PRODUCT CATALOGUE

FEEDERS & AIRLOCKS

anval

Disclaimer:

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The photographs, illustrations, drawings and descriptions contained in this publication are not intended to depict actual operating conditions or to suggest operating procedures. They are included only for the purpose of portraying the features of the machinery.

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ANVAL PRODUCT CATALOGUE

Feeders & Airlocks

Valve Selection Chart

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VALVE SELECTION CHART

Valve Type		Material Type						Diff. Pressure (kPa)			Temperature (°C)				Remarks
		GRANULAR	LARGE CHIP	STRINGY	FLUFFY	ABRASIVE	STICKY	<20	20 - 50	50+	<150	<250	<400	>400	
A	AIRLOCKING														Use Larger Size 1
	RL								5						Rubber tipped 2
	RS								5						Vibrate Upstream 3
	RH		1 2 10	1 2	1 3				5	4 5		7 8	6 7 8	6 7 8 9	Vent valve 4
	RFS		1 10	1	3					4 5		7	6 7 8	6 7 8 9	Grease Purge seals 5
	DH									5		5 7	6 7	6 7 9	Air Purge Seals 6
B	METERING														High Temp Seals 7
	RL								5						Machine to table 8
	RS								5						Insulation Spacer 9
	RH		1 2 10	1 2	1 3				5	4 5		7 8	6 7 8	6 7 8 9	Deflector Plate 10
	RFS		10	1	3					4 5		7	6 7 8	6 7 8 9	Outlet Adaptor 11
	DH									5		5 7	6 7	6 7 9	
C	ISOLATION														
	SG				1		1					7		7	
	SL				1		1					7			
	DH									5		5 7	6 7	6 7 9	
D	PNEUMATIC TRANSFER														
	BH									4 5		7 8	6 7 8	6 7 8 9	Very Good
	BHS									4 5		7 8	6 7 8	6 7 8 9	Good
	RH	11		1 2 11	1 3 11	11	11	11	5 11	4 5 11	11	7 8 11	6 7 8 11	6 7 8 9 11	
	RFS	11		1 11	3 11	11	11	11	11	4 5 11	11	7 11	6 7 8 11	6 7 8 9 11	

Note: This chart is indicative and for guidance only.

Valve Selection Chart for ATEX

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VALVE SELECTION CHART FOR ATEX

Valve Type		Material Type						ATEX Zone			Diff. Pressure (kPa)			Temperature (°C)			
		GRANULAR	LARGE CHIP	STRINGY	FLUFFY	ABRASIVE	STICKY	20/21	21/22	22	0 - 20	20 - 50	50+	<150	<250	<400	>400
A	AIRLOCK																
	RLX											5					
	RHX		1 2 10	1 2	1 3							5	4 5		7 8	6 7 8	6 7 8 9
	RFSX		1 10	1	3								4 5		7	6 7 8	6 7 8 9
	RSX											5					
B	METERING																
	RLX											5					
	RSX											5					
	RHX		1 2 10	1 2	1 3							5	4 5		7 8	6 7 8	6 7 8 9
	RFSX		1 10	1	3								4 5		7	6 7 8	6 7 8 9
C	PNEUMATIC TRANSFER																
	RHX	11		1 2 11	1 3 11	11	11				11	5 11	4 5 11	11	7 8 11	6 7 8 11	6 7 8 9 11
	RFSX	11		1 11	3 11	11	11				11	11	4 5 11	11	7 11	6 7 8 11	6 7 8 9 11

Remarks

1. Use Larger Size
2. Rubber tipped
3. Vibrate Upstream
4. Vent valve
5. Grease Purge seals
6. Air Purge Seals
7. High Temp Seals
8. Machine to table
9. Insulation Spacer
10. Deflector Plate
11. Outlet Adaptor

Very Good

Good

Note: This chart is indicative and for guidance only.

Contents

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Company Overview

Established in 2008, Anval Valves has built a reputation as the market leader in the design and manufacture of valves, feeders and airlocks. Born from the Australian thermal processing specialist Ansac, Anval is able to draw from over theree decades of industry experience to deliver the highest quality equipment for some of the most demanding applications in the world.

Anval is constantly developing and widening its range of equipment to cater for the increasingly demanding needs of their customers. While most industries routinely handle powdered substances en-mass, each material will have specific needs that will need to be tailored to ensure efficiency is maintained. From simple pellets to raw coal, from sticky biomass to abrasive alumina, Anval's in-house engineering team has provided solutions to a dazzling array of material handling problems.

Anval prides itself on using simple and robust design solutions to effectively fulfil customers' performance requirements. Committed to customer satisfaction, Anval will not only provide an effective design solutions, but will also ensure spare parts supply and full service support throughout the lifetime of the product.

Our Sister Companies

Ansac

Ansac, the Australian thermal processing specialists, have been supplying high quality industrial equipment to some of the world's leading material handling companies for over three decades. Though Ansac's primary speciality has always been in the thermal processing market, the manufacture of high quality valves for the bulk handling of materials has long been a business strength.

The key to all Ansac-designed products is their simplicity and flexibility. This ability to provide such products is based on the accumulated knowledge of decades of industry experience that feeds directly into on-going research and development programmes, ensuring market leading innovation and reinforcing their global reach.

Anval has taken the philosophy of Ansac and integrated it into their own business model ensuring consistent, durable and versatile design. Combining this consistency with their passion for innovation and performance has allowed Anval to establish itself at the forefront of the bulk materials handling market.

Anergy

Anergy is based in the UK to take advantage of the vibrant renewable energy market of Europe and North America. Anergy designs and offers a range of pyrolysis, gastification and combustion technologies to process a wide range of green and waste feed stocks for energy generation purposes. Supported by the Australian Federal Government and the University of Western Australia, Anergy has ensured that the capital costs are non-prohibited to the lower and mid

Our Core Products

Anval's extensive range of products for feeding, air locking and isolation duties can be broadly grouped as:

- Rotary Valve Range
  - Drop Through - RL, RS, RH, RFS Series
  - Blow Through - BH Series
- Slide Gate Valves - SL, SG Series
- Dump Valves - DH Series

ATEX Product Valve Range

- Rotary Valve Range
  - Drop Through - RLX, RSX, RHX, RFSX Series

Rotary, Slide Gate, Dump and Blow Through Valves

Materials

- Abrasive
- Fluffy
- Stringy
- Large chips
- Hygroscopic
- Corrosive
- Acid
- Granular

Prime Functionalities

- Airlocking
- Metering
- Isolation
- Pneumatic transfer

Applications

- Hopper
- Cyclone / Bag filter
- Silo
- Screw conveyor
- Blender
- Bulk truck
- Container
- Boilers
- Sand separator
- Weigh hopper
- Vacuum conveyor
- Dryer

Explosive Environment

Industries

- Cement
- Flour
- Grain
- Chemical
- Pharmaceutical
- Sugar
- Glass
- Plastics
- Power plants
- Wood chip
- Biomass
- Foundry
- Metals & minerals
- Food

Rotary Airlock Valve Range Capacity Table

Selection	**RL / RS** Series	**RH** Series	**RFS** Series	**BH** Series
Capacity (Max)	33.6 m^3/hr	344 m^3/hr	621 m^3/hr	76 m^3/hr

Product Range

Rotary Airlock Valve Range

Anval offers a wide variety of rotary valves which are used effectively in industries ranging from light agriculture to heavy minerals.

