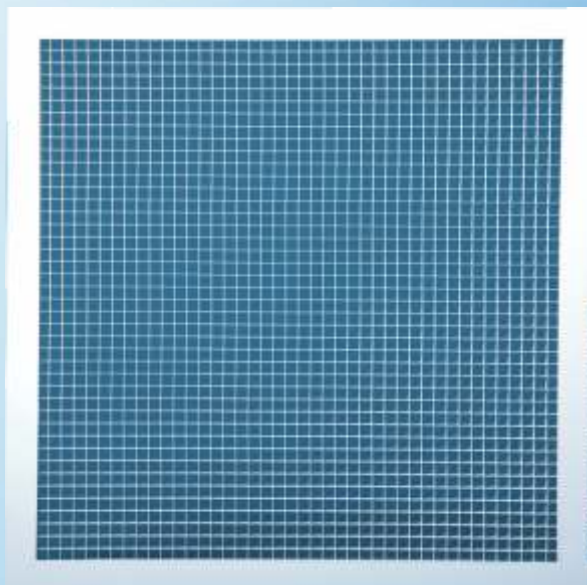




Egg-crate return air grilles **ERAG**



Egg-crate return air grilles

ERAG

Applications:

Egg-crate return air grilles, with or without filter, are the terminal elements of a manifold HVAC system, providing evacuation or recirculation of room air. They are successfully used also for smoke removal systems.

Description:

Egg-crate return air grilles are made of the same frame profiles as the exterior grilles, the difference consisting in the front side which is made of aluminum egg-crate, with 12.7 x 12.7 mm cells.

If specified in the order, grilles may be provided with detachable, framed filter. For fast removal and easy access for inspection and routine maintenance, they may be ordered with an additional counter-frame. This counter-frame shall remain installed in place, allowing removal of the actual grille alone. **On request, this additional counter-frame may be provided with magnetic support elements.** In both cases, rated sizes (specified in the order) shall be the frame sizes.

For improved adjustment of the air flowrate, the use of OBD dampers is recommended.

Material:

- Frame: special profile, made of extruded aluminum, in RITECH design;
- Central part: aluminum egg-crate, 12.7 x 12.7 mm.

Finish:

Electrostatically painted surface, dried in polymerization oven, providing increased lifetime of the paint layer and its pigment. Standard color: WHITE - RAL code 9016. On request, products may be delivered in any RAL color.

Fastening:

Pre-punched Ø 5 mm holes, on long sides, for recessed-head anchor screw, painted in grille's color. The number and position of holes may be adjusted, if requested in order. For installation in place of a ceiling cell (595 x 595 mm) perforation of holes is not required, as the grille fits perfectly into the standard "T" profile.

Packaging:

Individual packaging, in polyethylene foil and delivered in cardboard boxes. Corners are protected with cardboard guards.

Technical specifications text-box, for price quotation requests:

Egg-crate return air grille, made of extruded aluminum, aluminum 12.7 x 12.7 mm egg-crate, painted with electrostatic coating. Color: RAL #####;

Sizes: mm X mm;

Accessories: Plenum box; Damper; Detachable air filter; Additional frame - Standard / with magnetic support;

Type: RITECH ERAG #####.



