

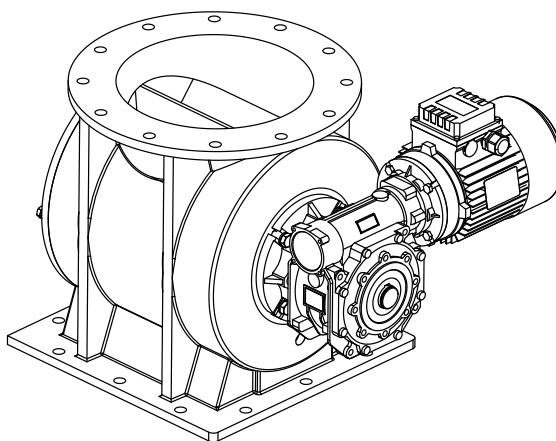
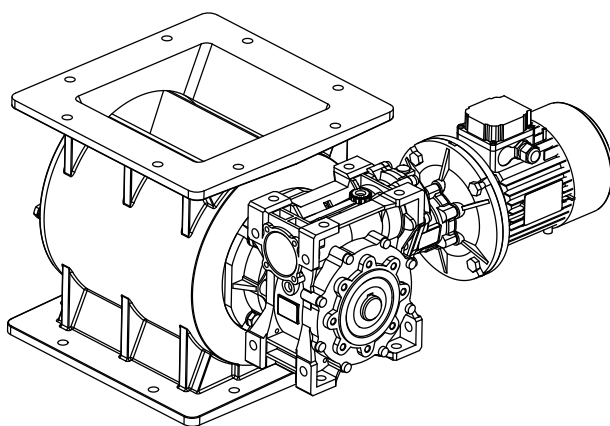


RV-RVR

DROP-THROUGH ROTARY VALVES

1

TECHNICAL CATALOGUE



Manual No. TOR.RV-RVR.--.T.A2.0421.EN Issue: A2
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ORIGINAL INSTRUCTIONS IN ENGLISH

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**1.0 DESCRIPTION AND USE - OPERATION
CONDITIONS****1**

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1.1 Description

The drop-down rotary valves mod. RV-RVR have been designed according to the criterion of maximum application universality, they are suitable for the controlled feeding or unloading of powder or granular materials from silos, hoppers, pneumatic transport systems, filters and cyclones.

Thanks to the different construction materials and the appropriate accessories, they can be adapted to the characteristics of any material and to every customer requirement.

IMPROPER USE NOT PERMITTED

The RV and RVR Rotary Valves in the standard version have NOT been designed to operate in hazardous conditions or with hazardous materials; in case the machine must fulfil such requirements, it is mandatory to inform the manufacturer.

The materials considered being hazardous are the following:

- explosives,
- toxic,
- flammable,
- harmful and / or similar.

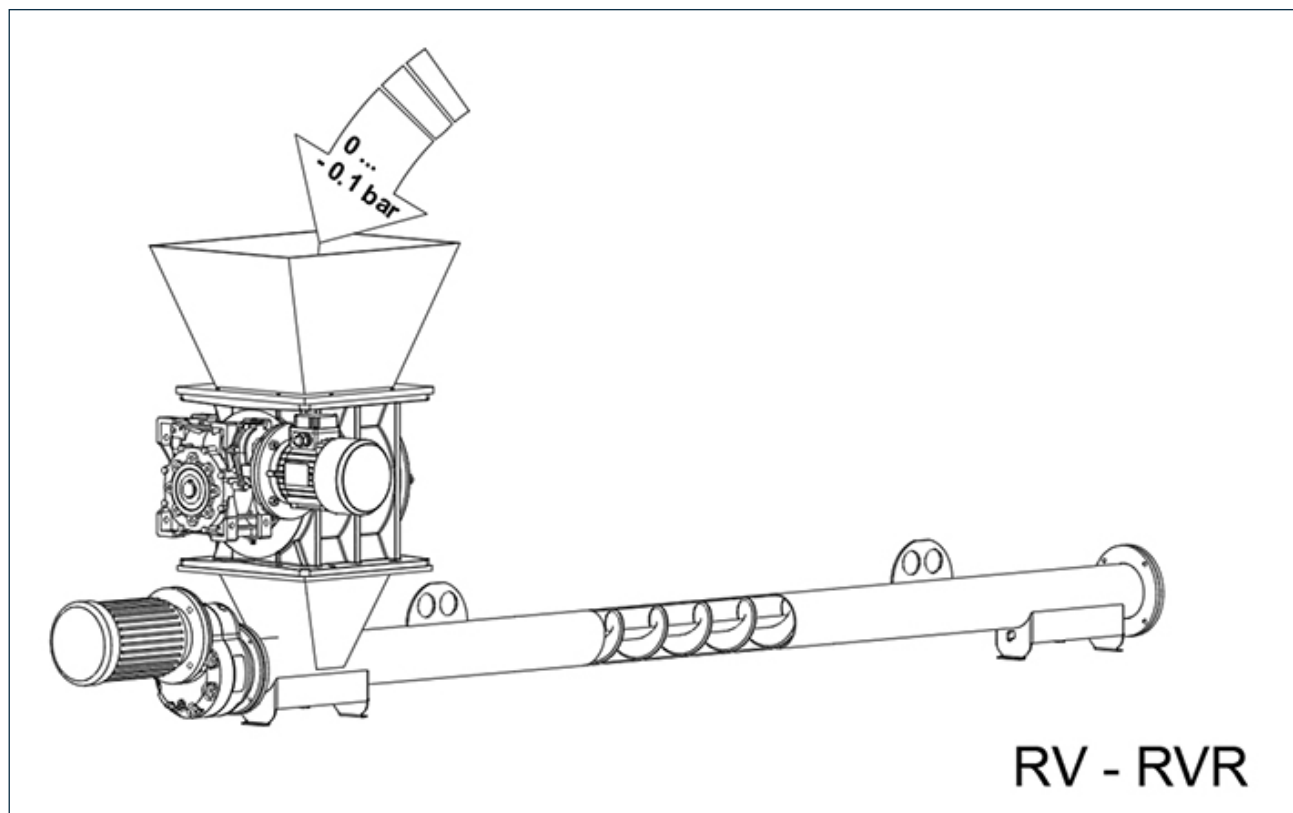
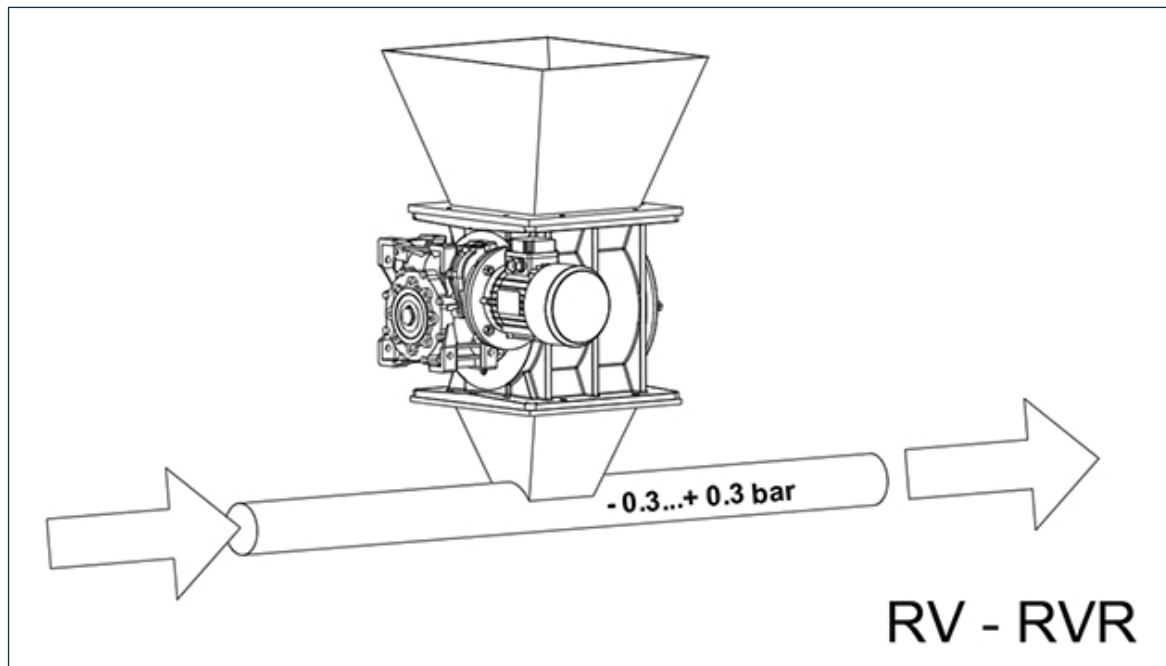
The applications considered being hazardous are the following:

- unloading from the silo or cells containing the materials previously indicated

1.2 Technical features

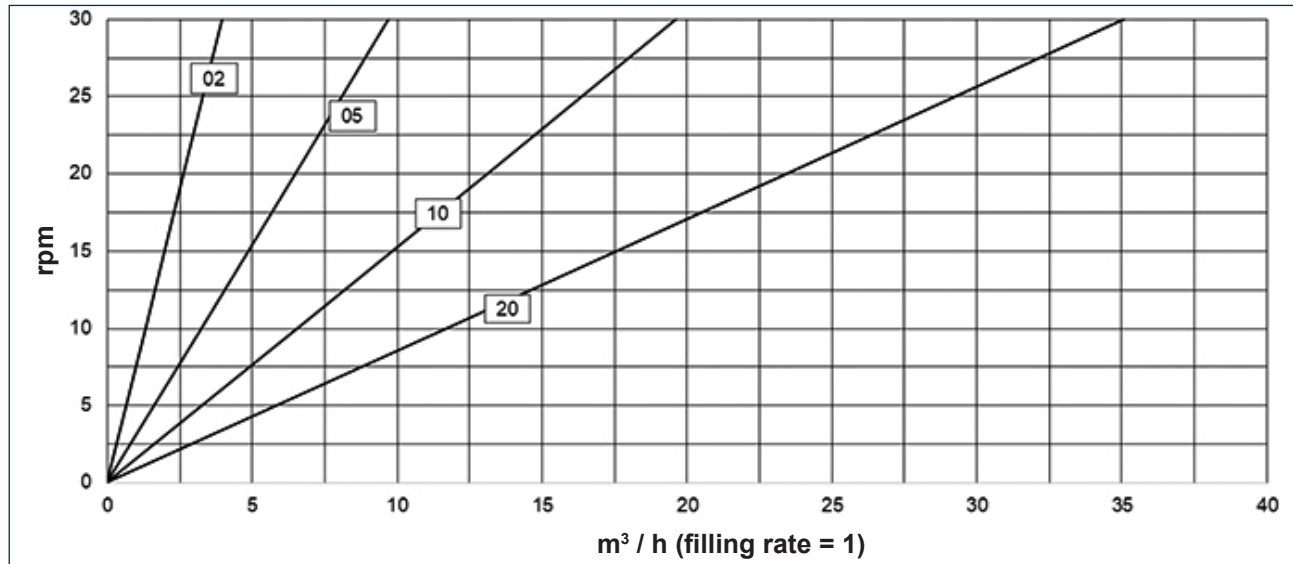
DESCRIPTION	RV	RVR
Outlet diameter	150x150 mm - 200x200 mm - 250x250 mm - 300x300 mm (6"x6" - 8"x8" - 10"x10" - 12"x12")	150 mm (6") - 200 (8") - 250 (10") - 300 mm (12")
Conveying	2-5-10-20 litres/revolution (0.07 - 0.17 - 0.35 - 0.7 cu ft/rev)	
Operating temperature	from -40 °C up to 180 °C	
Operation pressure	Depending on the application (see image below)	
Construction materials	Cast iron, Stainless Steel 304 and 316	

Operation pressure depending on application:



1.2.1 Performance diagram

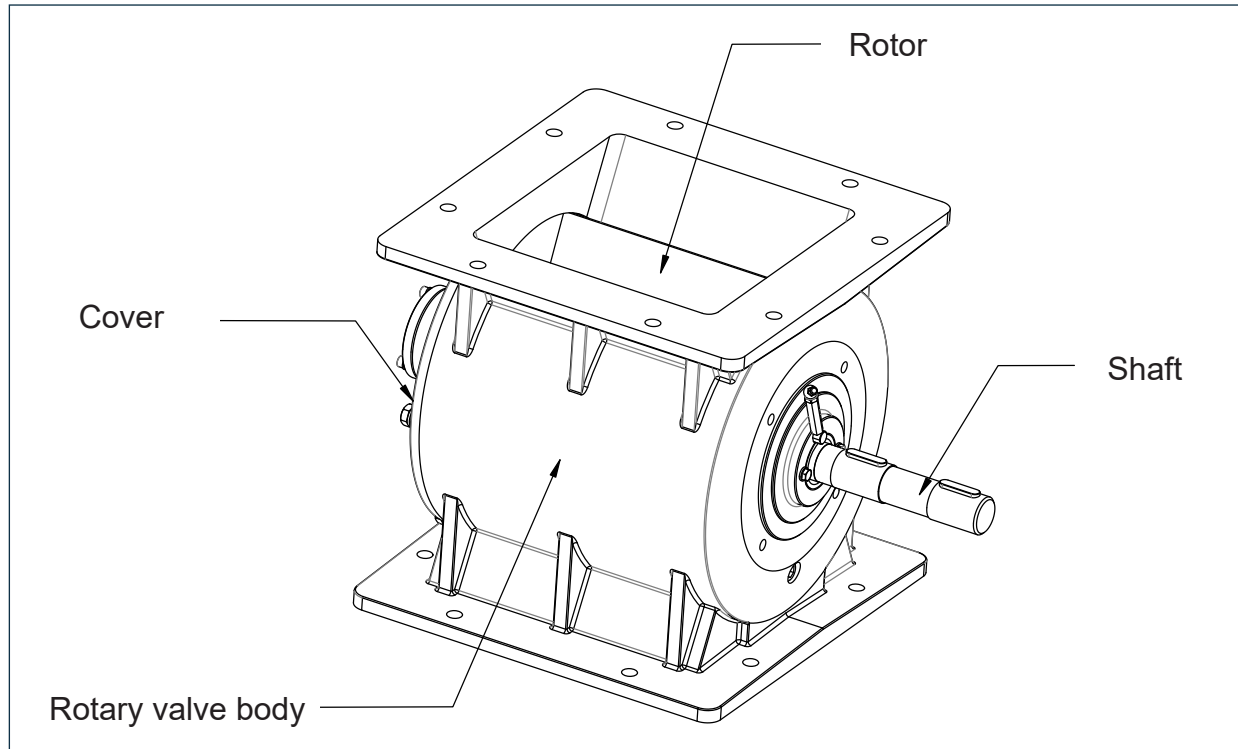
Capacity (dm ³ /rev)			
RV-RVR 02	RV-RVR 05	RV-RVR 10	RV-RVR 20
2.2	5.4	10.9	19.5



