Iso-VS

Sound-insulated smoke extraction fan



Application

- The sound-insulated dual-purpose smoke extraction fan is used in emergency exhaust ventilation systems for forced extraction of smoke, heated gases and combustion products.
- May be used in general exhaust ventilation systems in shopping centers, offices, garages, warehouses and kitchens.

Air flow:
up to 28 500 m³/h

Transported air temperature:
+120 °C for long-term operation;
+400 °C for operation
up to 120 minutes

Operation

- The fan is designed to extract smoke and air mixtures heated up to +400 °C for up to 120 minutes, and long-term operation with transported air temperature of up to +120 °C.
- The fan can be equipped with a frequency converter for speed control.
- The fan can be manufactured for temperate (**U**), cold (**HL**), tropical (**T**) or marine moderately cold (**M**) climates of the first placement category.

Electric motor

- The fan is equipped with a single-phase (up to 1.1 kW) or three-phase electric motor designed for 230/400 V voltage.
- The electric motor is installed outside the air flow on an additional panel inside the fan.
- The motor ingress protection rating according to IEC 60034-5 is IP55.

Mounting

- The fan is installed with a square or round air duct.
- The connection to the air ducts is carried out by means of a flexible joint or an adapter joint of the appropriate cross-section.
- The fan is powered through the external terminal box.
- The fan can be installed in any position according to the direction of air flow, provided that access for maintenance is ensured.

Design

- The fan casing features heat and sound insulating two-layer panels, made of galvanized steel to protect it from environmental exposure.
- The panels are insulated with 20 mm thick non-flammable mineral wool.
- The impeller with backward-curved blades is powder coated.
- The connecting spigots, which also serve as anti-vibration dampers, can be of square or round cross-section.
- The round connecting spigots are equipped with rubber seals.
- The connecting spigots are not included in the delivery set and must be ordered separately.
- The direction of air flow and air mixtures is controlled by rearranging the panels on the fan frame.

Example of repositioning the panels

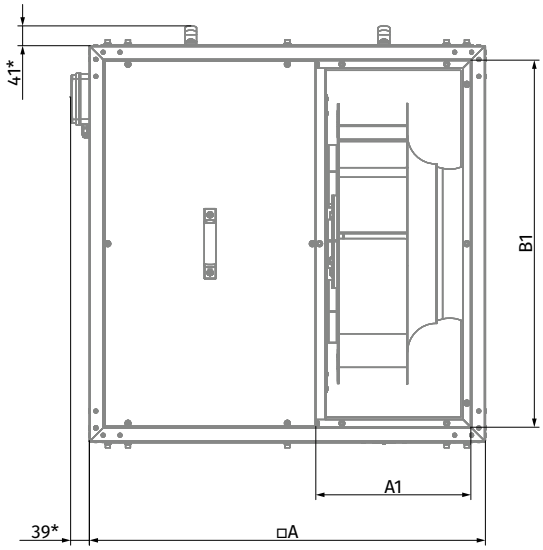


Designation key

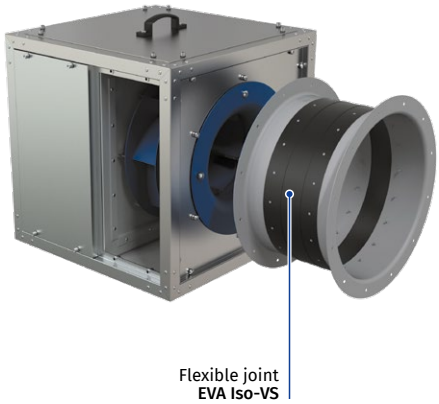
Series	Diameter [cm]		Number of poles	Phases		Motor power [kW]		Climatic category	Case coating
Iso-VS: sound-insulated smoke removal fan (400°C)	**28; 31; 35; 40; 45; 50; 56; 63; 71; 80**	–	**2; 4; 6; 2/4; 4/6; 4/8**	**E:** single-phase **D:** three-phase	/	**x:** single-speed **x/x:** two-speed	–	**U1:** moderate climate **HL1:** cold climate **T1:** tropical climate **M1:** maritime moderately cold climate	**_:** galvanized steel (default) **RAL 7004:** the RAL is specified if applicable