Performance table

Product code	A	B	Con- nection area	Free area	Tube V = 2 [m/s]			Tube V = 3 [m/s]			Tube V = 4 [m/s]		
	[mm]	[mm]	[m ²]	[m ²]	Q [m ³ /h]	ΔP [Pa]	Grille V [m/s]	Q [m ³ /h]	ΔP [Pa]	Grille V [m/s]	Q [m ³ /h]	ΔP [Pa]	Grille V [m/s]
ERAG 010020	100	200	0,020	0,017	144	2,4	2,42	216	3,2	3,63	288	4,23	4,84
ERAG 010030	100	300	0,030	0,025	216	2,4	2,42	324	3,2	3,63	432	4,23	4,84
ERAG 010040	100	400	0,040	0,033	288	2,4	2,42	432	3,2	3,63	576	4,23	4,84
ERAG 010050	100	500	0,050	0,041	360	2,4	2,42	540	3,2	3,63	720	4,23	4,84
ERAG 010060	100	600	0,060	0,050	432	2,4	2,42	648	3,2	3,63	864	4,23	4,84
ERAG 010070	100	700	0,070	0,058	504	2,4	2,42	756	3,2	3,63	1.008	4,23	4,84
ERAG 010080	100	800	0,080	0,066	576	2,4	2,42	864	3,2	3,63	1.152	4,23	4,84
ERAG 010090	100	900	0,090	0,074	648	2,4	2,42	972	3,2	3,63	1.296	4,23	4,84
ERAG 010100	100	1.000	0,100	0,083	720	2,4	2,42	1.080	3,2	3,63	1.440	4,23	4,84
ERAG 010110	100	1.100	0,110	0,091	792	2,4	2,42	1.188	3,2	3,63	1.584	4,23	4,84
ERAG 010120	100	1.200	0,120	0,099	864	2,4	2,42	1.296	3,2	3,63	1.728	4,23	4,84
ERAG 010130	100	1.300	0,130	0,107	936	2,4	2,42	1.404	3,2	3,63	1.872	4,23	4,84
ERAG 010140	100	1.400	0,140	0,116	1.008	2,4	2,42	1.512	3,2	3,63	2.016	4,23	4,84
ERAG 010150	100	1.500	0,150	0,124	1.080	2,4	2,42	1.620	3,2	3,63	2.160	4,23	4,84
ERAG 015020	150	200	0,030	0,025	216	2,4	2,42	324	3,2	3,63	432	4,23	4,84
ERAG 015030	150	300	0,045	0,037	324	2,4	2,42	486	3,2	3,63	648	4,23	4,84
ERAG 015040	150	400	0,060	0,050	432	2,4	2,42	648	3,2	3,63	864	4,23	4,84
ERAG 015050	150	500	0,075	0,062	540	2,4	2,42	810	3,2	3,63	1.080	4,23	4,84
ERAG 015060	150	600	0,090	0,074	648	2,4	2,42	972	3,2	3,63	1.296	4,23	4,84
ERAG 015070	150	700	0,105	0,087	756	2,4	2,42	1.134	3,2	3,63	1.512	4,23	4,84
ERAG 015080	150	800	0,120	0,099	864	2,4	2,42	1.296	3,2	3,63	1.728	4,23	4,84
ERAG 015090	150	900	0,135	0,112	972	2,4	2,42	1.458	3,2	3,63	1.944	4,23	4,84
ERAG 015100	150	1.000	0,150	0,124	1.080	2,4	2,42	1.620	3,2	3,63	2.160	4,23	4,84
