

SERIES R - MD MOR & GOR

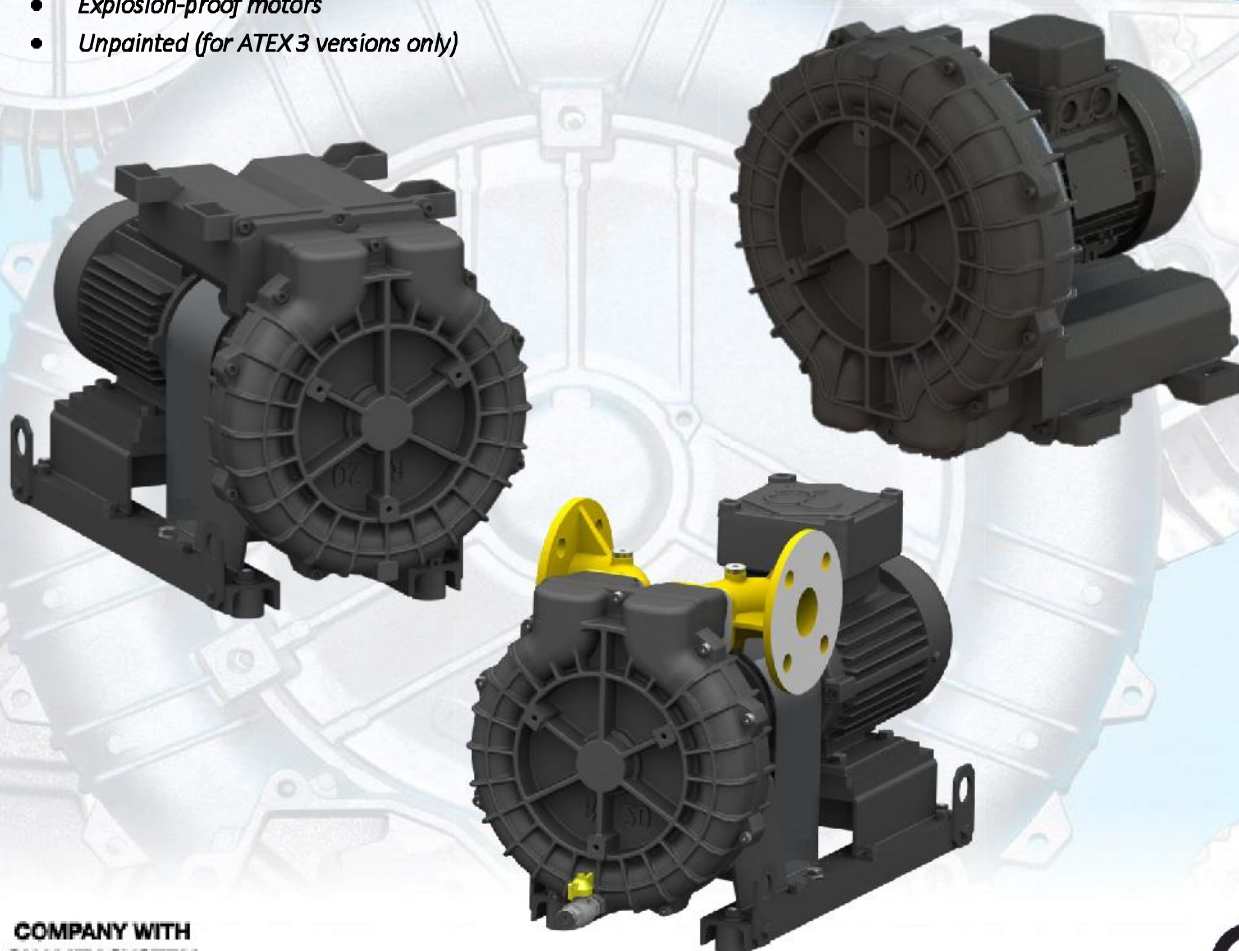
ATEX II VERSION

CHARACTERISTICS

- *Aluminium alloy construction*
- *Surface protection treatment (anodising, only for ATEX 2 versions)*
- *Available in monoblock execution (MOR) and with coupling (GOR)*
- *Condensate drain (only for GOR execution)*
- *Blower with increased seal (vacuum sealing of components)*
- *Electric motors equipped with thermal protection*
- *Painted*

