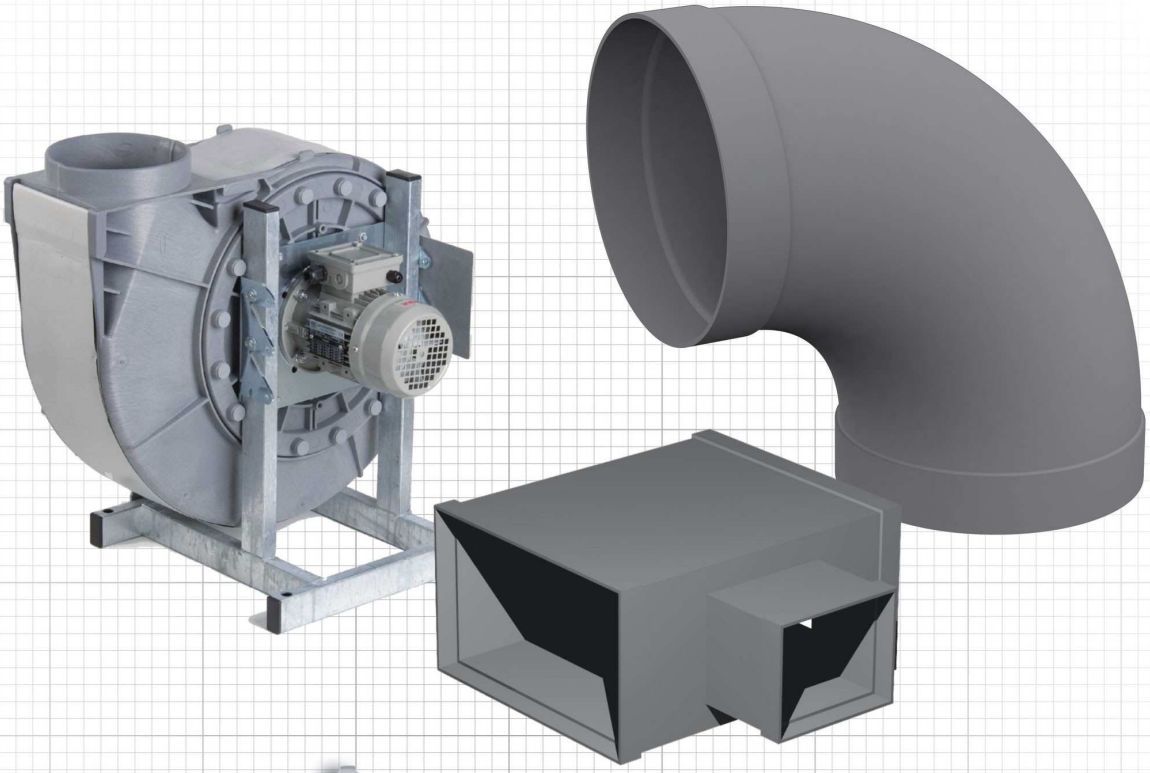
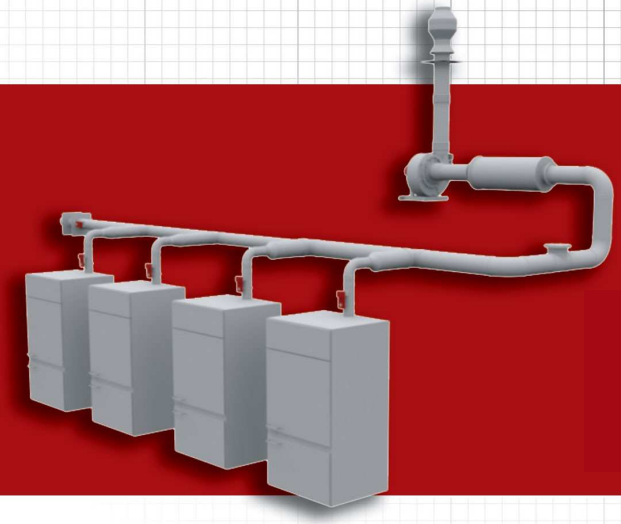
CHEMOWENT®

Technical catalogue





Chemically resistance

ventilation system

of plastics

Grupa Konsultingowo-Inżynieryjna

kompleks®

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CHEMOWENT®

CHEMOODPORNA WENTYLACJA Z TWORZYW SZTUCZNYCH

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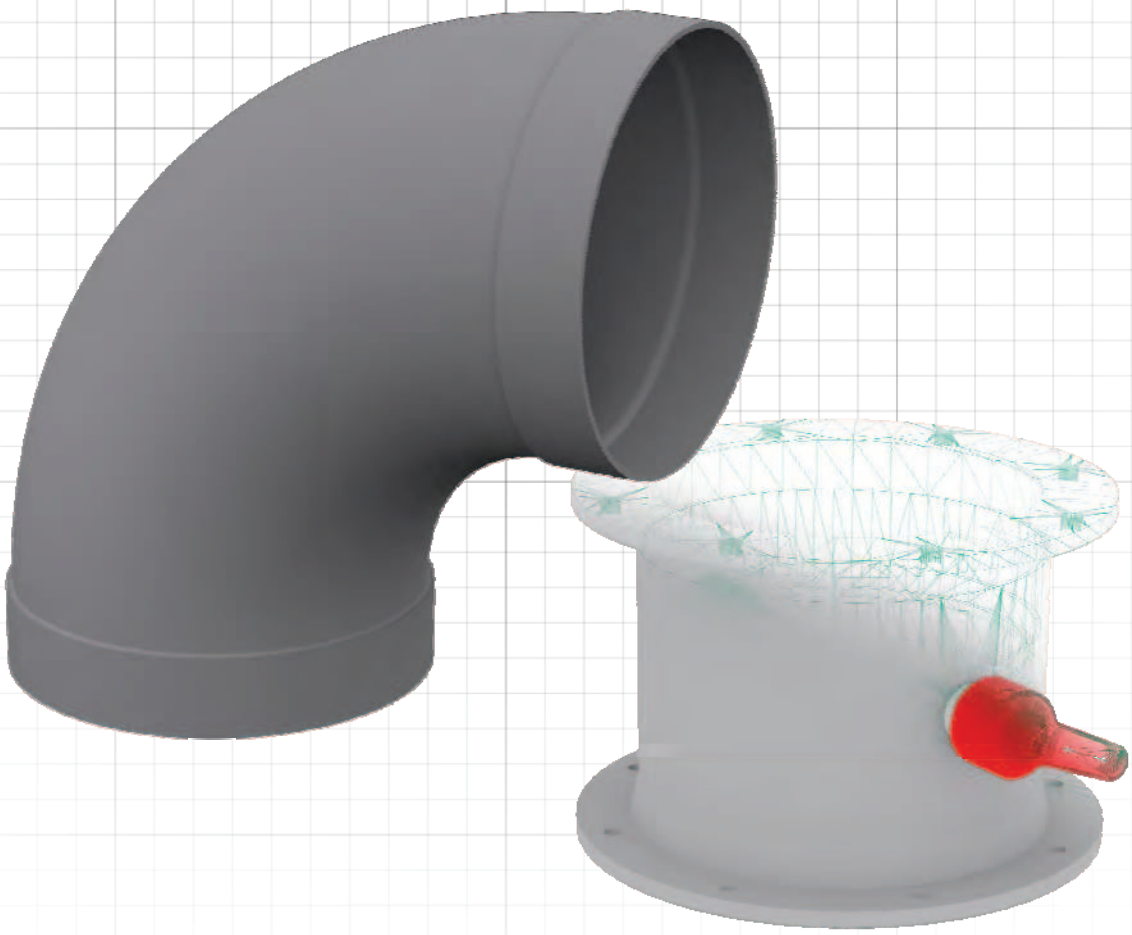


1. CIRCULAR DUCTS AND FITTINGS MADE OF PVC / PPs / PP / PE

1.1. Characteristics

Description

Ventilation ducts and fittings produced according to the following standards:
a. made of **PVC-U**:

- Ducts of circular cross-section - standard No. **DIN 4740 Teil 1**
- Fittings of circular cross-section - standard No. **DIN 4740 Teil 2**

b. made of **PP i PPs**:

- Ducts of circular cross-section - standard No. **DIN 4741 Teil 1**
- Fittings of circular cross-section - standard No. **DIN 4741 Teil 2**

c. other materials available upon request
d. all elements are also produced in accordance with internal manufacturer's standards and at the Client's individual request or according to a specific design. In accordance with DIN standards, all elements can be produced according to following designs:

- low pressure **p_e = -630 Pa**
- medium pressure **p_e = -1600 Pa**
- high pressure **p_e = -5000 Pa**

Dimensions

Nominal size being a conventional size used for marking and calculation of straight ducts and fittings, constitutes the external dimension of - **D**.

Tightness

The ducts and fittings connected by welding ensure 100% tightness of the system.

Rigidity

The rigidity of ducts and fittings is ensured by adequately selected thickness of material of which they are made. For large ducts made of rolled plates, it is possible to apply rib reinforcements to reduce the plate thickness.

Connections

Possible methods for connection of duct and fitting systems:

- **PVC-U** - plain ducts and coupler fittings - welding with PVC-U wire or gluing
- **PP/PPs** - plain ducts and coupler fittings - welding with PP/PPs wire
- **PE** - plain ducts and coupler fittings - welding with PE wire
- connection of the pipe and fitting system with other ventilation equipment is possible with the use of standardized flanges

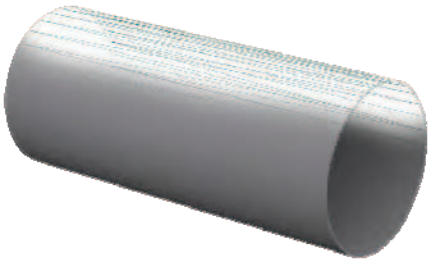
Designations

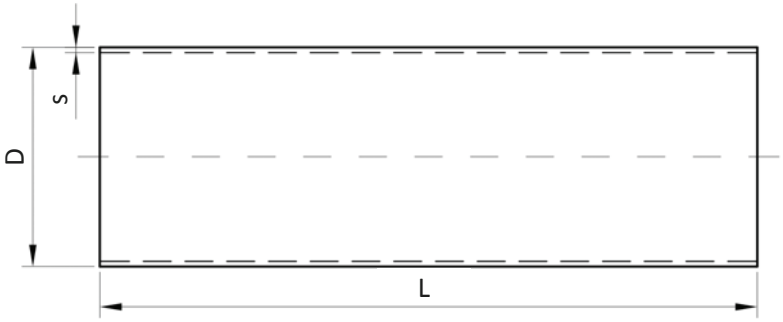
XX symbol in the product catalog number represents the type of plastic and it should be filled as follows:

- **PVC-U** - **XX** -> **88**
- **PPs** - **XX** -> **36**
- **PP** - **XX** -> **30**
- **PE** - **XX** -> **22**

1. CIRCULAR DUCTS AND FITTINGS MADE OF PVC / PPs / PP / PE

1.2.1. Circular ventilation ducts



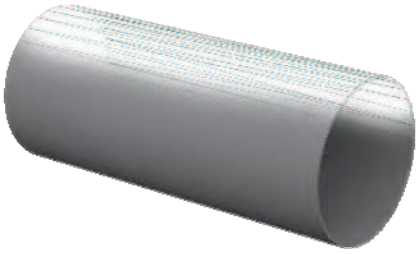


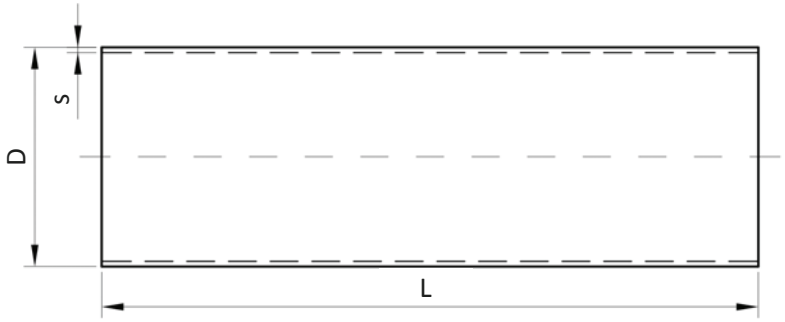
Element name	Cat. no.	D	l	s	
				PVC	PE / PP / PPs
---	---	mm	mm	mm	mm
Circular ventilation duct **d32**	**XX**.032.**Y**.0000	**32**	2500 / 5000		3,0
Circular ventilation duct **d40**	**XX**.040.**Y**.0000	**40**	2500 / 5000		3,0
Circular ventilation duct **d50**	**XX**.050.**Y**.0000	**50**	2500 / 5000		3,0
Circular ventilation duct **d63**	**XX**.063.**Y**.0000	**63**	2500 / 5000		3,0
Circular ventilation duct **d75**	**XX**.075.**Y**.0000	**75**	2500 / 5000		3,0
Circular ventilation duct **d90**	**XX**.090.**Y**.0000	**90**	2500 / 5000		3,0
Circular ventilation duct **d110**	**XX**.110.**Y**.0000	**110**	2500 / 5000	1,8	3,0
Circular ventilation duct **d125**	**XX**.125.**Y**.0000	**125**	2500 / 5000	1,8	3,0
Circular ventilation duct **d140**	**XX**.140.**Y**.0000	**140**	2500 / 5000	1,8	3,0
Circular ventilation duct **d160**	**XX**.160.**Y**.0000	**160**	2500 / 5000	1,8/2,5	3,0
Circular ventilation duct **d180**	**XX**.180.**Y**.0000	**180**	2500 / 5000	1,8/2,5	3,0
Circular ventilation duct **d200**	**XX**.200.**Y**.0000	**200**	2500 / 5000	1,8/2,5	3,0
Circular ventilation duct **d225**	**XX**.225.**Y**.0000	**225**	2500 / 5000	1,8/2,8	3,5
Circular ventilation duct **d250**	**XX**.250.**Y**.0000	**250**	2500 / 5000	2,0/2,9	3,5
Circular ventilation duct **d280**	**XX**.280.**Y**.0000	**280**	2500 / 5000	2,3/2,9	4,0
Circular ventilation duct **d315**	**XX**.315.**Y**.0000	**315**	2500 / 5000	2,5/2,9	5,0
Circular ventilation duct **d355**	**XX**.355.**Y**.0000	**355**	2500 / 5000	2,9/4,4	5,0
Circular ventilation duct **d400**	**XX**.400.**Y**.0000	**400**	2500 / 5000	3,2/5,0	6,0
Circular ventilation duct **d450**	**XX**.450.**Y**.0000	**450**	2500 / 5000	3,6/5,6	7,0
Circular ventilation duct **d500**	**XX**.500.**Y**.0000	**500**	2500 / 5000	4,0/5,6	8,0

1. Designations:
   a. **D** - external pipe diameter, mm
   b. **L** - pipe length, mm
   c. **XX** - material designation, see point 1.1.
   d. **Y** - variant choice: **L** - standard wall thickness / **M** - increased PVC wall thickness
2. Other dimensions available upon request .

1. CIRCULAR DUCTS AND FITTINGS MADE OF PVC / PPs / PP / PE

1.2.2. Circular ventilation ducts - made of plates



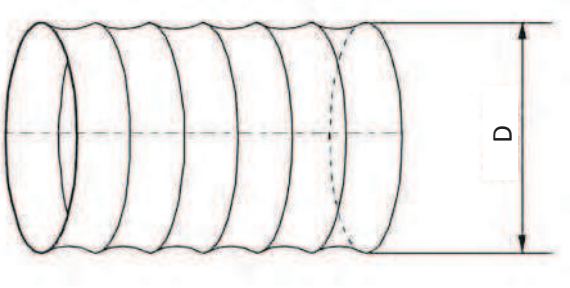


Element name	Cat. no.	D	l	s	
				L	M
---	---	mm	mm	mm	
Circular ventilation duct made of plates **d400**	**XX**.400.**Y**.000P	**400**	500 / 1000 / 1500 / 2000	5,0	
Circular ventilation duct made of plates **d450**	**XX**.450.**Y**.000P	**450**	500 / 1000 / 1500 / 2000	5,0	6,0
Circular ventilation duct made of plates **d500**	**XX**.500.**Y**.000P	**500**	500 / 1000 / 1500 / 2000	5,0	6,0
Circular ventilation duct made of plates **d560**	**XX**.560.**Y**.000P	**560**	500 / 1000 / 1500 / 2000	5,0	6,0
Circular ventilation duct made of plates **d600**	**XX**.600.**Y**.000P	**600**	500 / 1000 / 1500 / 2000	5,0	6,0
Circular ventilation duct made of plates **d630**	**XX**.630.**Y**.000P	**630**	500 / 1000 / 1500 / 2000	5,0	6,0
Circular ventilation duct made of plates **d700**	**XX**.700.**Y**.000P	**700**	500 / 1000 / 1500 / 2000	6,0	8,0
Circular ventilation duct made of plates **d710**	**XX**.710.**Y**.000P	**710**	500 / 1000 / 1500 / 2000	6,0	8,0
Circular ventilation duct made of plates **d800**	**XX**.800.**Y**.000P	**800**	500 / 1000 / 1500 / 2000	8,0	10,0
Circular ventilation duct made of plates **d900**	**XX**.900.**Y**.000P	**900**	500 / 1000 / 1500 / 2000	8,0	10,0 (12,0)
Circular ventilation duct made of plates **d1000**	**XX**.1000.**Y**.000P	**1000**	500 / 1000 / 1500 / 2000	(8,0) 10,0	12,0
Circular ventilation duct made of plates **d1250**	**XX**.1250.**Y**.000P	**1250**	500 / 1000 / 1500 / 2000	12,0	15,0
Circular ventilation duct made of plates **d1400**	**XX**.1400.**Y**.000P	**1400**	500 / 1000 / 1500 / 2000	12,0	15,0

1. Designations:
   a. **D** - external pipe diameter, mm
   b. **l** - pipe length, mm
   c. **XX** - material designation, see point 1.1.
   d. **Y** - variant choice: **L** - standard wall thickness / **M** - increased wall thickness
2. Other dimensions available upon request.

1. CIRCULAR DUCTS AND FITTINGS MADE OF PVC / PPs / PP / PE

1.2.3. Elastic PVC ducts



Elastic PVC ducts are made according to **DIN 24146 Teil 1** standard

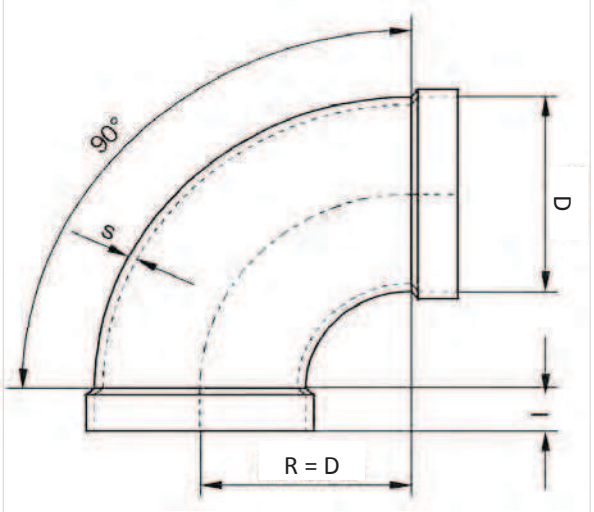
Element name	Cat. no.	D
---	---	mm
Elastic duct Flex **d75**	**88.**075.RF.0000	**75**
Elastic duct Flex **d90**	**88.**090.RF.0000	**90**
Elastic duct Flex **d110**	**88.**110.RF.0000	**110**
Elastic duct Flex **d125**	**88.**125.RF.0000	**125**
Elastic duct Flex **d140**	**88.**140.RF.0000	**140**
Elastic duct Flex **d160**	**88.**160.RF.0000	**160**
Elastic duct Flex **d180**	**88.**180.RF.0000	**180**
Elastic duct Flex **d200**	**88.**200.RF.0000	**200**
Elastic duct Flex **d225**	**88.**225.RF.0000	**225**
Elastic duct Flex **d250**	**88.**250.RF.0000	**250**
Elastic duct Flex **d280**	**88.**280.RF.0000	**280**
Elastic duct Flex **d315**	**88.**315.RF.0000	**315**
Elastic duct Flex **d355**	**88.**355.RF.0000	**355**
Elastic duct Flex **d400**	**88.**400.RF.0000	**400**
Elastic duct Flex **d450**	**88.**450.RF.0000	**450**
Elastic duct Flex **d500**	**88.**500.RF.0000	**500**
Elastic duct Flex **d600**	**88.**600.RF.0000	**600**
Elastic duct Flex **d800**	**88.**800.RF.0000	**800**

1. Designations:
   a. **D** - external pipe diameter, mm
   b. **88** - FLEX typee duct made of PVC.
2.
3. Other dimensions available upon request.

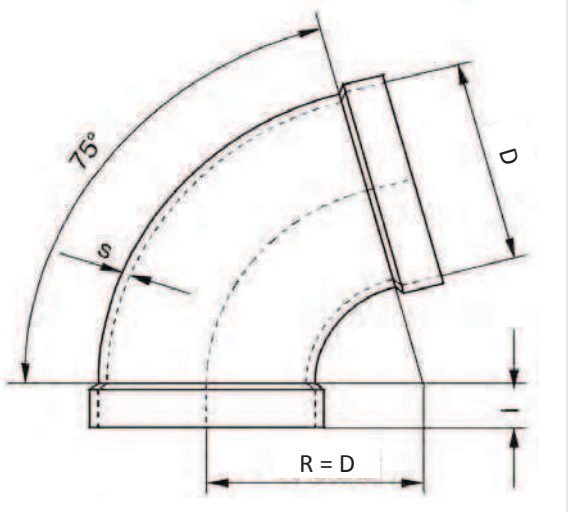
1. CIRCULAR DUCTS AND FITTINGS MADE OF PVC / PPs / PP / PE

1.3. Angles - 90°, 75°, 60°, 45°, 30° i 15°

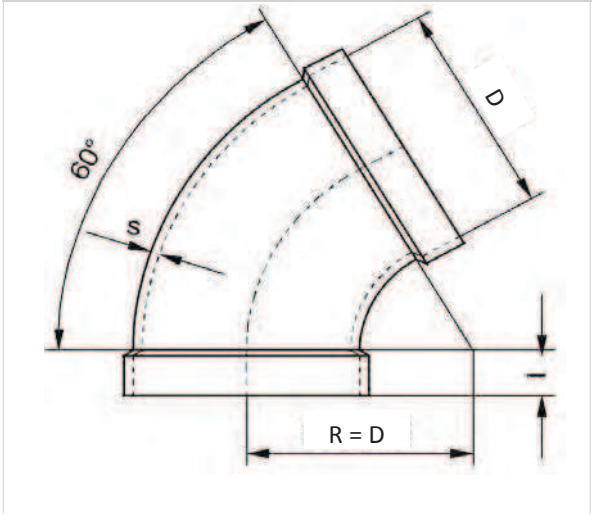
XX.DDD.L.0090 / ζ=0,25



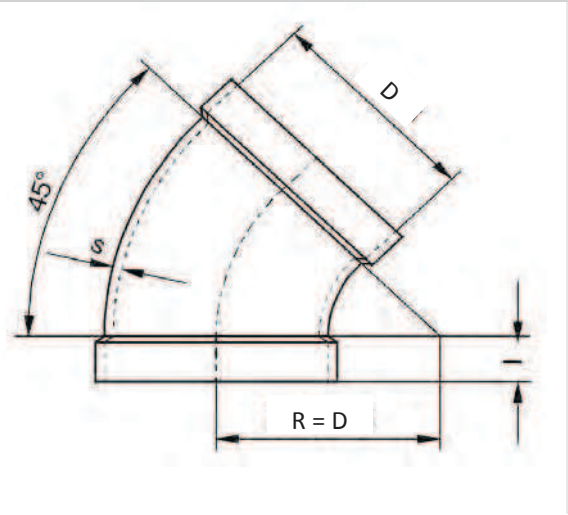
XX.DDD.L.0075 / ζ=0,20



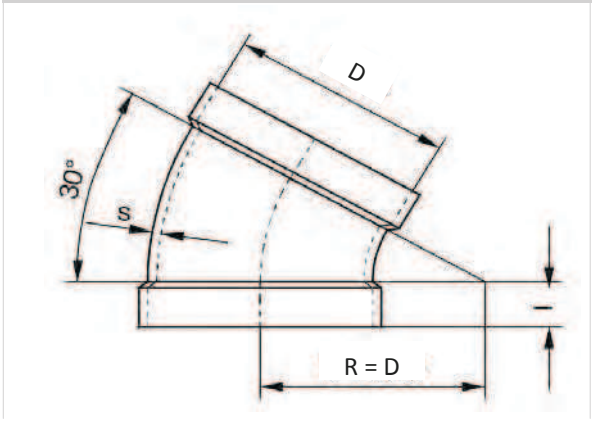
XX.DDD.L.0060 / ζ=0,18



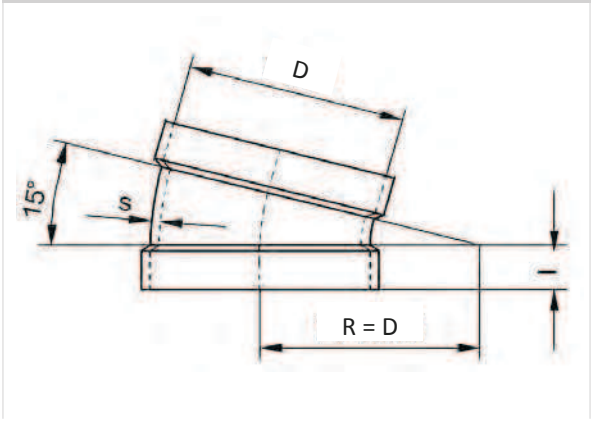
XX.DDD.L.0045 / ζ=0,15



XX.DDD.L.0030 / ζ=0,10



XX.DDD.L.0015 / ζ=0,05



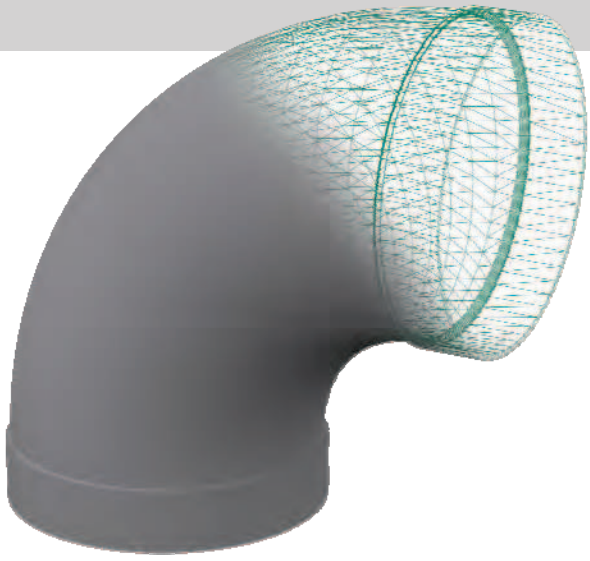
1. CIRCULAR DUCTS AND FITTINGS MADE OF PVC / PPs / PP / PE

1.3. Angles - 90°, 75°, 60°, 45°, 30° i 15°

Element name	Cat. no.	D	l	s	
				PVC	PE / PP / PPs
---	---	mm	mm	mm	mm
Angle 90°/75°/60°/45°/30°/15° **d50**	**XX**.050.L.00**YY**	**50**	40	1,8	3,0
Angle 90°/75°/60°/45°/30°/15° **d63**	**XX**.063.L.00**YY**	**63**	40	1,8	3,0
Angle 90°/75°/60°/45°/30°/15° **d75**	**XX**.075.L.00**YY**	**75**	40	1,8	3,0
Angle 90°/75°/60°/45°/30°/15° **d90**	**XX**.090.L.00**YY**	**90**	40	1,8	3,0
Angle 90°/75°/60°/45°/30°/15° **d110**	**XX**.110.L.00**YY**	**110**	40	1,8	3,0
Angle 90°/75°/60°/45°/30°/15° **d125**	**XX**.125.L.00**YY**	**125**	40	1,8	3,0
Angle 90°/75°/60°/45°/30°/15° **d140**	**XX**.140.L.00**YY**	**140**	40	1,8	3,0
Angle 90°/75°/60°/45°/30°/15° **d160**	**XX**.160.L.00**YY**	**160**	40	1,8	3,0
Angle 90°/75°/60°/45°/30°/15° **d180**	**XX**.180.L.00**YY**	**180**	40	1,8	3,0
Angle 90°/75°/60°/45°/30°/15° **d200**	**XX**.200.L.00**YY**	**200**	40	1,8	3,0
Angle 90°/75°/60°/45°/30°/15° **d225**	**XX**.225.L.00**YY**	**225**	40	1,8	3,5
Angle 90°/75°/60°/45°/30°/15° **d250**	**XX**.250.L.00**YY**	**250**	40	2,0	3,5
Angle 90°/75°/60°/45°/30°/15° **d280**	**XX**.280.L.00**YY**	**280**	50	2,3	3,5
Angle 90°/75°/60°/45°/30°/15° **d315**	**XX**.315.L.00**YY**	**315**	50	2,5	4,0
Angle 90°/75°/60°/45°/30°/15° **d355**	**XX**.355.L.00**YY**	**355**	50	2,9	4,0
Angle 90°/75°/60°/45°/30°/15° **d400**	**XX**.400.L.00**YY**	**400**	50	3,2	4,5
Angle 90°/75°/60°/45°/30°/15° **d450**	**XX**.450.L.00**YY**	**450**	60	3,6	5,5
Angle 90°/75°/60°/45°/30°/15° **d500**	**XX**.500.L.00**YY**	**500**	60	4,0	6,5
Angle 90°/75°/60°/45°/30°/15° **d560**	**XX**.560.L.00**YY**	**560**	60	---	5,0
Angle 90°/75°/60°/45°/30°/15° **d600**	**XX**.600.L.00**YY**	**600**	80	6,0	6,0

DESCRIPTION:

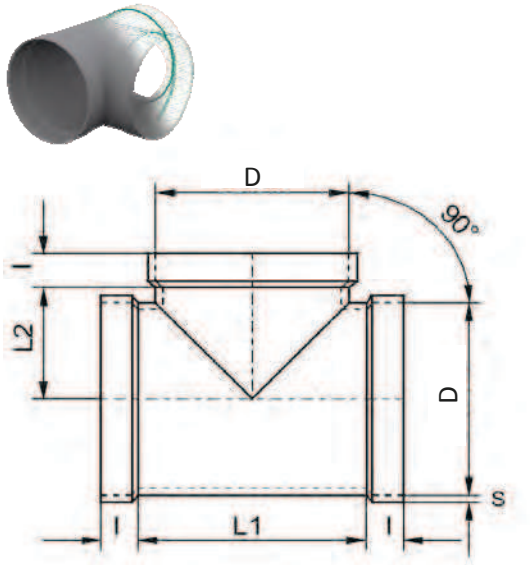
1. Designations:
   a. **D** - external pipe diameter, mm
   b. **s** - wall thickness, mm
   c. **l** - coupler length, mm
   d. **XX** - material designation, see point 1.1.
   e. **YY** - angle designation - 90/75/60/45/30/15
2. Angle d560 PVC - of segmented design
3. Dimensions upon request:
   a. PVC - D 700 ÷ 1250mm
   b. PP / PE / PPs - D 630 ÷ 1250mm
4. Local drag coefficient **ζ** - specified on drawings.
5. Wall thickness tolerance is specified in the descriptive part- pt. 1.1.



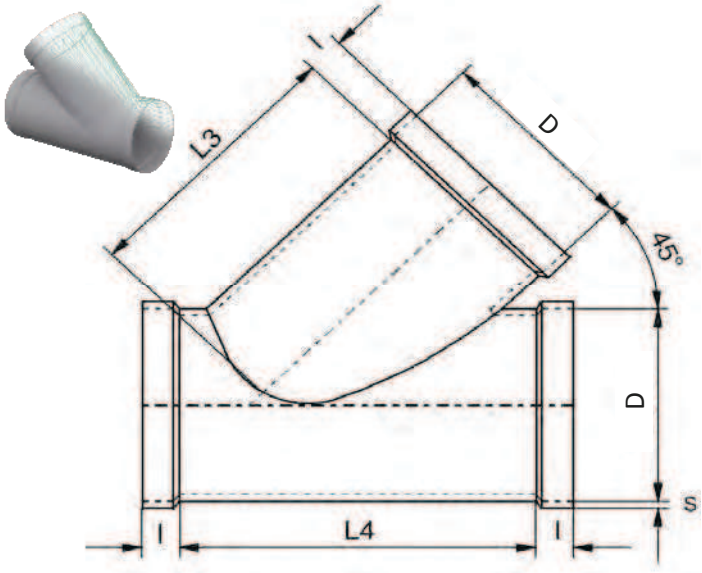
1. CIRCULAR DUCTS AND FITTINGS MADE OF PVC / PPs / PP / PE

1.4. Tee with a 90° and 45° branch-off

XX.DDD.L.9000 / ζ=1,10



XX.DDD.L.4500 / ζ=1,10

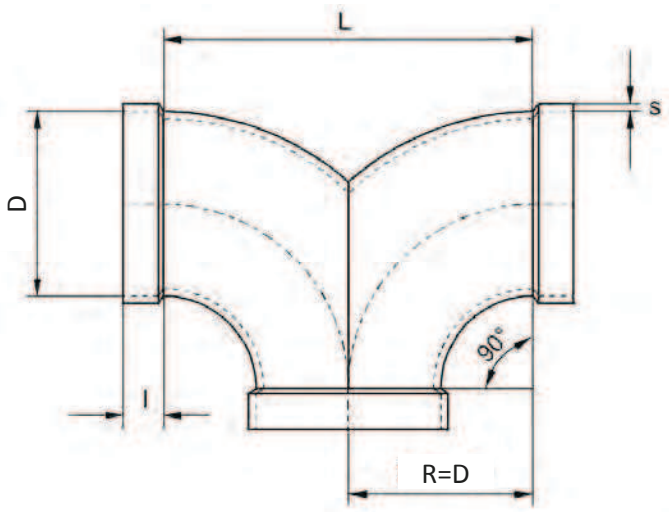


Element name	Cat. no.	D	l	L1	L2	L3	L4	s	
								PVC	PE / PP / PPs
---	---	mm	mm	mm	mm	mm	mm	mm	mm
Tee 90° and 45° **d50**	**XX.**050.L.**YY**00	**50**	40	105	52,5	120	165	2,5	3,0
Tee 90° and 45° **d63**	**XX.**063.L.**YY**00	**63**	40	105	52,5	120	165	2,5	3,0
Tee 90° and 45° **d75**	**XX.**075.L.**YY**00	**75**	40	105	52,5	120	165	2,5	3,0
Tee 90° and 45° **d90**	**XX.**090.L.**YY**00	**90**	40	120	60,0	140	190	2,5	3,0
Tee 90° and 45° **d110**	**XX.**110.L.**YY**00	**110**	40	140	70,0	170	235	2,5	3,0
Tee 90° and 45° **d125**	**XX.**125.L.**YY**00	**125**	40	155	77,5	190	255	2,5	3,0
Tee 90° and 45° **d140**	**XX.**140.L.**Y**Y00	**140**	40	170	85,0	210	280	2,5	3,0
Tee 90° and 45° **d160**	**XX.**160.L.**YY**00	**160**	40	190	95,0	240	325	2,5	3,0
Tee 90° and 45° **d180**	**XX.**180.L.**YY**00	**180**	40	210	105,0	265	355	2,5	3,0
Tee 90° and 45° **d200**	**XX.**200.L.**YY**00	**200**	40	230	115,0	290	380	2,5	3,0
Tee 90° and 45° **d225**	**XX.**225.L.**YY**00	**225**	40	255	127,5	330	440	2,0	3,5
Tee 90° and 45° **d250**	**XX.**250.L.**YY**00	**250**	40	280	140,0	360	475	2,0	3,5
Tee 90° and 45° **d280**	**XX.**280.L.**YY**00	**280**	50	310	165,0	400	515	2,3	3,5
Tee 90° and 45° **d315**	**XX.**315.L.**YY**00	**315**	50	345	172,5	440	565	2,5	4,0
Tee 90° and 45° **d355**	**XX.**355.L.**YY**00	**355**	50	385	192,5	490	620	2,9	4,0
Tee 90° and 45° **d400**	**XX.**400.L.**YY**00	**400**	50	430	215,0	540	685	3,2	4,5
Tee 90° and 45° **d450**	**XX.**450.L.**YY**00	**450**	60	570	285,0	610	770	3,6	5,0
Tee 90° and 45° **d500**	**XX.**500.L.**YY**00	**500**	60	620	310,0	680	880	4,0	5,0
Tee 90° and 45° **d560**	**XX.**560.L.**YY**00	**560**	60	680	340,0	---	---	---	5,0
Tee 90° and 45° **d600**	**XX.**600.L.**YY**00	**600**	60	760	380,0	---	---	5,0	6,0

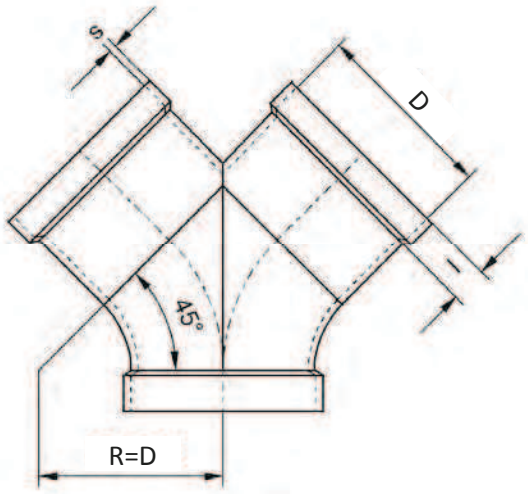
1. CIRCULAR DUCTS AND FITTINGS MADE OF PVC / PPs / PP / PE

1.5. Y-tee with a 90° and 45° branch-off

XX.DDD.Y.9000 / ζ=0,25



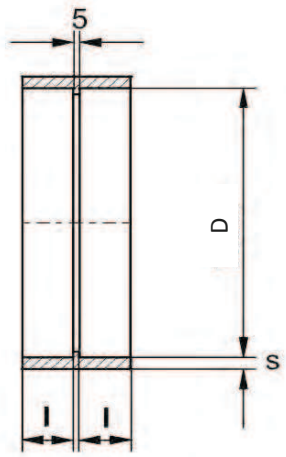
XX.DDD.Y.4500 / ζ=0,15

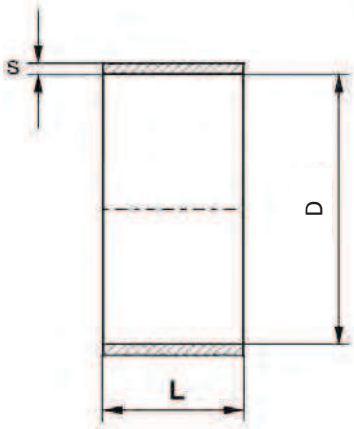


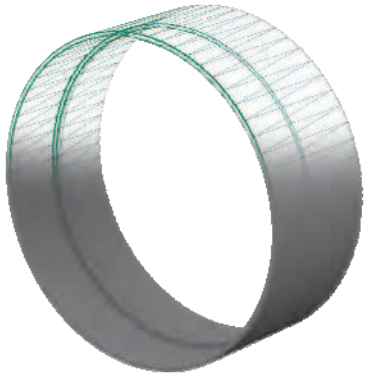
Element name	Cat. no.	D	l	L	s	
					PVC	PE / PP / PPs
---	---	mm	mm	mm	mm	mm
Y-tee 90° and 45° **d50**	**XX.**050.Y.**YY**00	**50**	40	150	1,8	3,0
Y-tee 90° and 45° **d63**	**XX.**063.Y.**YY**00	**63**	40	150	1,8	3,0
Y-tee 90° and 45° **d75**	**XX.**075.Y.**YY**00	**75**	40	150	1,8	3,0
Y-tee 90° and 45° **d90**	**XX.**090.Y.**YY**00	**90**	40	180	1,8	3,0
Y-tee 90° and 45° **d110**	**XX.**110.Y.**YY**00	**110**	40	220	1,8	3,0
Y-tee 90° and 45° **d125**	**XX.**125.Y.**YY**00	**125**	40	250	1,8	3,0
Y-tee 90° and 45° **d140**	**XX.**140.Y.**YY**00	**140**	40	280	1,8	3,0
Y-tee 90° and 45° **d160**	**XX.**160.Y.**YY**00	**160**	40	320	1,8	3,0
Y-tee 90° and 45° **d180**	**XX.**180.Y.**YY**00	**180**	40	360	1,8	3,0
Y-tee 90° and 45° **d200**	**XX.**200.Y.**YY**00	**200**	40	400	1,8	3,0
Y-tee 90° and 45° **d225**	**XX.**225.Y.**YY**00	**225**	40	450	1,8	3,5
Y-tee 90° and 45° **d250**	**XX.**250.Y.**YY**00	**250**	40	500	2,0	3,5
Y-tee 90° and 45° **d280**	**XX.**280.Y.**YY**00	**280**	50	560	2,3	3,5
Y-tee 90° and 45° **d315**	**XX.**315.Y.**YY**00	**315**	50	630	2,5	4,0
Y-tee 90° and 45° **d355**	**XX.**355.Y.**YY**00	**355**	50	710	2,9	4,0
Y-tee 90° and 45° **d400**	**XX.**400.Y.**YY**00	**400**	50	800	3,2	4,5
Y-tee 90° and 45° **d450**	**XX.**450.Y.**YY**00	**450**	60	900	3,6	5,5
Y-tee 90° and 45° **d500**	**XX.**500.Y.**YY**00	**500**	60	1000	4,0	6,5
Y-tee 90° and 45° **d560**	**XX.**560.Y.**YY**00	**560**	60	1120	4,0	5,0
Y-tee 90° and 45° **d600**	**XX.**600.Y.**YY**00	**600**	60	1200	5,0	6,0

1. CIRCULAR DUCTS AND FITTINGS MADE OF PVC / PPs / PP / PE

1.6. Coupler





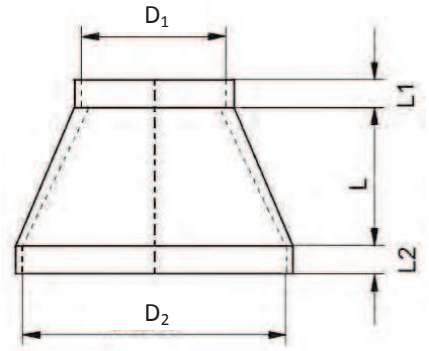


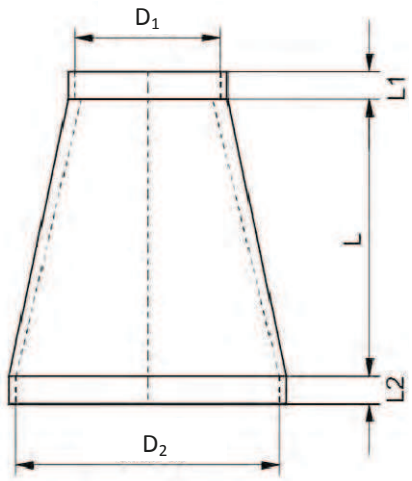
Element name	Cat. no.	D	l	L	s	
					PVC	PE / PP / PPs
---	---	mm	mm	mm	mm	mm
Coupler **d50**	XX.050.L.0002	**50**	40	---	2,5	3,0
Coupler **d63**	XX.063.L.0002	**63**	40	---	2,5	3,0
Coupler **d75**	XX.075.L.0002	**75**	40	---	2,5	3,0
Coupler **d90**	XX.090.L.0002	**90**	40	---	2,5	3,0
Coupler **d110**	XX.110.L.0002	**110**	40	---	2,5	3,0
Coupler **d125**	XX.125.L.0002	**125**	40	---	2,5	3,0
Coupler **d140**	XX.140.L.0002	**140**	40	---	2,5	3,0
Coupler **d160**	XX.160.L.0002	**160**	40	---	2,5	3,0
Coupler **d180**	XX.180.L.0002	**180**	40	---	2,5	3,0
Coupler **d200**	XX.200.L.0002	**200**	40	---	2,5	3,0
Coupler **d225**	XX.225.L.0002	**225**	40	---	2,5	3,5
Coupler **d250**	XX.250.L.0002	**250**	40	---	2,5	3,5
Coupler **d280**	XX.280.L.0002	**280**	50	---	2,5	3,5
Coupler **d315**	XX.315.L.0002	**315**	50	---	2,5	4,0
Coupler **d355**	XX.355.L.0002	**355**	50	---	3,0	4,0
Coupler **d400**	XX.400.L.0002	**400**	50	---	3,0	4,5
Coupler **d450**	XX.450.L.0002	**450**	---	120	3,6	5,0
Coupler **d500**	XX.500.L.0002	**500**	---	120	4,0	5,0
Coupler **d560**	XX.560.L.0002	**560**	---	120		5,0
Coupler **d600**	XX.600.L.0002	**600**	---	120	5,0	6,0
Coupler **d630**	XX.630.L.0002	**630**	---	120		6,0
Coupler **d700**	XX.700.L.0002	**700**	---	150	5,0	6,0
Coupler **d710**	XX.710.L.0002	**710**	---	150		6,0
Coupler **d800**	XX.800.L.0002	**800**	---	150	6,0	8,0

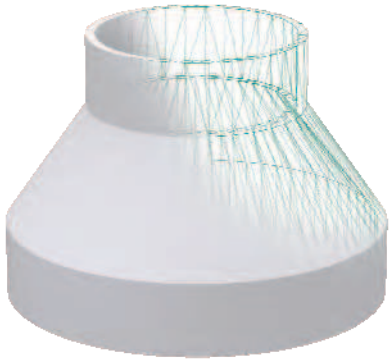
1. CIRCULAR DUCTS AND FITTINGS MADE OF PVC / PPs / PP / PE

1.7. Reducer

D_2 - D_1 / ζ=0 - 0,5







Element name	Cat. no.	D_1	D_2	L	L1	L2
---	---	mm	mm	mm	mm	mm
Reducer **d90 x d75**	XX.090.R.0075	**75**	**90**	40	40	40
Reducer **d110 x d75**	XX.110.R.0075	**75**	**110**	80	40	40
Reducer **d110 x d90**	XX.110.R.0090	**90**	**110**	60	40	40
Reducer **d125 x 110**	XX.125.R.0110	**110**	**125**	40	40	40
Reducer **d140 x d110**	XX.140.R.0110	**110**	**140**	80	40	40
Reducer **d140 x d125**	XX.140.R.0125	**125**	**140**	40	40	40
Reducer **d160 x d110**	XX.160.R.0110	**110**	**160**	140	40	40
Reducer **d160 x d125**	XX.160.R.0125	**125**	**160**	100	40	40
Reducer **d160 x d140**	XX.160.R.0140	**140**	**160**	60	40	40
Reducer **d180 x d110**	XX.180.R.0110	**110**	**180**	60	40	40
Reducer **d180 x d125**	XX.180.R.0125	**125**	**180**	50	40	40
Reducer **d180 x d140**	XX.180.R.0140	**140**	**180**	40	40	40
Reducer **d180 x d160**	XX.180.R.0160	**160**	**180**	60	40	40
Reducer **d200 x d110**	XX.200.R.0110	**110**	**200**	65	40	40
Reducer **d200 x d125**	XX.200.R.0125	**125**	**200**	75	40	40
Reducer **d200 x d140**	XX.200.R.0140	**140**	**200**	70	40	40
Reducer **d200 x d160**	XX.200.R.0160	**160**	**200**	120	40	40
Reducer **d200 x d180**	XX.200.R.0180	**180**	**200**	60	40	40
Reducer **d225 x d125**	XX.225.R.0125	**125**	**225**	80	40	40
Reducer **d225 x d140**	XX.225.R.0140	**140**	**225**	70	40	40
Reducer **d225 x d160**	XX.225.R.0160	**160**	**225**	100	40	40
Reducer **d225 x d180**	XX.225.R.0180	**180**	**225**	105	40	40
Reducer **d225 x d200**	XX.225.R.0200	**200**	**225**	80	40	40
Reducer **d250 x d125**	XX.250.R.0125	**125**	**250**	90	40	40
Reducer **d250 x d140**	XX.250.R.0140	**140**	**250**	80	40	40

1. CIRCULAR DUCTS AND FITTINGS MADE OF PVC / PPs / PP / PE

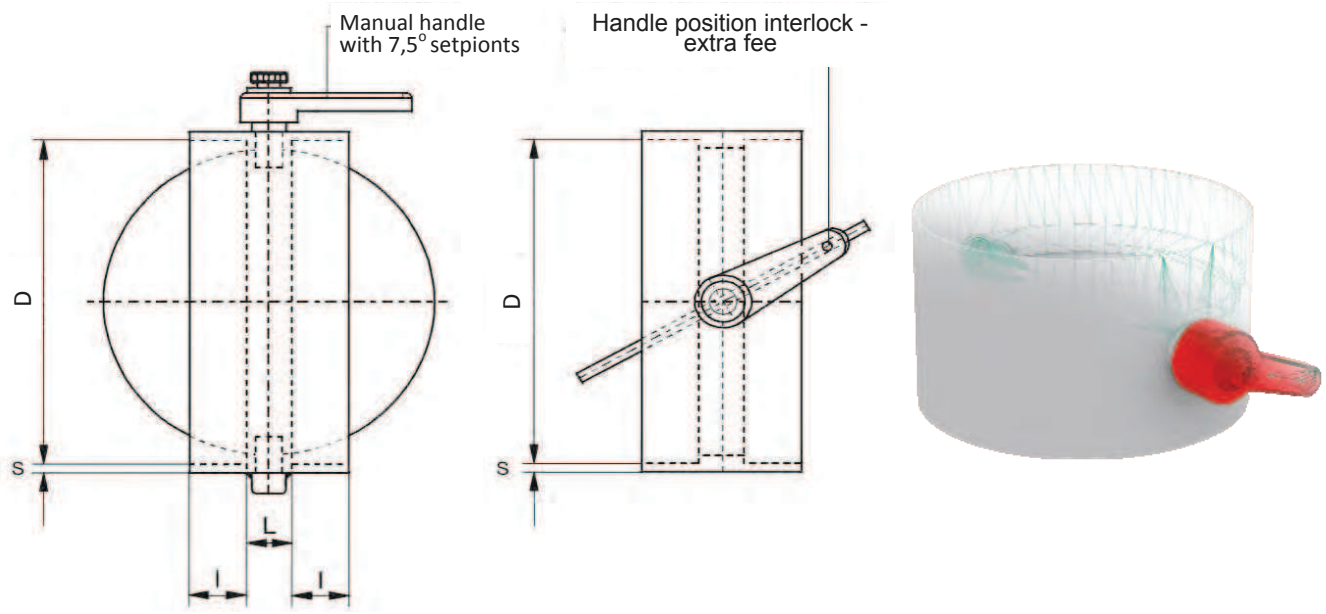
1.7. Reducer

Element name	Cat. no.	D_1	D_2	L	L1	L2
---	---	mm	mm	mm	mm	mm
Reducer **d250 x d160**	XX.250.R.0160	**160**	**250**	120	40	40
Reducer **d250 x d180**	XX.250.R.0180	**180**	**250**	100	40	40
Reducer **d250 x d200**	XX.250.R.0200	**200**	**250**	140	40	40
Reducer **d250 x d225**	XX.250.R.0225	**225**	**250**	80	40	40
Reducer **d280 x d160**	XX.280.R.0160	**160**	**280**	95	40	50
Reducer **d280 x d180**	XX.280.R.0180	**180**	**280**	75	40	50
Reducer **d280 x d200**	XX.280.R.0200	**200**	**280**	120	40	50
Reducer **d280 x d225**	XX.280.R.0225	**225**	**280**	120	40	50
Reducer **d280 x d250**	XX.280.R.0250	**250**	**280**	80	40	50
Reducer **d315 x d160**	XX.315.R.0160	**160**	**315**	115	40	50
Reducer **d315 x d180**	XX.315.R.0180	**180**	**315**	100	40	50
Reducer **d315 x d200**	XX.315.R.0200	**200**	**315**	160	40	50
Reducer **d315 x d225**	XX.315.R.0225	**225**	**315**	155	40	50
Reducer **d315 x d250**	XX.315.R.0250	**250**	**315**	100	40	50
Reducer **d315 x d280**	XX.315.R.0280	**280**	**315**	100	50	50
Reducer **d355 x d200**	XX.355.R.0200	**200**	**355**	115	40	50
Reducer **d355 x d225**	XX.355.R.0225	**225**	**355**	120	40	50
Reducer **d355 x d250**	XX.355.R.0250	**250**	**355**	140	40	50
Reducer **d355 x d280**	XX.355.R.0280	**280**	**355**	135	50	50
Reducer **d355 x d315**	XX.355.R.0315	**315**	**355**	120	50	50
Reducer **d400 x d225**	XX.400.R.0225	**225**	**400**	125	40	50
Reducer **d400 x d250**	XX.400.R.0250	**250**	**400**	125	40	50
Reducer **d400 x d280**	XX.400.R.0280	**280**	**400**	105	50	50
Reducer **d400 x d315**	XX.400.R.0315	**315**	**400**	120	50	50
Reducer **d400 x d355**	XX.400.R.0355	**355**	**400**	135	50	50
Reducer **d450 x d250**	XX.450.R.0250	**250**	**450**	145	40	50
Reducer **d450 x d280**	XX.450.R.0280	**280**	**450**	150	50	50
Reducer **d450 x d315**	XX.450.R.0315	**315**	**450**	120	50	50
Reducer **d450 x d355**	XX.450.R.0355	**355**	**450**	100	50	50
Reducer **d500 x d280**	XX.500.R.0280	**280**	**500**	160	50	50
Reducer **d500 x d315**	XX.500.R.0315	**315**	**500**	135	50	50
Reducer **d500 x d355**	XX.500.R.0355	**355**	**500**	140	50	50

1. Designations:
   a. **D_1/D_2** - external pipe diameter, mm
   b. **L_1/L_2** - coupler length, mm
   c. **XX** - material designation, see point 1.1.
2. Other dimensions available upon request.