ERAG 015110	150	1.100	0,165	0,136	1.188	2,4	2,42	1.782	3,2	3,63	2.376	4,23	4,84
ERAG 015120	150	1.200	0,180	0,149	1.296	2,4	2,42	1.944	3,2	3,63	2.592	4,23	4,84
ERAG 015130	150	1.300	0,195	0,161	1.404	2,4	2,42	2.106	3,2	3,63	2.808	4,23	4,84
ERAG 015140	150	1.400	0,210	0,174	1.512	2,4	2,42	2.268	3,2	3,63	3.024	4,23	4,84
PRAG 015150	150	1.500	0,225	0,186	1.620	2,4	2,42	2.430	3,2	3,63	3.240	4,23	4,84
ERAG 020020	200	200	0,040	0,033	288	2,4	2,42	432	3,2	3,63	576	4,23	4,84
ERAG 020030	200	300	0,060	0,050	432	2,4	2,42	648	3,2	3,63	864	4,23	4,84
ERAG 020040	200	400	0,080	0,066	576	2,4	2,42	864	3,2	3,63	1.152	4,23	4,84
ERAG 020050	200	500	0,100	0,083	720	2,4	2,42	1.080	3,2	3,63	1.440	4,23	4,84
ERAG 020060	200	600	0,120	0,099	864	2,4	2,42	1.296	3,2	3,63	1.728	4,23	4,84
PRAG 020070	200	700	0,140	0,116	1.008	2,4	2,42	1.512	3,2	3,63	2.016	4,23	4,84
ERAG 020080	200	800	0,160	0,132	1.152	2,4	2,42	1.728	3,2	3,63	2.304	4,23	4,84
ERAG 020090	200	900	0,180	0,149	1.296	2,4	2,42	1.944	3,2	3,63	2.592	4,23	4,84
ERAG 020100	200	1.000	0,200	0,165	1.440	2,4	2,42	2.160	3,2	3,63	2.880	4,23	4,84
ERAG 020110	200	1.100	0,220	0,182	1.584	2,4	2,42	2.376	3,2	3,63	3.168	4,23	4,84
ERAG 020120	200	1.200	0,240	0,198	1.728	2,4	2,42	2.592	3,2	3,63	3.456	4,23	4,84
ERAG 020130	200	1.300	0,260	0,215	1.872	2,4	2,42	2.808	3,2	3,63	3.744	4,23	4,84
ERAG 020140	200	1.400	0,280	0,231	2.016	2,4	2,42	3.024	3,2	3,63	4.032	4,23	4,84
ERAG 020150	200	1.500	0,300	0,248	2.160	2,4	2,42	3.240	3,2	3,63	4.320	4,23	4,84
ERAG 025020	250	200	0,050	0,041	360	2,4	2,42	540	3,2	3,63	720	4,23	4,84
ERAG 025030	250	300	0,075	0,062	540	2,4	2,42	810	3,2	3,63	1.080	4,23	4,84
ERAG 025040	250	400	0,100	0,083	720	2,4	2,42	1.080	3,2	3,63	1.440	4,23	4,84
ERAG 025050	250	500	0,125	0,103	900	2,4	2,42	1.350	3,2	3,63	1.800	4,23	4,84
ERAG 025060	250	600	0,150	0,124	1.080	2,4	2,42	1.620	3,2	3,63	2.160	4,23	4,84
ERAG 025070	250	700	0,175	0,145	1.260	2,4	2,42	1.890	3,2	3,63	2.520	4,23	4,84

