

DIRECT DRIVE MOTOR

TB

Extremely robust, open blade and single inlet centrifugal fans with sheet steel casing and impeller
Designed for air that is very dusty and with materials suspended in the air



*The images are provided only for illustrative purposes, the product may vary depending on its size, specifications and position.



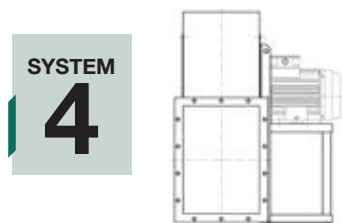
- Fan:**
- Sheet steel casing.
 - Impeller with reaction blades in extremely robust sheet steel, specially designed for air that is very dusty and with materials suspended in the air.
 - Motor coupled directly.

- Motor:**
- IE3 efficiency motors for powers equal to or higher than 0.75 kW except single-phase, 2-speed and 8-poles.
 - Class F motors with ball bearings and IP55 protection.
 - Three-phase 230/400 V-50 Hz (up to 4 kW) and 400/690 V-50 Hz (powers higher than 4 kW).
 - Maximum temperature of air to be carried: -25°C +90°C.

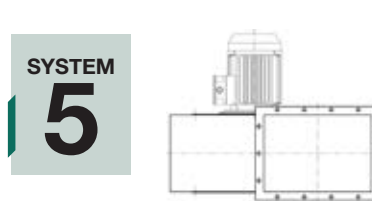
- Finish:**
- Anti-corrosive finish of polyester resin polymerised at 190°C, previously degreased with phosphate-free nanotechnological treatment.

- On request:**
- Special windings for different voltages.
 - Fan prepared for air transmission of up to +150°C.
 - Special executions for temperatures of +300°C.
 - Stainless steel fan.
 - Category 2 ATEX certification.
 - System 8 elastic coupling.

Direct drive motor construction method



Direct drive, impeller mounted on the motor shaft, mounted on the pedestal.



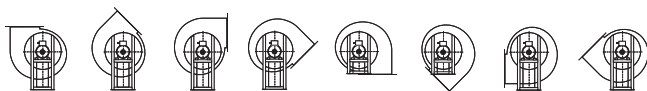
Direct drive, impeller mounted on the motor shaft, flange motor mounted on the fan casing.



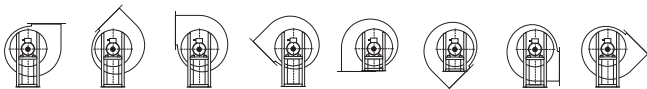
Elastic coupling drive, impeller mounted on the support shaft, mounted on the motor via an elastic coupling. Everything mounted together on a fan pedestal.

Orientations

RD 0 RD45 RD90 RD135 RD180 RD225 RD270 RD315



LG 0 LG45 LG90 LG135 LG180 LG225 LG270 LG315





BELT-DRIVEN MOTOR

TB/R

Centrifugal, open blade, belt driven fans fitted with electric motors and a standardised set of pulleys, belts and protectors in accordance with standard ISO 13857
Designed for air that is very dusty and with materials suspended in the air



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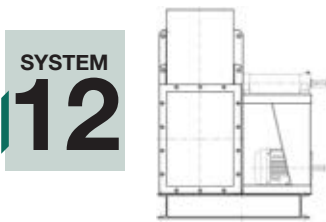
- Fan:**
- Sheet steel casing.
 - Impeller with reaction blades in extremely robust sheet steel, specially designed for air that is very dusty and with materials suspended in the air.
 - Motor assembled on the general bench.

- Motor:**
- IE3 efficiency motors.
 - Class F motors with ball bearings and IP55 protection.
 - Three-phase 230/400 V-50 Hz (up to 4 kW) and 400/690 V-50 Hz (powers higher than 4 kW).
 - Maximum temperature of air to be carried: -25°C +90°C.

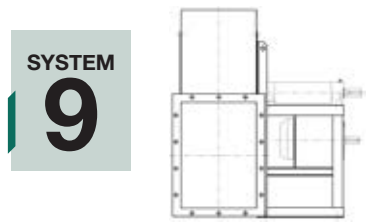
- Finish:**
- Anti-corrosive finish of polyester resin polymerised at 190°C, previously degreased with phosphate-free nanotechnological treatment.

- On request:**
- Special windings for different voltages.
 - Fan prepared for air transmission of up to +300°C.
 - Stainless steel fan.
 - Category 2 ATEX certification.
 - System 8 elastic coupling.

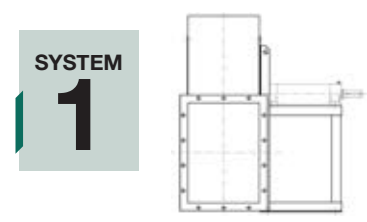
Belt-driven motor construction method



Transmission drive, identical to SYSTEM 1, with the motor and fan mounted on the common bench. Motor positions "W" or "Z" and exceptionally "X" or "Y".

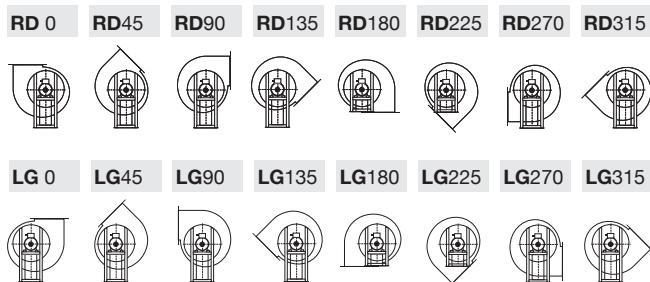


Transmission drive, identical to SYSTEM 1, with the motor mounted on the side of the pedestal, in position "W" or "Z".



Transmission drive, impeller mounted on the support shaft. Support mounted on the pedestal.