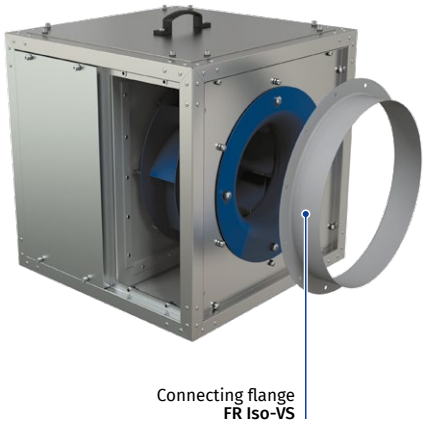
Dimensions [mm]

Model	A	A1	B1	Weight [kg]
Iso-VS 28-2D	450	190	390	39
Iso-VS 28-2E	450	190	390	39
Iso-VS 31-2D	500	200	440	50.6
Iso-VS 31-2E	500	200	440	50.6
Iso-VS 31-4D	500	200	440	46.5
Iso-VS 31-4E	500	200	440	46.5
Iso-VS 35-4D	600	225	540	61.6
Iso-VS 35-4E	600	225	540	61.6
Iso-VS 40-4D	670	252	610	72
Iso-VS 40-4E	670	252	610	65.7
Iso-VS 45-4D	700	282	640	76.7
Iso-VS 45-4E	700	282	640	76.7
Iso-VS 50-4D	820	321	760	111
Iso-VS 56-4D	900	365	840	144
Iso-VS 63-4D	1000	409	940	166
Iso-VS 71-4D	1075	456	1015	262
Iso-VS 71-6D	1075	456	1015	237
Iso-VS 80-6D	1175	506	1115	311



Installation example with accessories

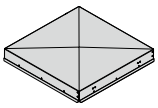

Flexible joint
EVA Iso-VS


Connecting flange
FR Iso-VS


Protective cover
RSD Iso-VS

Mounting bracket
MH Iso-VS

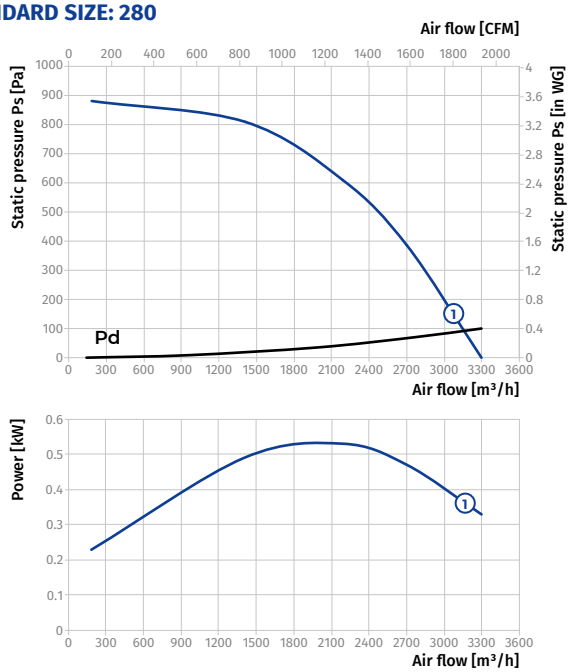
Accessories

Backdraft damper	Flexible joint	Connecting flange	Mounting bracket	Protective cover	Frequency converter	Safety switches
						