OPTIONS

- *Surface protection treatment (anodising for ATEX 3 versions only - already included for ATEX 2)*
- *Explosion-proof motors*
- *Unpainted (for ATEX 3 versions only)*



SPECIFICATIONS

Model	P _p ² [kW]	Frequency [Hz]	Δp_{max} [mbar]		Q _{max} [m³/h]	Leq ¹ [dB(A)]	Temperature Class (ATEX)	Product Code in STD Configuration	
			Suction	Compression				3GD (MOR)	2G (GOR)
R20-MD	0.75	50	250	325	60	66.0	T4	SR20MD00+0023	SR20MD00+0021
	0.9	60	300	275	70	68.0			
	1.1	50	300	400	60	66.5	T3	SR20MD00+0024	SR20MD00+0022
	1.3	60	350	450	70	68.5			
R30-MD	1.1	50	250	325	91	69.2	T4	SR30MD00+0021	SR30MD00+0019
	1.3	60	275	300	110	72.2			
	1.5	50	350	425	91	69.7	T3	SR30MD00+0022	SR30MD00+0020
	1.7	60	375	425	110	72.8			
R40-MD	2.2	50	275	375	117	70.8	T4	SR40MD00+0004	SR40MD00+0002
	2.6	60	300	350	137	72.8			
	3.0	50	350	500	117	71.3	T3	SR40MD00+0005	SR40MD00+0003
	3.5	60	375	500	137	73.3			

Table 1. Fluid dynamic performance of the blowers with relative installed powers, temperature classes and STD product codes.

BLOWER CONFIGURATIONS

ATEX environment

Model	Execution	ATEX category				Electric Motor		
		3GD	2G	3/2G	2/3G	IP rating (Motor)	Thermal Protection	
							PTO	PTC
R20-MD	MOR	STD	-	-	-	65	STD	Optional
	GOR	Optional	STD	Optional	Optional	66	-	STD
R30-MD	MOR	STD	-	-	-	65	STD	Optional
	GOR	Optional	STD	Optional	Optional	66	-	STD
R40-MD	MOR	STD	-	-	-	65	STD	Optional
	GOR	Optional	STD	Optional	Optional	66	-	STD

Table 2. Blower configurations with reference to the electric motor and ATEX category.

¹ Noise level measured at a distance of 1 m with ducted intake and delivery, in accordance with Standard ISO 3744.

² Power supply voltage: 230/400 V @ 50 Hz – 265/460 V @ 60 Hz. Tolerance on fixed voltage value $\pm 10\%$, Motors with class F insulation, suitable for operation with inverter* refer to FPZ (all motors for ATEX environments are equipped with probes or thermal protection).

ATEX MARKING

The final marking of the blower (complete with electric motor) is determined by the chosen options (summarised in the columns of Table 3); for the selected blower model choose the category - as in Table 2 - and the motor power - as in table 1. The abbreviation ATEX is a simple "composition".

Example of Marking

By choosing blower Model "R20-MD", in monoblock execution (**MOR**) ATEX 3GD category (STD for this blower execution), equipped with **0.75 kW** motor, the complete marking is

ATEX II 3GD c T4

("II" indicates: machine suitable to operate in a different environment from a mine); if the **1.1 kW motor** is chosen instead of the 0.75 kW motor, the marking would differ only for the temperature class, i.e.

ATEX II 3GD c T3

Category & Environment (see table 2 - "BLOWER CONFIGURATIONS")	Protection Method (the same for all blowers)	Temperature Class (see table 1 - "SPECIFICATIONS")
3GD	"c"	T3
2G		
3/2G		
2/3G		T4

Table 3. ATEX marking options for the blower unit and electric motor.

ATEX MARKING NOTES:

- Unless specifically indicated, the ATEX marking refers to the "internal" and "external" environment.
- In the case of double indication separated by a "/", the first number indicates the "internal" category (inner surfaces of the blower), and the second indicated the "external" category (outer surfaces of the blower, including electric motor).
- Configurations "2G" and "3 / 2G" are all with explosion-proof motors (**Ex d** protection method).
- The protection method of the blowers is constructive type ("c")
- The electric motors have different types of protection depending on the category and the environment for which they are designed and meet the requirements of the gas groups (IIA/B/C) and dust (IIIA/B/C), as indicated in Table 4