Anval's Rotary valves will operate efficiently in higher temperatures whilst handling volumes of up to 621m^3/hr ensuring performance under the most challenging of conditions. Not only are the rotary valves robust, rigid and durable but they can also be customised to the specific requirements of a given application.

RL Series
Simple, Stable and Economical Airlocks

Anval RL Series Valves are available with opening sizes from 150 to 300mm and are designed to be easily installed in the shortest time, requiring very little maintenance.

RS Series
Corrosion Resistant Rotary Valves

Anval RS Series Rotary Valves are in complete cast Stainless Steel construction with internal surfaces machined to high precision. Comes with opening sizes from 150 to 300mm as standard and can be customizable in above sizes.

RH Series
Robust, Versatile and Highly Efficient

The RH Series Rotary Valve serves an extensive range of industrial applications from heavy minerals processing to light dusts management. The valves will perform well even in the most challenging of environments. These qualities have made Anval the preferred supplier to some of the world's largest mining companies.

Available with opening sizes from 150 to 750mm, the Anval RH Series valve is made from a single piece of cast iron as opposed to multiple, mild steel parts which are the preferred material construction of many of our competitors. The materials used by Anval provide improved corrosion resistance and increased thermal stability, prolonging the operating life of the valve.

RFS Series
The Tough, Hard Wearing Airlock or Metering Solution

The Rotary Floating Shoe or RFS valves form an integral part of the Anval range and are specifically designed for high wear applications. These valves, composed of a cast iron body with bolt on side plates and a webbed rotor, can be used in both positive and negative pressure applications.These valves designed to create additional sealing performance through the use of "Floating Shoe" to transport even the most abrasive material and still have a prolonged lifecycle when compared to its rivals.

Blow Through Valve Range

With the Blow-through valve the conveying air passes through the purges and discharging pockets such that the material entrainment into the conveying pipeline actually take place in the valve itself.

These valves are primarily intended for the use with more cohesive types of materials.

BH Series
High Efficiency Blow Through Valves

The BH Series valve is specifically designed for pneumatic conveying systems, and best suited to non-abrasive products; this is a highly efficient valve that ensures the smooth flow of materials whilst significantly diminishing a loss of pressure.

As with all Anval products, the BH Series is designed to exacting standards aimed at providing a long and effective valve life.

Slide Gate Valve Range

The Anval Slide Gate valve Series is designed to provide a quick acting isolation valve unit that can be installed into a bulk handling flow path to stop material flow. The Anval slide gate valves are excellent for industries and applications where the isolation of solids is needed. This is achieved through the forcing of the blade into the valve seat by the cam rollers.

Anval slide gate vales are simple and compact in design, robust in structure, harness excellent technology and are easy to install. These valves are designed to handle bulk materials for all industrial applications, both continuous and intermediate operation.

SL Series
A Simple, Robust and Economical Isolation Unit

The Anval SL Series Valves are currently in use on storage bins, silos, conveyors and an ever extending range of material handling discharge points. Available with opening sizes from 150 to 300mm.

The SL Series Valve has a simple and compact design with a pressure tight support frame. This ensures efficient flow management without clogging and with minimal leakage in both continuous and intermediate operations.

SG Series
Absolute Isolation for Solids Applications

The SG Series valve are in single piece cast utilises a robust, yet compact design that effects the isolation of solids when the blade is moved into the valve seat by the cam rollers. Available with opening sizes from 350 to 750mm.

The SG Series design standards are fully compliant with Industry Standard specifically ISO185 besides meeting the high internal design requirements. Its ease of use and robust nature has made the SG series the preferred choice in the solids handling industry.

Dump Valve Range

The Anval Dump Series Valve offers a low cost, versatile air locking solution for bulk solids handling. The Valve restricts backflow of air whilst simultaneously discharging material under a vacuum or pressurised environment.

DH Series
A Low Cost and Efficient Airlock Under Vacuum or Pressure Conditions

The DH Series is designed to provide a continuous discharge of materials whilst ensuring complete sealing of the flow path. The sturdy design standards will warrant minimal maintenance and permit a highly efficient and reliable product life. Available with opening sizes from 150 to 350mm.