Orientations



QUICK SELECT SYSTEM 4

Impulsion characteristics

Model	Frame	kW abs.	kW inst.	RPM	dB	V m ³ /s																			
						0.16	0.18	0.2	0.23	0.26	0.3	0.33	0.36	0.4	0.46	0.52	0.58	0.66	0.75	0.83					
						Pt kgf/m ² =mmH ₂ O																			
TB 250	71 B/2	0.53	0.55	2810	75	99	97	94	92	90	89	78													
TB 280	80 B/2	0.9	1.1	2820	80							135	134	132	130	125	122	120	119						
TB 310	90 S/2	1.3	1.5	2840	82											175	174	172	165	155	145	140			
TB 350	112 M/2	3.7	4	2860	90															230	229	228	226	224	
TB 400	132 SB/2	7.1	7.5	2900	92																284				

Model	Frame	kW abs.	kW inst.	RPM	dB	V m ³ /s										
						0.93	1	1.2	1.35	1.5	1.8	1.9	2			
						Pt kgf/m ² =mmH ₂ O										
TB 350	112 M/2	3.7	4	2860	90	220	218									
TB 400	132 SB/2	7.1	7.5	2900	92	284	284	280	276	274	270					
TB 450	160 MA/2	10.5	11	2910	95				365	365	365	360	355			
TB 470	160 MB/2	14.2	15	2930	97					415	410	405	400	390		

Flow margin ± 5%
Noise level margin +3...5 dB

Inlet characteristics

Model	Frame	kW abs.	kW inst.	RPM	dB	V m ³ /s																			
						0.16	0.18	0.2	0.23	0.26	0.3	0.33	0.36	0.4	0.46	0.52	0.58	0.66	0.75	0.83					
						Pt kgf/m ² =mmH ₂ O																			
TB 250	71 B/2	0.53	0.55	2810	78	96	94	91	89	87	86	76													
TB 280	80 B/2	0.9	1.1	2820	83							131	130	128	126	121	118	116	115						
TB 310	90 S/2	1.3	1.5	2840	85											170	169	167	160	150	141	136			
TB 350	112 M/2	3.7	4	2860	93															223	222	221	219	217	
TB 400	132 SB/2	7.1	7.5	2900	95																275				

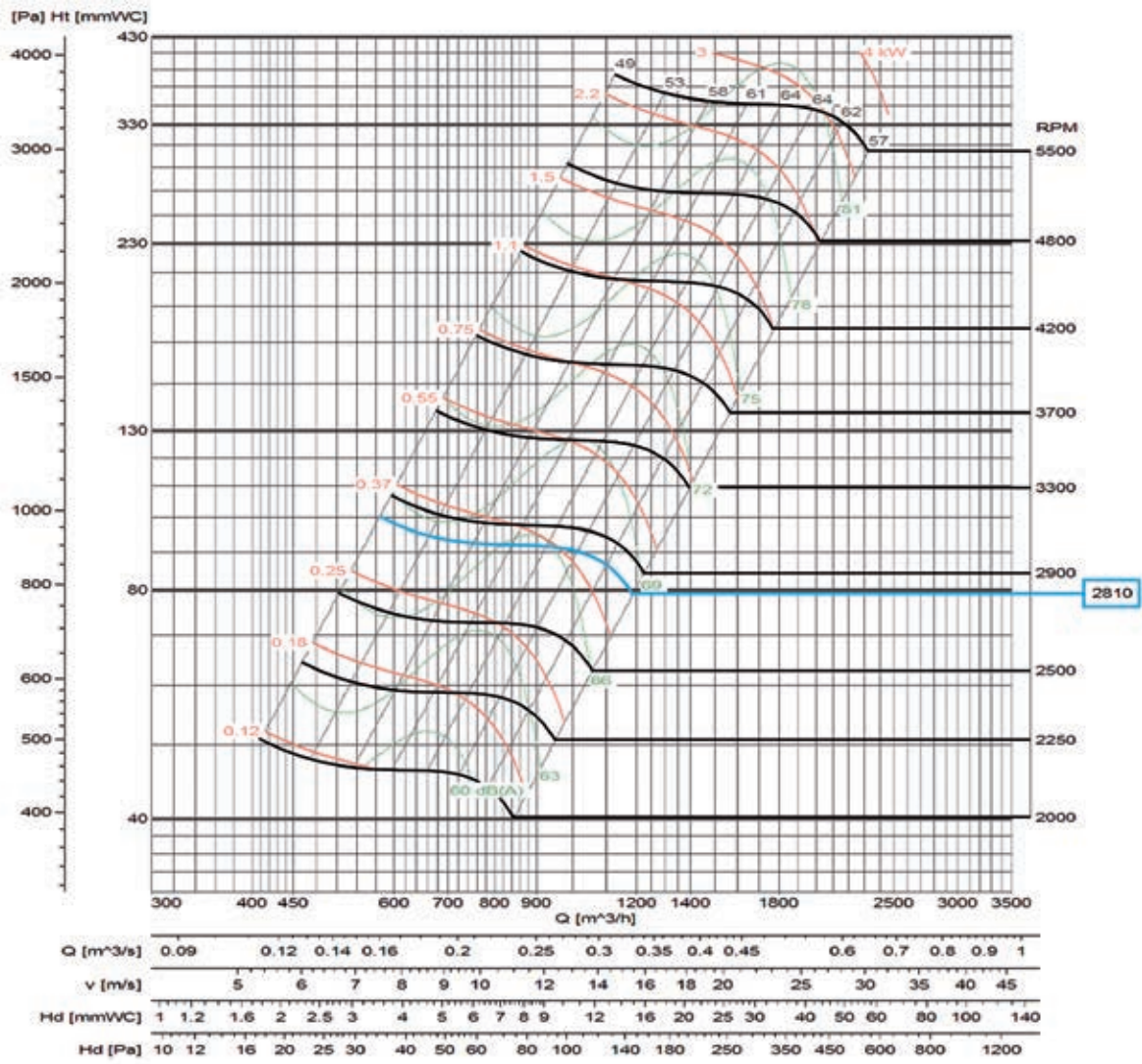
Model	Frame	kW abs.	kW inst.	RPM	dB	V m ³ /s										
						0.93	1	1.2	1.35	1.5	1.8	1.9	2			
						Pt kgf/m ² =mmH ₂ O										
TB 350	112 M/2	3.7	4	2860	93	213	211									
TB 400	132 SB/2	7.1	7.5	2900	95	275	275	272	268	266	262					
TB 450	160 MA/2	10.5	11	2910	98				354	354	354	349	344			
TB 470	160 MB/2	14.2	15	2930	100					403	398	393	388	378		