ERAG - Egg-crate return air grilles

Performance table

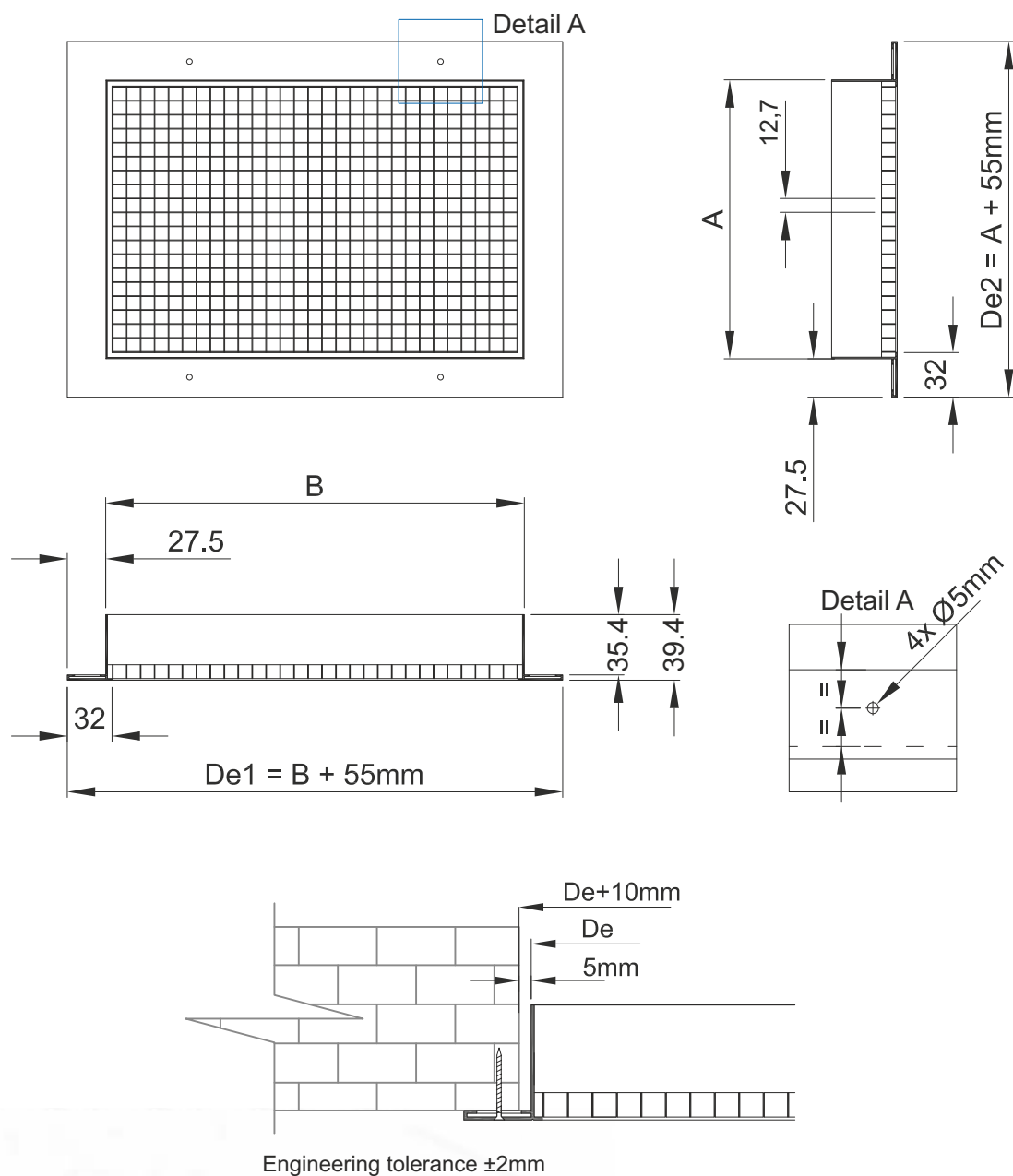
Product code	A	B	Con- nection area	Free area	Tube V = 2 [m/s]			Tube V = 3 [m/s]			Tube V = 4 [m/s]		
	[mm]	[mm]	[m ²]	[m ²]	Q [m ³ /h]	ΔP [Pa]	Grille V [m/s]	Q [m ³ /h]	ΔP [Pa]	Grille V [m/s]	Q [m ³ /h]	ΔP [Pa]	Grille V [m/s]
ERAG 025080	250	800	0,200	0,165	1.440	2,4	2,42	2.160	3,2	3,63	2.880	4,23	4,84
ERAG 025090	250	900	0,225	0,186	1.620	2,4	2,42	2.430	3,2	3,63	3.240	4,23	4,84
ERAG 025100	250	1.000	0,250	0,207	1.800	2,4	2,42	2.700	3,2	3,63	3.600	4,23	4,84
ERAG 025110	250	1.100	0,275	0,227	1.980	2,4	2,42	2.970	3,2	3,63	3.960	4,23	4,84
ERAG 025120	250	1.200	0,300	0,248	2.160	2,4	2,42	3.240	3,2	3,63	4.320	4,23	4,84
ERAG 025130	250	1.300	0,325	0,269	2.340	2,4	2,42	3.510	3,2	3,63	4.680	4,23	4,84
ERAG 025140	250	1.400	0,350	0,289	2.520	2,4	2,42	3.780	3,2	3,63	5.040	4,23	4,84
ERAG 025150	250	1.500	0,375	0,310	2.700	2,4	2,42	4.050	3,2	3,63	5.400	4,23	4,84
ERAG 030030	300	300	0,090	0,074	648	2,4	2,42	972	3,2	3,63	1.296	4,23	4,84
ERAG 030040	300	400	0,120	0,099	864	2,4	2,42	1.296	3,2	3,63	1.728	4,23	4,84
ERAG 030050	300	500	0,150	0,124	1.080	2,4	2,42	1.620	3,2	3,63	2.160	4,23	4,84
ERAG 030060	300	600	0,180	0,149	1.296	2,4	2,42	1.944	3,2	3,63	2.592	4,23	4,84
ERAG 030070	300	700	0,210	0,174	1.512	2,4	2,42	2.268	3,2	3,63	3.024	4,23	4,84
ERAG 030080	300	800	0,240	0,198	1.728	2,4	2,42	2.592	3,2	3,63	3.456	4,23	4,84
ERAG 030090	300	900	0,270	0,223	1.944	2,4	2,42	2.916	3,2	3,63	3.888	4,23	4,84