VRV-AF...400/2	EVA Iso-VS	FR Iso-VS	MH Iso-VS	RSD Iso-VS	Basic Drive FC-101	AS

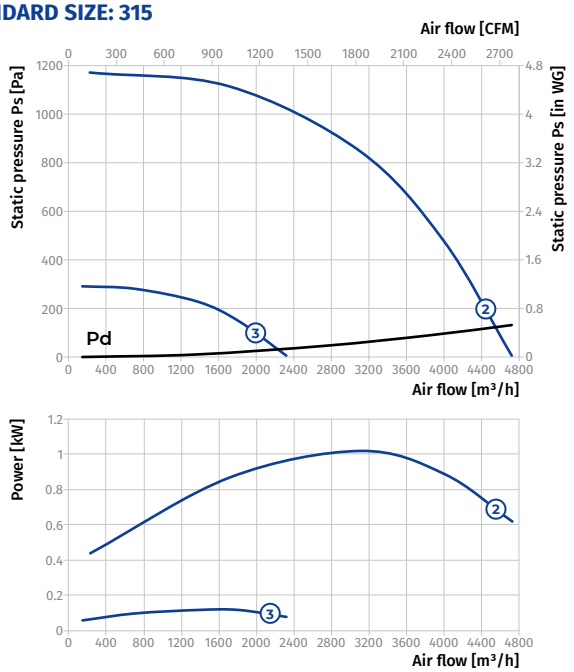
Technical data

Standard size	Number of poles	Voltage [V/50 Hz]	Fan model	Rated power [kW]	Rated RPM [min⁻¹]	High speed curve number	Low speed curve number
280	2	3~400	Iso-VS 28-2D/0.55	0.55	2880	①	
280	2	1~230	Iso-VS 28-2E/0.55	0.55	2880	①	
315	2	3~400	Iso-VS 31-2D/1.1	1.1	2880	②	
315	2	1~230	Iso-VS 31-2E/1.1	1.1	2880	②	
315	4	3~400	Iso-VS 31-4D/0.25	0.25	1440	③	
315	4	1~230	Iso-VS 31-4E/0.25	0.25	1440	③	
315	2/4	3~400	Iso-VS 31-2/4D/1.1/0.25	1.1/0.25	2880/1440	②	③
355	4	3~400	Iso-VS 35-4D/0.37	0.37	1440	④	
355	4	1~230	Iso-VS 35-4E/0.37	0.37	1440	④	
355	4/6	3~400	Iso-VS 35-4/6D/0.37/0.1	0.37/0.1	1420/905	④	⑤
400	4	3~400	Iso-VS 40-4D/0.55	0.55	1440	⑥	
400	4	1~230	Iso-VS 40-4E/0.55	0.55	1440	⑥	
400	4/6	3~400	Iso-VS 40-4/6D/0.55/0.2	0.55/0.2	1420/905	⑥	⑦