Flow margin ± 5%
Noise level margin +3...5 dB



Characteristic curves

TB 250



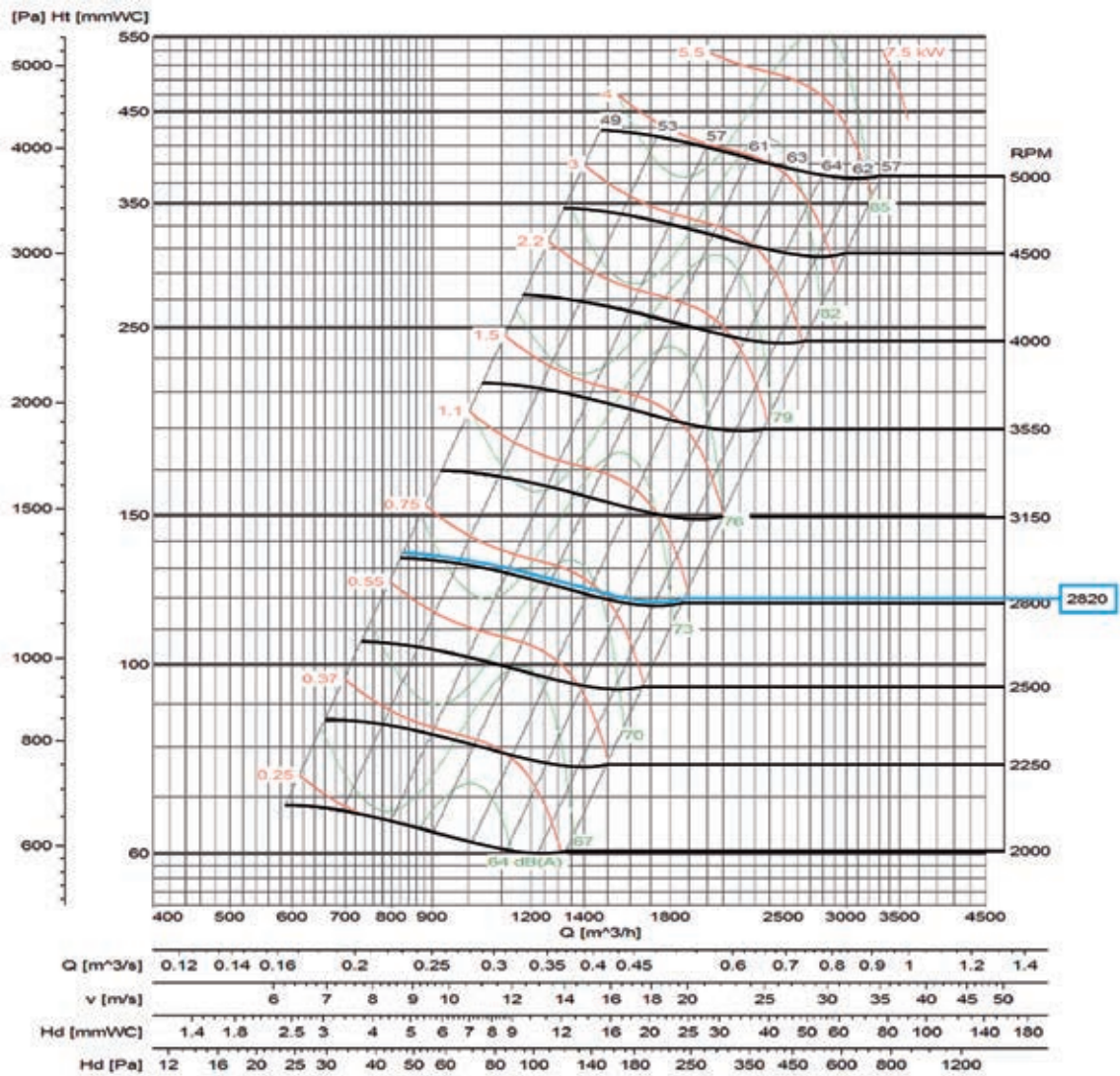
Flow margin ±5%
 Noise level margin +3...5 dB
 Margin of kW absorbed ±3%
 Impulsion characteristics

RPM

Characteristics for:
 system 4 and 5 in direct
 drive motor with 2/4/6/8
 poles depending on the
 model.

Characteristic curves

TB 280



Flow margin ±5%
 Noise level margin +3...5 dB
 Margin of kW absorbed ±3%
 Impulsion characteristics