Electric Motor Protection Methods					
Zone	Category	Environment	Protection Method (Ex)	Sub-groups	
				MOR execution	GOR execution
2	3	G	nA	IIB	IIC
22	3	D	tc	IIIC	IIIB
1	2	G	d	-	IIC

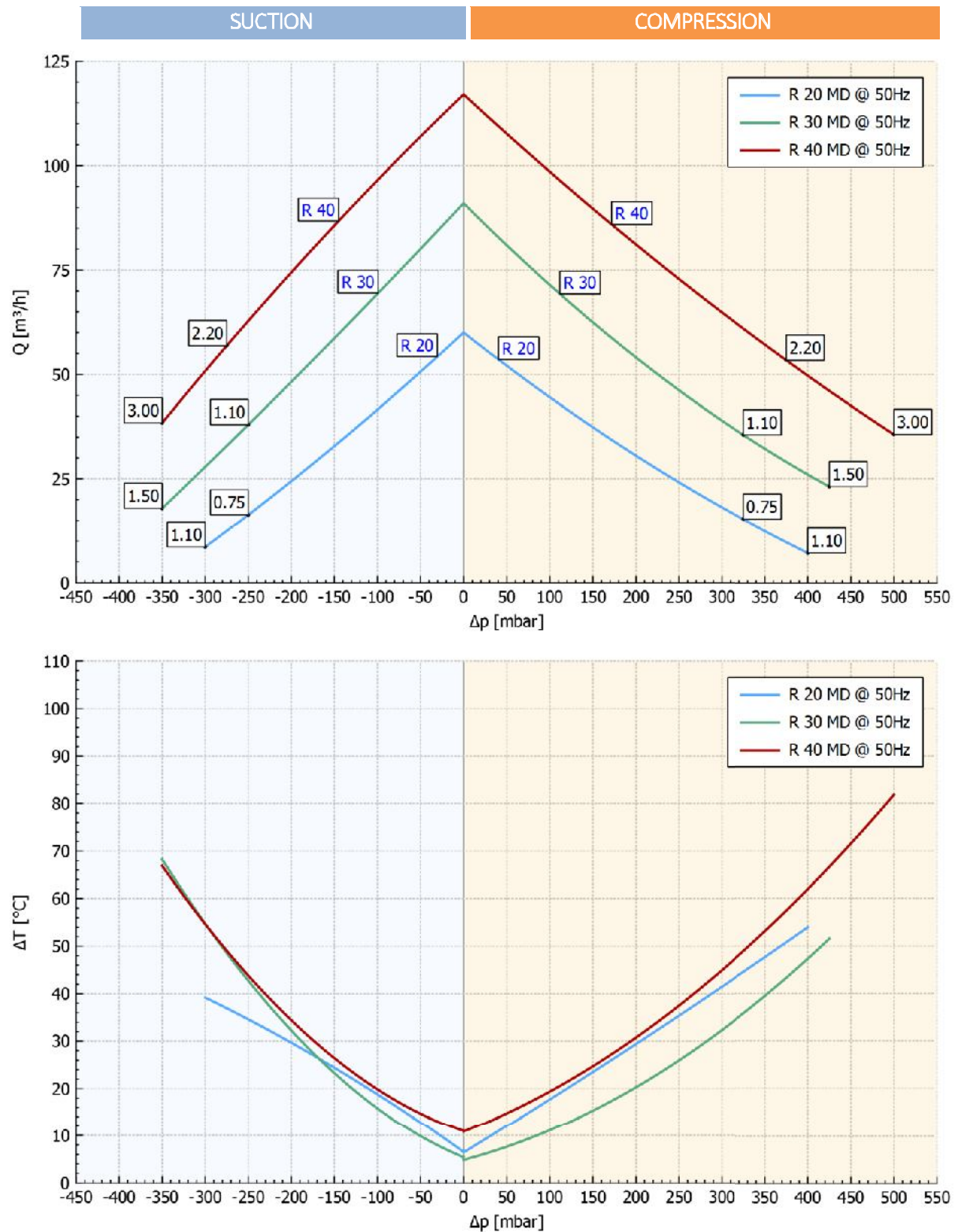
Table 4. Protection methods for electric motors by category and environment.