ERAG 030100	300	1.000	0,300	0,248	2.160	2,4	2,42	3.240	3,2	3,63	4.320	4,23	4,84
ERAG 030110	300	1.100	0,330	0,273	2.376	2,4	2,42	3.564	3,2	3,63	4.752	4,23	4,84
ERAG 030120	300	1.200	0,360	0,298	2.592	2,4	2,42	3.888	3,2	3,63	5.184	4,23	4,84
ERAG 030130	300	1.300	0,390	0,322	2.808	2,4	2,42	4.212	3,2	3,63	5.616	4,23	4,84
ERAG 030140	300	1.400	0,420	0,347	3.024	2,4	2,42	4.536	3,2	3,63	6.048	4,23	4,84
ERAG 030150	300	1.500	0,450	0,372	3.240	2,4	2,42	4.860	3,2	3,63	6.480	4,23	4,84
ERAG 040040	400	400	0,160	0,132	1.152	2,4	2,42	1.728	3,2	3,63	2.304	4,23	4,84
ERAG 040050	400	500	0,200	0,165	1.440	2,4	2,42	2.160	3,2	3,63	2.880	4,23	4,84
ERAG 040060	400	600	0,240	0,198	1.728	2,4	2,42	2.592	3,2	3,63	3.456	4,23	4,84
ERAG 040070	400	700	0,280	0,231	2.016	2,4	2,42	3.024	3,2	3,63	4.032	4,23	4,84
ERAG 040080	400	800	0,320	0,264	2.304	2,4	2,42	3.456	3,2	3,63	4.608	4,23	4,84
ERAG 040090	400	900	0,360	0,298	2.592	2,4	2,42	3.888	3,2	3,63	5.184	4,23	4,84
ERAG 040100	400	1.000	0,400	0,331	2.880	2,4	2,42	4.320	3,2	3,63	5.760	4,23	4,84
ERAG 040110	400	1.100	0,440	0,364	3.168	2,4	2,42	4.752	3,2	3,63	6.336	4,23	4,84
ERAG 040120	400	1.200	0,480	0,397	3.456	2,4	2,42	5.184	3,2	3,63	6.912	4,23	4,84
ERAG 040130	400	1.300	0,520	0,430	3.744	2,4	2,42	5.616	3,2	3,63	7.488	4,23	4,84
ERAG 040140	400	1.400	0,560	0,463	4.032	2,4	2,42	6.048	3,2	3,63	8.064	4,23	4,84
ERAG 040150	400	1.500	0,600	0,496	4.320	2,4	2,42	6.480	3,2	3,63	8.640	4,23	4,84
ERAG 054054	540	540	0,292	0,241	2.100	2,4	2,42	3.149	3,2	3,63	4.199	4,23	4,84

