

AERZEN

POSITIVE DISPLACEMENT BLOWERS

for conveying of air and neutral gases for high vacuum with
pre-inlet cooling

series GMa / GMb / GMc . . . mHV

theoretical nominal suction volume flow from 250 m³/h to 61.000 m³/h

VACUUM with pre-inlet cooling



AERZEN

**AERZENER MASCHINENFABRIK
GMBH**

G1-096 | 00 | EN

1000 1.2005

Aerzen Vacuum-Blowers

Aerzen Positive Displacement Blowers (type Roots) have been manufactured since 1868 and today are highly developed standard production machines designed and adapted to find use in a wide variety of applications.

Fields of application

Conveying of air and neutral gases.
Vacuum from 10 mbar to approx. 300 mbar for mHV-blowers
available in 11 sizes for theoretical nominal suction volume flow from 250 to 61.000 m³/h.
The max. admissible differential pressure depends on the thermal load.
(See performance diagrams / chart - page 3)

Design

Housing with an additional third socket on the inlet side for the pre-inlet cooling. Due to the O-ring seals the housing flanges are vacuum-tight, air-cooled. Splash oil lubrication.

Shaft sealings

Conveying chamber by combined oil slinger- piston ring labyrinth seals. Driving shaft by double radial seal rings with grease barrier.

Direction of flow (viewed onto driving shaft)
vertical to the bottom

Drive

Direct coupling with motor or via spur gear, narrow v-belt drive restricted to the smaller pressure differentials.

Mechanical load

<u>directly coupled</u> - profile 10.1	up to 12.5 mHV up to 900 mbar
profile 13.f7	up to 17.15 mHV up to 800 mbar
profile 18.17	up to 20.21 mHV up to 600 mbar

with belt drive

applicable to all sizes up to a load of 250 mbar.

Special material

Designs of the housing parts in nodular graphite cast iron EN-GJS-400-18U-LT (GGG 40.3)