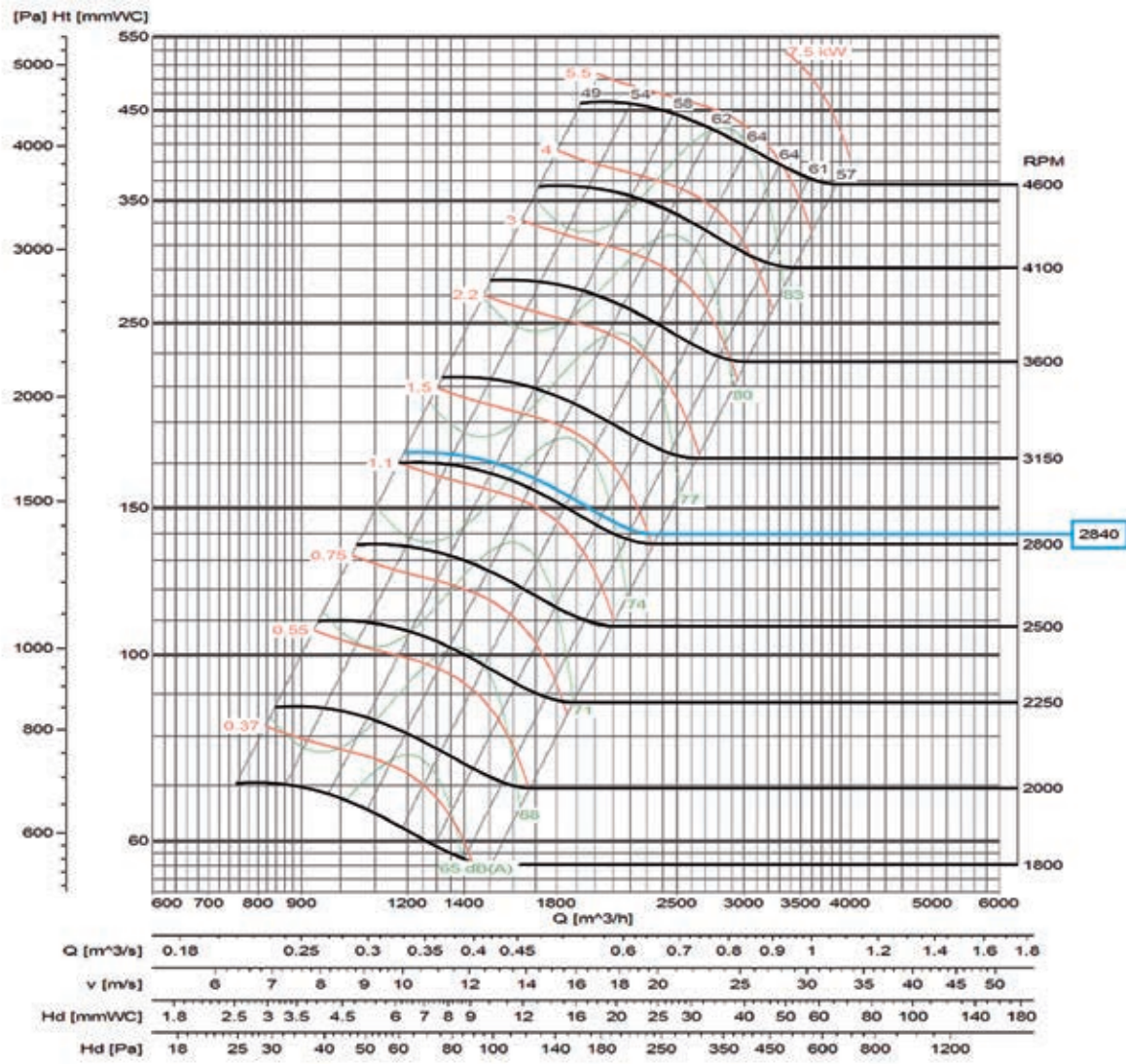
RPM

Characteristics for:
 system 4 and 5 in direct
 drive motor with 2/4/6/8
 poles depending on the
 model.



Characteristic curves

TB 310

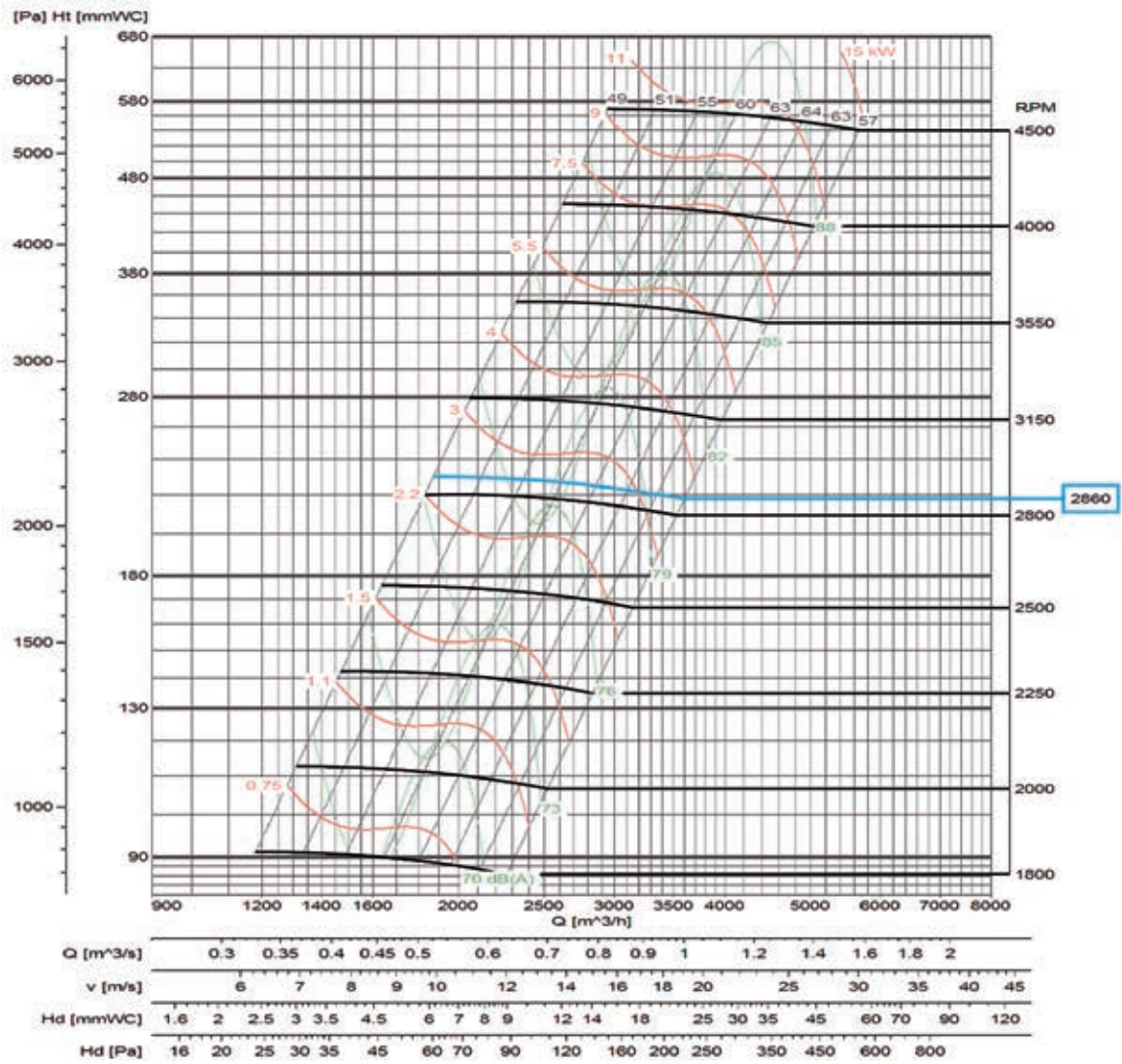


Flow margin ±5%
 Noise level margin +3...5 dB
 Margin of kW absorbed ±3%
 Impulsion characteristics

RPM Characteristics for:
 system 4 and 5 in direct
 drive motor with 2/4/6/8
 poles depending on the
 model.