ATEX Valve Range

RLX Series
Simple, Stable and Economical Airlocks

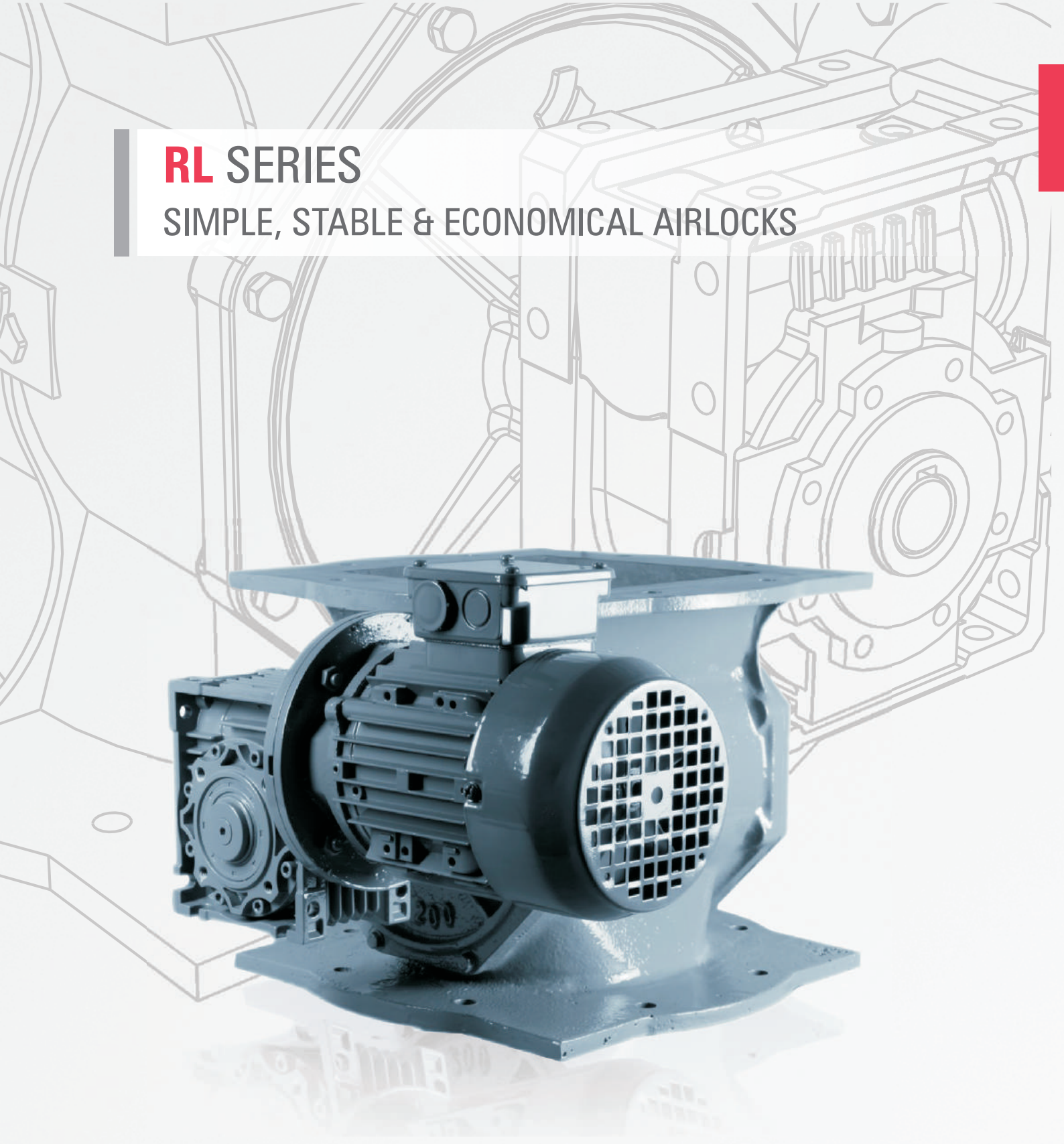
RSX Series
Corrosion Resistant Rotary Valves

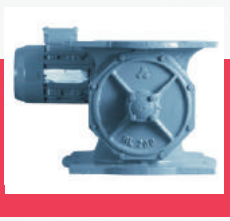
RHX Series
Robust, Versatile and Highly Efficient Heavy Duty Rotary Valves

RFSX Series
The Tough, Hard Wearing Airlock or Metering Solution

RL SERIES

SIMPLE, STABLE & ECONOMICAL AIRLOCKS





Product Overview

The RL series valves are of valves are the embodiment of Anval's simple design solutions, offering a low maintenance and ready to use product.

Suitable for use in heavy mineral industries to light agricultural applications, the RL Series is cost effective and robust in design. The valves are available in opening sizes ranging from 150 mm to 300 mm.

Product Features

- Robust design
- High performance drive
- No complex adjustments
- Minimal maintenance requirements
- Heavy-duty sealing capacity
- Available in Direct/Chain drive types
- Excellent airlock performance
- Cost effective
- Universal square flange

Applications

Ideally suited for dust collection systems or solid metering applications, the Rotary Air Lock Valves can serve a vast range of industries and applications.

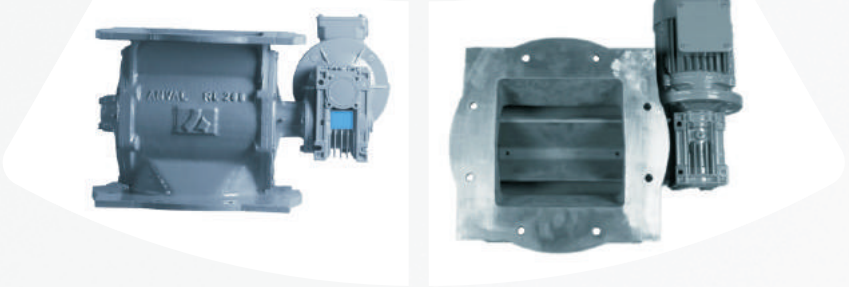
RL Series are employed in the process of solid gas separation applications or solid metering applications.

The RL Series Valves are best suited for the following applications:

- Dust collection systems
- Rice and flour mills

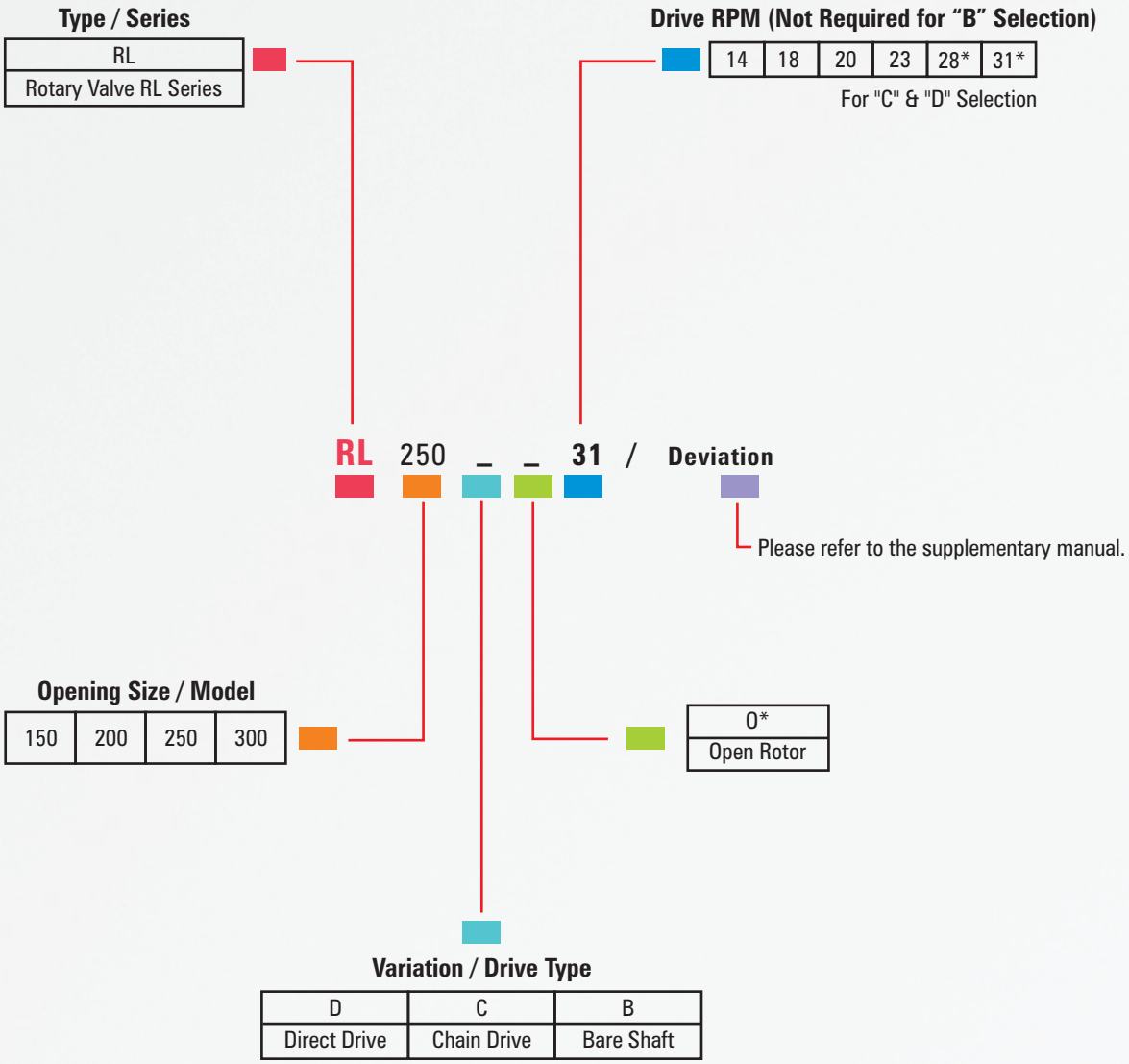
Product Specifications

Opening Size	:	150, 200, 250, 300 mm
Flange Opening	:	Universal with square opening
Drives	:	Direct Driven / Chain Driven/ Bare Shaft
Material of Construction	:	Cast Iron
Capacity Range	:	Up to 33 m^3/hr Max.
Painting Standard	:	Dark Grey Blue
Bearings	:	Inboard
Shaft	:	CS1030
Seals	:	Labyrinth Seals (Sealing Washer)
Special Seals	:	Grease Purge / Air Purge
Gearbox	:	Heliworm Gears (D) / Helical Gears (C)
Rotor Type	:	Open Rotor
Surface Treatment (Anval standard)	:	50μm Wattyl Rapid Prime (Grey) 50μm Wattyl Paracryl IFC tinted to B53 dark Grey Blue; Guards tinted to Y14 Golden Yellow.