Legend:

Symbol	Description	M.U.
ERAG	Egg-crate return air grille	
A	Grille connection gauge - Width	[mm]
B	Grille connection gauge - Length	[mm]
Connection area	Grille surface for connection gauges (A x B)	[m ²]
Free area	Surface available for air circulation (connection area-blade area)	[m ²]
Q	Air flow	[m ³ /h]
ΔP	Pressure loss through grille	[Pa]
Grille V	Air velocity through grille, calculated based on Flow and Free Area	[m/s]
Tube V	Air velocity in the connection section	[m/s]



Sizes



Example: Code ERAG020030 represents:

Egg-crate return air grille with $A = 200$ mm; $B = 300$ mm

Accessories: Plenum box

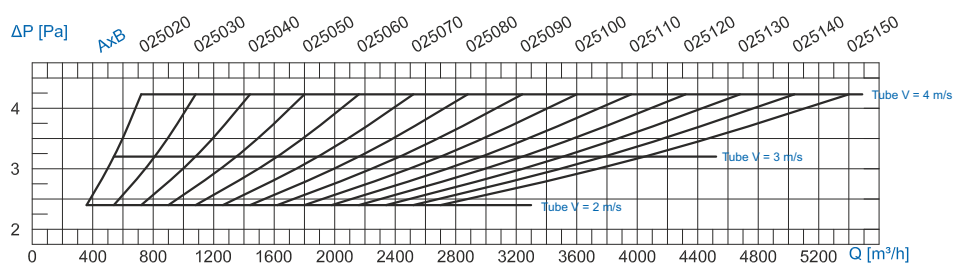
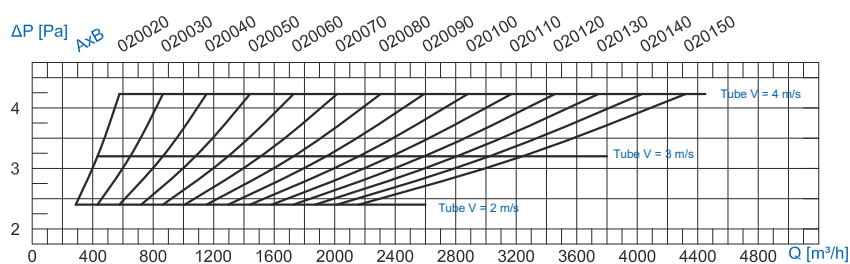
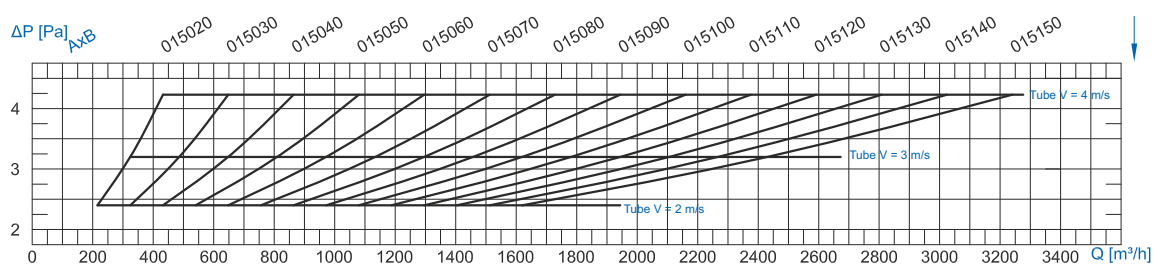
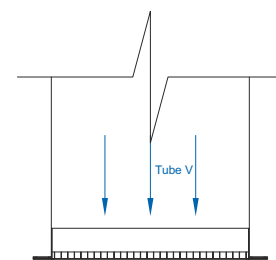
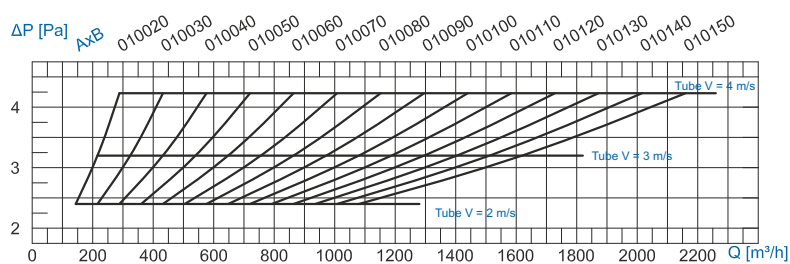
Detachable air filter

Additional frame

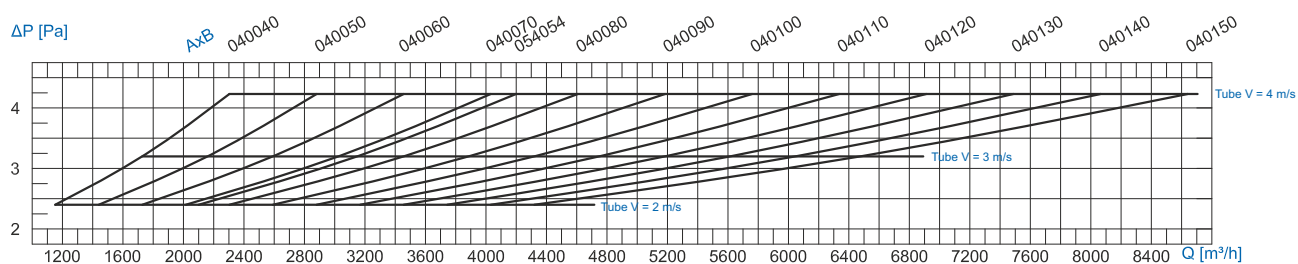
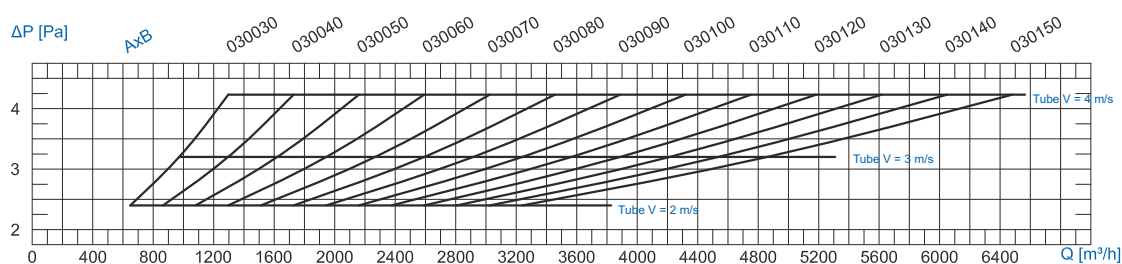
OBD020030 damper

NOTE: Products may be ordered in customized sizes and configurations (colors, number and position of holes, fastening method, execution of hybrid product, special plenum box etc.)

