 16 VA,you should wire the leads to terminals 201 (G) and 202 (G0). Wiring terminals 201-202 can be loaded with a total of max. 48 VA.

5. To activate the function in the hand-held terminal

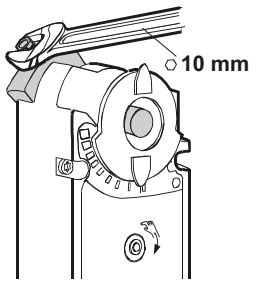
The function must be activated in the hand-held micro terminal. This activation is done at installation level (code = 1111) under Functions/Temperature/Extra reg. sequence.

Set the cooling and heating function to Economy. Set the output signal, cooling, and the output signal, heating, to 10 - 0 V.

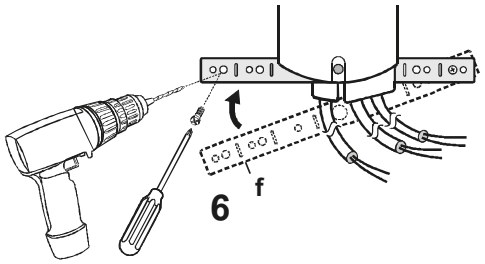
If a min. outdoor air flow is required, set this flow under Max. output signal. 100% corresponds to 100% recirculation and 0% outdoor air, 70% corresponds to 70% recirculation and 30% outside air.

6. To change the direction of travel, damper actuator

1. Back off the damper spindle locking screw.



2. Remove the damper actuator from the damper spindle. It might be necessary to also remove the lower bracket.



3. Reverse the damper actuator and mount it with its rear side facing outward.
4. Adjust the damper blade(s) to the fully open position.
5. Tighten the locking screw against the damper spindle (7-10 Nm).
6. Check the end positions with a crank or a hexagon spanner.