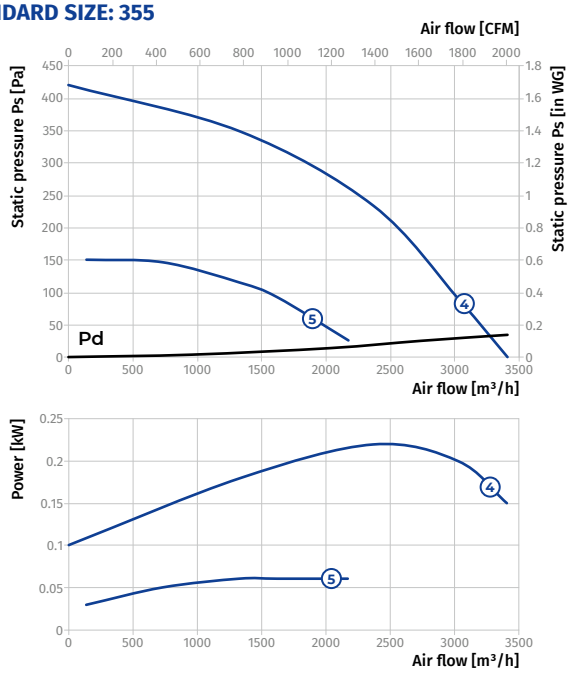
STANDARD SIZE: 280



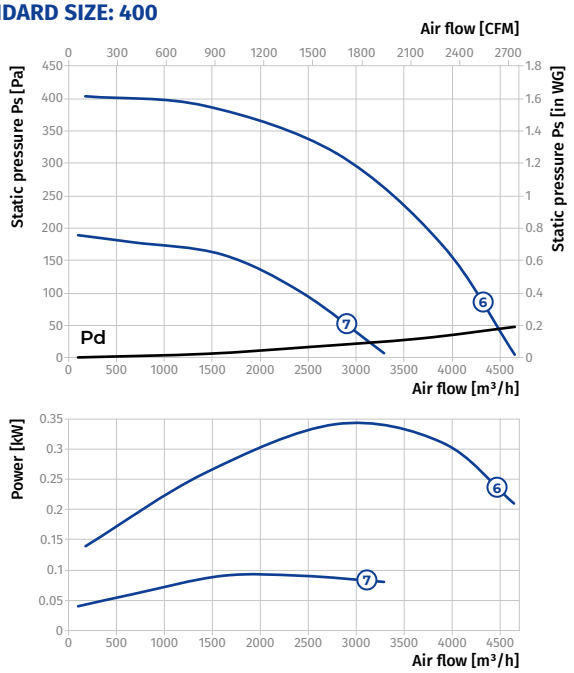
STANDARD SIZE: 315



STANDARD SIZE: 355

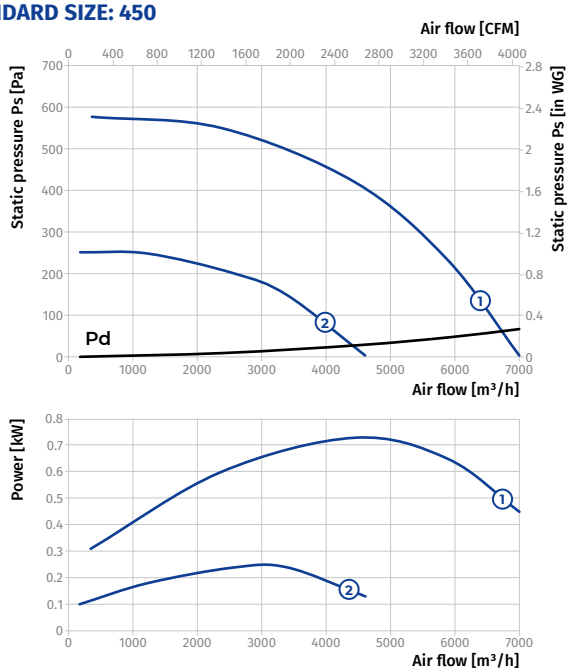


STANDARD SIZE: 400

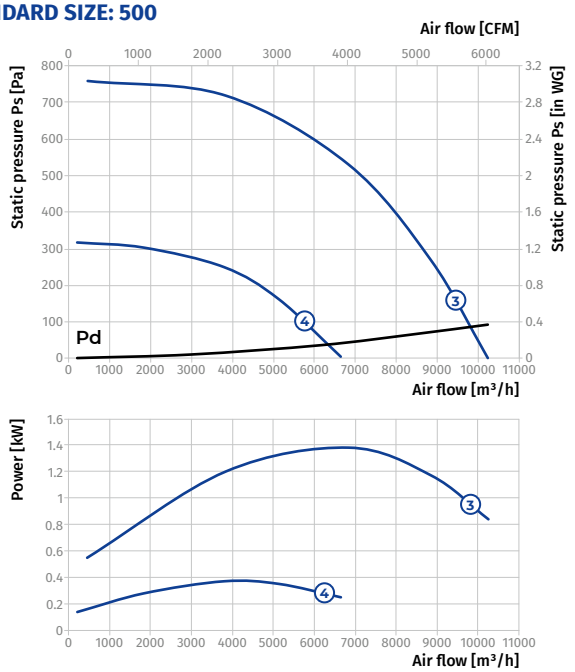


Standard size	Number of poles	Voltage [V/50 Hz]	Fan model	Rated power [kW]	Rated RPM [min^{-1}]	High speed curve number	Low speed curve number
450	4	3~400	Iso-VS 45-4D/0.75	0.75	1440	①	
450	4	1~230	Iso-VS 45-4E/0.75	0.75	1440	①	
450	4/6	3~400	Iso-VS 45-4/6D/0.75/0.25	0.75/0.25	1435/905	①	②
500	4	3~400	Iso-VS 50-4D/1.5	1.5	1440	③	
500	4/6	3~400	Iso-VS 50-4/6D/1.5/0.37	1.5/0.37	1430/920	③	④
560	4	3~400	Iso-VS 56-4D/3	3	1440	⑤	
560	4/6	3~400	Iso-VS 56-4/6D/3.0/1.0	3.0/1.0	1435/950	⑤	⑥
560	4/8	3~400	Iso-VS 56-4/8D/2.8/0.7	2.8/0.7	1435/710	⑤	⑦
630	4	3~400	Iso-VS 63-4D/4	4	1440	⑧	
630	4/6	3~400	Iso-VS 63-4/6D/4.5/1.5	4.5/1.5	1445/950	⑧	⑨
630	4/8	3~400	Iso-VS 63-4/8D/3.8/1.0	3.8/1.0	1445/720	⑧	⑩