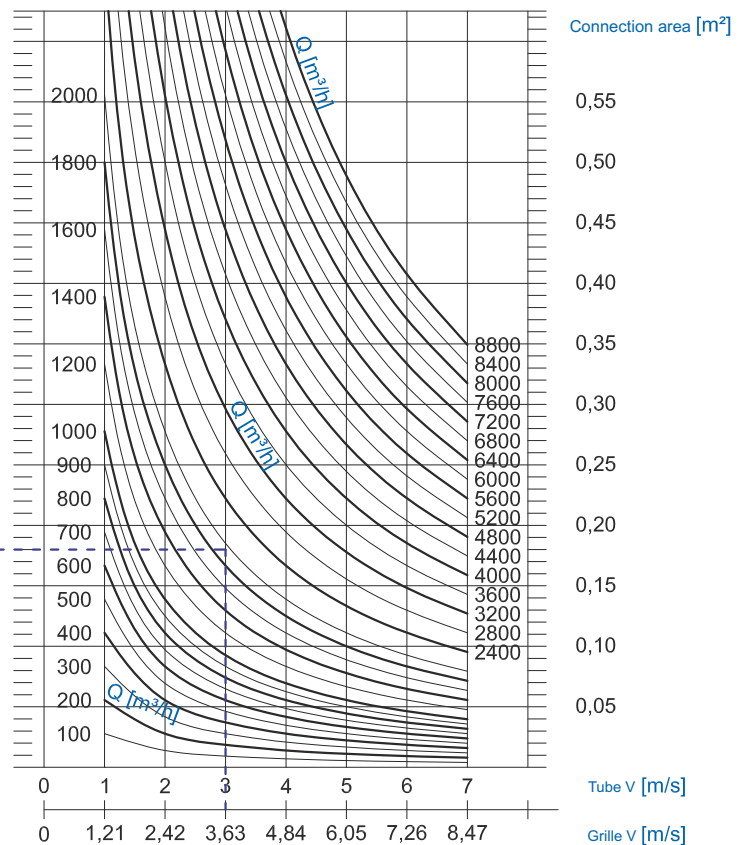
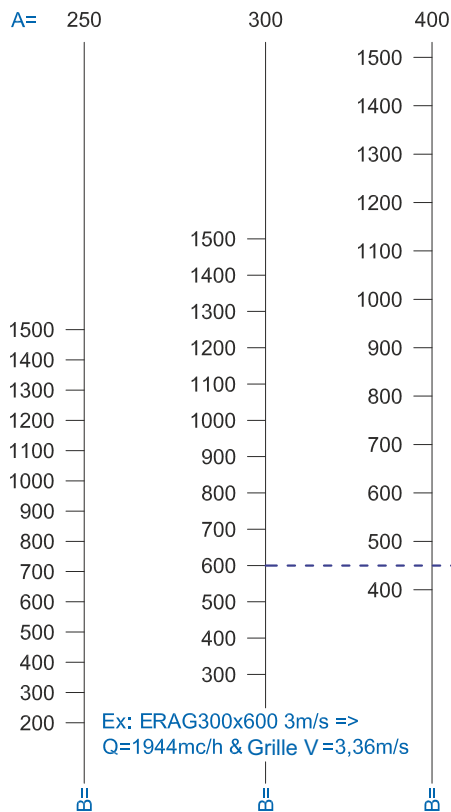
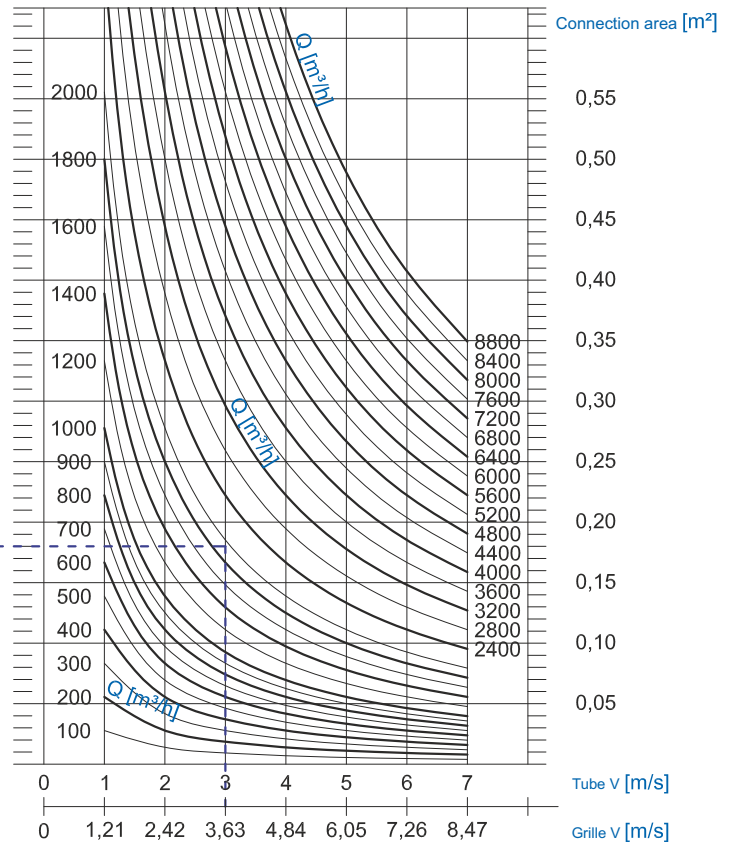
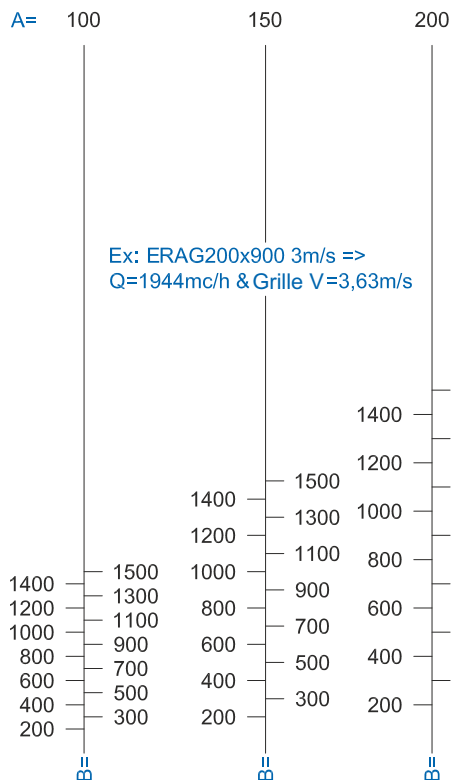
Pressure loss charts



Ex: ERAG300x600 Tube V=3m/s =>
Q=1944mc/h & ΔP=3.20Pa



Selection chart



ERAG - Egg-crate return air grilles





Design your environment