Product Codification

The table below represents the codification format for choosing the model

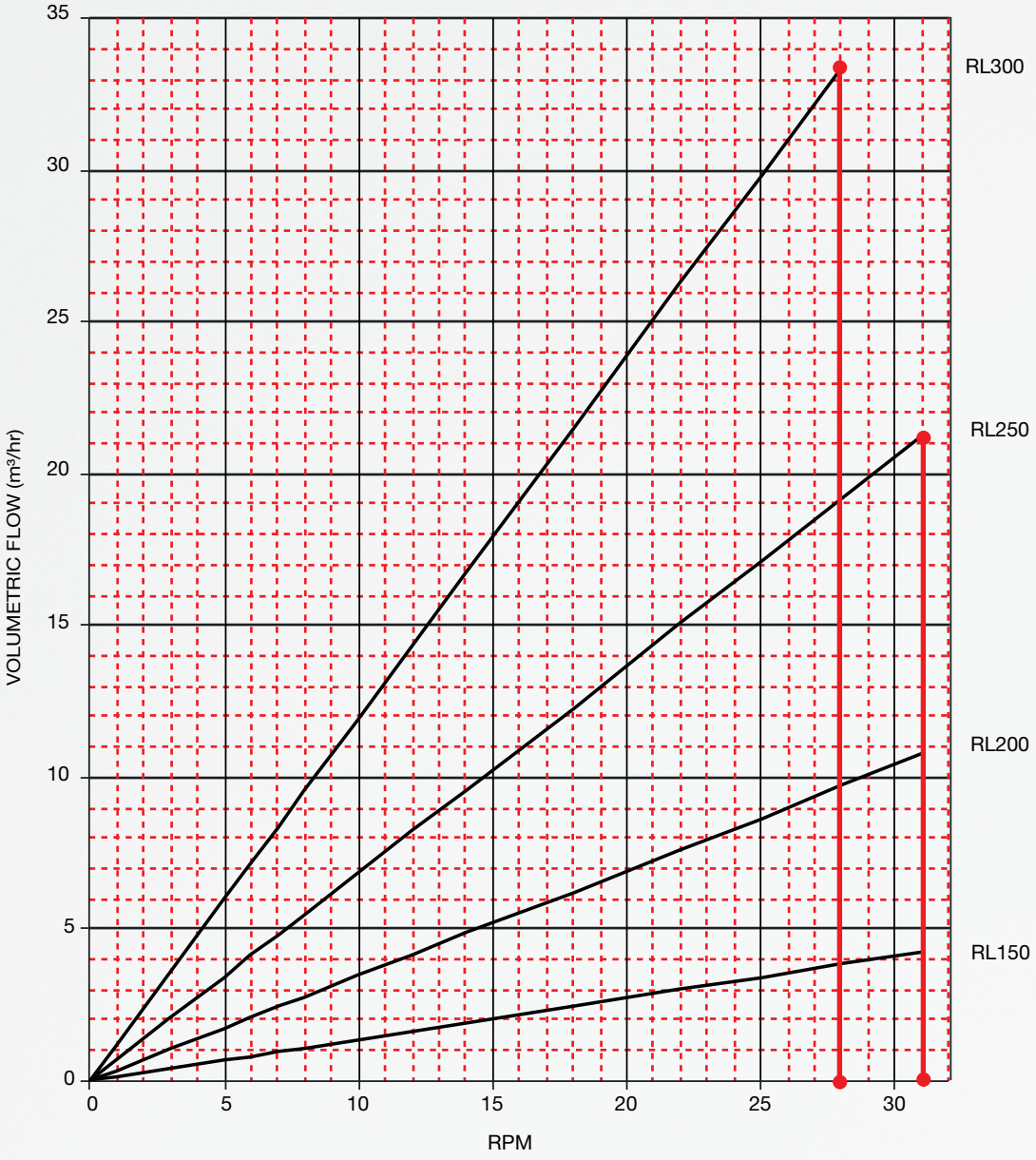


*Default Selection

RI150 / 200 / 250 - 31 RPM
RL300 - 28 RPM

Model Selection Chart

Speed Vs Throughput

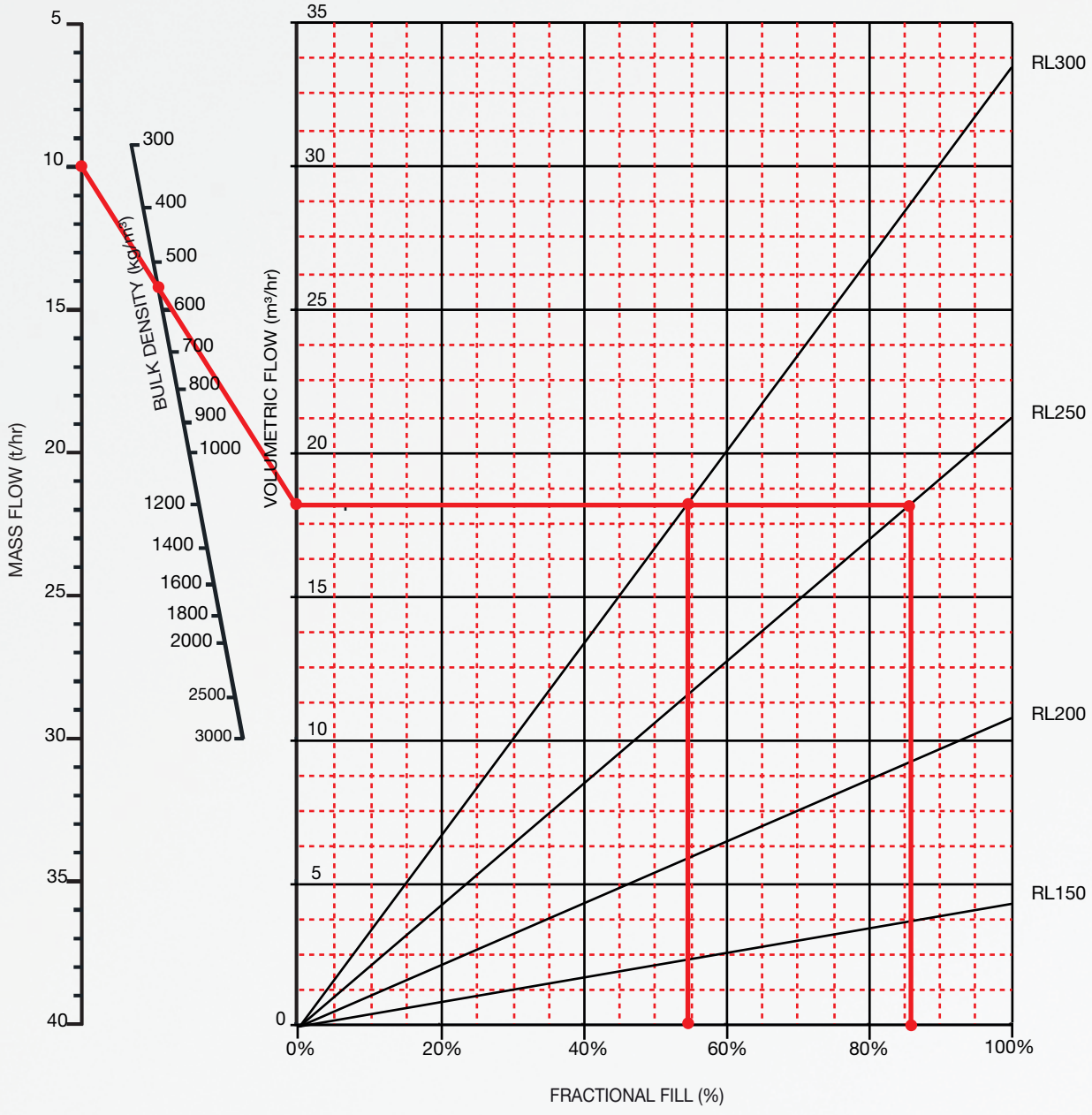


Model	Speed (RPM)	Capacity (m^3/hr)
RL150	31	4.2
RL200	31	10.7
RL250	31	21.2
RL300	28	33.4

31 RPM default for RL150 / 200 / 250
28 RPM default for RL300

Note: This chart is prepared for guidance purpose only, considering 31 RPM for RL150/200/250 and 28 RPM for RL300.

Capacity Chart



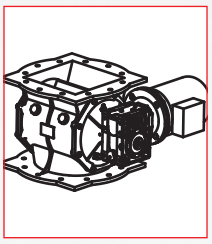
Example: A material with a density of 550kg/m^3 and required capacity of 10t/hr will operate at 86% filling capacity with 31 RPM and also by RL 300 at 54% filling capacity with 28 RPM.

Note: This chart is prepared for guidance purpose only, considering 31 RPM for RL150/200/250 and 28 RPM for RI300.

Defining Features

RL Body

The standard RL Series body is cast from a single piece of iron, reducing the prevalence of seams, in turn increasing corrosion resistance and durability. This unique trait also lends itself to increase thermal stability of the valve.

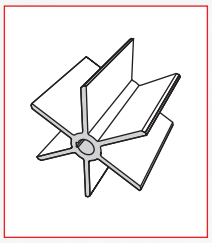


RL Body

Open Rotor

Open Rotors refer to the open pocket at each end of the rotor.

The RL Series rotors, by default come with 6 vanes and a close radial clearance tolerance of 0.15 mm (max).

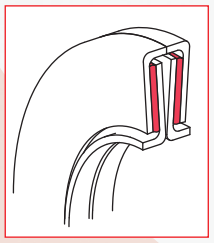


Open Rotor

Labyrinth Seal

A Labyrinth Seal is a mechanical seal that fits around the axle or shaft to prevent any leakage of particles and is composed of many threads or grooves that are tightly fit inside the casing, thus making it difficult for the dust to pass through.

By providing a non-contact sealing action on the rotating shafts, the passage of particles through a variety of chambers by centrifugal motion is controlled. 'Double Labyrinth Seals' fitted with flock pads, and greased on each side of the valve, are standard with all Rotary Valves. Double “Labyrinth Seals” are filled with flock pads and greased on either side of the valve. This procedure is standard with all of the Rotary Valves.