INSTALLATION

- For proper operation of the machine, it must be provided with a suction FILTER and a vacuum/pressure limiting device.
- ATEX certified accessories are available on request:
 - Analogue pressure gauges and thermometers
 - Temperature and pressure transducers
- Filters for Gas available on request
- All "GOR - 2G" configurations have:
 - Condensate drain valves (optional for the other GOR versions - not available on MOR execution)
 - anodised impeller, cover and body
- Permissible ambient and fluid temperature in suction from -15 °C to +40 °C.
- Read the instruction manual carefully before installing the machine.
- FPZ, as a manufacturer of ATEX blowers, shall provide advice regarding the appropriate blower. However, the correct classification of the ATEX environment and the corresponding choice of appropriate blower configuration is the purchaser's responsibility.



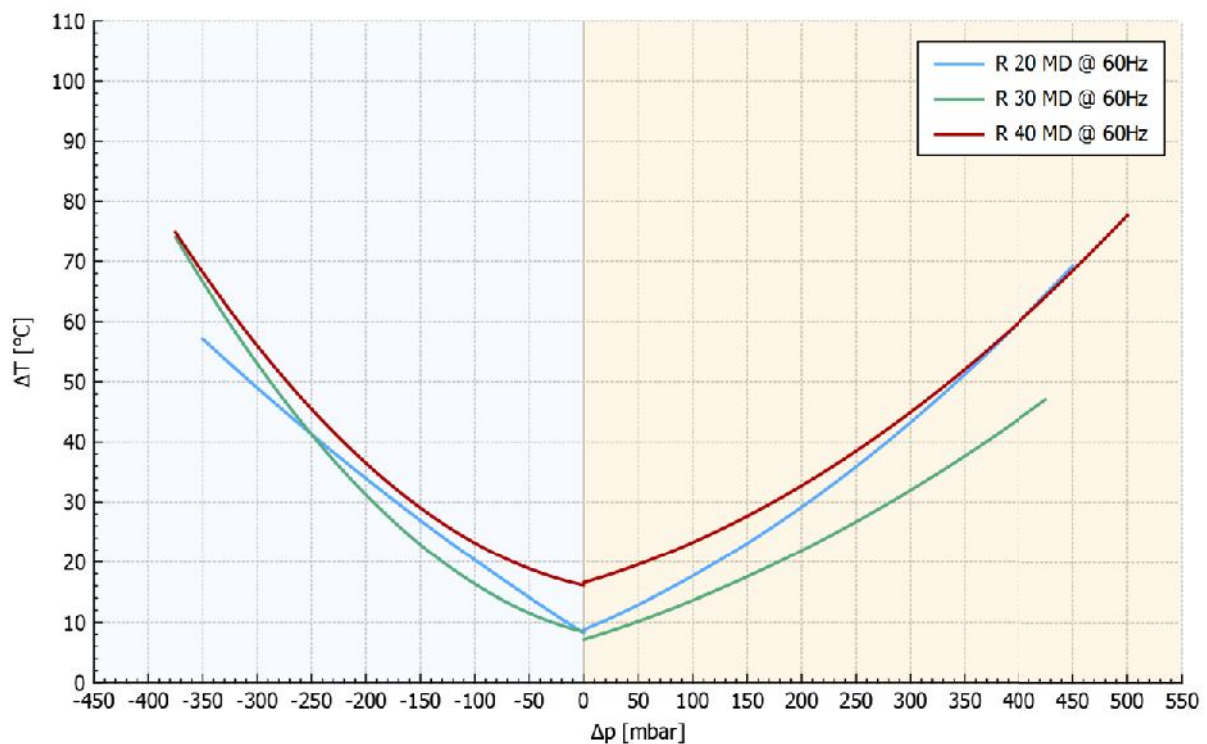
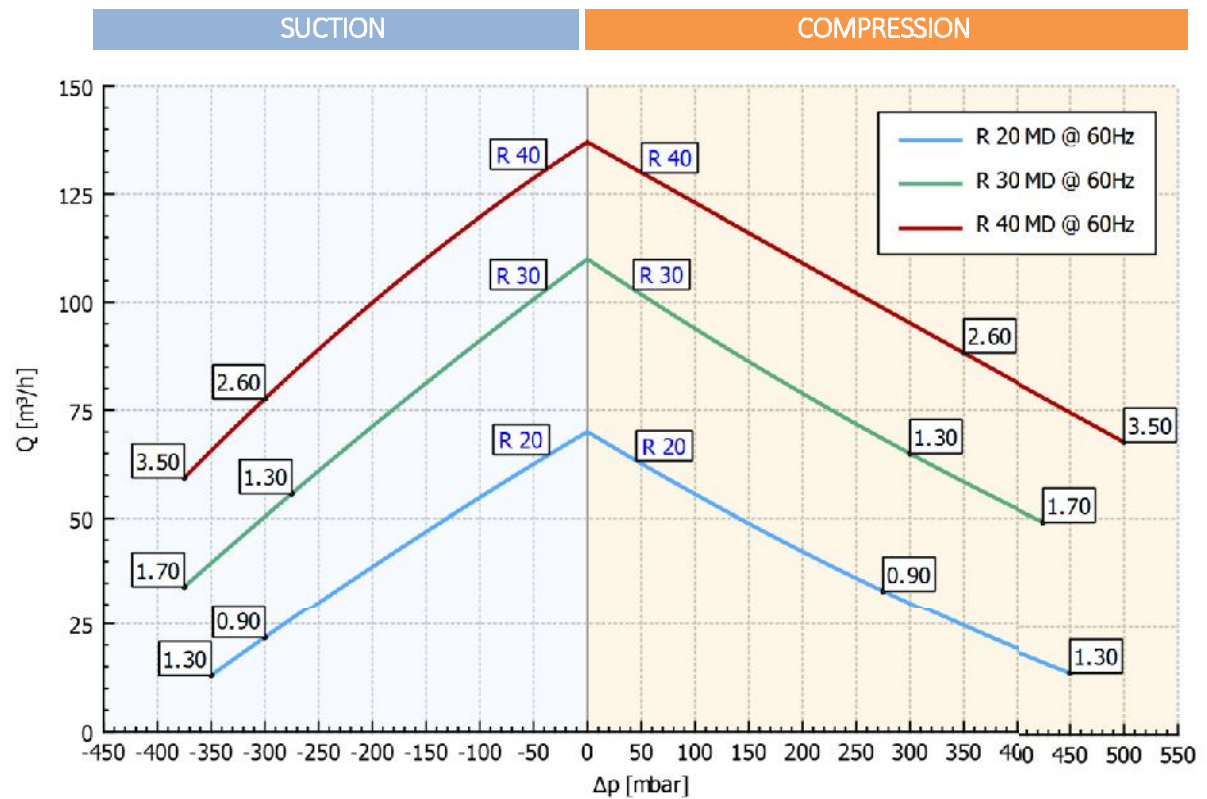
Operation @ 50 Hz



Curves referring to air at a temperature of 20 °C and atmospheric pressure of 1013 mbar (abs.).
Tolerance on indicated values $\pm 10\%$.
Data subject to change without notice.



Operation @ 60 Hz



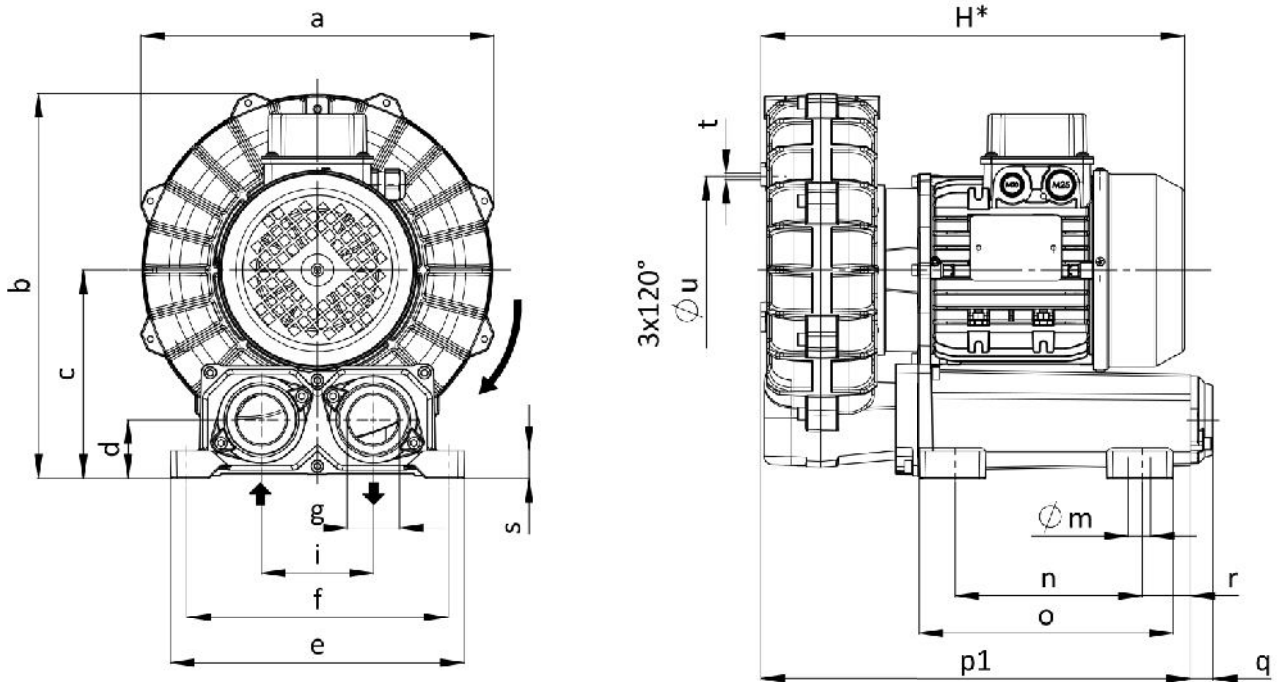
Curves referring to air at a temperature of 20 °C and atmospheric pressure of 1013 mbar (abs.).
Tolerance on indicated values $\pm 10\%$.
Data subject to change without notice.



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SERIES R - MD – MOR/GOR EXECUTION ATEX II VERSION

DIMENSIONS (MOR EXECUTION: VERSION ATEX II CATEGORY 3)



Sizes in mm - NOT BINDING

Model	a	b	c	d	e	f	g	H*	i	m	n	o	p1	q	r	s	t	u	Max weight [kg]
R20-MD	283	309	167	47	235	210	G 1"¼	340	90	10	150	200	345	18	45	22	M6	150	21
R30-MD	319	346	187	47	235	210	G 1"¼	390	90	10	150	200	354	18	45	22	M6	180	25
R40-MD	350	372	197	47	235	210	G 1"¼	440	90	10	150	200	364	18	45	22	M8	225	40

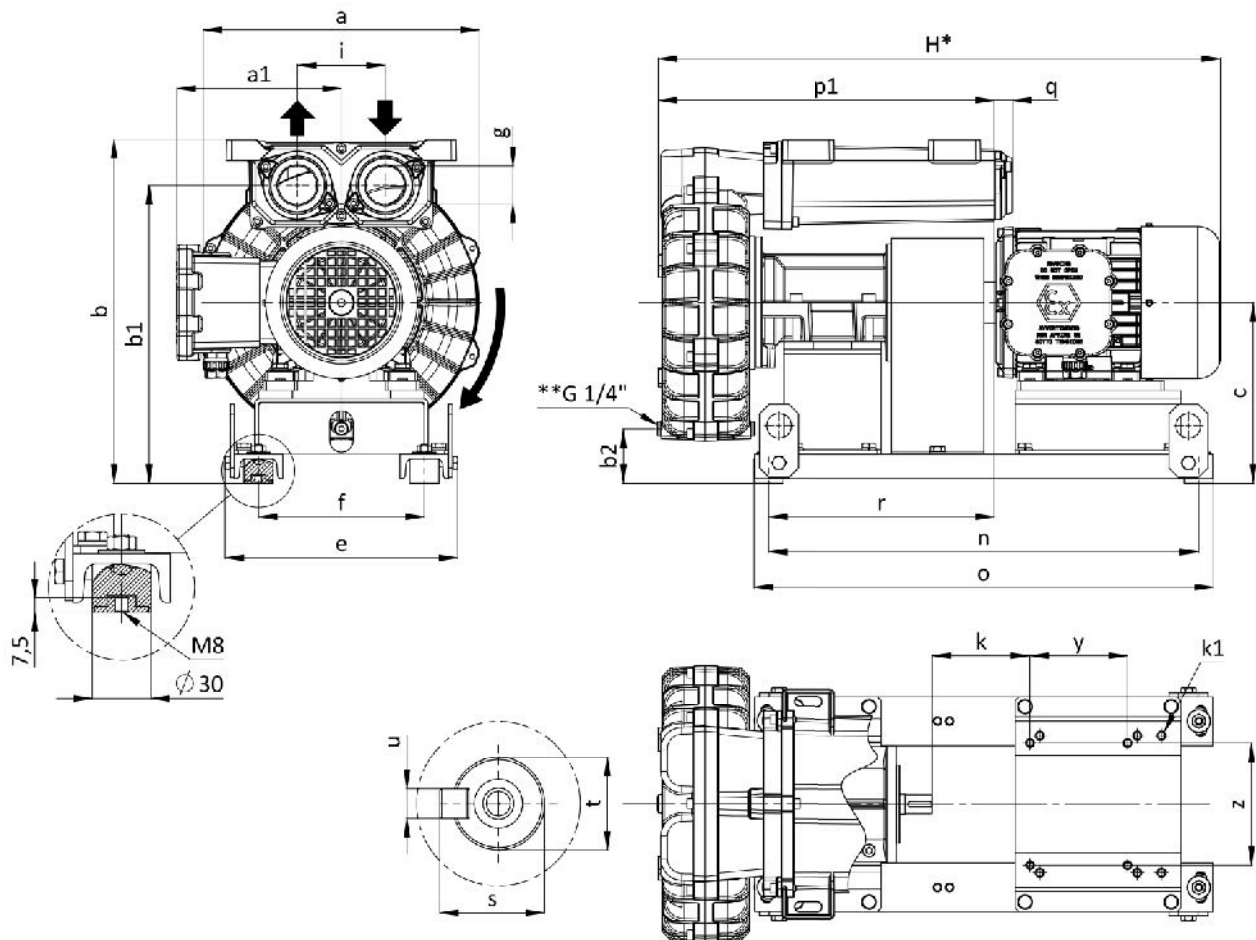
* The value indicated refers to the machine with motor of maximum length.