1. CIRCULAR DUCTS AND FITTINGS MADE OF PVC / PPs / PP / PE

1.8. Manual damper d75 - d400



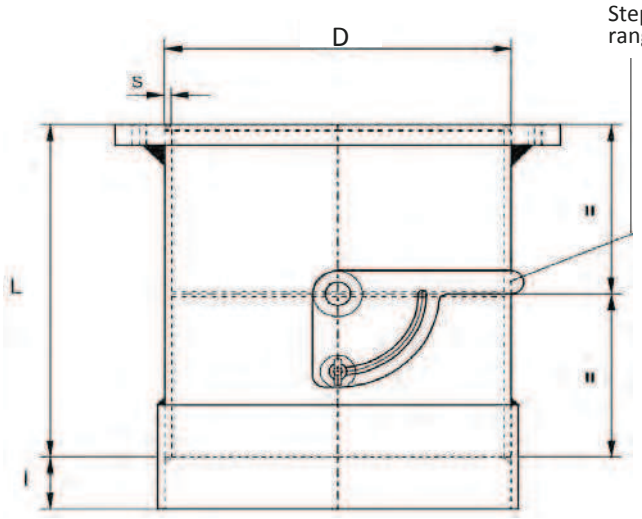
ζ at damper settings	0,5	1,5	4	11	33	120	250
	10°	20°	30°	40°	50°	60°	70°

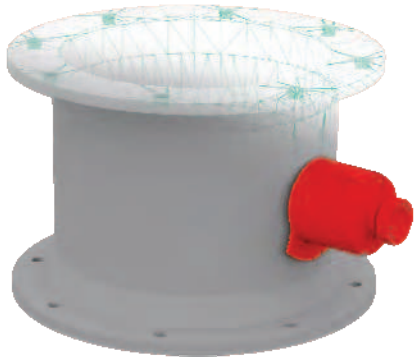
Element name	Cat. no.	D	L	l	s	
					PVC	PE / PP / PPs
---	---	mm	mm	mm	mm	mm
Manual damper **d75**	XX.075.L.0070	**75**	40	40	2,5	3,0
Manual damper **d90**	XX.090.L.0070	**90**	40	40	2,5	3,0
Manual damper **d110**	XX.110.L.0070	**110**	40	40	2,5	3,0
Manual damper **d125**	XX.125.L.0070	**125**	40	40	2,5	3,0
Manual damper **d140**	XX.140.L.0070	**140**	40	40	2,5	3,0
Manual damper **d160**	XX.160.L.0070	**160**	40	40	2,5	3,0
Manual damper **d180**	XX.180.L.0070	**180**	40	40	2,5	3,5
Manual damper **d200**	XX.200.L.0070	**200**	40	40	2,5	3,5
Manual damper **d225**	XX.225.L.0070	**225**	40	40	2,5	3,5
Manual damper **d250**	XX.250.L.0070	**250**	40	40	2,5	3,5
Manual damper **d280**	XX.280.L.0070	**280**	40	50	2,5	3,5
Manual damper **d315**	XX.315.L.0070	**315**	40	50	2,5	4,0
Manual damper **d355**	XX.355.L.0070	**355**	40	50	3,0	4,0
Manual damper **d400**	XX.400.L.0070	**400**	40	50	3,5	4,5

1. Designations:
   a. **D** - external pipe diameter, mm
   b. **l** - coupler length, mm
   c. **XX** - material designation, see point 1.1.
2. Handle position interlock - extra fee - cat. no. **XX.DDD.P.0070.B.**
3. Other dimensions available upon request.

1. CIRCULAR DUCTS AND FITTINGS MADE OF PVC / PPs / PP / PE

1.9. Manual damper d450 - d800





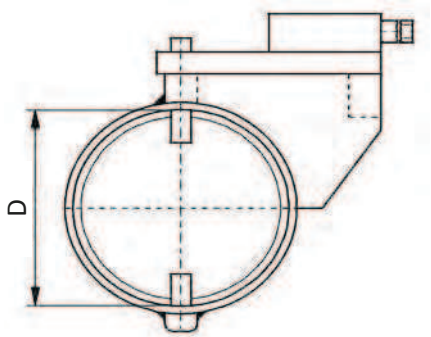
ζ at damper settings	0,5	1,5	4	11	33	120	250
	10°	20°	30°	40°	50°	60°	70°

Element name	Cat. no.	D	L	l	s	
					PVC	PE / PP / PPs
---	---	mm	mm	mm	mm	mm
Manual damper **d450**	XX.450.L.0070	**450**	320	60	3,6	5,0
Manual damper **d500**	XX.500.L.0070	**500**	360	60	4,0	5,0
Manual damper **d560**	XX.560.L.0070	**560**	410	70	---	6,0
Manual damper **d600**	XX.600.L.0070	**600**	450	70	5,0	6,0
Manual damper **d630**	XX.630.L.0070	**630**	480	70	---	6,0
Manual damper **d700**	XX.700.L.0070	**700**	520	70	6,0	8,0
Manual damper **d710**	XX.710.L.0070	**710**	530	70	---	8,0
Manual damper **d800**	XX.800.L.0070	**800**	560	70	6,0	8,0

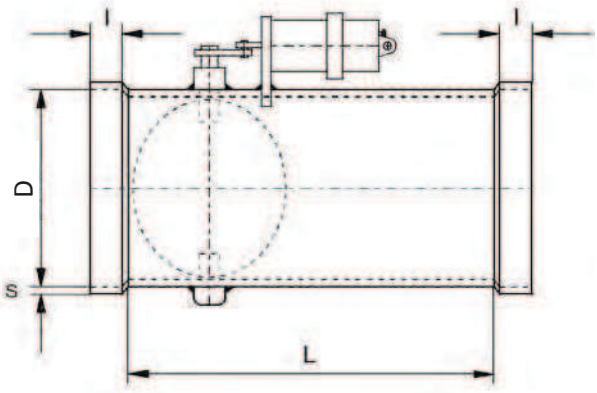
1. Designations:
   a. **D** - external pipe diameter, mm
   b. **l** - coupler length, mm
   c. **XX** - material designation, see point 1.1.
2. Connection flanged or coupler**.**
3. Handle position interlock at extra fee - cat. no. **XX.DDD.P.0070.B.**
4. Other dimensions available upon request.

1. CIRCULAR DUCTS AND FITTINGS MADE OF PVC / PPs / PP / PE

1.10. Control damper for drives



Version 1 - electric drive



Version 2 - pneumatic drive

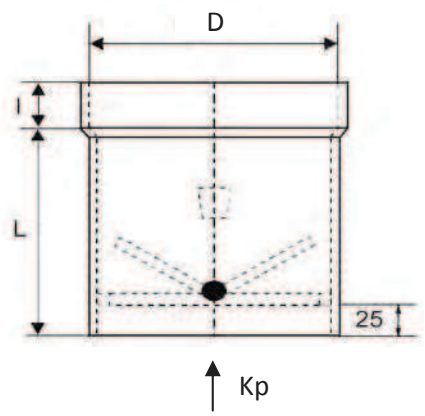
ζ at damper settings	0,5	1,5	4	11	33	120	250
	10°	20°	30°	40°	50°	60°	70°

Element name	Cat. no.	D	L	l	s	
					PVC	PE / PP / PPs
---	---	mm	mm	mm	mm	mm
Control damper for drives **d75**	XX.075.L.0071.E/P	**75**	220	40	2,5	3,0
Control damper for drives **d90**	XX.090.L.0071.E/P	**90**	220	40	2,5	3,0
Control damper for drives **d110**	XX.110.L.0071.E/P	**110**	220	40	2,5	3,0
Control damper for drives **d125**	XX.125.L.0071.E/P	**125**	220	40	2,5	3,0
Control damper for drives **d140**	XX.140.L.0071.E/P	**140**	220	40	2,5	3,0
Control damper for drives **d160**	XX.160.L.0071.E/P	**160**	220	40	2,5	3,0
Control damper for drives **d180**	XX.180.L.0071.E/P	**180**	220	40	2,5	3,5
Control damper for drives **d200**	XX.200.L.0071.E/P	**200**	220	40	2,5	3,5
Control damper for drives **d225**	XX.225.L.0071.E/P	**225**	220	40	2,5	3,5
Control damper for drives **d250**	XX.250.L.0071.E/P	**250**	220	40	2,5	3,5
Control damper for drives **d280**	XX.280.L.0071.E/P	**280**	270	50	2,5	3,5
Control damper for drives **d315**	XX.315.L.0071.E/P	**315**	270	50	2,5	4,0
Control damper for drives **d355**	XX.355.L.0071.E/P	**355**	270	50	3,0	4,0
Control damper for drives **d400**	XX.400.L.0071.E/P	**400**	270	50	3,5	4,5

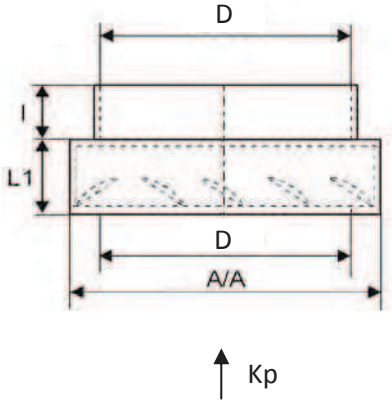
1. Designations:
   a. **D** - external pipe diameter, mm
   b. **l** - coupler length, mm
   c. **XX** - material designation, see point 1.1.
   d. **E/P** - select drive variant: E - electric or P - pneumatic
2. Connection flanged or coupler**.**
3. Other dimensions available upon request.

1. CIRCULAR DUCTS AND FITTINGS MADE OF PVC / PPs / PP / PE

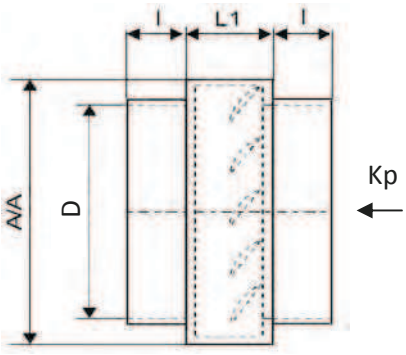
1.11. Non-return damper



For vertical installation I
XX.DDD.L.460**2** / ζ=0,5



For vertical installation II
XX.DDD.L.460**3** / ζ=1,5



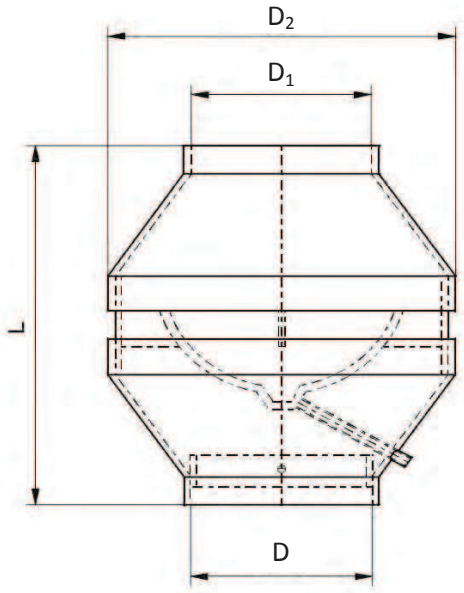
For horizontal installation
XX.DDD.L.460**1** / ζ=1,5

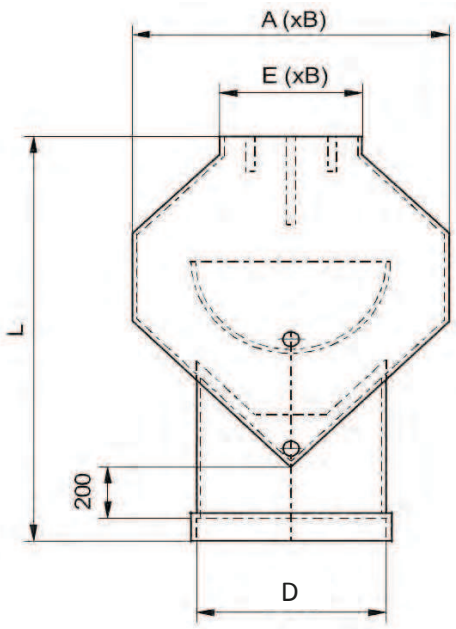
Element name	Cat. no.	D	L	l	A/A	L1
---	---	mm	mm	mm	mm	mm
Non-return damper for vertical/horizontal installation **d110**	XX.110.L.460Y	**110**	160	40	170	65
Non-return damper for vertical/horizontal installation **d125**	XX.125.L.460Y	**125**	165	40	170	65
Non-return damper for vertical/horizontal installation **d140**	XX.140.L.460Y	**140**	170	40	170	70
Non-return damper for vertical/horizontal installation **d160**	XX.160.L.460Y	**160**	180	40	205	70
Non-return damper for vertical/horizontal installation **d180**	XX.180.L.460Y	**180**	190	40	205	70
Non-return damper for vertical/horizontal installation **d200**	XX.200.L.460Y	**200**	200	40	255	70
Non-return damper for vertical/horizontal installation **d225**	XX.225.L.460Y	**225**	210	40	255	80
Non-return damper for vertical/horizontal installation **d250**	XX.250.L.460Y	**250**	225	40	305	80
Non-return damper for vertical/horizontal installation **d280**	XX.280.L.460Y	**280**	240	50	305	90
Non-return damper for vertical/horizontal installation **d315**	XX.315.L.460Y	**315**	260	50	358	90
Non-return damper for vertical/horizontal installation **d355**	XX.355.L.460Y	**355**	280	50	408	90
Non-return damper for vertical/horizontal installation **d400**	XX.400.L.460Y	**400**	300	50	470	120

1. Designations:
   a. **D** - external pipe diameter, mm
   b. **l** - coupler length, mm
   c. **XX** - material designation, see point 1.1.
   d. **Y** - variant selection in accordance with drawings above - **1,2 or 3**
   e. **Kp** - air flow direction

1. CIRCULAR DUCTS AND FITTINGS MADE OF PVC / PPs / PP / PE

1.12. Coupler or flanged deflector



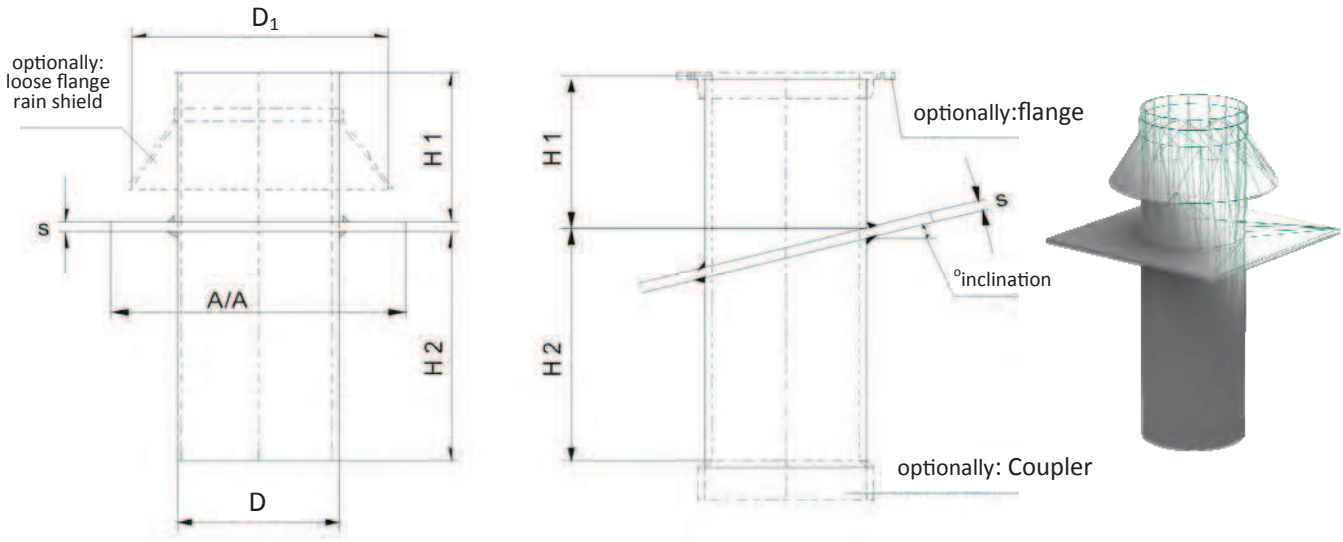


Element name	Cat. no.	D	D_1	D_2	L	A (x B)	E (x B)
---	---	mm	mm	mm	mm	mm	mm
Coupler/flanged deflector **d110**	XX.110.L.00YY	**110**	110	206	290	---	---
Coupler/flanged deflector **d125**	XX.125.L.00YY	**125**	125	256	340	---	---
Coupler/flanged deflector **d140**	XX.140.L.00YY	**140**	140	256	320	---	---
Coupler/flanged deflector **d160**	XX.160.L.00YY	**160**	160	321	410	---	---
Coupler/flanged deflector **d180**	XX.180.L.00YY	**180**	180	321	380	---	---
Coupler/flanged deflector **d200**	XX.200.L.00YY	**200**	200	361	410	---	---
Coupler/flanged deflector **d225**	XX.225.L.00YY	**225**	225	408	430	---	---
Coupler/flanged deflector **d250**	XX.250.L.00YY	**250**	250	458	470	---	---
Coupler/flanged deflector **d280**	XX.280.L.00YY	**280**	280	508	520	---	---
Coupler/flanged deflector **d315**	XX.315.L.00YY	**315**	315	508	440	---	---
Coupler/flanged deflector **d355**	XX.355.L.00YY	**355**	---	---	869	590 x 390	266 x 390
Coupler/flanged deflector **d400**	XX.400.L.00YY	**400**	---	---	992	664 x 440	300 x 440
Coupler/flanged deflector **d450**	XX.450.L.00YY	**450**	---	---	1047	747 x 495	338 x 495
Coupler/flanged deflector **d500**	XX.500.L.00YY	**500**	---	---	1140	830 x 550	375 x 550
Coupler/flanged deflector **d560**	XX.560.L.00YY	**560**	---	---	1235	913 x 605	412 x 605
Coupler/flanged deflector **d600**	XX.600.L.00YY	**600**	---	---	1328	996 x 660	450 x 660
Coupler/flanged deflector **d630**	XX.630.L.00YY	**630**	---	---	1423	1079 x 715	488 x 715
Coupler/flanged deflector **d700**	XX.700.L.00YY	**700**	---	---	1516	1162 x 770	525 x 770
Coupler/flanged deflector **d710**	XX.710.L.00YY	**710**	---	---	1611	1245 x 825	600 x 825
Coupler/flanged deflector **d800**	XX.800.L.00YY	**800**	---	---	1704	1328 x 880	675 x 880

1. Designations:
   a. **D** - external pipe diameter, mm
   b. **XX** - material designation, see point 1.1.
   c. **YY** - select variant: 09 - coupler-typee 91 - flanged-typee

1. CIRCULAR DUCTS AND FITTINGS MADE OF PVC / PPs / PP / PE

1.13. Roof penetration – roof inclination of 0° - 45°



					Inclination 0°		
Element name	**Cat. no.**	**D**	**D_1**	**s**	**A/A**	**H1**	**H2**
---	---	mm	mm	mm	mm	mm	mm
Roof penetration inclination of 0° **d110**	XX.110.L.3000.Y	**110**	160	8	350x350	250	400
Roof penetration inclination of 0° **d125**	XX.125.L.3000.Y	**125**	160	8	350x350	250	400
Roof penetration inclination of 0° **d140**	XX.140.L.3000.Y	**140**	180	8	350x350	250	400
Roof penetration inclination of 0° **d160**	XX.160.L.3000.Y	**160**	200	8	400x400	250	400
Roof penetration inclination of 0° **d180**	XX.180.L.3000.Y	**180**	220	8	400x400	250	400
Roof penetration inclination of 0° **d200**	XX.200.L.3000.Y	**200**	250	8	400x400	250	400
Roof penetration inclination of 0° **d225**	XX.225.L.3000.Y	**225**	280	10	450x450	250	400
Roof penetration inclination of 0° **d250**	XX.250.L.3000.Y	**250**	315	10	450x450	250	400
Roof penetration inclination of 0° **d280**	XX.280.L.3000.Y	**280**	315	10	500x500	250	400
Roof penetration inclination of 0° **d315**	XX.315.L.3000.Y	**315**	400	10	500x500	250	400
Roof penetration inclination of 0° **d355**	XX.355.L.3000.Y	**355**	450	10	550x550	250	400
Roof penetration inclination of 0° **d400**	XX.400.L.3000.Y	**400**	500	10	600x600	250	400

1. Designations:
   a. **D** - external pipe diameter, mm
   b. **D_1** - rain shield flange diameter, mm
   c. **XX** - material designation, see point 1.1.
   d. **Y** - variant choice: **M** - optional coupler / **K** - optional flange / **LK** - losse rain shield flange.
2. Other dimensions available upon request.

1. CIRCULAR DUCTS AND FITTINGS MADE OF PVC / PPs / PP / PE

1.13. Roof penetration – roof inclination of 0° - 45°

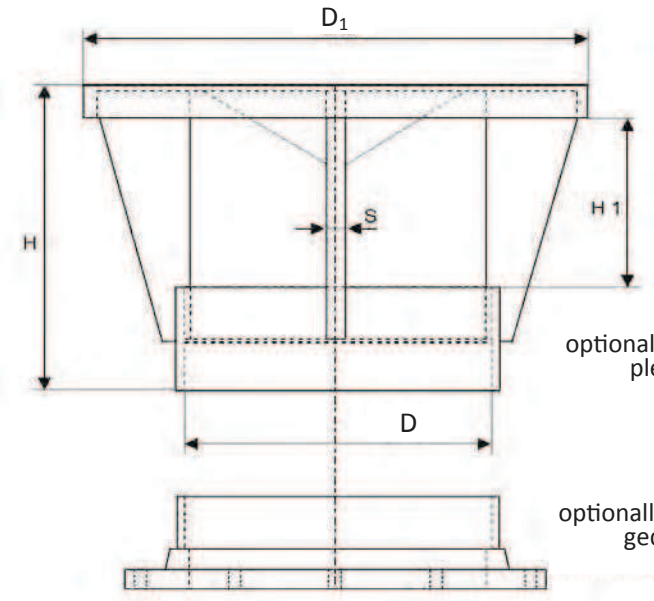
					Inclination 1° - 22°		
Element name	**Cat. no.**	**D**	**D_1**	**s**	**A/A**	**H1**	**H2**
---	---	mm	mm	mm	mm	mm	mm
Roof penetration inclination of 1° - 22° **d110**	XX.110.L.3122.Y	**110**	160	8	400x400	300	430
Roof penetration inclination of 1° - 22° **d125**	XX.125.L.3122.Y	**125**	160	8	400x400	250	430
Roof penetration inclination of 1° - 22° **d140**	XX.140.L.3122.Y	**140**	180	8	400x400	300	435
Roof penetration inclination of 1° - 22° **d160**	XX.160.L.3122.Y	**160**	200	8	450x450	300	440
Roof penetration inclination of 1° - 22° **d180**	XX.180.L.3122.Y	**180**	220	8	450x450	300	445
Roof penetration inclination of 1° - 22° **d200**	XX.200.L.3122.Y	**200**	250	8	450x450	300	450
Roof penetration inclination of 1° - 22° **d225**	XX.225.L.3122.Y	**225**	280	10	500x500	300	455
Roof penetration inclination of 1° - 22° **d250**	XX.250.L.3122.Y	**250**	315	10	500x500	300	460
Roof penetration inclination of 1° - 22° **d280**	XX.280.L.3122.Y	**280**	315	10	550x550	300	470
Roof penetration inclination of 1° - 22° **d315**	XX.315.L.3122.Y	**315**	400	10	550x550	300	480
Roof penetration inclination of 1° - 22° **d355**	XX.355.L.3122.Y	**355**	450	10	600x600	300	490
Roof penetration inclination of 1° - 22° **d400**	XX.400.L.3122.Y	**400**	500	10	650x650	300	500

					Inclination 23° - 45°		
Element name	**Cat. no.**	**D**	**D_1**	**s**	**A/A**	**H1**	**H2**
---	---	mm	mm	mm	mm	mm	mm
Roof penetration inclination of 23° - 45° **d110**	XX.110.L.3345.Y	**110**	160	8	450x450	350	450
Roof penetration inclination of 23° - 45° **d125**	XX.125.L.3345.Y	**125**	160	8	450x450	350	460
Roof penetration inclination of 23° - 45° **d140**	XX.140.L.3345.Y	**140**	180	8	450x450	350	470
Roof penetration inclination of 23° - 45° **d160**	XX.160.L.3345.Y	**160**	200	8	500x500	350	480
Roof penetration inclination of 23° - 45° **d180**	XX.180.L.3345.Y	**180**	220	8	500x500	350	490
Roof penetration inclination of 23° - 45° **d200**	XX.200.L.3345.Y	**200**	250	8	500x500	350	500
Roof penetration inclination of 23° - 45° **d225**	XX.225.L.3345.Y	**225**	280	10	550x550	350	510
Roof penetration inclination of 23° - 45° **d250**	XX.250.L.3345.Y	**250**	315	10	550x550	350	525
Roof penetration inclination of 23° - 45° **d280**	XX.280.L.3345.Y	**280**	315	10	600x600	350	540
Roof penetration inclination of 23° - 45° **d315**	XX.315.L.3345.Y	**315**	400	10	600x600	350	550
Roof penetration inclination of 23° - 45° **d355**	XX.355.L.3345.Y	**355**	450	10	650x650	350	570
Roof penetration inclination of 23° - 45° **d400**	XX.400.L.3345.Y	**400**	500	10	700x700	350	600

1. Designations:
   a. **D** - external pipe diameter, mm
   b. **D_1** - rain shield flange diameter, mm
   c. **XX** - material designation, see point 1.1.
   d. **Y** - variant choice: **M** - optional coupler / **K** - optional flange / **LK** - losse rain shield flange.
2. Other dimensions available upon request.

1. CIRCULAR DUCTS AND FITTINGS MADE OF PVC / PPs / PP / PE

1.14. Rain shield



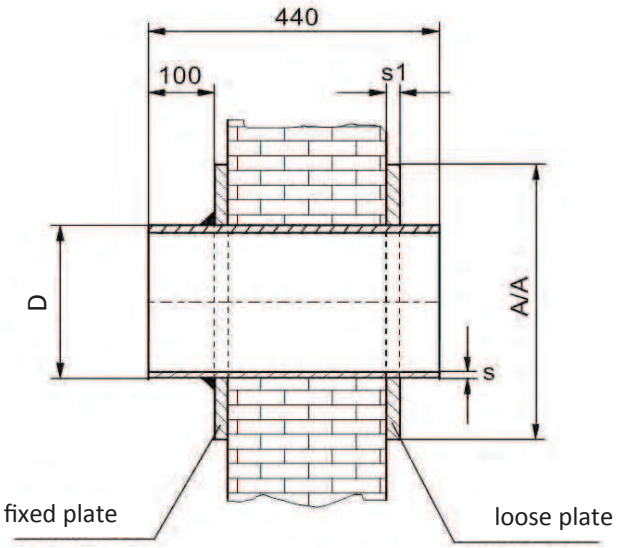
XX.DDD.L.400Y / ζ=1,5

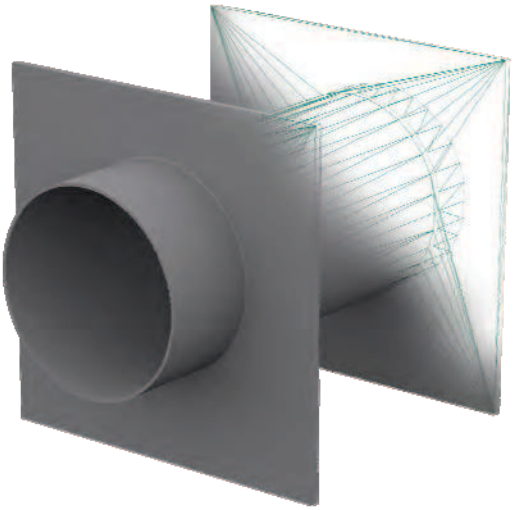
Element name	Cat. no.	D	D_1	s	A/A	H1
---	---	mm	mm	mm	mm	mm
Rain shield Coupler/flanged **d110**	XX.110.L.400Y	**110**	225	55	165	8
Rain shield Coupler/flanged **d125**	XX.125.L.400Y	**125**	225	65	175	8
Rain shield Coupler/flanged **d140**	XX.140.L.400Y	**140**	250	70	180	8
Rain shield Coupler/flanged **d160**	XX.160.L.400Y	**160**	250	80	190	8
Rain shield Coupler/flanged **d180**	XX.180.L.400Y	**180**	280	90	200	8
Rain shield Coupler/flanged **d200**	XX.200.L.400Y	**200**	315	100	210	8
Rain shield Coupler/flanged **d225**	XX.225.L.400Y	**225**	355	115	225	8
Rain shield Coupler/flanged **d250**	XX.250.L.400Y	**250**	400	125	235	8
Rain shield Coupler/flanged **d280**	XX.280.L.400Y	**280**	450	140	270	10
Rain shield Coupler/flanged **d315**	XX.315.L.400Y	**315**	500	160	290	10
Rain shield Coupler/flanged **d355**	XX.355.L.400Y	**355**	550	170	300	10
Rain shield Coupler/flanged **d400**	XX.400.L.400Y	**400**	600	200	330	10

1. Designations:
   a. **D** - external pipe diameter, mm
   b. **D_1** - rain shield diameter, mm
   c. **XX** - material designation, see point 1.1.
   d. **Y** - variant choice: **1** - optional coupler / **2** - optional flange
2. Other dimensions available upon request.

1. CIRCULAR DUCTS AND FITTINGS MADE OF PVC / PPs / PP / PE

1.15. Wall penetration



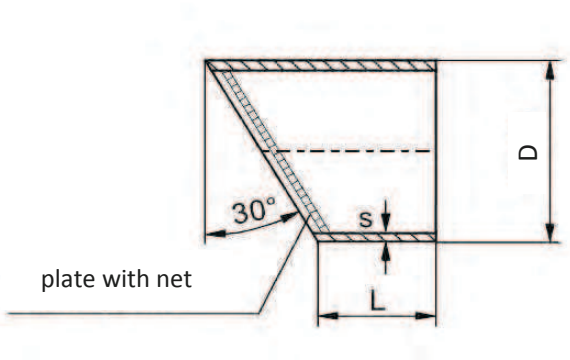


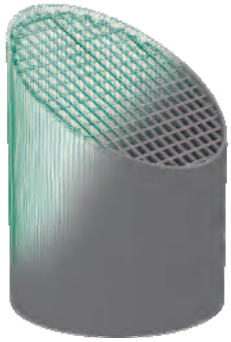
Element name	Cat. no.	D	A/A	s1	s	
					PVC	PE / PP / PPs
---	---	mm	mm	mm	mm	mm
Wall penetration **d110**	XX.110.L.7001	**110**	210	5	1,8	3,0
Wall penetration **d125**	XX.125.L.7001	**125**	275	5	1,8	3,0
Wall penetration **d140**	XX.140.L.7001	**140**	290	5	1,8	3,0
Wall penetration **d160**	XX.160.L.7001	**160**	310	5	1,8	3,0
Wall penetration **d180**	XX.180.L.7001	**180**	330	5	1,8	3,0
Wall penetration **d200**	XX.200.L.7001	**200**	350	8	1,8	3,0
Wall penetration **d225**	XX.225.L.7001	**225**	425	8	1,8	3,5
Wall penetration **d250**	XX.250.L.7001	**250**	450	8	2,0	3,5
Wall penetration **d280**	XX.280.L.7001	**280**	480	8	2,3	3,5
Wall penetration **d315**	XX.315.L.7001	**315**	515	8	2,5	5,0
Wall penetration **d355**	XX.355.L.7001	**355**	555	8	2,9	5,0
Wall penetration **d400**	XX.400.L.7001	**400**	600	8	3,2	6,0

1. Designations:
   a. **D** - external pipe diameter, mm
   b. **XX** - material designation, see point 1.1.
2. Other dimensions available upon request.

1. CIRCULAR DUCTS AND FITTINGS MADE OF PVC / PPs / PP / PE

1.16. Protective net





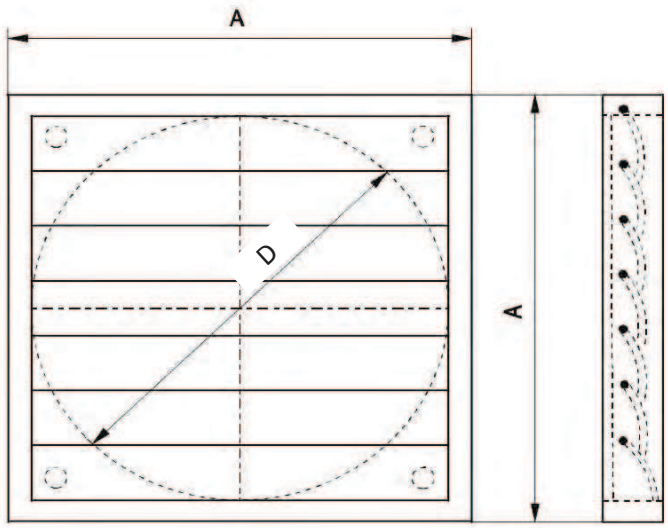
XX.DDD.L.6001 / ζ=1,4

Element name	Cat. no.	D	L	s	
				PVC	PE / PP / PPs
---	---	mm	mm	mm	mm
Protective net **d110**	XX.110.L.6001	**110**	100	1,8	3,0
Protective net **d125**	XX.125.L.6001	**125**	100	1,8	3,0
Protective net **d140**	XX.140.L.6001	**140**	100	1,8	3,0
Protective net **d160**	XX.160.L.6001	**160**	100	1,8	3,0
Protective net **d180**	XX.180.L.6001	**180**	150	1,8	3,0
Protective net **d200**	XX.200.L.6001	**200**	150	1,8	3,0
Protective net **d225**	XX.225.L.6001	**225**	150	1,8	3,5
Protective net **d250**	XX.250.L.6001	**250**	150	2,0	3,5
Protective net **d280**	XX.280.L.6001	**280**	200	2,3	3,5
Protective net **d315**	XX.315.L.6001	**315**	200	2,5	5,0
Protective net **d355**	XX.355.L.6001	**355**	200	2,9	5,0
Protective net **d400**	XX.400.L.6001	**400**	200	3,2	6,0

1. Designations:
   a. **D** - external pipe diameter, mm
   b. **D_1** - rain shield diameter, mm
   c. **XX** - material designation, see point 1.1.
   d. **Y** - variant choice: **1** - optional coupler / **2** - optional flange
2. Other dimensions available upon request.

1. CIRCULAR DUCTS AND FITTINGS MADE OF PVC / PPs / PP / PE

1.17. Closing blind



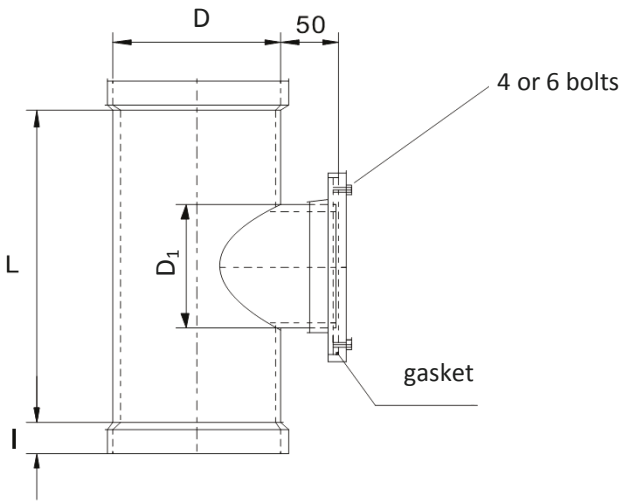
Pressure loss, Vmax = 10m/s		
d110 - d200	100 m^3/h	**7 - 9 Pa**
	1100 m^3/h	**60 - 70 Pa**
d225 - d315	100 m^3/h	**5 Pa**
	1000 m^3/h	**18 - 28 Pa**
	2800 m^3/h	**30 - 60 Pa**
d355 - d400	100 m^3/h	**3 - 5 Pa**
	1000 m^3/h	**10 - 15 Pa**
	4500 m^3/h	**20 - 28 Pa**

Element name	Cat. no.	D	A
---	---	mm	mm
Closing blind LVA 12 **d110**	XX.110.L.0120	**110**	160
Closing blind LVA 12 **d125**	XX.125.L.0120	**125**	160
Closing blind LVA 15 **d140**	XX.140.L.0150	**140**	194
Closing blind LVA 15 **d160**	XX.160.L.0150	**160**	194
Closing blind LVA 20 **d180**	XX.180.L.0200	**180**	244
Closing blind LVA 20 **d200**	XX.200.L.0200	**200**	244
Closing blind LVA 25 **d225**	XX.225.L.0250	**225**	294
Closing blind LVA 25 **d250**	XX.250.L.0250	**250**	294
Closing blind LVA 30 **d280**	XX.280.L.0300	**280**	347
Closing blind LVA 30 **d315**	XX.315.L.0300	**315**	347
Closing blind LVA 35 **d355**	XX.355.L.0350	**355**	397
Closing blind LVA 40 **d400**	XX.400.L.0400	**400**	462
Closing blind LVA 45 **d450**	XX.450.L.0450	**450**	501
Closing blind LVA 50 **d500**	XX.500.L.0500	**500**	549
Closing blind LVA 65 **d600**	XX.600.L.0650	**600**	696

1. Designations:
   a. **D** - external pipe diameter, mm
   b. **XX** - material designation, see point 1.1.
2. Frame with lamellae made of grey PVC (RAL 7001)
3. Other dimensions available upon request.

1. CIRCULAR DUCTS AND FITTINGS MADE OF PVC / PPs / PP / PE

1.18. Inspection tee

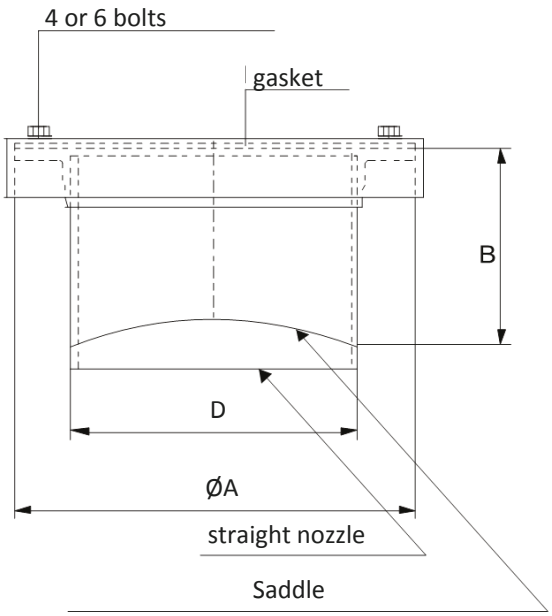


Element name	Cat. no.	D	D_1	L	l
---	---	mm	mm	mm	mm
Inspection tee **d110/d110**	XX.110.TR.0110	**110**	110	210	40
Inspection tee **d125/d125**	XX.125.TR.0125	**125**	125	210	40
Inspection tee **d140/d140**	XX.140.TR.0140	**140**	140	210	40
Inspection tee **d160/d110**	XX.160.TR.0110	**160**	110	210	40
Inspection tee **d160/d160**	XX.160.TR.0160	**160**	160	260	40
Inspection tee **d180/d180**	XX.180.TR.0180	**180**	180	260	40
Inspection tee **d200/d160**	XX.200.TR.0160	**200**	160	260	40
Inspection tee **d200/d200**	XX.200.TR.0200	**200**	200	300	40
Inspection tee **d225/d200**	XX.225.TR.0200	**225**	200	300	40
Inspection tee **d250/d200**	XX.250.TR.0200	**250**	200	300	40
Inspection tee **d250/d250**	XX.250.TR.0250	**250**	250	300	50
Inspection tee **d280/d200**	XX.280.TR.0280	**280**	200	300	50
Inspection tee **d280/d250**	XX.280.TR.0250	**280**	250	300	50
Inspection tee **d315/d250**	XX.315.TR.0250	**315**	250	350	50
Inspection tee **d355/d250**	XX.355.TR.0250	**355**	250	350	50
Inspection tee **d400/d250**	XX.400.TR.0250	**400**	250	350	50

1. Designations:
   a. **D** - external pipe diameter, mm
   b. **D_1** - inspection nozzle, mm
   c. **XX** - material designation, see point 1.1.
2. Other dimensions available upon request.

1. CIRCULAR DUCTS AND FITTINGS MADE OF PVC / PPs / PP / PE

1.19. Inspection nozzle

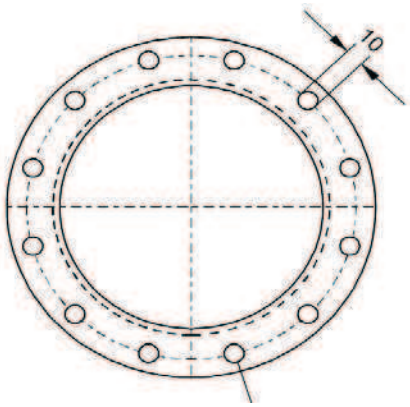


Element name	Cat. no.	D	ØA	B
---	---	mm	mm	mm
Inspection nozzle **d110**	XX.110.B.0000	**110**	180	100
Inspection nozzle **d125**	XX.125.B.0000	**125**	200	100
Inspection nozzle **d140**	XX.140.B.0000	**140**	225	100
Inspection nozzle **d160**	XX.160.B.0000	**160**	250	100
Inspection nozzle **d180**	XX.180.B.0000	**180**	280	100
Inspection nozzle **d200**	XX.200.B.0000	**200**	280	100
Inspection nozzle **d225**	XX.225.B.0000	**225**	315	100
Inspection nozzle **d250**	XX.250.B.0000	**250**	355	100
Inspection nozzle **d280**	XX.280.B.0000	**280**	400	100
Inspection nozzle **d315**	XX.315.B.0000	**315**	400	150
Inspection nozzle **d355**	XX.355.B.0000	**355**	450	150
Inspection nozzle **d400**	XX.400.B.0000	**400**	500	150

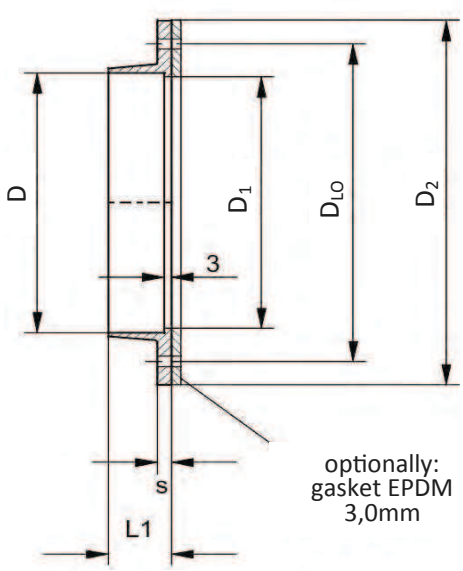
1. Designations:
   a. **D** - external pipe diameter, mm
   b. **XX** - material designation, see point 1.1.
2. Other dimensions available upon request.

1. CIRCULAR DUCTS AND FITTINGS MADE OF PVC / PPs / PP / PE

1.20. Coupler flange d75 - d400



LO - number of openings



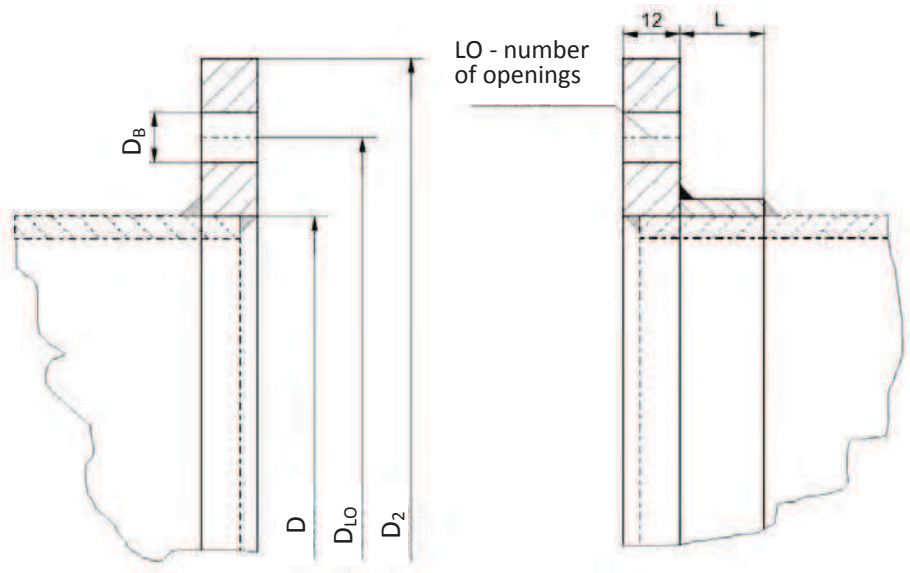
optionally:
gasket EPDM
3,0mm

Element name	Cat. no.	D	D_{LO}	D_2	LO	D_1	L1	s
---	---	mm	mm	mm	--	mm	mm	mm
Coupler flange **d75**	XX.075.L.0004	**75**	110	140	8	69	29	6,5
Coupler flange **d90**	XX.090.L.0004	**90**	128	158	8	84	29	6,5
Coupler flange **d110**	XX.110.L.0004	**110**	150	170	8	106	30	8,0
Coupler flange **d125**	XX.125.L.0004	**125**	165	185	8	122	30	8,0
Coupler flange **d140**	XX.140.L.0004	**140**	175	200	8	136	30	8,0
Coupler flange **d160**	XX.160.L.0004	**160**	200	230	8	156	30	8,0
Coupler flange **d180**	XX.180.L.0004	**180**	220	245	8	176	30	8,0
Coupler flange **d200**	XX.200.L.0004	**200**	240	270	8	196	30	8,0
Coupler flange **d225**	XX.225.L.0004	**225**	265	290	8	222	30	8,0
Coupler flange **d250**	XX.250.L.0004	**250**	290	320	12	246	30	8,0
Coupler flange **d280**	XX.280.L.0004	**280**	325	355	12	275	30	10,0
Coupler flange **d315**	XX.315.L.0004	**315**	350	380	12	310	30	10,0
Coupler flange **d355**	XX.355.L.0004	**355**	400	435	12	349	30	10,0
Coupler flange **d400**	XX.400.L.0004	**400**	445	475	16	393	30	10,0

1. Designations:
   a. **D** - external pipe diameter, mm
   b. **D_2** - external flange diameter, mm
   c. **D_{LO}** - opening spacing diameter, mm
   d. **LO** - number of openings, mm
   e. **XX** - material designation, see point 1.1.
2. Other dimensions available upon request.

1. CIRCULAR DUCTS AND FITTINGS MADE OF PVC / PPs / PP / PE

1.21. Coupler d450 - d800

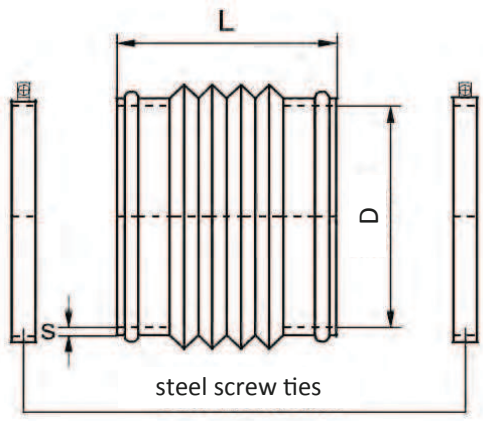


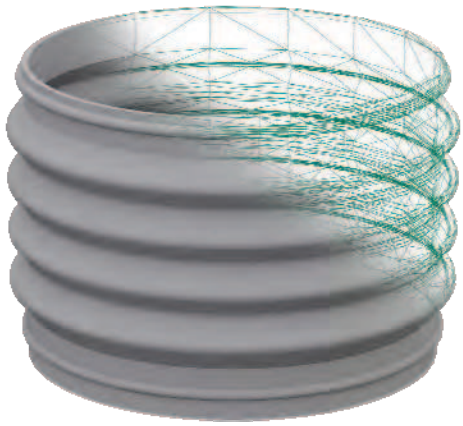
Element name	Cat. no.	D	D_{LO}	D_2	D_B	LO	L
---	---	mm	mm	mm	--	mm	mm
Coupler **d450**	XX.450.L.0044	**450**	510	560	9	16	60
Coupler **d500**	XX.500.L.0044	**500**	560	610	9	20	60
Coupler **d560**	XX.560.L.0044	**560**	610	660	9	20	60
Coupler **d600**	XX.600.L.0044	**600**	660	710	9	24	80
Coupler **d630**	XX.630.L.0044	**630**	710	760	9	24	80
Coupler **d700**	XX.700.L.0044	**700**	760	810	9	24	80
Coupler **d710**	XX.710.L.0044	**710**	760	810	9	24	80
Coupler **d800**	XX.800.L.0044	**800**	866	916	9	28	80

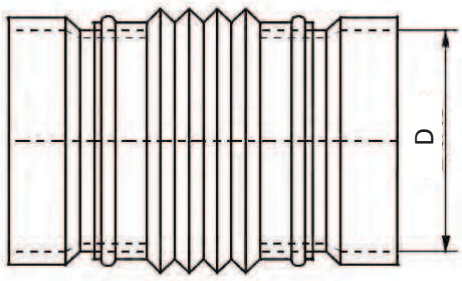
1. Designations:
   a. **D** - external pipe diameter, mm
   b. **D_2** - external flange diameter, mm
   c. **D_{LO}** - opening spacing diameter, mm
   d. **LO** - number of openings, mm
   e. **XX** - material designation, see point 1.1.
2. Other dimensions available upon request.

1. CIRCULAR DUCTS AND FITTINGS MADE OF PVC / PPs / PP / PE

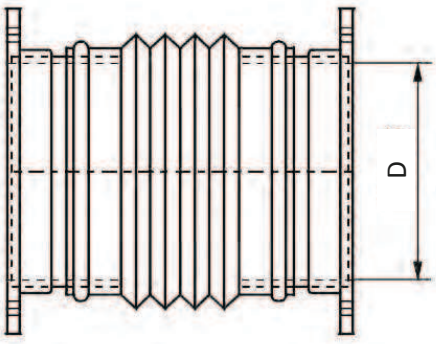
1.22. Elastic PVC connector







elastic coupler connectors



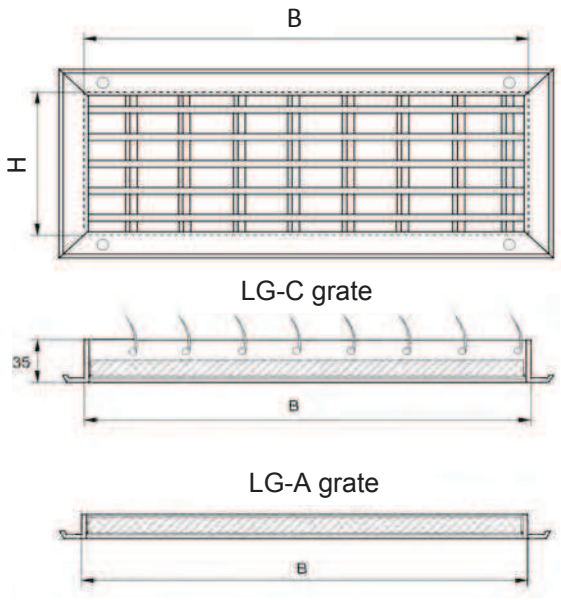
elastic flanged connectors

Element name	Cat. no.	D	L1
---	---	mm	mm
Elastic PVC connector **d75**	XX.075.E.000Y	**75**	90
Elastic PVC connector **d90**	XX.090.E.000Y	**90**	90
Elastic PVC connector **d110**	XX.110.E.000Y	**110**	90
Elastic PVC connector **d125**	XX.125.E.000Y	**125**	90
Elastic PVC connector **d140**	XX.140.E.000Y	**140**	150
Elastic PVC connector **d160**	XX.160.E.000Y	**160**	150
Elastic PVC connector **d180**	XX.180.E.000Y	**180**	150
Elastic PVC connector **d200**	XX.200.E.000Y	**200**	150
Elastic PVC connector **d225**	XX.225.E.000Y	**225**	150
Elastic PVC connector **d250**	XX.250.E.000Y	**250**	150
Elastic PVC connector **d280**	XX.280.E.000Y	**280**	150
Elastic PVC connector **d315**	XX.315.E.000Y	**315**	150
Elastic PVC connector **d355**	XX.355.E.000Y	**355**	150
Elastic PVC connector **d400**	XX.400.E.000Y	**400**	150
Elastic PVC connector **d450**	XX.450.E.000Y	**450**	150
Elastic PVC connector **d500**	XX.500.E.000Y	**500**	150
Elastic PVC connector **d560**	XX.560.E.000Y	**560**	150
Elastic PVC connector **d600**	XX.600.E.000Y	**600**	150

1. Designations:
   a. **D** - external pipe diameter, mm
   b. **XX** - material designation, see point 1.1.
   c. **Y** - variant choice: **0** - steel screw ties /**1** - optional coupler / **3** - optional flange
2. Other dimensions available upon request.

1. CIRCULAR DUCTS AND FITTINGS MADE OF PVC / PPs / PP / PE

1.23. Air supply and air exhaust grates

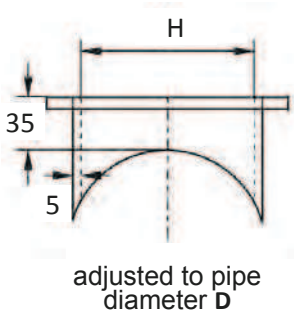


Element name	Cat. no.	B	H
---	---	mm	mm
Air supply-exhaust grate typee LG-A/C 300x100	36.300.Y.0100	300	100
Air supply-exhaust grate typee LG-A/C 400x100	36.400.Y.0100	400	100
Air supply-exhaust grate typee LG-A/C 500x100	36.500.Y.0100	500	100
Air supply-exhaust grate typee LG-A/C 600x100	36.600.Y.0100	600	100
Air supply-exhaust grate typee LG-A/C 300x150	36.300.Y.0150	300	150
Air supply-exhaust grate typee LG-A/C 400x150	36.400.Y.0150	400	150
Air supply-exhaust grate typee LG-A/C 500x150	36.500.Y.0150	500	150
Air supply-exhaust grate typee LG-A/C 600x150	36.600.Y.0150	600	150
Air supply-exhaust grate typee LG-A/C 300x200	36.300.Y.0200	300	200
Air supply-exhaust grate typee LG-A/C 400x200	36.400.Y.0200	400	200
Air supply-exhaust grate typee LG-A/C 500x200	36.500.Y.0200	500	200
Air supply-exhaust grate typee LG-A/C 600x200	36.600.Y.0200	600	200
Air supply-exhaust grate typee LG-A/C 300x250	36.300.Y.0250	300	250
Air supply-exhaust grate typee LG-A/C 400x250	36.400.Y.0250	400	250
Air supply-exhaust grate typee LG-A/C 500x250	36.500.Y.0250	500	250
Air supply-exhaust grate typee LG-A/C 600x250	36.600.Y.0250	600	250

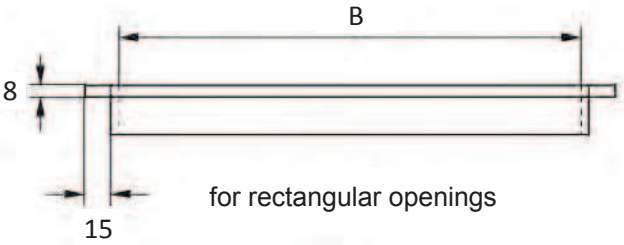
1. Designations:
   a. **Y** - grate typee selection: **A** - horizontal lamellae /**C** - horizontal and vertical lamellae
   b. **36** - material designation - grates made of grey **PVC**.
2. Other dimensions available upon request.

1. CIRCULAR DUCTS AND FITTINGS MADE OF PVC / PPs / PP / PE

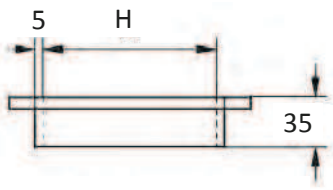
1.24. Installation frames for grates



adjusted to pipe diameter **D**



for rectangular openings



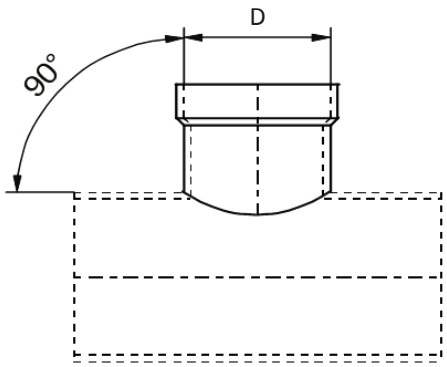
for rectangular openings

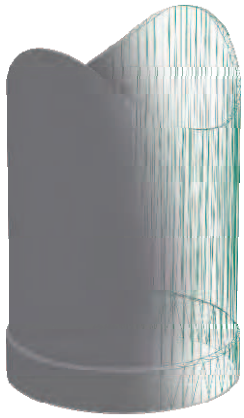
Element name	Cat. no.	B	H
---	---	mm	mm
Installation frame for grates typee LG-A/C 300x100	XX.3010.D.Y	300	100
Installation frame for grates typee LG-A/C 400x100	XX.4010.D.Y	400	100
Installation frame for grates typee LG-A/C 500x100	XX.5010.D.Y	500	100
Installation frame for grates typee LG-A/C 600x100	XX.6010.D.Y	600	100
Installation frame for grates typee LG-A/C 300x150	XX.3015.D.Y	300	150
Installation frame for grates typee LG-A/C 400x150	XX.4015.D.Y	400	150
Installation frame for grates typee LG-A/C 500x150	XX.5015.D.Y	500	150
Installation frame for grates typee LG-A/C 600x150	XX.6015.D.Y	600	150
Installation frame for grates typee LG-A/C 300x200	XX.3020.D.Y	300	200
Installation frame for grates typee LG-A/C 400x200	XX.4020.D.Y	400	200
Installation frame for grates typee LG-A/C 500x200	XX.5020.D.Y	500	200
Installation frame for grates typee LG-A/C 600x200	XX.6020.D.Y	600	200
Installation frame for grates typee LG-A/C 300x250	XX.3025.D.Y	300	250
Installation frame for grates typee LG-A/C 400x250	XX.4025.D.Y	400	250
Installation frame for grates typee LG-A/C 500x250	XX.5025.D.Y	500	250
Installation frame for grates typee LG-A/C 600x250	XX.6025.D.Y	600	250

1. Designations:
   a. **Y** - diameter of duct on which the grate is to be installed , mm
   b. **XX** - material designation, see point 1.1.
2. H and B dimensions expanded by 5.0mm.
3. Other dimensions available upon request.