Labyrinth Seal

Key Features

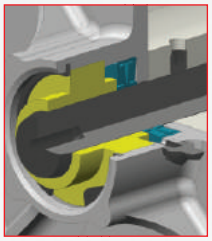
- Longer life span
- No scoring on the shaft
- No need for adjustments
- Overall cost reduction

Defining Features

Purge Sealing

Grease Purge (G) Sealing as Standard

For extreme duty, valves can be fitted with a grease purge unit over a labyrinth seal. By creating a grease filled cavity between the seals, it prevents the escape of any dust particles or gases.



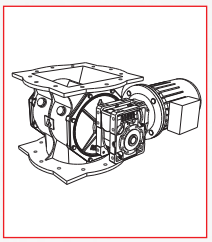
Grease Purge (G) Sealing

Air Purge (A) Sealing as Optional

When grease cannot be used, air or other gases can be used to purge the seal so all dust particles or product cases are flushed back into the product stream.

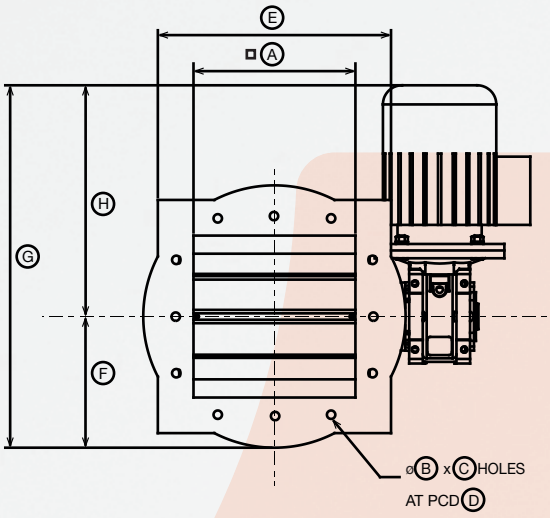
Air Vent / Cleaning

Based on the application requirement, air vent is optionally available for rotary valve to release the gas leakage when feeding a positive pressure system.

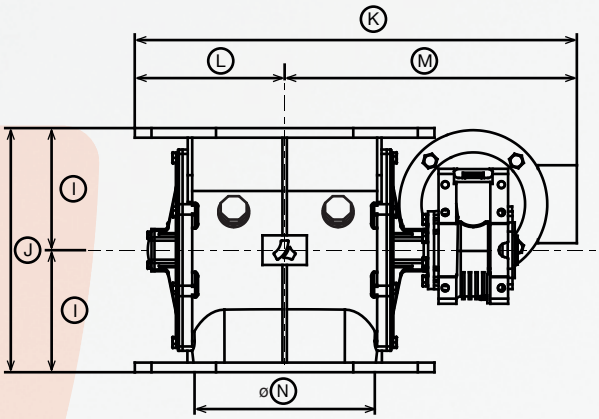


Air Vent / Cleaning

Direct Drive - Dimension Details



TOP VIEW



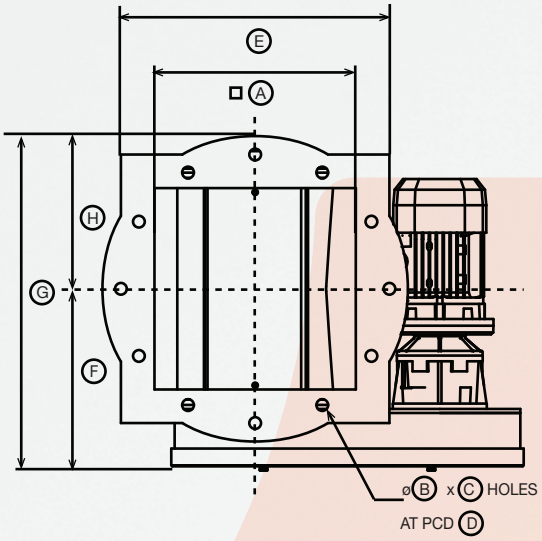
FRONT VIEW

NAME	RL 150	RL 200	RL 250	RL 300
A	150	200	250	300
B	13	13	13	18
C	8	8	12	12
D	240	295	350	400
E	□250	□305	□360	□400
F	140	170	202.5	228
G#	429	459	560	616
H#	289	289	357	388
I	105	135	165	200
J	210	270	330	400
K#	444	492	598	649
L	140	170	203	228
M#	304	322	395	408
N	147	198	249	299
Net Weight	29	47	65	93
Gross weight	34	55	75	105

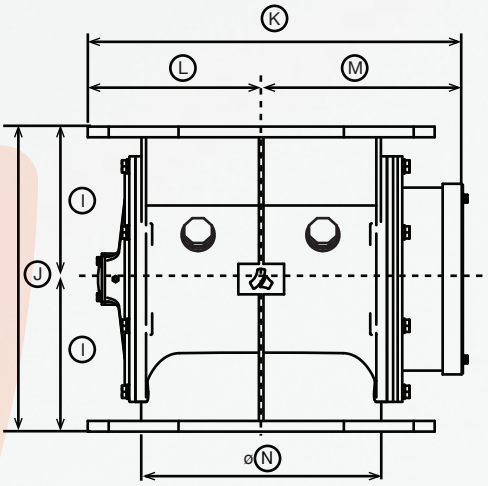
All dimensions in mm. Weight in Kgs

#Approximate dimensions only; dimensions vary with motor size and gear box variation.

Chain Drive - Dimension Details



TOP VIEW



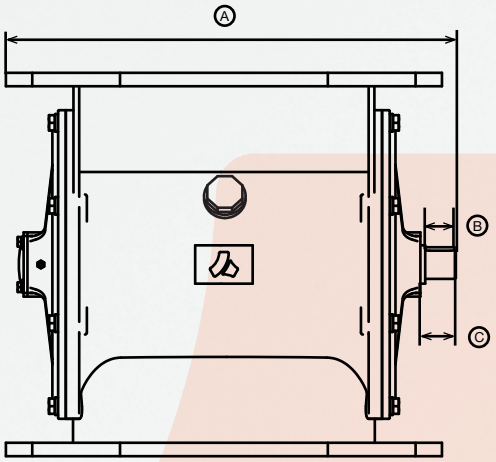
FRONT VIEW

NAME	RL 150	RL 200	RL 250	RL 300
A	150	200	250	300
B	13	13	13	18
C	8	8	12	12
D	240	295	350	400
E	□250	□305	□360	□400
F	188	170	242.5	270
G	328	386	445	498
H	140	216	202.5	228
I	105	135	165	200
J	210	270	330	400
K#	382	474	564	628
L	140	170	202.5	228
M#	242	304	361.5	400
N	147	198	249	299
Net Weight	28	46	63	90
Gross weight	33	53	73	102

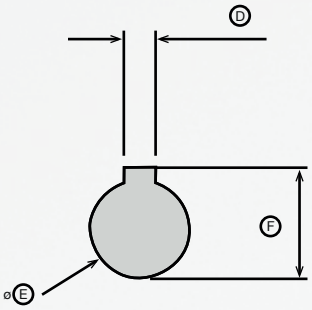
All dimensions in mm. Weight in Kgs

#Approximate dimensions only; dimensions vary with motor size and gear box variation.

