

Rotary Valves Type H-AR / H-GR / H-AX

"High-Duty" rotary airlocks & blowing seals

Application

TBMA High-Duty rotary valves are employed in the conveying and dosing of almost any kind of product in the most demanding applications. These valves are eminently suitable for handling powdered and granulated materials in pneumatic conveying systems and under atmospheric conditions.

All High-Duty models are ATEX 95 certified.

The three High-Duty models are each suited for a specific application purpose.



Rotary valves Type H-AR

The H-AR type valve is basically suitable for almost any application you can think of. The valve functions mainly as an air- or explosion barrier or for dosing/discharging of a wide variety of materials. H-AR valves can be employed as a protective system up to 10 bar when handling dust explosion hazardous materials (dust explosion barrier). The valve is also very suitable for dosing in a pneumatic conveying system when used in combination with a blow-trough or ventury adaptor. H-AR valves create a high filling efficiency and capacity due to their effective inlet shape.

- Size DN 150 - DN 500
- Rotor volume 2,5 up to 125 ltr./rev



Blowing seals Type H-GR

TBMA H-GR type blowing seals have the same characteristics as the H-AR type valve but are employed in the direct dosing of powdered and granulated materials into pneumatic conveying systems.

They are therefore designed with cast pipe inlet and outlet connections allowing the valve to be directly mounted in the conveying line.

The design of the conical transition area below the rotor ensures the efficient emptying of each rotor pocket.

- Size DN 150 - DN 350
- Rotor volume 2,5 up to 58 ltr./rev



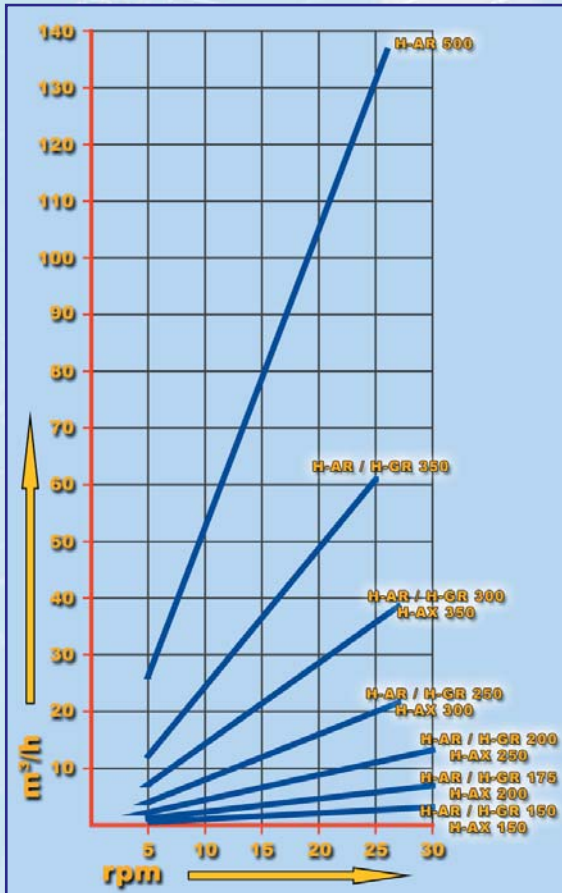
Rotary valves Type H-AX

The TBMA H-AX valves find their application mainly in situations where the flange size has a higher priority than valve capacity. The valve offers a relative large flanged diameter in relation to the rotor capacity for easy discharging of even very poor flowing materials.

H-AX type valves are manufactured with a square and circular flange. It is therefore possible to use the valve as a transition connection from square to round or vice versa. Both flange sides have a double shearing edge and the valve housing is executed with cast air vent provisions in both directions. This means a considerable reduction in installation height and cost for expensive transition flanges.

- Size DN 150 - DN 350 (square/round)
- Rotor volume 2,5 up to 34 ltr./rev

Capacity graph (filling degree 70%)



Specific features:

- ATEX 95 certified for both dust and gas zones
- Protective system/dust explosion barrier (H-AR type valves) Certified explosion- and flame proof up to 10 bar
- High filling efficiency created by effective inlet shape
- Max. operating pressure differential 1,5 bar
- Close running tolerance due to adjustable- and replaceable rotor blades
- Minimal air leakage
- Direct- or chain drive
- Standard design temperature 120°C.

Construction materials:

Body and end covers

- Cast iron, stress relieved
- Cast iron, internally hard chrome plated
- Cast iron, chemically nickel plated
- Cast iron, internally PTFE coated
- Cast iron, internally Tungsten Carbide coated
- Stainless steel

Rotors

- Steel
- Steel, partial hard chrome plated shaft ends
- Steel, Tungsten Carbide coated shaft ends
- Steel, PTFE coated rotor blades
- Stainless steel

Rotor blades

- Steel
- Steel, hard chrome plated
- Hardened steel
- Stainless steel
- Resins (Vulkollan, Teflon, Viton etc.)
- Brass/bronze (non-sparking applications)
- Hardox 400

Execution:

Rotor bearing arrangement

- Outboard, dust-tight ball bearings "sealed for life"
- Heat resistant slide bearings, suitable for temp. up to 350°C.

Shaft sealings

- Gland packing, standard
- Gland packing, sanitary standards
- Gland packing, suitable for temp. up to 450°C.
- Shaft sealing with wear bush (Garlock)
- Air purge seals in various executions

Drive

- Geared drive unit, with chain drive in an enclosed guard
- Geared drive unit, directly connected

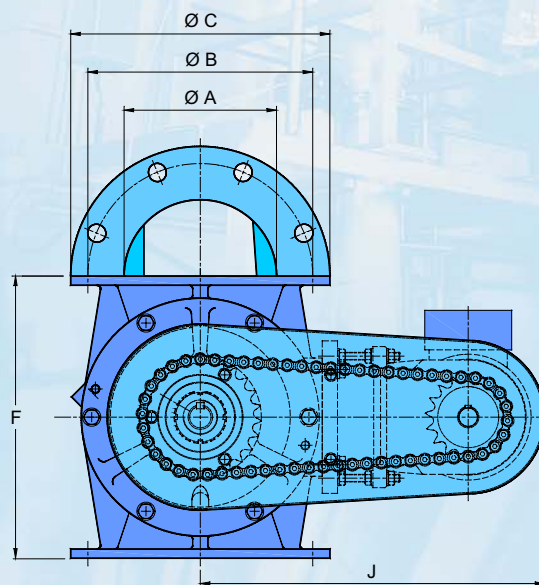
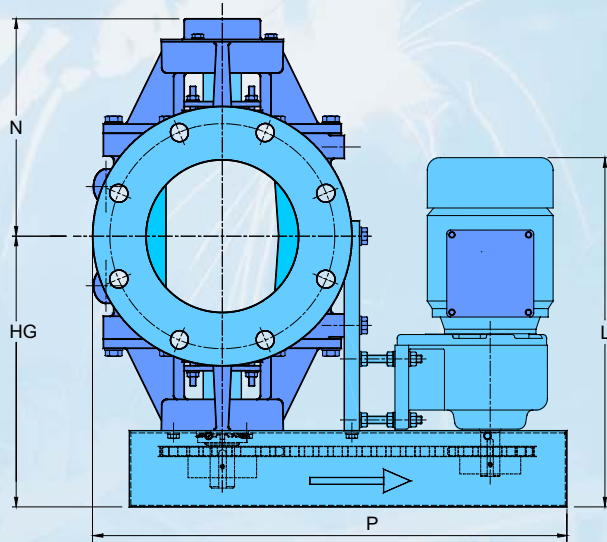


Options:

- Corrosion- and abrasion resistant executions
- Special shaft seal executions
- Rotors in various special executions
- Special flange drilling pattern
- Heat resistant execution up to 450°C.
- Pulsed air injection system
- Venting facility on valve body
- Shear-pin safety and clutch couplings
- Rotational speed transducers
- Sanitary execution for pharmaceutical- and food industry
- Quick demountable valve in various executions.
- Quick release rotor system with support track in various executions
- Wide range of ventury and conveying adapters
- Wide range of inlet adapters and feed restrictors
- Mobile valve execution



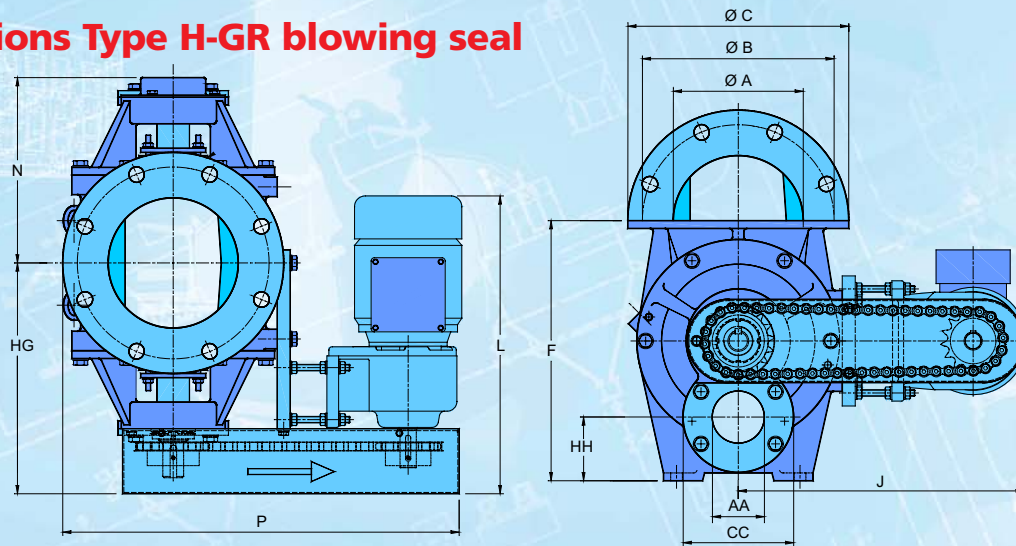
Dimensions Type H-AR rotary valve



H-AR	Ltr/rev	kW	A	B	C	HG	N	P	L	F	J	kg
150	2,5	0,25	150	240	285	273	228	485	398	260	342	73
175	5,5	0,37	175	270	315	320	250	550	423	320	392	95
200	10,5	0,55	200	295	340	355	285	622	458	370	452	145
250	19,0	0,75	250	350	395	380	310	720	482	430	522	220
300	34,0	0,75	300	400	445	430	365	785	482	520	562	313
350	58,0	1,1	350	460	505	465	400	875	525	610	622	450
500	125,0	2,2	500	620	670	631	550	1072	596	780	737	950

Standard flange drilling: PN 10 (Alternative drilling patterns on request) All dimensions are in mm and might be subject to change

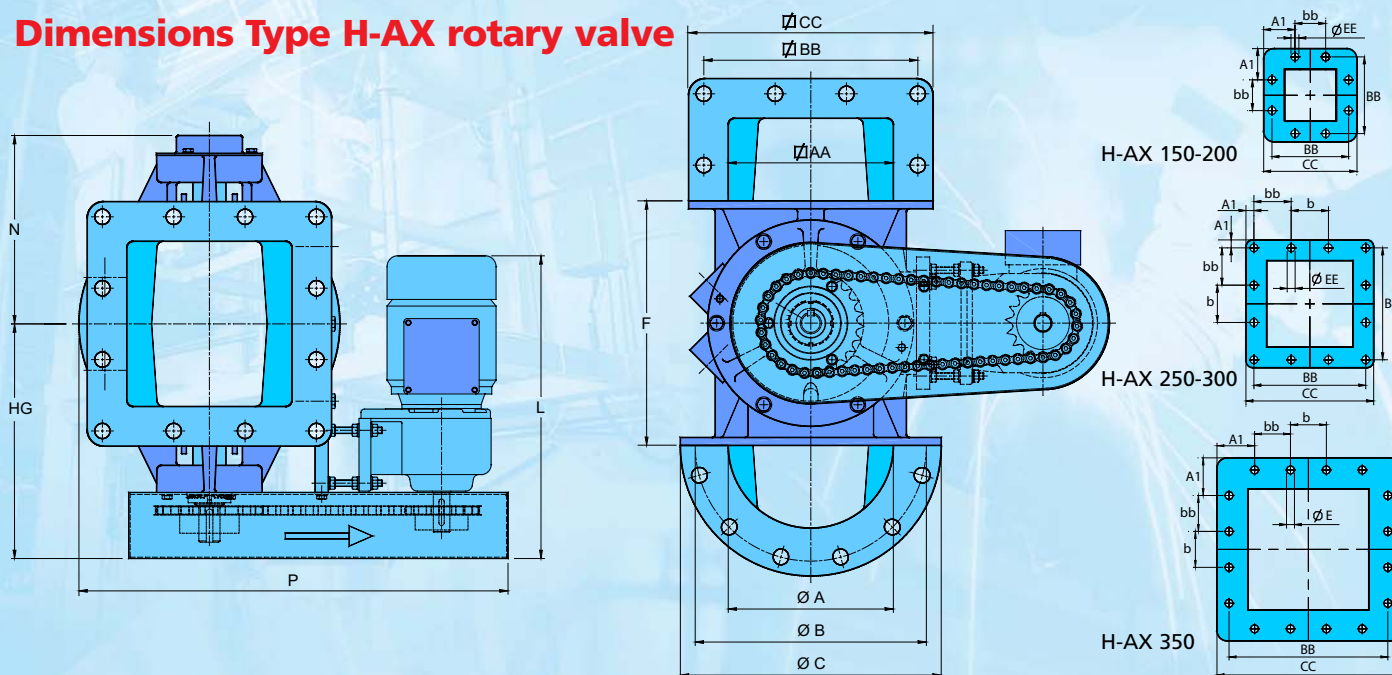
Dimensions Type H-GR blowing seal



H-GR	Ltr/ rev.	kW	A	B	C	N	HG	L	P	J	F	HH	AA	CC	kg
150	2,5	0,37	150	240	285	228	273	398	480	337	280	73	50	120	75
175	5,5	0,37	175	270	315	250	320	423	526	368	335	79	65	150	93
200	10,5	0,75	200	295	340	285	355	482	610	440	400	98	80	170	165
250	19,0	0,75	250	350	395	310	380	482	678	480	465	110	100	200	200
300	34,0	1,5	300	400	445	365	450	545	778	555	555	125	125	230	350
350	58,0	1,5	350	460	505	400	485	545	873	620	645	130	150	240	490

Standard flange drilling: PN 10 (Alternative drilling patterns on request) All dimensions are in mm and might be subject to change

Dimensions Type H-AX rotary valve



H-AX	Ltr/rev	kW	A / AA	A1	B	b	BB	bb	C	CC	N x Ø EE/E	HG	F	J	L	N	P	kg
150	2,5	0,25	150	89	240	-	222	92	285	270	8x Ø 23	273	260	342	398	228	485	73
200	5,5	0,37	200	103,5	295	-	273	113	340	320	8x Ø 23	320	320	392	423	250	550	95
250	10,5	0,55	250	23	350	108	324	108	395	370	12x Ø 23	355	370	452	458	285	622	145
300	19,0	0,75	300	28	400	128	384	128	445	440	12x Ø 23	380	430	522	482	310	720	220
350	34,0	0,75	350	109	460	104	460	104	505	530	16x Ø 23	430	520	562	482	365	785	313

Standard flange drilling: PN 10 (Alternative drilling patterns on request) All dimensions are in mm and might be subject to change

All rights reserved. Reproduction or issue to third parties in any form whatever is not permitted without written authority from the proprietors. TBMA reserve the right to make alterations in construction and/or dimensions without further notice. Illustrations and specifications may differ from final execution. Although this information has been compiled with the utmost care, no liability can be assumed for inaccuracies of any kind. © Copyright by TBMA - HDV/UK 11-2006

tbma europe bv

P.O. Box 140 NL-2210 AC Noordwijkerhout - Holland
 Delfweg 18 NL-2211 VM Noordwijkerhout - Holland
 Tel.: +31(0)252 37 50 68 Fax: +31(0)252 37 54 36
 E-mail: info@tbma.com www.tbma.com

For more information