1. CIRCULAR DUCTS AND FITTINGS MADE OF PVC / PPs / PP / PE

1.25. Saddle with a 90° branch-off



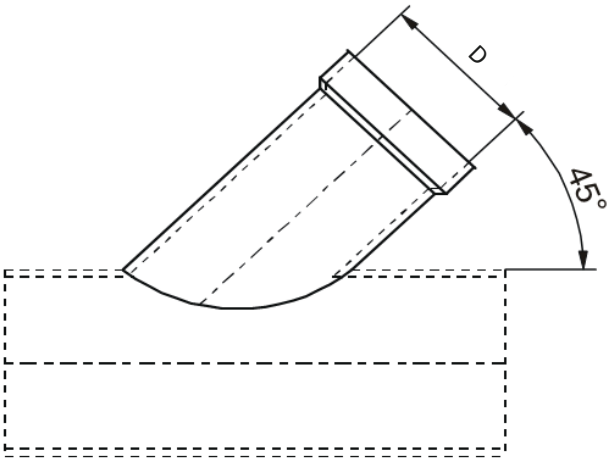


Element name	Cat. no.	D
---	---	mm
Saddle with a 90° branch-off **d75**	XX.075.O.90Y	**75**
Saddle with a 90° branch-off **d90**	XX.090.O.90Y	**90**
Saddle with a 90° branch-off **d110**	XX.110.O.90Y	**110**
Saddle with a 90° branch-off **d125**	XX.125.O.90Y	**125**
Saddle with a 90° branch-off **d140**	XX.140.O.90Y	**140**
Saddle with a 90° branch-off **d160**	XX.160.O.90Y	**160**
Saddle with a 90° branch-off **d180**	XX.180.O.90Y	**180**
Saddle with a 90° branch-off **d200**	XX.200.O.90Y	**200**
Saddle with a 90° branch-off **d225**	XX.225.O.90Y	**225**
Saddle with a 90° branch-off **d250**	XX.250.O.90Y	**250**
Saddle with a 90° branch-off **d280**	XX.280.O.90Y	**280**
Saddle with a 90° branch-off **d315**	XX.315.O.90Y	**315**
Saddle with a 90° branch-off **d355**	XX.355.O.90Y	**355**
Saddle with a 90° branch-off **d400**	XX.400.O.90Y	**400**
Saddle with a 90° branch-off **d450**	XX.450.O.90Y	**450**
Saddle with a 90° branch-off **d500**	XX.500.O.90Y	**500**
Saddle with a 90° branch-off **d560**	XX.560.O.90Y	**560**
Saddle with a 90° branch-off **d600**	XX.600.O.90Y	**600**

1. Designations:
   a. **D** - external pipe diameter, mm
   b. **Y** - diameter of duct on which the saddle is to be installed , mm
   c. **XX** - material designation, see point 1.1.
2. Other dimensions available upon request.

1. CIRCULAR DUCTS AND FITTINGS MADE OF PVC / PPs / PP / PE

1.26. Saddle with 45° branch off

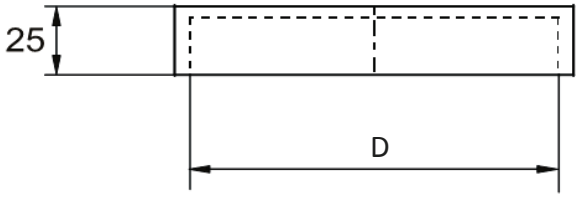


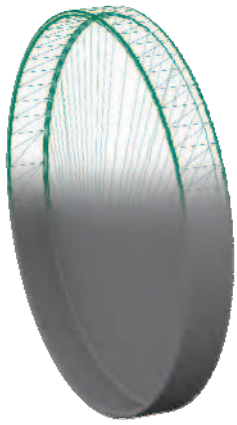
Element name	Cat. no.	D
---	---	mm
Saddle with a 45° branch-off **d75**	**XX**.075.O.45**Y**	**75**
Saddle with a 45° branch-off **d90**	**XX**.090.O.45**Y**	**90**
Saddle with a 45° branch-off **d110**	**XX**.110.O.45**Y**	**110**
Saddle with a 45° branch-off **d125**	**XX**.125.O.45**Y**	**125**
Saddle with a 45° branch-off **d140**	**XX**.140.O.45**Y**	**140**
Saddle with a 45° branch-off **d160**	**XX**.160.O.45**Y**	**160**
Saddle with a 45° branch-off **d180**	**XX**.180.O.45**Y**	**180**
Saddle with a 45° branch-off **d200**	**XX**.200.O.45**Y**	**200**
Saddle with a 45° branch-off **d225**	**XX**.225.O.45**Y**	**225**
Saddle with a 45° branch-off **d250**	**XX**.250.O.45**Y**	**250**
Saddle with a 45° branch-off **d280**	**XX**.280.O.45**Y**	**280**
Saddle with a 45° branch-off **d315**	**XX**.315.O.45**Y**	**315**
Saddle with a 45° branch-off **d355**	**XX**.355.O.45**Y**	**355**
Saddle with a 45° branch-off **d400**	**XX**.400.O.45**Y**	**400**
Saddle with a 45° branch-off **d450**	**XX**.450.O.45**Y**	**450**
Saddle with a 45° branch-off **d500**	**XX**.500.O.45**Y**	**500**
Saddle with a 45° branch-off **d560**	**XX**.560.O.45**Y**	**560**
Saddle with a 45° branch-off **d600**	**XX**.600.O.45**Y**	**600**

1. Designations:
   a. **D** - external pipe diameter, mm
   b. **Y** - diameter of duct on which the saddle is to be installed, mm
   c. **XX** - material designation, see point 1.1.
2. Other dimensions available upon request.

1. CIRCULAR DUCTS AND FITTINGS MADE OF PVC / PPs / PP / PE

1.27. Blind cap



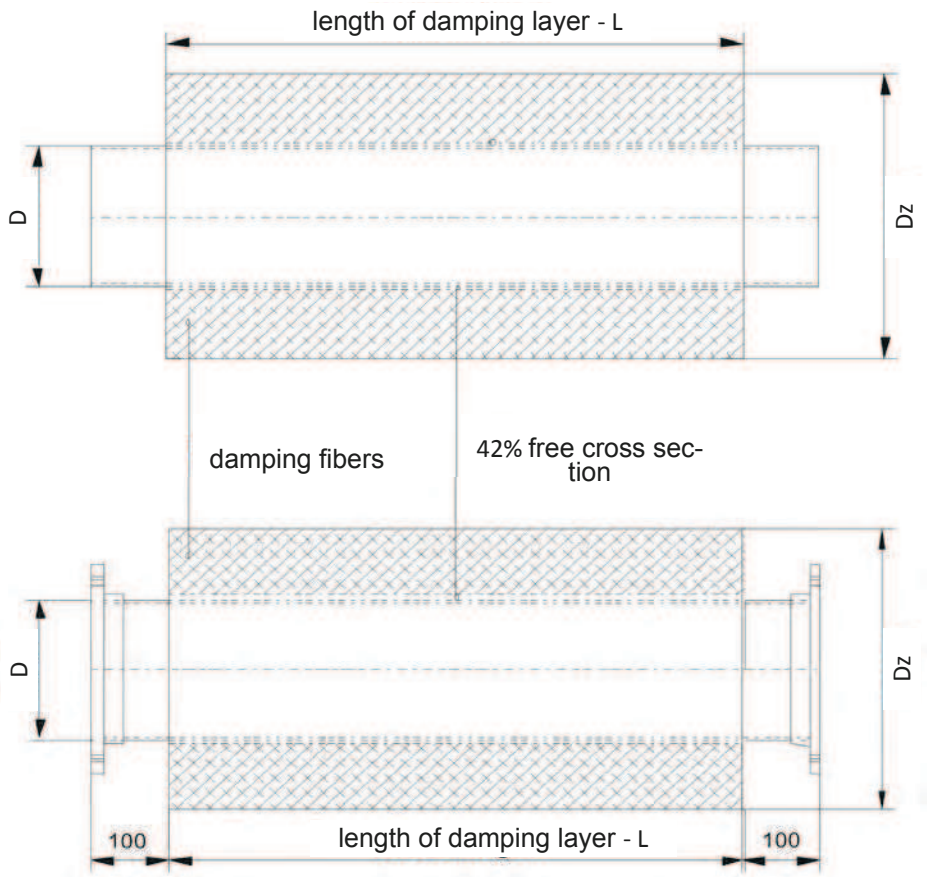


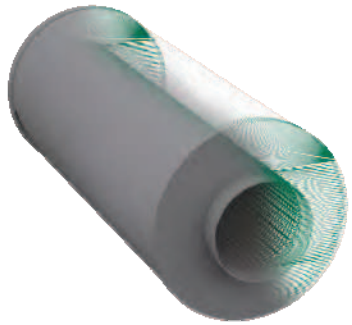
Element name	Cat. no.	D
---	---	mm
Blind cap **d75**	**XX**.075.L.0008	**75**
Blind cap **d90**	**XX**.090.L.0008	**90**
Blind cap **d110**	**XX**.110.L.0008	**110**
Blind cap **d125**	**XX**.125.L.0008	**125**
Blind cap **d140**	**XX**.140.L.0008	**140**
Blind cap **d160**	**XX**.160.L.0008	**160**
Blind cap **d180**	**XX**.180.L.0008	**180**
Blind cap **d200**	**XX**.200.L.0008	**200**
Blind cap **d225**	**XX**.225.L.0008	**225**
Blind cap **d250**	**XX**.250.L.0008	**250**
Blind cap **d280**	**XX**.280.L.0008	**280**
Blind cap **d315**	**XX**.315.L.0008	**315**
Blind cap **d355**	**XX**.355.L.0008	**355**
Blind cap **d400**	**XX**.400.L.0008	**400**
Blind cap **d450**	**XX**.450.L.0008	**450**
Blind cap **d500**	**XX**.500.L.0008	**500**
Blind cap **d560**	**XX**.560.L.0008	**560**
Blind cap **d600**	**XX**.600.L.0008	**600**

1. Designations:
   a. **D** - external pipe diameter, mm
   b. **XX** - material designation, see point 1.1.
2. Other dimensions available upon request.

1. CIRCULAR DUCTS AND FITTINGS MADE OF PVC / PPs / PP / PE

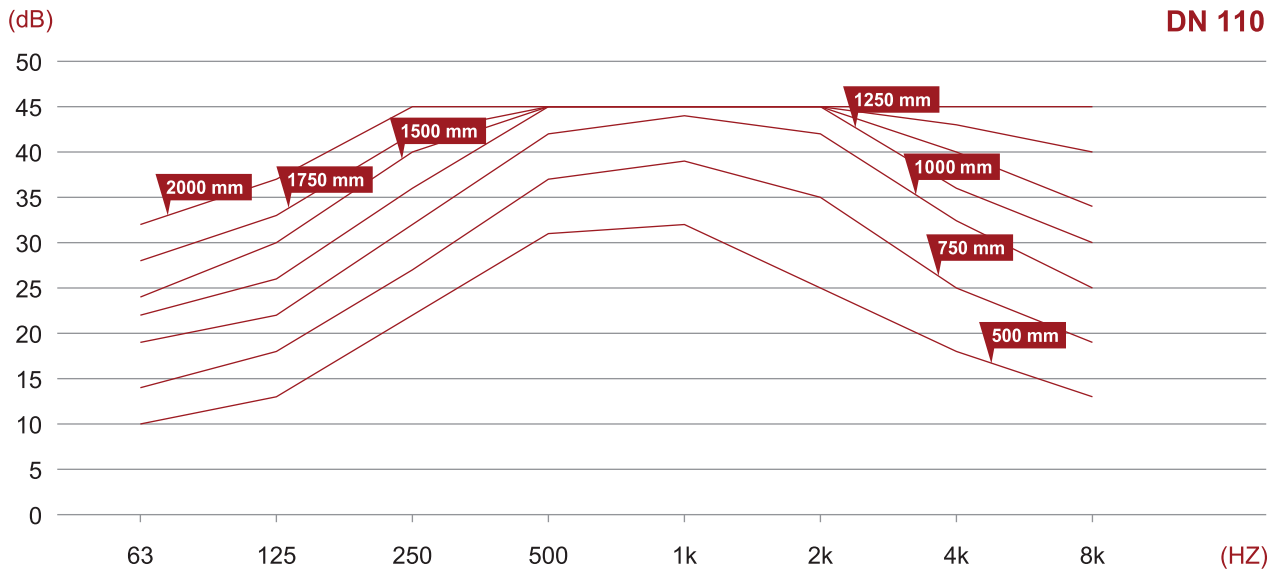
1.28. Tubular flanged and coupler damper





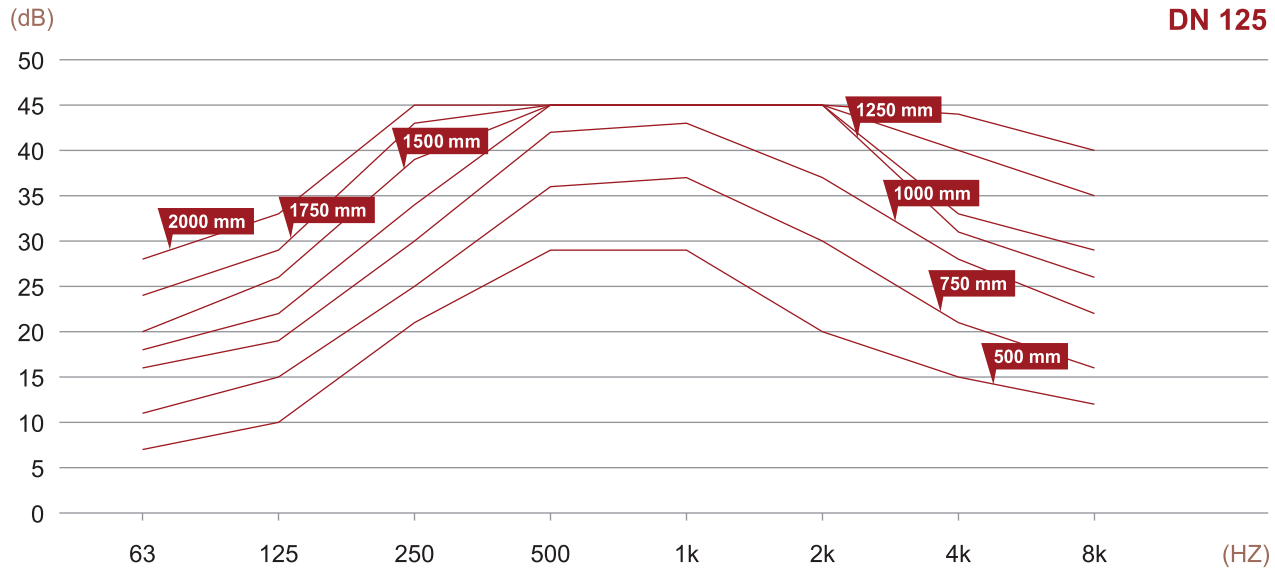
Pressure loss for dampers per 1 m of dampening inlay	
air flow speed	pressure loss
m/s	Pa/mb
5 - 8	**20 - 25**
8 - 12	**25 - 35**
12 - 15	**35 - 45**

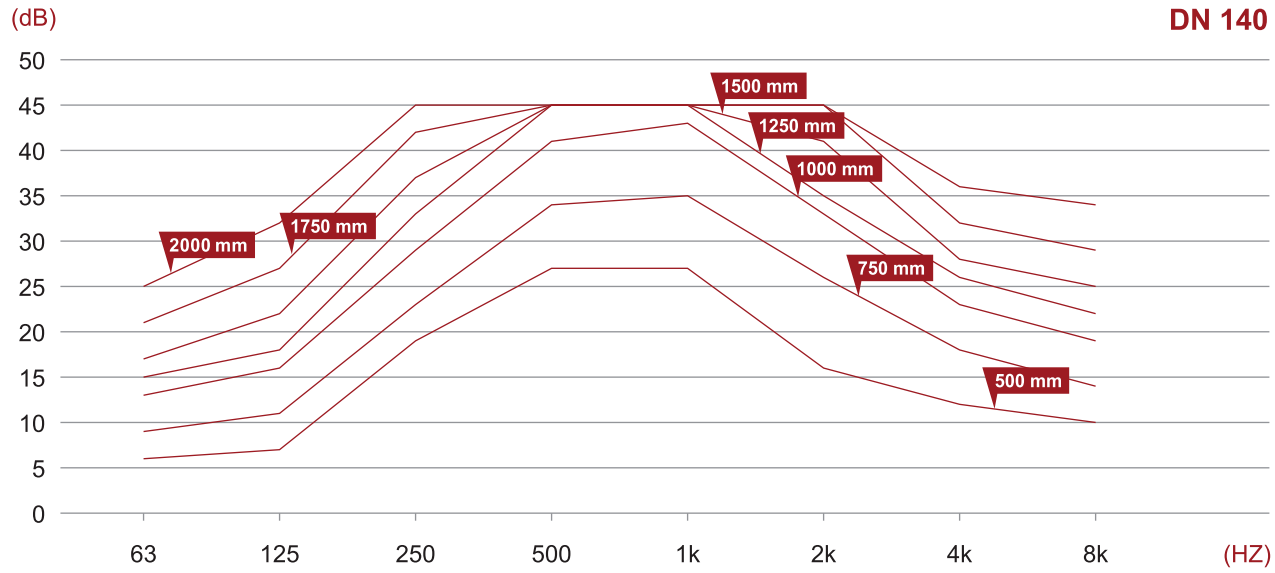
Characteristics

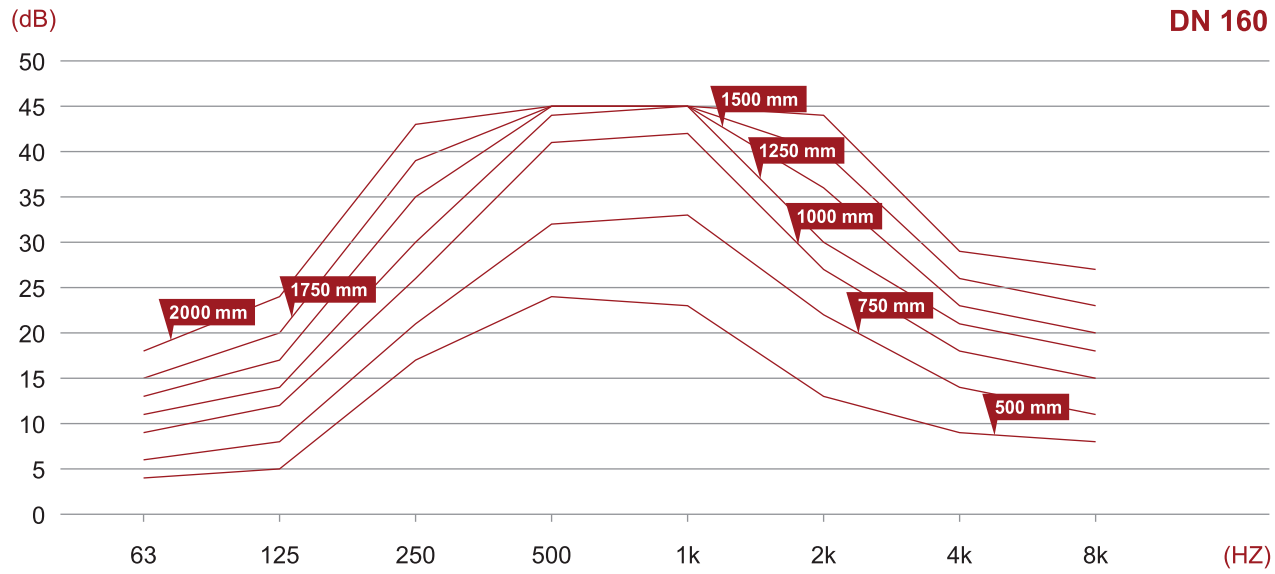


1. CIRCULAR DUCTS AND FITTINGS MADE OF PVC / PPs / PP / PE

1.28. Tubular flanged and coupler damper

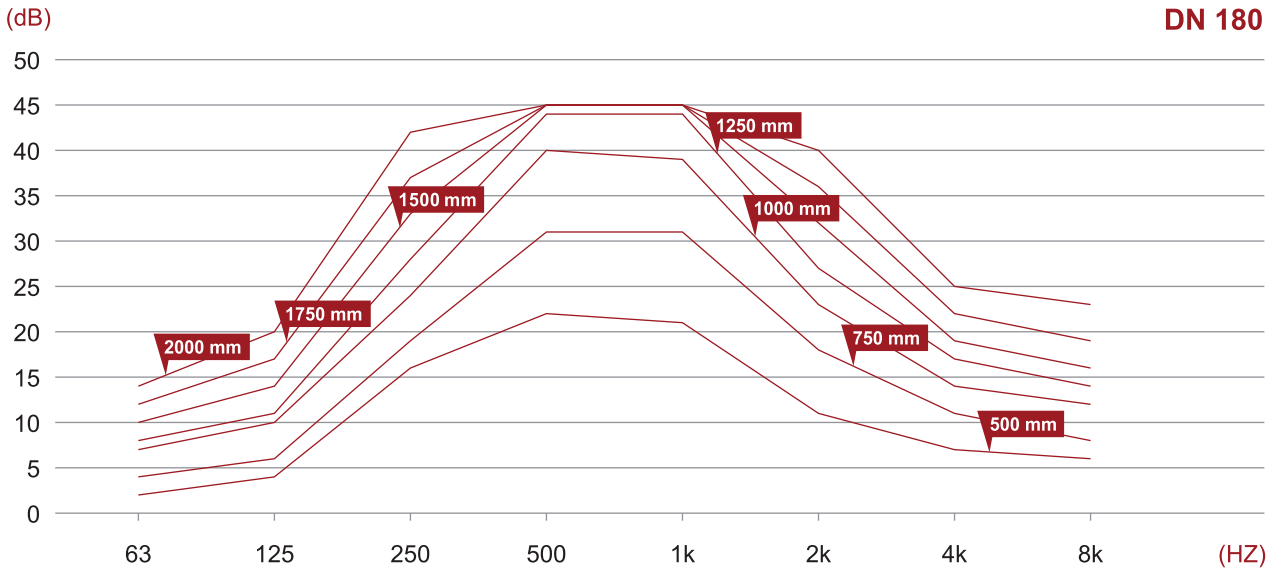


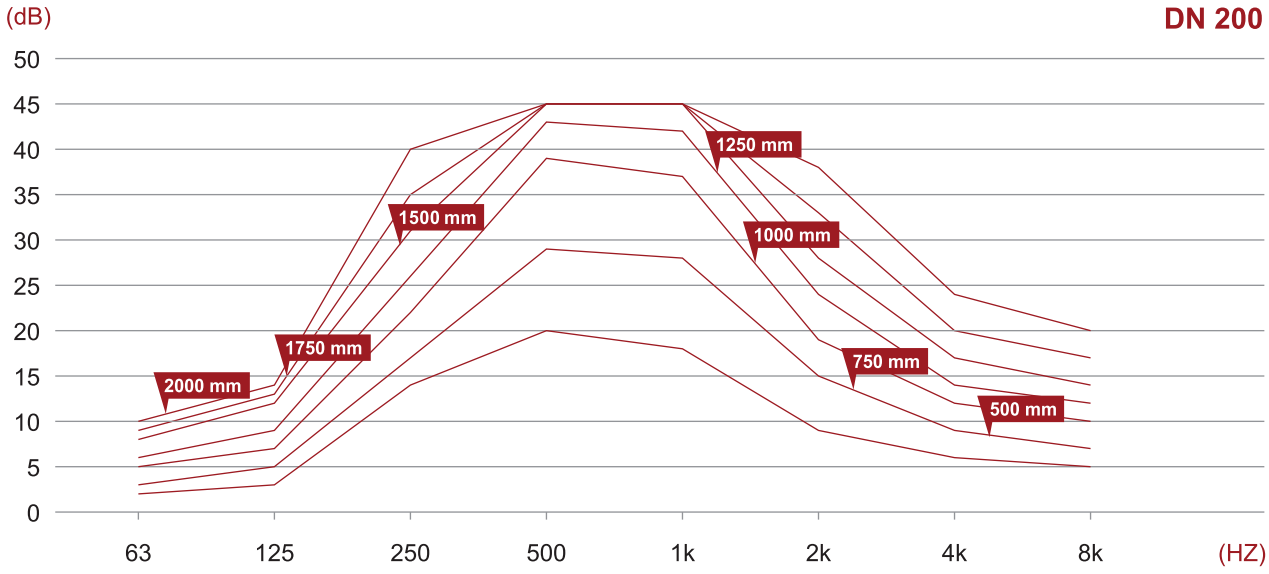


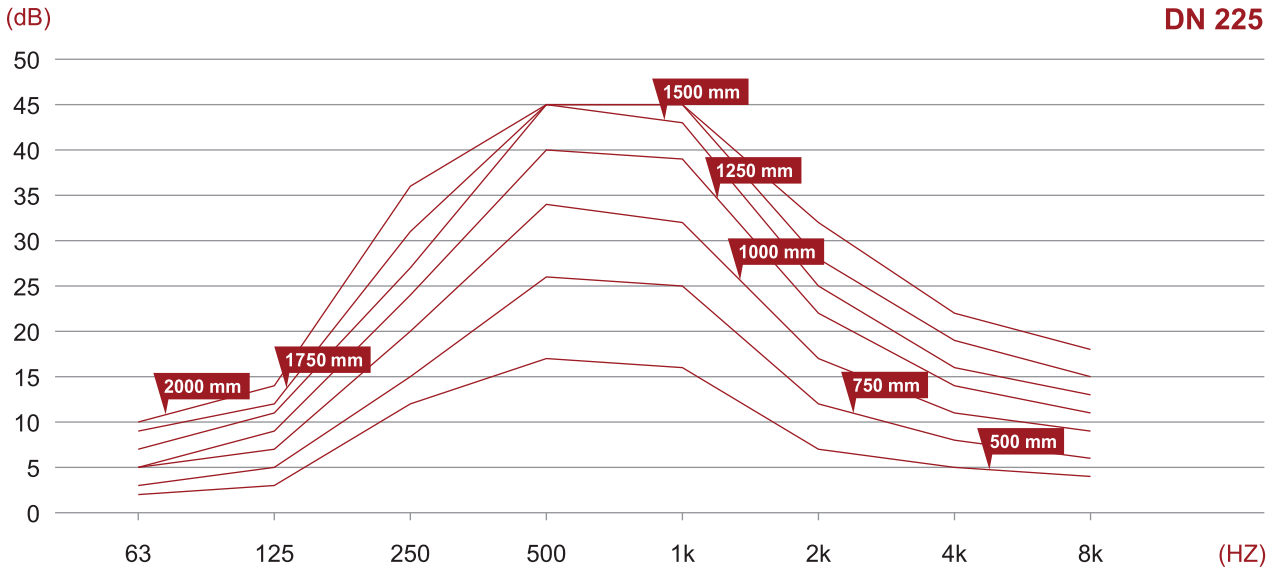


1. CIRCULAR DUCTS AND FITTINGS MADE OF PVC / PPs / PP / PE

1.28. Tubular flanged and coupler damper

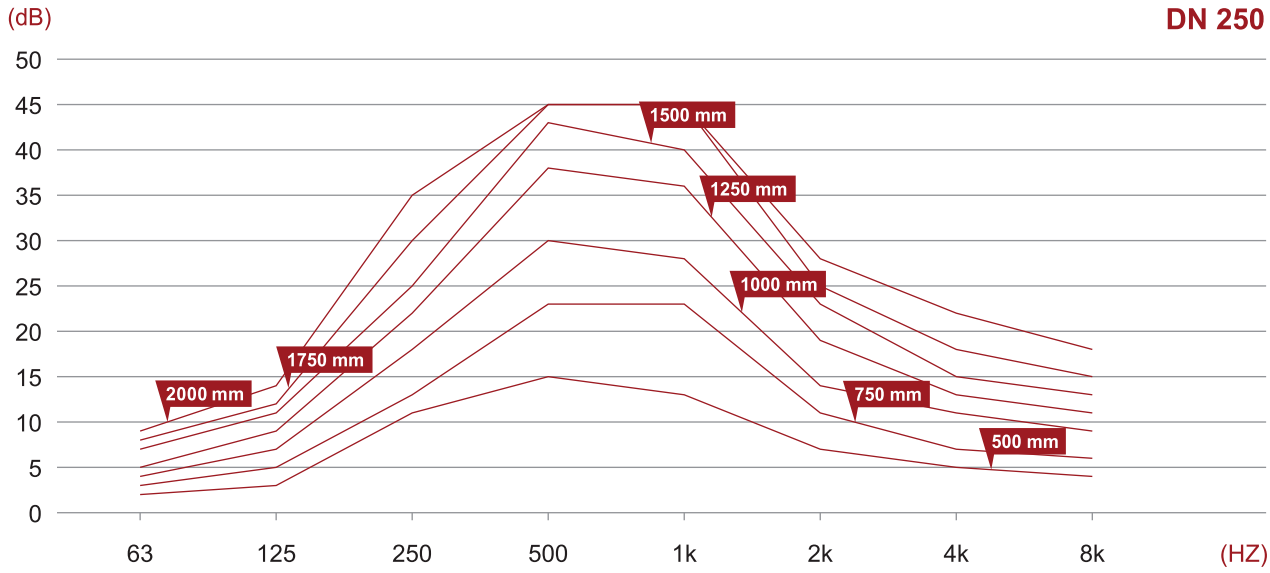


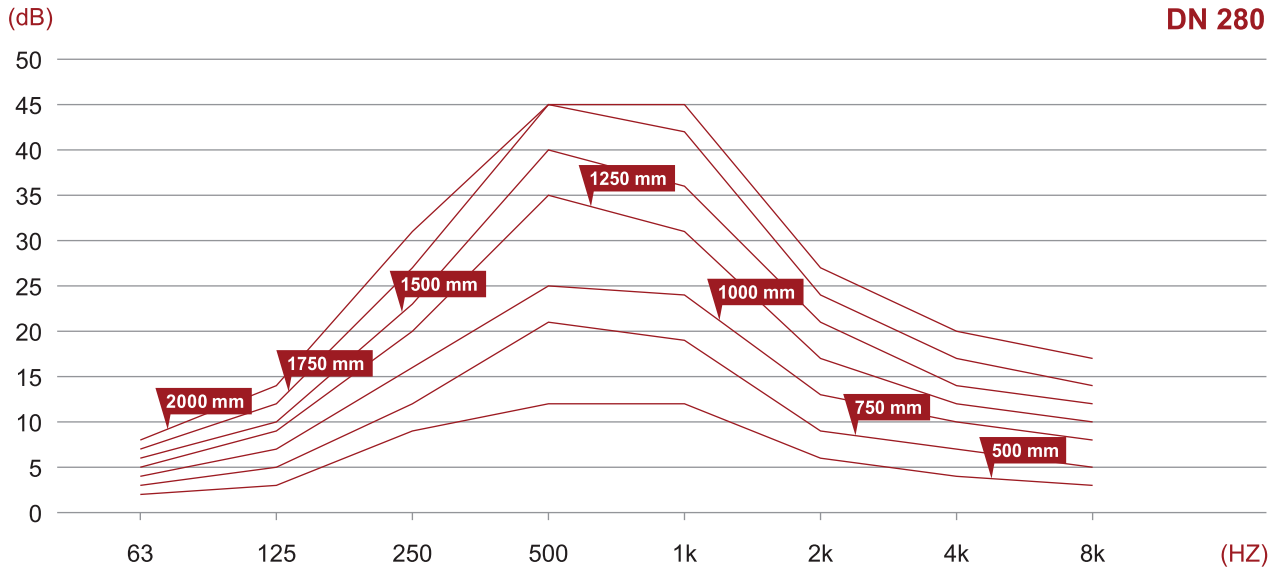


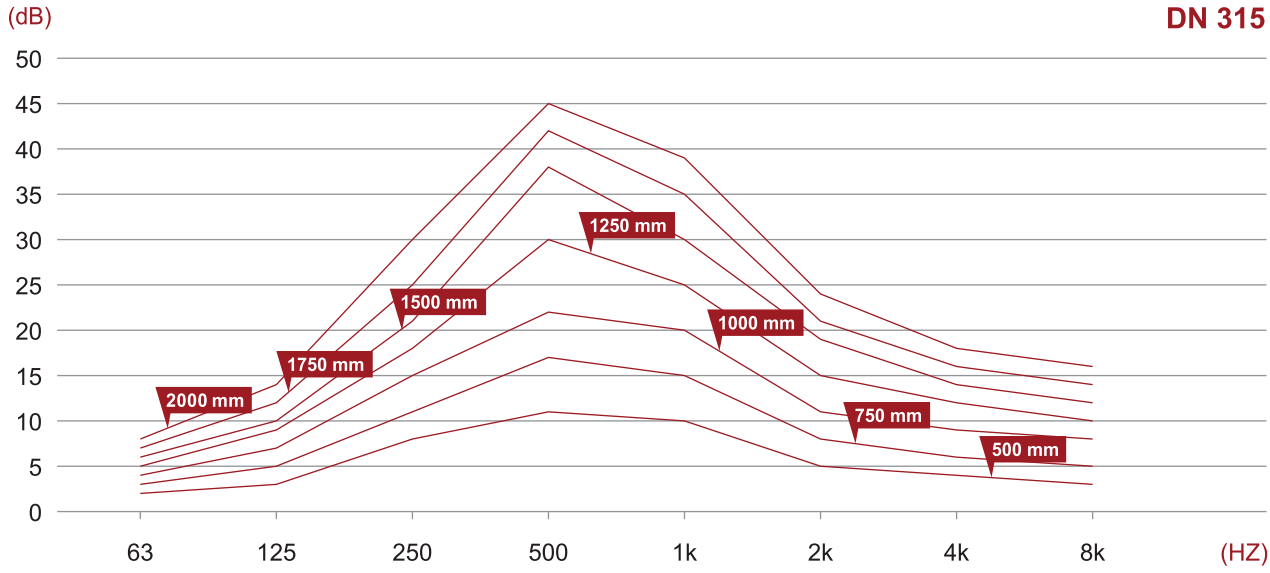


1. CIRCULAR DUCTS AND FITTINGS MADE OF PVC / PPs / PP / PE

1.28. Tubular flanged and coupler damper



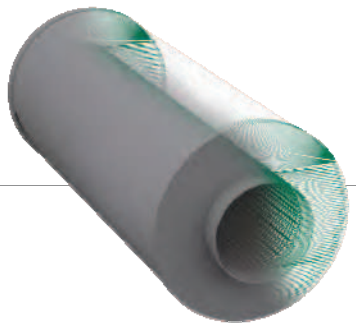




1. CIRCULAR DUCTS AND FITTINGS MADE OF PVC / PPs / PP / PE

1.28. Tubular flanged and coupler damper

Element name	Cat. no.	D	Dz	L
---	---	mm	mm	mm
Acoustic coupler damper **d110/315**, lenght L	**XX**.110.L.315**L**	**110**	355	500/ 750 / 1000 / 1250
Acoustic coupler damper **d125/315**, lenght L	**XX**.125.L.315**L**	**125**	355	500/ 750 / 1000 / 1250
Acoustic coupler damper **d140/355**, lenght L	**XX**.140.L.355**L**	**140**	400	500/ 750 / 1000 / 1250 / 1500 / 1750 / 2000
Acoustic coupler damper **d160/355**, lenght L	**XX**.160.L.355**L**	**160**	400	500 / 750 / 1000 / 1250 / 1500 / 1750 / 2000
Acoustic coupler damper **d180/400**, lenght L	**XX**.180.L.400**L**	**180**	450	500 / 750 / 1000 / 1250 / 1500 / 1750 / 2000
Acoustic coupler damper **d200/400**, lenght L	**XX**.200.L.400**L**	**200**	450	500 / 750 / 1000 / 1250 / 1500 / 1750 / 2000
Acoustic coupler damper **d225/450**, lenght L	**XX**.225.L.450**L**	**225**	500	500 / 750 / 1000 / 1250 / 1500 / 1750 / 2000
Acoustic coupler damper **d250/450**, lenght L	**XX**.250.L.450**L**	**250**	500	500 / 750 / 1000 / 1250 / 1500 / 1750 / 2000
Acoustic coupler damper **d280/500**, lenght L	**XX**.280.L.500**L**	**280**	500	500 / 750 / 1000 / 1250 / 1500 / 1750 / 2000
Acoustic coupler damper **d315/500**, lenght L	**XX**.315.L.500**L**	**315**	600	500 / 750 / 1000 / 1250 / 1500 / 1750 / 2000
Acoustic coupler damper **d355/500**, lenght L	**XX**.355.L.500**L**	**355**	500	500 / 750 / 1000 / 1250 / 1500 / 1750 / 2000
Acoustic coupler damper **d400/600**, lenght L	**XX**.400.L.600**L**	**400**	600	500 / 750 / 1000 / 1250 / 1500 / 1750 / 2000

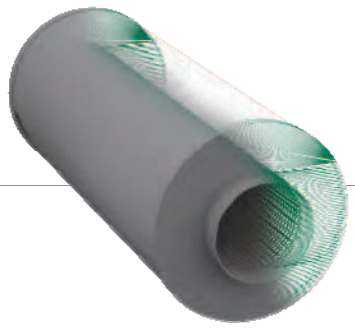


1. Designations:
   a. **D** - external pipe diameter, mm
   b. **Dz** - external diameter of damping layer, mm
   c. **L** - length of damping layer, mm
   d. **XX** - material designation, see point 1.1.
2. Other dimensions available upon request.
3. Pressure loss on dampers specified in the table.

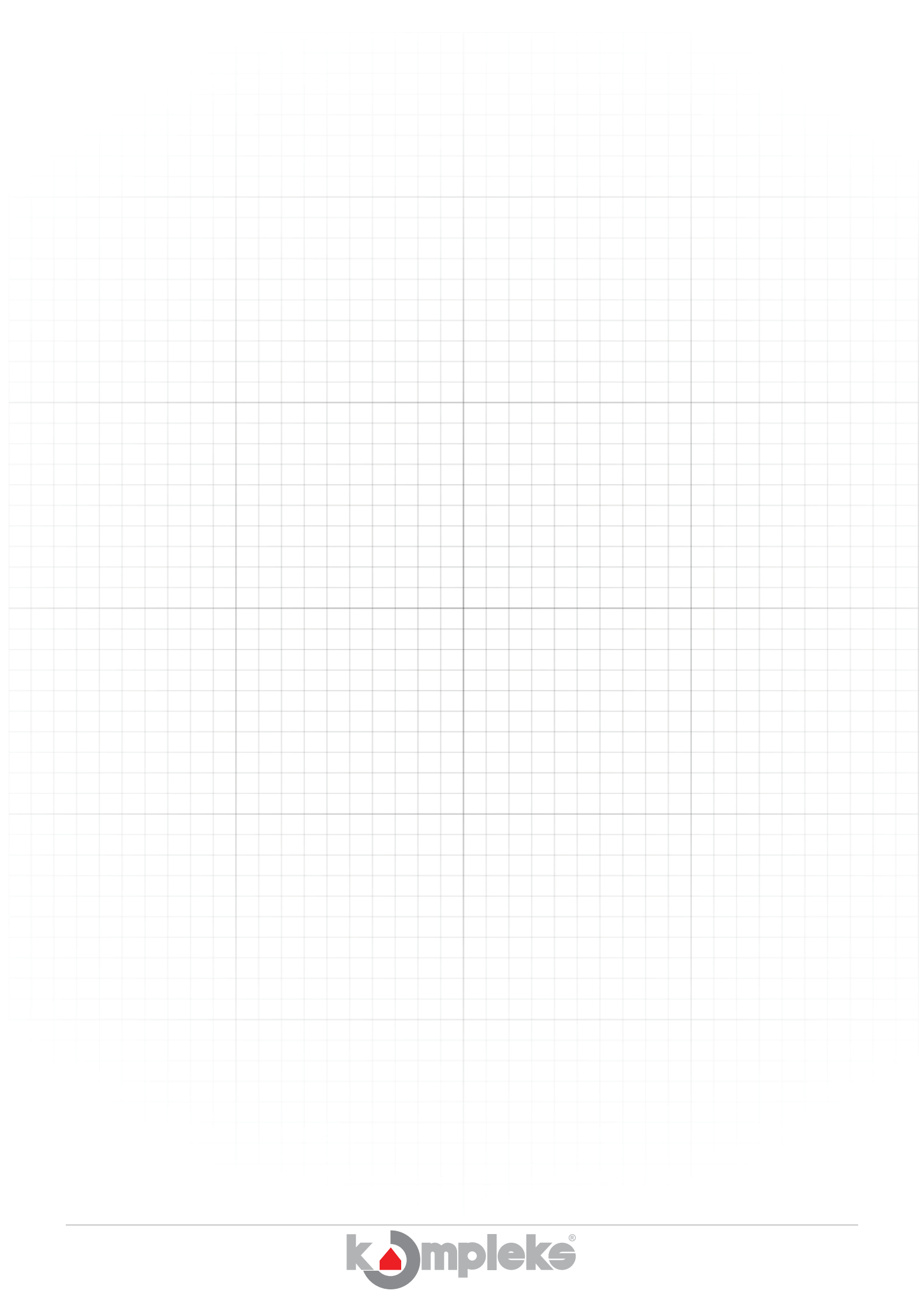
1. CIRCULAR DUCTS AND FITTINGS MADE OF PVC / PPs / PP / PE

1.28. Tubular flanged and coupler damper

Element name	Cat. no.	D	Dz	L
---	---	mm	mm	mm
Acoustic flanged damper **d110/315**, lenght L	**XX**.110.K.315**L**	**110**	355	500/ 750 / 1000 / 1250
Acoustic flanged damper **d125/315**, lenght L	**XX**.125.K.315**L**	**125**	355	500/ 750 / 1000 / 1250
Acoustic flanged damper **d140/355**, lenght L	**XX**.140.K.355**L**	**140**	400	500/ 750 / 1000 / 1250 / 1500 / 1750 / 2000
Acoustic flanged damper **d160/355**, lenght L	**XX**.160.K.355**L**	**160**	400	500 / 750 / 1000 / 1250 / 1500 / 1750 / 2000
Acoustic flanged damper **d180/400**, lenght L	**XX**.180.K.400**L**	**180**	450	500 / 750 / 1000 / 1250 / 1500 / 1750 / 2000
Acoustic flanged damper **d200/400**, lenght L	**XX**.200.K.400**L**	**200**	450	500 / 750 / 1000 / 1250 / 1500 / 1750 / 2000
Acoustic flanged damper **d225/450**, lenght L	**XX**.225.K.450**L**	**225**	500	500 / 750 / 1000 / 1250 / 1500 / 1750 / 2000
Acoustic flanged damper **d250/450**, lenght L	**XX**.250.K.450**L**	**250**	500	500 / 750 / 1000 / 1250 / 1500 / 1750 / 2000
Acoustic flanged damper **d280/500**, lenght L	**XX**.280.K.500**L**	**280**	500	500 / 750 / 1000 / 1250 / 1500 / 1750 / 2000
Acoustic flanged damper **d315/500**, lenght L	**XX**.315.K.500**L**	**315**	600	500 / 750 / 1000 / 1250 / 1500 / 1750 / 2000
Acoustic flanged damper **d355/500**, lenght L	**XX**.355.K.500**L**	**355**	500	500 / 750 / 1000 / 1250 / 1500 / 1750 / 2000
Acoustic flanged damper **d400/600**, lenght L	**XX**.400.K.600**L**	**400**	600	500 / 750 / 1000 / 1250 / 1500 / 1750 / 2000



1. Designations:
   a. **D** - external pipe diameter, mm
   b. **Dz** - external diameter of damping layer, mm
   c. **L** - length of damping layer, mm
   d. **XX** - material designation, see point 1.1.
2. Other dimensions available upon request.
3. Pressure loss on dampers specified in the table.



CHEMOWENT®

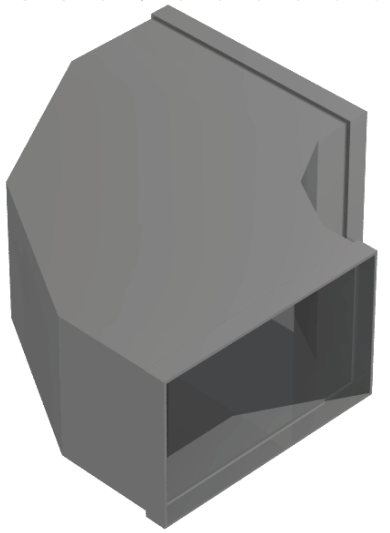
CHEMOODPORNA WENTYLACJA Z TWORZYW SZTUCZNYCH

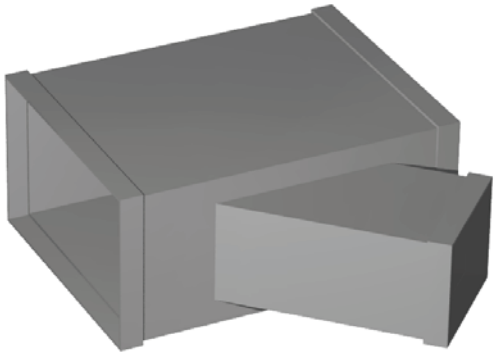
2. RECTANGULAR VENTILATION DUCTS AND FITTINGS

2.1. CHARACTERISTICS

2.2. SERIES

2.3. PRODUCT LINE





2. RECTANGULAR DUCTS AND FITTINGS MADE OF PVC/ PPs/ PP/ PE

2.1. Characteristics

Description

Our product range for rectangular ducts and fittings made of plastics.
Our catalogue contains ducts and fittings made according to following standards:

a. Made of **PVC-U**:

- Ducts and fittings of rectangular cross-section - standard No. **DIN 4740 Teil 5**

b. Made of **PP i PPs**:

- Ducts and fittings of rectangular cross-section - standard No. **DIN 4741 Teil 5**

c. other materials available upon request

d. all elements are also produced in accordance with internal manufacturer's standards and at the Client's individual request or according to a specific design.

In accordance with DIN standards, all elements can be produced according to following designs:

- low pressure **p_e = ± 630 Pa**
- medium pressure **p_e = ± 1600 Pa**
- high pressure **p_e = ± 5000 Pa**

Dimensions

Nominal size being a conventional size used for marking and calculation of straight ducts and fittings, constitutes the **external** dimensions of **A** and **B** side, wherein **A** is a visible dimensions (see drawing below). The side lengths of the smaller end of intermediate fitting are marked **C** and **D**, wherein **C** is the visible dimensions.

Tightness

The ducts and fittings connected by welding ensure 100% tightness of the system.

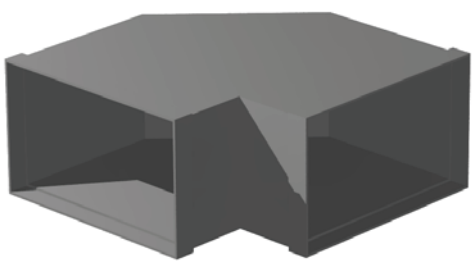
Rigidity

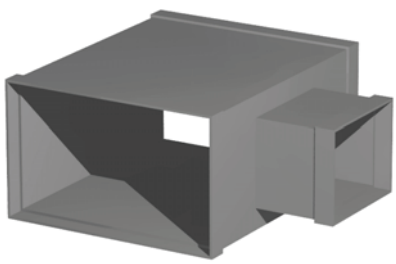
The rigidity of ducts and fittings is ensured by adequately selected thickness of material of which they are made. For large ducts, it is possible to apply rib reinforcements to reduce plate thickness - in accordance with the guidelines set out in DIN standards.
The ducts and bends, subject to Client's request, can be stiffened with the use of guide vanes in accordance with PN-EN 1505 standard. The guide vanes are not required in elbows and bends of angle ≤ 45°

Connections

Possible methods for connection of duct and fitting systems:

- **PVC-U** - plain ducts and coupler fittings - welding with PVC-U wire or gluing, flanged connection
- **PP/PPs** - plain ducts and coupler fittings - welding with PP/PPs wire, flanged connection
- **PE** - plain ducts and coupler fittings - welding with PE wire, flanged connection
- connection of the duct and fitting system with other ventilation equipment is possible with the use of standardized frames which are dimensionally compliant with PN-B-76002 standard, ofr with flanges produced in accordance with the Client's design.





2. RECTANGULAR DUCTS AND FITTINGS MADE OF PVC/ PPs/ PP/ PE

2.2. Series

Wall thickness and dimensions

The standardized wall thickness and dimensions are calculated on the basis of internal manufacturer's standard (specified in table below).
We also offer ducts and fittings or wall thickness values compliant with the standards No. **DIN 4741 and 4740 Teil 5** - both of smooth and ribbed design.

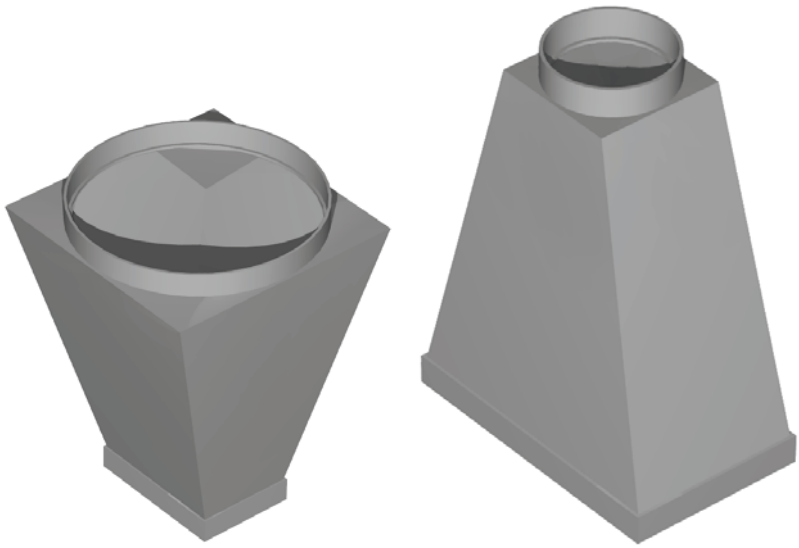
TAB.2.1. Wall thickness

side lenght, mm	200	250	300	400	500	600	800	1000	1200
200	4,0mm								
250	4,0mm								
300	4,0mm								
400	4,0 ÷ 5,0mm								
500	5,0 ÷ 6,0mm								
600	5,0 ÷ 6,0mm								
800	6,0 ÷ 10,0mm								
1000	8,0 ÷ 12,0mm								
1200	10,0 ÷ 15,0mm								

Material designations:

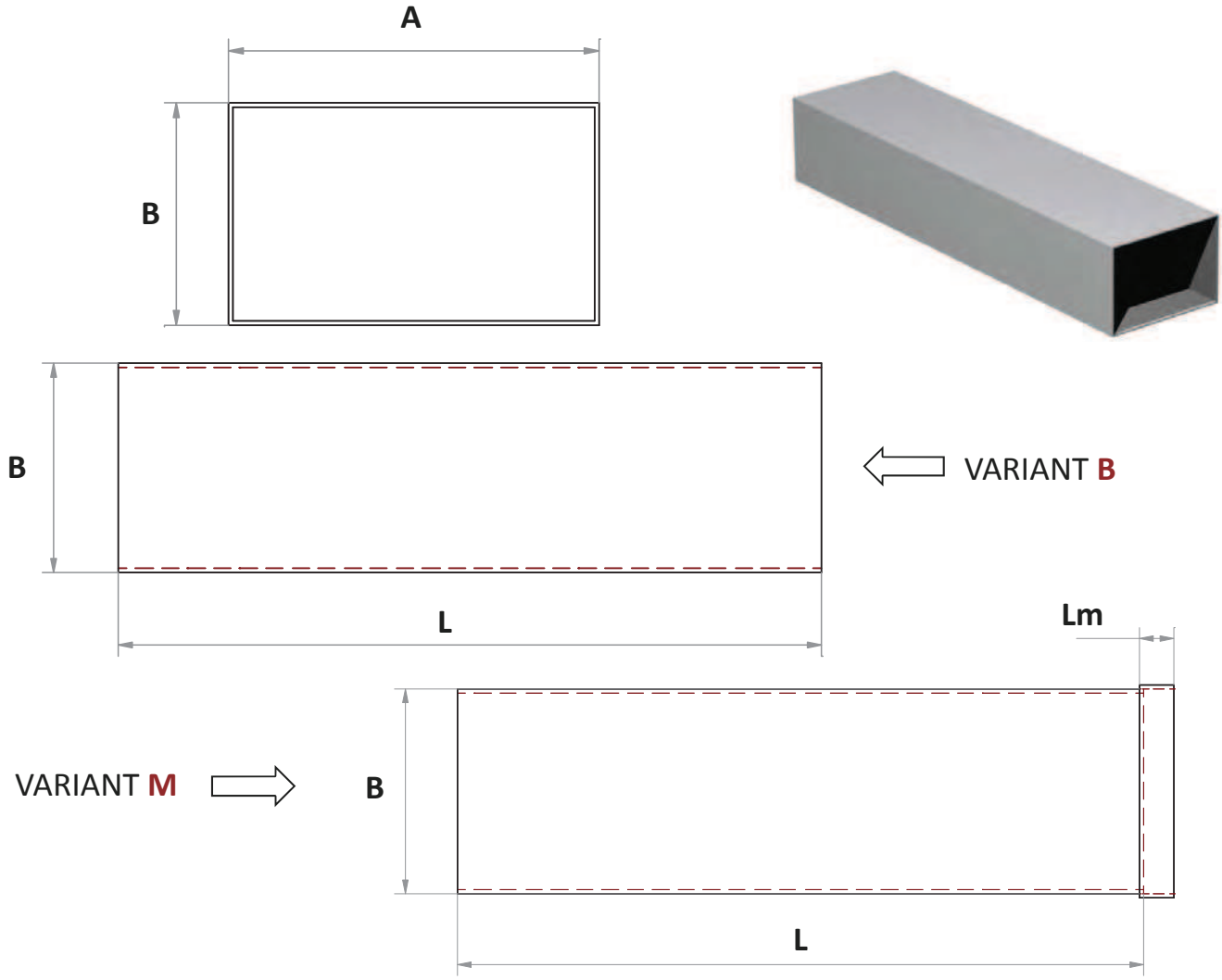
Symbols used in catalog numbers:

1. **PVC-U** - **88**
2. **PP** - **30**
3. **PPs** - **36**
4. **PE** - **22**



2. RECTANGULAR DUCTS AND FITTINGS MADE OF PVC/ PPs/ PP/ PE

2.3.1. Duct with rectangular cross-section



Description:

Standard ventilation ducts are made in pieces of following lengths: 1000, 1500, 2000 and 3000mm.
The channels are produced as bare (both ends without couplers) and with a connection coupler at one end which allows for easy and quick connection of channels with one another.
The wall thicknesses and potential ribbing depends on the parameters of the air to be transported inside the duct .