Bare Shaft - Dimension Details



TOP VIEW



(BARE SHAFT)
DRIVEN SHAFT SECTION

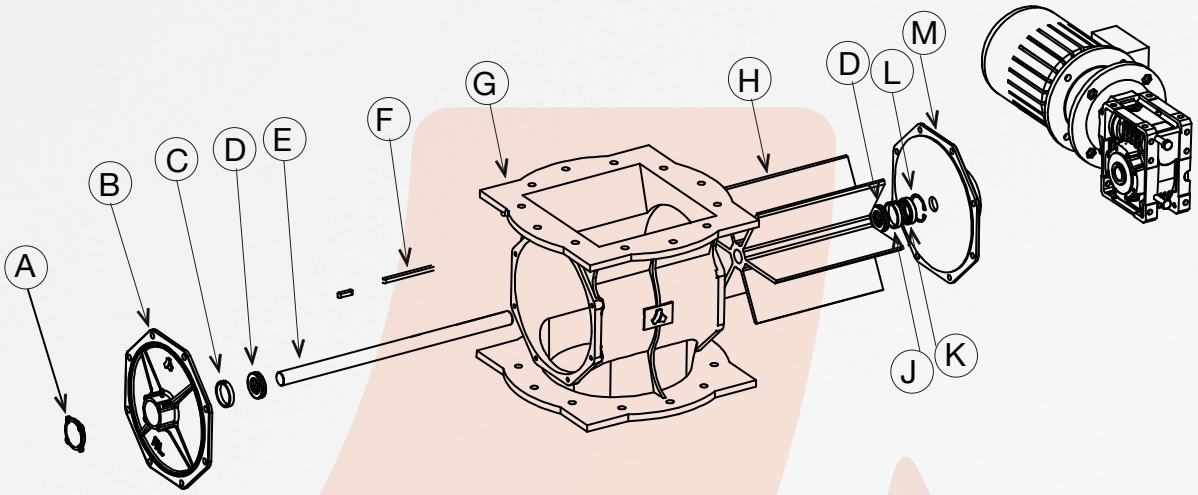
NAME	RL 150	RL 200	RL 250	RL 300
A	294	351	416	469
B	26.5	27	34	32
C	31	31	37	37
D	8	8	8	8
E	25	25	25	30
F	28	28	28.3	33

All dimensions in mm.

#Approximate dimensions only;

Component Details

Direct Drive (D)

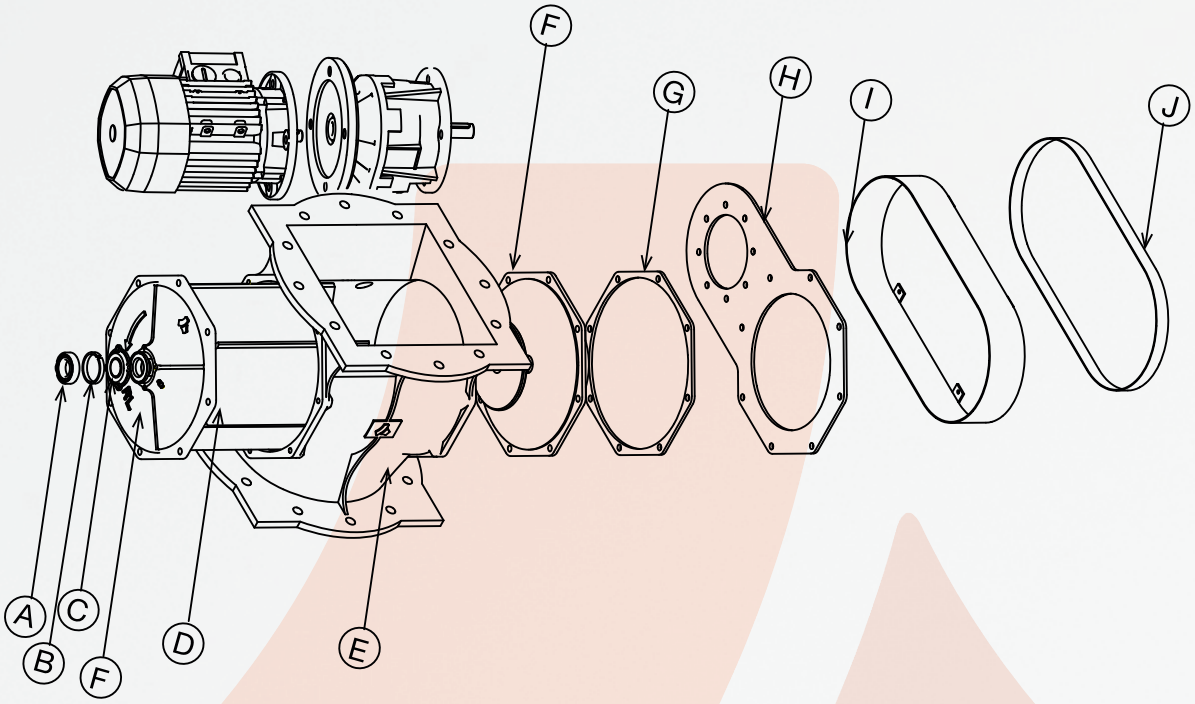


NAME	DESCRIPTION	RL 150	RL 200	RL 250	RL 300
A	Bearing End Cap	102-6267	102-6267	102-6267	102-6280
B	Bearing Side Plate	102-6265	102-6270	102-6274	102-6278
C	Bearing	102-6281	102-6281	102-6281	102-6282
D	Labyrinth Seal	100-6826	100-6826	100-6826	100-6827
E	Shaft	102-6455	102-6456	102-6457	102-6458
F	Key	101-7039	101-7039	100-6864	102-6480
G	Body	102-6264	102-6269	102-6273	102-6277
H	Open rotor	102-6291	102-6292	102-6293	102-6294
J	Spacer	102-6289	102-6289	102-6289	102-6290
K	Oil Seal	102-6284	102-6284	102-6284	102-6285
L	Circlip	100-8214	100-8214	100-8214	100-8778
M	Drive Side Plate	102-6266	102-6271	102-6275	102-6279

Note: Above details represents the part no. of each component and may subject to change with variation.