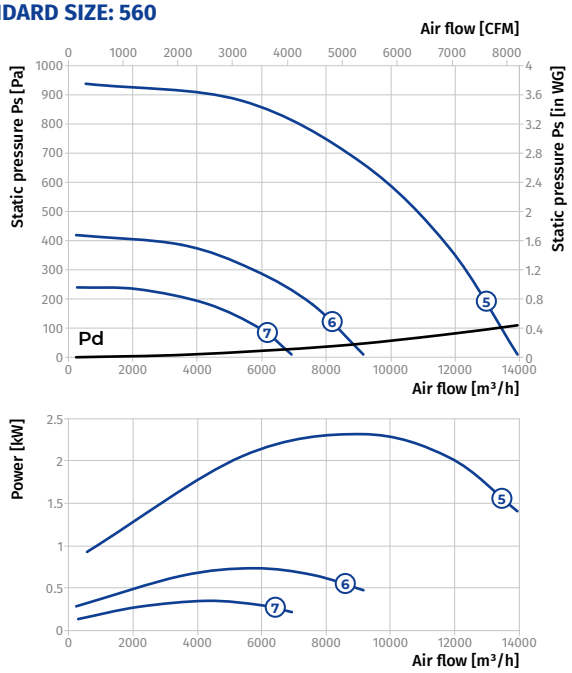
STANDARD SIZE: 450



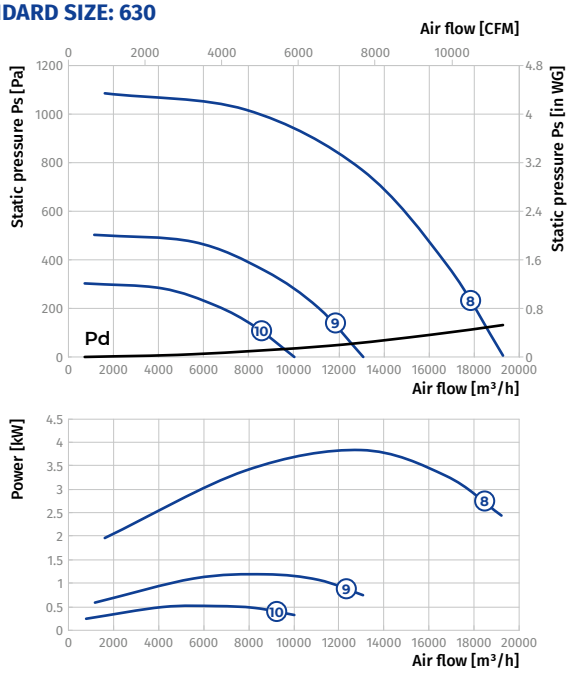
STANDARD SIZE: 500



STANDARD SIZE: 560

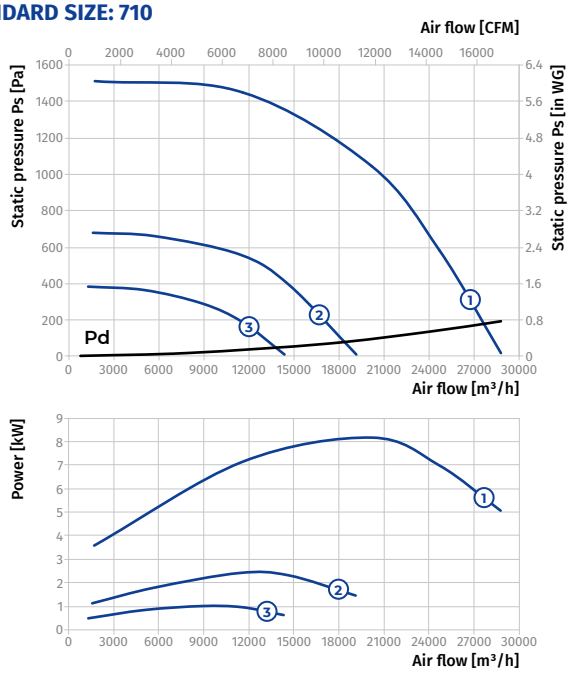


STANDARD SIZE: 630

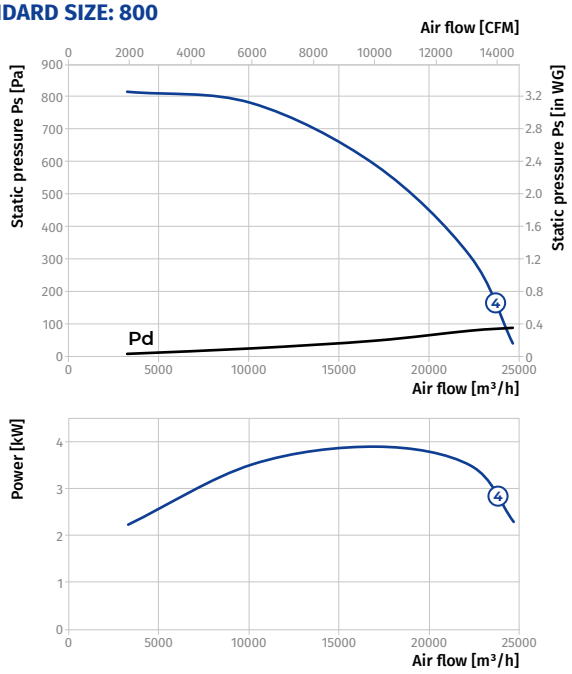


Standard size	Number of poles	Voltage [V/50 Hz]	Fan model	Rated power [kW]	Rated RPM [min⁻¹]	High speed curve number	Low speed curve number
710	4	3~400	Iso-VS 71-4D/7.5	7.5	1440	①	
710	6	3~400	Iso-VS 71-6D/2.2	2.2	960	②	
710	4/6	3~400	Iso-VS 71-4/6D/7.5/3.5	7.5/3.5	1455/960	①	②
710	4/8	3~400	Iso-VS 71-4/8D/7.2/1.8	7.2/1.8	1455/720	①	③
800	6	3~400	Iso-VS 80-6D/4	4	960	④	

STANDARD SIZE: 710



STANDARD SIZE: 800