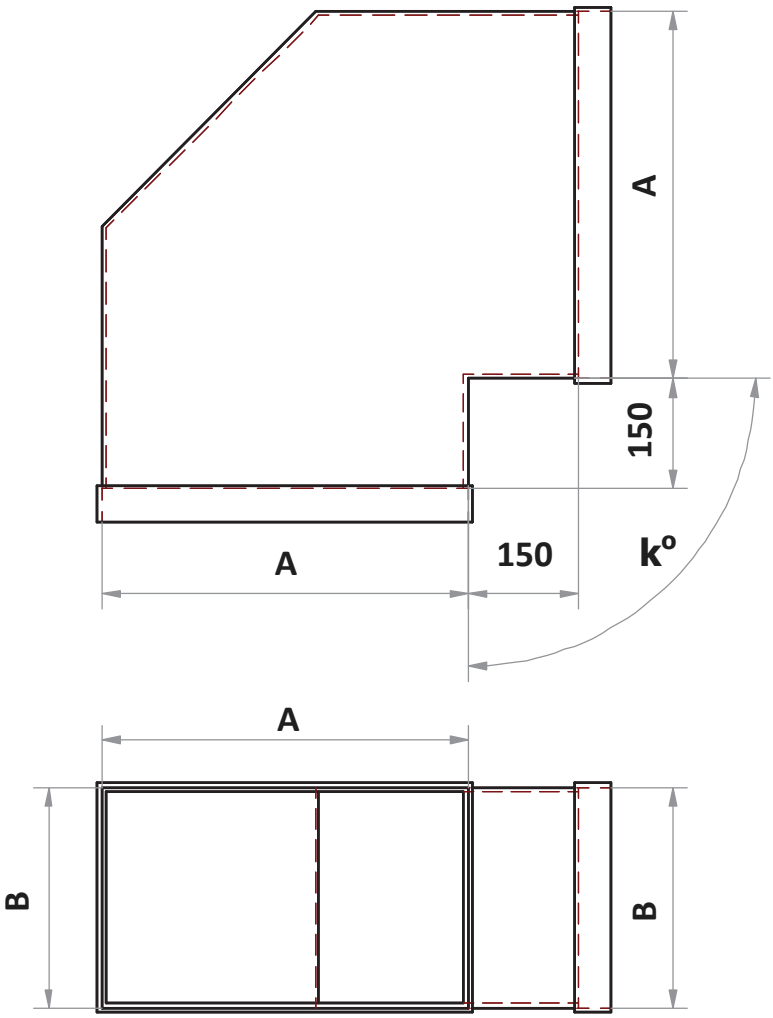
Designation example:

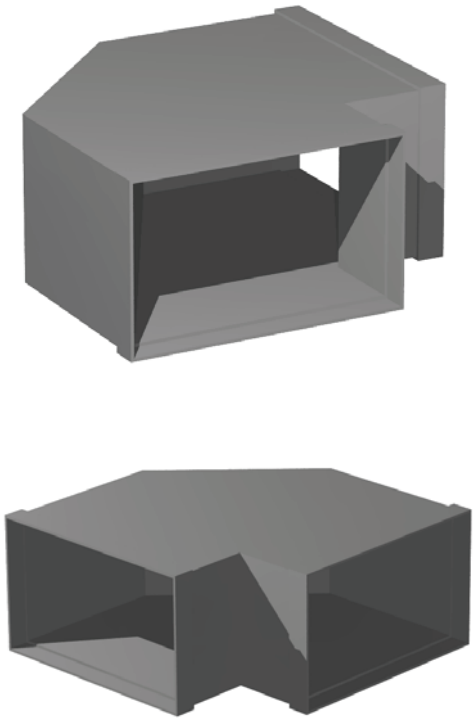
88 . K . 500 . 300 . 1500 . B

MATERIAL - **30, 36, 88, 22**
TYPE
LONG SIDE **A**, mm
SHORT SIDE **B**, mm
LENGHT L, mm
BARE DUCT **B** / DUCT WITH COUPLER **M**

2. RECTANGULAR DUCTS AND FITTINGS MADE OF PVC/ PPs/ PP/ PE

2.3.2. Elbow





Description:

The ventilation elbows are, by default, available with angles of 45° and 90°, with connection couplers at both ends. It is recommended to use elbows in systems of small transport velocity / pressure and with side dimension A < 400 mm. Standardized offset is 150 mm.

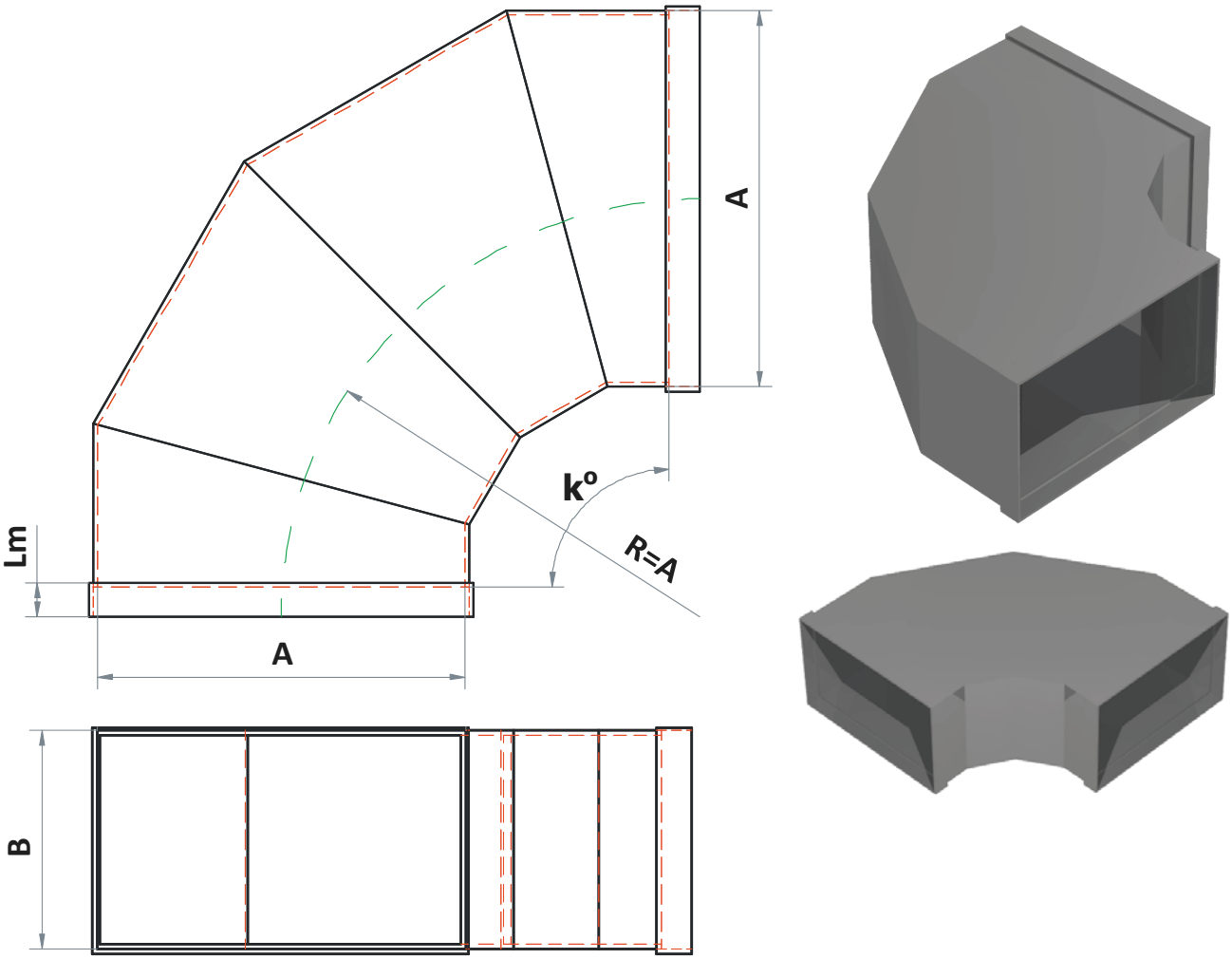
Designation example:

88 . L1 . 500 . 300 . 90

- MATERIAL - **30, 36, 88, 22**
- TYPE
- LONG SIDE **A**, mm
- SHORT SIDE **B**, mm
- ANGLE **k°**

2. RECTANGULAR DUCTS AND FITTINGS MADE OF PVC/ PPs/ PP/ PE

2.3.3. Segmented bends



Description:

Segmented chemically resistant bends are normally available with angles as follows: 30°, 45°, 60° i 90°, with connection couplers at both ends. It is recommended to use segmented bends in systems of high transport velocity / pressure and with side dimension A > 400 mm. The bend retains equal cross-section along its entire length (during the transport of air its speed does not change) and the standard radius equals R = A.

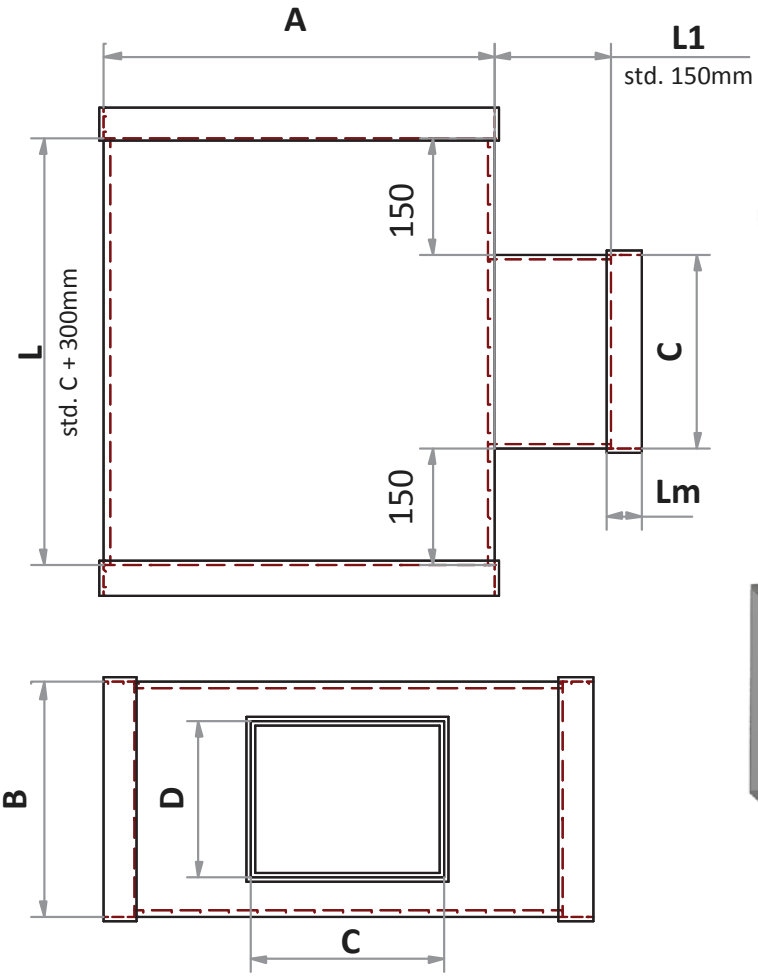
Designation example:

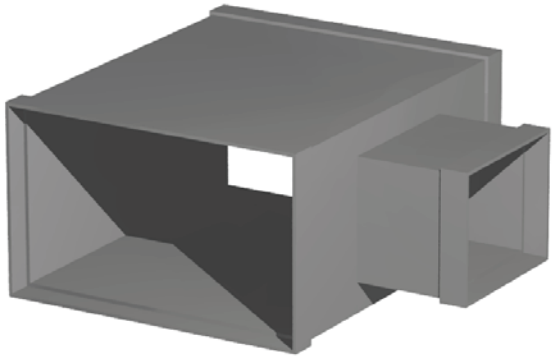
88 . L2 . 500 . 300 . 90

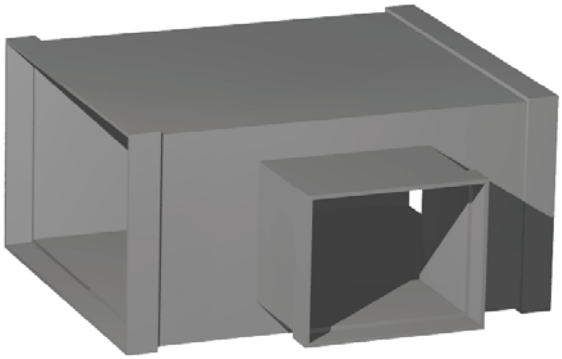
MATERIAL - **30, 36, 88, 22**
TYPE
LONG SIDE **A**, mm
SHORT SIDE **B**, mm
ANGLE **k°**

2. RECTANGULAR DUCTS AND FITTINGS MADE OF PVC/ PPs/ PP/ PE

2.3.4. 90° Tee







Description:

Chemically resistant ventilation tee with a 90° branch out both with reduced and equal branch out diameter, with connection couplers at both ends.

The dimensions L and L1 are of standard length depending on dimensions A and C. Execution of a tee of a different L and L1 length is possible, subject to special order.

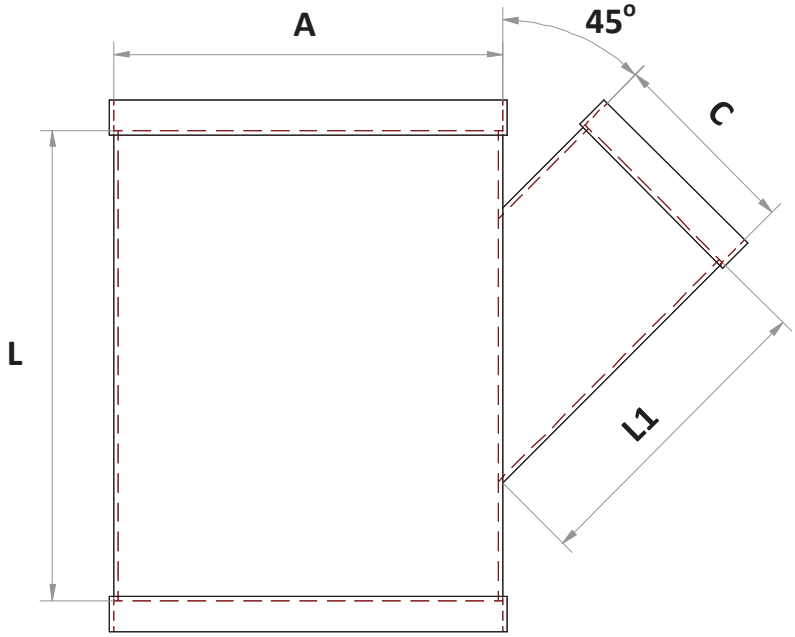
Designation example:

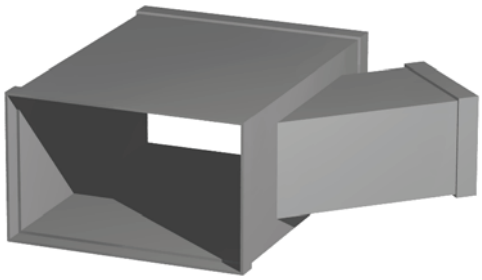
88 . T1 . 500 . 300 . 200 . 250

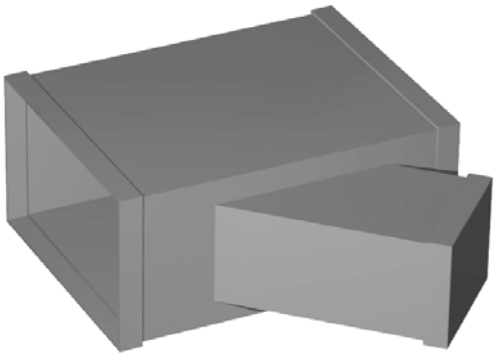
- MATERIAL - **30, 36, 88, 22**
- TYPE
- LONG SIDE **A**, mm
- SHORT SIDE **B**, mm
- BRANCH LONG SIDE **C**, mm
- BRANCH SHORT SIDE **D**, mm

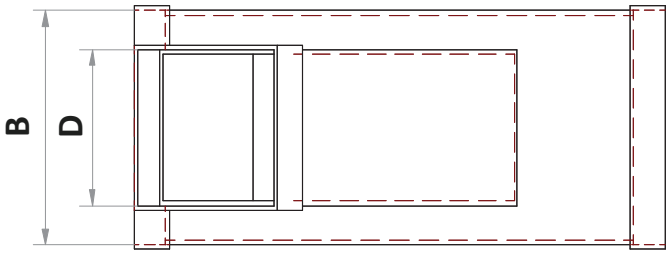
2. RECTANGULAR DUCTS AND FITTINGS MADE OF PVC/ PPs/ PP/ PE

2.3.5. 45° Tee









Description:

Chemically resistant ventilation tee with a 45° branch out both with reduced and equal branch out diameter, with connection couplers at both ends.

The dimensions L and L1 are of standard length depending on dimensions A and C. Execution of a tee of a different L and L1 length is possible, subject to special order.

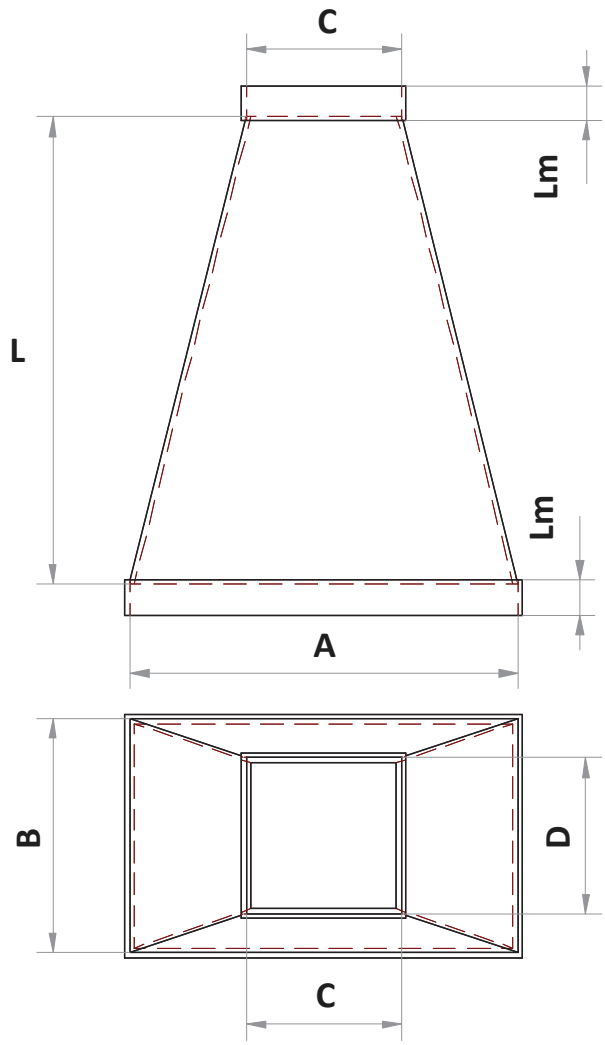
Designation example:

88 . T2 . 500 . 300 . 200 . 250

- MATERIAL - **30, 36, 88, 22**
- TYPE
- LONG SIDE **A**, mm
- SHORT SIDE **B**, mm
- BRANCH LONG SIDE **C**, mm
- BRANCH SHORT SIDE **D**, mm

2. RECTANGULAR DUCTS AND FITTINGS MADE OF PVC/ PPs/ PP/ PE

2.3.6. Symmetrical reducer



Description:

Symmetrical ventilation reducer has connection couplers at both ends.
The dimension L is of standard length depending on dimensions A and C. Execution of a tee of a different L length is possible, subject to special order.

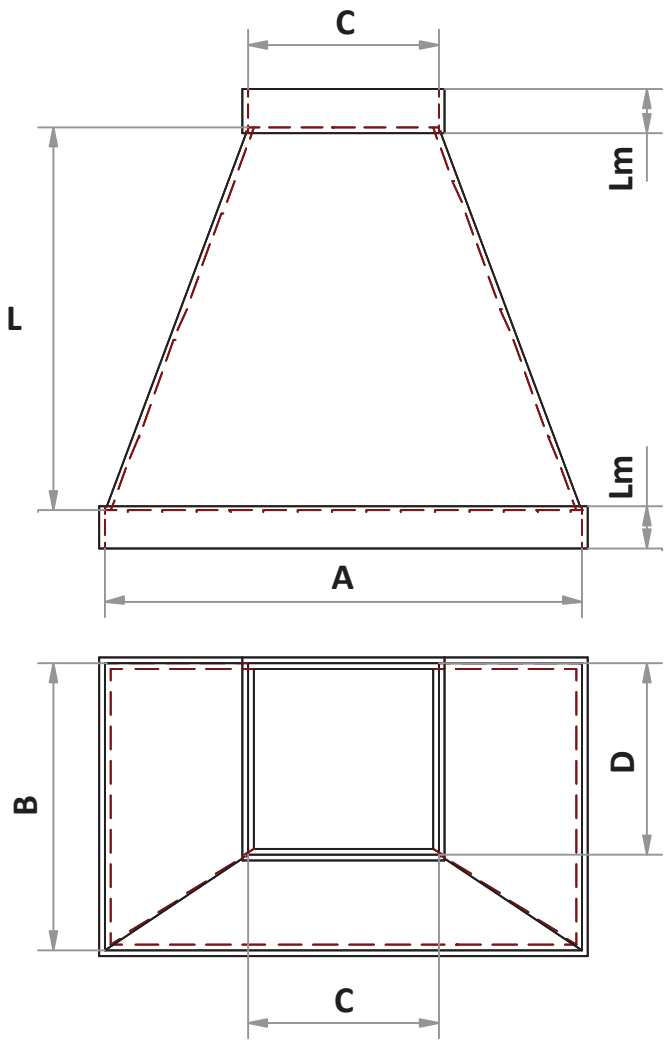
Designation example:

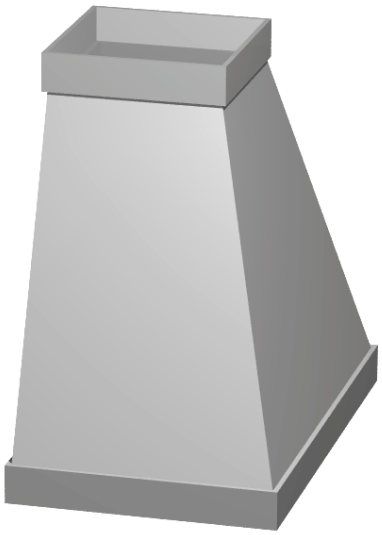
88 . R1 . 500 . 300 . 200 . 250

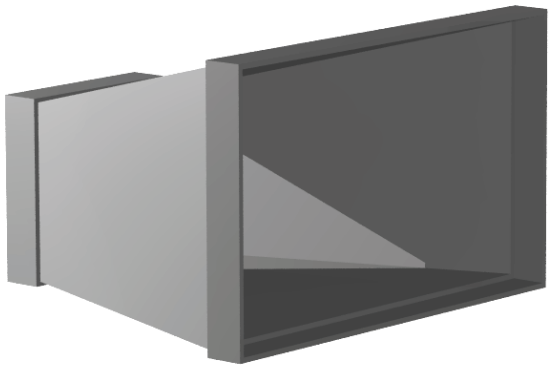
MATERIAL - **30, 36, 88, 22**
TYPE
LONG SIDE **A**, mm
SHORT SIDE **B**, mm
BRANCH LONG SIDE **C**, mm
BRANCH SHORT SIDE **D**, mm

2. RECTANGULAR DUCTS AND FITTINGS MADE OF PVC/ PPs/ PP/ PE

2.3.7. Asymmetrical reducer







Description:

Asymmetrical ventilation reducer has connection couplers at both ends.
The dimension L is of standard length depending on dimensions A and C. Execution of a tee of a different L length is possible, subject to special order.

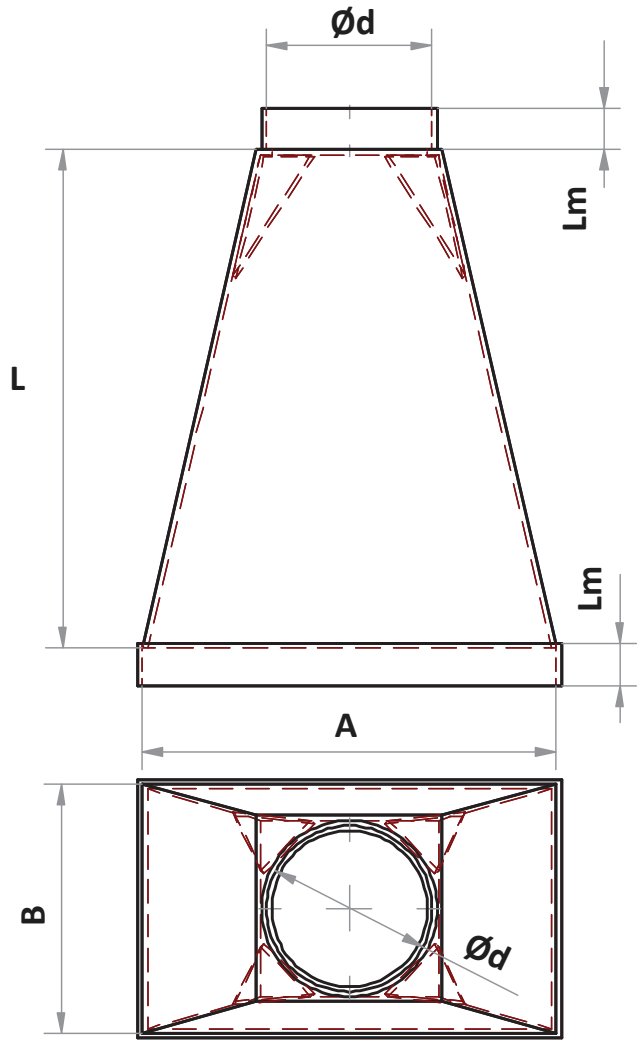
Designation example:

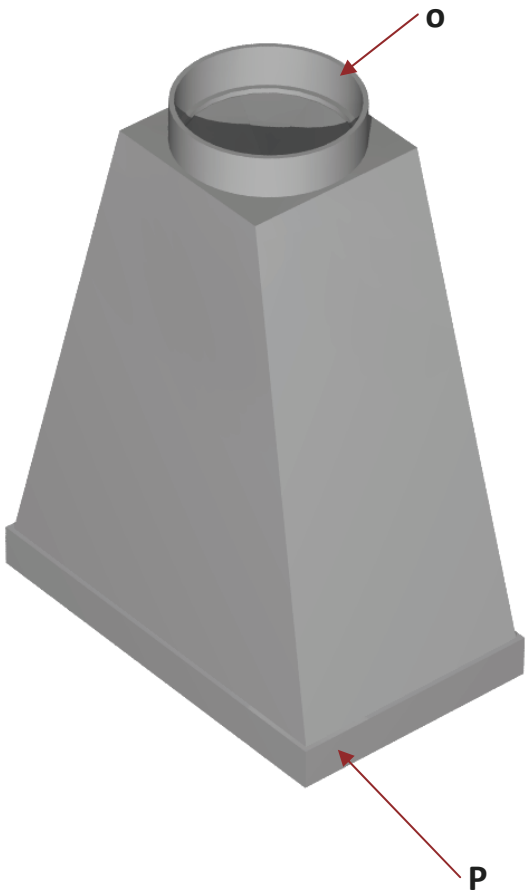
88 . R2 . 500 . 300 . 200 . 200

- MATERIAL - **30, 36, 88, 22**
- TYPE
- LONG SIDE **A**, mm
- SHORT SIDE **B**, mm
- BRANCH LONG SIDE **C**, mm
- BRANCH SHORT SIDE **D**, mm

2. RECTANGULAR DUCTS AND FITTINGS MADE OF PVC/ PPs/ PP/ PE

2.3.8. Rectangular / circular intermediate piece





Description:

Chemically resistant intermediate piece between the rectangular and circular cross-section has connection couplers at both ends.

The dimension L is of standard length depending on dimensions A and Ød. Execution of a tee of a different L length is possible, subject to special order.

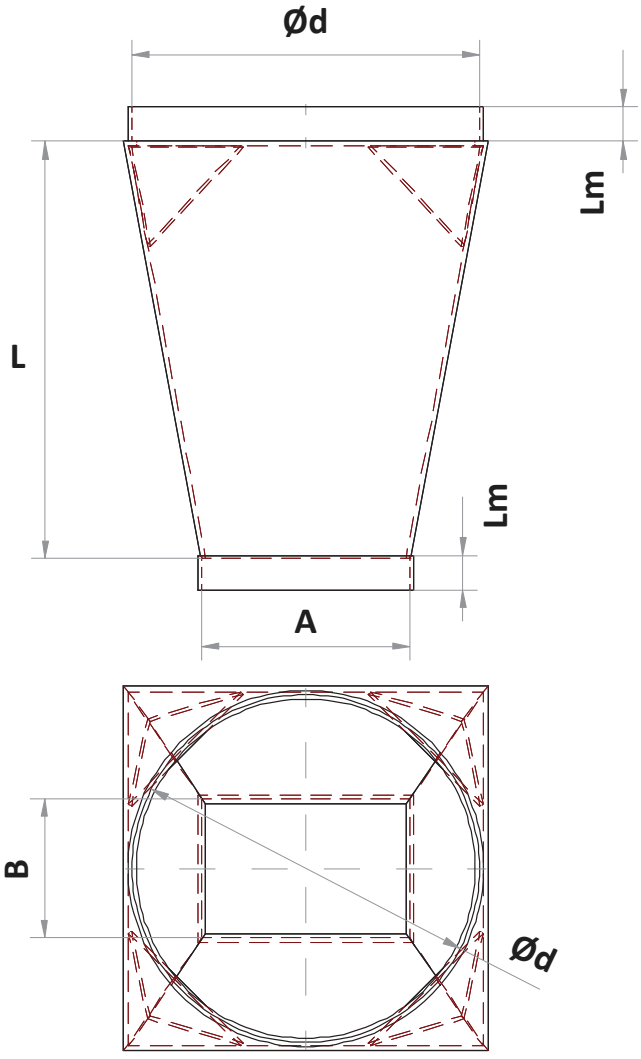
Designation example:

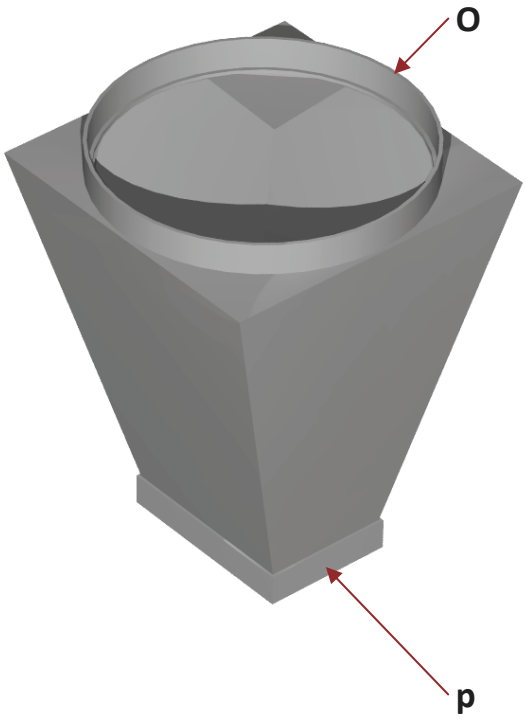
88 . P1 . 500 . 300 . 200

MATERIAL - **30, 36, 88, 22**
TYPE
LONG SIDE **A**, mm
SHORT SIDE **B**, mm
DIAMETER **Ød**, mm

2. RECTANGULAR DUCTS AND FITTINGS MADE OF PVC/ PPs/ PP/ PE

2.3.9. Circular / rectangular intermediate piece





Description:

Chemically resistant intermediate piece between the circular and rectangular cross-section has connection couplers at both ends.

The dimension L is of standard length depending on dimensions A and Ød. Execution of a tee of a different L length is possible, subject to special order.

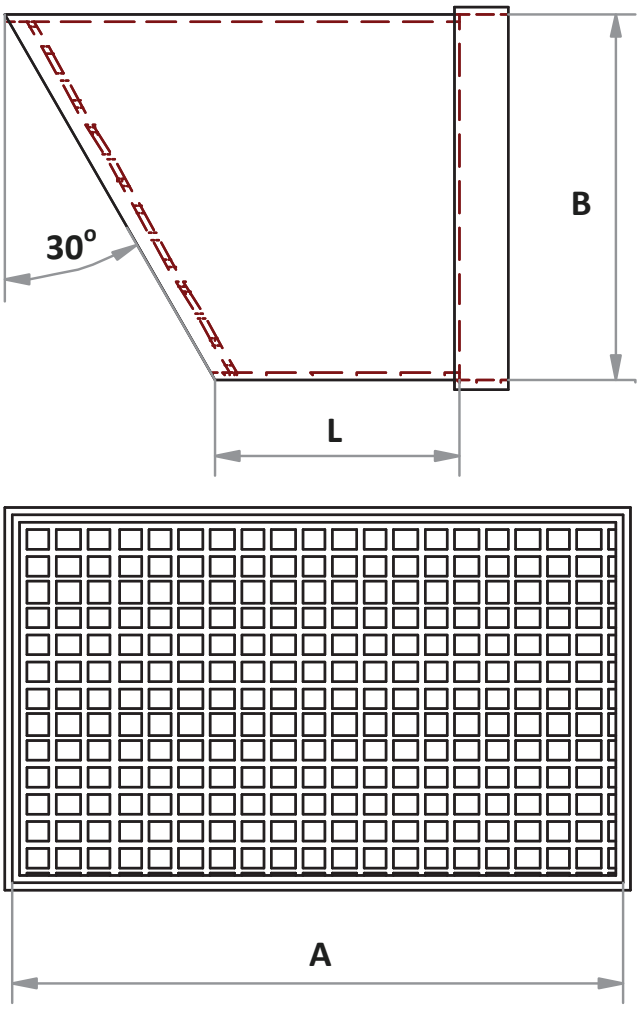
Designation example:

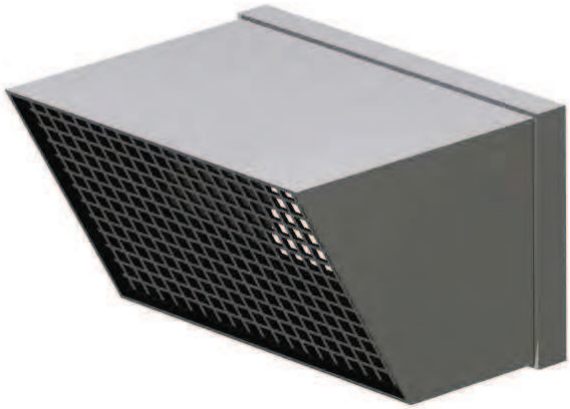
88 . P2 . 300 . 200 . 500

- MATERIAL - **30, 36, 88, 22**
- TYPE
- LONG SIDE **A**, mm
- SHORT SIDE **B**, mm
- DIAMETER **Ød**, mm

2. RECTANGULAR DUCTS AND FITTINGS MADE OF PVC/ PPs/ PP/ PE

2.3.10. Air intake

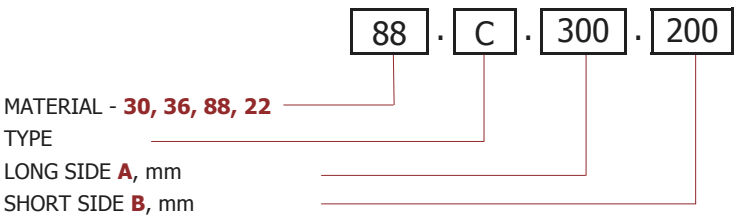




Description:

Air intake chemoodporna zakończona jest mufą połączeniową i siatką ochronną.
Wymiar L posiada standardową długość zależną od wymiaru A. Na specjalne zamówienie możliwe jest wykonanie redukcji o innej długości L.

Designation example:

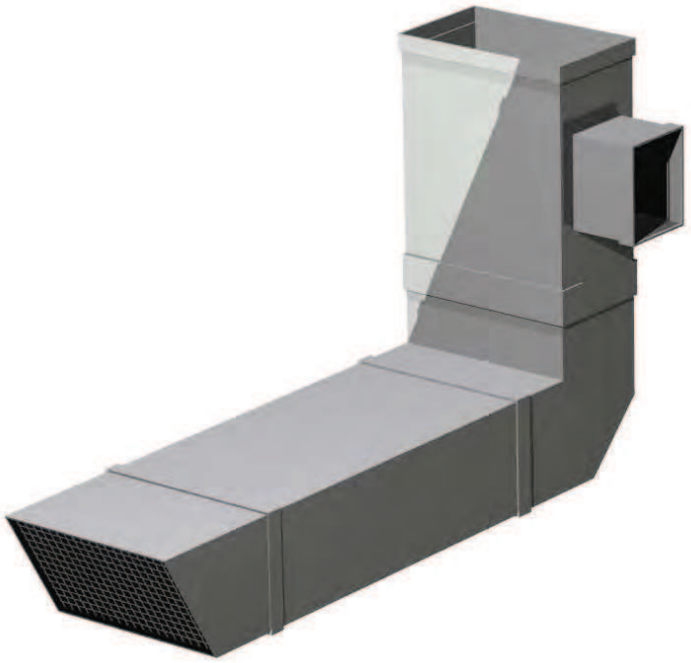


2. RECTANGULAR DUCTS AND FITTINGS MADE OF PVC/ PPs/ PP/ PE

2.3.11. Other elements

Apart from standard fittings, also custom-made elements are available, e.g.:

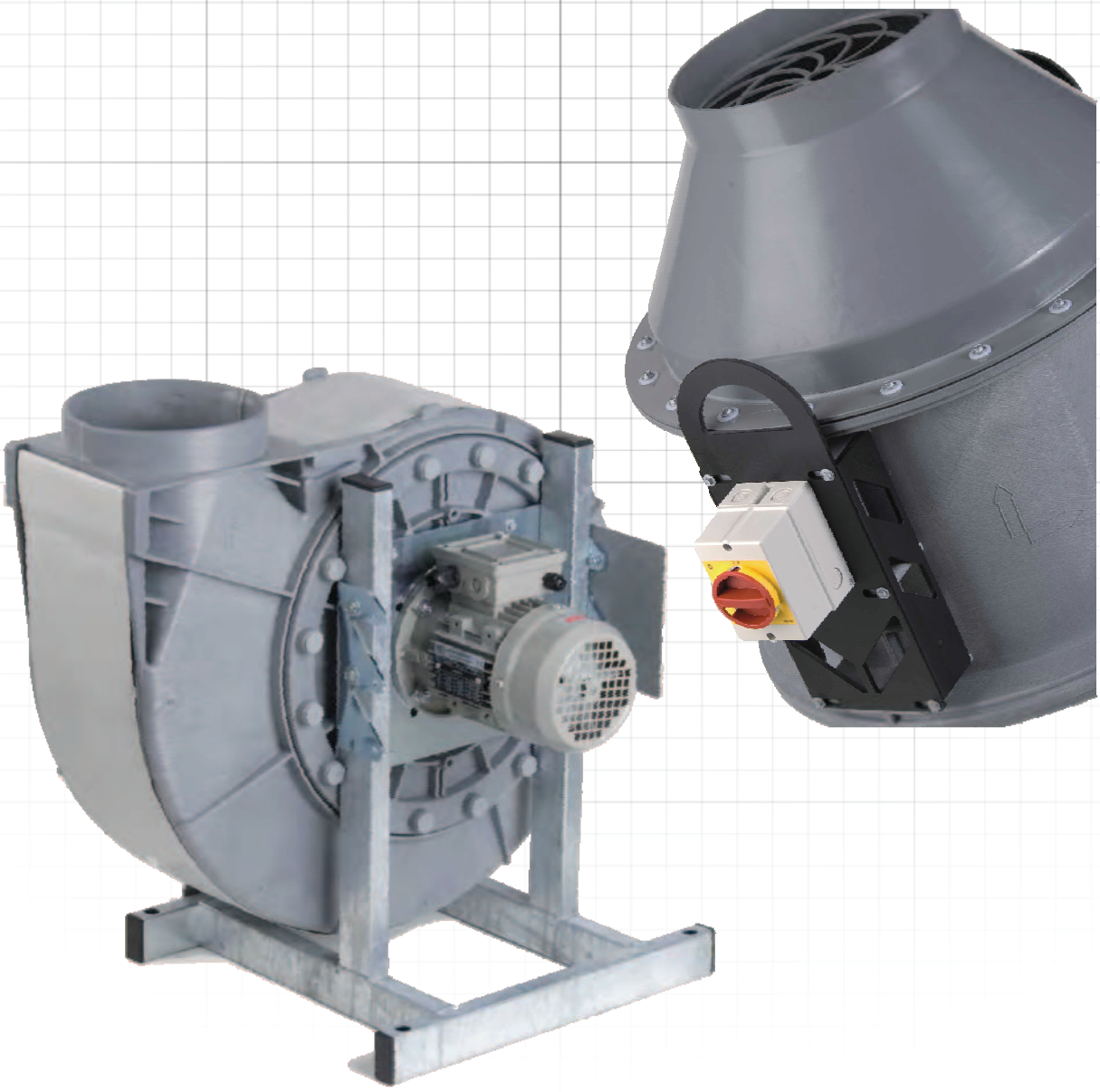
1. Control dampers
2. Non-return dampers
3. Baffles
4. Roof penetrations
5. Loose flanges
6. Couplers
7. Fastening frames for outlet and inlet grates
8. Inspection tees
9. Silencers
10. Distance pieces



CHEMOWENT®

CHEMOODPORNA WENTYLACJA Z TWORZYW SZTUCZNYCH

3. CHEMICALLY RESISTANT FANS



3. CHEMICALLY RESISTANT FANS

3.1. Product line

TYPE		ZALETY TECHNICZNE
Small radial fans **FRv 075 - 110+**		• Compact casing with drum rotor • Very quiet • Hermetic shaft sealing • Maintenance-free • Mechanical and electrical flexibility
Radial fans **FRv 125 - 280**		• High alignment thanks to production by method of injection molding • Hermetic design • Exceptionally easy maintenance • Adjustable maximum height • Very stable due to additional support
Rooftop fans **FDv 075 - 280** **FDvF 075 - 280**		• Drum rotor made of polypropylene by method of injection molding with rotor blade arrangement ensuring guaranteed negative pressure on the shaft keys during operation • Specially shaped plastic exhaust grate ensures even, vertical air exhaust • Exceptionally easy maintenance • Direct drive by a IEC-34 standardized motor in an exhaust air-tight casing • Casing cooling air guided through separated supply and exhaust chambers for cooling air and to prevent uncontrolled circulation

FUNKEN Ventilation Systems

3. CHEMICALLY RESISTANT FANS

3.2. FRv 075 - 110+ SMALL RADIAL FANS

DESCRIPTION

FRv small radial fans for pumping corrosive and explosive gases, vapors and fumes of dust content of < 5 mg/m³, maximum medium temperature of 40°C and maximum ambient temperature of 40°C.

Fan casing made of polypropylene by method of injection molding, with an integrated, maintenance-free sealing system with a labyrinth seal.

In the Ex version, the radial fans are supplied additionally with a lubricant lock and sealing with a self-sealing ring. Conformity with VDMA 24 169 and RL/94/9/WE (ATEX).

Fan drum rotor made of polypropylene by method of injection molding with rotor blade arrangement ensuring guaranteed negative pressure on the shaft penetration during operation.

ATEX-compliant direct drive with a standardized IEC-34 motor with temperature-resistant motor shields on the casing and rotor to prevent installation position deflections, also in case of a failure.

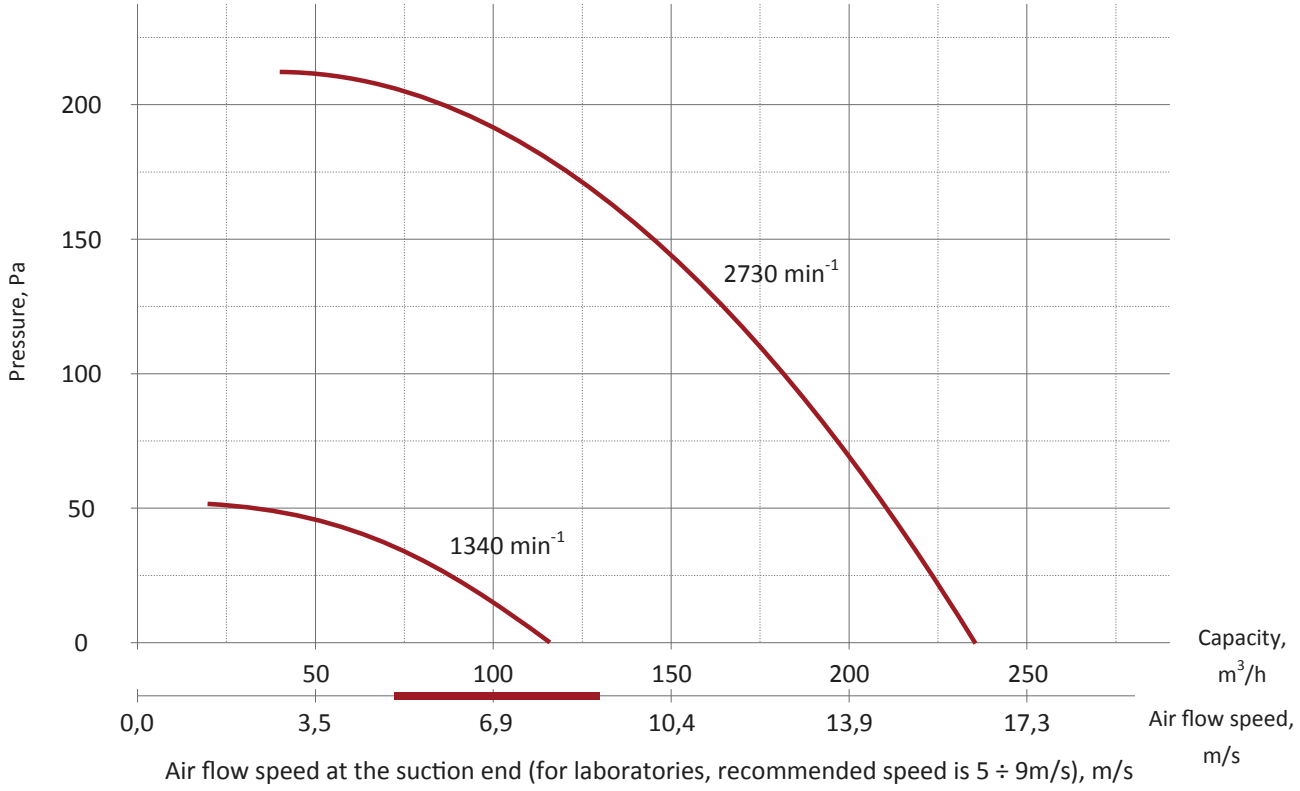
TECHNICAL DETAILS

Casing position:	GL
Exhaust direction:	- In version C, 8 x 45° control - Rotation by 360° available in version F
Drive:	1 x 230 V or 3 x 230/400 V, 50 Hz standardized motor, IP55, heat class F with a thermal contactor
Protection class for Ex version:	fan II 3G c IIB T3 X 04 ATEX D132 engine EExe II2GT3
Version:	- **C** – with a plastic console and vibration damper suitable for any installation position - **F** – with a plastic flange, can be rotated 360°, with a plastic console and vibration damper, suitable for any installation position
Accessories:	Set of rubber vibration dampers

3.2. FRv 075 - 110+ SMALL RADIAL FANS

3.2.1. FRv 075 Type

Characteristics:



TECHNICAL DETAILS:

Fan type	Rotational speed	Rated power	Rated current	Maximum capacity	Maximum pressure
---	rpm	kW	A	m^3/h	Pa
FRv 075 type radial fan	1500	0,06	0,35	**115**	**54**
	3000	0,09	0,36	**240**	**220**

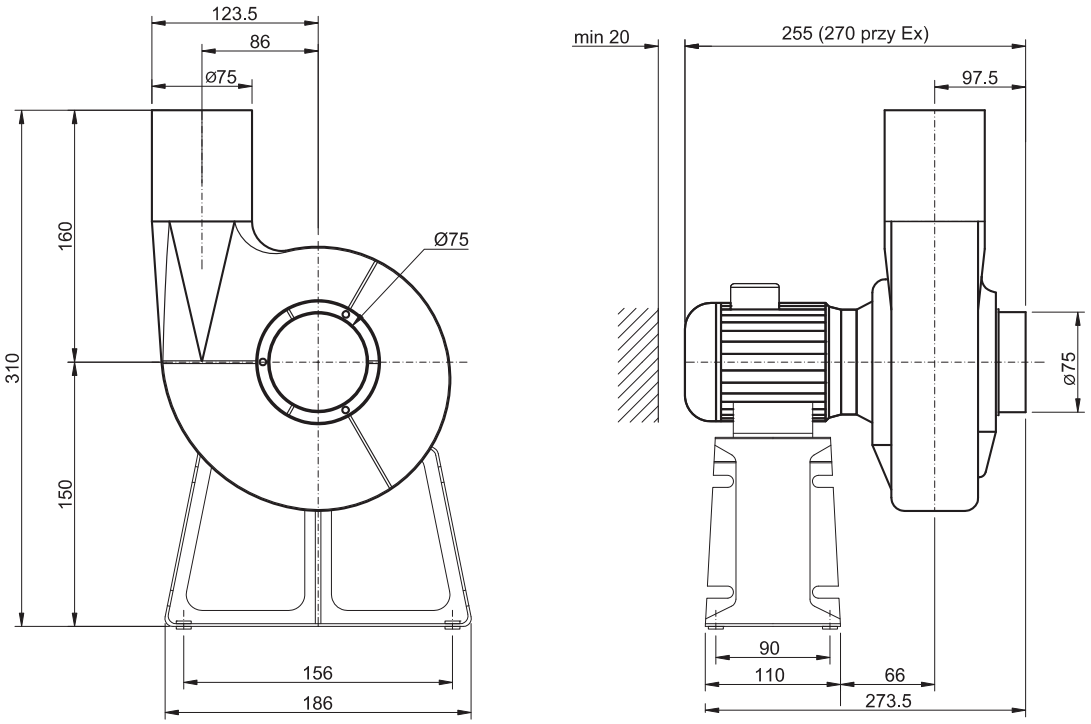
Acoustic characteristics:

Rotational speed	Frequency, Hz								Lw(dB)	Lw(dBA)
rpm	dB								dB	dB
	63	125	250	500	1000	2000	4000	8000	---	---
1500	3	35	15	16	15	11	4	2	27	24
3000	20	29	59	36	36	32	27	18	51	45

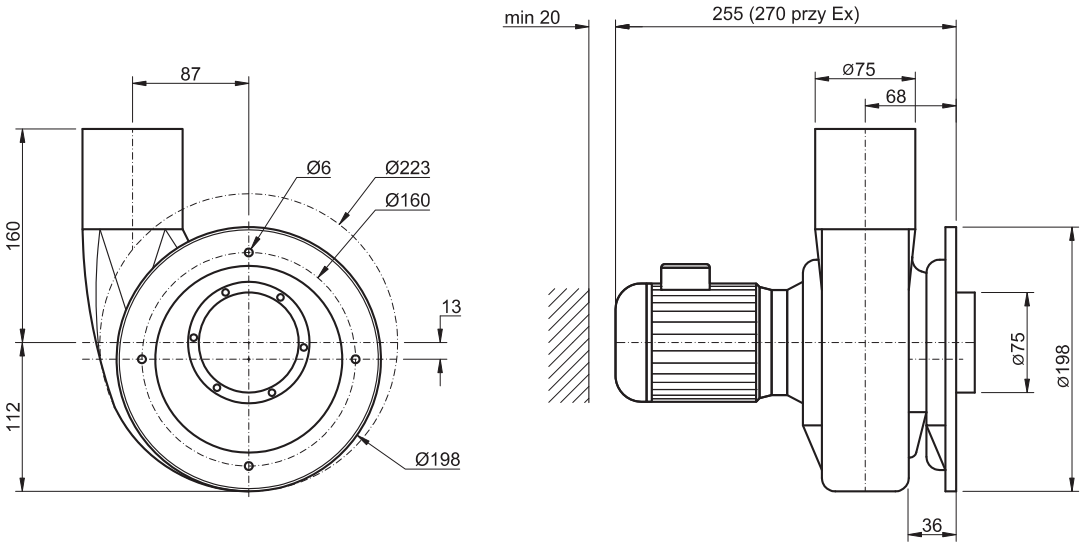
3.2. FRv 075 - 110+ SMALL RADIAL FANS

3.2.1. FRv 075 Type

Dimensions - version with a console:



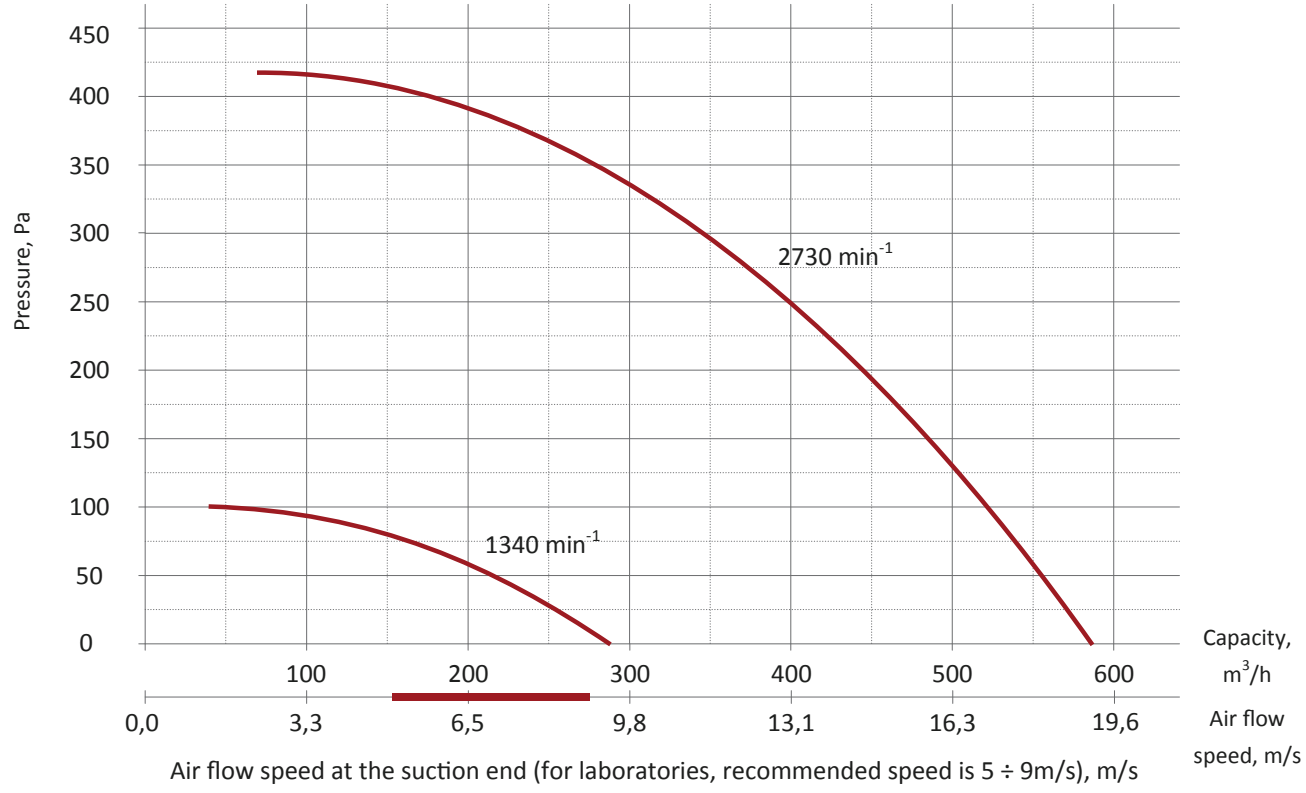
Dimensions - version with a flange:



3.2. FRv 075 - 110+ SMALL RADIAL FANS

3.2.2. FRv 110 Type

Characteristics:



TECHNICAL DETAILS:

Fan type	Rotational speed	Rated power	Rated current	Maximum capacity	Maximum pressure
---	rpm	kW	A	m^3/h	Pa
FRv 110 type radial fan	1500	0,06	0,35	**285**	**100**
	3000	0,09	0,36	**590**	**425**

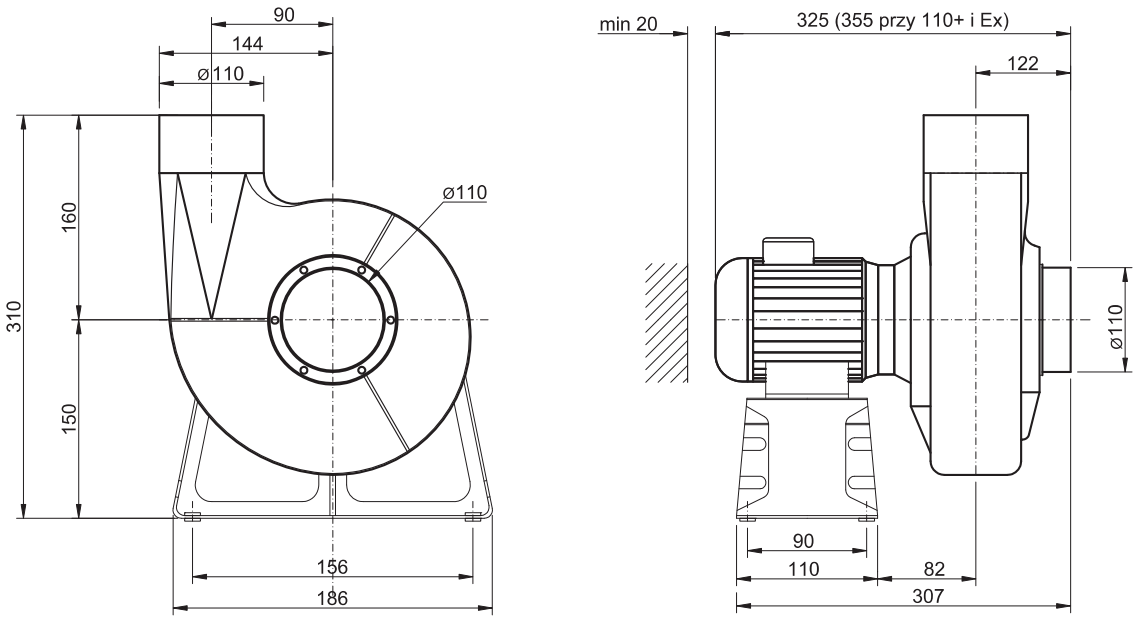
Acoustic characteristics:

Rotational speed	Frequency, Hz								Lw(dB)	Lw(dBA)
rpm	dB								dB	dB
	63	125	250	500	1000	2000	4000	8000	---	---
1500	3	46	16	17	16	12	5	2	38	34
3000	20	28	69	36	35	32	26	18	61	55

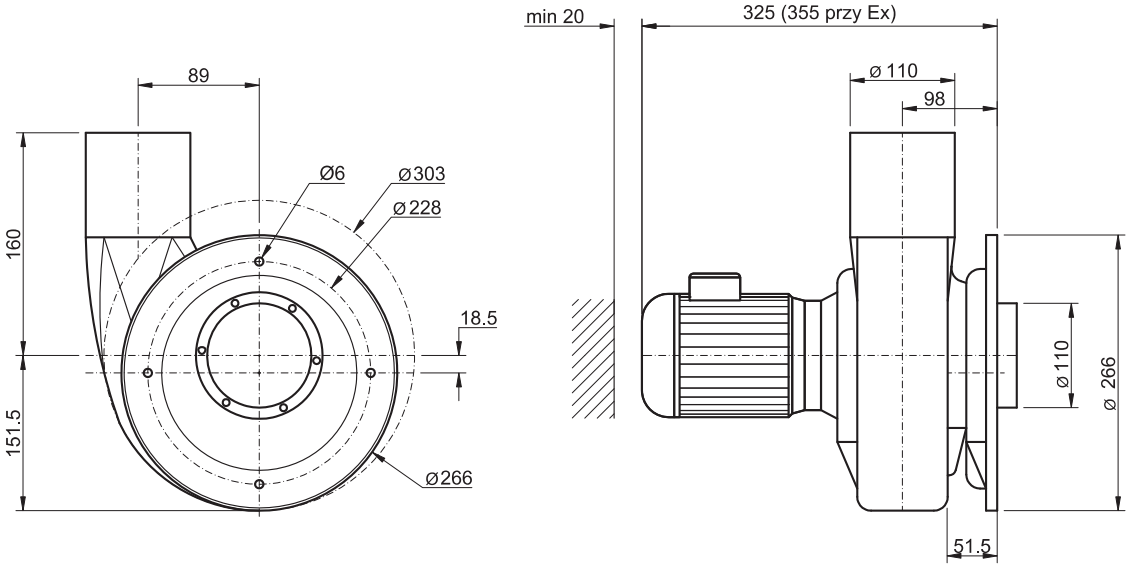
3.2. FRv 075 - 110+ SMALL RADIAL FANS

3.2.2. FRv 110 Type

Dimensions - version with a console:



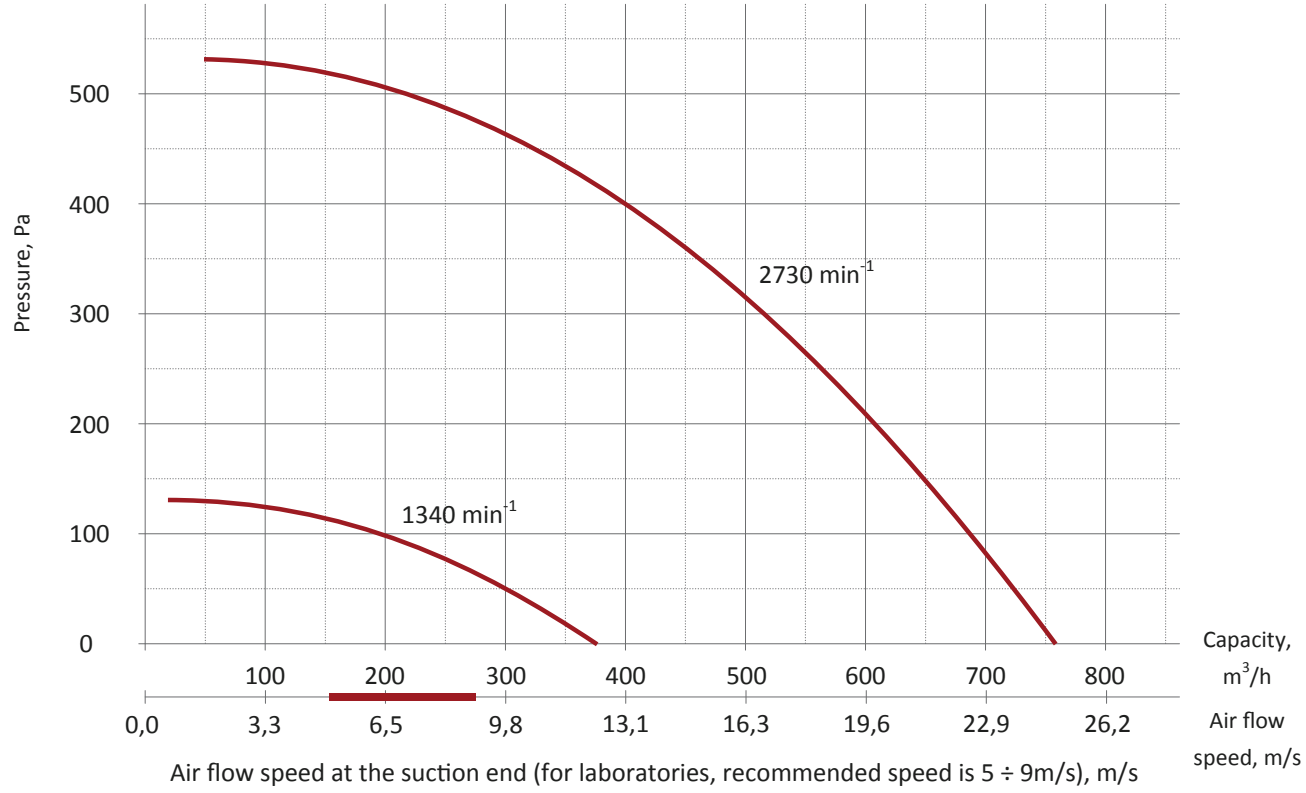
Dimensions - version with a flange:



3.2. FRv 075 - 110+ SMALL RADIAL FANS

3.2.3. FRv 110+ Type

Characteristics:



TECHNICAL DETAILS:

Fan type	Rotational speed	Rated power	Rated current	Maximum capacity	Maximum pressure
---	rpm	kW	A	m^3/h	Pa
FRv 110+ type radial fan	1500	0,06	0,35	**375**	**130**
	3000	0,18	0,60	**735**	**530**

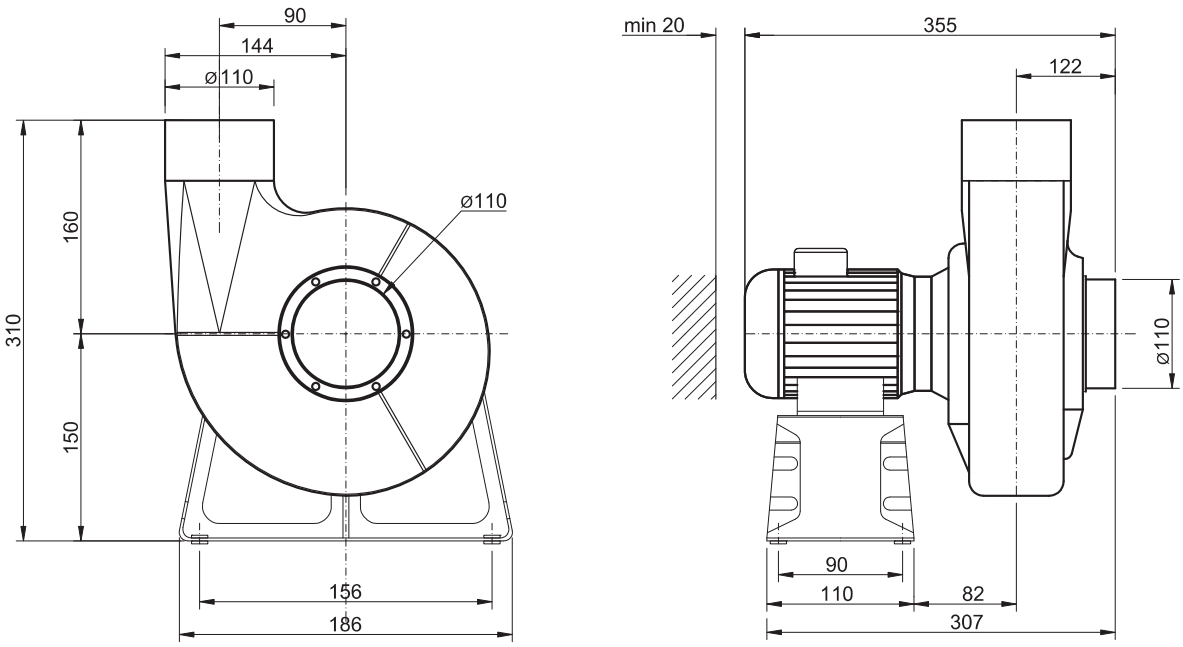
Acoustic characteristics:

Rotational speed	Frequency, Hz								Lw(dB)	Lw(dBA)
rpm	dB								dB	dB
	63	125	250	500	1000	2000	4000	8000	---	---
1500	14	57	27	28	27	23	17	8	49	45
3000	30	38	79	46	45	42	36	28	71	65

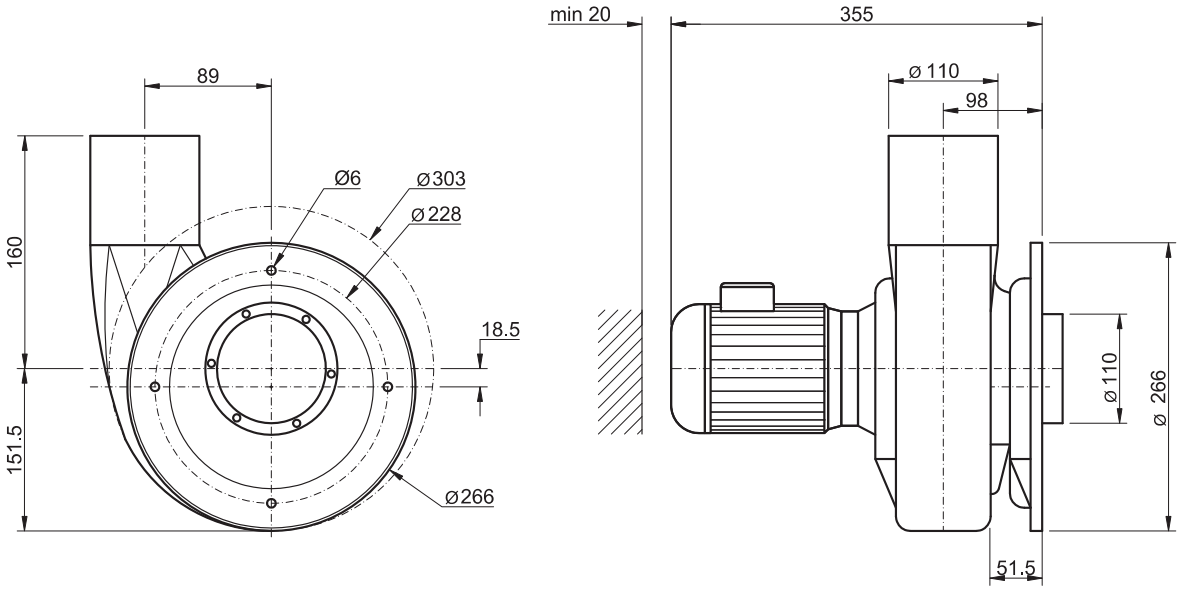
3.2. FRv 075 - 110+ SMALL RADIAL FANS

3.2.3. FRv 110+ Type

Dimensions - version with a console:



Dimensions - version with a flange:



3. CHEMICALLY RESISTANT FANS

3.3. FRv 125 - 280 RADIAL FANS

DESCRIPTION

FRv radial fans for pumping corrosive and explosive gases, vapors and fumes of dust content of < 5 mg/m³, maximum medium temperature of 40°C and maximum ambient temperature of 40°C.

Casing made of polypropylene by method of injection molding, with an integrated, maintenance-free sealing system with a labyrinth seal.

In the Ex version, additionally with a lubricant lock and sealing with a self-sealing ring. Conformity with VDMA 24 169 and RL/94/9/WE (ATEX).

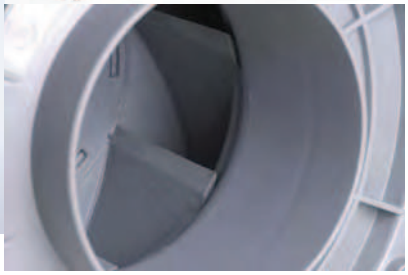
Drum rotor made of polypropylene by method of injection molding with rotor blade arrangement ensuring guaranteed negative pressure on the shaft penetration during operation.

ATEX-compliant direct drive with a standardized IEC-34 motor with temperature-resistant motor shields on the casing and rotor to prevent installation position deflections, also in case of a failure.

TECHNICAL DETAILS

Casing position:	GL / GR
Exhaust direction:	45° / 90° / 135° / 180° / - / 270° / 315° / 360°
Drive:	1 x 230 V or 3 x 230/400 V, 50 Hz standardized motor, IP55, heat class F with a thermal contactor
Protection class for Ex version:	fan II 3G c IIB T3 X 05 ATEX D085 engine EExe II2GT3

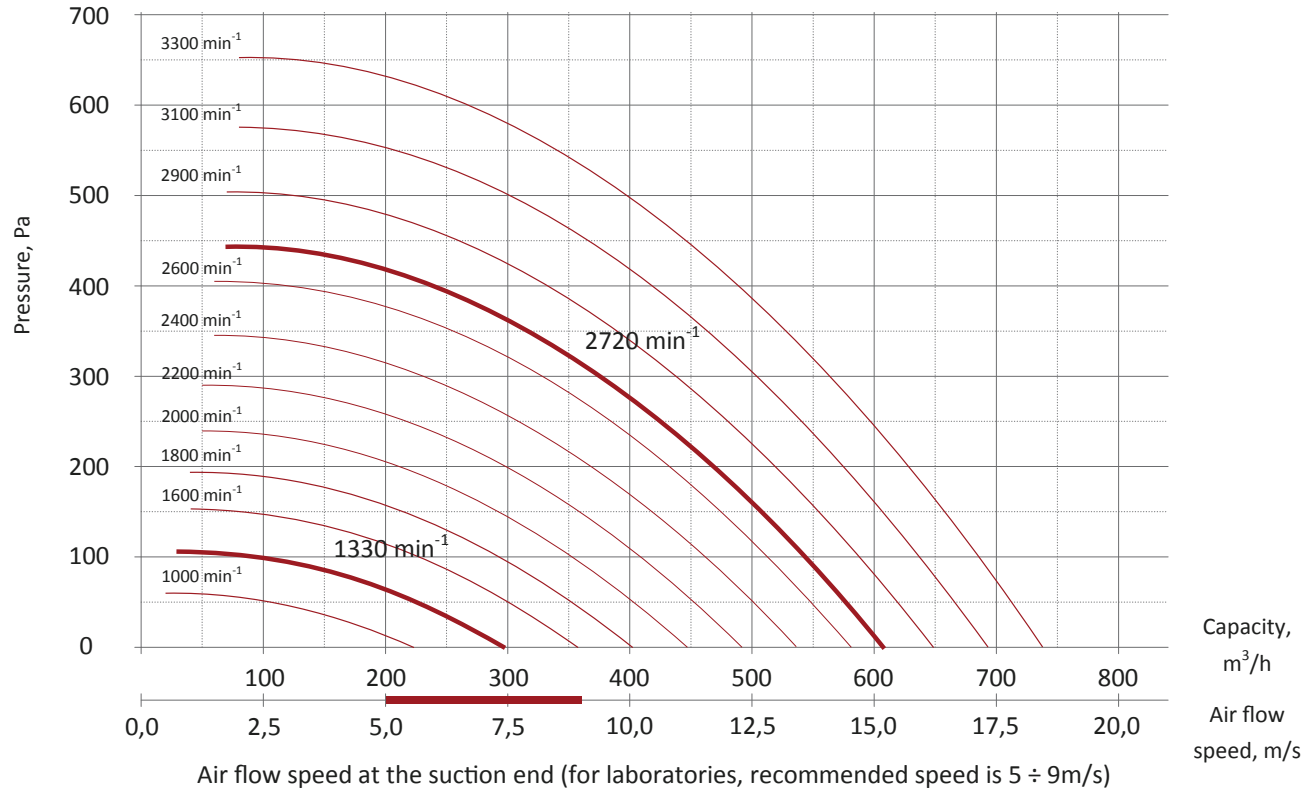
FUNKEN Ventilation Systems



3.3. FRv 125 - 280 RADIAL FANS

3.3.1. FRv 125 Type

Characteristics:



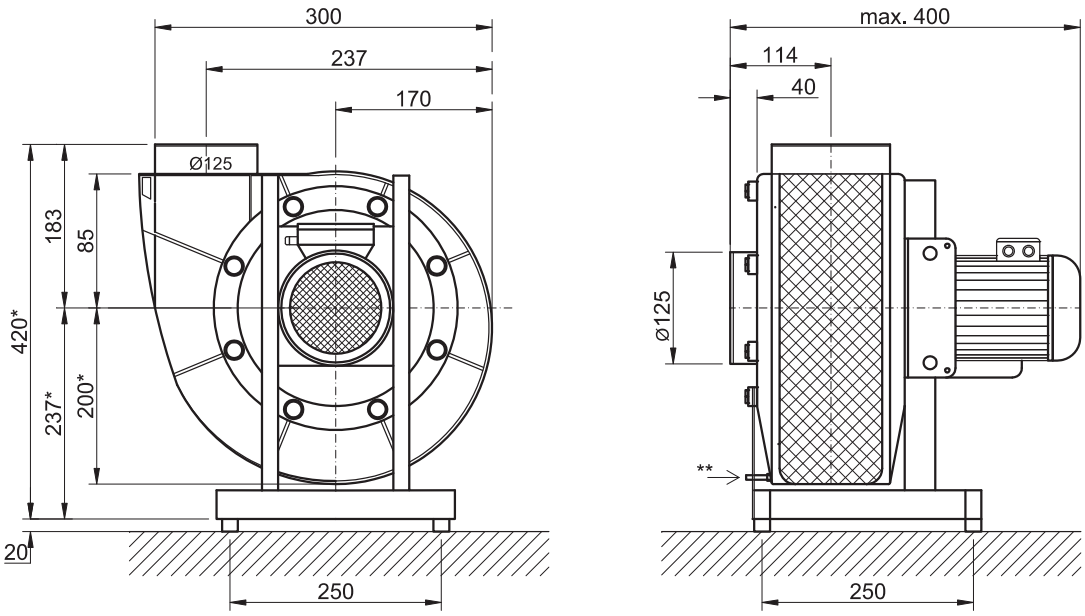
FRv 125 TYPE FAN TECHNICAL DETAILS:

Rotational speed		Rotational speed at 50Hz	Ilość biegunów	Rated power	Rated current at 400V/50Hz	Maximum capacity	Maximum pressure
10Hz	60Hz						
rpm		rpm	---	kW	A	m^3/h	Pa
Standard design							
266	1596	1500	4 (1500 1/min)	0,06	0,35	**375**	**130**
544	3264	3000	2 (3000 1/min)	0,12	0,50	**735**	**530**
Ex - EExe II 2GT3 design							
		1500	4 (1500 1/min)	0,12	0,48	**375**	**130**
		3000	2 (3000 1/min)	0,18	0,53	**735**	**530**

3.3. FRv 125 - 280 RADIAL FANS

3.3.1. FRv 125 Type

Dimensions:



* - for casing position 270 + 315o - dimension + 40mm

** - condensate drain Ø12mm

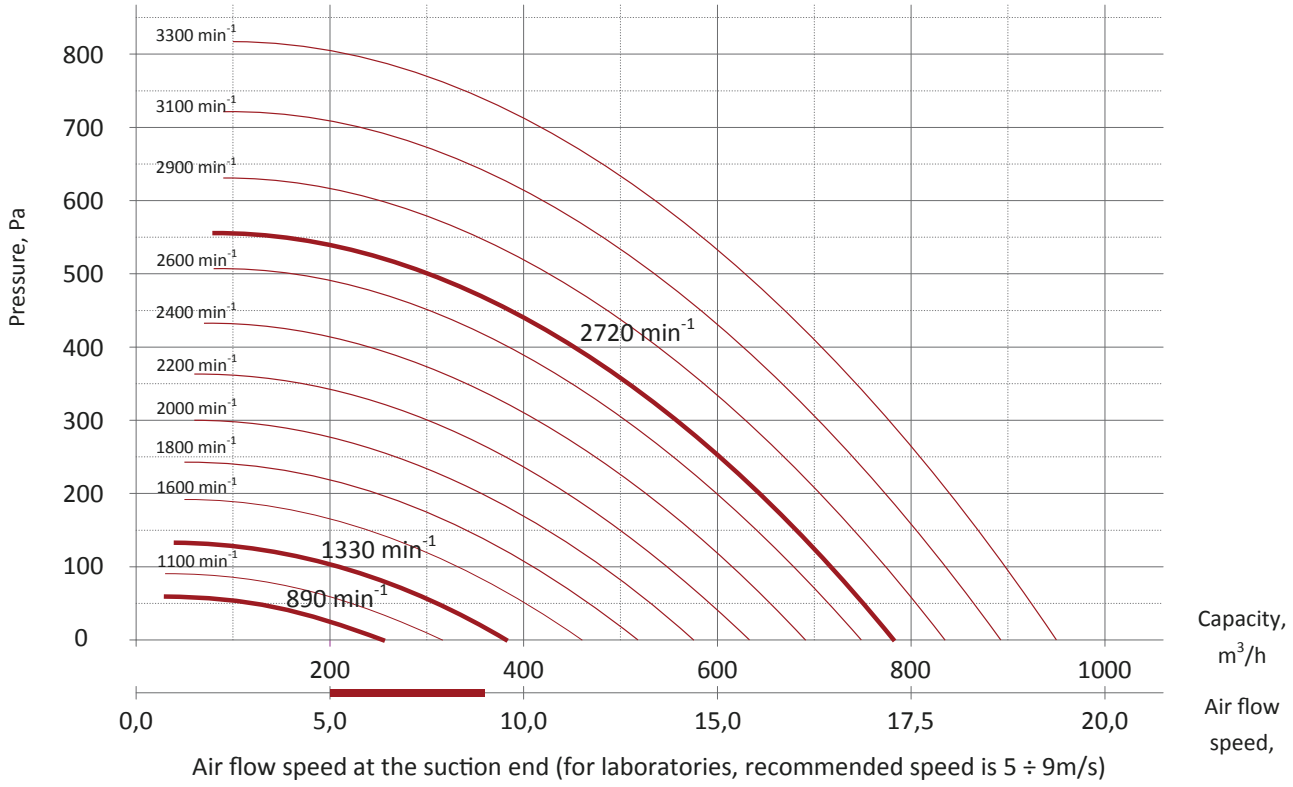
Acoustic characteristics:

Rotational speed	Frequency, Hz								Lw(dB)	Lw(dBA)
rpm	dB								dB	dB
	63	125	250	500	1000	2000	4000	8000	---	---
1500	31	46	42	43	40	35	27	16	63	53
3000	49	57	68	63	61	57	50	40	63	53

3.3. FRv 125 - 280 RADIAL FANS

3.3.2. FRv 140 Type

Characteristics:



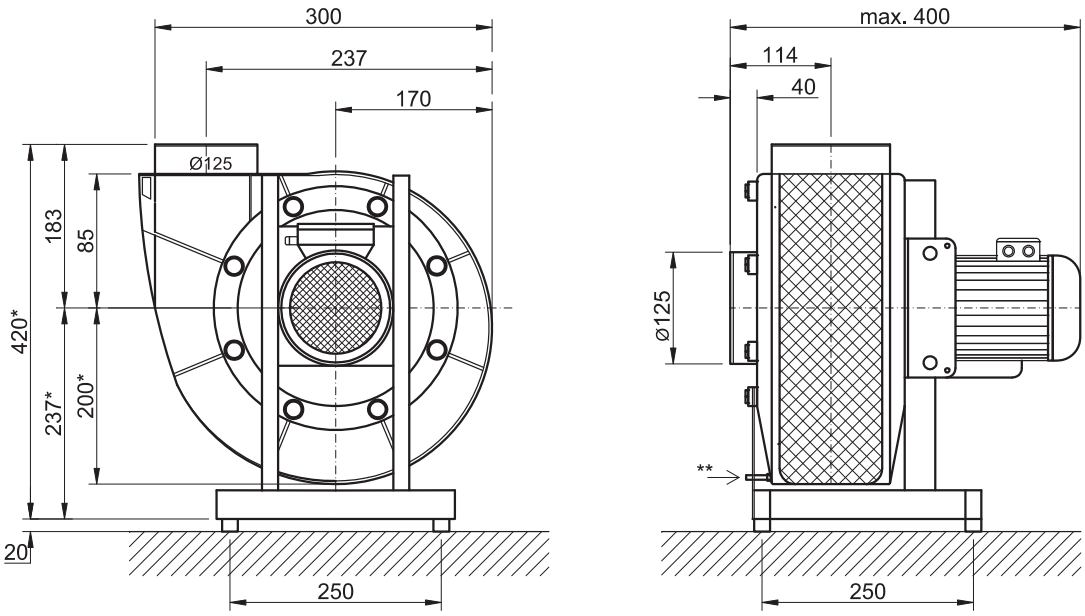
FRv 140 FAN TYPE TECHNICAL DETAILS :

Rotational speed		Rotational speed at 50Hz	Number of poles	Rated power	Rated current at 400V/50Hz	Maximum capacity	Maximum pressure
10Hz	60Hz						
rpm		rpm	---	kW	A	m^3/h	Pa
			Standard design				
266	1596	1500	4 (1500 1/min)	0,06	0,35	**380**	**140**
544	3264	3000	2 (3000 1/min)	0,12	0,50	**790**	**560**
			Ex - EExe II 2GT3 design				
		1500	4 (1500 1/min)	0,12	0,48	**380**	**140**
		3000	2 (3000 1/min)	0,18	0,53	**790**	**560**

3.3. FRv 125 - 280 RADIAL FANS

3.3.2. Type FRv 140

Dimensions:



* - for casing position 270 + 315o - dimension + 40mm

** - condensate drain Ø12mm

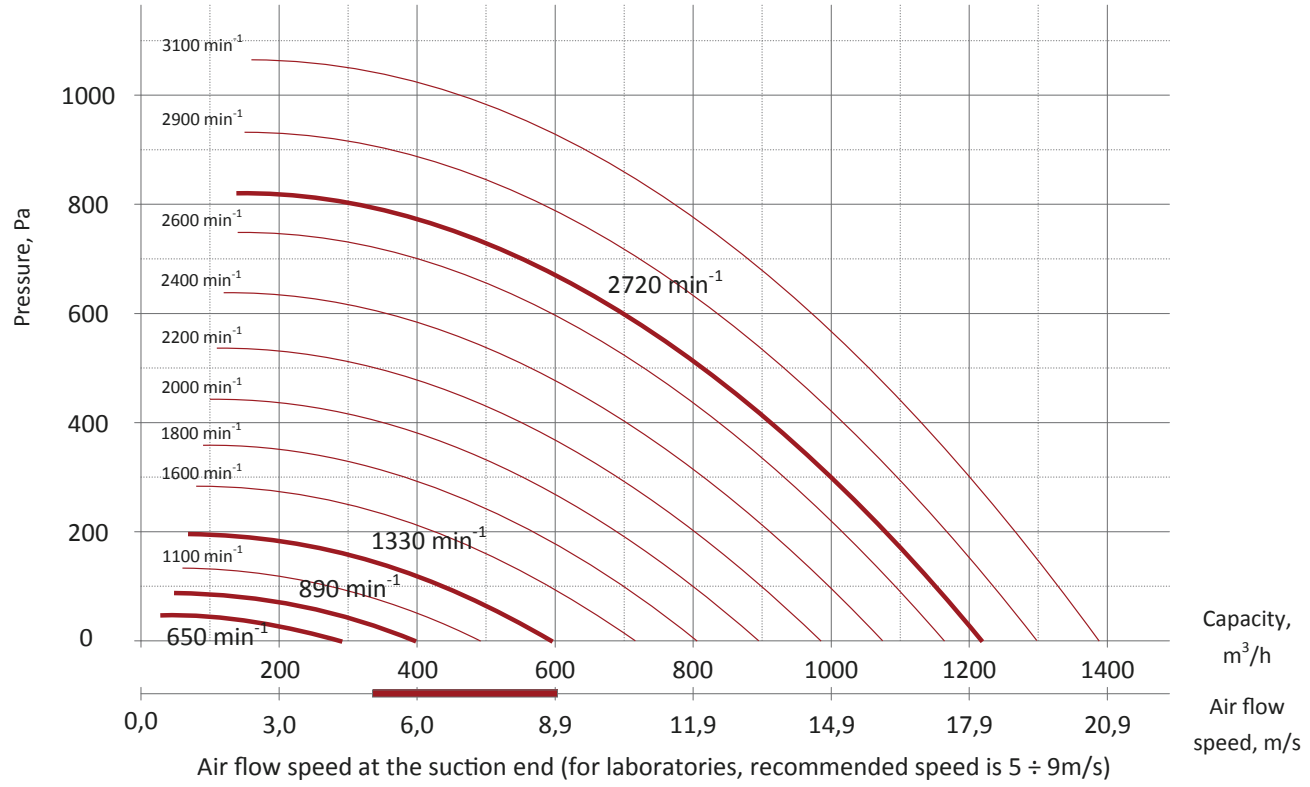
Acoustic characteristics:

Rotational speed	Frequency, Hz								Lw(dB)	Lw(dBA)
rpm	dB								dB	dB
	63	125	250	500	1000	2000	4000	8000	---	---
1500	38	58	49	49	46	40	32	21	51	39
3000	56	64	81	69	67	63	55	46	74	60

3.3. FRv 125 - 280 RADIAL FANS

3.3.3. Type FRv 160

Characteristics:



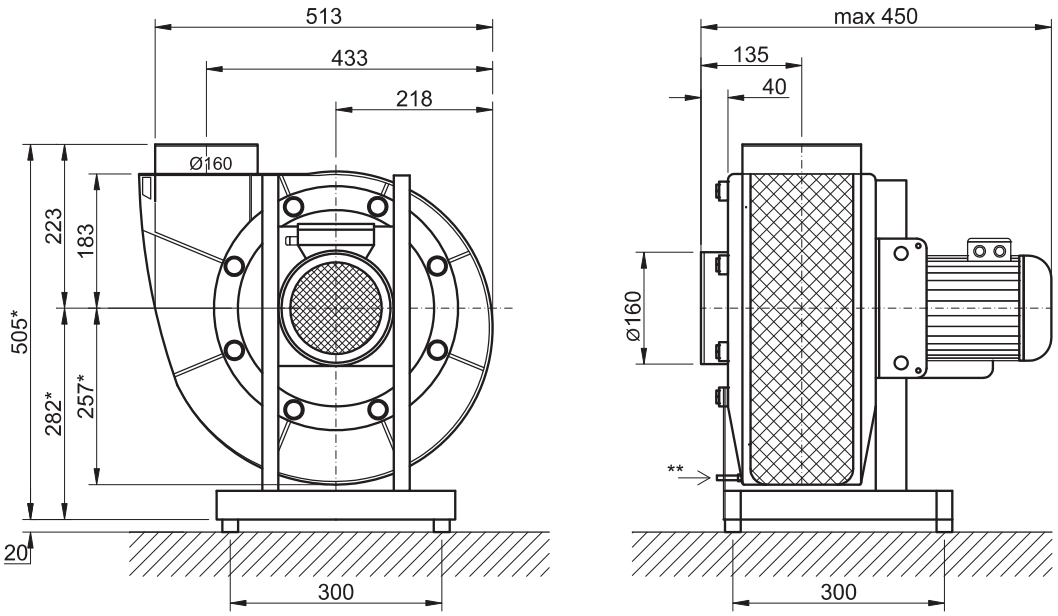
FRv 160 TYPE FAN TECHNICAL DETAILS:

Rotational speed		Rotational speed at 50Hz	Number of poles	Rated power	Rated current at 400V/50Hz	Maximum capacity	Maximum pressure
10Hz	60Hz						
rpm		rpm	---	kW	A	m^3/h	Pa
			Standard design				
544	3264	3000	2	0,37	1,10	**1220**	**820**
266	1596	1500	4	0,12	0,70	**590**	**200**
178	1068	1000	6	0,12	0,63		
130	780	750	8	0,12	0,80		
		3000/1500	2/4	0,55/0,11	1,27/0,34		
		1500/1000	4/6	0,18/0,05	0,80/0,38		
		1500/750	4/8	0,18/0,04	0,62/0,24		
			Ex - EExe II 2GT3 design				
		3000	2	0,37	0,97	**1220**	**820**
		1500	4	0,12	0,48	**590**	**200**

3.3. FRv 125 - 280 RADIAL FANS

3.3.3. FRv 160 Type

Dimensions:



* - for casing position 270 + 315o - dimension + 40mm

** - condensate drain Ø12mm

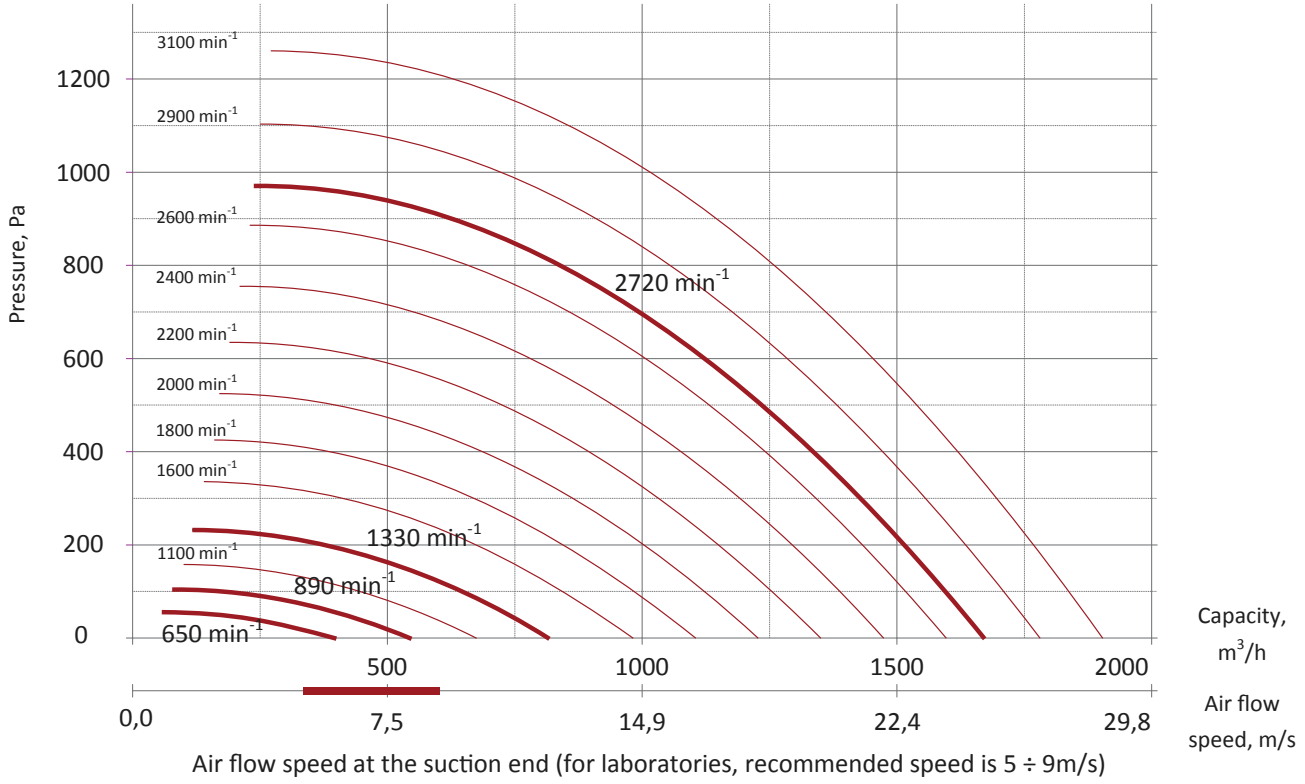
Acoustic characteristics:

Rotational speed	Frequency, Hz								Lw(dB)	Lw(dBA)
rpm	dB								dB	dB
	63	125	250	500	1000	2000	4000	8000	---	---
1500	69	53	50	51	48	42	35	24	49	40
3000	57	65	76	71	69	64	58	48	70	61

3.3. FRv 125 - 280 RADIAL FANS

3.3.4. FRv 180 Type

Characteristics:



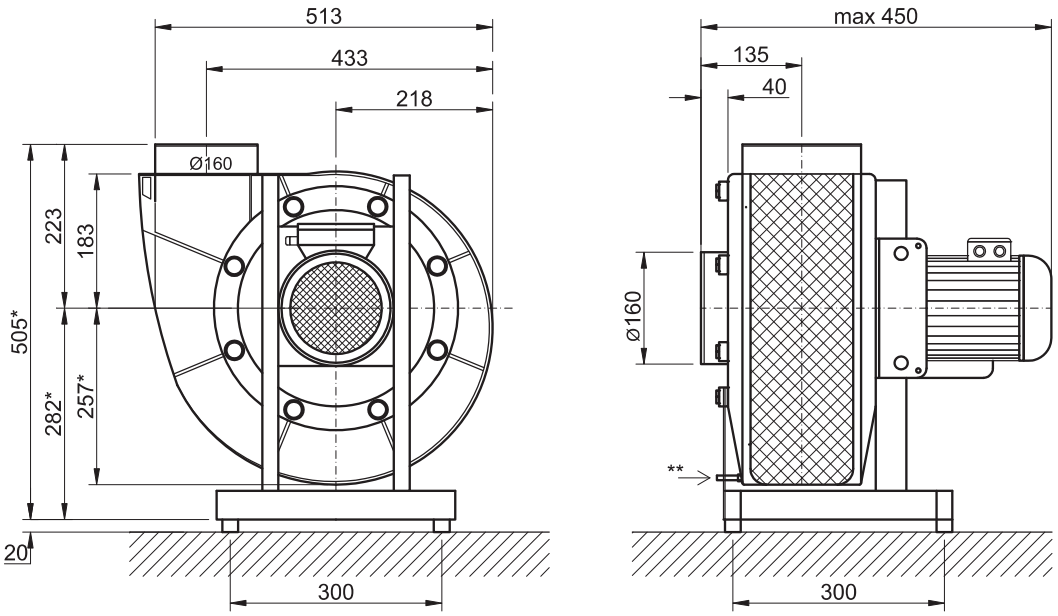
FRv 180 TYPE FAN TECHNICAL DETAILS:

Rotational speed		Rotational speed at 50Hz	Number of poles	Rated power	Rated current at 400V/50Hz	Maximum capacity	Maximum pressure
10Hz	60Hz						
rpm		rpm	---	kW	A	m^3/h	Pa
			Standard design				
544	3264	3000	2	0,37	1,10	**1700**	**990**
266	1596	1500	4	0,12	0,70	**860**	**240**
178	1068	1000	6	0,12	0,63		
130	780	750	8	0,12	0,80		
		3000/1500	2/4	0,55/0,11	1,27/0,34		
		1500/1000	4/6	0,18/0,05	0,80/0,38		
		1500/750	4/8	0,18/0,04	0,62/0,24		
			Ex - EExe II 2GT3 design				
		3000	2	0,37	0,97	**1700**	**990**
		1500	4	0,12	0,48	**860**	**240**

3.3. FRv 125 - 280 RADIAL FANS

3.3.4. FRv 180 Type

Dimensions:



* - for casing position 270 + 315o - dimension + 40mm
** - condensate drain Ø12mm

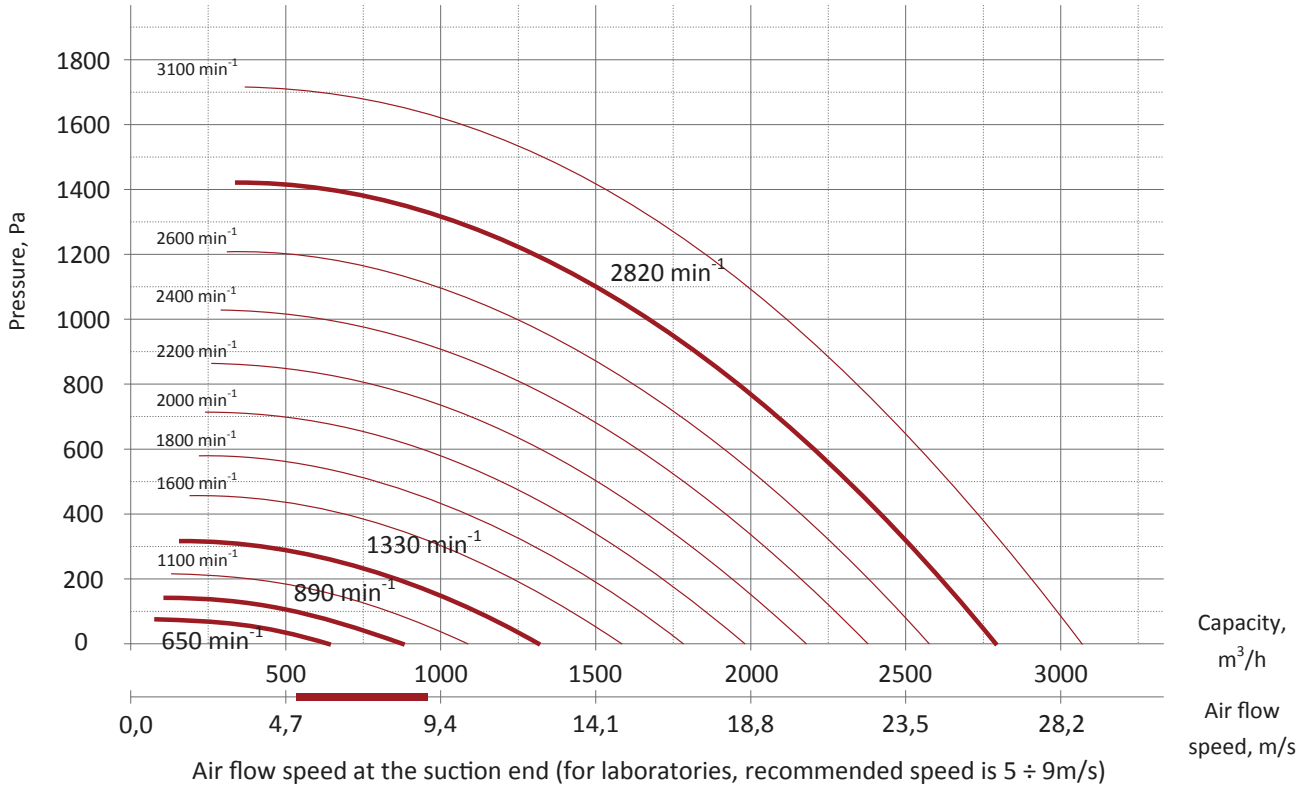
Acoustic characteristics:

Rotational speed	Frequency, Hz								Lw(dB)	Lw(dBA)
rpm	dB								dB	dB
	63	125	250	500	1000	2000	4000	8000	---	---
1500	44	66	57	57	54	48	40	29	59	47
3000	64	72	89	77	76	71	64	54	82	69

3.3. FRv 125 - 280 RADIAL FANS

3.3.5. FRv 200 Type

Characteristics:



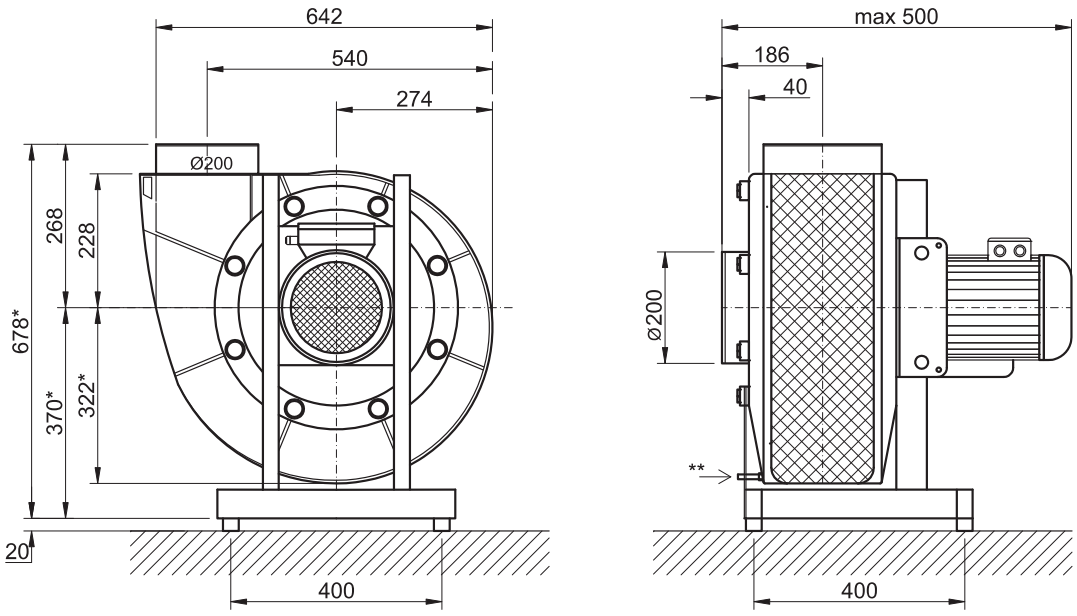
FRv 200 FAN TYPE TECHNICAL DETAILS:

Rotational speed		Rotational speed at 50Hz	Number of poles	Rated power	Rated current at 400V/50Hz	Maximum capacity	Maximum pressure
10Hz	60Hz						
rpm		rpm	---	kW	A	m^3/h	Pa
			Standard design				
564	3384	3000	2	0,75	2,00	**2800**	**1420**
266	1596	1500	4	0,25	0,86	**1300**	**310**
178	1068	1000	6	0,18	1,00		
130	780	750	8	0,12	0,80		
		3000/1500	2/4	0,95/0,25	2,30/0,70		
		1500/1000	4/6	0,26/0,08	1,07/0,52		
		1500/750	4/8	0,26/0,05	0,86/0,31		
			Ex - EExe II 2GT3 design				
		3000	2	0,75	1,76	**2800**	**1420**
		1500	4	0,25	0,79	**1300**	**310**
		1000	6	0,37	1,30		
		750	8	0,18	0,78		

3.3. FRv 125 - 280 RADIAL FANS

3.3.5. Type FRv 200

Dimensions:



* - for casing position 270 + 315o - dimension + 40mm

** - condensate drain Ø12mm

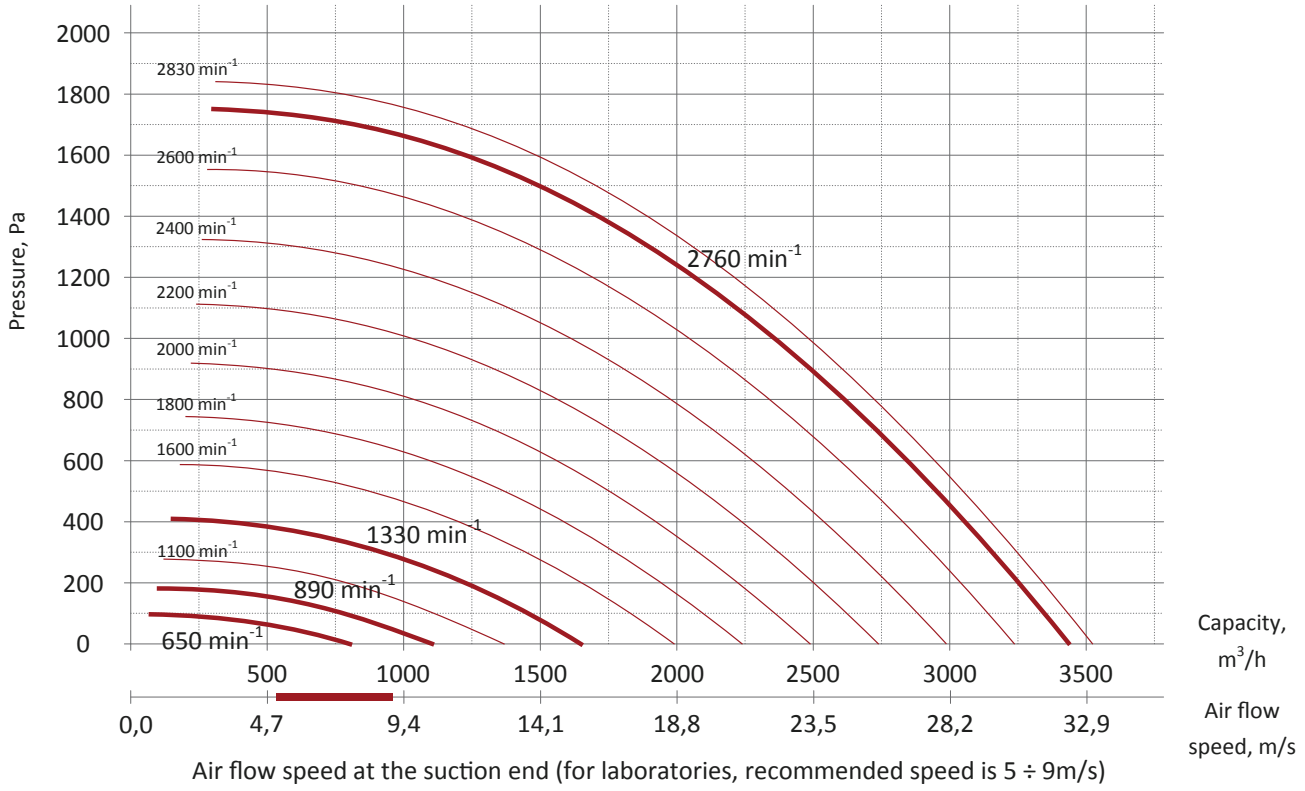
Acoustic characteristics:

Rotational speed	Frequency, Hz								Lw(dB)	Lw(dBA)
rpm	dB								dB	dB
	63	125	250	500	1000	2000	4000	8000	---	---
1500	46	60	57	58	55	50	42	31	56	47
3000	64	72	83	78	76	72	65	55	77	68

3.3. FRv 125 - 280 RADIAL FANS

3.3.6. Type FRv 225

Characteristics:



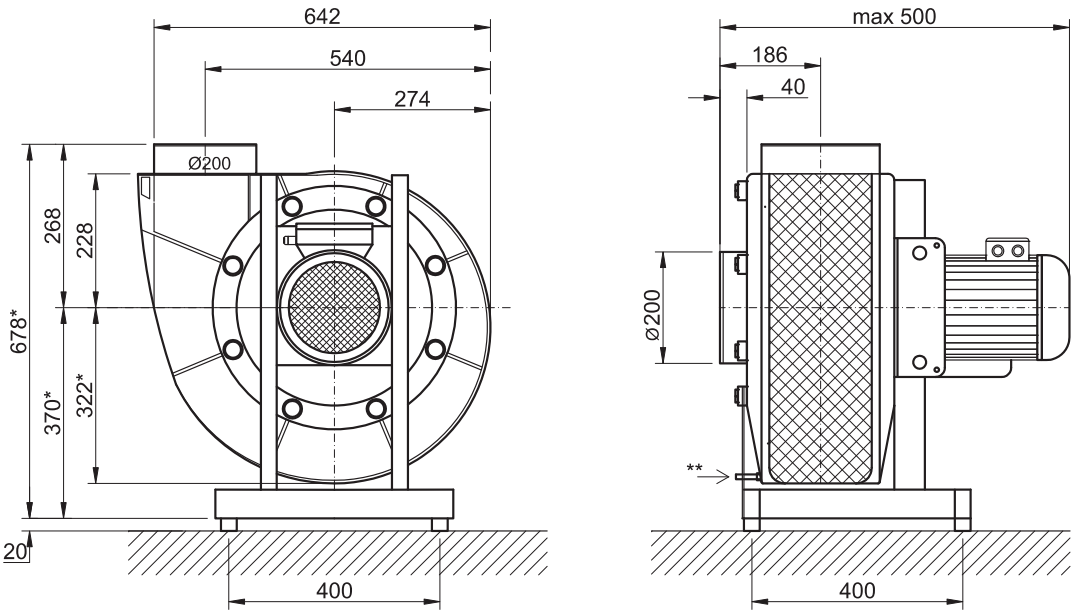
FRv 225 FAN TYPE TECHNICAL DETAILS:

Rotational speed		Rotational speed at 50Hz	Number of poles	Rated power	Rated current at 400V/50Hz	Maximum capacity	Maximum pressure
10Hz	60Hz						
rpm		rpm	---	kW	A	m^3/h	Pa
			Standard design				
552	3312	3000	2	1,10	2,60	**3430**	**1760**
266	1596	1500	4	0,25	0,86	**1680**	**400**
178	1068	1000	6	0,18	1,00		
130	780	750	8	0,12	0,80		
		3000/1500	2/4	0,95/0,25	2,30/0,70		
		1500/1000	4/6	0,26/0,08	1,07/0,52		
		1500/750	4/8	0,26/0,05	0,86/0,31		
			Ex - EExe II 2GT3 design				
		3000	2	1,10	2,60	**3430**	**1760**
		1500	4	0,25	0,79	**1680**	**400**
		1000	6	0,37	1,30		
		750	8	0,12	0,78		

3.3. FRv 125 - 280 RADIAL FANS

3.3.6. FRv 225 Type

Dimensions:



* - for casing position 270 + 315o - dimension + 40mm

** - condensate drain Ø12mm

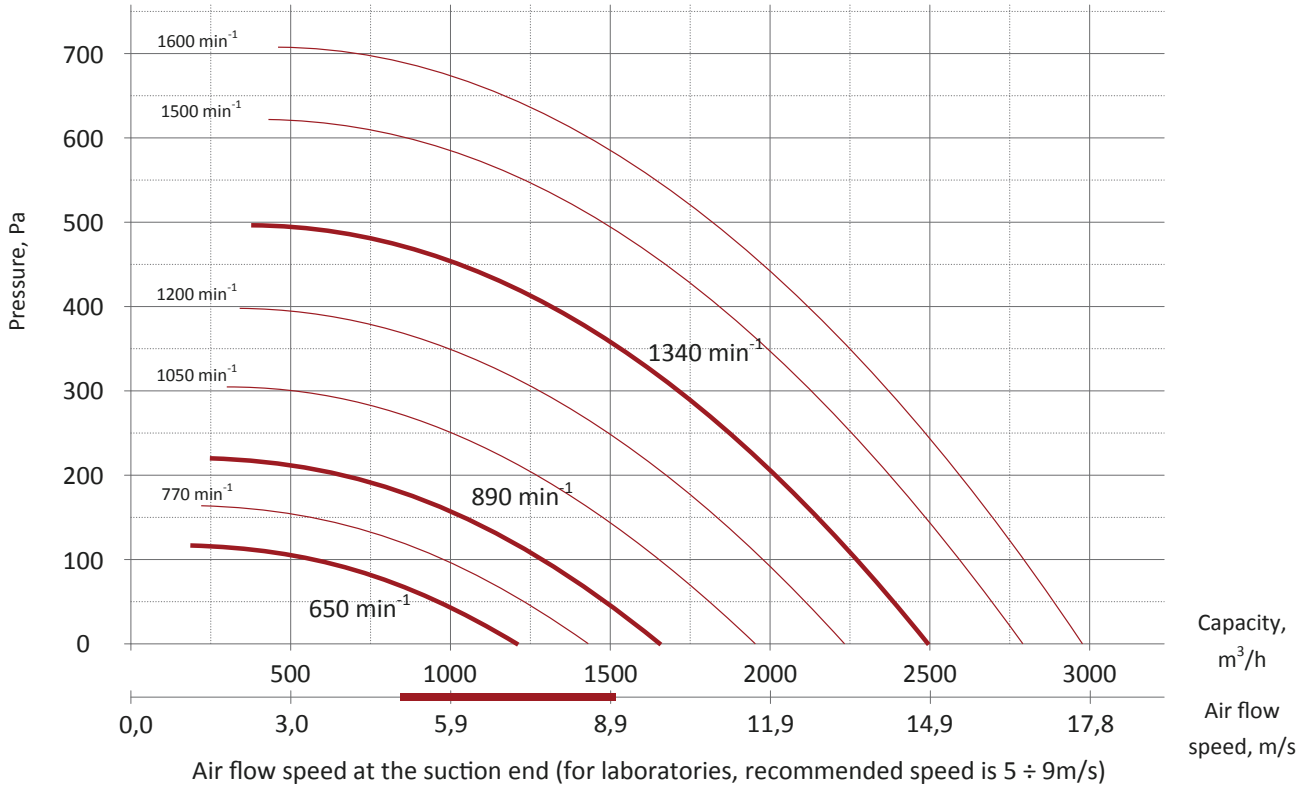
Acoustic characteristics:

Rotational speed	Frequency, Hz								Lw(dB)	Lw(dBA)
rpm	dB								dB	dB
	63	125	250	500	1000	2000	4000	8000	---	---
1500	53	73	64	64	61	55	47	36	67	54
3000	71	79	96	84	83	78	71	61	89	76

3.3. FRv 125 - 280 RADIAL FANS

3.3.7. FRv 250 Type

Characteristics:



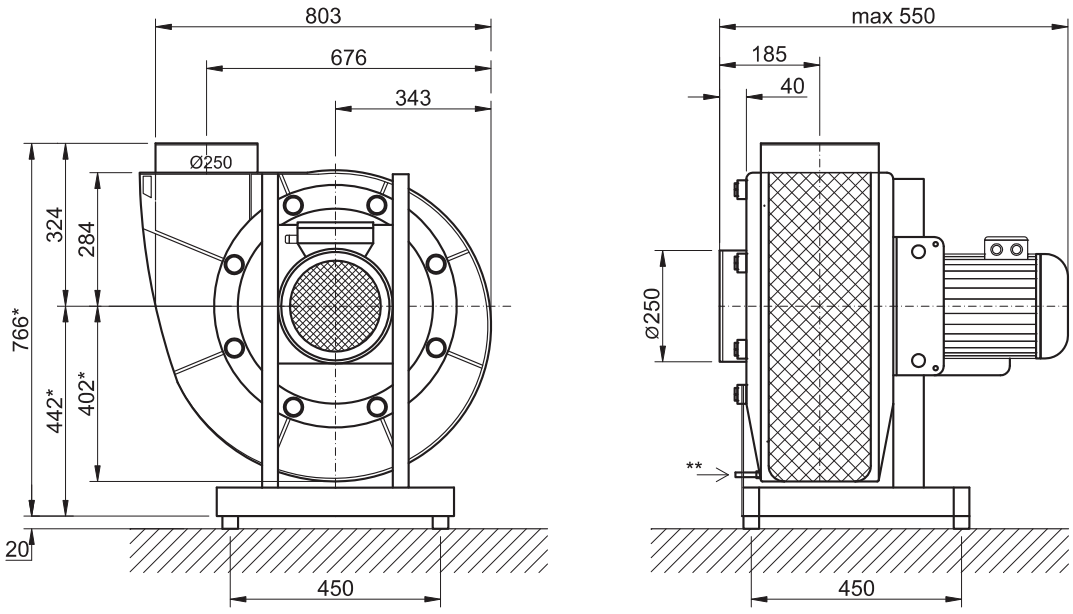
FRv 250 FAN TYPE TECHNICAL DETAILS:

Rotational speed		Rotational speed at 50Hz	Number of poles	Rated power	Rated current at 400V/50Hz	Maximum capacity	Maximum pressure
10Hz	60Hz						
rpm		rpm	---	kW	A	m^3/h	Pa
			Standard design				
268	1608	1500	4	0,37	1,20	**2500**	**500**
178	1068	1000	6	0,18	1,00	**1700**	**220**
130	780	750	8	0,12	0,80	**1200**	**110**
		1500/1000	4/6	0,55/0,18	1,75/0,66		
		1500/750	4/8	0,50/0,10	1,00/0,42		
			Ex - EExe II 2GT3 design				
		1500	4	0,37	0,79	**2500**	**500**
		1000	6	0,37	1,30	**1700**	**220**
		750	8	0,18	0,78	**1200**	**110**

3.3. FRv 125 - 280 RADIAL FANS

3.3.7. FRv 250 Type

Dimensions:



* - for casing position 270 + 315o - dimension + 40mm

** - condensate drain Ø12mm

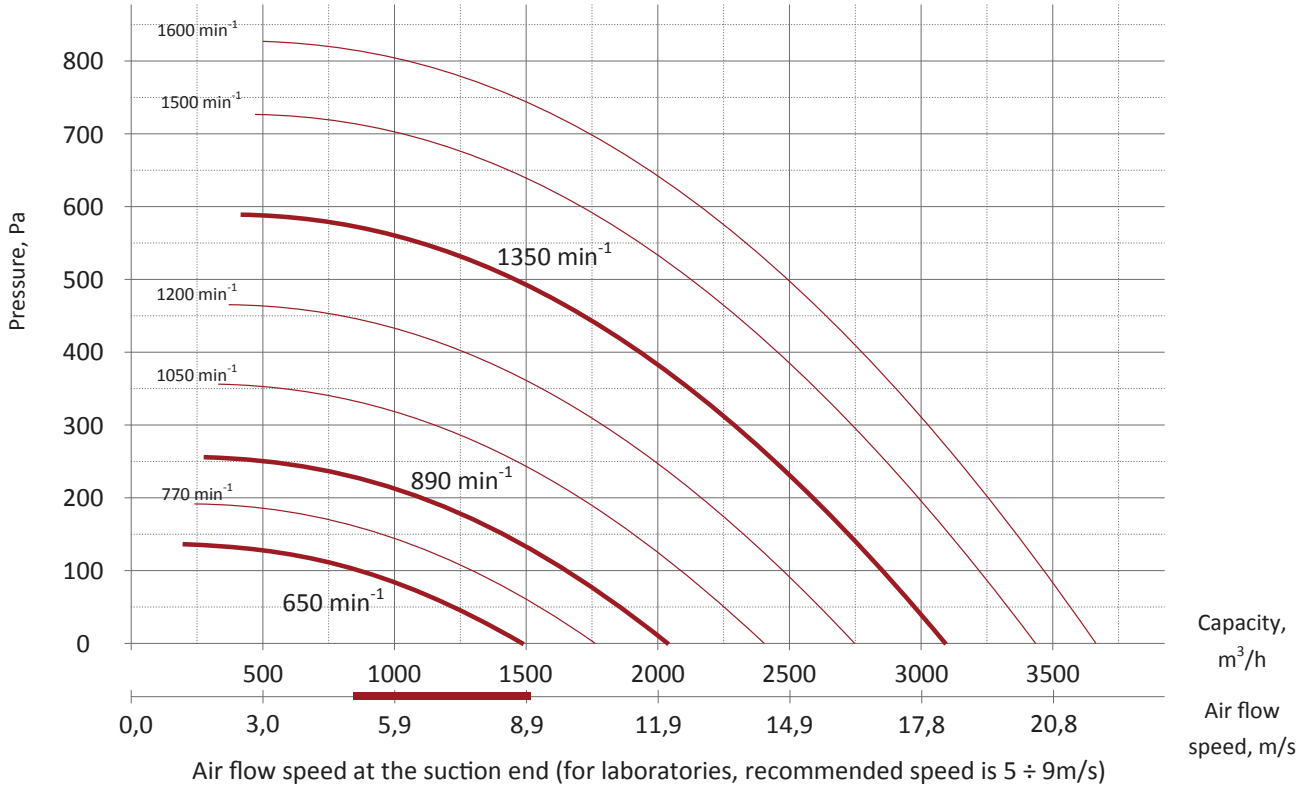
Acoustic characteristics:

Rotational speed	Frequency, Hz								Lw(dB)	Lw(dBA)
rpm	dB								dB	dB
	63	125	250	500	1000	2000	4000	8000	---	---
1500	53	67	64	65	62	57	49	38	63	54
950	43	57	53	53	50	44	36	25	52	41
750	42	42	44	44	41	34	26	14	42	32

3.3. FRv 125 - 280 RADIAL FANS

3.3.8. FRv 280 Type

Characteristics:



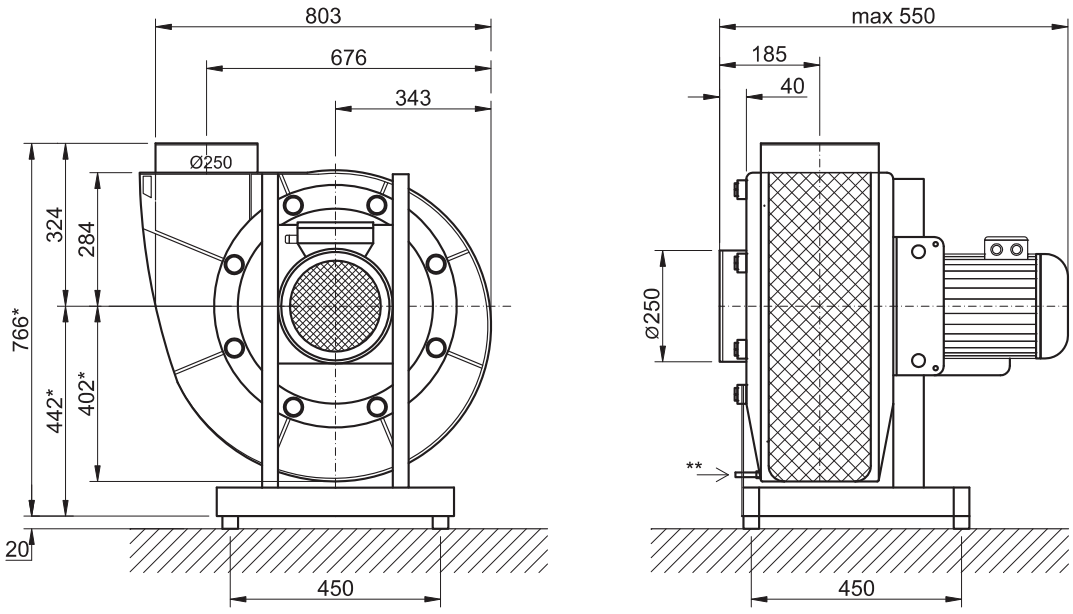
FRv 280 FAN TYPE TECHNICAL DETAILS:

Rotational speed		Rotational speed at 50Hz	Number of poles	Rated power	Rated current at 400V/50Hz	Maximum capacity	Maximum pressure
10Hz	60Hz						
rpm		rpm	---	kW	A	m^3/h	Pa
			Standard design				
270	1620	1500	4	0,55	1,50	**3100**	**590**
178	1068	1000	6	0,18	1,00	**2050**	**260**
130	780	750	8	0,12	0,80	**1480**	**140**
		1500/1000	4/6	0,55/0,18	1,75/0,66		
		1500/750	4/8	0,50/0,10	1,00/0,42		
			Ex - EExe II 2GT3 design				
		1500	4	0,55	1,59	**3100**	**590**
		1000	6	0,37	1,30	**2050**	**260**
		750	8	0,18	0,78	**1480**	**140**

3.3. FRv 125 - 280 RADIAL FANS

3.3.8. FRv 280 Type

Dimensions:



* - for casing position 270 + 315o - dimension + 40mm

** - condensate drain Ø12mm

Acoustic characteristics:

Rotational speed	Frequency, Hz								Lw(dB)	Lw(dBA)
rpm	dB								dB	dB
	63	125	250	500	1000	2000	4000	8000	---	---
1500	60	80	71	71	68	62	54	43	73	61
950	49	68	58	58	54	48	39	28	61	48
750	55	48	51	50	46	40	31	19	50	38

3. CHEMICALLY RESISTANT FANS

3.4. FRv 075 - 280 ROOFTOP RADIAL FANS

DESCRIPTION

FRv type rooftop radial fans for pumping corrosive and explosive gases, vapors and fumes of dust content of < 5 mg/m³, maximum medium temperature of 40°C and maximum ambient temperature of 40°C.

Polyethylene casing made by injection molding with a guide device as a single casting, with an integrated maintenance-free sealing system with a labyrinth seal. In the Ex version, additionally with a lubricant lock and sealing with a self-sealing ring. Conformity with VDMA 24 169 i RL/94/9/WE (ATEX). Condensate nozzle in the lowest casing point.

Drum rotor made of polypropylene by method of injection molding with rotor blade arrangement ensuring guaranteed negative pressure on the shaft penetration during operation.

Direct drive with a standardized IEC-34 motor in an exhaust air-tight casing, with temperature-resistant motor shields on the casing and rotor to prevent installation position deflections, also in case of a failure. Casing cooling air guided through separated supply and exhaust chambers for cooling air and to prevent uncontrolled circulation.

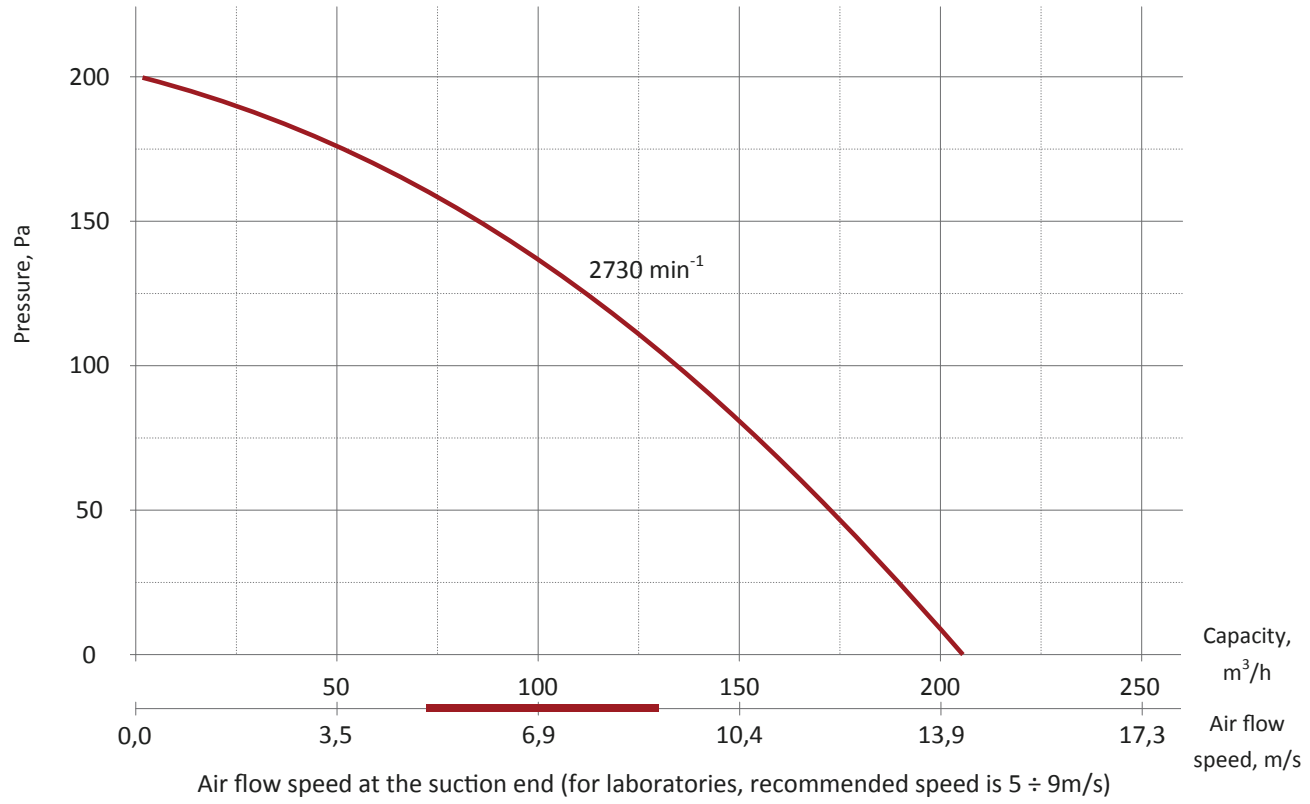
TECHNICAL DETAILS

Exhaust direction:	vertical
Drive:	1 x 230 V or 3 x 230/400 V, 50 Hz standardized motor, IP55, heat class F with a thermal contactor
Protection class for Ex version:	fan II 3G c IIB T3 X 04 ATEX D132 engine EExe II2GT3
Accessories:	lockable maintenance switch with an auxiliary contactor, installed and equipped with cables (in the Ex version, only the terminal box is installed and equipped with cables

3.4. FRv 075 - 280 ROOFTOP RADIAL FANS

3.4.1. FDv 075 Type

Characteristics:



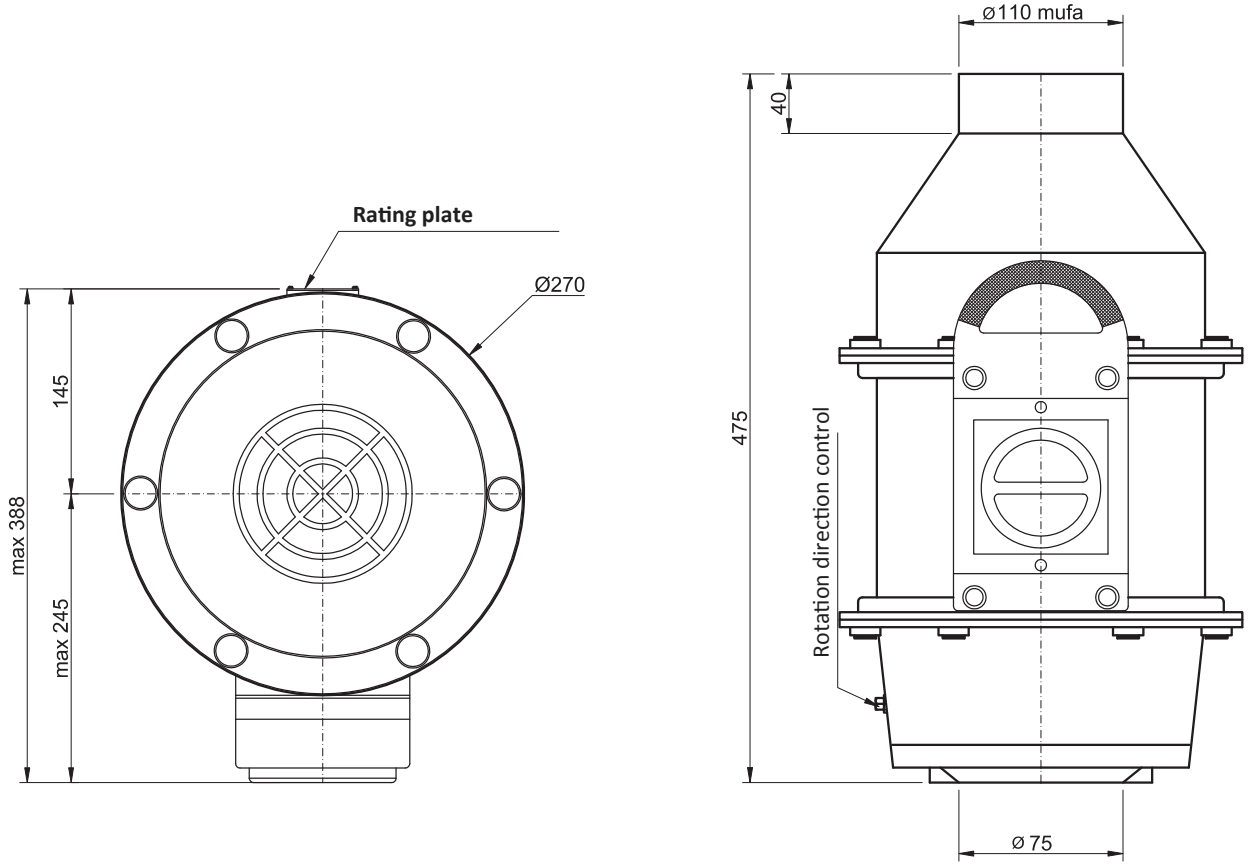
FDv 075 FAN TYPE TECHNICAL DETAILS:

Rotational speed		Rotational speed at 50Hz	Ilość biegunów	Rated power	Rated current at 400V/50Hz	Maximum capacity	Maximum pressure
10Hz	60Hz						
rpm		rpm	---	kW	A	m^3/h	Pa
Standard design							
---	---	3000	2	0,09	0,35	**210**	**200**
Ex design							
NOT APPLICABLE							

3.4. FRv 075 - 280 ROOFTOP RADIAL FANS

3.4.1. FDv 075 Type

Dimensions:



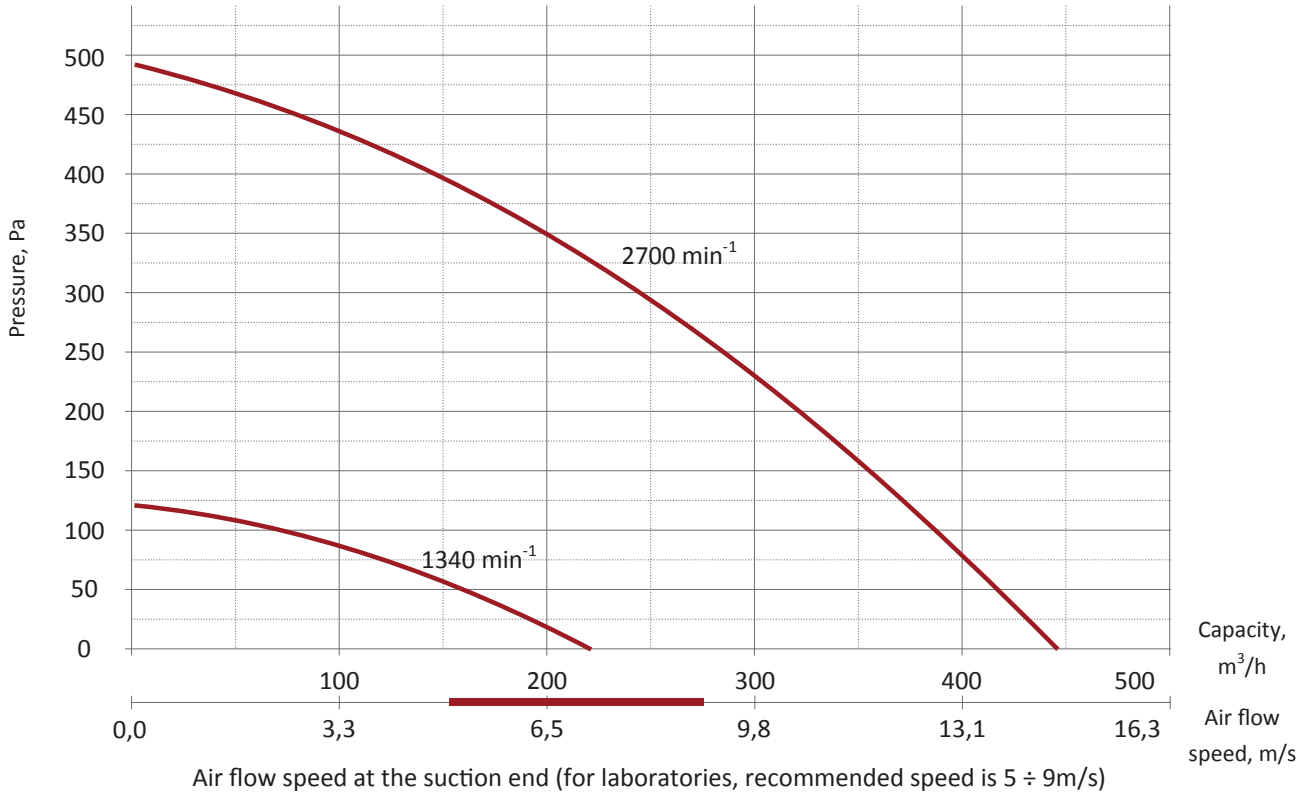
Acoustic characteristics:

Rotational speed	Frequency, Hz								Lw(dB)	Lw(dBA)
rpm	dB								dB	dB
	63	125	250	500	1000	2000	4000	8000	---	---
3000	23	31	61	37	36	31	24	15	53	36

3.4. FRv 075 - 280 ROOFTOP RADIAL FANS

3.4.2. FDv 110+ Type

Characteristics:



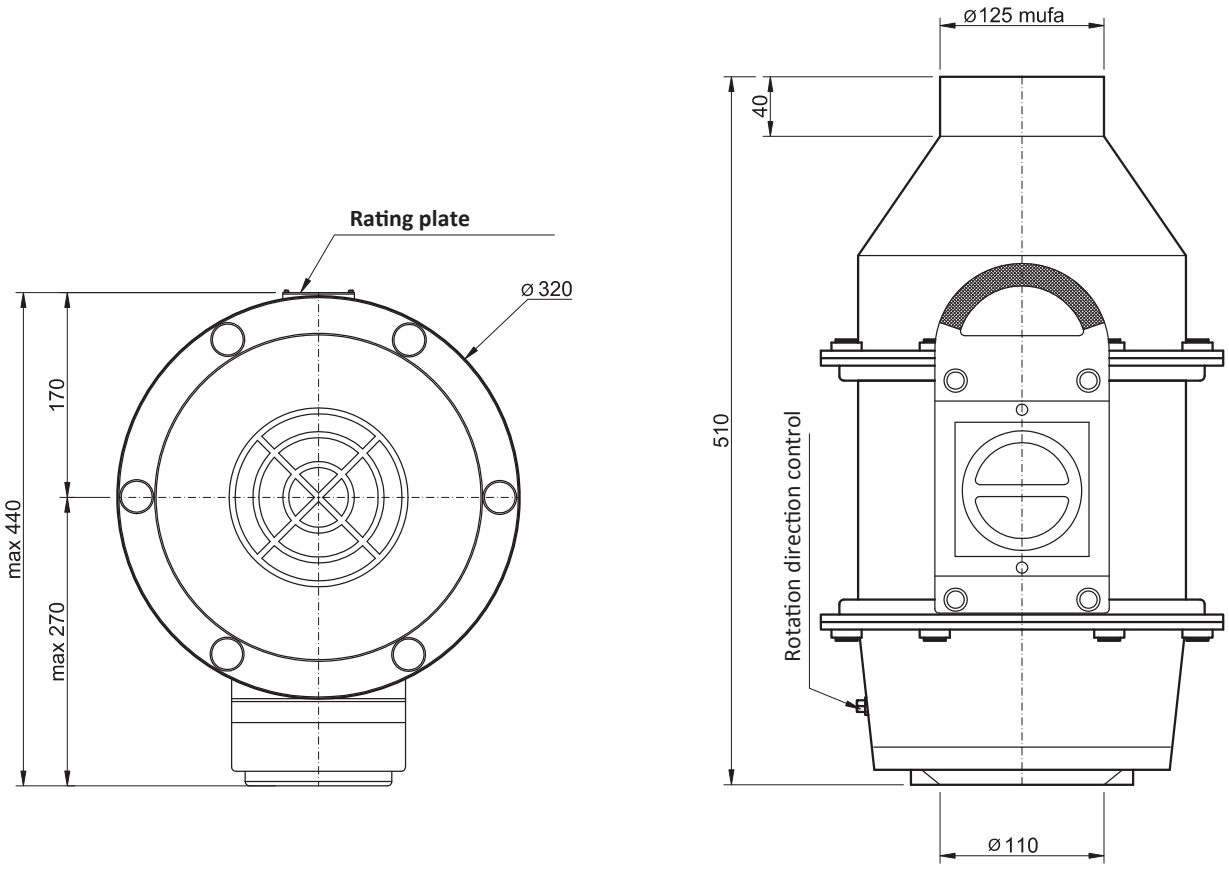
FDv 110+ TECHNICAL DETAILS:

Rotational speed		Rotational speed at 50Hz	Number of poles	Rated power	Rated current at 400V/50Hz	Maximum capacity	Maximum pressure
10Hz	60Hz						
rpm		rpm	---	kW	A	m^3/h	Pa
Standard design							
---	---	1500	4	0,06	0,35	**220**	**125**
540	3240	3000	2	0,18	0,60	**440**	**480**
Ex - EExe II 2GT3 design							
		1500	4	0,12	0,48	**220**	**125**
		3000	2	0,18	0,48	**440**	**480**

3.4. FRv 075 - 280 ROOFTOP RADIAL FANS

3.4.2. FDv 110+ Type

Dimensions:



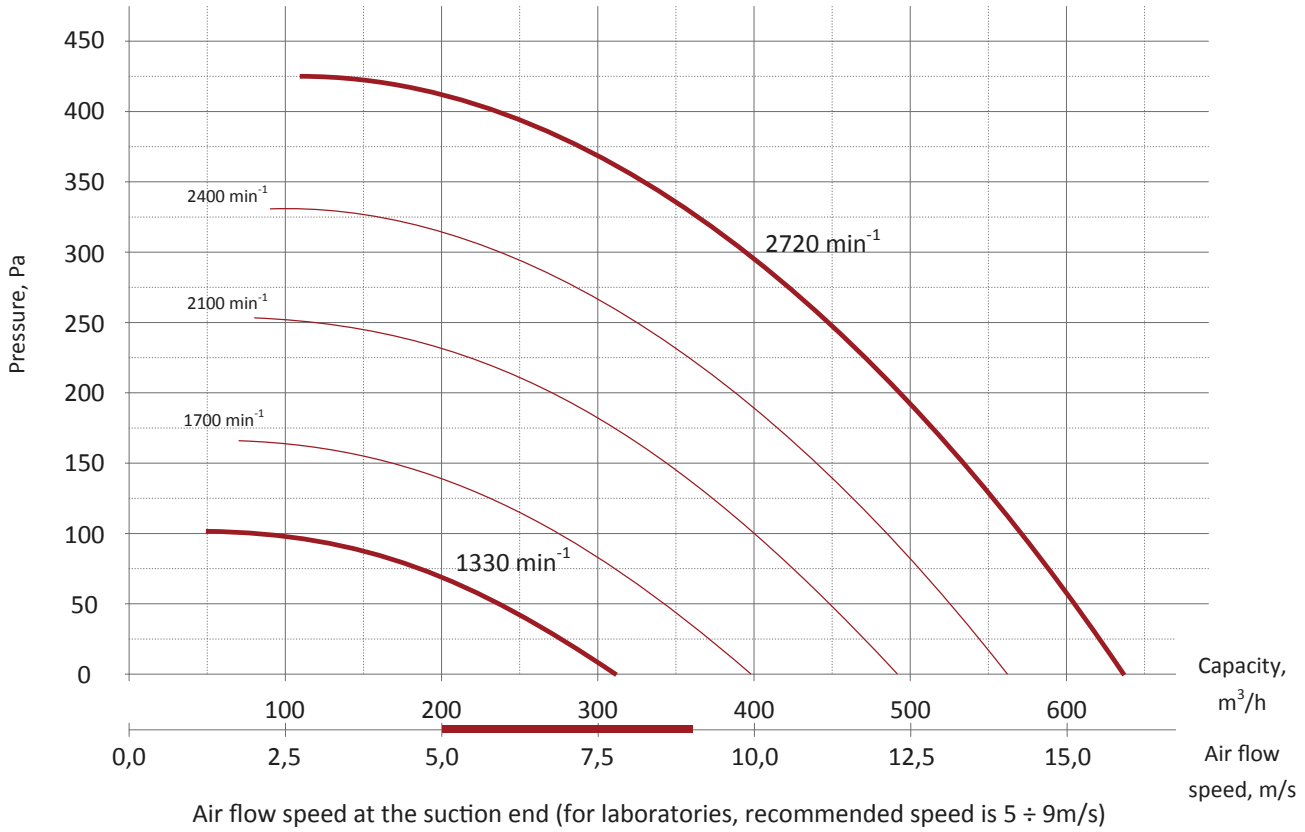
Acoustic characteristics:

Rotational speed	Frequency, Hz								Lw(dB)	Lw(dBA)
rpm	dB								dB	dB
	63	125	250	500	1000	2000	4000	8000	---	---
3000	33	41	79	46	43	37	29	18	71	54
1500	17	57	26	26	22	16	6	3	49	31

3.4. FRv 075 - 280 ROOFTOP RADIAL FANS

3.4.3. FDv 125 Type

Characteristics:



Air flow speed at the suction end (for laboratories, recommended speed is 5 ÷ 9m/s)

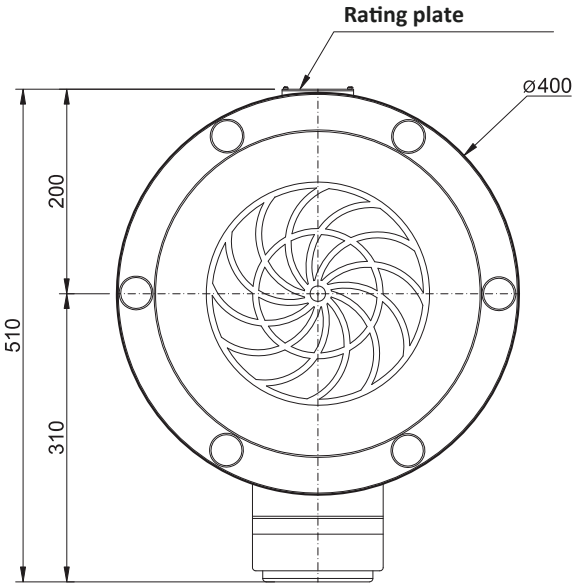
FDv 125 FAN TYPE TECHNICAL DETAILS:

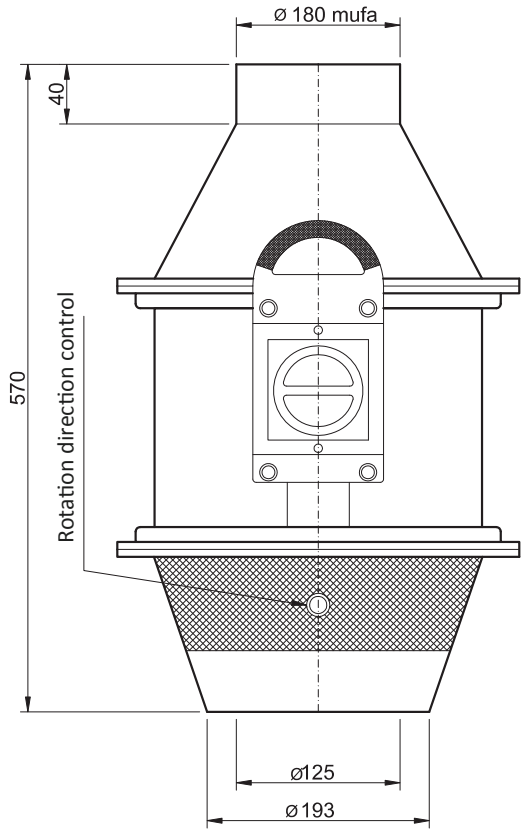
Rotational speed		Rotational speed at 50Hz	Number of poles	Rated power	Rated current at 400V/50Hz	Maximum capacity	Maximum pressure
10Hz	60Hz						
rpm		rpm	---	kW	A	m^3/h	Pa
Standard design							
266	1596	1500	4	0,06	0,26	**310**	**110**
544	3264	3000	2	0,12	0,50	**640**	**430**
Ex - EExe II 2GT3 design							
		1500	4	0,12	0,48	**310**	**110**
		3000	2	0,18	0,48	**640**	**430**

3.4. FRv 075 - 280 ROOFTOP RADIAL FANS

3.4.3. FDv 125 Type

Dimensions:





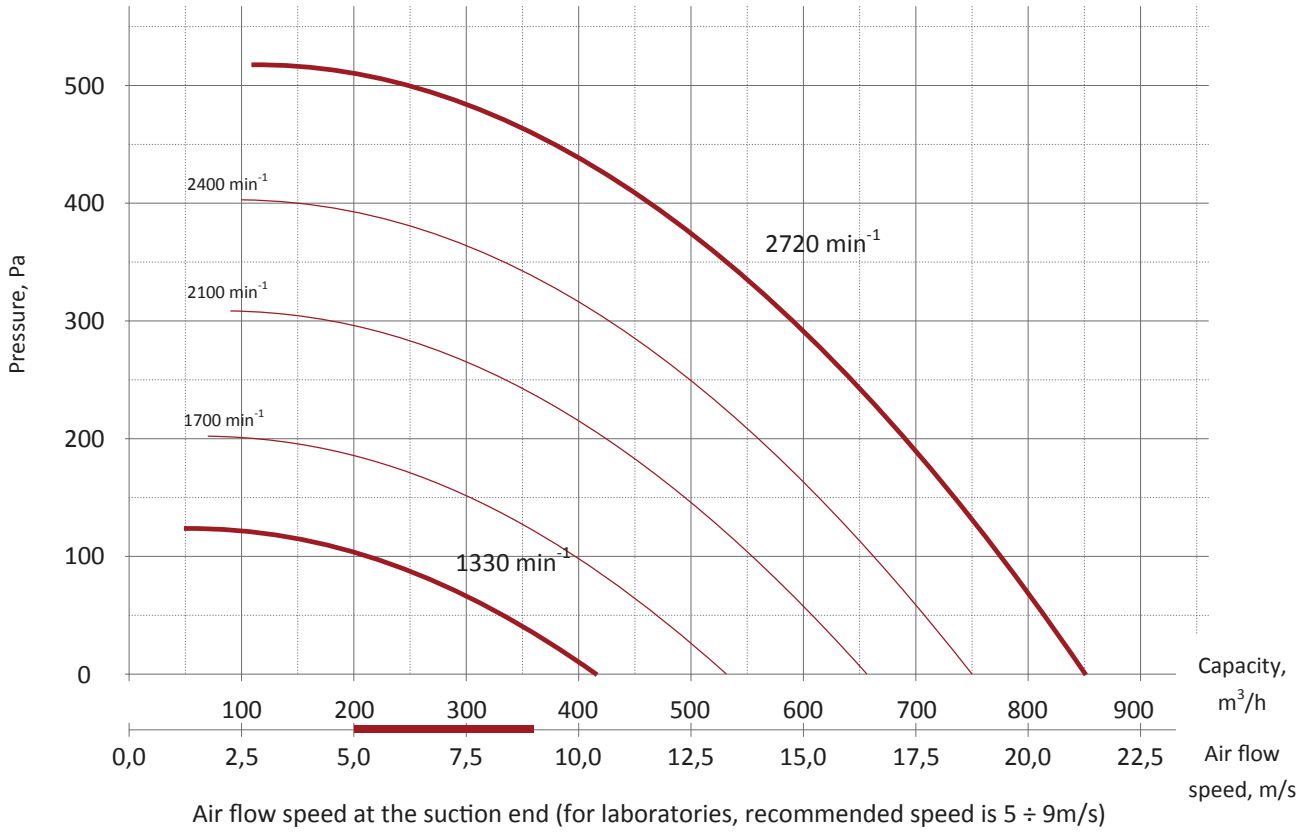
Acoustic characteristics:

Rotational speed	Frequency, Hz								Lw(dB)	Lw(dBA)
rpm	dB								dB	dB
	63	125	250	500	1000	2000	4000	8000	---	---
3000	51	59	70	64	62	57	49	39	64	54
1500	34	48	44	45	42	36	27	16	44	34

3.4. FRv 075 - 280 ROOFTOP RADIAL FANS

3.4.4. FDv 140 Type

Characteristics:



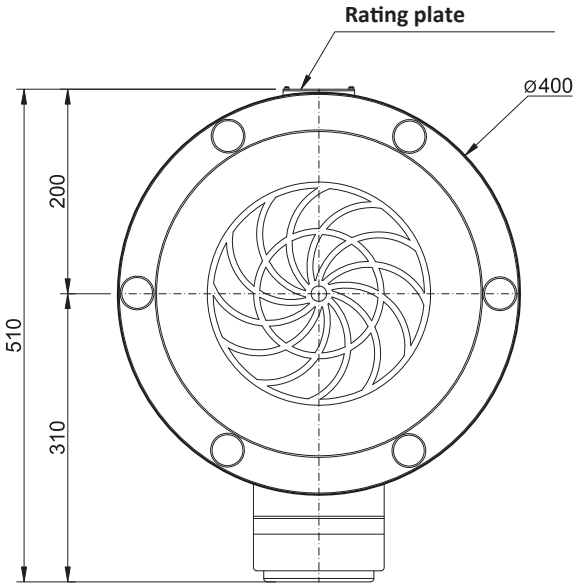
FDv 140 FAN TYPE TECHNICAL DETAILS:

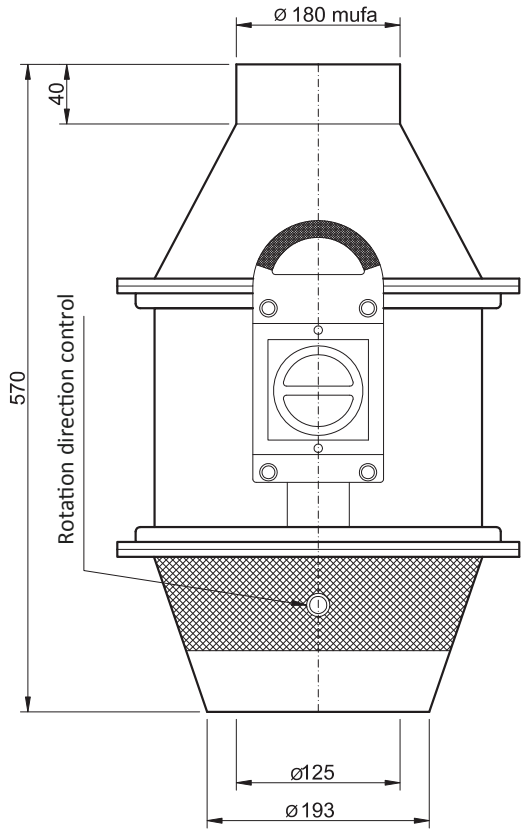
Rotational speed		Rotational speed at 50Hz	Number of poles	Rated power	Rated current at 400V/50Hz	Maximum capacity	Maximum pressure
10Hz	60Hz						
rpm		rpm	---	kW	A	m^3/h	Pa
Standard design							
266	1596	1500	4	0,06	0,26	**420**	**130**
544	3264	3000	2	0,12	0,50	**850**	**540**
Ex - EExe II 2GT3 design							
		1500	4	0,12	0,48	**420**	**130**
		3000	2	0,18	0,48	**850**	**540**

3.4. FRv 075 - 280 ROOFTOP RADIAL FANS

3.4.4. FDv 140 Type

Dimensions:





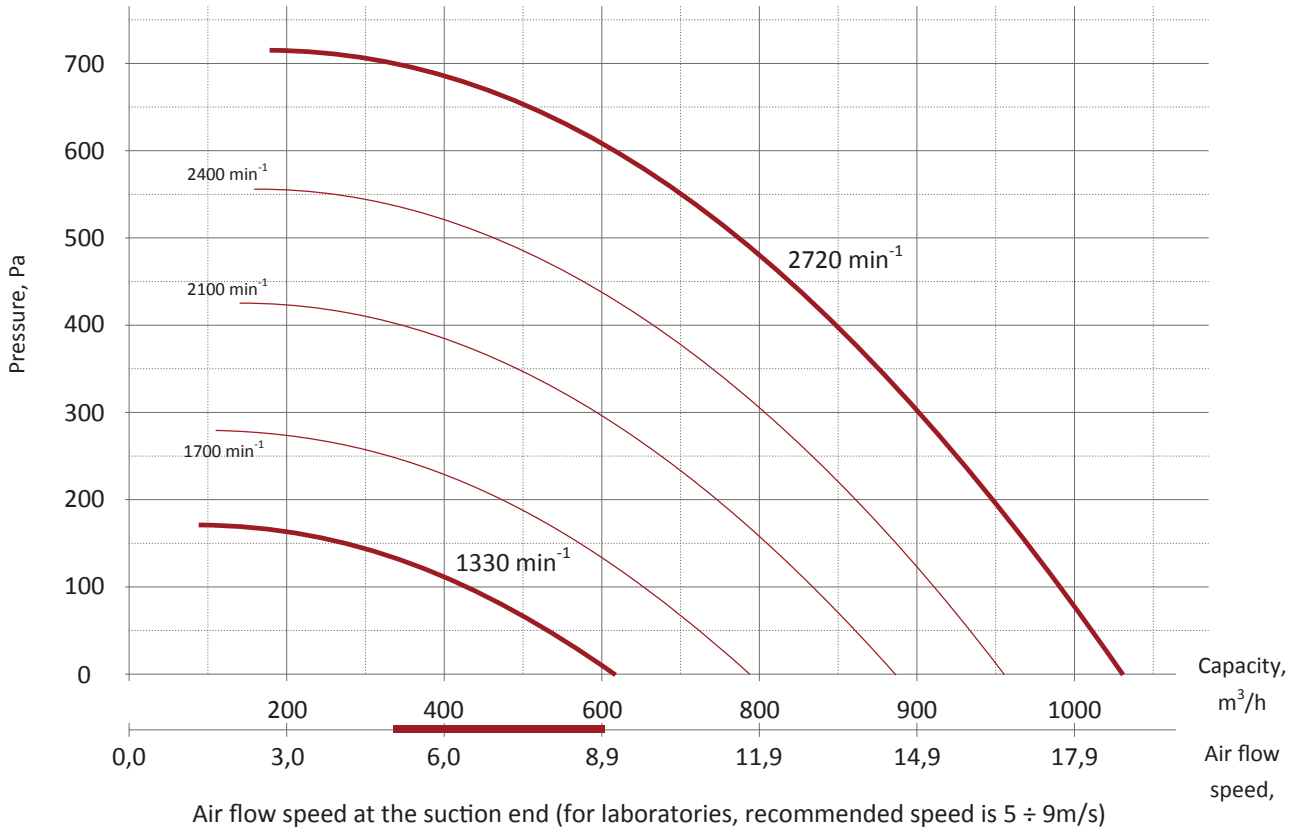
Acoustic characteristics:

Rotational speed	Frequency, Hz								Lw(dB)	Lw(dBA)
rpm	dB								dB	dB
	63	125	250	500	1000	2000	4000	8000	---	---
3000	53	60	71	64	61	55	46	34	64	55
1500	36	49	45	44	39	21	22	9	44	35

3.4. FRv 075 - 280 ROOFTOP RADIAL FANS

3.4.5. FDv 160 Type

Characteristics:



Air flow speed at the suction end (for laboratories, recommended speed is 5 ÷ 9m/s)

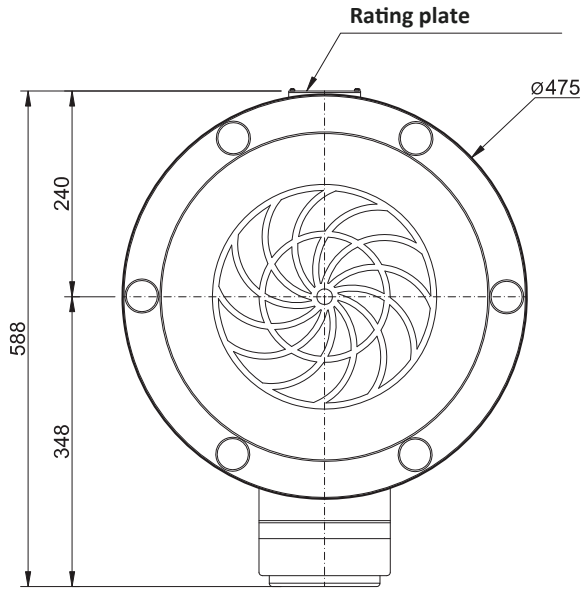
FDv 160 FAN TYPE TECHNICAL DETAILS:

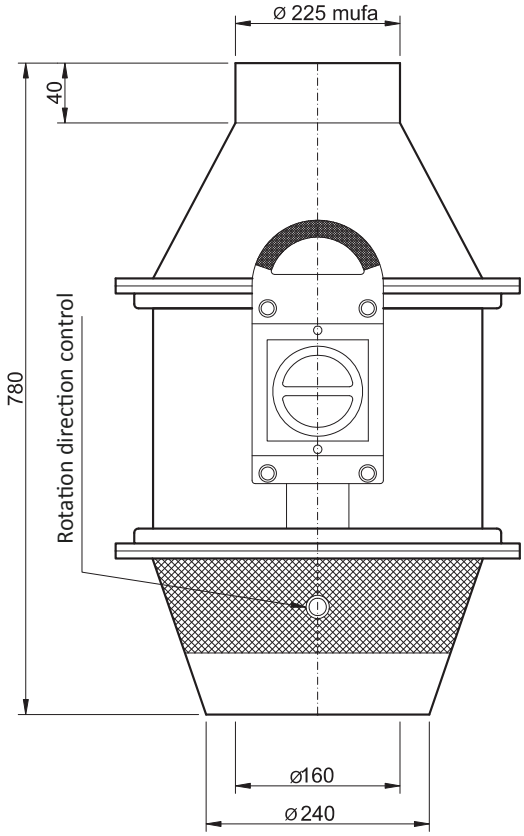
Rotational speed		Rotational speed at 50Hz	Number of poles	Rated power	Rated current at 400V/50Hz	Maximum capacity	Maximum pressure
10Hz	60Hz						
rpm		rpm	---	kW	A	m^3/h	Pa
			Standard design				
552	3312	3000	2	0,37	0,94	**1260**	**720**
266	1596	1500	4	0,12	0,70	**620**	**170**
178	1068	1000	6	0,09	0,50		
130	780	750	8	0,12	0,65		
		3000/1500	2/4	0,55/0,11	1,27/0,34		
		1500/1000	4/6	0,18/0,05	0,80/0,38		
		1500/750	4/8	0,18/0,04	0,62/0,24		
			Ex - EExe II 2GT3 design				
		3000	2	0,37	0,97	**1260**	**720**
		1500	4	0,12	0,48	**620**	**170**
		1000	6	0,37	1,30		
		750	8	0,18	0,78		

3.4. FRv 075 - 280 ROOFTOP RADIAL FANS

3.4.5. FDv 160 Type

Dimensions:





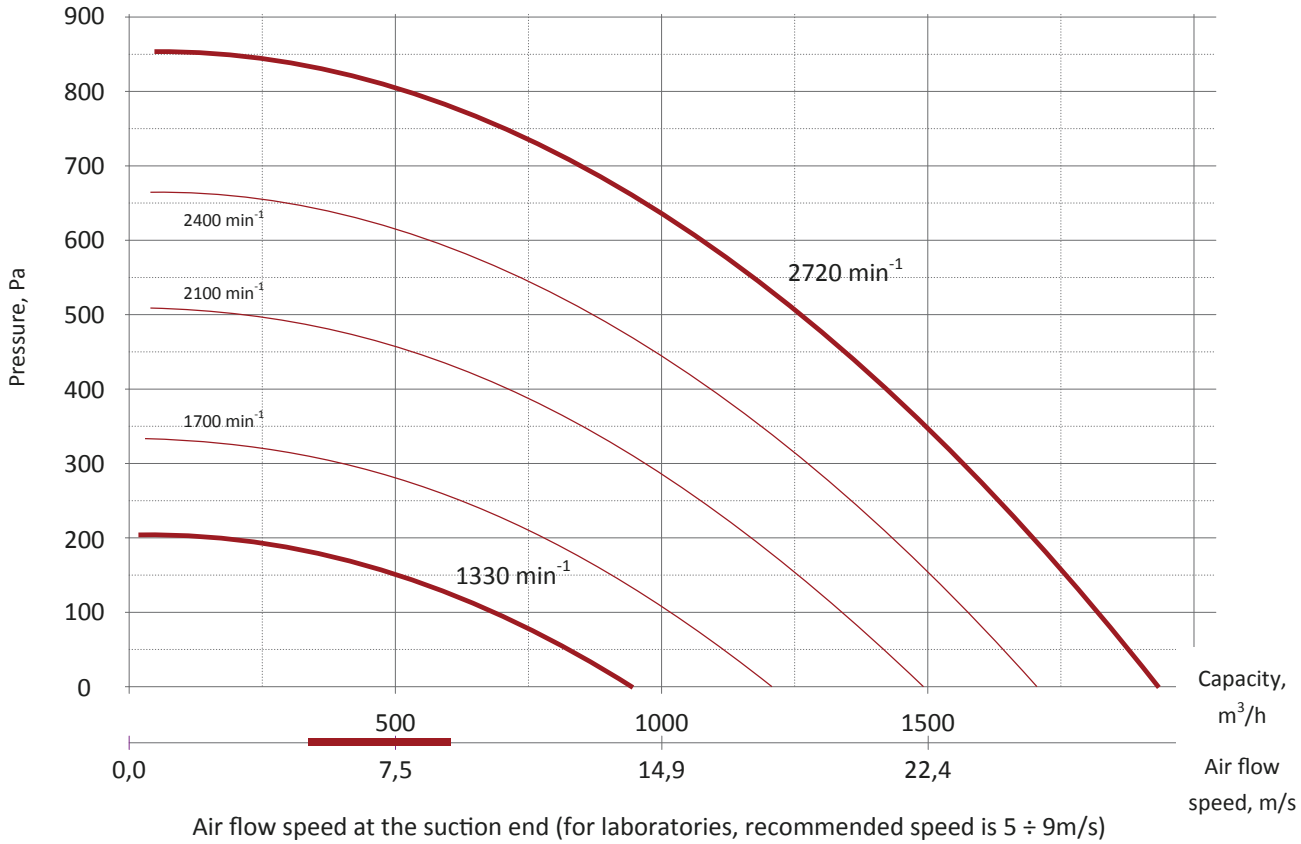
Acoustic characteristics:

Rotational speed	Frequency, Hz								Lw(dB)	Lw(dBA)
rpm	dB								dB	dB
	63	125	250	500	1000	2000	4000	8000	---	---
3000	58	66	77	71	69	64	57	48	71	61
1500	42	56	52	52	49	43	35	24	51	41

3.4. FRv 075 - 280 ROOFTOP RADIAL FANS

3.4.6. FDv 180 Type

Characteristics:



Air flow speed at the suction end (for laboratories, recommended speed is 5 ÷ 9m/s)

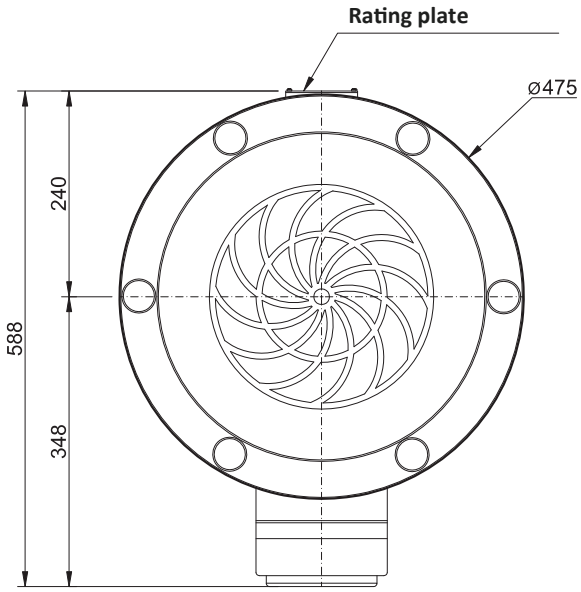
FDv 180 FAN TYPE TECHNICAL DETAILS:

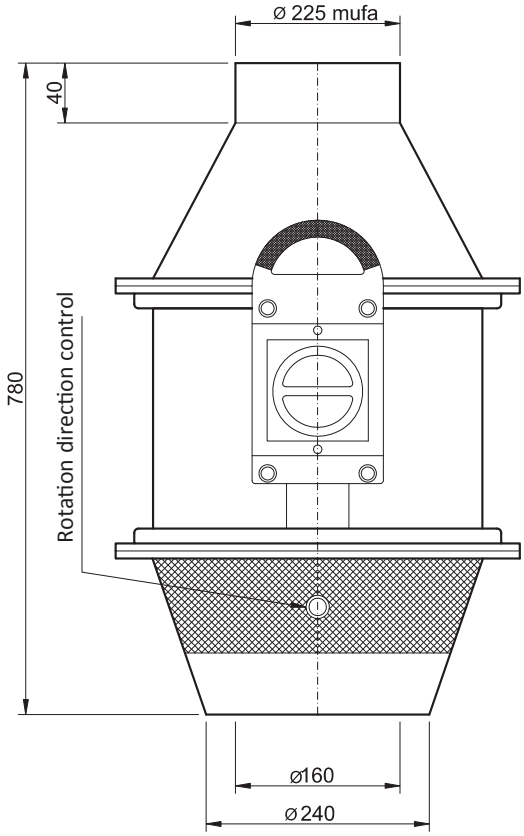
Rotational speed		Rotational speed at 50Hz	Number of poles	Rated power	Rated current at 400V/50Hz	Maximum capacity	Maximum pressure
10Hz	60Hz						
rpm		rpm	---	kW	A	m^3/h	Pa
			Standard design				
552	3312	3000	2	0,37	0,94	**1930**	**860**
266	1596	1500	4	0,12	0,70	**880**	**200**
178	1068	1000	6	0,09	0,50		
130	780	750	8	0,12	0,65		
		3000/1500	2/4	0,55/0,11	1,27/0,34		
		1500/1000	4/6	0,18/0,05	0,80/0,38		
		1500/750	4/8	0,18/0,04	0,62/0,24		
			Ex - EExe II 2GT3 design				
		3000	2	0,37	0,97	**1930**	**860**
		1500	4	0,12	0,48	**880**	**200**
		1000	6	0,37	1,30		
		750	8	0,18	0,78		

3.4. FRv 075 - 280 ROOFTOP RADIAL FANS

3.4.6. FDv 180 Type

Dimensions:





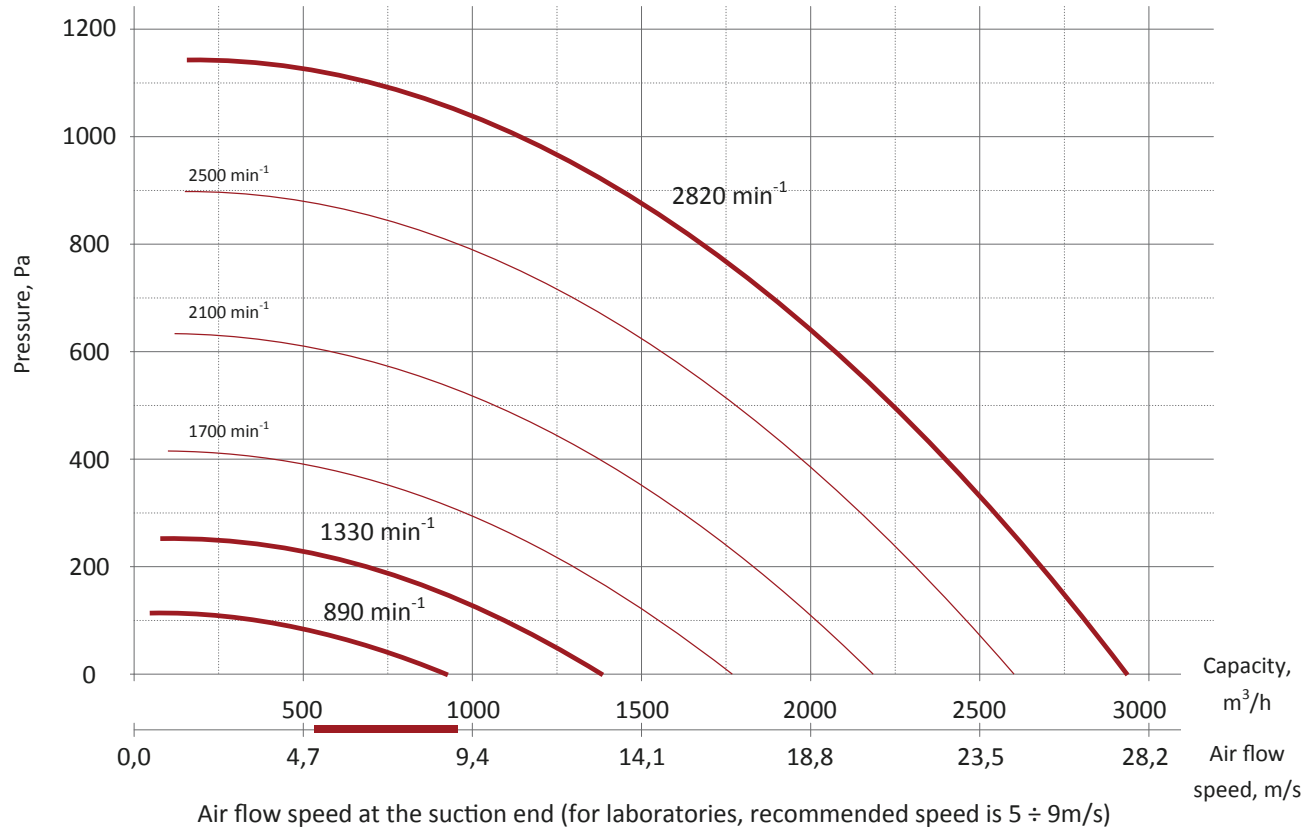
Acoustic characteristics:

Rotational speed	Frequency, Hz								Lw(dB)	Lw(dBA)
rpm	dB								dB	dB
	63	125	250	500	1000	2000	4000	8000	---	---
3000	61	68	78	72	69	62	53	42	72	63
1500	44	57	52	51	47	40	30	17	51	43

3.4. FRv 075 - 280 ROOFTOP RADIAL FANS

3.4.7. FDv 200 Type

Characteristics:



Air flow speed at the suction end (for laboratories, recommended speed is 5 ÷ 9m/s)

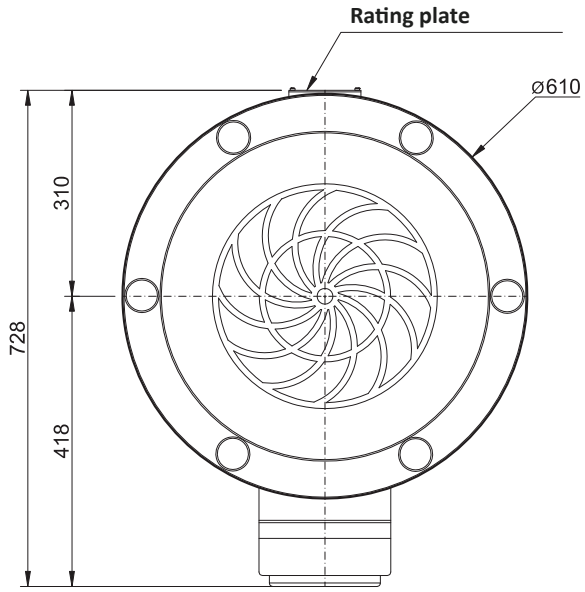
FAN TYPE TECHNICAL DETAILSFDv 200:

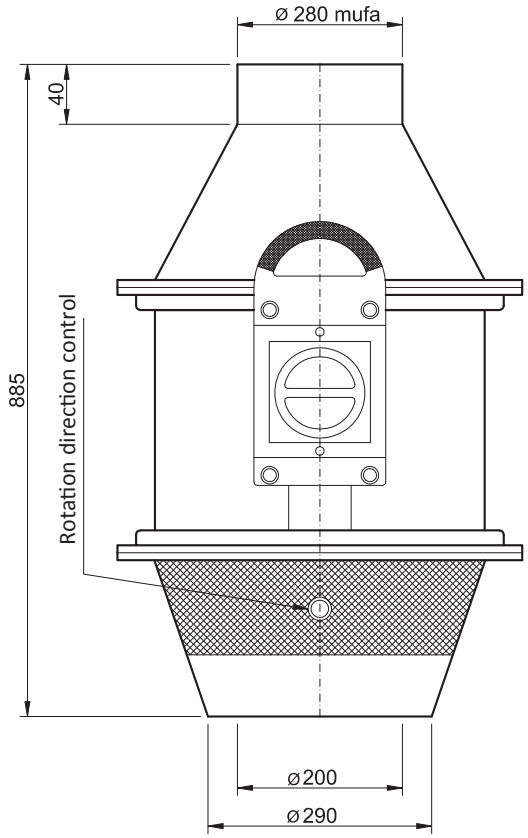
Rotational speed		Rotational speed at 50Hz	Number of poles	Rated power	Rated current at 400V/50Hz	Maximum capacity	Maximum pressure
10Hz	60Hz						
rpm		rpm	---	kW	A	m^3/h	Pa
			Standard design				
564	3384	3000	2	0,75	1,80	**2950**	**1140**
266	1596	1500	4	0,25	0,86	**1380**	**230**
178	1068	1000	6	0,18	0,79		
130	780	750	8	0,12	0,65		
		3000/1500	2/4	0,95/0,25	2,30/0,70		
		1500/1000	4/6	0,26/0,08	1,07/0,52		
		1500/750	4/8	0,26/0,05	0,86/0,31		
			Ex - EExe II 2GT3 design				
		3000	2	0,75	1,76	**2950**	**1140**
		1500	4	0,25	0,79	**1380**	**230**
		1000	6	0,37	1,30		
		750	8	0,18	0,78		

3.4. FRv 075 - 280 ROOFTOP RADIAL FANS

3.4.7. FDv 200 Type

Dimensions:





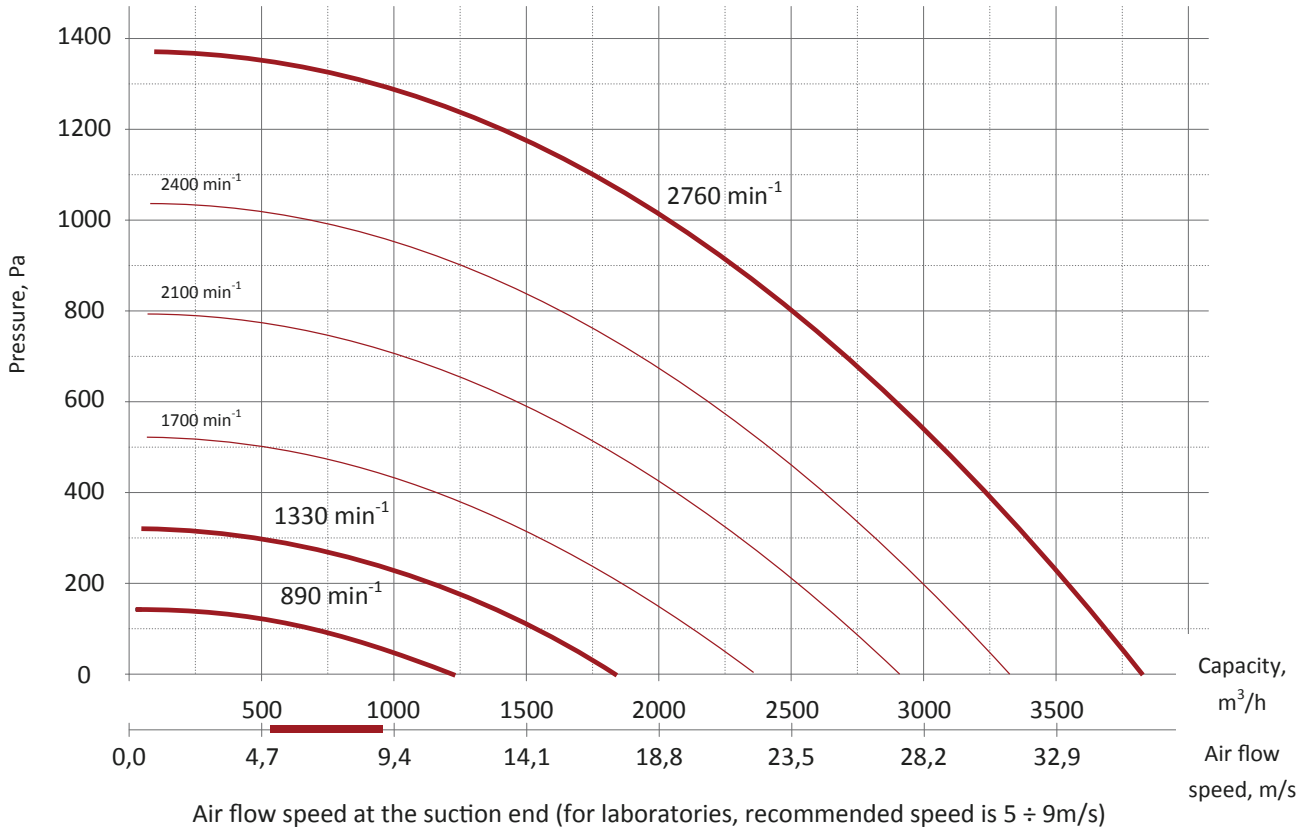
Acoustic characteristics:

Rotational speed	Frequency, Hz								Lw(dB)	Lw(dBA)
rpm	dB								dB	dB
	63	125	250	500	1000	2000	4000	8000	---	---
3000	65	73	84	78	76	71	64	54	78	68
1500	49	62	59	59	56	50	42	31	58	48

3.4. FRv 075 - 280 ROOFTOP RADIAL FANS

3.4.8. FDv 225 Type

Characteristics:



Air flow speed at the suction end (for laboratories, recommended speed is 5 ÷ 9m/s)

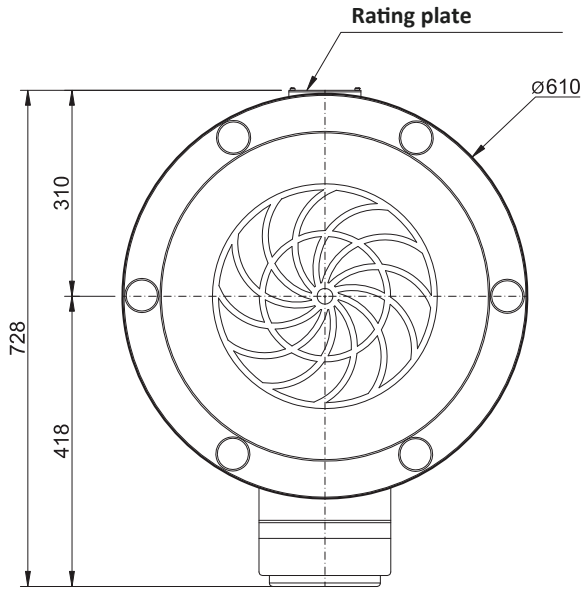
FDv 225 FAN TYPE TECHNICAL DETAILS:

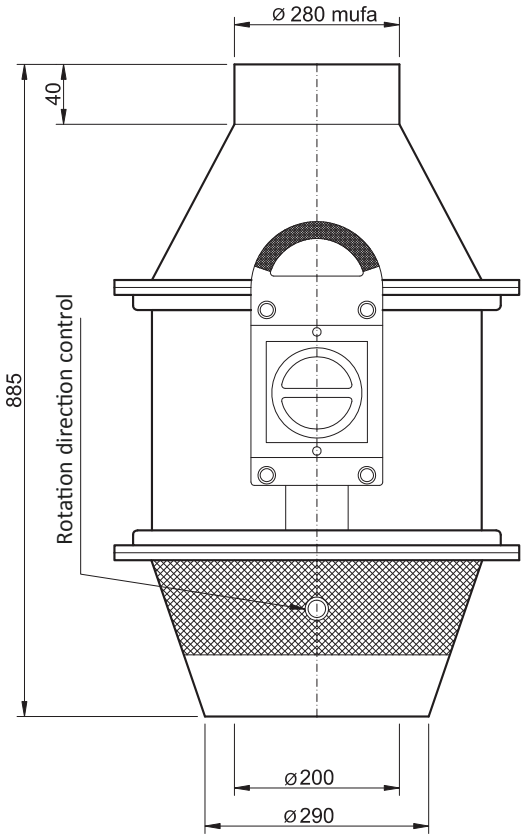
Rotational speed		Rotational speed at 50Hz	Number of poles	Rated power	Rated current at 400V/50Hz	Maximum capacity	Maximum pressure
10Hz	60Hz						
rpm		rpm	---	kW	A	m^3/h	Pa
			Standard design				
564	3384	3000	2	1,10	2,60	**3850**	**1380**
266	1596	1500	4	0,25	0,86	**1830**	**310**
178	1068	1000	6	0,18	0,79		
130	780	750	8	0,12	0,65		
		3000/1500	2/4	0,95/0,25	2,30/0,70		
		1500/1000	4/6	0,26/0,08	1,07/0,52		
		1500/750	4/8	0,26/0,05	0,86/0,31		
			Ex - EExe II 2GT3 design				
		3000	2	1,10	2,60	**3850**	**1380**
		1500	4	0,25	0,79	**1830**	**310**
		1000	6	0,37	1,30		
		750	8	0,18	0,78		

3.4. FRv 075 - 280 ROOFTOP RADIAL FANS

3.4.8. FDv 225 Type

Dimensions:





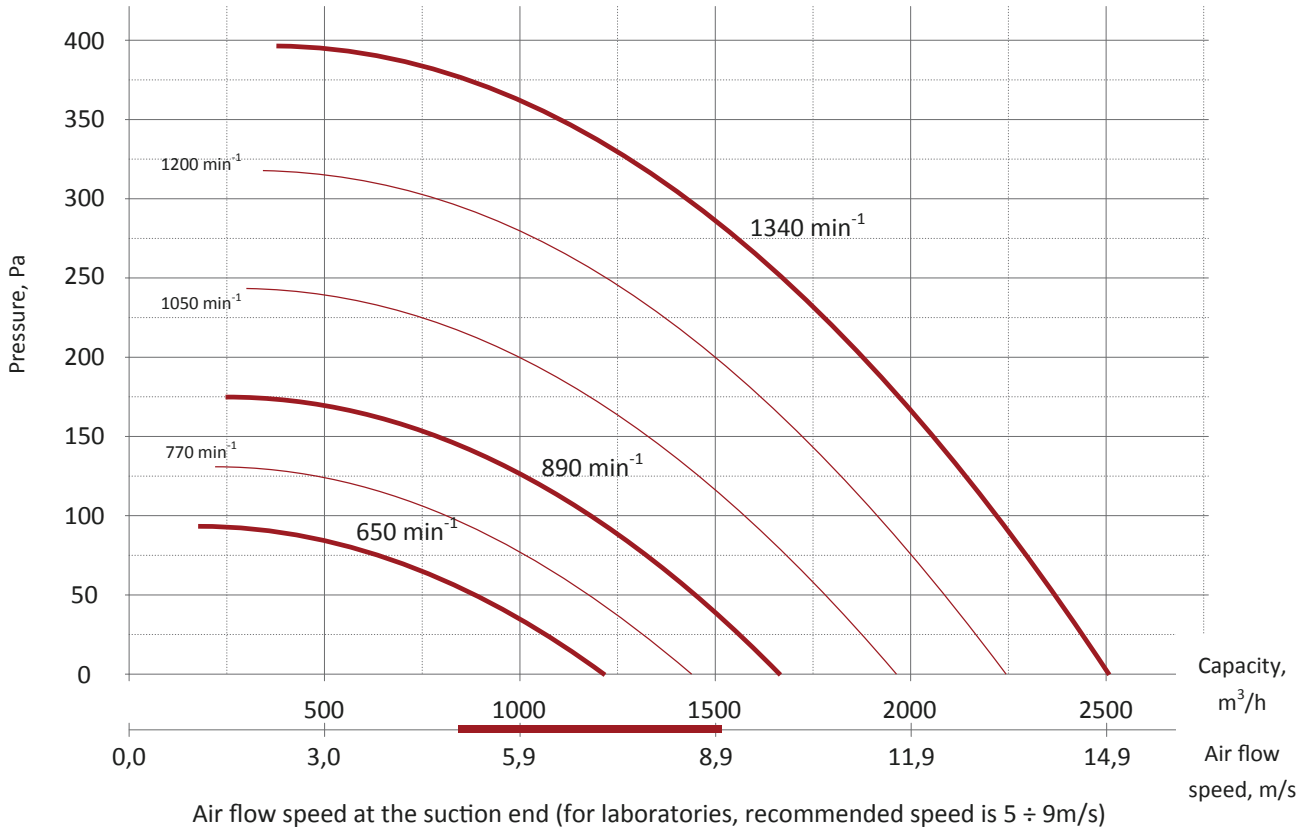
Acoustic characteristics:

Rotational speed	Frequency, Hz								Lw(dB)	Lw(dBA)
rpm	dB								dB	dB
	63	125	250	500	1000	2000	4000	8000	---	---
3000	68	75	85	78	75	69	60	48	79	70
1500	51	64	59	58	54	47	37	24	58	50

3.4. FRv 075 - 280 ROOFTOP RADIAL FANS

3.4.9. FDv 250 Type

Characteristics:



Air flow speed at the suction end (for laboratories, recommended speed is 5 ÷ 9m/s)

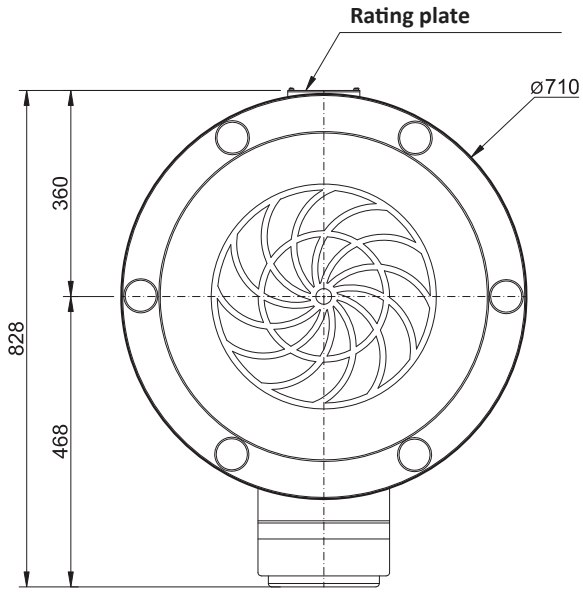
FAN TYPE TECHNICAL DETAILSFDv 250:

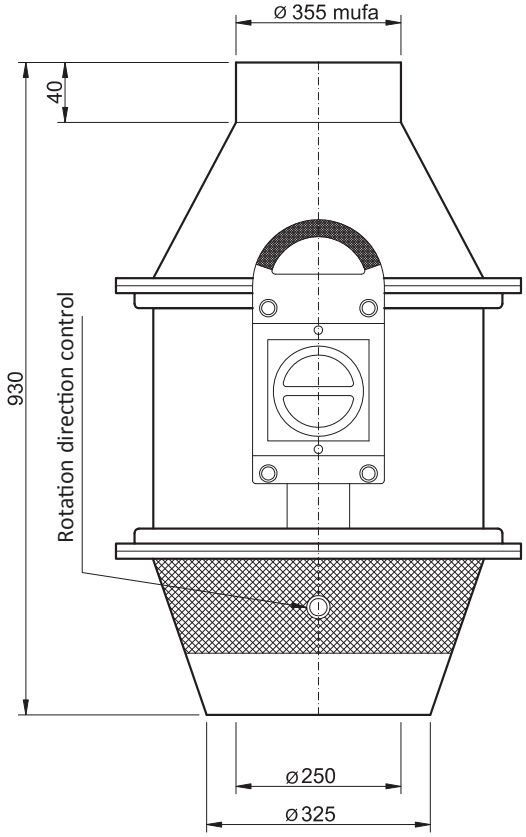
Rotational speed		Rotational speed at 50Hz	Number of poles	Rated power	Rated current at 400V/50Hz	Maximum capacity	Maximum pressure
10Hz	60Hz						
rpm		rpm	---	kW	A	m^3/h	Pa
			Standard design				
268	1608	1500	4	0,37	1,20	**2500**	**400**
178	1068	1000	6	0,18	0,79	**1660**	**175**
130	780	750	8	0,12	0,65	**1140**	**90**
		1500/1000	4/6	0,55/0,18	1,75/0,66		
		1500/750	4/8	0,50/0,10	1,00/0,42		
			Ex - EExe II 2GT3 design				
		1500	4	0,55	1,59	**2500**	**400**
		1000	6	0,37	1,30	**1660**	**175**
		750	8	0,18	0,78	**1140**	**90**

3.4. FRv 075 - 280 ROOFTOP RADIAL FANS

3.4.9. FDv 250 Type

Dimensions:





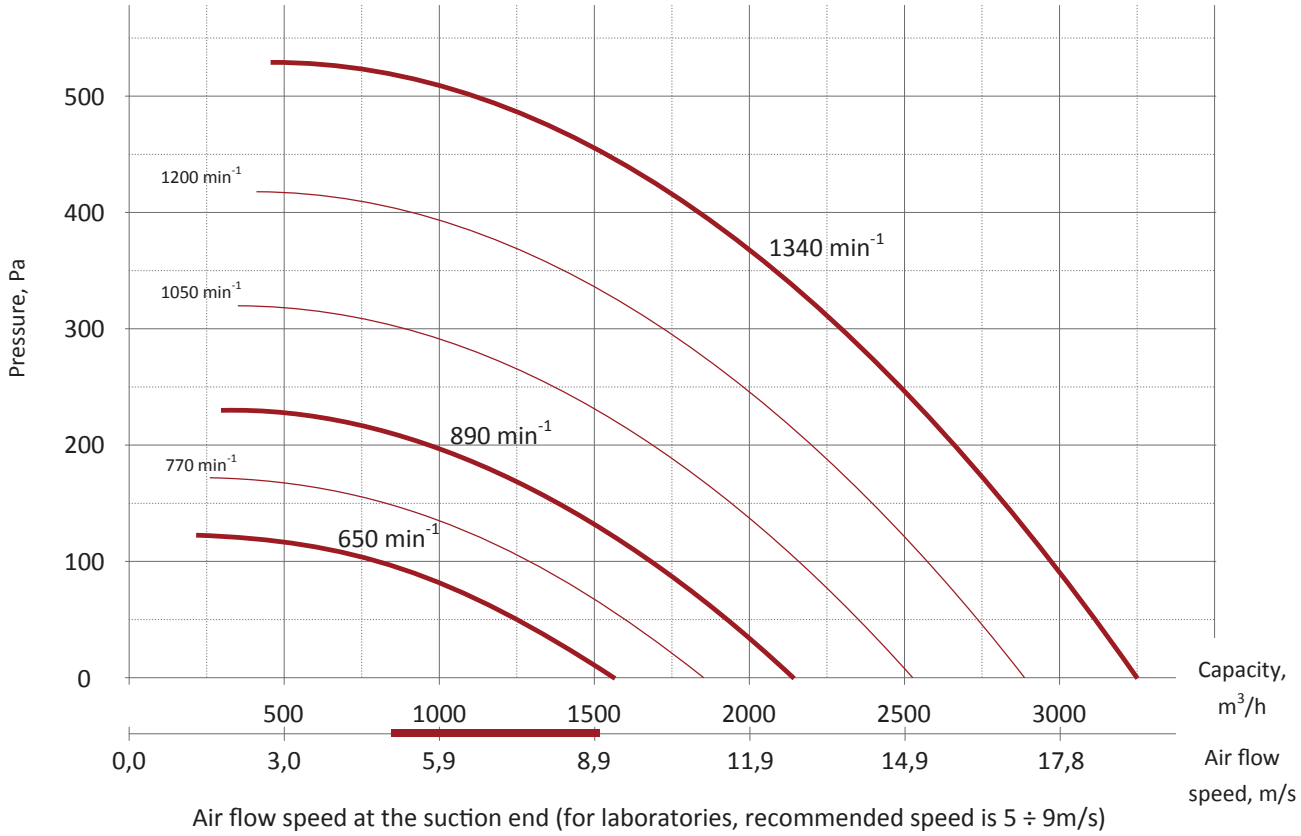
Acoustic characteristics:

Rotational speed	Frequency, Hz								Lw(dB)	Lw(dBA)
rpm	dB								dB	dB
	63	125	250	500	1000	2000	4000	8000	---	---
1500	55	69	65	66	63	57	49	37	65	55
950	44	58	53	53	49	43	34	22	52	42
750	45	44	46	46	42	35	26	14	44	34

3.4. FRv 075 - 280 ROOFTOP RADIAL FANS

3.4.10. FDv 280 Type

Characteristics:



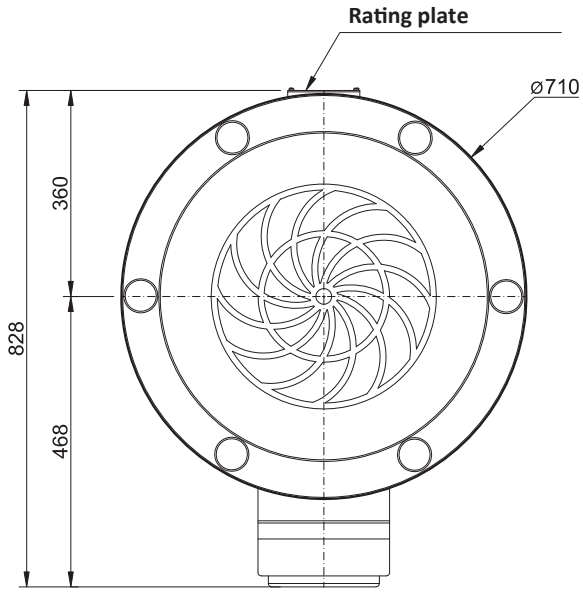
FAN TYPE TECHNICAL DETAILSFDv 280:

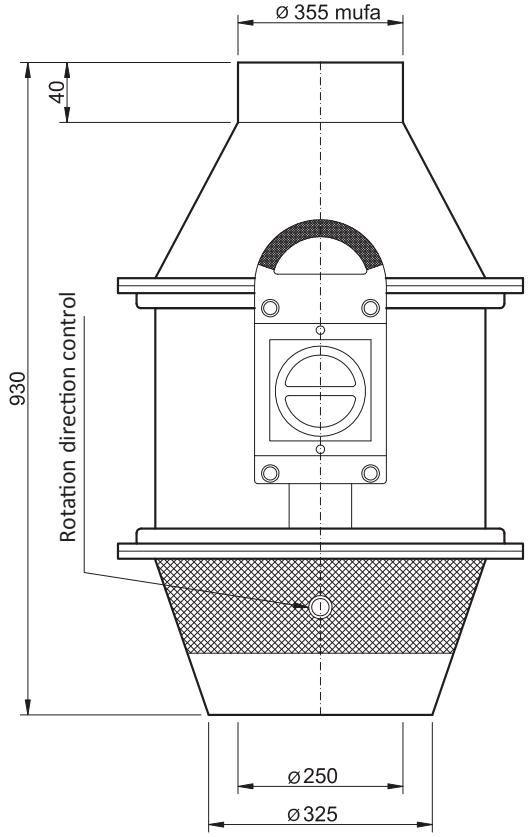
Rotational speed		Rotational speed at 50Hz	Number of poles	Rated power	Rated current at 400V/50Hz	Maximum capacity	Maximum pressure
10Hz	60Hz						
rpm		rpm	---	kW	A	m^3/h	Pa
			Standard design				
270	1620	1500	4	0,55	1,60	**3250**	**540**
178	1068	1000	6	0,18	0,79	**2150**	**230**
130	780	750	8	0,12	0,65	**1580**	**125**
		1500/1000	4/6	0,55/0,18	1,75/0,66		
		1500/750	4/8	0,50/0,10	1,00/0,42		
			Ex - EExe II 2GT3 design				
		1500	4	0,55	1,59	**3250**	**540**
		1000	6	0,37	1,30	**2150**	**230**
		750	8	0,18	0,78	**1580**	**125**

3.4. FRv 075 - 280 ROOFTOP RADIAL FANS

3.4.10. FDv 280 Type

Dimensions:





Acoustic characteristics:

Rotational speed	Frequency, Hz								Lw(dB)	Lw(dBA)
rpm	dB								dB	dB
	63	125	250	500	1000	2000	4000	8000	---	---
1500	57	70	66	65	61	53	43	30	65	56
950	46	58	53	51	46	38	28	13	52	43
750	46	44	45	43	38	30	19	5	43	34

3. CHEMICALLY RESISTANT FANS

3.5. FRvF 110+ - 280 ROOFTOP RADIAL FANS

DESCRIPTION

FRvF type rooftop radial fans for pumping corrosive and explosive gases, vapors and fumes of dust content of < 5 mg/m³, maximum medium temperature of 40°C and maximum ambient temperature of 40°C.

Polyethylene casing made by injection molding with a guide device as a single casting, with an integrated maintenance-free sealing system with a labyrinth seal. In the Ex version, additionally with a lubricant lock and sealing with a self-sealing ring. Conformity with VDMA 24 169 i RL/94/9/WE (ATEX). Condensate nozzle in the lowest casing point.

Drum rotor made of polypropylene by method of injection molding with rotor blade arrangement ensuring guaranteed negative pressure on the shaft penetration during operation.

Direct drive with a standardized IEC-34 motor in an exhaust air-tight casing, with temperature-resistant motor shields on the casing and rotor to prevent installation position deflections, also in case of a failure. Casing cooling air guided through separated supply and exhaust chambers for cooling air and to prevent uncontrolled circulation.

Specially shaped plastic **exhaust grate** (IP20) ensures even, vertical air exhaust.

TECHNICAL DETAILS

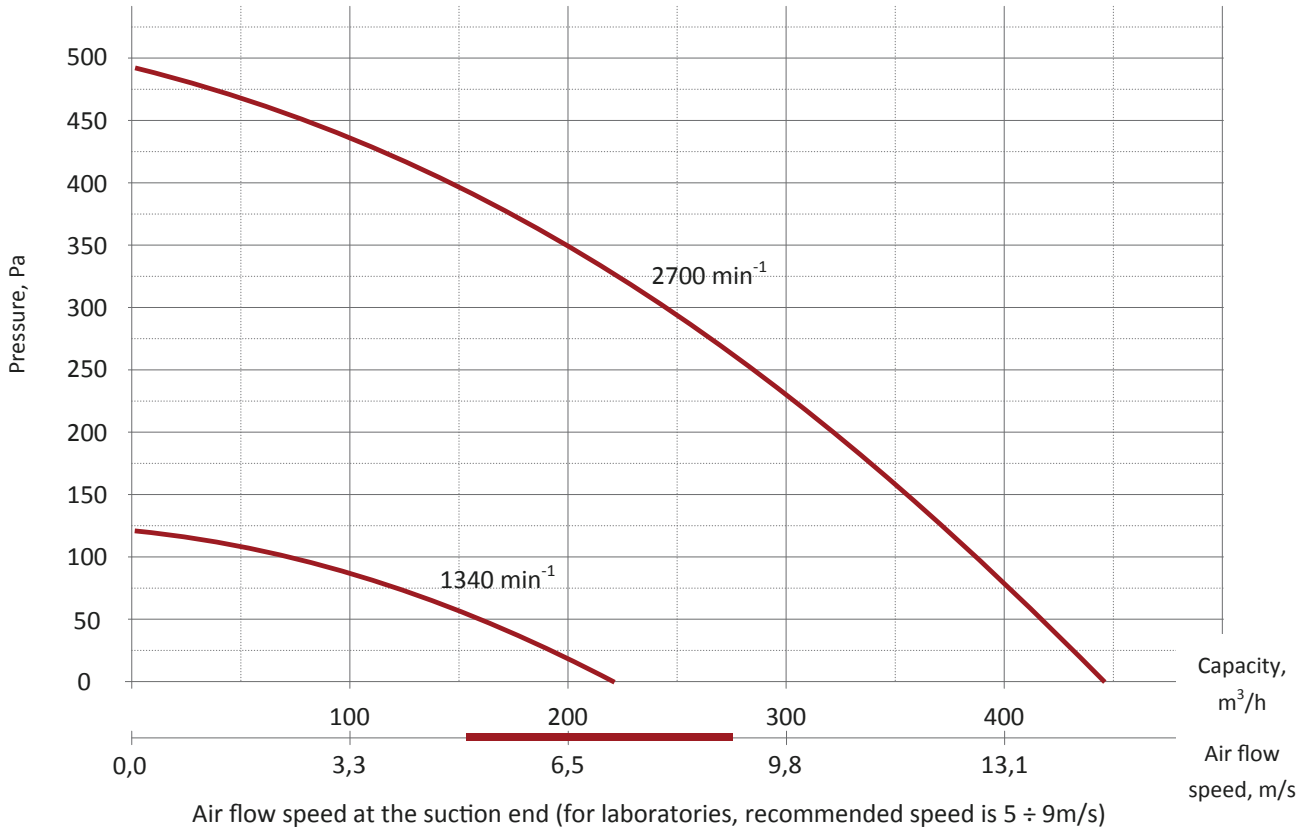
Exhaust direction:	vertical
Drive:	1 x 230 V or 3 x 230/400 V, 50 Hz standardized motor, IP55, heat class F with a thermal contactor
Protection class for Ex version:	fan II 3G c IIB T3 X 04 ATEX D132 engine EExe II2GT3
Accessories:	lockable maintenance switch with an auxiliary contactor, installed and equipped with cables (in the Ex version, only the terminal box is installed and equipped with cables

FUNKEN Ventilation Systems

3.5. FRvF 110+ - 280 ROOFTOP RADIAL FANS

3.5.1. FDvF 110+ Type

Characteristics:



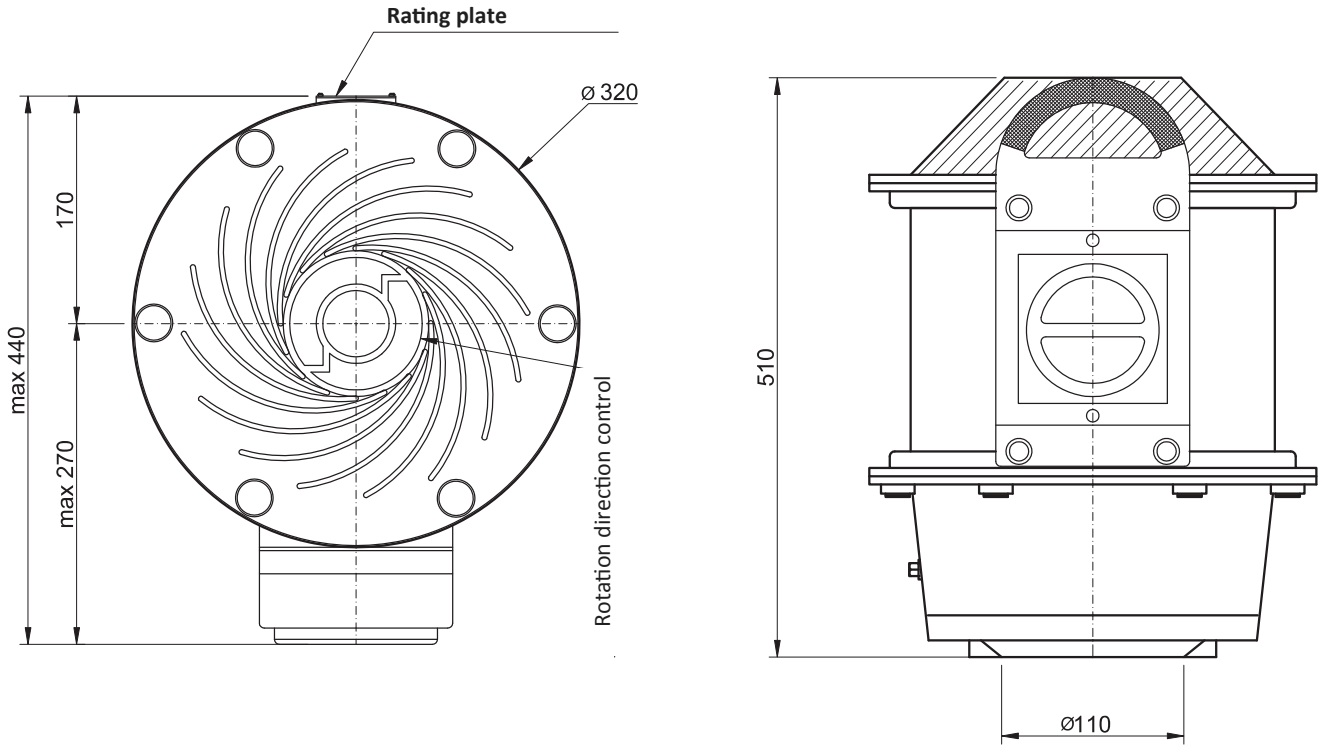
FDvF 110+ FAN TYPE TECHNICAL DETAILS:

Rotational speed		Rotational speed at 50Hz	Number of poles	Rated power	Rated current at 400V/50Hz	Maximum capacity	Maximum pressure
10Hz	60Hz						
rpm		rpm	---	kW	A	m^3/h	Pa
Standard design							
---	---	1500	4	0,06	0,35	**220**	**125**
540	3240	3000	2	0,18	0,60	**440**	**480**
Ex - EExe II 2GT3 design							
		1500	4	0,12	0,48	**220**	**125**
		3000	2	0,18	0,48	**440**	**480**

3.5. FRvF 110+ - 280 ROOFTOP RADIAL FANS

3.5.1. FDvF 110+ Type

Dimensions:



Connection diameter - **110mm**
Delivery duct diameter - **125mm**

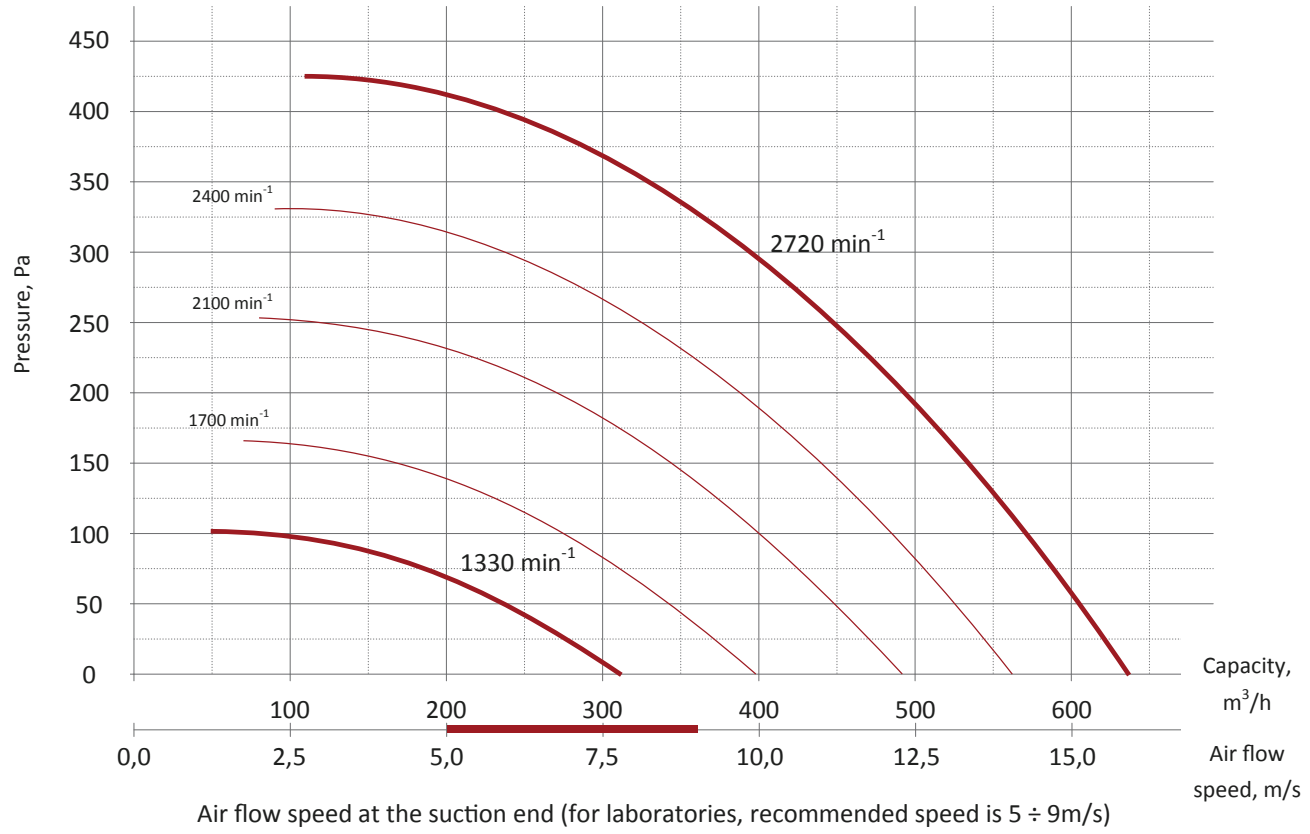
Acoustic characteristics:

Rotational speed	Frequency, Hz								Lw(dB)	Lw(dBA)
rpm	dB								dB	dB
	63	125	250	500	1000	2000	4000	8000	---	---
3000	33	41	79	46	43	37	29	18	71	54
1500	17	57	26	26	22	16	6	3	49	31

3.5. FRvF 110+ - 280 ROOFTOP RADIAL FANS

3.5.2. FDvF 125 Type

Characteristics:



Air flow speed at the suction end (for laboratories, recommended speed is 5 ÷ 9m/s)

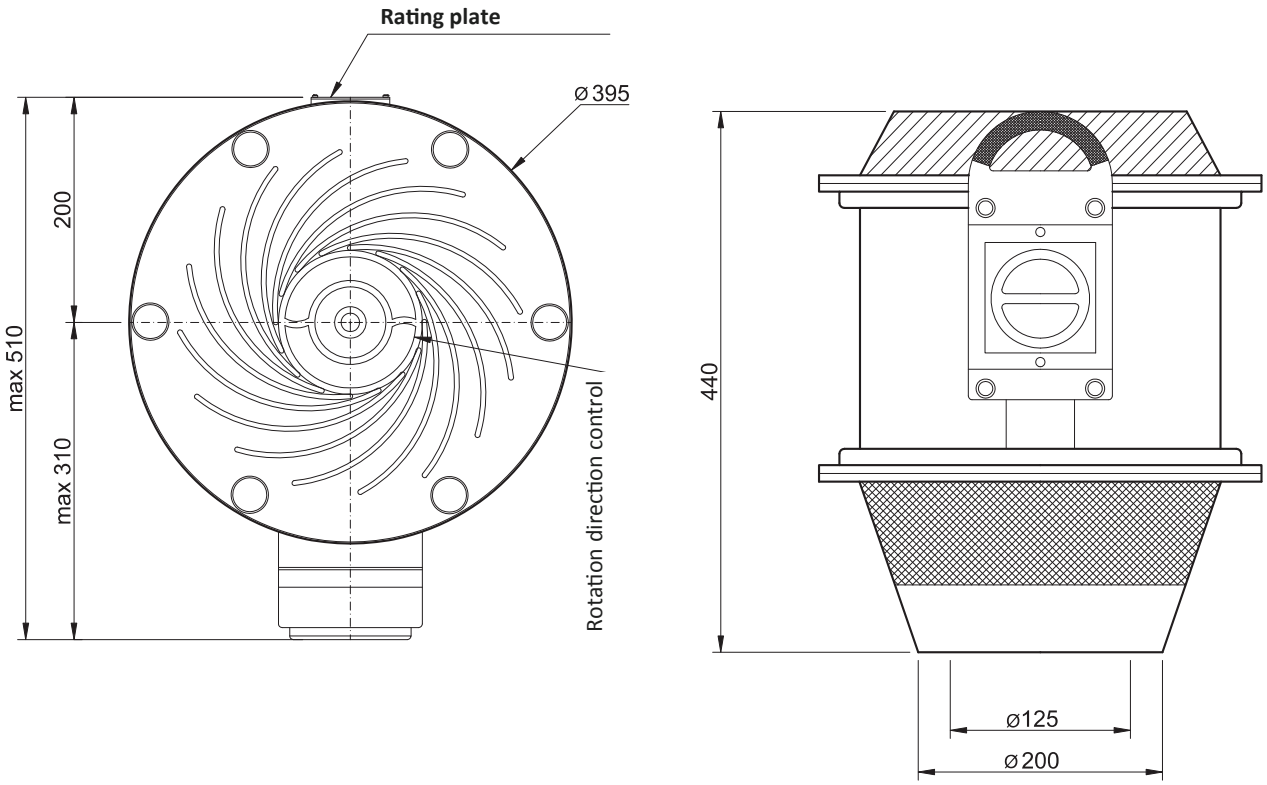
FDvF 125 FAN TYPE TECHNICAL DETAILS:

Rotational speed		Rotational speed at 50Hz	Number of poles	Rated power	Rated current at 400V/50Hz	Maximum capacity	Maximum pressure
10Hz	60Hz						
rpm		rpm	---	kW	A	m^3/h	Pa
Standard design							
266	1596	1500	4	0,06	0,26	**310**	**110**
544	3264	3000	2	0,12	0,50	**640**	**430**
Ex - EExe II 2GT3 design							
		1500	4	0,12	0,48	**310**	**110**
		3000	2	0,18	0,48	**640**	**430**

3.5. FRvF 110+ - 280 ROOFTOP RADIAL FANS

3.5.2. FDvF 125 Type

Dimensions:



Connection diameter - **125mm**
Delivery duct diameter - **160mm**

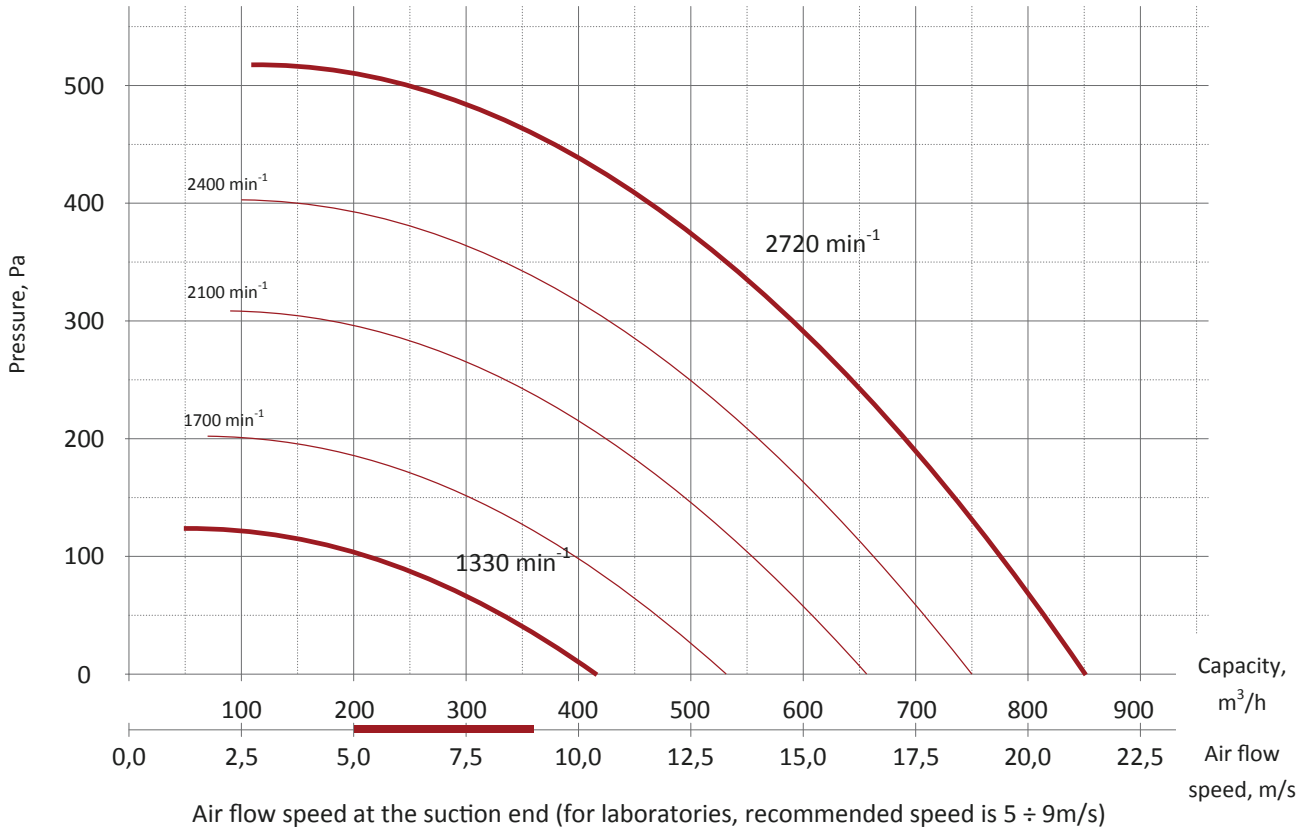
Acoustic characteristics:

Rotational speed	Frequency, Hz								Lw(dB)	Lw(dBA)
rpm	dB								dB	dB
	63	125	250	500	1000	2000	4000	8000	---	---
3000	51	59	70	64	62	57	49	39	64	54
1500	34	48	44	45	42	36	27	16	44	34

3.5. FRvF 110+ - 280 ROOFTOP RADIAL FANS

3.5.3. FDvF 140 Type

Characteristics:



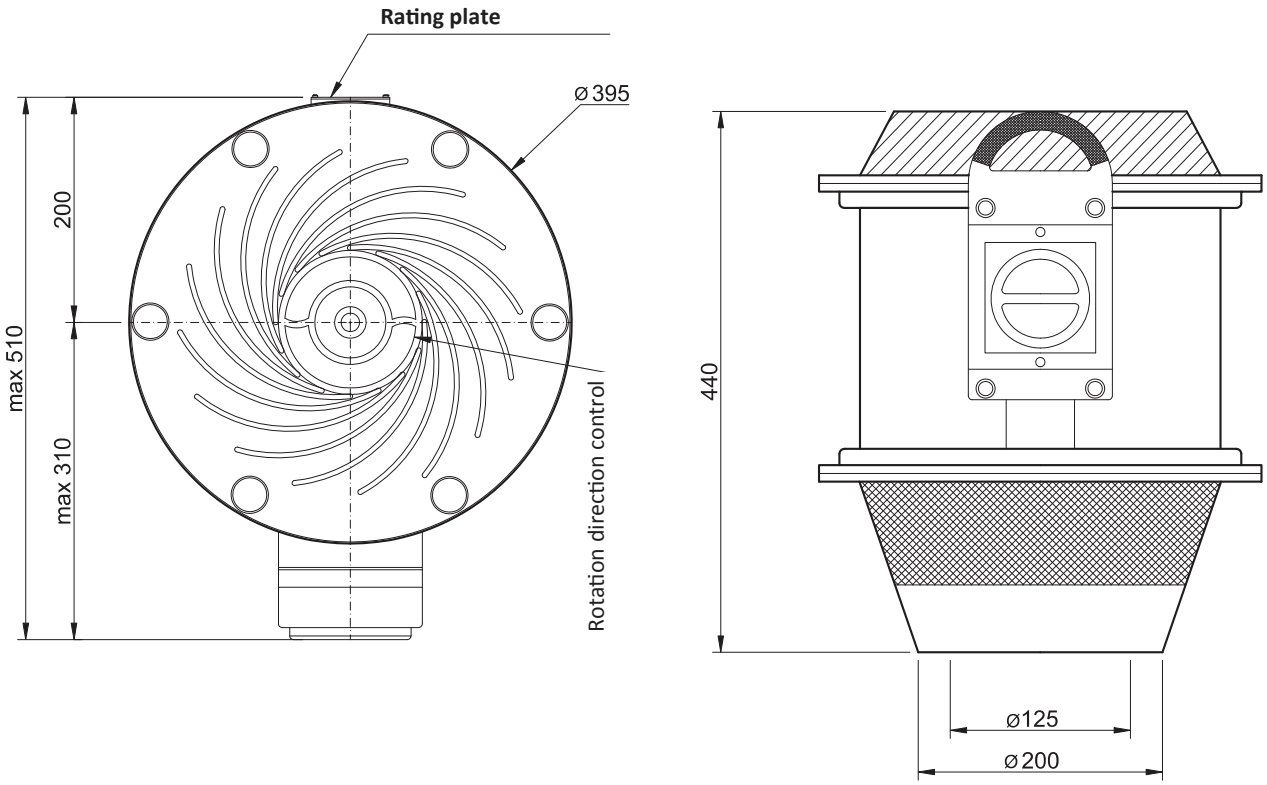
FDvF 140 FAN TYPE TECHNICAL DETAILS:

Rotational speed		Rotational speed at 50Hz	Number of poles	Rated power	Rated current at 400V/50Hz	Maximum capacity	Maximum pressure
10Hz	60Hz						
rpm		rpm	---	kW	A	m^3/h	Pa
Standard design							
266	1596	1500	4	0,06	0,26	**420**	**130**
544	3264	3000	2	0,12	0,50	**850**	**540**
Ex - EExe II 2GT3 design							
		1500	4	0,12	0,48	**420**	**130**
		3000	2	0,18	0,48	**850**	**540**

3.5. FRvF 110+ - 280 ROOFTOP RADIAL FANS

3.5.3. Type FDvF 140

Dimensions:



Connection diameter - **125mm**
Delivery duct diameter - **160mm**

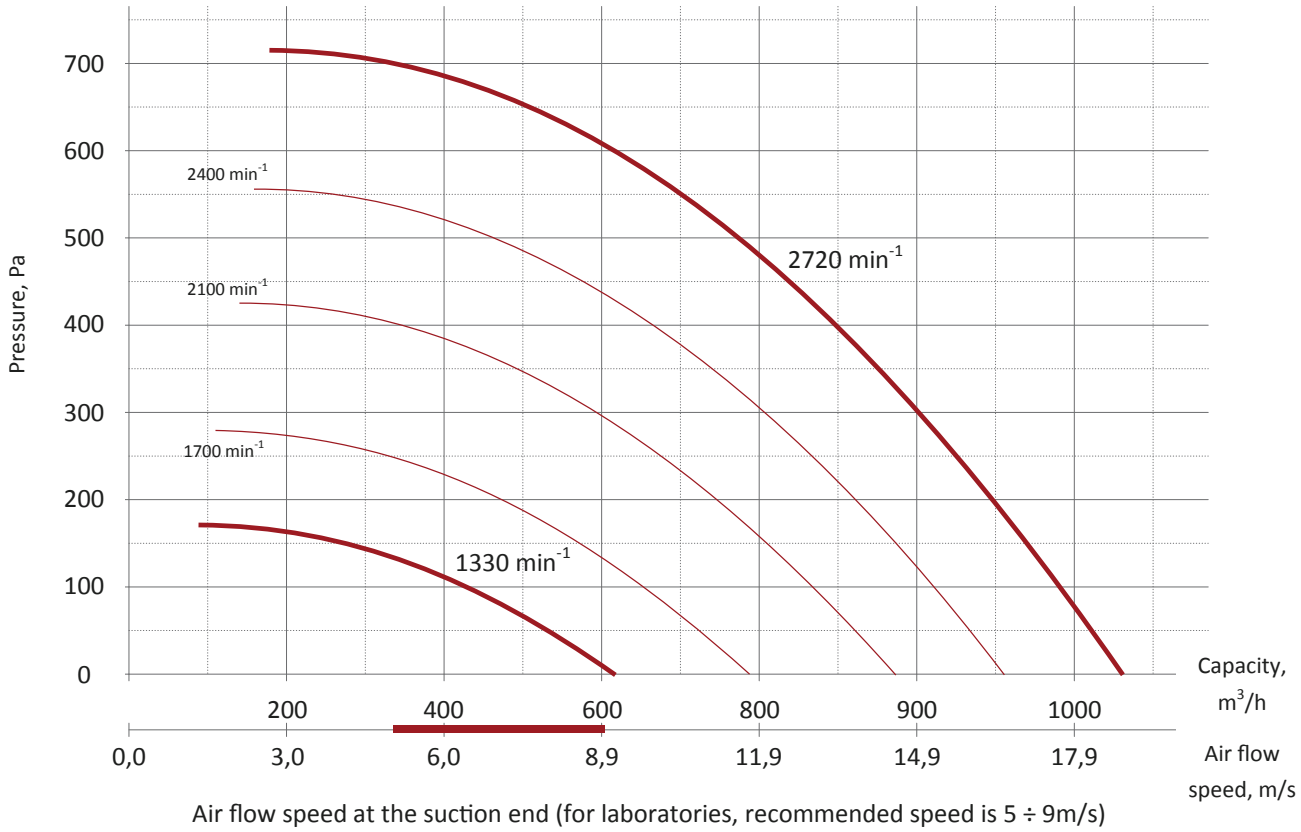
Acoustic characteristics:

Rotational speed	Frequency, Hz								Lw(dB)	Lw(dBA)
rpm	dB								dB	dB
	63	125	250	500	1000	2000	4000	8000	---	---
3000	53	60	71	64	61	55	46	34	64	55
1500	36	49	45	44	39	21	22	9	44	35

3.5. FRvF 110+ - 280 ROOFTOP RADIAL FANS

3.5.4. Type FDvF 160

Characteristics:



Air flow speed at the suction end (for laboratories, recommended speed is 5 ÷ 9m/s)

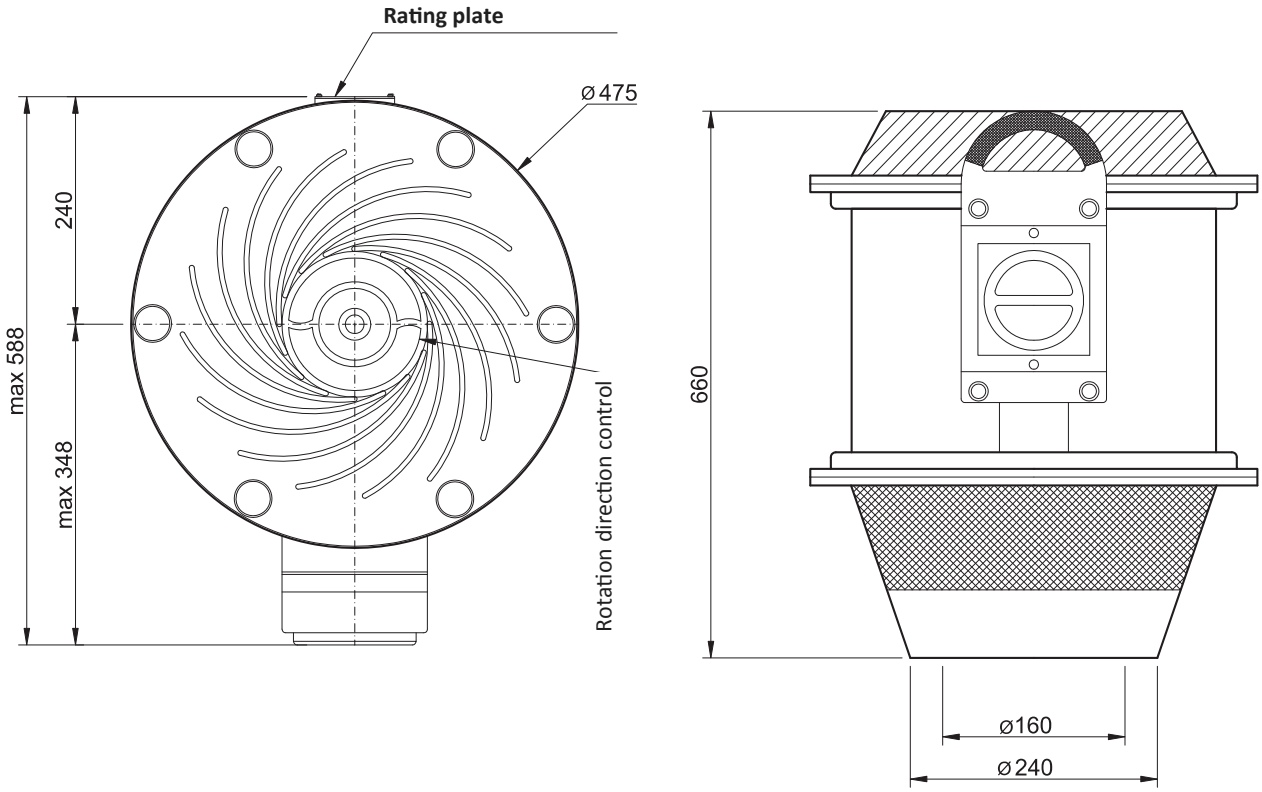
FDvF 160 FAN TYPE TECHNICAL DETAILS:

Rotational speed		Rotational speed at 50Hz	Number of poles	Rated power	Rated current at 400V/50Hz	Maximum capacity	Maximum pressure
10Hz	60Hz						
rpm		rpm	---	kW	A	m^3/h	Pa
			Standard design				
552	3312	3000	2	0,37	0,94	**1260**	**720**
266	1596	1500	4	0,12	0,70	**620**	**170**
178	1068	1000	6	0,09	0,50		
130	780	750	8	0,12	0,65		
		3000/1500	2/4	0,55/0,11	1,27/0,34		
		1500/1000	4/6	0,18/0,05	0,80/0,38		
		1500/750	4/8	0,18/0,04	0,62/0,24		
			Ex - EExe II 2GT3 design				
		3000	2	0,37	0,97	**1260**	**720**
		1500	4	0,12	0,48	**620**	**170**
		1000	6	0,37	1,30		
		750	8	0,18	0,78		

3.5. FRvF 110+ - 280 ROOFTOP RADIAL FANS

3.5.4. FDvF 160 Type

Dimensions:



Connection diameter - **160mm**
Delivery duct diameter - **225mm**

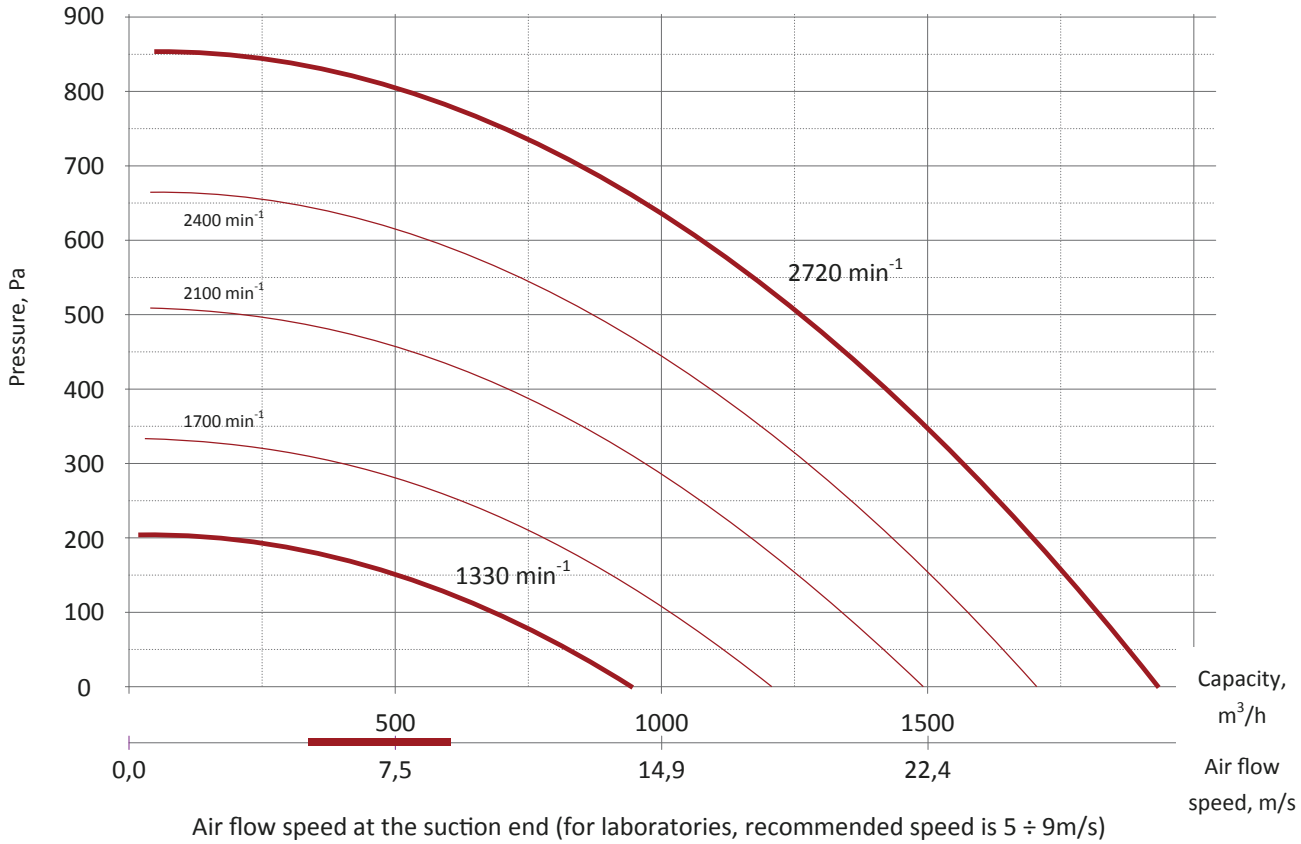
Acoustic characteristics:

Rotational speed	Frequency, Hz								Lw(dB)	Lw(dBA)
rpm	dB								dB	dB
	63	125	250	500	1000	2000	4000	8000	---	---
3000	58	66	77	71	69	64	57	48	71	61
1500	42	56	52	52	49	43	35	24	51	41

3.5. FRvF 110+ - 280 ROOFTOP RADIAL FANS

3.5.5. FDvF 180 Type

Characteristics:



Air flow speed at the suction end (for laboratories, recommended speed is 5 ÷ 9m/s)

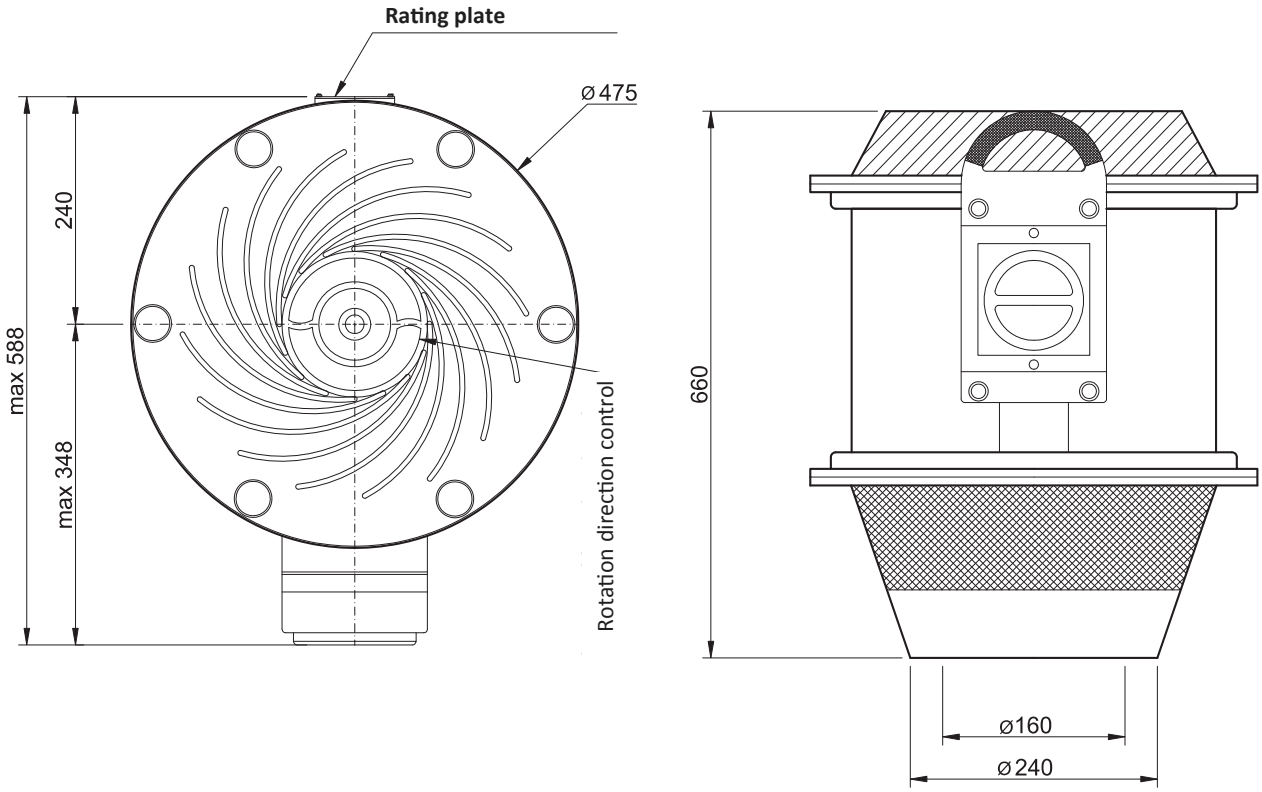
FDvF 180 FAN TYPE TECHNICAL DETAILS:

Rotational speed		Rotational speed at 50Hz	Number of poles	Rated power	Rated current at 400V/50Hz	Maximum capacity	Maximum pressure
10Hz	60Hz						
rpm		rpm	---	kW	A	m^3/h	Pa
			Standard design				
552	3312	3000	2	0,37	0,94	**1930**	**860**
266	1596	1500	4	0,12	0,70	**880**	**200**
178	1068	1000	6	0,09	0,50		
130	780	750	8	0,12	0,65		
		3000/1500	2/4	0,55/0,11	1,27/0,34		
		1500/1000	4/6	0,18/0,05	0,80/0,38		
		1500/750	4/8	0,18/0,04	0,62/0,24		
			Ex - EExe II 2GT3 design				
		3000	2	0,37	0,97	**1930**	**860**
		1500	4	0,12	0,48	**880**	**200**
		1000	6	0,37	1,30		
		750	8	0,18	0,78		

3.5. FRvF 110+ - 280 ROOFTOP RADIAL FANS

3.5.5. FDvF 180 Type

Dimensions:



Connection diameter - **160mm**
Delivery duct diameter - **225mm**

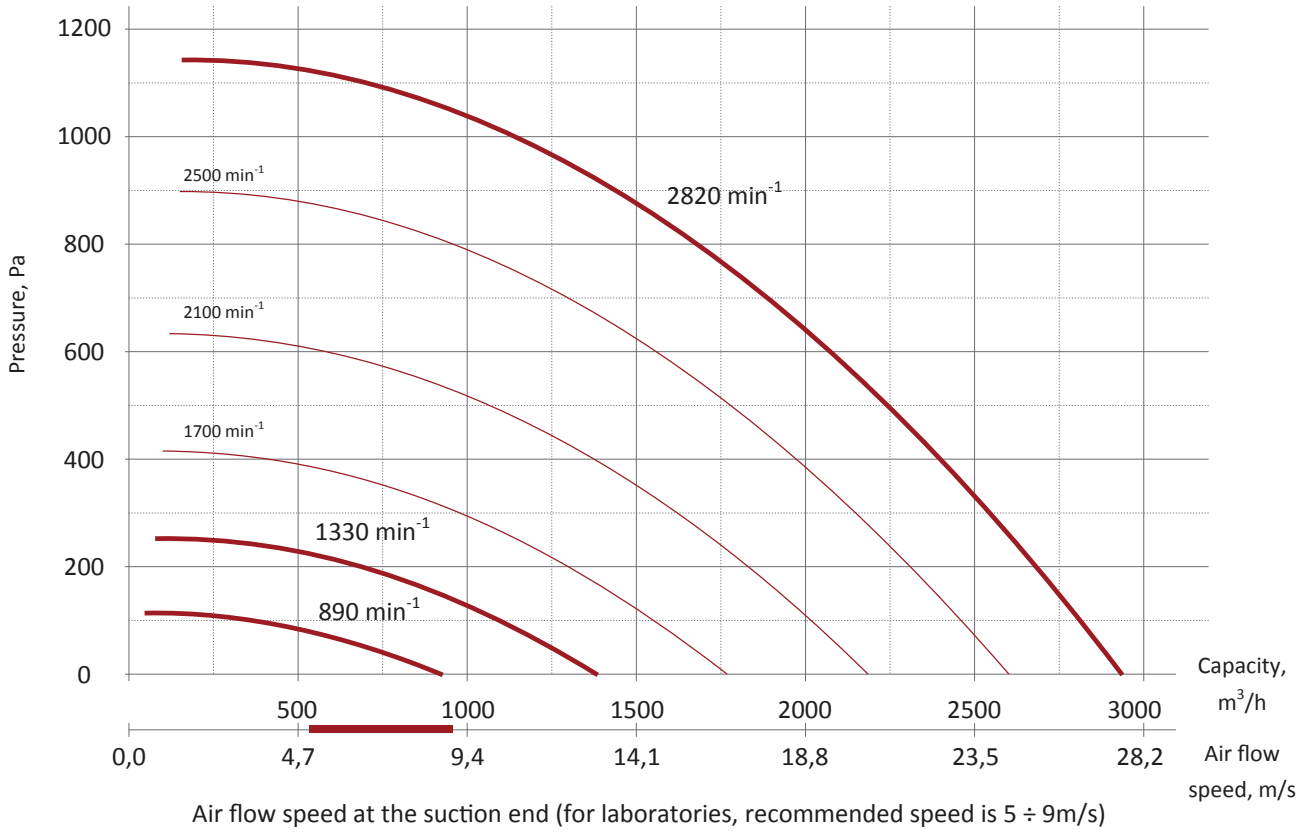
Acoustic characteristics:

Rotational speed	Frequency, Hz								Lw(dB)	Lw(dBA)
rpm	dB								dB	dB
	63	125	250	500	1000	2000	4000	8000	---	---
3000	61	68	78	72	69	62	53	42	72	63
1500	44	57	52	51	47	40	30	17	51	43

3.5. FRvF 110+ - 280 ROOFTOP RADIAL FANS

3.5.6. FDvF 200 Type

Characteristics:



Air flow speed at the suction end (for laboratories, recommended speed is 5 ÷ 9m/s)

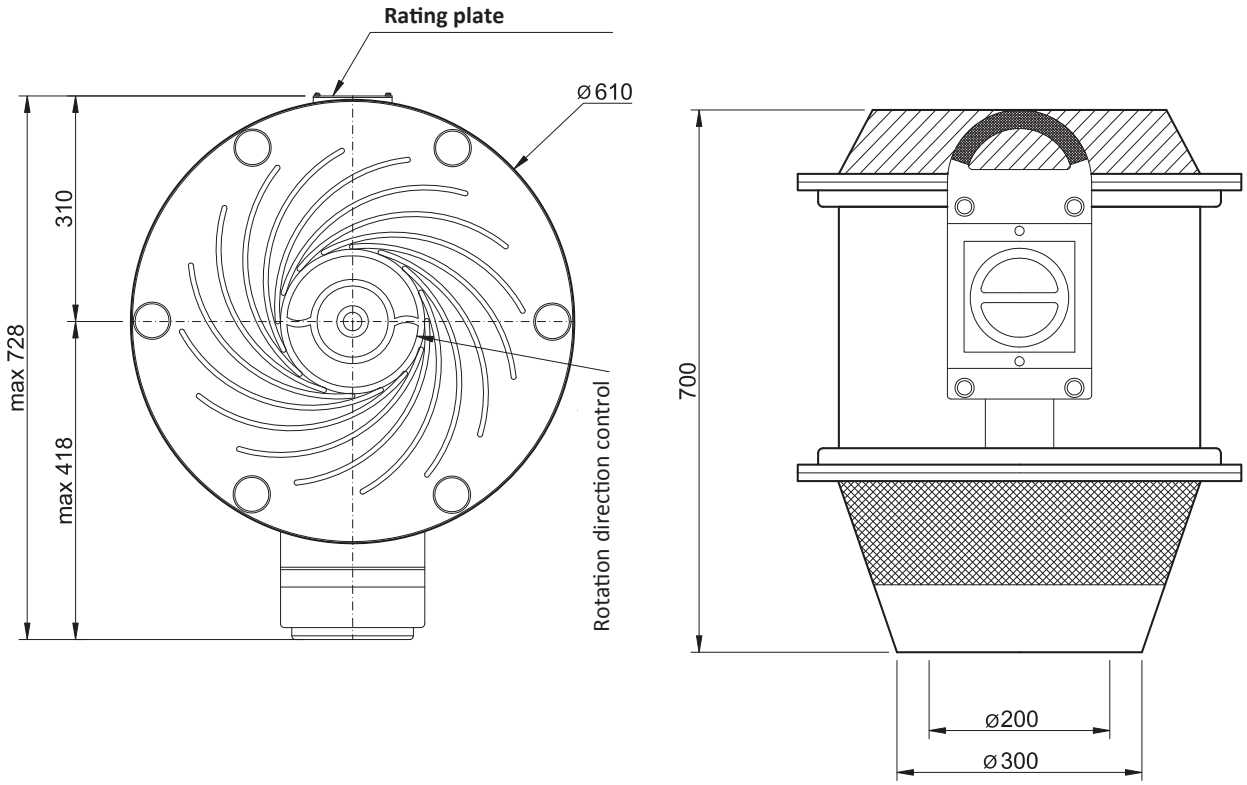
FDvF 200 FAN TYPE TECHNICAL DETAILS:

Rotational speed		Rotational speed at 50Hz	Number of poles	Rated power	Rated current at 400V/50Hz	Maximum capacity	Maximum pressure
10Hz	60Hz						
rpm		rpm	---	kW	A	m^3/h	Pa
			Standard design				
564	3384	3000	2	0,75	1,80	**2950**	**1140**
266	1596	1500	4	0,25	0,86	**1380**	**230**
178	1068	1000	6	0,18	0,79		
130	780	750	8	0,12	0,65		
		3000/1500	2/4	0,95/0,25	2,30/0,70		
		1500/1000	4/6	0,26/0,08	1,07/0,52		
		1500/750	4/8	0,26/0,05	0,86/0,31		
			Ex - EExe II 2GT3 design				
		3000	2	0,75	1,76	**2950**	**1140**
		1500	4	0,25	0,79	**1380**	**230**
		1000	6	0,37	1,30		
		750	8	0,18	0,78		

3.5. FRvF 110+ - 280 ROOFTOP RADIAL FANS

3.5.6. FDvF 200 Type

Dimensions:



Connection diameter - **200mm**
Delivery duct diameter - **280mm**

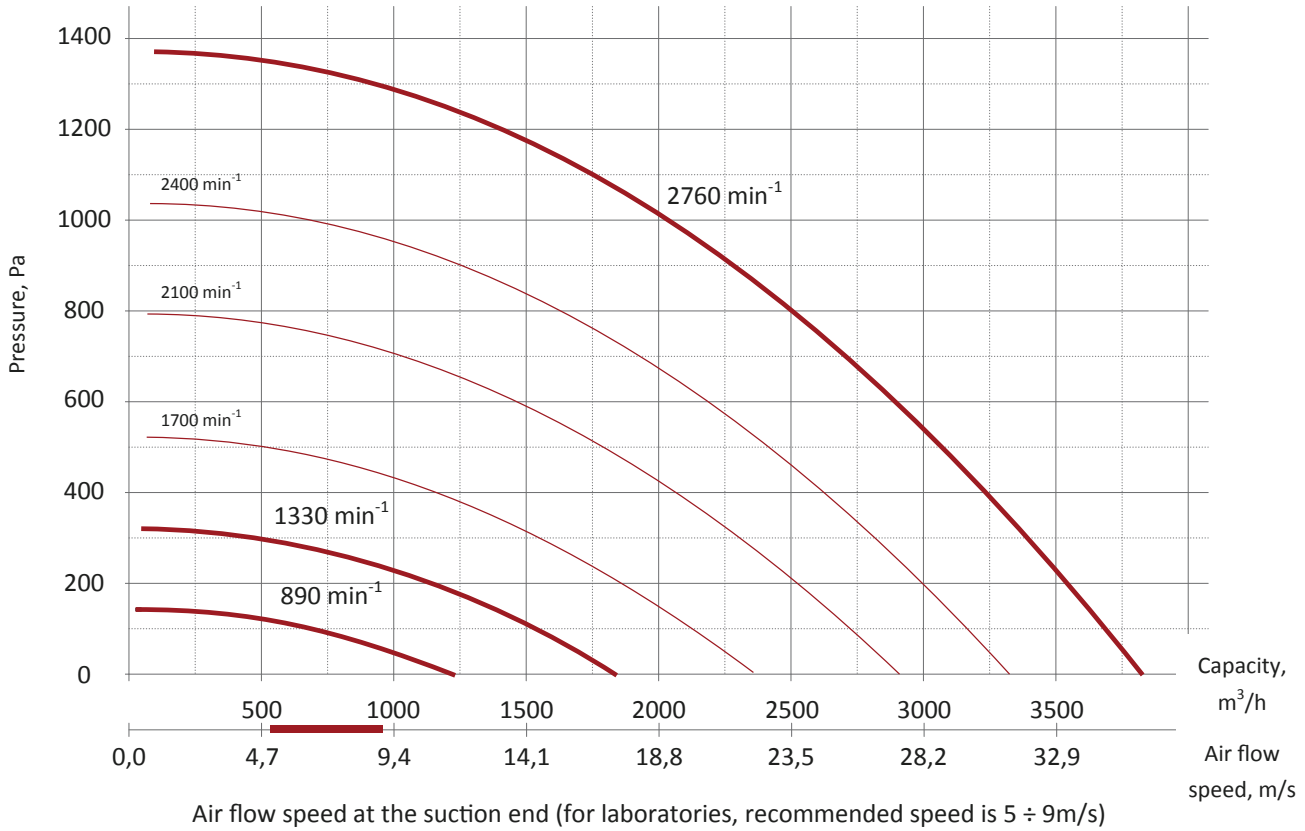
Acoustic characteristics:

Rotational speed	Frequency, Hz								Lw(dB)	Lw(dBA)
rpm	dB								dB	dB
	63	125	250	500	1000	2000	4000	8000	---	---
3000	65	73	84	78	76	71	64	54	78	68
1500	49	62	59	59	56	50	42	31	58	48

3.5. FRvF 110+ - 280 ROOFTOP RADIAL FANS

3.5.7. FDvF 225 Type

Characteristics:



Air flow speed at the suction end (for laboratories, recommended speed is 5 ÷ 9m/s)

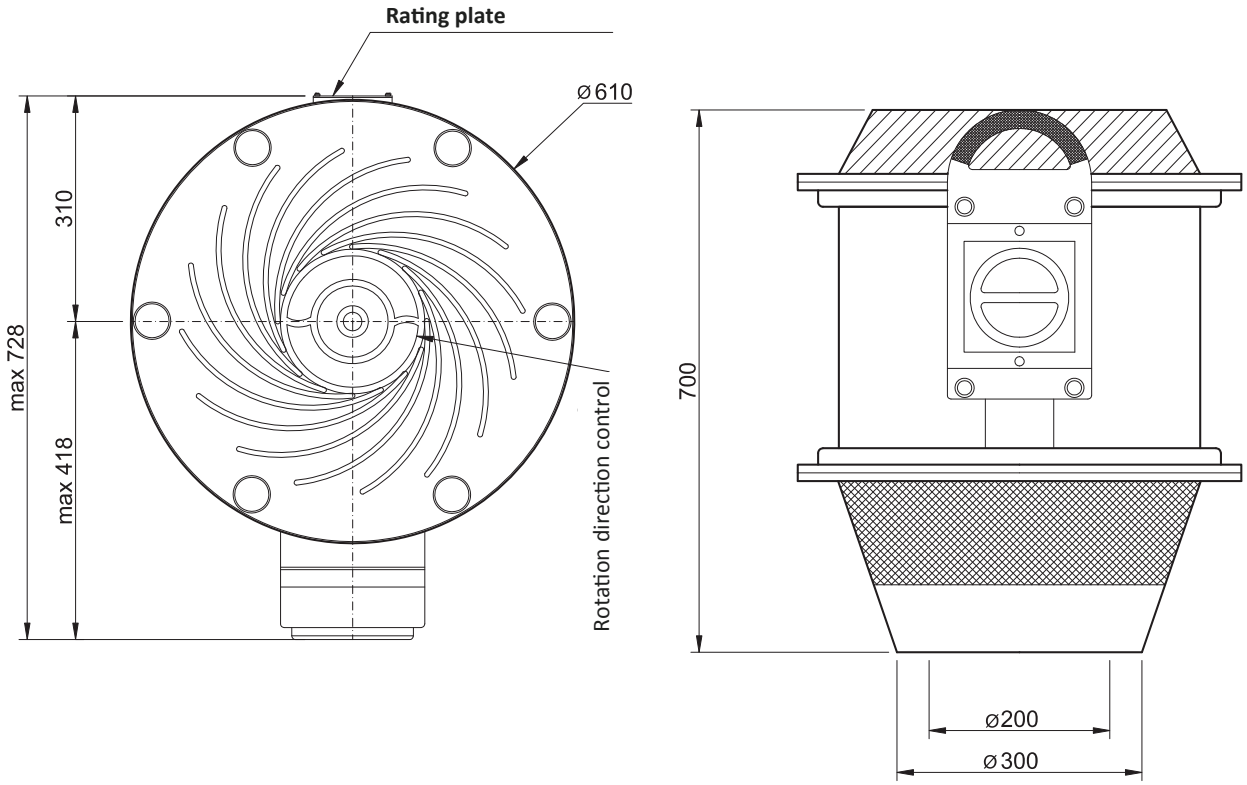
FDvF 225 FAN TYPE TECHNICAL DETAILS:

Rotational speed		Rotational speed at 50Hz	Number of poles	Rated power	Rated current at 400V/50Hz	Maximum capacity	Maximum pressure
10Hz	60Hz						
rpm		rpm	---	kW	A	m^3/h	Pa
			Standard design				
564	3384	3000	2	1,10	2,60	**3850**	**1380**
266	1596	1500	4	0,25	0,86	**1830**	**310**
178	1068	1000	6	0,18	0,79		
130	780	750	8	0,12	0,65		
		3000/1500	2/4	0,95/0,25	2,30/0,70		
		1500/1000	4/6	0,26/0,08	1,07/0,52		
		1500/750	4/8	0,26/0,05	0,86/0,31		
			Ex - EExe II 2GT3 design				
		3000	2	1,10	2,60	**3850**	**1380**
		1500	4	0,25	0,79	**1830**	**310**
		1000	6	0,37	1,30		
		750	8	0,18	0,78		

3.5. FRvF 110+ - 280 ROOFTOP RADIAL FANS

3.5.7. FDvF 225 Type

Dimensions:



Connection diameter - **200mm**
Delivery duct diameter - **280mm**

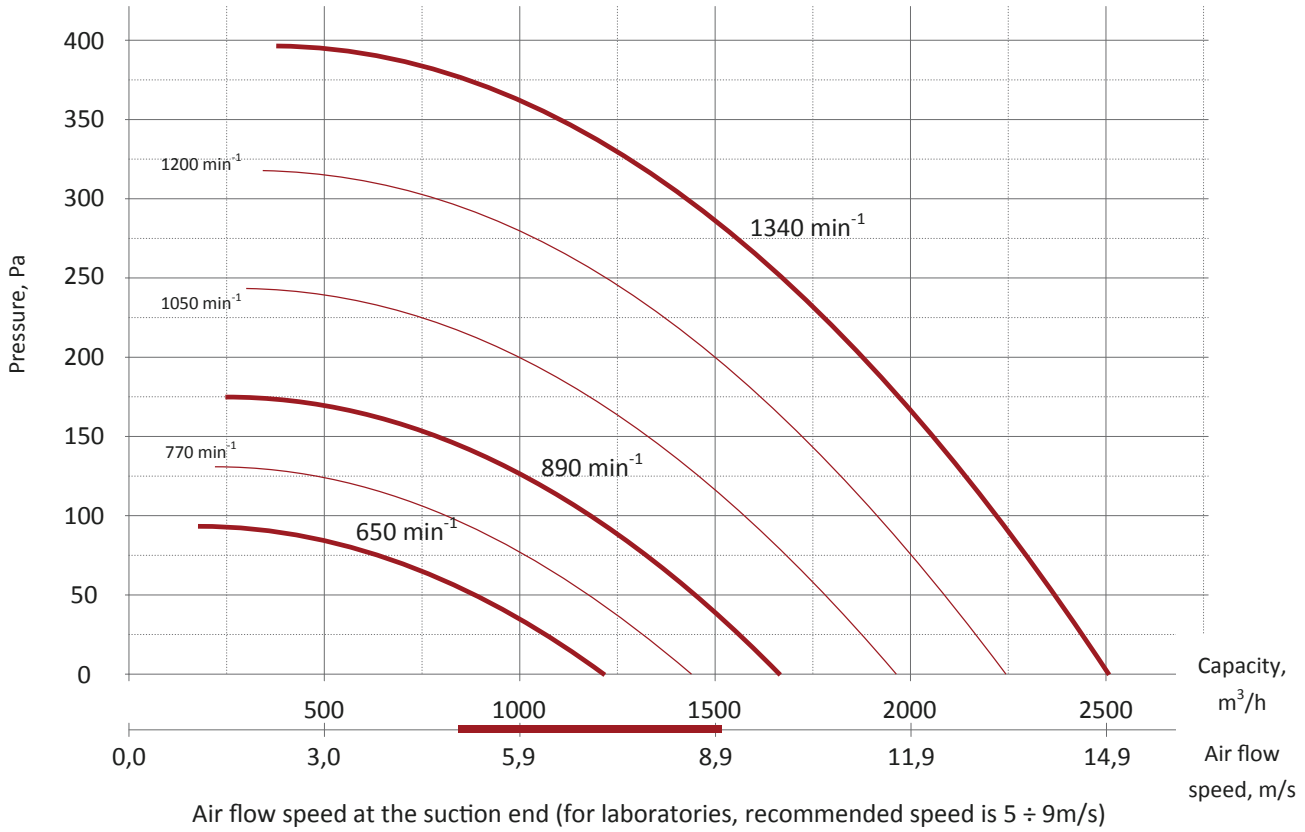
Acoustic characteristics:

Rotational speed	Frequency, Hz								Lw(dB)	Lw(dBA)
rpm	dB								dB	dB
	63	125	250	500	1000	2000	4000	8000	---	---
3000	68	75	85	78	75	69	60	48	79	70
1500	51	64	59	58	54	47	37	24	58	50

3.5. FRvF 110+ - 280 ROOFTOP RADIAL FANS

3.5.8. FDvF 250 Type

Characteristics:



Air flow speed at the suction end (for laboratories, recommended speed is 5 ÷ 9m/s)

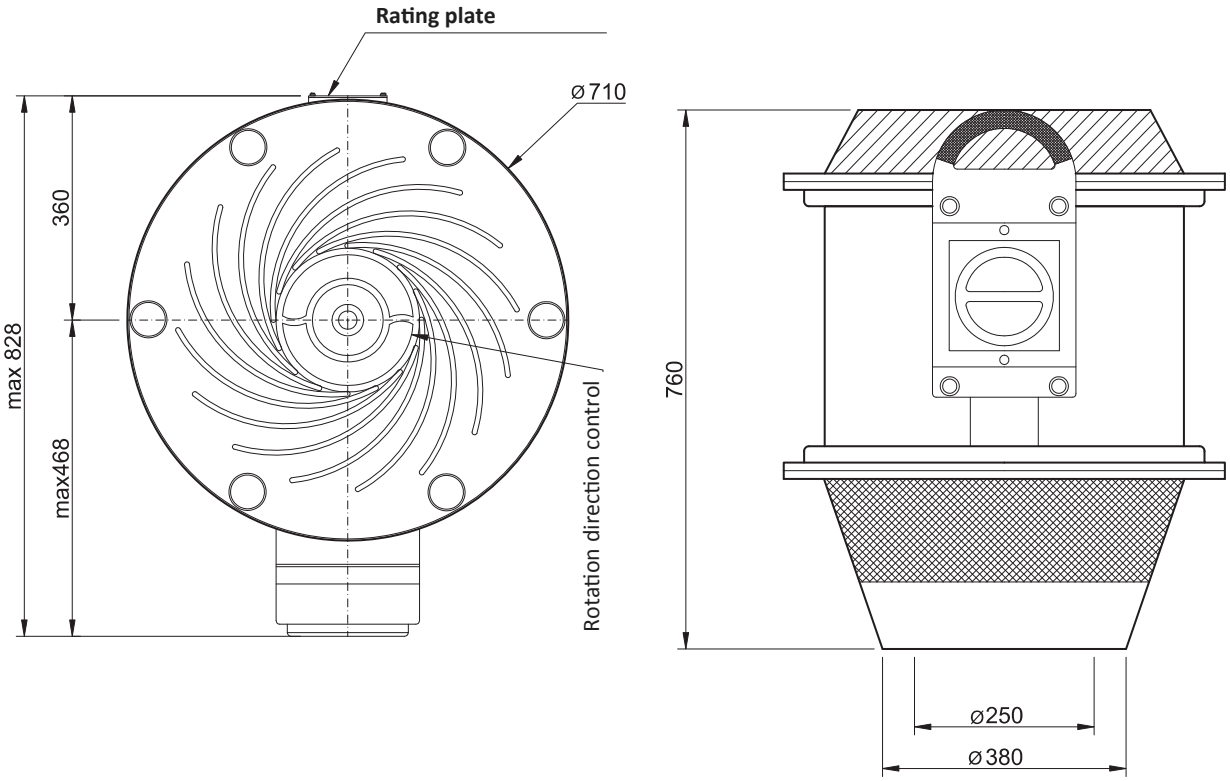
FDvF 250 FAN TYPE TECHNICAL DETAILS:

Rotational speed		Rotational speed at 50Hz	Number of poles	Rated power	Rated current at 400V/50Hz	Maximum capacity	Maximum pressure
10Hz	60Hz						
rpm		rpm	---	kW	A	m^3/h	Pa
			Standard design				
268	1608	1500	4	0,37	1,20	**2500**	**400**
178	1068	1000	6	0,18	0,79	**1660**	**175**
130	780	750	8	0,12	0,65	**1140**	**90**
		1500/1000	4/6	0,55/0,18	1,75/0,66		
		1500/750	4/8	0,50/0,10	1,00/0,42		
			Ex - EExe II 2GT3 design				
		1500	4	0,55	1,59	**2500**	**400**
		1000	6	0,37	1,30	**1660**	**175**
		750	8	0,18	0,78	**1140**	**90**

3.5. FRvF 110+ - 280 ROOFTOP RADIAL FANS

3.5.8. FDvF 250 Type

Dimensions:



Connection diameter - **250mm**
Delivery duct diameter - **355mm**

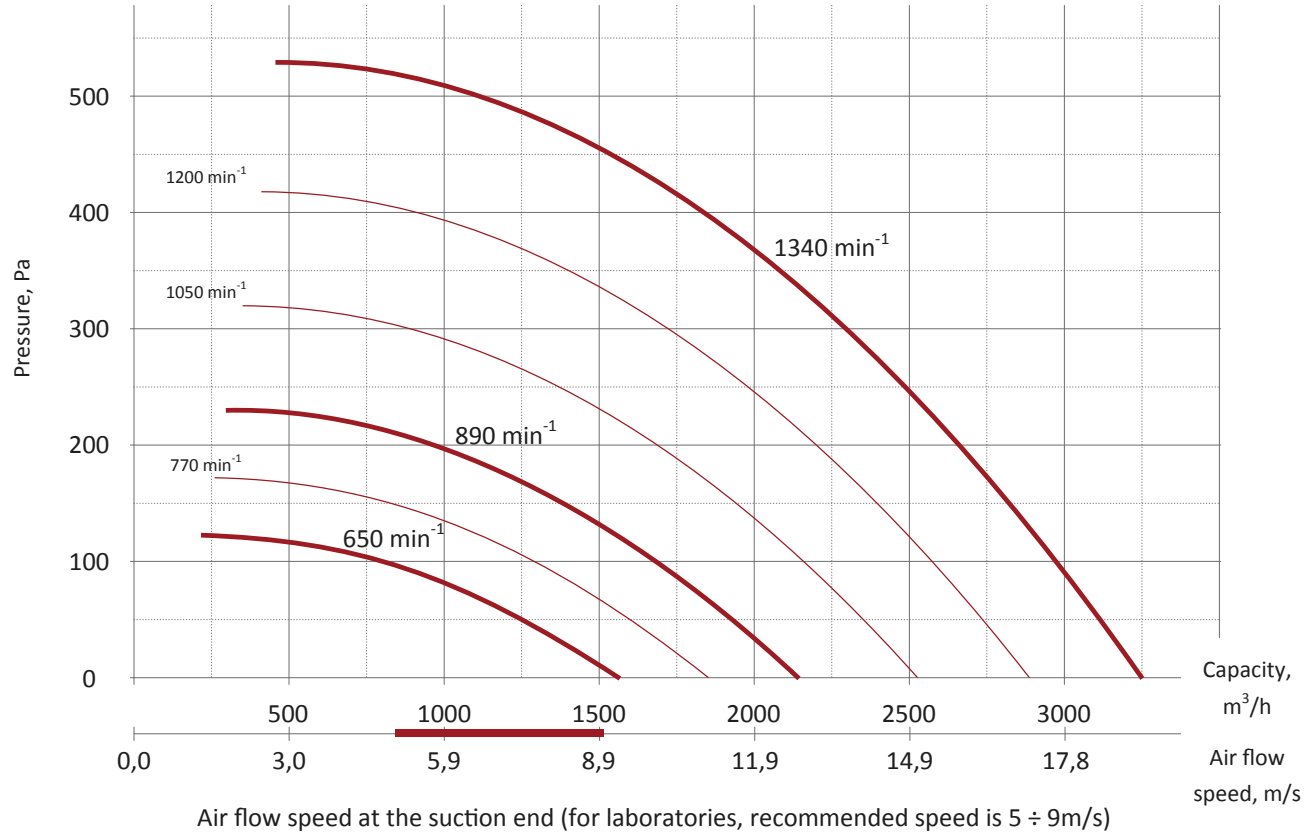
Acoustic characteristics:

Rotational speed	Frequency, Hz								Lw(dB)	Lw(dBA)
rpm	dB								dB	dB
	63	125	250	500	1000	2000	4000	8000	---	---
1500	55	69	65	66	63	57	49	37	65	55
950	44	58	53	53	49	43	34	22	52	42
750	45	44	46	46	42	35	26	14	44	34

3.5. FRvF 110+ - 280 ROOFTOP RADIAL FANS

3.5.9. FDvF 280 Type

Characteristics:



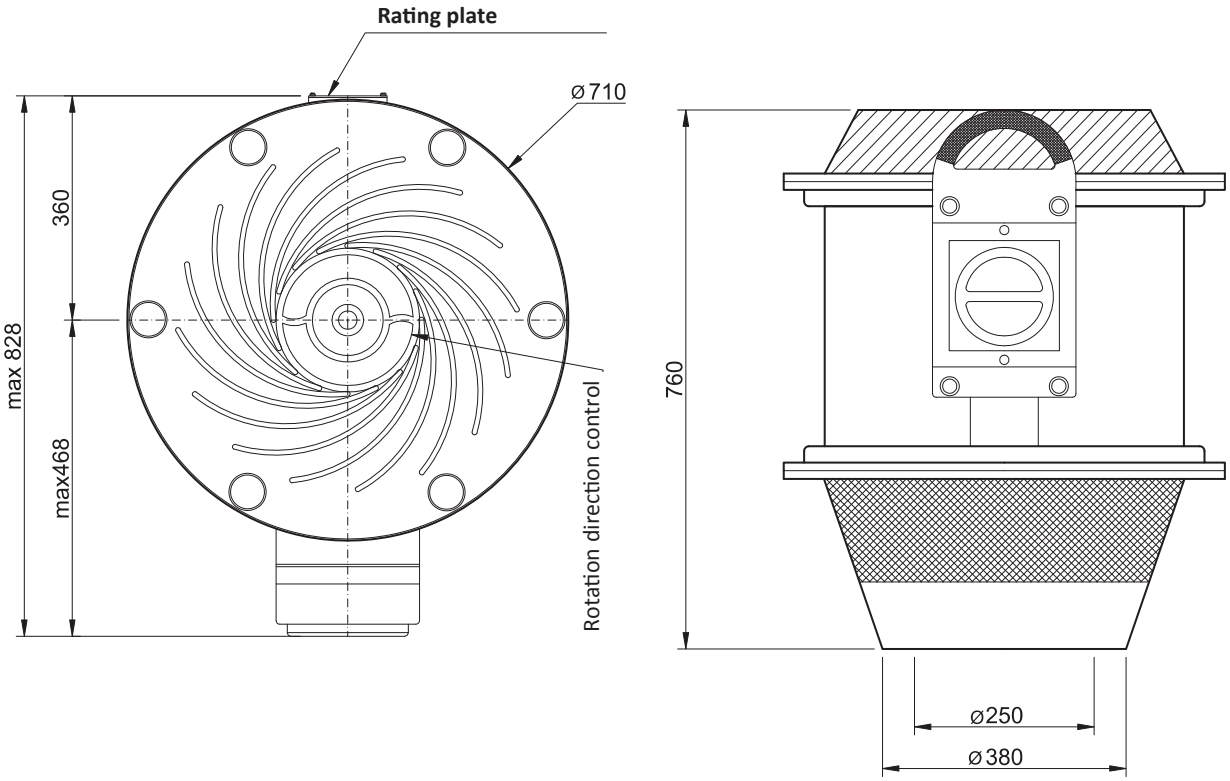
FDvF 280 FAN TYPE TECHNICAL DETAILS:

Rotational speed		Rotational speed at 50Hz	Number of poles	Rated power	Rated current at 400V/50Hz	Maximum capacity	Maximum pressure
10Hz	60Hz						
rpm		rpm	---	kW	A	m^3/h	Pa
Standard design							
270	1620	1500	4	0,55	1,60	**3250**	**540**
178	1068	1000	6	0,18	0,79	**2150**	**230**
130	780	750	8	0,12	0,65	**1580**	**125**
		1500/1000	4/6	0,55/0,18	1,75/0,66		
		1500/750	4/8	0,50/0,10	1,00/0,42		
Ex - EExe II 2GT3 design							
		1500	4	0,55	1,59	**3250**	**540**
		1000	6	0,37	1,30	**2150**	**230**
		750	8	0,18	0,78	**1580**	**125**

3.5. FRvF 110+ - 280 ROOFTOP RADIAL FANS

3.5.9. FDvF 280 Type

Dimensions:



Connection diameter - **250mm**
Delivery duct diameter - **355mm**

Acoustic characteristics:

Rotational speed	Frequency, Hz								Lw(dB)	Lw(dBA)
rpm	dB								dB	dB
	63	125	250	500	1000	2000	4000	8000	---	---
1500	57	70	66	65	61	53	43	30	65	56
950	46	58	53	51	46	38	28	13	52	43
750	46	44	45	43	38	30	19	5	43	34

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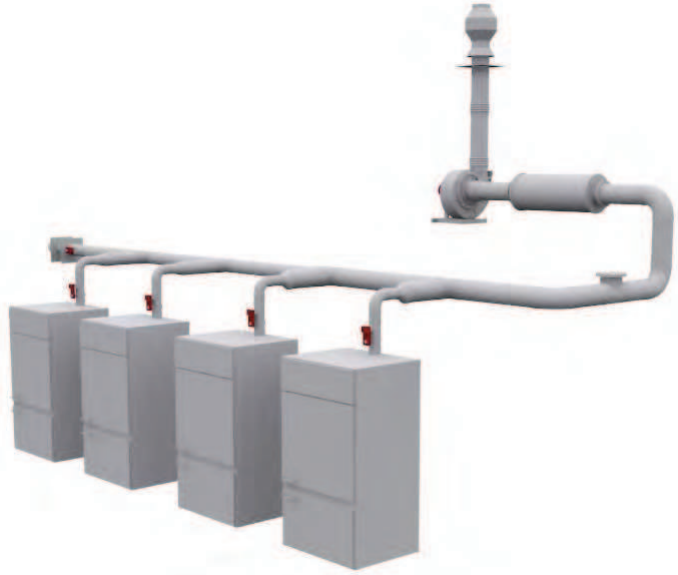
4. FAN ACCESORIES



DESCRIPTION

Owing to our very modern machines for plastic processing, we are able to build virtually any apparatuses and equipment such as:

- fume hoods
- exhaust hoods
- exhausters
- scrubbers
- tanks
- other equipment in accordance with execution design

NOTES: