



TECHNIKA

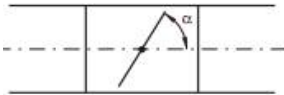
Rectangular shut-off damper

SSUR/SSUP



Description

The shut-off dampers are used to install a ventilation system in buildings together with rectangular ducts. The damper can be used to close or regulate the air flow. The opening angle α of the blades can be adjusted from 0° to 90° .



The damper on the inside of the blades is fitted with an EPDM sealing strips, the tightness class 2 according to test standard LST EN 1751. Higher tightness class (3 or 4) it is also available on request. The position of the handle is fixed by screws. The shut-off dampers are made of low-resistance aerodynamic aluminium profiles and the rotation is transmitted through the inside of the plastic gears. The damper can be used at temperatures from -20 to $+100^\circ\text{C}$, insulated accordingly with the duct system. The maximum permissible absolute humidity inside and outside the air stream is 18 g/kg . It is possible to order with insulated PVC blades to keep warm longer inside.

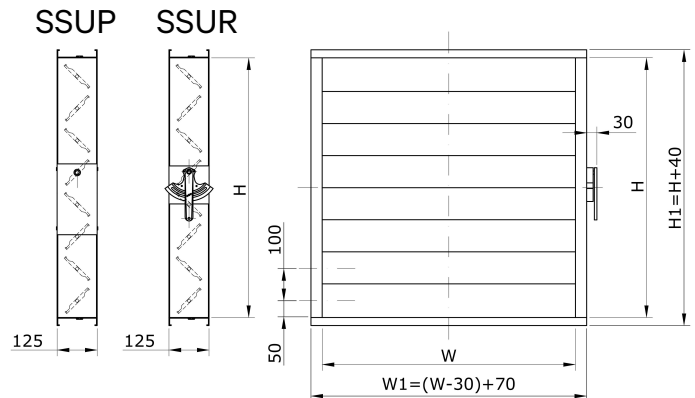
Ordering code

SSURIZ800800

Manual – SSUR
 With insulated blades SSURIZ
 With actuator – SSUP
 With insulated blades SSUPIZ
 Size

Sample: SSURIZ800800 – rectangular shut-off insulated damper, dimensions $800 \times 800\text{ mm}$.

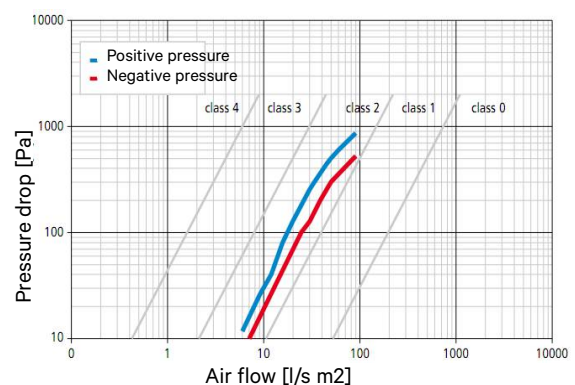
Dimensions



- The damper SSUP has an axis $12 \times 12\text{ mm}$.
- Dimension H always has a pitch of 100 mm and a tolerance of $+10\text{ mm}$. As a result, the internal dimension H is always $210, 310$ and so on, while the external dimension $240, 340$ and so on.
- The dimension W can be chosen any. Dimension W is always produced with a reduction of -30 mm . When ordering SSUP400400, the inner dimension will be $370 \times 410\text{ mm}$ and the outside dimension $440 \times 440\text{ mm}$. The damper has flanges 15 mm in high and 35 mm in wide and connects to the duct flange L20 or L30 using standard clamps.
- The handle has a locking screw.
- Valve with hidden axis and aerodynamic blades.
- The damper can be ordered with a square for mounting the actuator.
- The damper can only be installed in the duct in a horizontal position.

	W < 1000	W > 1000
Tightness class of the blade	Class 2	Class 2
Maximum permissible pressure drop through the blades [Pa]	2000 Pa	1500 Pa

Technical data





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The shut-off dampers are available in a variety of dimensions. The height step every 100 mm. Depending on the selected damper width W and height H, the required torque (Nm) can be determined. The table also shows standard weights (kg) without actuators for standard shut-off dampers.

Torque [Nm]	Actuator type
5	LM
10	NM
20	SM
30	GM

		W [mm]											
		200	300	400	500	600	800	1000	1200	1400	1600		
H [mm]	100	Nm	2,0	2,0	2,0	-	-	-	-	-	-	-	-
		kg	1,5	1,7	2,0	-	-	-	-	-	-	-	-
	200	Nm	2,0	2,0	2,0	2,0	2,0	2,0	-	-	-	-	-
		kg	2,0	2,5	2,9	3,3	3,8	4,6	-	-	-	-	-
	300	Nm	2,0	2,0	2,0	2,0	2,0	2,0	3,0	3,0	-	-	-
		kg	2,7	3,3	3,9	4,4	4,9	6,0	7,2	8,3	-	-	-
	400	Nm	2,0	2,0	2,0	3,0	3,0	3,0	3,0	3,0	4,0	4,0	-
		kg	3,5	4,2	4,8	5,5	6,2	7,5	8,8	10	11,5	12,8	-
	500	Nm	2,0	2,0	2,0	3,0	3,0	3,0	3,0	3,0	4,0	5,0	-
		kg	4,3	5,0	5,8	6,6	7,3	8,9	10,4	12	13,5	15,0	-
	600	Nm	3,0	3,0	3,0	3,0	4,0	4,0	4,0	4,0	5,0	5,0	-
		kg	5,0	5,9	6,8	7,7	8,5	10,5	12	13,8	15,6	17,3	-
	800	Nm	3,0	3,0	3,0	3,0	4,0	4,0	4,0	5,0	5,0	6,0	-
		kg	6,5	7,6	8,7	9,8	10,1	13,2	15,3	17,5	19,8	22	-
	1000	Nm	3,0	3,0	3,0	3,0	4,0	4,0	5,0	5,0	6,0	6,0	-
		kg	8,0	9,4	10,7	12	13,3	16	18,6	21	24	26	-
	1200	Nm	3,0	3,0	3,0	4,0	4,0	5,0	5,0	6,0	7,0	8,0	-
		kg	9,5	11	12,5	14	16	19	22	25	28	31	-
	1400	Nm	3,0	3,0	4,0	4,0	5,0	5,0	6,0	7,0	8,0	10	-
		kg	11	13	14,5	16,3	18	21	25	28	32	36	-
1600	Nm	3,0	3,0	4,0	5,0	5,0	6,0	6,0	8,0	10	10	-	
	kg	12,6	14,6	16,5	18,5	20,5	24	28	32	36	40	-	

Pressure drop

The calculation of the pressure drop shall be specified for the damper installed in the duct on a straight line under normal conditions. To determine the differential pressure across the blades at different opening angles, you need to know what the velocity will be through the damper itself. The design speed of the system shall be multiplied by a factor of 1,15. This will approximate the reduction in area through the damper due to the internal elements of the structure. The graph shows the velocity of the air and the angle of opening as the pressure across the damper. If the dampers are installed in the open space, then due to the change in air velocity additional dynamic pressure must be added p_d .

