The Innovation Company
LTG Incorporated

Medium-pressure Conveying Fans

VSR-M.

Example:
VSR-MM

LTG Incorporated
105 Corporate Drive, Suite E
Spartanburg, SC 29303
PO Box 2889, Spartanburg, SC 29304
USA
Tel: 864-599-6340
Fax: 864-599-6344
e-mail: info@LTG-INC.net
Internet: http://www.LTG-INC.net

LTG Aktiengesellschaft
Grenzstrasse 7, D-70435 Stuttgart
PO Box 40 05 25, D-70405 Stuttgart
Germany
Tel: 49-711-8201-180
Fax: 49-711-8201-720
e-mail: prozessluft@LTG-AG.de
Internet: http://www.LTG-AG.de

VSR-M.-USA-TP-01 (0708) 450-65

Medium-pressure Conveying Fans Type VSR-M.

Application

This series of fans is particularly suitable to pneumatically convey dust, fibers and shavings and wherever common impellers would easily get clogged, e.g. in the textile, plastics, and paper industry.

Typical applications also include the conveying of wood chips, bark, lumber scrap, grains, nut shells and similar particles of dusty or short-fiber goods.

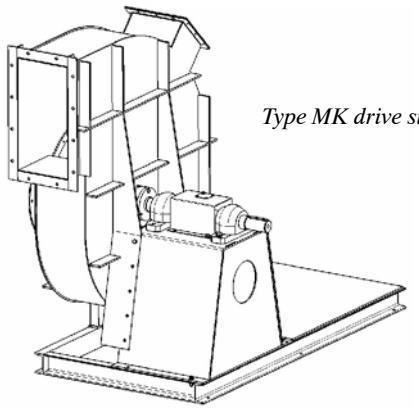
A special version is suitable to also convey long-fiber materials such as wood wool, peeled bark or paper strips. Possible applications include the use as forced draught and induced draught fans in connection with steam and hot water boilers.

Operating Conditions

Temperature of conveying means
depending on type of drive:
up to 160 °F (70 °C) (MM)
up to 400 °F (200 °C) (MK, MKM, MMK)

Flow rates: up to 70,600 cfm (120,000 m^3/h)

Total pressure: up to 20 “wg (5,000 Pa)



Type MK drive side

Spezification and Features

Housing of welded sheet steel, up to size 280 rotatable, with opening for cleaning.
Up to size 280, suction and discharge connection round, from size 315 suction connection round with flange, discharge socket square with angular frame.

Welded sheet steel impeller with open blades for direct material conveyance, cast-iron hub, dynamically balanced according to DIN ISO 1940, grade 6.3.

Motor or bearing support of reinforced welded sheet steel.

Reinforced version: welded sheet steel housing with 6 mm steel tongue and impeller with 6 mm steel blades made out of special steel with increased wear resistance.

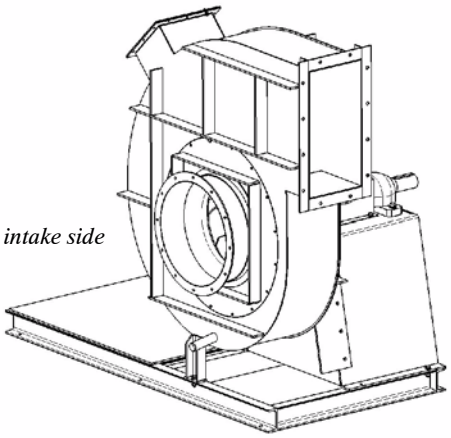
Surface finish similar to RAL 5003, accessories similar to RAL 9006.

Motor

Standard three-phase motors, construction type IMB3,
up to 4 hp (3 kW) 230/400 V,
from 5 hp (4 kW) 400/690 V, 50 Hz,
type of protection: IP55 (with PTC resistor sensor).

Advantages

- **Perfect aerodynamic properties**
- **Flat fan curve**
  ensuring minimum pressure fluctuation during operation.
- **Low power consumption**
  due to excellent efficiency.
- **High operation safety**
  due to solid, torsion-resistant steel housing;
  welded, bolted, coated.
- **Wide variety of applications**
  due to different drive types and special versions.
- **Wide variety of types**
  Basic series with 15 sizes and 6 housing positions.
  Other versions on request.
- **Wide selection**
  for flow rates up to 70,600 cfm (120,000 m^3/h) and a total pressure of up to 20 “wg (5,000 Pa).
- **Computer-based design**
  LTG fans are sized with the help of computer program for each case individually based on the actual criteria. Thus ensures to select the best possible fan for each application.



Type MK intake side

Medium-pressure Conveying Fans Type VSR-M.

Drive Types

The LTG series VSR-M. medium-pressure conveying fan is a single inlet centrifugal fan available in a wide variety of versions and drives.

Special Designs

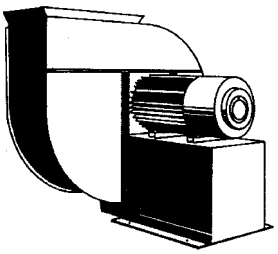
Meeting certain requirements, the fans may be supplied with double inlet.

Special Versions

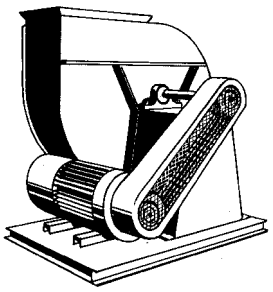
Special versions with cooled shaft and bearings are available to convey hot air or hot gasses (”sp”).
In case of very high temperatures, the impellerl and housing may be made of heat-resistant steel.
To protect from chemically aggressive gasses, the housing and impeller may be made of non-corrosive, acid-resistant chrome-nickel steel or out ofaluminum.

Drive Types

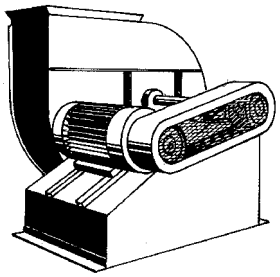
MM (preferred type)
Direct drive
Housing bolted to the motor support.
Impeller fixed to motor shaft end.
Fan speed = motor speed.
Suitable for use up to 160° (F70°C), unsuitable for hot air.
Most used drive type.
See page 11 for dimensions.



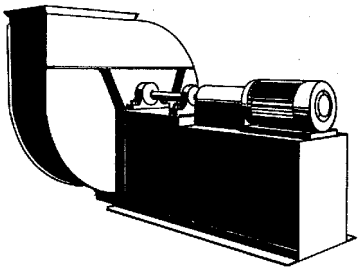
MK (special version)
Belt drive
Impeller with one sided bearing on steel shaft
with antifriction bearing.
Pulley with one sided bearing on the other shaft end.
Suitable for hot air since the shaft will be air-cooled.
Dimensions on request.



MKM (special version)
Belt drive
Identical to MK, but with enlarged motor support to take the motor.
Compact aggregate
with short fan shaft - motor shaft center distance.
See page 15 for dimensions.



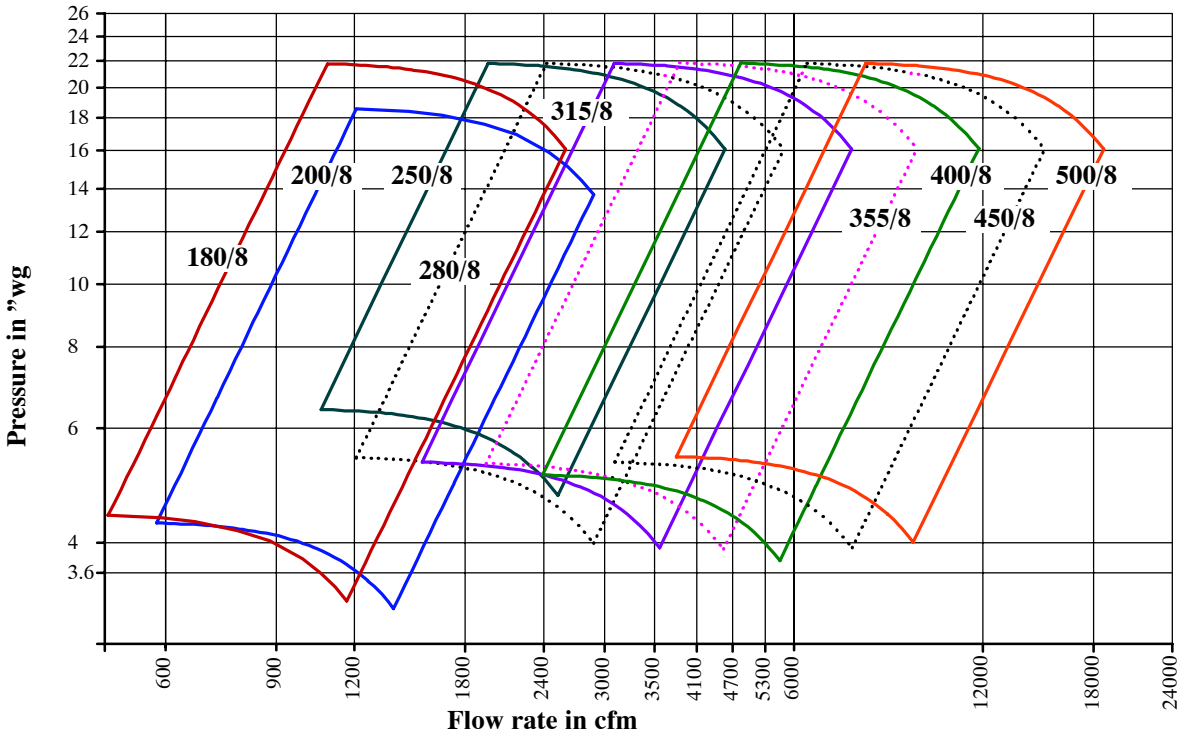
MMK (special type)
Direct drive via elastic coupling
Fan on separate bearing.
Axial extension of the fan bearing support to take the motor.
Fan speed = motor speed.
Particularly suitable for hot air.
Dimensions on request.



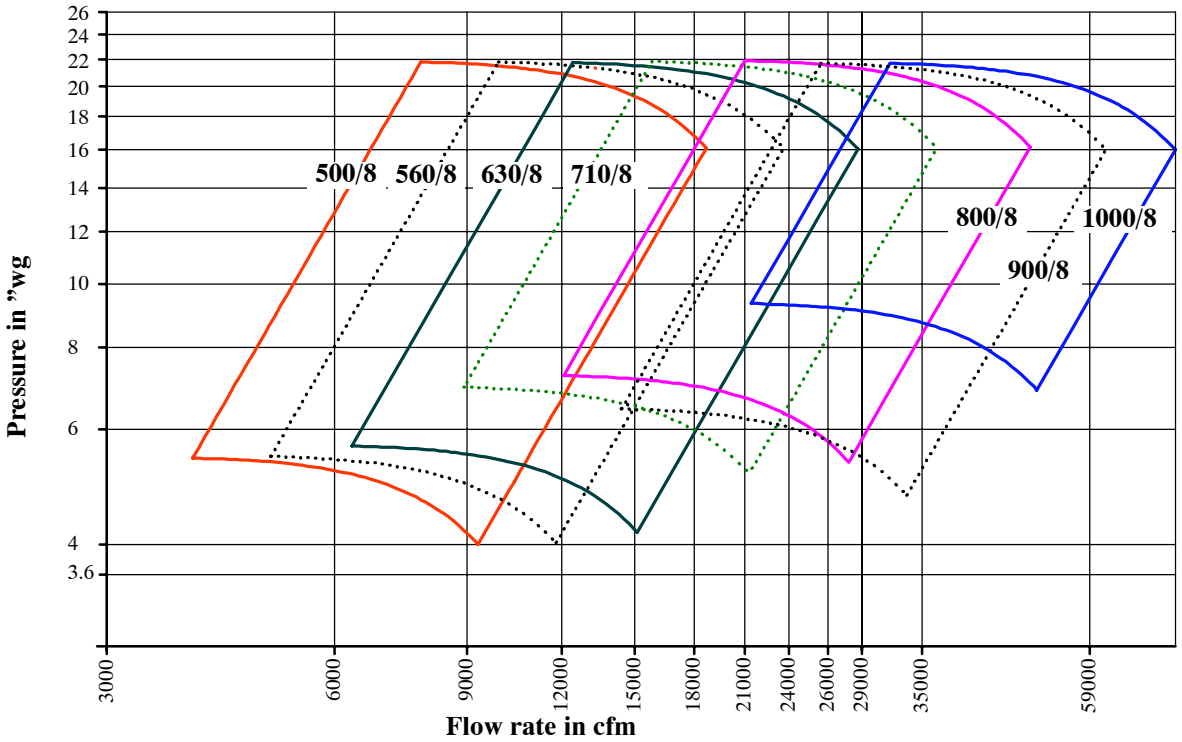
Medium-pressure Conveying Fans Type VSR-M.

Overview of Sizes

Conveying Fan VSR-M..200/8 - VSR-M.. 500/8



Conveying Fan VSR-M..500/8 - VSR-M.. 1000/8



Medium-pressure Conveying Fans Type VSR-M.

Technical Specifications for standard conditions 70 °F (20 °C), ϱ = 0.075 lb/cuft (1.2 kg/m^3) [3)]

Size	Drive[1]	Fan speed [rpm]	Flow rate [cfm][m^3/h]	Suction speed [fps][m/s]	Total pressure rise ["wg][Pa]	Power requirement [hp][kW]	Motor-output [hp][kW]	Motor speed [rpm]	Weight fan with motor [2)] ca. [lb] [kg]
125/10	MM	2835	520 (880)	66 (20)	3.12 (780)	0.6 (0.4)	0.75 (0.55)	2835	66 (30)
125/14	MM	2870	520 (880)	66 (20)	5.28 (1320)	0.8 (0.6)	1 (0.75)	2870	88 (40)
160/9	MM	2860	850 (1450)	66 (20)	5.2 (1300)	1.2 (0.9)	1.5 (1.1)	2860	77 (35)
160/11	MM	2890	520 (880)	66 (20)	6.64 (1660)	1.6 (1.2)	2 (1.5)	2890	88 (40)
180/8*	**MM**	**2890**	**1080 (1830)**	**66 (20)**	**6.2 (1550)**	**1.6 (1.2)**	**2 (1.5)**	**2890**	**77 (35)**
180/10	MM	2890	1080 (1830)	66 (20)	8.12 (2030)	2.5 (1.8)	3 (2.2)	2890	110 (50)
200/8*	**MM/MK**	**2890**	**1330 (2260)**	**66 (20)**	**8.16 (2040)**	**2.6 (1.9)**	**4 (3)**	**2890**	**132 (60)**
200/10	MM	2905	1330 (2260)	66 (20)	10 (2500)	3.7 (2.7)	5 (4)	2905	165 (75)
224/7	MM	2905	1670 (2840)	66 (20)	7.76 (1940)	3.5 (2.6)	5 (4)	2905	176 (80)
224/11	MM	2930	2000 (3400)	79 (24)	17.6 (4400)	9 (6.6)	10 (7.5)	2930	286 (130)
224/15	MM	2940	2000 (3400)	79 (24)	21.96 (5490)	10.9 (8)	15 (11)	2940	420 (190)
250/5	MM	2905	2080 (3530)	66 (20)	8.44 (2110)	4.6 (3.4)	5 (4)	2905	188 (85)
250/6 R	MM	2890	2080 (3530)	66 (20)	6.48 (1620)	3.5 (2.6)	4 (3)	2890	176 (80)
250/6	MM	2925	2080 (3530)	66 (20)	9.56 (2390)	5.6 (4.1)	7.5 (5.5)	2925	220 (100)
250/8*	**MM/MK**	**2930**	**2080 (3530)**	**66 (20)**	**13.4 (3350)**	**7.1 (5.2)**	**10 (7.5)**	**2930**	**243 (110)**
250/12	MM	2940	2000 (3400)	79 (24)	24.8 (6200)	17.7 (13)	20 (15)	2940	420 (190)
250/15	MM	2945	2000 (3400)	70 (24)	27.16 (6790)	24.1 (17.7)	30 (22)	2945	606 (275)
280/5	MM	2930	2600 (4440)	66 (20)	10.6 (2650)	7.2 (5.3)	10 (7.5)	2930	265 (120)
280/6	MM	2940	2950 (5000)	92 (28)	11.76 (2940)	10.6 (7.8)	15 (11)	2940	253 (160)
280/7 R	MM	2925	2600 (4440)	66 (20)	9.12 (2280)	5.7 (4.2)	7.5 (5.5)	2925	254 (115)
280/8*	**MM/MK**	**2940**	**2950 (5000)**	**92 (28)**	**16.64 (4160)**	**10.5 (7.7)**	**15 (11)**	**2940**	**363 (165)**
315/5 R	MM	2930	3300 (5600)	66 (20)	7.92 (1980)	7.2 (5.3)	10 (7.5)	2930	298 (135)
315/8 R	MM	2940	4000 (6800)	79 (24)	18.08 (4520)	17.5 (12.9)	20 (15)	2940	420 (190)
315/8*	**MM/MK**	**1440**	**3300 (5600)**	**66 (20)**	**4.32 (1080)**	**3.8 (2.8)**	**5 (4)**	**1440**	**254 (115)**
315/10	MM	1455	3300 (5600)	66 (20)	6.32 (1580)	3 (4)	7.5 (5.5)	1455	298 (135)
355/8*	**MM/MK**	**1455**	**4200 (7130)**	**66 (20)**	**5.96 (1490)**	**6.1 (4.5)**	**10 (7.5)**	**1455**	**342 (155)**
355/10	MM	1460	4200 (7130)	66 (20	8.72 (2180)	9.7 (7.1)	15 (11)	1460	430 (195)
400/6	MM	1455	5300 (9050)	66 (20)	5.4 (1350)	8.2 (6)	10 (7.5)	1455	408 (185)
400/7	MM	1460	5300 (9050)	66 (20)	6.48 (1620)	10 (7.3)	15 (11)	1460	474 (215)
400/8*	**MM/MK**	**1460**	**5300 (9050)**	**66 (20)**	**8.12 (2030)**	**10.6 (7.8)**	**15 (11)**	**1460**	**485 (220)**
400/10	MM	1465	5300 (9050)	66 (20)	11.64 (2910)	17.1 (12.6)	25 (18.5)	1465	585 (265)
450/7	MM	1465	6750 (11450)	66 (20)	9.04 (2260)	17.3 (12.7)	25 (18.5)	1465	650 (295)
450/8*	**MM/MK**	**1465**	**6750 (11450)**	**66 (20)**	**10.76 (2690)**	**18 (13.2)**	**30 (22)**	**1465**	**507 (230)**
450/10	MM	1465	6750 (11450)	66 (20)	14.6 (3650)	28.3 (20.8)	40 (30)	1465	880 (400)
500/7	MM	1465	8300 (14140)	66 (20)	12.64 (3160)	26.4 (19.4)	40 (30)	1465	950 (430)
500/8*	**MM/MK**	**1465**	8300 (14140)	**66 (20)**	**13.8 (3450)**	**29 (21.2)**	**40 (30)**	**1465**	**960 (435)**
500/9	MM	1475	8300 (14140)	66 (20)	16.16 (4040)	35 (25.6)	50 (37)	1475	1080 (490)
500/10	MM	1475	8300 (14140)	66 (20)	18.64 (4660)	47 (34.5)	60 (45)	1475	1160 (525)
560/8*	**MK**	**1500**	**14700 (25000)**	**92 (28)**	**17.16 (4290)**	**60 (44)**	**75 (55)**	**1480**	**2380 (1080)**
630/8*	**MK**	**1250**	**18500 (31500)**	**92 (28)**	**14.6 (3650)**	**65 (48)**	**75 (55)**	**1480**	**2733 (1240)**
710/8*	**MK**	**1125**	**23500 (40000)**	**92 (28)**	**15.08 (3770)**	**84 (62)**	**75 (75)**	**1485**	**3790 (1720)**
800/8*	**MK**	**1000**	**34000 (58000)**	**92 (32)**	**15.4 (3850)**	**126 (93)**	**150 (110)**	**1488**	**4620 (2095)**
900/8*	**MK**	**875**	**43200 (73500)**	**92 (32)**	**14.8 (3700)**	**155 (114)**	**200 (132)**	**1486**	**on request**
1000/8*	**MK**	**850**	**53200 (90500)**	**92 (32)**	**17.86 (4465)**	**227 (167)**	**270 (200)**	**1486**	**on request**

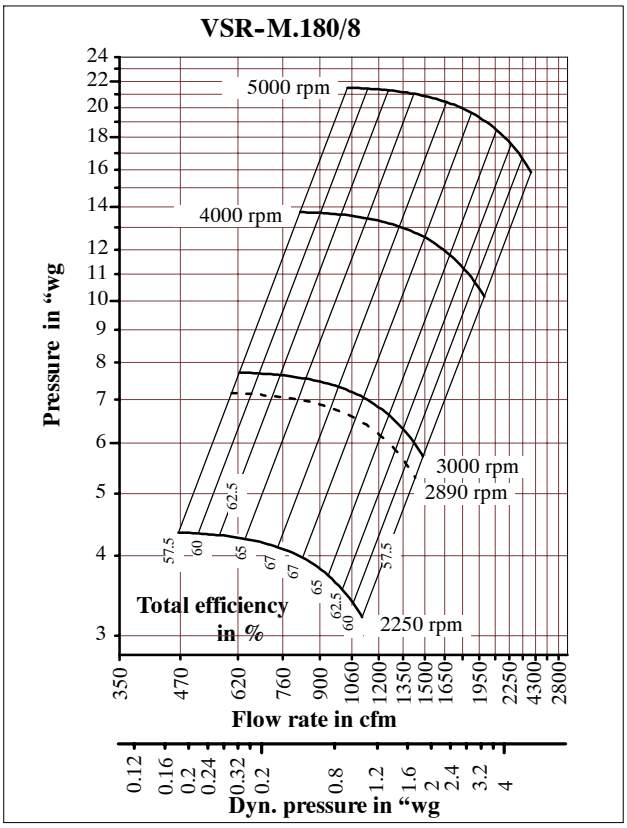
* Preferred series. For characteristic refer to page 5 [2)] Reinforced version

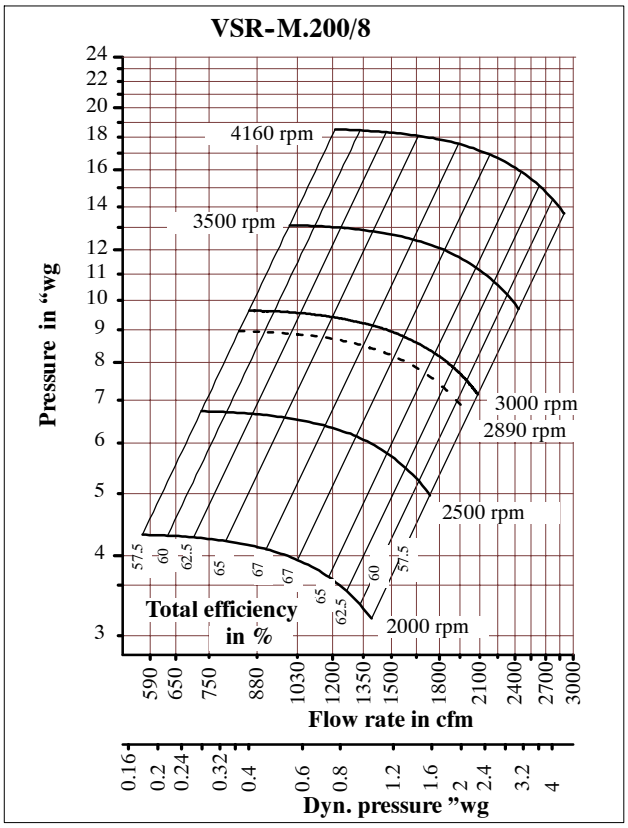
[1)] Drive type MM also available as MMK, drive type MK also available as MKM.

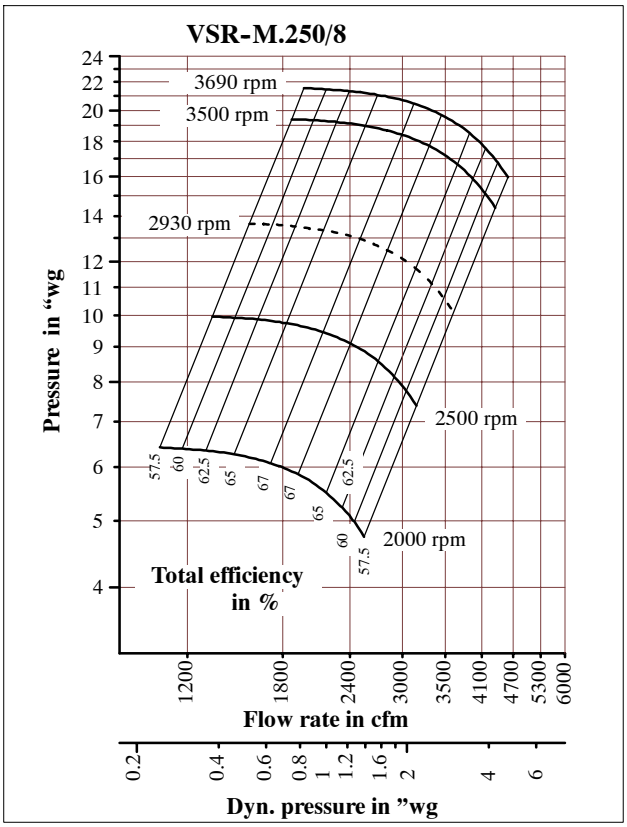
Motor: standard three-phase motor, type IM B3 up tp 3 kW (4 hp) 230/400V, from 4 kW (5 hp) 400/690 V, 50 Hz, type of protection IP 55 (with PTC resistor sensor)

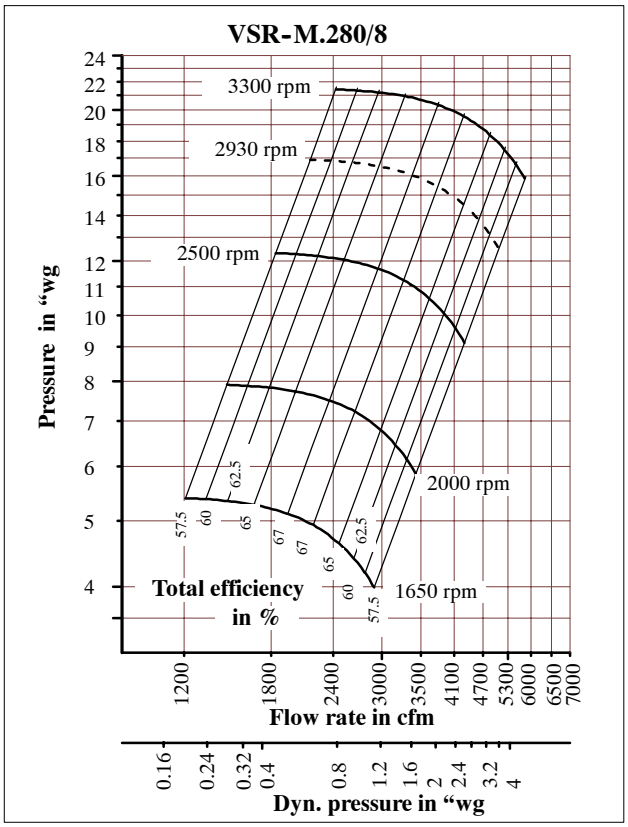
Medium-pressure Conveying Fans Type VSR-M.

Fan Curves at 70 °F (20 °C), ϱ = 0.075 lb/cuft (1.2 kg/m^3)









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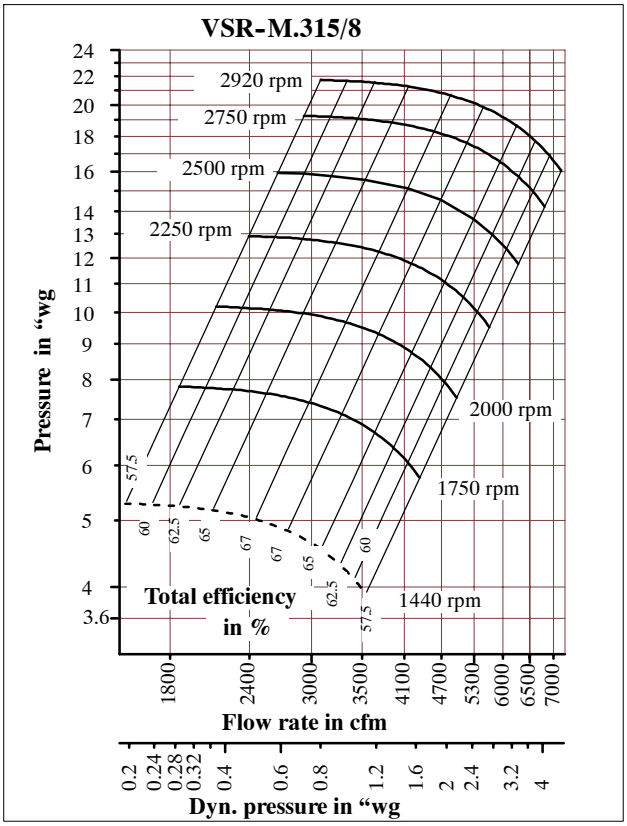

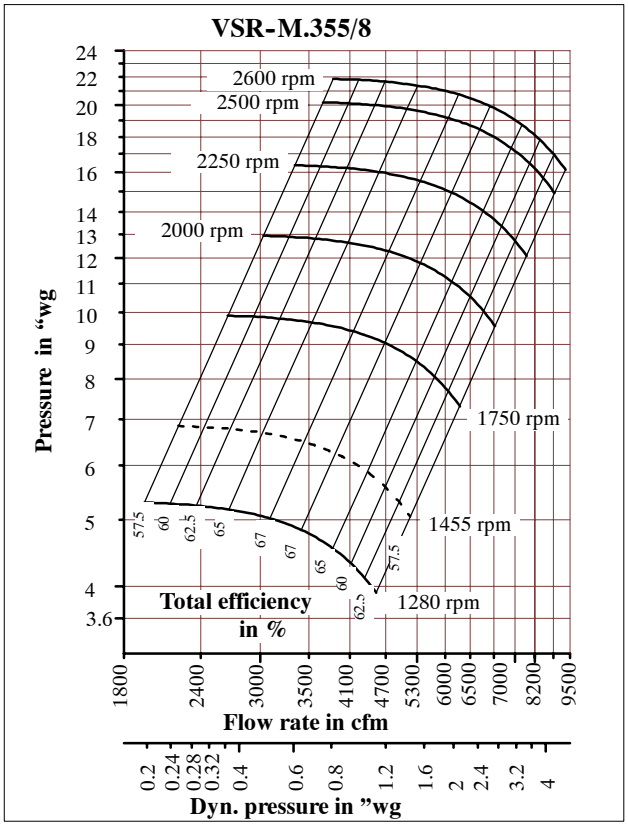

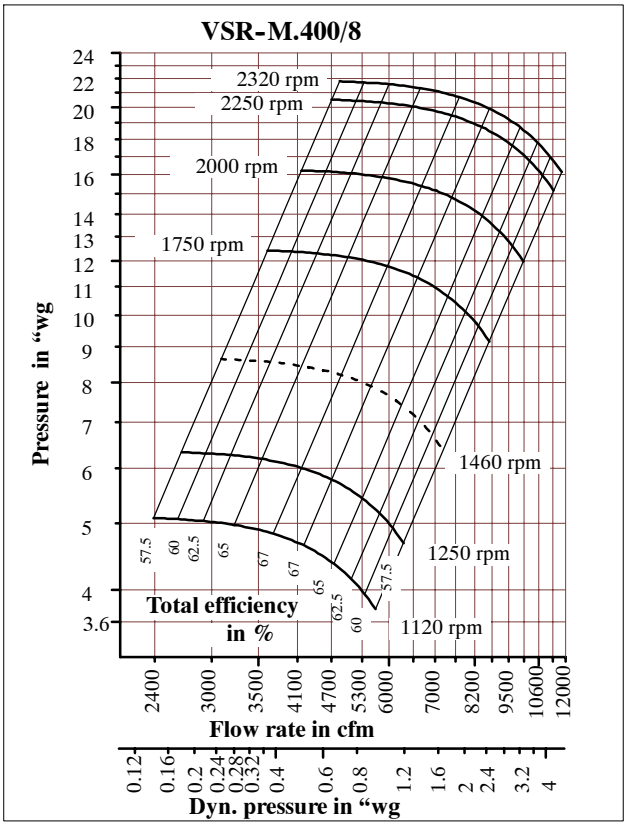

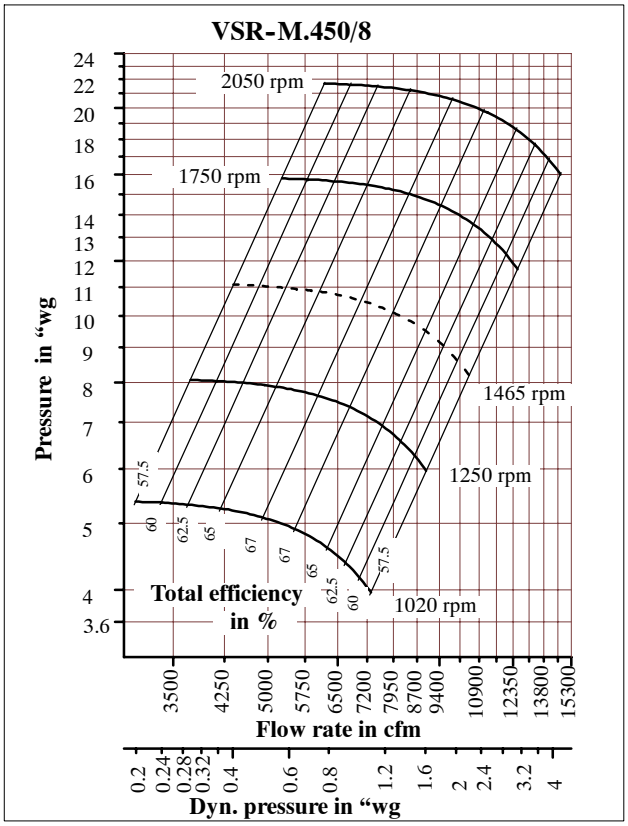

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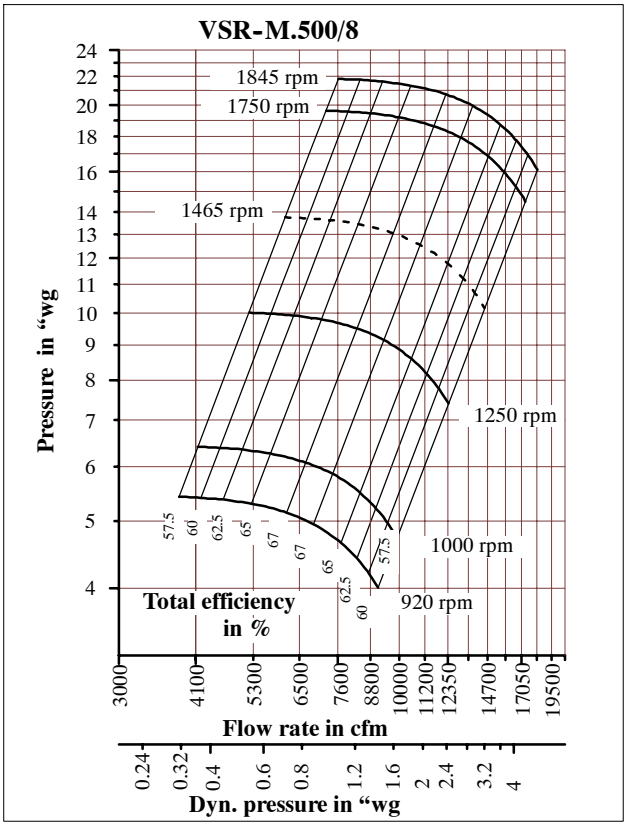

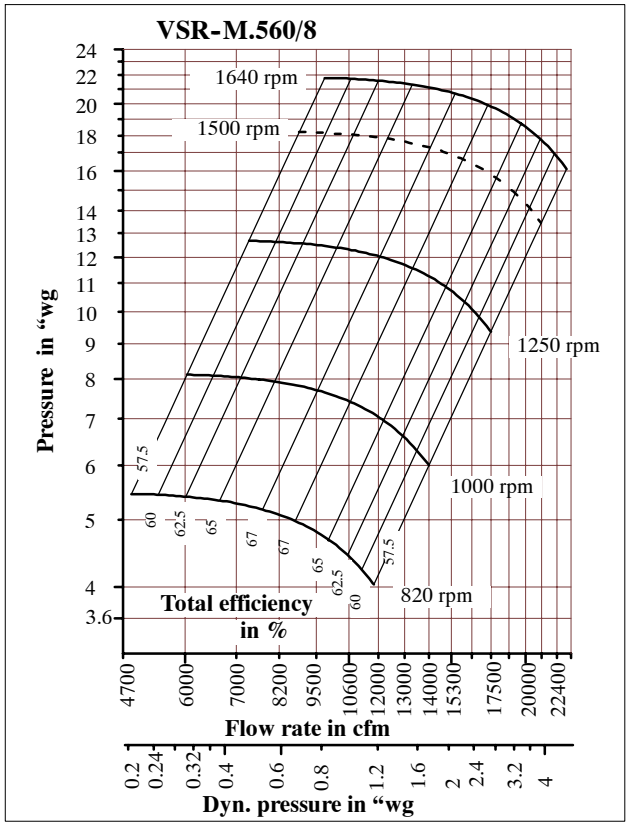

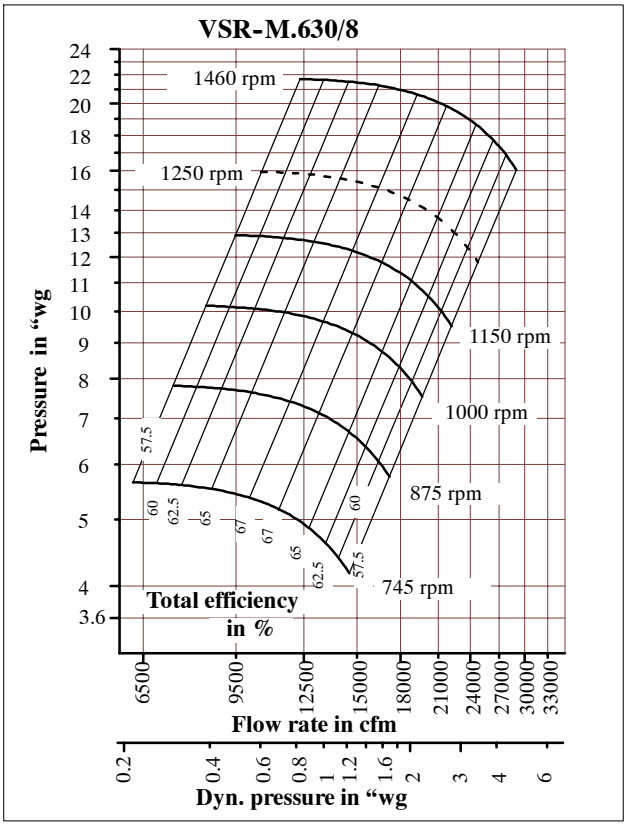

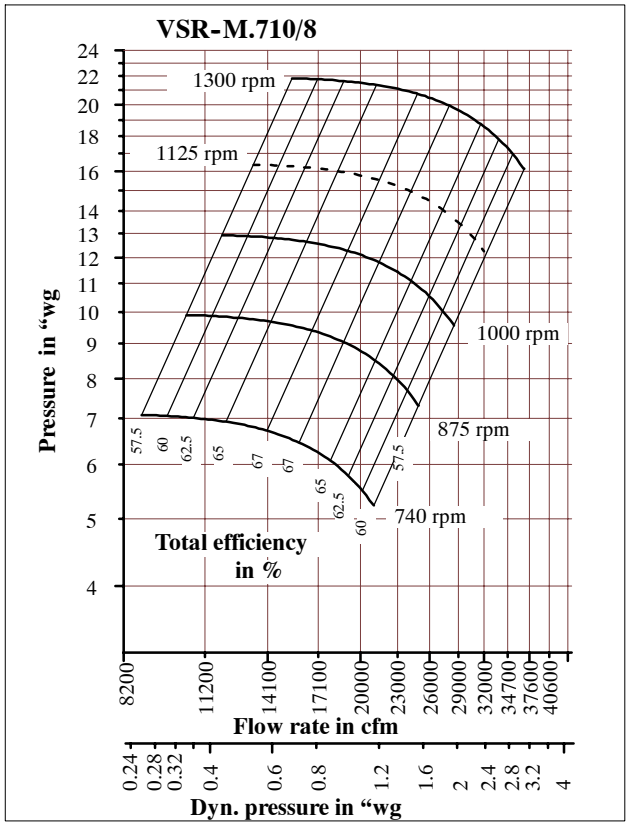

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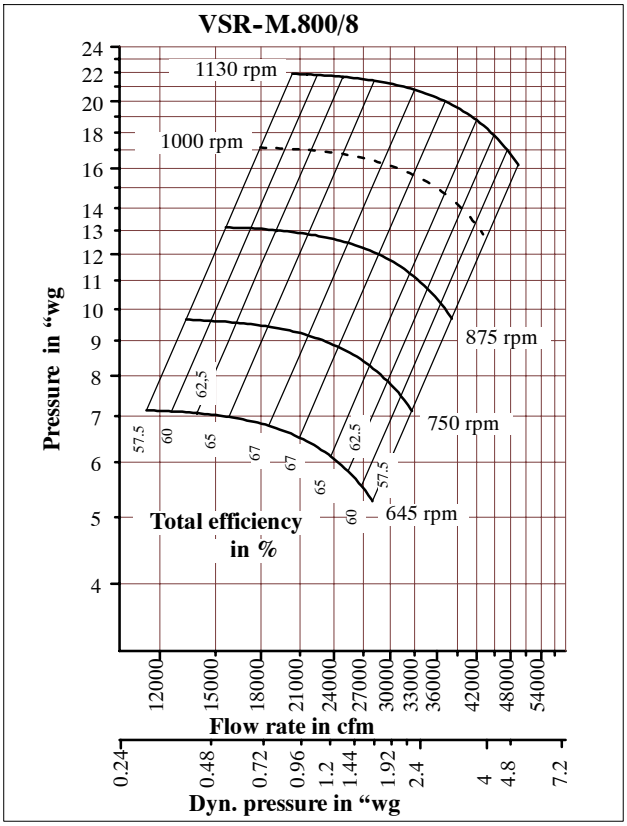
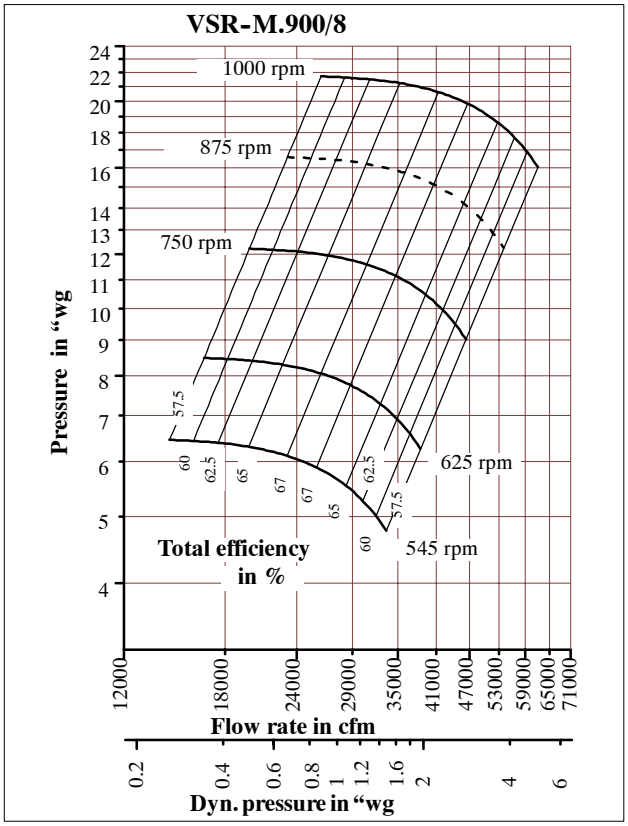
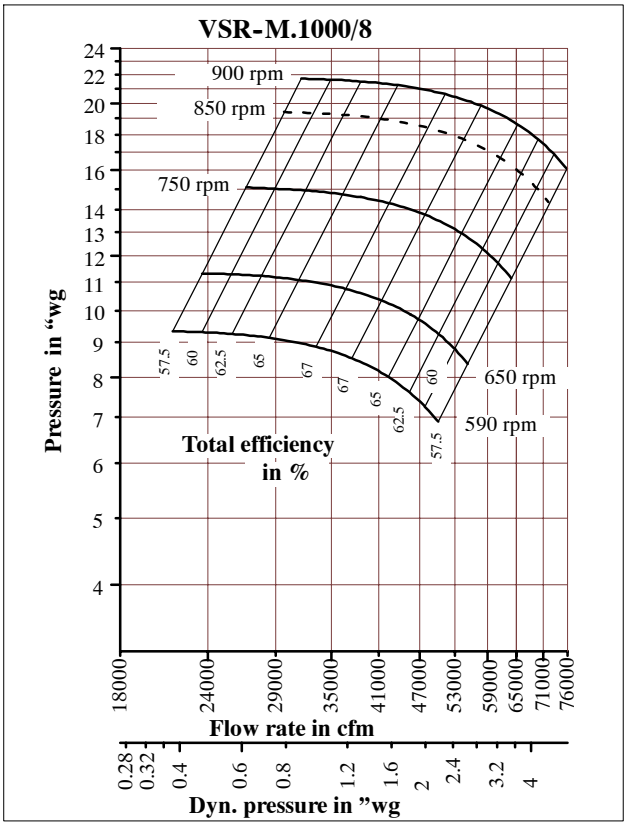
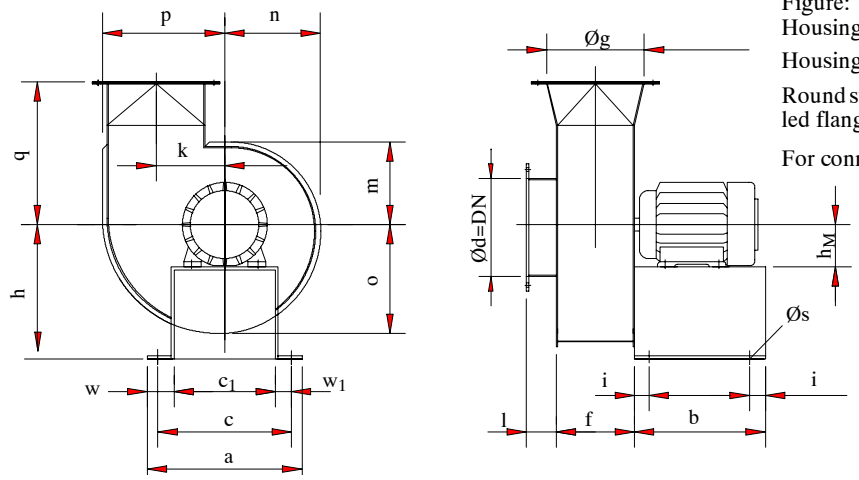






Medium-pressure Conveying Fans Type VSR-M.

Dimensions type MM up to size 280



Tolerances according to DIN ISO 2768-cL

Figure:
Housing position R 360

Housings are continuously rotatable.

Round suction and discharge sockets with drilled flange.

For connection dimensions refer to last page.

Size VSR-MM	Max. motor size	Dimensions of support [”] b	a	c_1	c	w	w_1	h_M	i	Øs	h
125 *	90 L	10.24	11.42	7.87	9.84	1.77	0.98	2.8	0.98	0.55	10.67
125/14 *	90 L	10.24	11.42	7.87	9.84	1.77	0.98	3.15	0.98	0.55	11.02
160/9 *	90 L	10.24	11.42	7.87	9.84	1.77	0.98	3.15	0.98	0.55	11.02
160/11	90 L	10.24	11.42	7.87	9.84	1.77	0.98	3.54	0.98	0.55	11.42■
180/8 *	90 L	10.24	11.42	7.87	9.84	1.77	0.98	3.54	0.98	0.55	13.78
180/10 *	90 L	10.24	11.42	7.87	9.84	1.77	0.98	3.54	0.98	0.55	13.78
200/8 *	112 M	13.39	14.17	10.63	12.6	1.77	0.98	3.94	0.98	0.55	14.17
200/10 *	112 M	13.39	14.17	10.63	12.6	1.77	0.98	4.41	0.98	0.55	14.65
224/7	112 M	13.39	14.17	10.63	12.6	1.77	0.98	4.41	0.98	0.55	14.65■
224/11 ▼	132 M	16.54	15.75	12.2	14.17	1.77	0.98	5.2	0.98	0.55	18.11
224/15 ▼	160 M	20.47	19.69	15.28	18.11	2.2	1.42	6.3	0.98	0.55	19.69
250/5 *	112 M	13.39	14.17	10.63	12.6	1.77	0.98	4.41	0.98	0.55	16.22■
250/6 R *	112 M	13.39	14.17	10.63	12.6	1.77	0.98	3.94	0.98	0.55	15.75■
250/6 *	132 M	16.54	15.75	12.2	14.17	1.77	0.98	5.2	0.98	0.55	18.11
250/8 *	132 M	16.54	15.75	12.2	14.17	1.77	0.98	5.2	0.98	0.55	18.11
250/12 ▼	160 L	23.62	19.69	15.75	18.11	1.97	1.18	6.3	0.98	0.55	22.05
280/5	132 M	16.54	16.14	12.2	14.57	1.97	1.18	5.2	0.98	0.55	22.05
280/6 ▼	160 M	20.47	20.47	15.75	18.5	2.36	1.38	6.3	1.97	0.71	22.83
280/7 R	132 M	16.54	16.14	12.2	14.57	1.97	1.18	5.2	0.98	0.55	22.05
280/8 ▼	160 L	20.47	19.69	14.96	17.72	2.36	1.38	6.3	1.97	0.71	22.83

for nominal width **Ød - f - Øg** and dimensions of housing **k - q** please see next page

* Max. downward turn to position R/L 165.

■ In position R/L 270 housing is sagging since h < p.

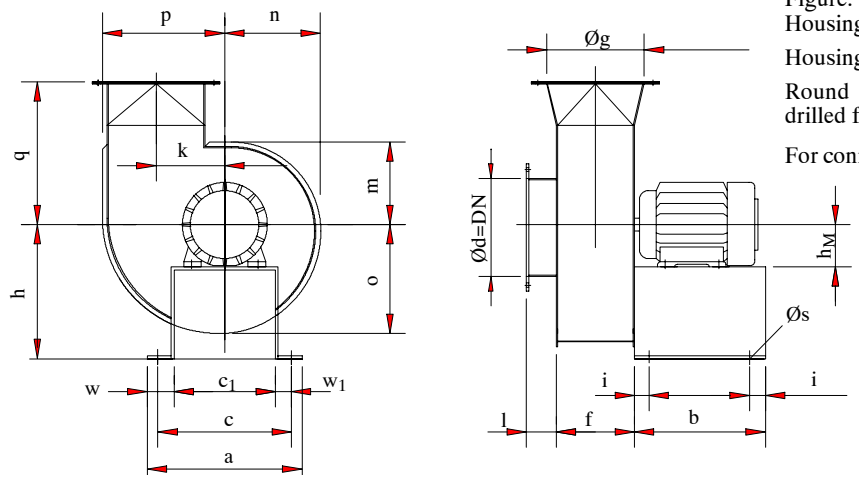
▼ Housings are **not** rotatable

Housing positions (View onto motor side), other positions on request

R 360 R 90 R 270 L 360 L 90 L 270

Medium-pressure Conveying Fans Type VSR-M.

Dimensions type MM up to size 280



Tolerances according to DIN ISO 2768-cL

Figure:
Housing position R 360

Housings are continuously rotatable.

Round suction and discharge sockets with drilled flange.

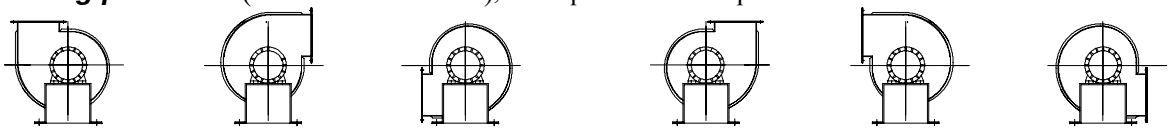
For connection dimensions refer to last page.

Size VSR-MM	Max. motor size		Nominal widths [”]			Dimensions of housing [”]						
			Ød	f	Øg	k	m	n	o	p	q	l
125 *	90 L		4.92	3.94	4.92	5.83	6.85	7.48	8.11	8.74	10.83	2.36
125/14 *	90 L		4.92	3.94	4.92	7.24	8.27	8.9	9.53	10.16	12.2	2.36
160/9 *	90 L		6.3	5.12	6.3	6.61	8.27	8.9	9.53	10.16	12.99	2.36
160/11	90 L		6.3	5.12	6.3	8.19	8.9	9.84	10.79	11.73	13.58	2.36
180/8 *	90 L		7.09	5.71	7.09	9.21	9.84	10.9	12.05	13.15	15.35	2.36
180/10 *	90 L		7.09	5.71	7.09	9.21	9.84	10.9	12.05	13.15	15.35	2.36
200/8 *	112 M		7.87	6.3	7.87	8.9	9.92	11.02	12.13	13.23	15.75	2.36
200/10 *	112 M		7.87	6.3	7.87	8.9	9.92	11.02	12.13	13.23	15.75	2.36
224/7	112 M	for dimensions of support please see previous page	8.82	7.09	8.82	10.51	10.87	12.36	13.86	15.35	16.93	2.36
224/11 ▼	132 M		8.82	7.2	8.82	13.23	13.78	15.59	17.4	19.21	19.69	2.36
224/15 ▼	160 M		8.9	7.2	8.7	14.37	13.78	15.59	17.4	19.21	19.69	2.36
250/5 *	112 M		9.84	7.87	9.84	11.81	11.26	13.23	15.2	17.17	17.72	3.15
250/6 R *	112 M		9.84	7.87	9.84	11.81	11.26	13.23	15.2	17.17	17.72	3.15
250/6 *	132 M		9.84	7.87	9.84	11.81	11.26	13.23	15.2	17.17	17.72	3.15
250/8 *	132 M		9.84	7.87	9.84	11.81	11.26	13.23	15.2	17.17	17.72	3.15
250/12 ▼	160 L		9.84	8.07	9.84	15.35	14.76	16.73	18.7	20.67	21.06	3.15
280/5	132 M		11.02	8.82	11.02	13.26	12.36	14.65	16.93	19.21	19.69	3.15
280/6 ▼	160 M		11.02	9.02	11.02	13.31	12.36	14.65	16.93	19.21	19.69	3.15
280/7 R	132 M		11.02	8.82	11.02	13.26	12.36	14.65	16.93	19.21	19.69	3.15
280/8 ▼	160 L		11.02	9.02	11.02	13.31	12.36	14.65	16.93	19.21	19.69	3.15

* Max. downward turn to position R/L 165.

▼ Housings are **not** rotatable

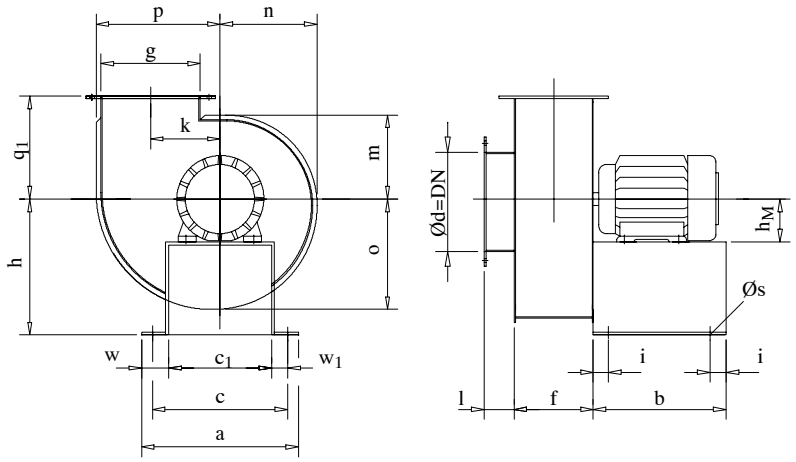
Housing positions (View onto motor side), other positions on request



R 360 R 90 R 270 L 360 L 90 L 270

Medium-pressure Conveying Fans Type VSR-M.

Dimensions type MM from size 315



Tolerances according to DIN ISO 2768-cL

Figure:
Housing position R 360

Up to size 355 housings are continuously rotatable. Housings of larger sizes are not rotatable.

Round suction socket with drilled flange, square discharge socket with drilled angular frame.

For connection dimensions refer to last page.

Size VSR-MM	Max. motor size	Dimensions of support [”] b	a	c_1	c	w	w_1	h_M	i	Øs	h
315/5 R	132 M	16.54	16.14	12.2	14.57	1.97	1.18	5.2	0.98	0.55	22.05
315/8 R ▼	180 M	23.62	19.69	15.75	18.11	1.97	1.18	7.09	0.98	0.55	22.84
315/8	132 M	16.54	16.14	12.2	14.57	1.97	1.18	4.41	0.98	0.55	21.26■
315/10	132 M	16.54	16.14	12.2	14.57	1.97	1.18	5.2	0.98	0.55	22.05■
355/8	132 M	16.54	16.14	12.2	14.57	1.97	1.18	5.2	0.98	0.55	22.05■
355/10	180 L	23.62	19.69	15.75	18.11	1.97	1.18	6.3	0.98	0.55	27.56
400/6 ▼	180 L	23.62	19.69	15.75	18.11	1.97	1.18	5.2	0.98	0.55	24.46■
400/7 ▼	180 L	23.62	19.69	15.75	18.11	1.97	1.18	6.3	0.98	0.55	27.56
400/8 ▼	180 L	23.62	19.69	15.75	18.11	1.97	1.18	6.3	0.98	0.55	27.56
400/10 ▼	180 L	23.62	19.69	15.75	18.11	1.97	1.18	7.09	0.98	0.55	28.35■
450/7 ▼	180 L	23.62	19.69	15.75	18.11	1.97	1.18	7.09	0.98	0.55	28.35■
450/8 ▼	180 L	23.62	19.69	15.75	18.11	1.97	1.18	7.09	0.98	0.55	28.35■
450/10 ▼	225 M	27.56	24.12	19.69	22.44	2.36	1.38	7.87	1.97	0.71	31.5■
500/7 ▼	225 M	27.56	24.12	19.69	22.44	2.36	1.38	7.87	1.97	0.71	31.5■
500/8 ▼	225 M	27.56	24.12	19.69	22.44	2.36	1.38	7.87	1.97	0.71	31.5■
500/9 ▼	250 M	29.53	26.38	21.65	24.12	2.36	1.38	8.86	1.97	0.71	33.46■
500/10 ▼	250 M	29.53	26.38	21.65	24.12	2.36	1.38	8.86	1.97	0.71	33.46■

for nominal width **Ød - f - Øg** and dimensions of housing **k - q** please see next page

■ In position R/L 270 housing is sagging since h < p.

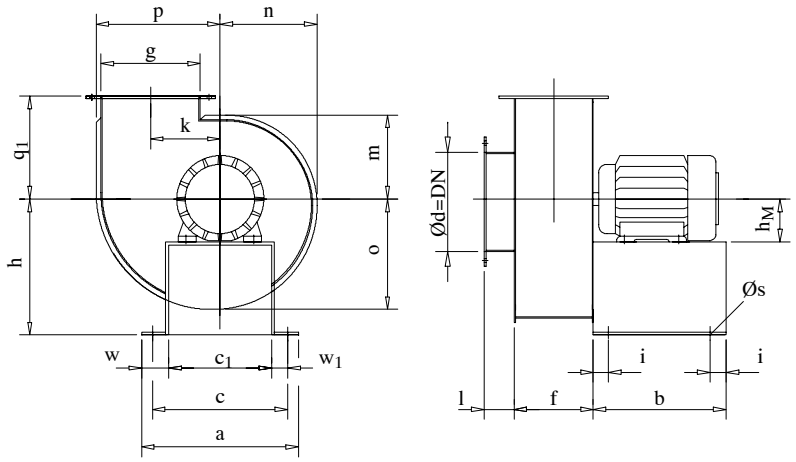
▼ Housings are **not** rotatable

Housing positions (View onto motor side), other positions on request

R 360 R 90 R 270 L 360 L 90 L 270

Medium-pressure Conveying Fans Type VSR-M.

Dimensions type MM from size 315



Tolerances according to DIN ISO 2768-cL

Figure:
Housing position R 360

Up to size 355 housings are continuously rotatable. Housings of larger sizes are not rotatable.

Round suction socket with drilled flange, square discharge socket with drilled angular frame.

For connection dimensions refer to last page.

Size VSR-MM	Max. motor size		Nominal widths [”]			Dimensions of housing [”]						
			Ød	f	g	k	m	n	o	p	q_1	l
315/5 R	132 M		12.4	9.84	12.4	14.76	13.78	16.3	18.82	21.34	14.96	3.15
315/8 R ▼	180 M		12.4	10.08	12.68	14.84	13.78	16.3	18.82	21.34	14.96	3.15
315/8	132 M		12.4	9.84	12.4	14.76	13.78	16.3	18.82	21.34	14.96	3.15
315/10	132 M		12.4	9.84	12.4	15.83	15.35	17.72	20.08	22.44	16.93	3.15
355/8	132 M		13.98	280	13.98	16.7	15.31	18.23	21.14	24.06	16.93	3.15
355/10	180 L		13.98	280	13.98	17.44	16.54	19.29	22.05	24.8	18.11	3.15
400/6 ▼	180 L	for dimensions of support please see previous page	15.75	12.4	15.75	18.7	17.09	20.39	23.7	27.01	18.9	3.15
400/7 ▼	180 L		15.75	12.4	15.75	18.7	17.09	20.39	23.7	27.01	18.9	3.15
400/8 ▼	180 L		15.75	12.4	15.75	18.7	17.09	20.39	23.7	27.01	18.9	3.15
400/10 ▼	180 L		15.75	12.4	15.75	20.16	18.7	21.93	25.15	28.39	20.47	3.15
450/7 ▼	180 L		17.72	13.98	17.72	21.26	19.17	22.95	26.73	30.51	20.47	3.15
450/8 ▼	180 L		17.72	13.98	17.72	21.26	19.17	22.95	26.73	30.51	20.47	3.15
450/10 ▼	225 M		17.72	13.98	17.72	22.72	20.28	24.21	28.15	32.09	21.65	3.15
500/7 ▼	225 M		19.69	15.75	19.69	23.46	21.3	26.53	29.65	33.82	22.83	3.15
500/8 ▼	225 M		19.69	15.75	19.69	23.46	21.3	26.53	29.65	33.82	22.83	3.15
500/9 ▼	250 M		19.69	15.75	19.69	24.29	22.44	26.53	30.63	34.72	23.82	3.15
500/10 ▼	250 M		19.69	15.75	19.69	24.29	22.44	26.53	30.63	34.72	23.82	3.15

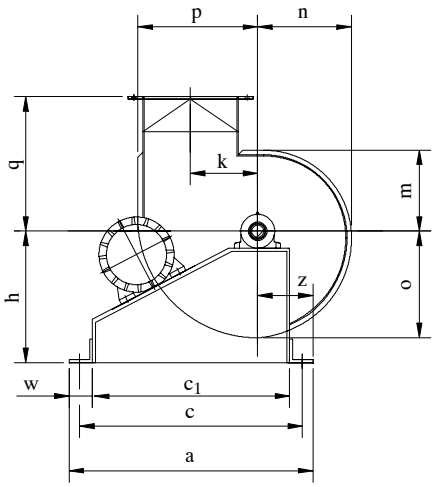
- In position R/L 270 housing is sagging since h < p.
- ▼ Housings are **not** rotatable

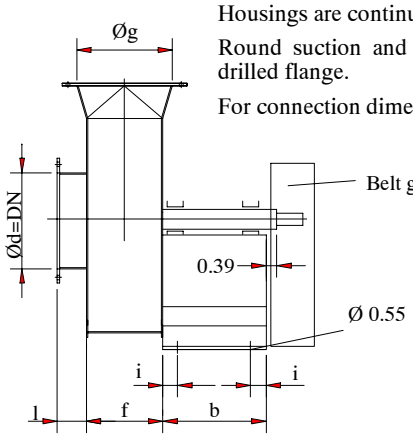
Housing positions (View onto motor side), other positions on request

R 360 R 90 R 270 L 360 L 90 L 270

Medium-pressure Conveying Fans Type VSR-M.

Dimensions type MKM up to Size 280





Tolerances according to DIN ISO 2768-cL

Figure:
Housing position R 360

Housings are continuously rotatable.

Round suction and discharge sockets with drilled flange.

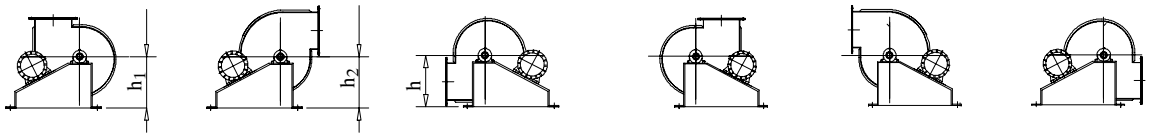
For connection dimensions refer to last page.

Size VSR-MKM	Max. motor size	Dimensions of support [”] b	a	c_1	c	w	z	i	Heights of axle [”] h	h_1	h_2	
200/8 *	112 M	16.54	33.07	29.53	31.5	1.77	165	1.97	15.75	15.75	15.75	for nominal width **Ød - f - Øg** and dimensions of housing **k - q** please see next page
250/8 *	112 M	16.54	33.07	29.53	31.5	1.77	165	1.97	15.75■	15.75	15.75	
	160 M	20.47	39.37	35.43	37.8	1.97	230	1.97	15.75■	15.75	15.75	
	112 M	16.54	33.07	29.53	31.5	1.77	165	1.97	22.05	22.05	22.05	
280/8 *	132 M	20.47	39.37	35.43	37.8	1.97	230	1.97	21.65	21.65	21.65	
*****	160 M	25.59	43.31	39.37	41.73	1.97	230	2.95	22.05	22.05	22.05	

* Max. downward turn to position R/L 165.

■ In position R/L 270 housing is sagging since h < p.

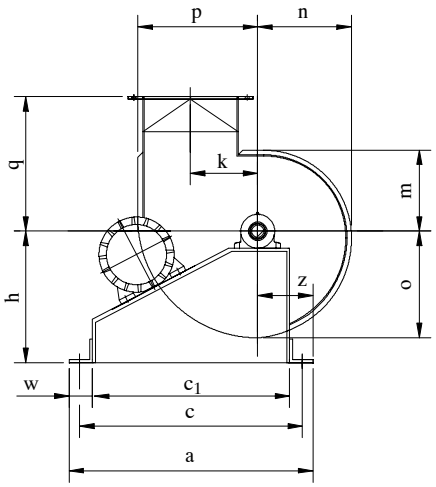
Housing positions (View onto motor side), other positions on request

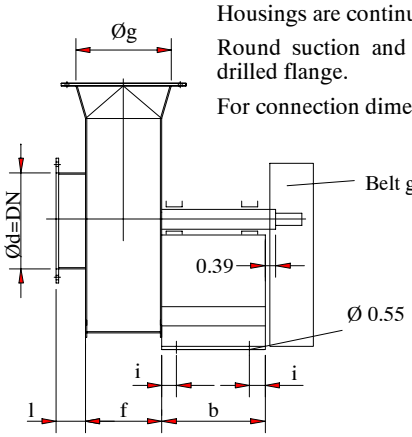


R 360 R 90 R 270 L 360 L 90 L 270

Medium-pressure Conveying Fans Type VSR-M.

Dimensions type MKM up to Size 280





Tolerances according to DIN ISO 2768-cL

Figure:
Housing position R 360

Housings are continuously rotatable.

Round suction and discharge sockets with drilled flange.

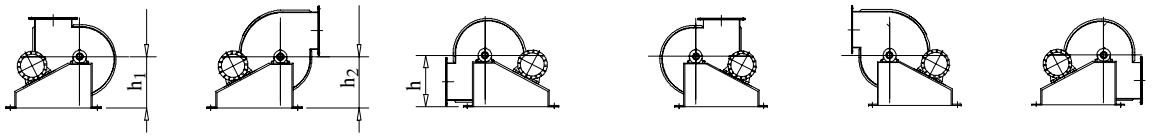
For connection dimensions refer to last page.

Size VSR-MKM	Max. motor size	Nominal widths			Dimensions of housing							
		Ød	f	Øg	k	m	n	o	p	q	l	
200/8 *	112 M	7.87	6.3	7.87	8.9	9.92	11.02	12.13	13.23	15.75	2.36	for dimensions of support and heights of axle please see previous page
250/8 *	112 M	9.84	7.87	9.84	11.81	11.26	13.23	15.2	17.17	17.72	3.15	
	160 M	9.84	7.87	9.84	11.81	11.26	13.23	15.2	17.17	17.72	3.15	
	112 M	11.02	8.82	11.02	13.27	12.36	14.65	16.93	19.22	19.69	3.15	
280/8 *	132 M	11.02	8.82	11.02	13.27	12.36	14.65	16.93	19.22	19.69	3.15	
*	160 M	11.02	8.82	11.02	13.27	12.36	14.65	16.93	19.22	19.69	3.15	

* Max. downward turn to position R/L 165.

■ In position R/L 270 housing is sagging since h < p.

Housing positions (View onto motor side), other positions on request

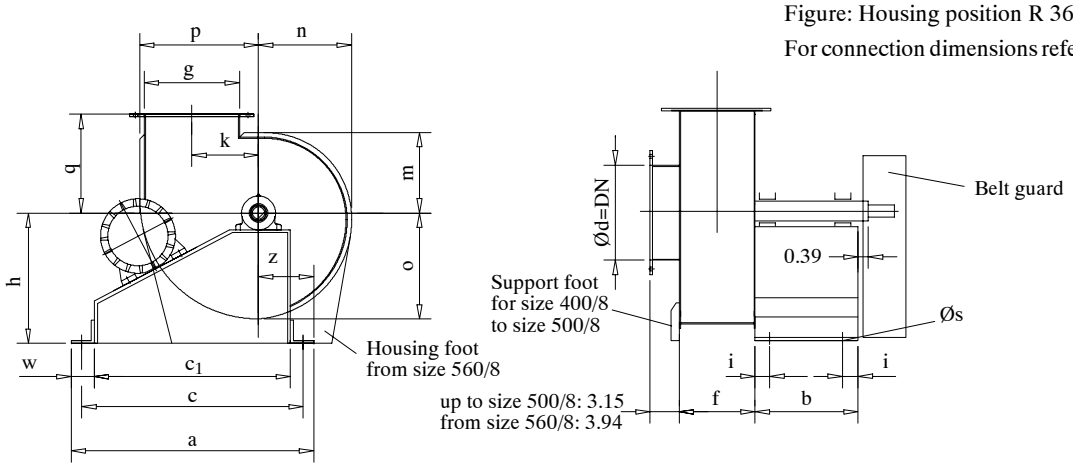


R 360 R 90 R 270 L 360 L 90 L 270

Medium-pressure Conveying Fans Type VSR-M.

Dimensions Type MKM from size 315

Tolerances according to DIN ISO 2768-cL
Figure: Housing position R 360
For connection dimensions refer to last page.



Size VSR-MKM	Max. motor size	Dimensions of support [”] b	a	c_1	c	w	z	i	Øs	Height of axle [”] h	h_1	h_2
	112 M	16.53	33.07	29.52	31.5	1.77	6.5	1.97	0.55	22.04	22.04	22.04
315/8 *	132 M	20.47	39.37	35.43	37.8	1.97	9.06	1.97	0.55	22.04	22.04	22.04
*	180 M	25.59	43.3	39.37	41.73	1.97	9.06	2.95	0.55	22.04	22.04	22.04
	112 M	16.53	33.07	29.52	31.5	1.77	6.5	1.97	0.55	22.04■	22.04	22.04
355/8 *	132 M	20.47	39.37	35.43	37.8	1.97	9.06	1.97	0.55	22.04■	22.04	22.04
*	180 M	25.59	43.3	39.37	41.73	1.97	9.06	2.95	0.55	22.04■	22.04	22.04
	132 M	20.47	39.37	35.43	37.8	1.97	9.06	1.97	0.55	27.95	27.95	27.95
400/8	180 M	25.59	43.3	39.37	41.73	1.97	9.06	2.95	0.55	27.95	27.95	27.95
	225 S	31.5	48.82	44.09	46.85	2.36	9.25	3.94	0.71	27.95	27.95	27.95
450/8	180 L	25.59	43.3	39.37	41.73	1.97	9.06	2.95	0.55	35.43	27.95	27.95
	225 S	31.5	48.82	44.09	46.85	2.36	9.25	3.94	0.71	35.43	27.95	27.95
500/8	180 L	25.59	43.3	39.37	41.73	1.97	9.06	2.95	0.55	35.43	27.95	27.95
	225 M	31.5	48.82	44.09	46.85	2.36	9.25	3.94	0.71	35.43	27.95	27.95
	180 L	25.59	43.3	39.37	41.73	1.97	9.06	2.95	0.55	44.09	35.43	35.43
560/8	225 M	31.5	48.82	44.09	46.85	2.36	9.25	3.94	0.71	44.09	35.43	35.43
	250 M	41.34	48.82	44.09	46.85	2.36	9.25	3.94	0.71	44.09	35.43	35.43
	180 L	25.59	43.3	39.37	41.73	1.97	9.06	2.95	0.55	44.09	44.09	35.43
630/8	225 M	31.5	48.82	44.09	46.85	2.36	9.25	3.94	0.71	44.09	44.09	35.43
	280 S	41.34	48.82	44.09	46.85	2.36	9.25	3.94	0.71	44.09	44.09	35.43
710/8	280 M	41.34	48.82	44.09	46.85	2.36	9.25	3.94	0.71	55.12	44.09	44.09
800/8	280 M	41.34	48.82	44.09	46.85	2.36	9.25	3.94	0.71	55.12	55.12	44.09
900/8	on request											
1000/8	315 S	45.28	54.17	59.06	61.81	2.56	12.4	3.94	0.87	62.99		

for nominal width **Ød - f - g** and dimensions of housing **k - q** please see next page

* Max. downward turn to position R/L 165.