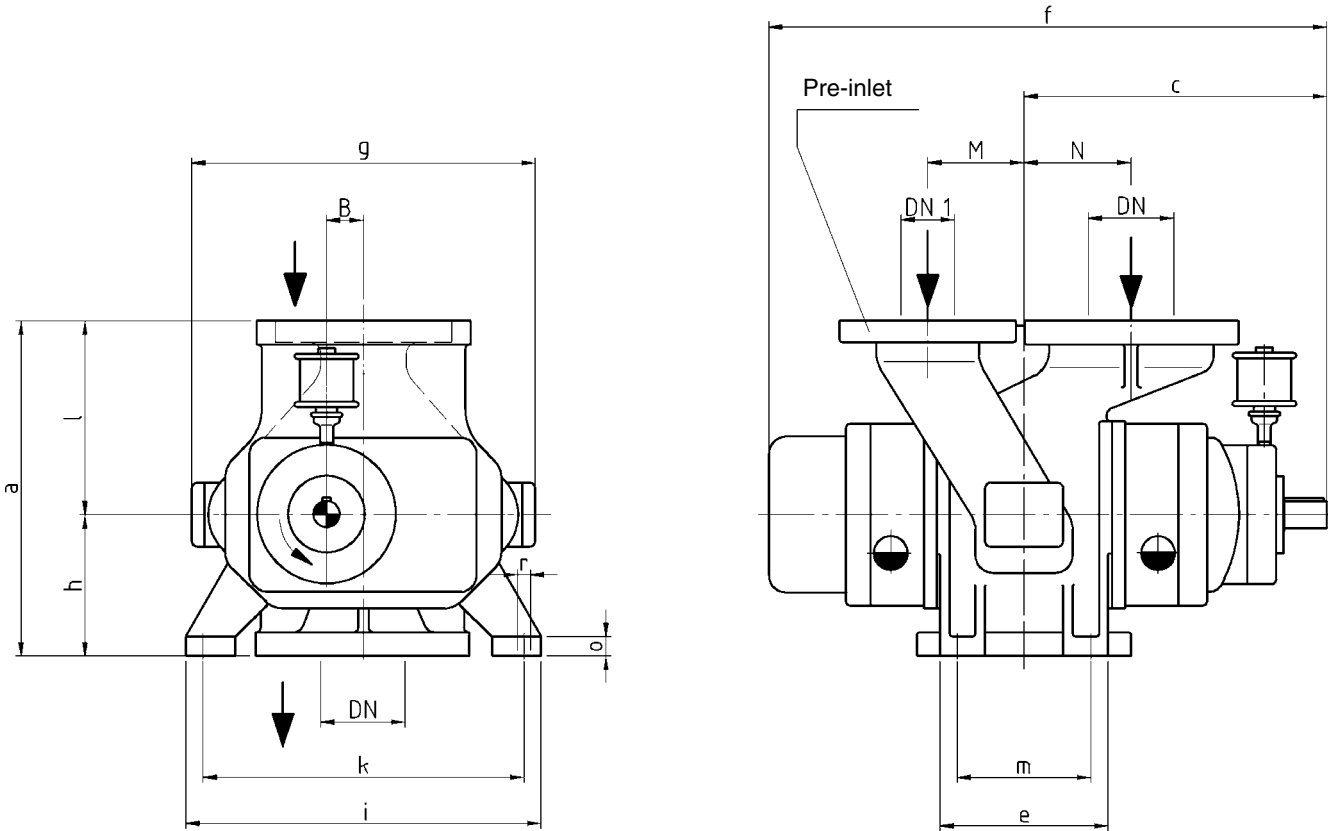
Operating- and Performance Diagrams

for the operation with 2 different speeds

Theoretic suction volume S_{th} [m ³ /h]	Blower size	Speed [1/min]	Drawing-no. Performance diagram
250 / 330	GMa 10.1 mHV	3000 / 4000	4TG-3524
500 / 340	GMa 11.3 mHV	3000 / 2000	4TG-3340
1000 / 680	GMa 12.5 mHV	3000 / 2000	4TG-3341
2000 / 1360	GMa 13.f7 mHV	3000 / 2000	4TG-3446
3250 / 2210	GMb 14.9 mHV	2500 / 1700	4TG-3451
4980 / 3240	GMb 15.11 mHV	2000 / 1300	4TG-3542
9800 / 6530	GMb 16.f13 mHV	1800 / 1200	4TG-3543
16000 / 10700	GMc 17.15 mHV	1500 / 1000	4TG-3544
19700 / 16400	GMc 18.17 mHV	900 / 650	4TG-3545
29700 / 19800	GMa 19.19 mHV	750 / 500	4TG-3546
61200 / 45900	GMb 20.21 mHV	600 / 450	4TG-3547



Dimensions Blower-Stage mHV



Type of construction	a	c	e	f	g	h	i	k	l	m	o	r	B	M	N	DN	DN 1	Weight approx. kgs
GMa 10.1	313	283	157	529	321	132	332	300	181	125	22	M12	34	90	100	80	50	95
GMa 11.3	370	324	200	604	377	160	390	350	210	150	24	M16	426	120	100	100	50	160
GMa 12.5	410	380	260	705	494	180	440	400	230	210	24	M16	533	125	115	100	80	225
GMa 13.f7	450	423	330	806	565	200	570	510	250	270	26	M20	675	160	130	150	100	310
GMb 14.9	550	510	350	980	666	250	652	600	300	290	26	M20	84	220	125	200*	100	500
GMb 15.11	680	610	490	1143	778	315	800	720	365	410	28	M20	106	250	200	250*	150	720
GMb 16.f13	760	717	670	1337	1058	355	910	830	405	525	28	M24	135	300	230	300*	200*	1230
GMc 17.15	1000	858	855	1640	1233	500	930	810	500	725	30	M30	1675	290	260	350*	200*	2180
GMb 18.17	1120	1005	1120	1955	1440	560	1160	1050	560	900	34	M30	210	480	320	500*	300*	3700
GMb 19.19	1420		1270		1954	710	1320	1200	710	1010	36	M30	264	500	400	600*	400*	6220

Mechanical loading capacity acc. to sheet 4 TG - 3522 and 4 TG - 3523

Socket flanges drilled acc. to DIN 2533 / * = DIN 2532