**1.0 DESCRIPTION AND USE - OPERATION
CONDITIONS**
1.2.2 Electric motors (400 V - 50 Hz)

TYPE		SIZE	kW	rpm	In (A)
RV-RVR 02	10 rpm	71	0.37	1400	1.11
	20 rpm	80	0.55	900	1.86
	30 rpm	80	0.55	1400	1.45
	VM	71	0.37	1400	1.11
	TC 10 rpm	71	0.37	1400	1.11
	TC 20 rpm	80	0.55	900	1.86
	TC 30 rpm	80	0.55	1400	1.45
RV-RVR 05	10 rpm	71	0.37	1400	1.11
	20 rpm	80	0.55	900	1.86
	30 rpm	80	0.75	1410	2.0
	VM	71	0.37	1400	1.11
	TC 10 rpm	71	0.37	1400	1.11
	TC 20 rpm	80	0.55	900	1.86
	TC 30 rpm	80	0.55	1400	1.45
RV-RVR 10	10 rpm	80	0.55	1400	1.45
	20 rpm	90	0.75	900	2.2
	30 rpm	90	1.1	1400	2.59
	VM	80	0.75	1400	1.9
	TC 10 rpm	80	0.55	1400	1.45
	TC 20 rpm	90	0.75	900	2.05
	TC 30 rpm	90	1.1	1400	2.59
RV-RVR 20	10 rpm	80	0.75	1400	1.90
	20 rpm	90	1.1	900	2.93
	30 rpm	90	1.5	1400	3.43
	VM	80	0.75	1400	1.90
	TC 10 rpm	80	0.55	1400	1.45
	TC 20 rpm	90	1.1	900	2.93
	TC 30 rpm	90	1.1	1400	2.59

1.3 Standard machine description

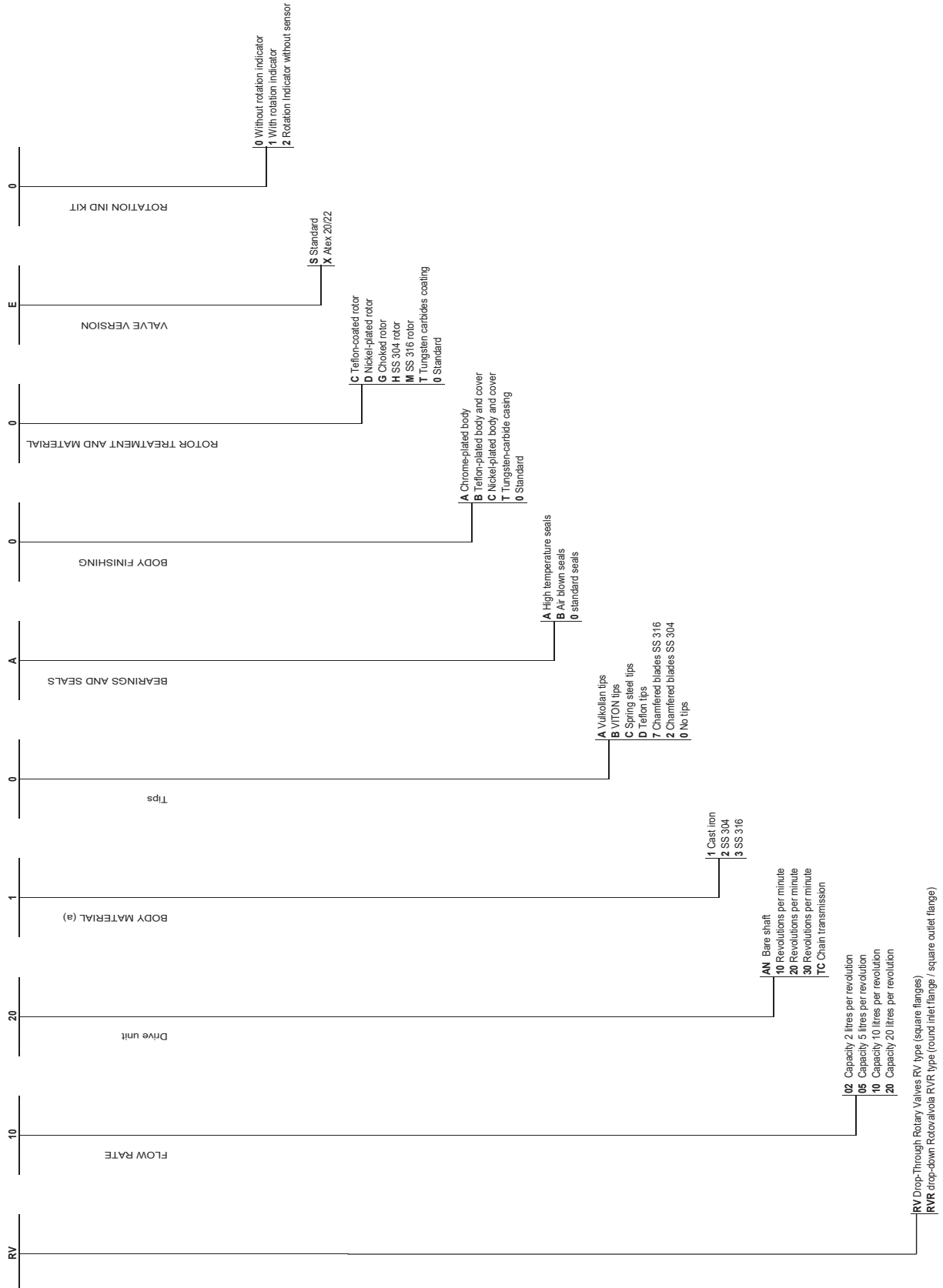


2.0 STANDARD VERSION OF THE MACHINE AND OPTIONS

1

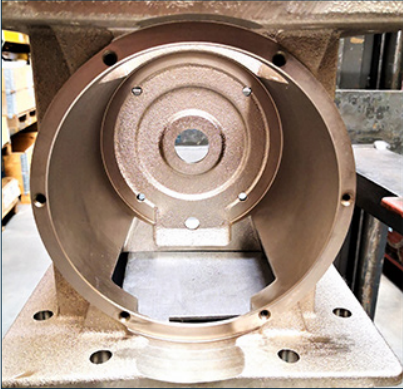
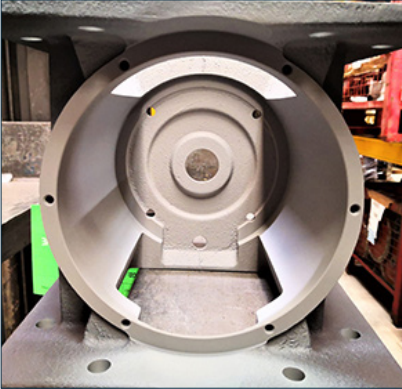
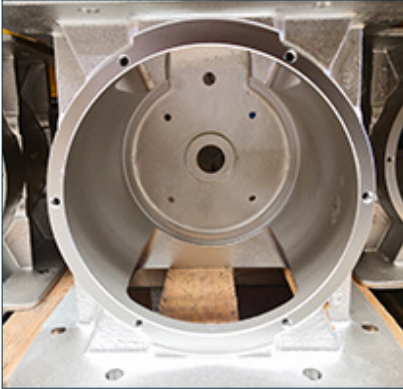
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2.1 Versions - Order code



2.2 Main components and accessories

2.2.1 BODY FINISHING

NICKEL-PLATED BODY	TEFLON-COATED BODY	STAINLESS STEEL BODY
		
CHROME-PLATED BODY (internal side only)	BODY WITH TUNGSTEN CAR- BIDES (internal side only)	
		

2.2.2 ROTORS

STANDARD ROTORS	ROTORS FOR TIPS
	

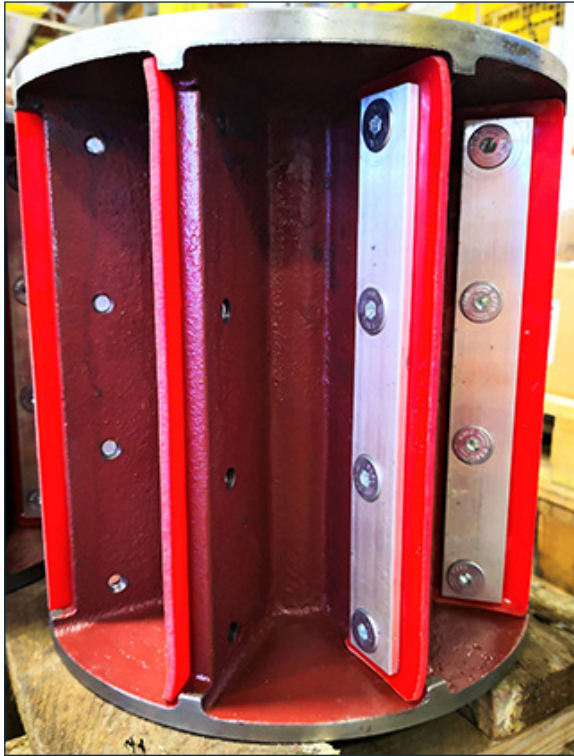
CHOKED ROTOR

If the volumetric capacity of the rotary valves has to be decreased, it has been provided a rotor choking kit consisting of eight plastic elements to be placed in the rotor alveoli, as shown in the images below.

The capacity of the alveoli lowers of about 50%.



2.2.3 TIPS



VULKOLLAN tip



VITON tip



SPRING STEEL tip



SS 304 / SS 316 tip
(chamfered blades version)

2.2.4 ADAPTORS FOR IRREGULAR-SHAPE MATERIALS (RV ONLY)

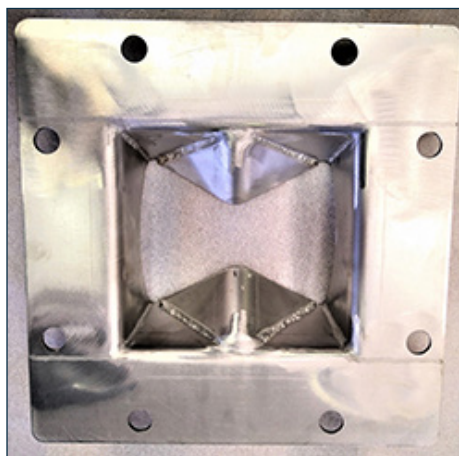
These adaptors are installed on the inlet spout of the rotary valve; their particular shape allows to convey directly into the pockets of the rotor the plastic granules with sizes up a to 4 – 5 mm, preventing the clogging of the rotary valve..

The adaptors are of two types (both for range of RV only), depending on the application:

GEAR REDUCER FOR GRANULES

Indicated for granular materials and flakes with static feeding system (the rotary valve is fitted under the silo or other devices that imply formation of a material column).

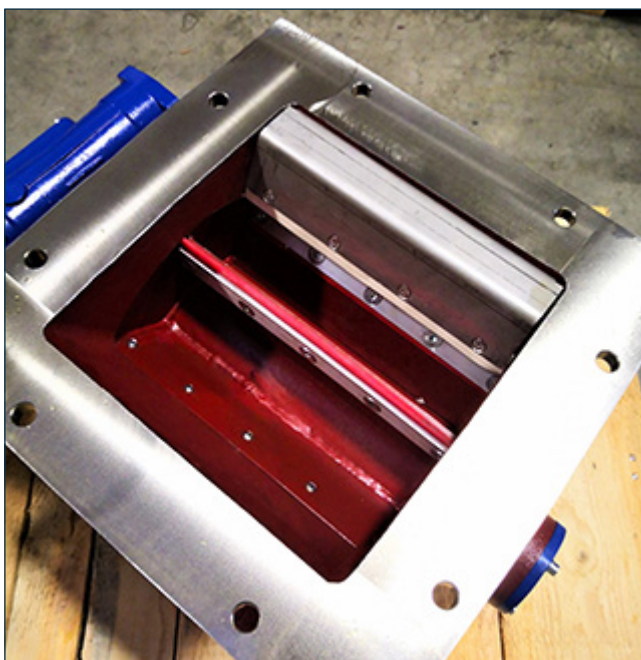
The adapter, fitted to the rotary valve inlet, increases the total height of the same of 5 mm only. Made from SS 304.



INSERT FOR GRANULES

Indicated for granular materials and pre-mixed flakes (rotary valves fed by a screw feeder or other devices which do not imply formation of a material column). Its particularly shape helps keeping clean the rotor blades.

Made from SS 304 with rubber tip.

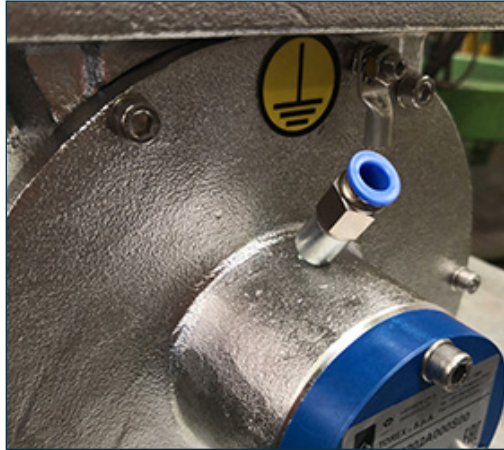


2.2.5 AIR-BLOWN SEALS

The rotary valves with air blown seals fluxed hold the material by means of the counter-pressure. Air inlet tube Ø 8 mm.

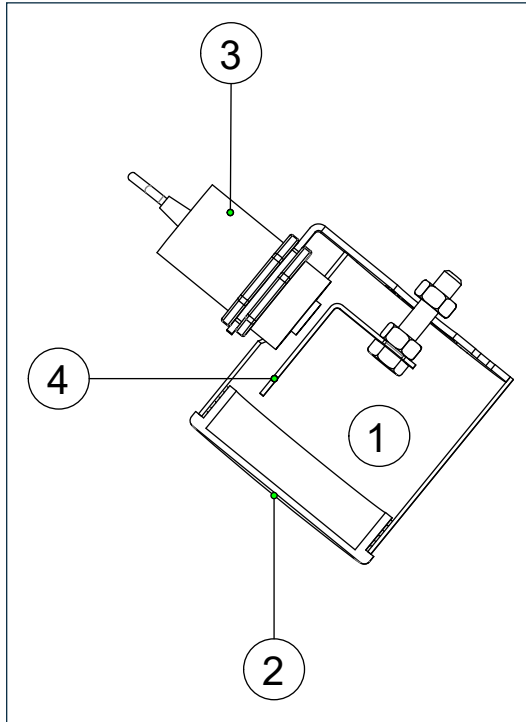
The seals **MUST NOT** be greased.

Blowing with continuous flow at 0.3– 0.4 bar.



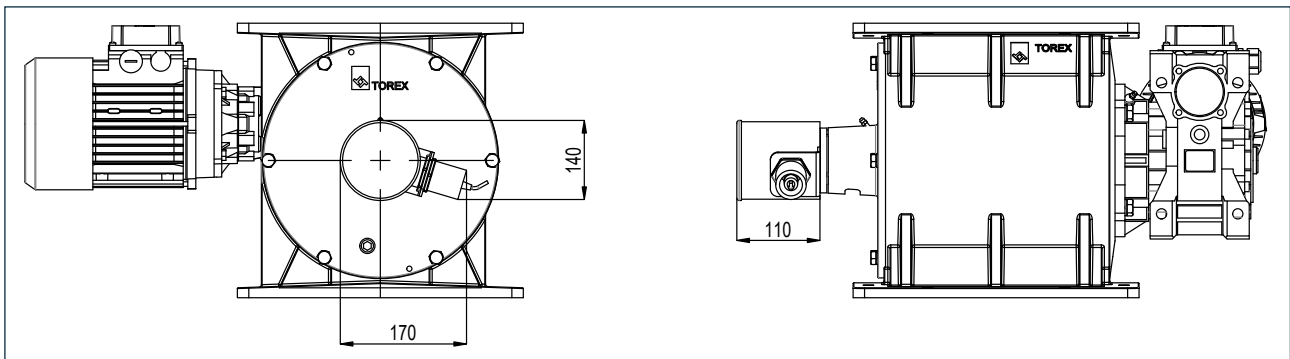
2.2.6 ROTATION INDICATOR

The rotation of the rotary valve can be controlled by means of a rotation indicator kit consisting of an electronic sensor. It is also available the version without sensor (pre-arrangement only).

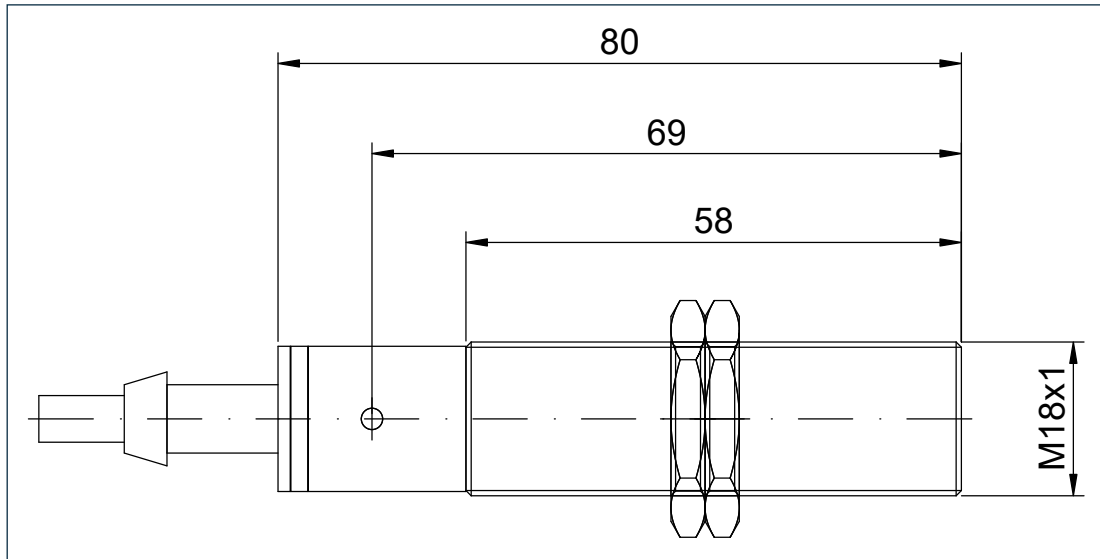


ROTATION INDICATOR	
1	Casing
2	Plug
3	Indicator holder
4	Flap

OVERALL DIMENSIONS

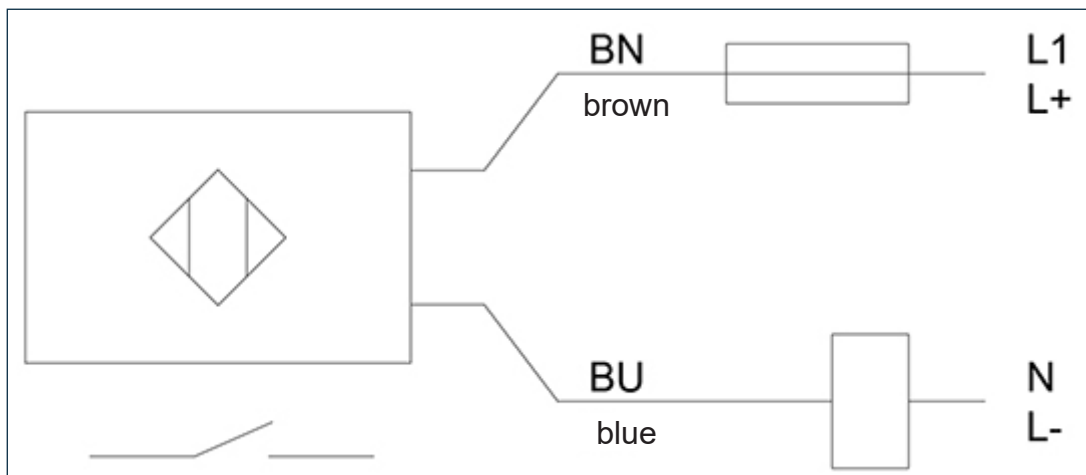


SENSOR



TECHNICAL DATA	
Operating voltage [VJ]	20...250V AC/DC 45...65Hz
Output type	normally open NA
Nominal current	350mA AC/ 100mA DC
Sensitivity	5 mm
Ambient temperature	-25...80 °C
Protection degree	IP67

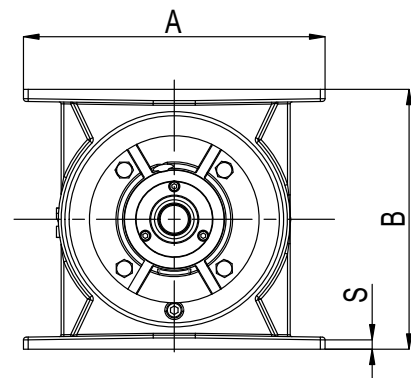
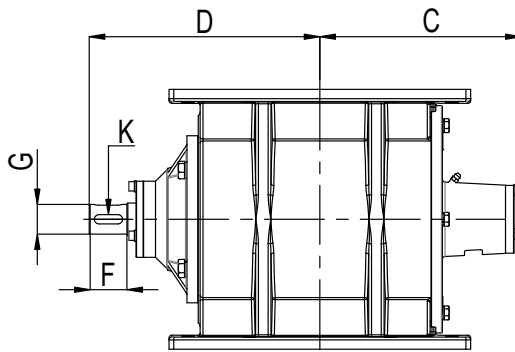
Electrical connections



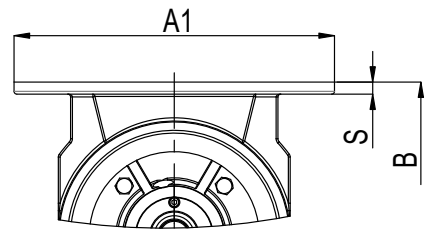
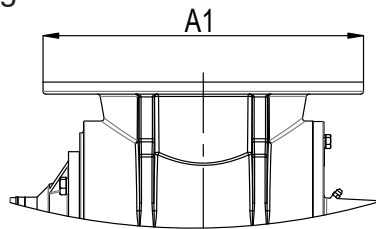
3.1 RV-RVR rotary valve overall dimensions

BARE SHAFT VALVES

RV Square Flange



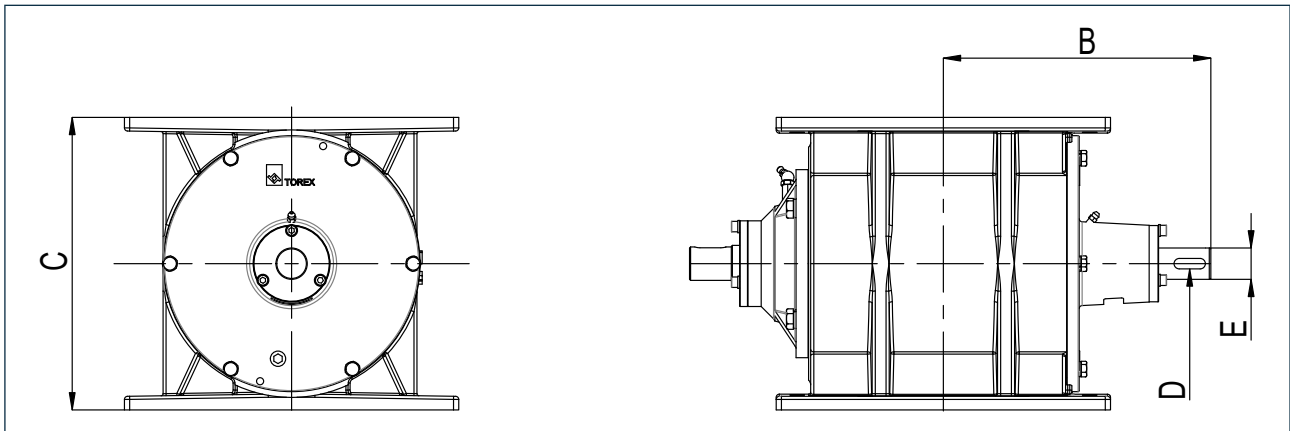
RV Round flange



TYPE	A	A1 (only RVR)	B		C	D	E	G	S	K
			RV	RVR						
RV - RVR 02	265	285	220	250	170	201	40	32 h7	10	10x8x30 DIN 6885A
RV - RVR 05	320	340	280	330	244	244			13	
RV - RVR 10	375	406	360		238	308	50		15	10x8x40 DIN 6885A
RV - RVR 20	440	445	455		282	338				

dimensions in mm

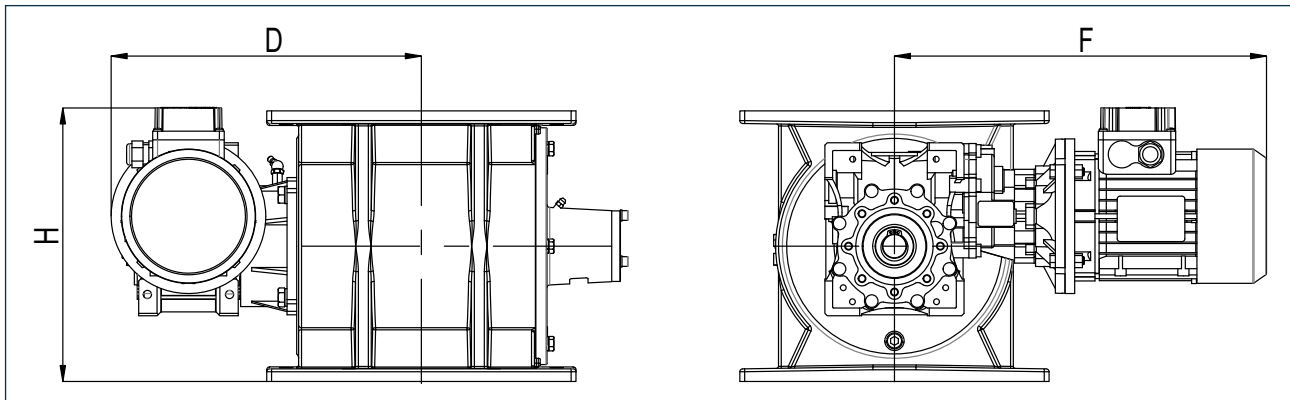
VALVES EQUIPPED WITH GEAR MOTOR WITH DOUBLE OUTLET SHAFT



TYPE	B	C		D	E
		RV	RVR		
RV - RVR 02	210	220	250	8x7x30 DIN 6885A	30 h7
RV - RVR 05	256	280	330		
RV - RVR 10	281	360			
RV - RVR 20	322	455			

dimensions in mm

DIRECT MOTOR-OPERATED VALVE



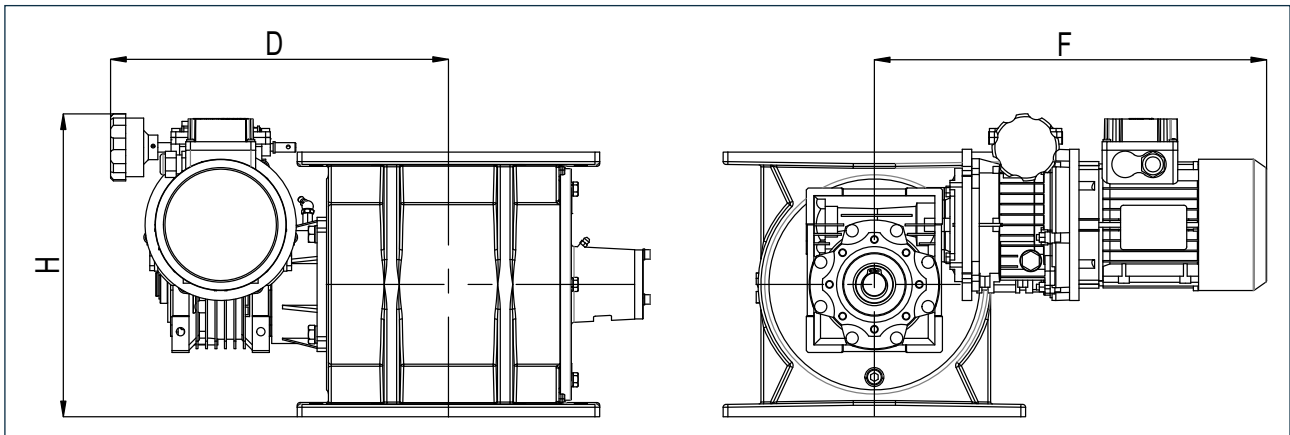
TYPE	D	F	H	
			RV	RVR
RV - RVR 02	300	400	260	280
RV - RVR 05	330		300	320
RV - RVR 10	380	460	360	
RV - RVR 20	410		410	

dimensions in mm


Important

Dimensions referred to the valve with 10 rpm gear reducer type, variable according to make and type.

VALVES EQUIPPED WITH VARIABLE SPEED GEAR MOTOR

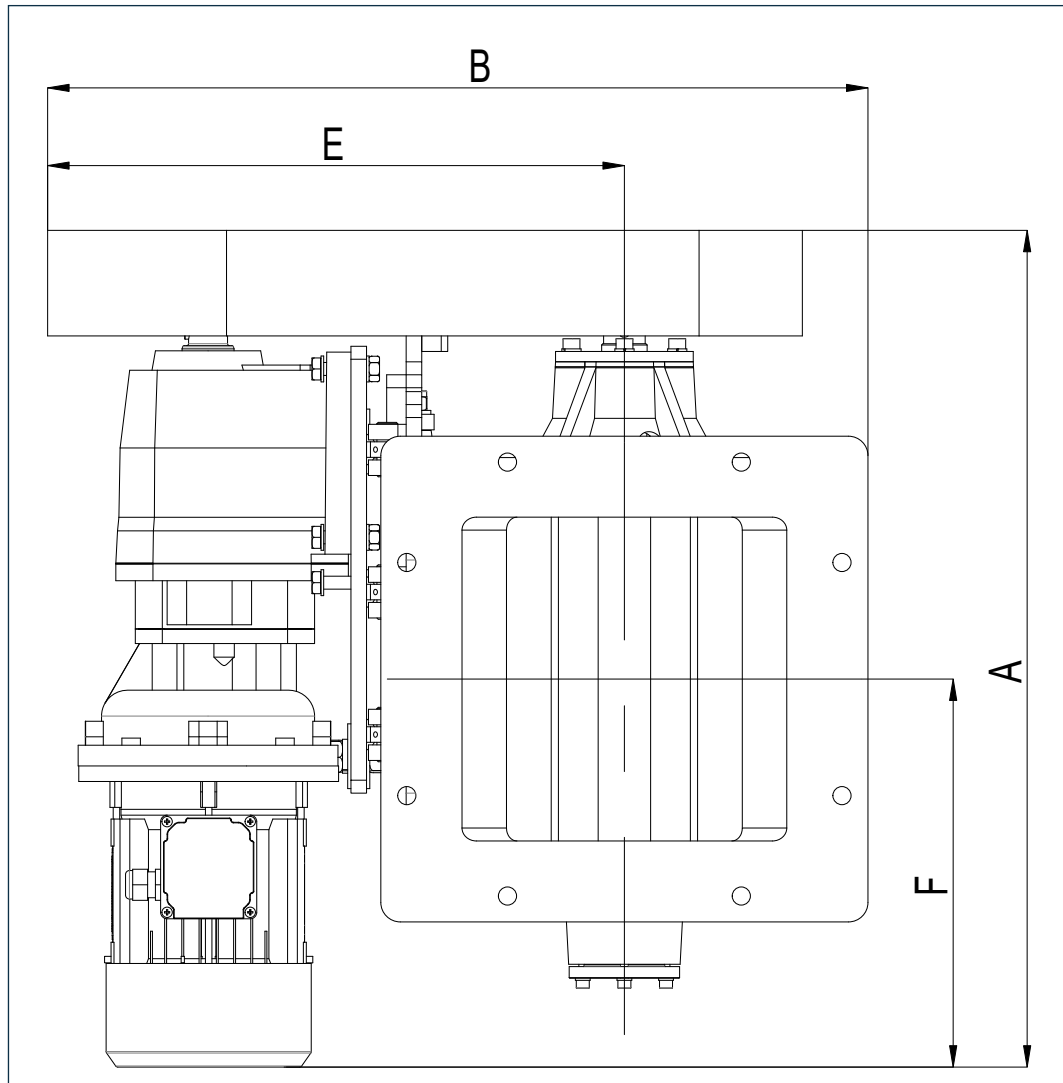


TYPE	D	F	H	
			RV	RVR
RV - RVR 02	340	430	300	320
RV - RVR 05	370		330	360
RV - RVR 10	410	520	420	
RV - RVR 20	440		470	

dimensions in mm


Important

Dimensions vary according to make and type of the geared motor.

VALVES EQUIPPED WITH CHAIN TRANSMISSION


TYPE	A	B	E	F
RV - RVR 02	590	520	390	340
RV - RVR 05	590	570	410	300
RV - RVR 10	660	640	460	310
RV - RVR 20	660	760	540	280

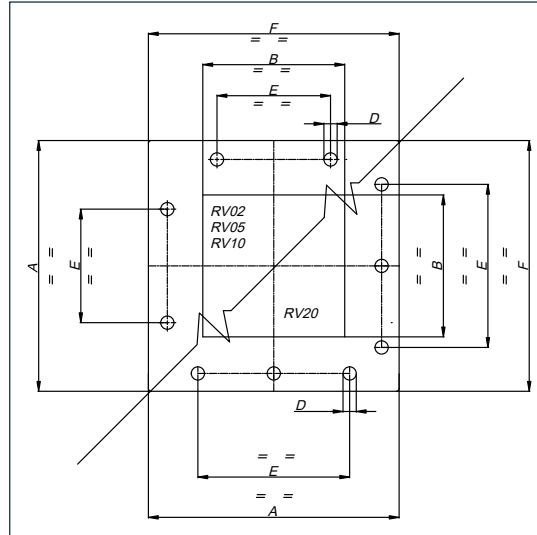
dimensions in mm


Important

Dimensions vary according to make and type of the geared motor.

3.1.1 OUTLET AND INLET SPOUTS

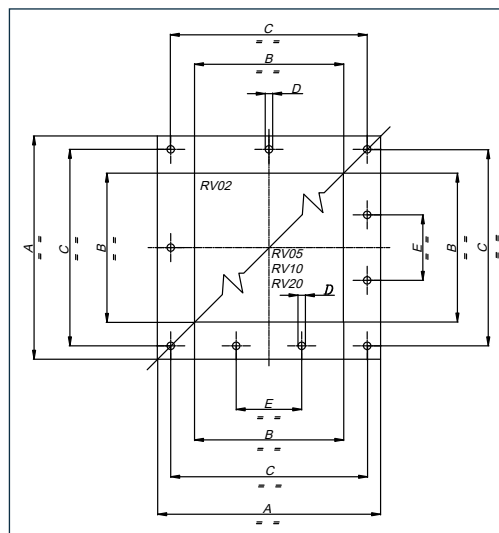
TOREX DRILLINGS



TYPE	A	B	D	E	F
RV 02	265	150	14	120	225
RV 05	320	200		150	280
RV 10	375	250		180	335
RV 20	440	300	18	260	400

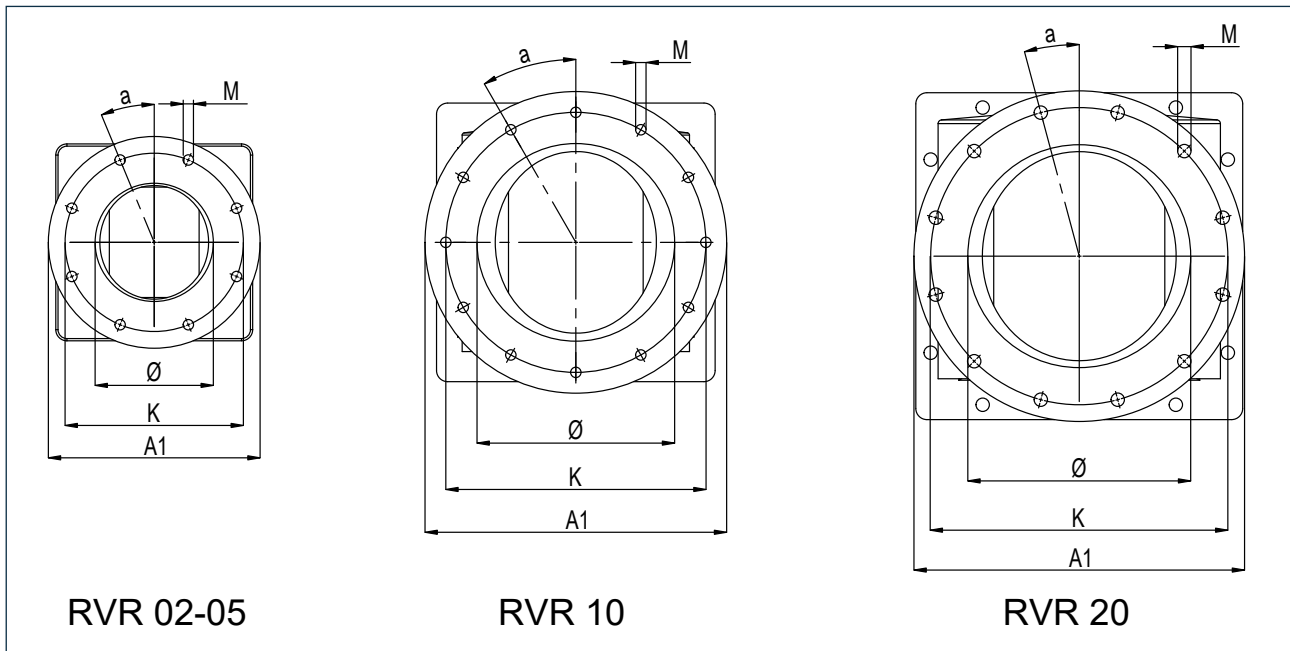
dimensions in mm

WAM drillings



TYPE	A	B	C	D	E	Compatible with WAM flanges	
						XBQ	VL
RV 02	265	150	230	12.5	/	015A1	150
RV 05	320	200	280		93.3	020A1	200
RV 10	375	250	330		110	025A1	250
RV 20	440	300	385		128.3	030A1	300

dimensions in mm

STANDARD DRILLINGS


TYPE	A1	K	Ø	M	a
RVR 02	285	240	160	n.8 Ø14	22.5°
RVR 05	340	295	200		
RVR 10	406	350	265	n.12 Ø14	30°
RVR 20	445	400	300	n.12 Ø18	15°

dimensions in mm