Characteristic curves

TB 350



Flow margin $\pm 5\%$
 Noise level margin $+3...5$ dB
 Margin of kW absorbed $\pm 3\%$
 Impulsion characteristics

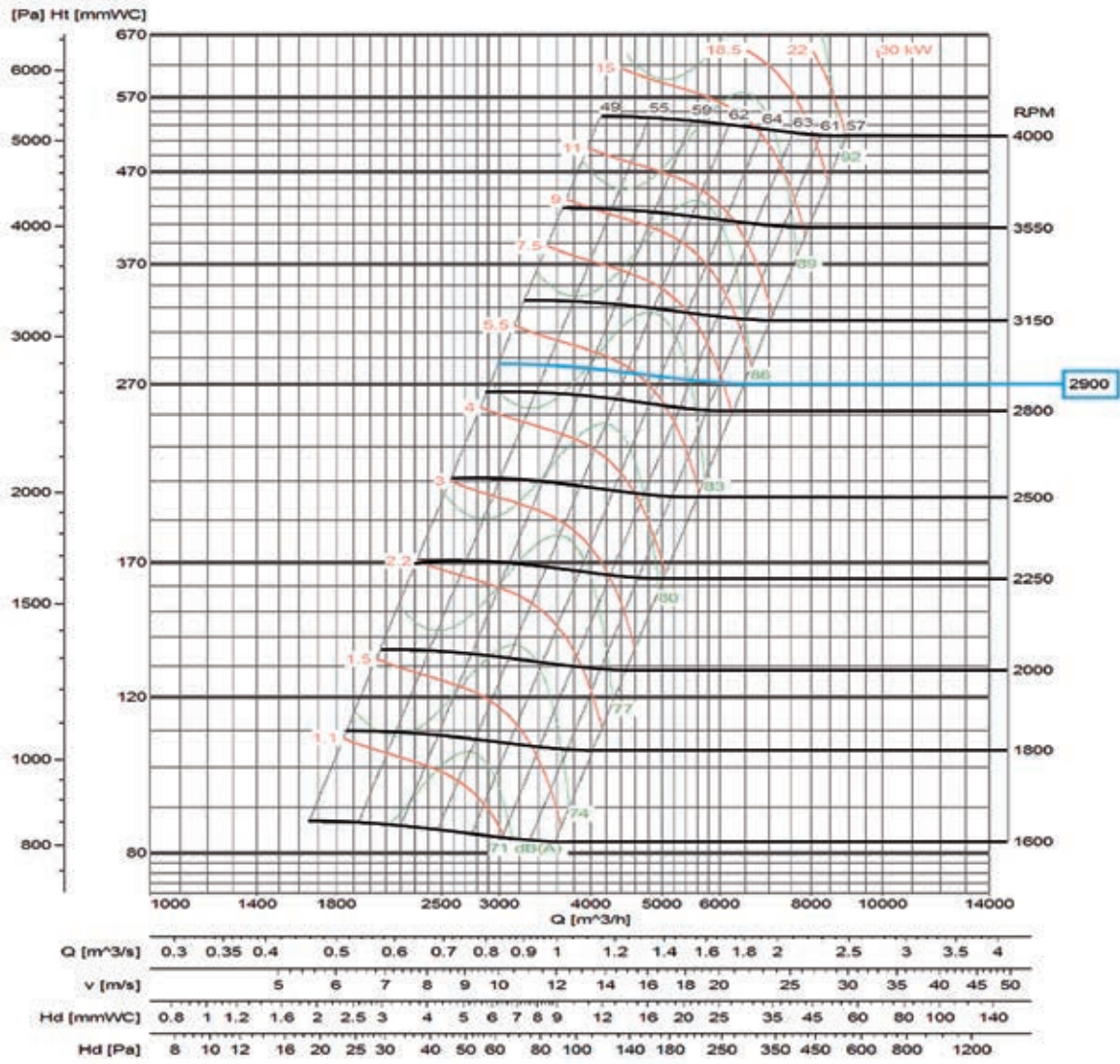
RPM

Characteristics for:
 system 4 and 5 in direct
 drive motor with 2/4/6/8
 poles depending on the
 model.



Characteristic curves

TB 400

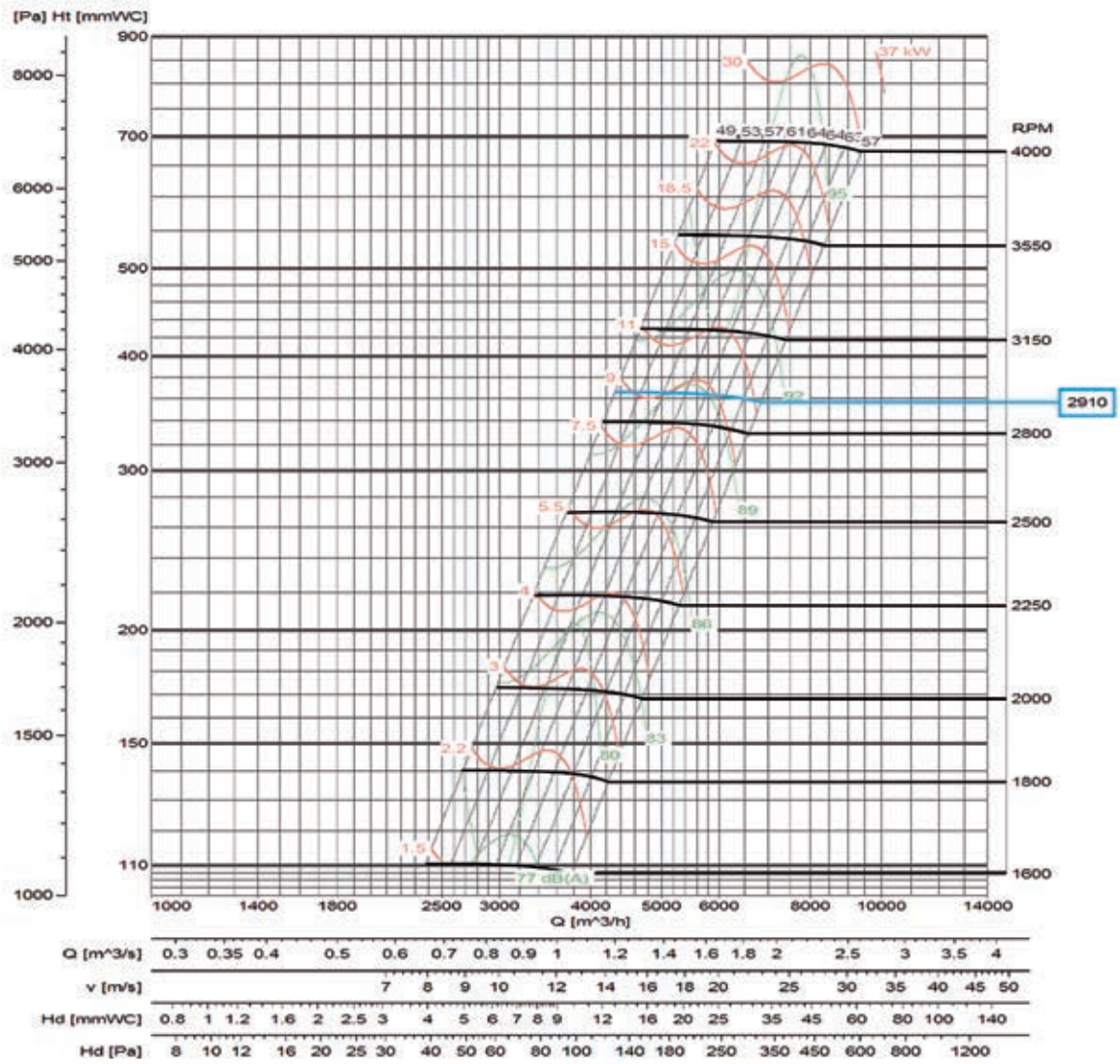


Flow margin ±5%
 Noise level margin +3...5 dB
 Margin of kW absorbed ±3%
 Impulsion characteristics

RPM Characteristics for:
 system 4 and 5 in direct
 drive motor with 2/4/6/8
 poles depending on the
 model.

Characteristic curves

TB 450



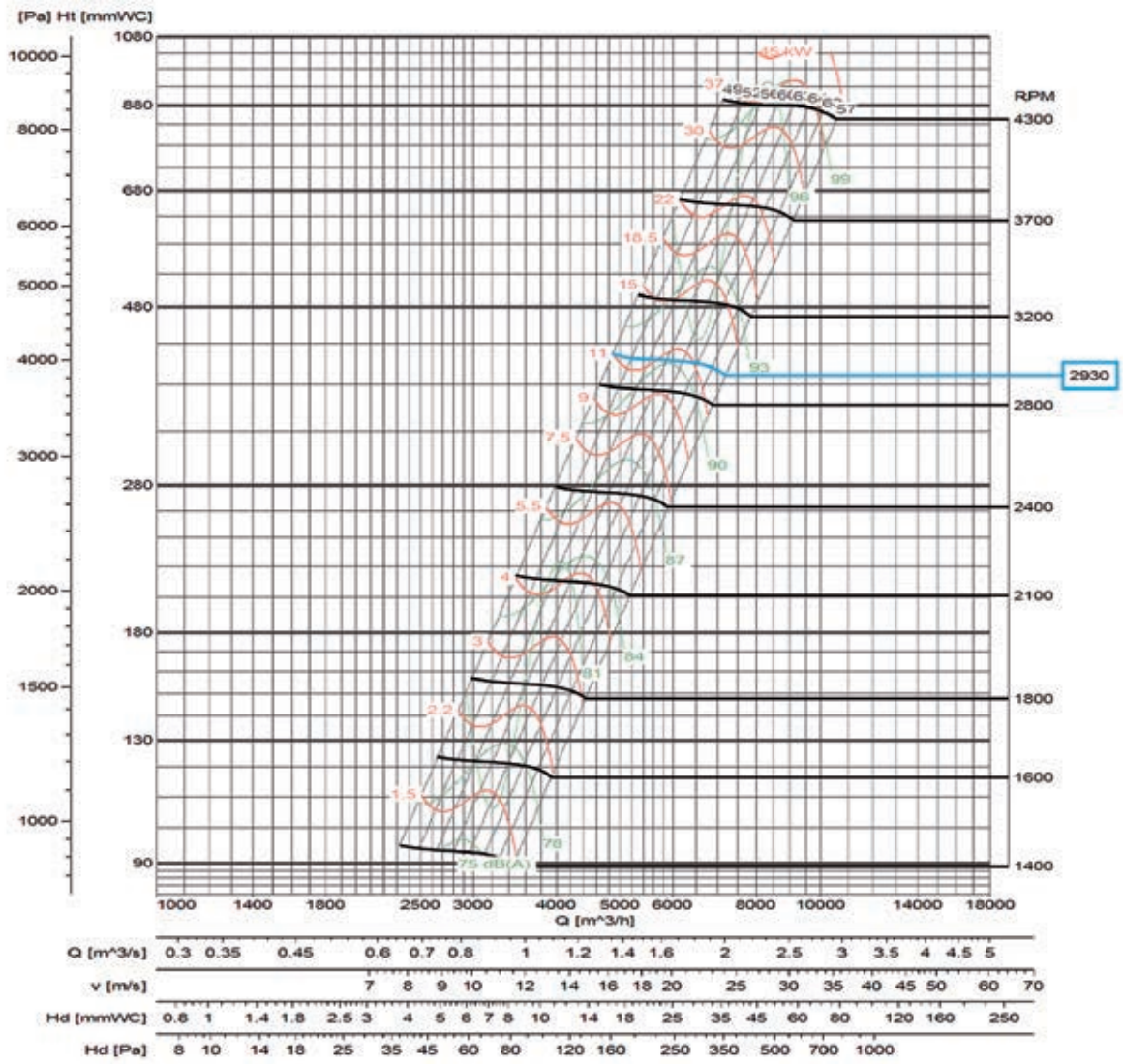
Flow margin $\pm 5\%$
 Noise level margin $+3...5$ dB
 Margin of kW absorbed $\pm 3\%$
 Impulsion characteristics

RPM Characteristics for:
 system 4 and 5 in direct
 drive motor with 2/4/6/8
 poles depending on the
 model.



Characteristic curves

TB 470

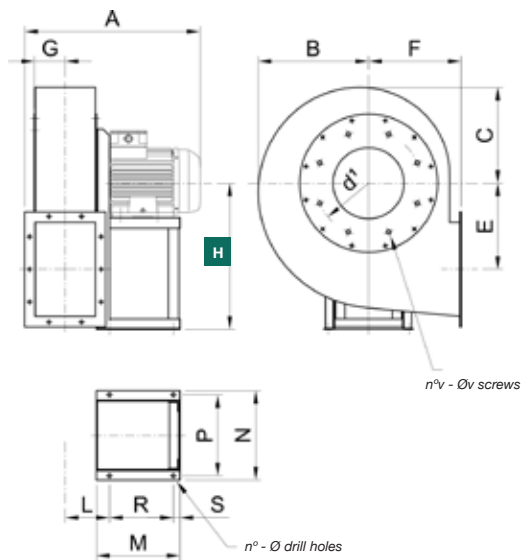


Flow margin ±5%
 Noise level margin +3...5 dB
 Margin of kW absorbed ±3%
 Impulsion characteristics

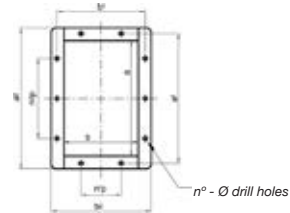
RPM Characteristics for:
 system 4 and 5 in direct
 drive motor with 2/4/6/8
 poles depending on the
 model.

Dimensions mm

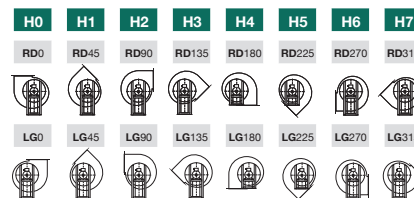
TB 250...470



OUTLET NOZZLE



ORIENTATIONS



H *The measurement of height H (distance between the ground and the axis) varies depending on the orientations

MOD.	FRAME	A*	B	C	E	F	G	HO-1-2-3	H4-5	H6-7	L	M*	N	P	R*	S
TB 250	71 B/2	375	215	190	160	180	67	315	180	315	111	190	244	220	115	25
TB 280	80 B/2	415	255	225	200	220	74	375	220	375	118	190	244	220	115	25
TB 310	90 S/2	465	285	245	225	240	86	400	240	400	125	215	269	245	140	25
TB 350	112 M/2	540	330	295	250	290	104	500	290	500	146	260	312	280	185	25
TB 400	132 SB/2	675	425	370	330	355	118	560	355	560	169	320	342	310	245	25
TB 450	160 MA/2	745	425	370	330	355	118	560	355	560	169	425	490	450	345	30
TB 470	160 MB/2	745	425	370	330	355	118	560	355	560	169	425	490	450	345	30

OUTLET NOZZLE

MOD.	n°	Φ	d ¹	n°v	Φv	a	b	a ¹	b ¹	a ²	b ²	n°p	n°p	n°f	Φf	kg	WD ²
TB 250	4	10	200	8	M6	184	116	219	151	254	186	-	1-112	6	12	25	0.05
TB 280	4	10	241	8	M6	204	129	241	166	274	199	-	1-112	6	12	35	0.08
TB 310	4	10	265	8	M6	229	144	265	181	299	214	1-112	1-112	8	12	45	0.2
TB 350	4	12	332	8	M8	284	185	332	232	364	265	1-125	2-125	10	12	70	0.6
TB 400	4	12	405	8	M8	360	231	405	274	440	311	1-125	2-125	10	12	110	1
TB 450	4	14	405	8	M8	360	231	405	274	440	311	1-125	2-125	10	12	145	1.3
TB 470	4	14	405	8	M8	360	231	405	274	440	311	1-125	2-125	10	12	150	1.6

(*) For "HIGH TEMP." constructions, elevations "A-M-R" + 50 mm.
(kg) = Weight of fan with motor.
WD² = Moment of inertia of the impeller, expressed in kg x m²

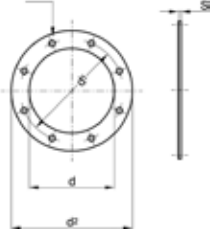
To obtain the dimensions of systems 1, 9 and 12 consult with our technical team.



Accessories

Inlet counter-flange

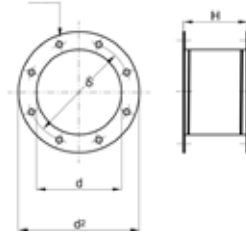
n° - Ø drill holes



MOD.	d	d¹	d²	n°	Φ	s	kg
TB 250	165	200	235	8	9	4	0.65
TB 280	205	241	275	8	9	4	0.75
TB 310	229	265	299	8	9	4	0.8
TB 350	286	332	366	8	11	5	1.6
TB 400	361	405	441	8	11	5	2
TB 450	361	405	441	8	11	5	2
TB 470	361	405	441	8	11	5	2

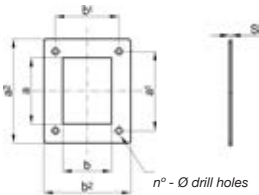
Inlet anti-vibration seal

n° - Ø drill holes



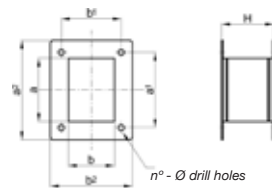
MOD.	d	d¹	d²	n°	Φ	H	kg
TB 250	165	200	235	8	9	200	1.5
TB 280	205	241	275	8	9	200	1.7
TB 310	229	265	299	8	9	200	1.8
TB 350	286	332	366	8	11	200	3.5
TB 400	361	405	441	8	11	200	4.3
TB 450	361	405	441	8	11	200	4.3
TB 470	361	405	441	8	11	200	4.3

Impulsion counter-flange



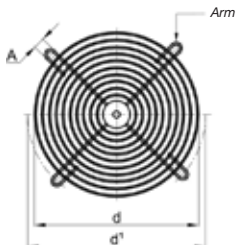
MOD.	a	b	a¹	b¹	a²	b²	n¹p	n²p	n°	Φ	s	kg
TB 250	184	116	219	151	254	186	-	1-112	6	12	4	0.8
TB 280	204	129	241	166	274	199	-	1-112	6	12	4	0.9
TB 310	229	144	265	181	299	214	1-112	1-112	8	12	4	1
TB 350	284	185	332	232	364	265	1-125	2-125	10	12	5	1.7
TB 400	360	231	405	274	440	311	1-125	2-125	10	12	5	2
TB 450	360	231	405	274	440	311	1-125	2-125	10	12	5	2
TB 470	360	231	405	274	440	311	1-125	2-125	10	12	5	2

Impulsion anti-vibration seal



MOD.	a	b	a¹	b¹	a²	b²	n¹p	n²p	n°	Φ	H	kg
TB 250	184	116	219	151	254	186	-	1-112	6	12	200	1.8
TB 280	204	129	241	166	274	199	-	1-112	6	12	200	2
TB 310	229	144	265	181	299	214	1-112	1-112	8	12	200	2.2
TB 350	284	185	332	232	364	265	1-125	2-125	10	12	200	3.7
TB 400	360	231	405	274	440	311	1-125	2-125	10	12	200	4.3
TB 450	360	231	405	274	440	311	1-125	2-125	10	12	200	4.3
TB 470	360	231	405	274	440	311	1-125	2-125	10	12	200	4.3

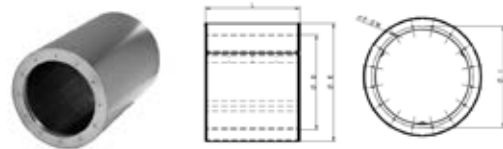
Inlet protection net



MOD.	d	d¹	A	n°	kg
TB 250	165	200	9	4	0.15
TB 280	205	241	9	4	0.2
TB 310	229	265	9	4	0.25
TB 350	286	332	11	4	0.35
TB 400	361	405	11	4	0.7
TB 450	361	405	11	4	0.7
TB 470	361	405	11	4	0.7

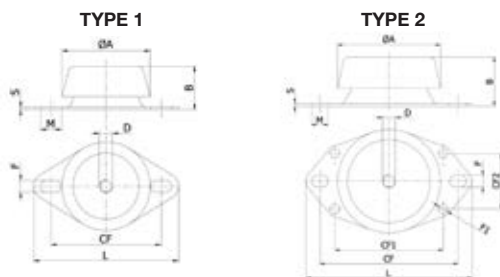
Circular silencers

Silencers are used to lower the noise level at air conditioning or ventilation installation manufactured using galvanised steel
 • Upon request: other constructions using different materials.



øD	øE	L	øI	F	øM	øD	øE	L	øI	F	øM
315	515	ØD,1.5ØD, 2ØD	355	8	M8	900	1100	ØD,1.5ØD, 2ØD	970	16	M10
355	555	ØD,1.5ØD, 2ØD	395	8	M8	1000	1200	ØD,1.5ØD, 2ØD	1070	16	M10
400	600	ØD,1.5ØD, 2ØD	450	8	M8	1120	1320	ØD,1.5ØD, 2ØD	1190	20	M10
450	650	ØD,1.5ØD, 2ØD	500	8	M8	1250	1450	ØD,1.5ØD, 2ØD	1320	20	M10
500	700	ØD,1.5ØD, 2ØD	560	12	M8	1400	1600	ØD,1.5ØD, 2ØD	1470	20	M10
560	760	ØD,1.5ØD, 2ØD	620	12	M8	1500	1700	ØD,1.5ØD, 2ØD	1570	20	M10
630	830	ØD,1.5ØD, 2ØD	690	12	M8	1600	1800	ØD,1.5ØD, 2ØD	1680	24	M14
710	910	ØD,1.5ØD, 2ØD	770	16	M8	1700	1900	ØD,1.5ØD, 2ØD	1780	24	M14
800	1000	ØD,1.5ØD, 2ØD	860	16	M8	1800	2000	ØD,1.5ØD, 2ØD	1880	24	M14

Shock-absorbers



MOD.	SHOCK-ABSORBERS MODEL	TYPE	øA	B	D	CF	CF1	CF2	F	øF1	L	M	S
TB 250	CF 623110	1	67	33...34	10	76.5	-	-	9	-	90.5	16	2
TB 280	CF 623110	1	67	33...34	10	76.5	-	-	9	-	90.5	16	2
TB 310	CF 623110	1	67	33...34	10	76.5	-	-	9	-	90.5	16	2
TB 350	CF 623110	1	67	33...34	10	76.5	-	-	9	-	90.5	16	2
TB 400	CF 623110	1	67	33...34	10	76.5	-	-	9	-	90.5	16	2
TB 450	CF 924512	2	92	44...45	12	120	98	50	10.5	8.5	130	15.5	2.5
TB 470	CF 924512	2	92	44...45	12	120	98	50	10.5	8.5	130	15.5	2.5