■ In position R/L 270 housing is sagging since h < p.

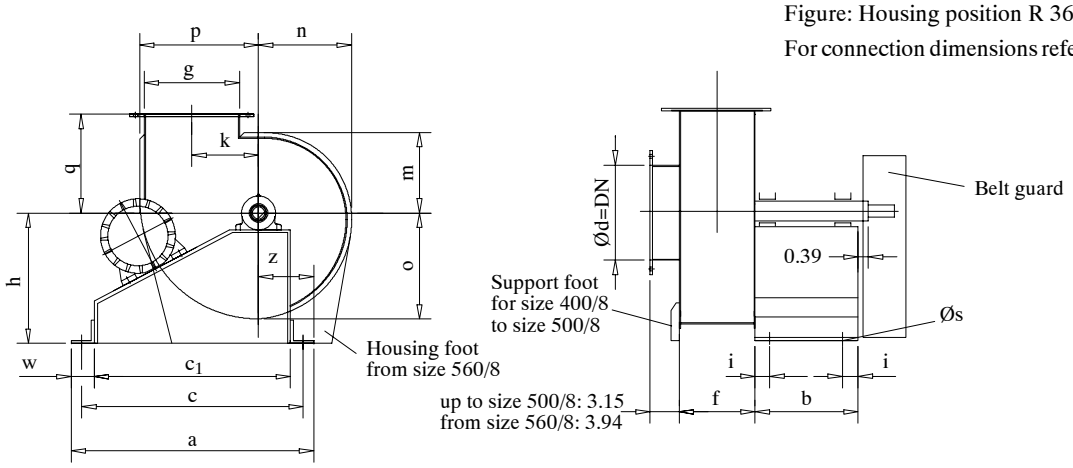
Up to size 355 housings are continuously rotatable. Housings of larger sizes are not rotatable.
Round suction socket with drilled flange, square discharge socket with drilled angular frame.

Housing positions (ref previous page)

Medium-pressure Conveying Fans Type VSR-M.

Dimensions Type MKM from size 315

Tolerances according to DIN ISO 2768-cL
Figure: Housing position R 360
For connection dimensions refer to last page.



Size VSR-MKM	Max. motor size		Nominal widths Ød	f	g	Dimensions of housing k	m	n	o	p	q
	112 M		12.4	9.84	12.4	14.72	13.78	16.3	18.82	21.34	14.96
315/8 *	132 M		12.4	9.84	12.4	14.72	13.78	16.3	18.82	21.34	14.96
*	180 M		12.4	9.84	12.4	14.72	13.78	16.3	18.82	21.34	14.96
	112 M		13.98	11.02	13.98	16.69	15.31	18.23	21.14	24.06	16.93
355/8 *	132 M		13.98	11.02	13.98	16.69	15.31	18.23	21.14	24.06	16.93
*	180 M		13.98	11.02	13.98	16.69	15.31	18.23	21.14	24.06	16.93
	132 M		15.75	12.4	15.75	18.7	17.09	20.39	23.7	27.01	18.9
400/8	180 M		15.75	12.4	15.75	18.7	17.09	20.39	23.7	27.01	18.9
	225 S		15.75	12.4	15.75	18.7	17.09	20.39	23.7	27.01	18.9
450/8	180 L	for dimensions of support and heights of axle please see previous page	17.72	13.98	17.72	21.26	19.17	22.95	26.73	30.51	20.47
	225 S		17.72	13.98	17.72	21.26	19.17	22.95	26.73	30.51	20.47
500/8	180 L		19.69	15.75	19.69	23.46	21.3	25.47	29.65	33.82	22.83
	225 M		19.69	15.75	19.69	23.46	21.3	25.47	29.65	33.82	22.83
	180 L		22.05	17.72	22.05	26.1	23.82	28.46	33.11	37.76	25.2
560/8	225 M		22.05	17.72	22.05	26.1	23.82	28.46	33.11	37.76	25.2
	250 M		22.05	17.72	22.05	26.1	23.82	28.46	33.11	37.76	25.2
	180 L		24.8	19.69	24.8	29.67	26.73	32.01	37.28	42.56	28.35
630/8	225 M		24.8	19.69	24.8	29.67	26.73	32.01	37.28	42.56	28.35
	280 S		24.8	19.69	24.8	29.67	26.73	32.01	37.28	42.56	28.35
710/8	280 M		27.95	22.05	27.95	33.35	30.31	36.22	42.13	48.03	32.68
800/8	280 M		31.5	24.8	31.5	37.17	33.46	40.16	46.86	53.54	36.22
900/8	on request		on request								
1000/8	315 S		39.37	31.5	39.37	45.31	41.34	49.21	57.09	65.51	44.49

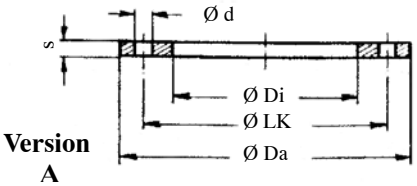
* Max. downward turn to position R/L 165.

■ In position R/L 270 housing is sagging since h < p.

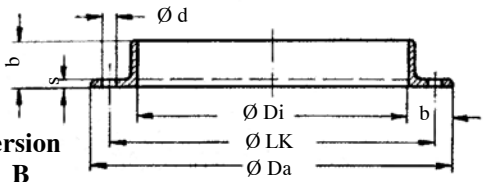
Up to size 355 housings are continuously rotatable. Housings of larger sizes are not rotatable.
Round suction socket with drilled flange, square discharge socket with drilled angular frame.

Medium-pressure Conveying Fans Type VSR-M.

Dimensions of flanges



Version A



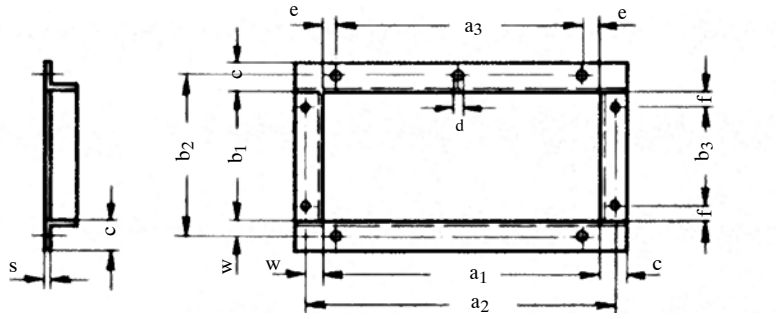
Version B

NW Ø	Ø Di	Ø Da	Ø LK	Ø d	Bolts	b	s	Version
125	5.16	6.73	6.1	0.28	4 x M6	-	0.16	**A** meets DIN 24 154 page 2 requirements
140	5.75	7.72	6.93	0.28	6 x M6			
160	6.46	8.43	7.64					
180	7.2	9.17	8.39				0.2	
200	8.07	10.04	9.25					
224	9.02	10.98	10.2	0.37	6 x M8			
250	9.96	12.05	11.26					
280	11.34	13.7	12.68	0.37	8 x M8			
315	12.68	15.04	14.02					
355	14.21	16.57	15.55					
400	15.91	18.27	17.24	0.37	12 x M8			
450	17.83	20.2	19.17	0.45	12 x M10			
500	19.96	22.3	21.3					
560	22.4	25.16	23.82	0.45	16 x M10	1.38	0.16	**B** meets DIN 24 155 page 2 requirements
630	25.11	27.87	26.54					
710	28.15	30.91	29.57					
800	31.54	34.29	32.95	0.45	24 x M10			

Dimensions of angular frames

up to size 500
meets DIN 24159 page 3 requirements

from size 560
meets DIN 24159 page 4 requirements



Fan type	Frame NW	a_1	a_2	e	Hole spacing a_3	b_1	b_2	f	Hole spacing b_3	Ø d	w	Profile c x s
125	4.92 x 3.94	5.16	6.34	0.81	1 x 3.54	4.13	5.31	0.3	1 x 3.54	0.28	0.59	0.98 x 0.12
140	5.51 x 4.41	5.75	6.93	1.1		4.61	5.79	0.53				
160	6.3 x 4.92	6.46	7.64	1.46		5.16	6.34	0.81				
180	7.09 x 5.51	7.2	8.39	1.83		5.75	6.93	1.1				
200	7.87 x 6.3	8.07	9.25	0.49	2 x 3.54	6.46	7.64	1.46				
224	8.82 x 7.09	9.02	10.2	0.96		7.2	8.39	1.83				
250	9.84 x 7.87	10.08	11.26	1.5		8.07	9.25	0.49	2 x 3.54			
280	11.02 x 8.82	11.34	12.68	1.73	2 x 3.94	9.02	10.35	0.57	2 x 3.94	0.37	0.67	1.18 x 0.16
315	12.4 x 9.84	12.68	14.02	0.43	3 x 3.94	10.08	11.42	1.1				
355	355 x 11.02	14.21	15.55	1.2		11.34	12.68	1.73				
400	15.75 x 12.4	15.91	17.24	2.05		12.68	14.02	0.43	3 x 3.94			
450	17.71 x 13.98	17.83	19.17	1.04	3 x 3.94	14.21	15.55	1.2		0.45		
500	19.69 x 15.75	19.96	21.3	2.11		15.91	17.24	2.05				
560	22.05 x 17.72	22.4	24.76	1.75	3 x 6.3	17.83	20.2	2.62	2 x 6.3	0.55	1.18	1.97 x 0.2
630	24.8 x 19.69	25.12	27.48	3.11		19.96	22.32	3.68				
710	27.95 x 22.05	28.15	30.51	1.48	4 x 6.3	22.4	24.76	1.75	3 x 6.3			
800	31.5 x 24.8	31.54	34.29	3.96	3 x 7.87	25.12	27.87	0.75	3 x 7.87	0.55	1.38	2.36 x 0.24