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SERIES R - MD – MOR/GOR EXECUTION ATEX II VERSION

DIMENSIONS (GOR EXECUTION: VERSION ATEX II CATEGORY 3)



Sizes in mm - NOT BINDING

Model	M.E.	a	a1	b	b1	b2	c	e	f	g	H*	l	k	k1	n	o	p1	q	r	s	t	u	y	z	Max weight ¹ (kg)
R20-MD	GR. 80 B3	283	169	352	305	56	185	239	170	G 1 1/4"	577	90	100	M8	445	475	345	19	234	21.5	19	6	100	125	23
	GR. 80 B3		169							G	583		100											125	
R30-MD	GR. 80 B3	319	169	372	325	38	185	239	170	G 1 1/4"	606	90	110	M8	445	475	354	19	237	21.5	19	6	100	140	26
	GR. 90S B3		174							G															
R40-MD	GR. 90L B3	350	174	402	355	41	205	259	190	G 1 1/4"	711	90	111	M8	560	590	364	19	233	31	28	8	125	140	34
	GR. 100 B3		185							G	742		128	M10										140	160

POSITION OF TERMINAL BOX

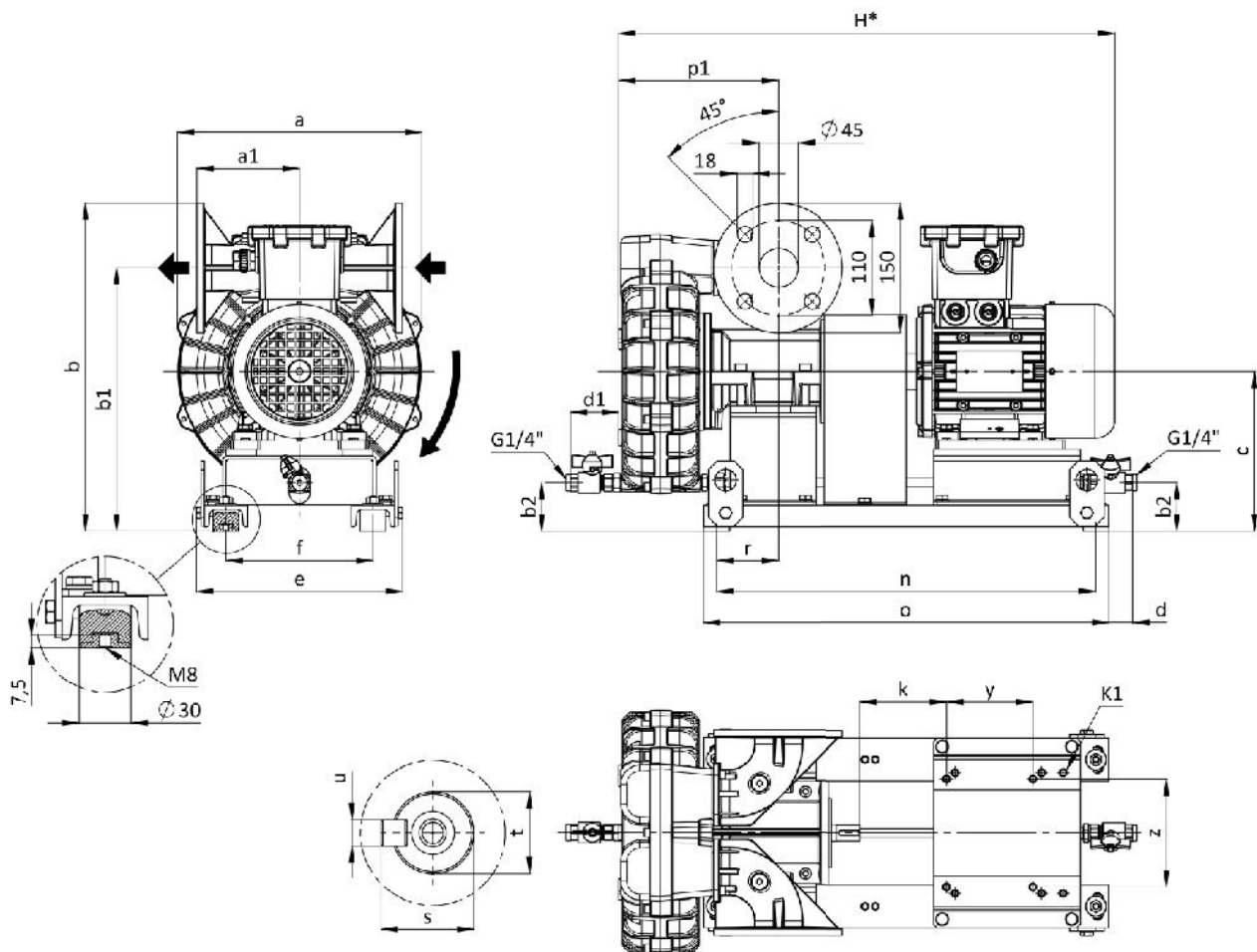
Standard version	Available on request

* The value indicated refers to the machine with motor of maximum length.

** Condensate drain kit available on request.

¹ The value indicated refers to the weight of the machine without electric motor.

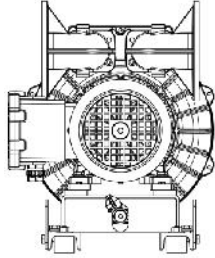
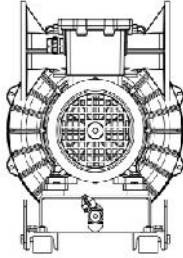
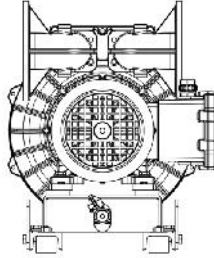
DIMENSIONS (GOR EXECUTION: VERSION ATEX II CATEGORY 2)



Sizes in mm - NOT BINDING

Model	M.E.	a	a1	b	b1	b2	c	d	d1	e	f	H*	k	k1	n	o	p1	r	s	t	u	y	z	Max weight ¹ [kg]
R20-MD	GR. 80 B3	283	119	380	305	56	185	41	56	239	170	577	100	M8	445	475	185	74	21.5	19	6	100	125	23
	GR. 80 B3											583	100										125	
R30-MD	GR. 80 B3	319	119	400	325	38	185	52	55	239	170	606	110	M8	445	475	194	77	21.5	19	6	100	140	26
	GR. 90S B3																							
R40-MD	GR. 90L B3	350	119	430	355	41	205	13	55	259	190	711	111	M8	560	590	205	74	31	28	8	125	140	34
	GR. 100 B3											742	128	M10								140	160	

POSITION OF TERMINAL BOX

		
Available on request	Standard version	Available on request

* The value indicated refers to the machine with motor of maximum length.

¹ The value indicated refers to the weight of the machine without electric motor.