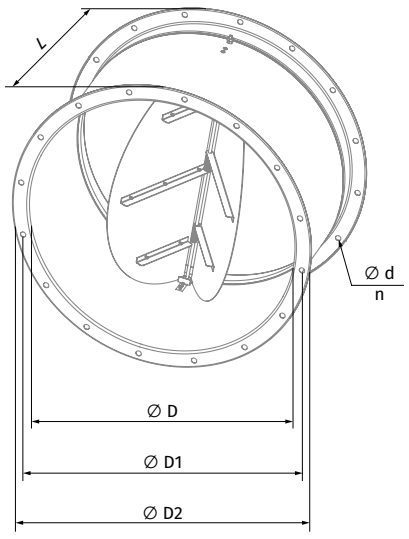


RADIAL CENTRIFUGAL FANS

Iso-VS accessories

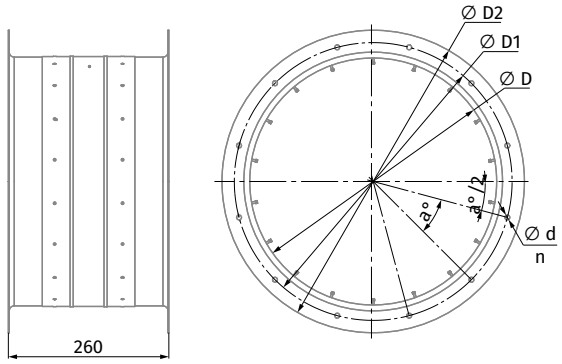
BACKDRAFT DAMPER VRV-AF...400/2

Model	Dimensions [mm]						Weight [kg]
	Ø D	Ø D1	Ø D2	Ø d	n	L	
VRV-AF-280-400/2	280	340	370	8	6	190	3.2
VRV-AF-315-400/2	315	365	405	8	6	190	3.6
VRV-AF-355-400/2	355	405	445	8	6	225	4.5
VRV-AF-400-400/2	400	450	490	8	12	250	5.4
VRV-AF-450-400/2	450	500	540	8	12	250	6.2
VRV-AF-500-400/2	500	560	590	12	12	250	7.1
VRV-AF-560-400/2	560	620	650	12	12	320	9.6
VRV-AF-630-400/2	630	690	720	12	12	370	14.2
VRV-AF-710-400/2	710	770	810	12	16	390	21.4
VRV-AF-800-400/2	800	860	900	12	16	390	25.4



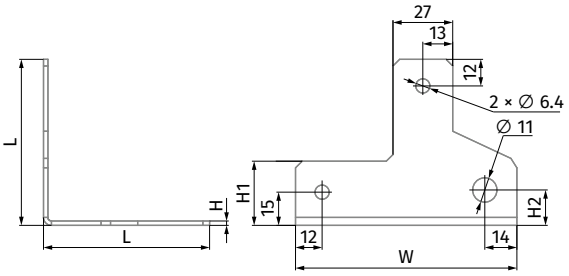
FLEXIBLE JOINT EVA ISO-VS

Model	Dimensions [mm]					Weight [kg]
	Ø D	Ø D1	Ø D2	Ø d	n	
EVA Iso-VS 280	280	340	370	8	6	3.39
EVA Iso-VS 315	315	365	405	8	6	3.79
EVA Iso-VS 355	355	405	445	8	6	4.25
EVA Iso-VS 400	400	450	490	8	12	4.76
EVA Iso-VS 450	450	500	540	8	12	5.34
EVA Iso-VS 500	500	560	600	12	12	6.12
EVA Iso-VS 560	560	620	660	12	12	6.83
EVA Iso-VS 630	630	690	730	12	12	7.66
EVA Iso-VS 710	710	770	810	12	16	8.6
EVA Iso-VS 800	800	860	900	12	16	9.67



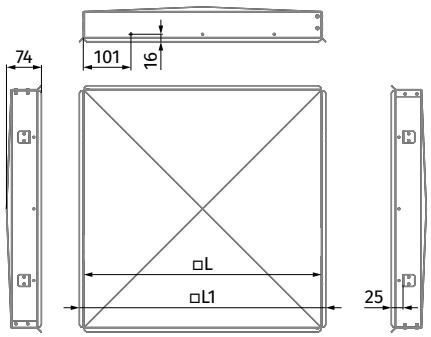
MOUNTING BRACKET MH ISO-VS

Model	Dimensions [mm]				Weight [kg]
	H	H1	L	W	
MH Iso-VS 280-450	2	29	90	125	0.12
MH Iso-VS 500-800	3	29	90	125	0.21



PROTECTIVE COVER RSD ISO-VS

Model	Dimensions [mm]		Weight [kg]
	L	L1	
RSD Iso-VS 280	456	472	2
RSD Iso-VS 315	503	522	2.42
RSD Iso-VS 355	603	622	3.25
RSD Iso-VS 400	673	692	3.91
RSD Iso-VS 450	703	722	4.21
RSD Iso-VS 500	823	842	6.57
RSD Iso-VS 560	903	922	7.71
RSD Iso-VS 630	1003	1022	9.27
RSD Iso-VS 710	1078	1097	10.53
RSD Iso-VS 800	1178	1197	12.3



CONNECTION FLANGE FR ISO-VS

Model	Dimensions [mm]					Weight [kg]
	Ø D	Ø D1	Ø D2	Ø d	n	
FR Iso-VS 280	280	340	370	8	6	1.52
FR Iso-VS 315	315	365	405	8	6	1.7
FR Iso-VS 355	355	405	445	8	6	1.9
FR Iso-VS 400	400	450	490	8	12	2.13
FR Iso-VS 450	450	500	540	8	12	2.39
FR Iso-VS 500	500	560	600	12	12	2.75
FR Iso-VS 560	560	620	660	12	12	3.06
FR Iso-VS 630	630	690	730	12	12	3.44
FR Iso-VS 710	710	770	810	12	16	3.86
FR Iso-VS 800	800	860	900	12	16	4.34