Component Details

Chain Drive(C) / Bare Shaft (B)



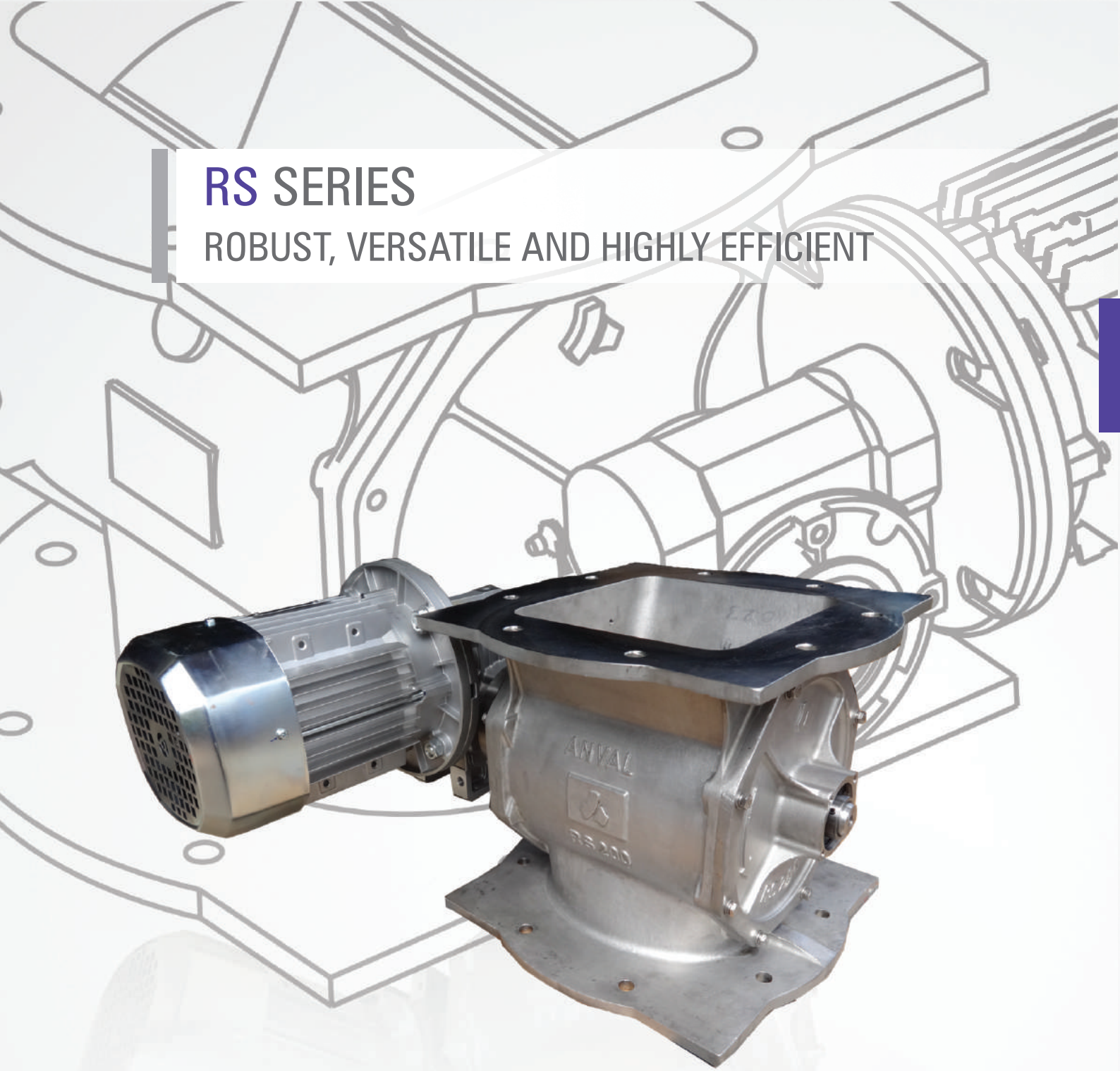
NAME	DESCRIPTION	RL 150	RL 200	RL 250	RL 300
A	Bearing	102-6281	102-6281	102-6281	102-6282
B	Spacer	102-6289	102-6289	102-6289	102-6290
C	Bearing End Cap	102-6267	102-6267	102-6267	102-6280
D	Rotor	102-6291	102-6292	102-6293	102-6294
E	Body	102-6264	102-6269	102-6273	102-6277
F	Bearing Side Plate	102-6265	102-6270	102-6274	102-6278
G	Bracket Spacer	102-9317	102-9325	102-9332	102-9339
H	Bracket	102-9318	102-9326	102-9333	102-9340
I	Chain Guard	102-9323	102-9331	102-9338	102-9345
J	Chain Guard Cover	102-9322	102-9330	102-9337	102-9344

For Bare Shaft(B), item names G, H, I and J will not be available.

Note: Above details represents the part no. of each component and may subject to change with variation.

RS SERIES

ROBUST, VERSATILE AND HIGHLY EFFICIENT






Product Overview

RS Series Rotary Valves are in SIngle piece Stainless Steel cast construction with internal surfaces machined to high precision to prevent corrosion, rust or stain problems in highly demanding application across industries.

Anval is constantly developing and widening its range of equipment to cater for increasingly demanding needs of their customers. With the three decades of experience, Anval have a vast and exciting selection of Rotary valves including the newly launched corrosive resistant RS Series that not only robust, rigid and durable but can also be customized to the specific requirements of a given application.

These valves are manufactured to robust design standards and an efficacious Quality Management System that enables the valve to operate under even the toughest conditions with minimal maintenance. This series is available with direct / chain / inline drive options, alternatively these valves can also be supplied as 'Bare Shaft'.

RS Series rotors are perfectly designed and manufactured to have a close radial and axial clearance of 0.20 mm (Max.). Comes with open-end style, as standard and also available in closed, scallopped, and reduced pocket types, adjustable flexible or wear tipped rotors are available for typical applications.

Product Features

- Investment casting for excellent surface finish
- Mirror finish internals
- Single piece cast construction with universal flange
- Drive Options: Direct or Chain or Inline
- "Labyrinth Seals" for high degree of shaft sealing
- Wide range of rotor types
- Available with Gas or Grease purging options
- Comes in opening sizes from 150 to 300 mm
- Minimal maintenance requirement

Applications

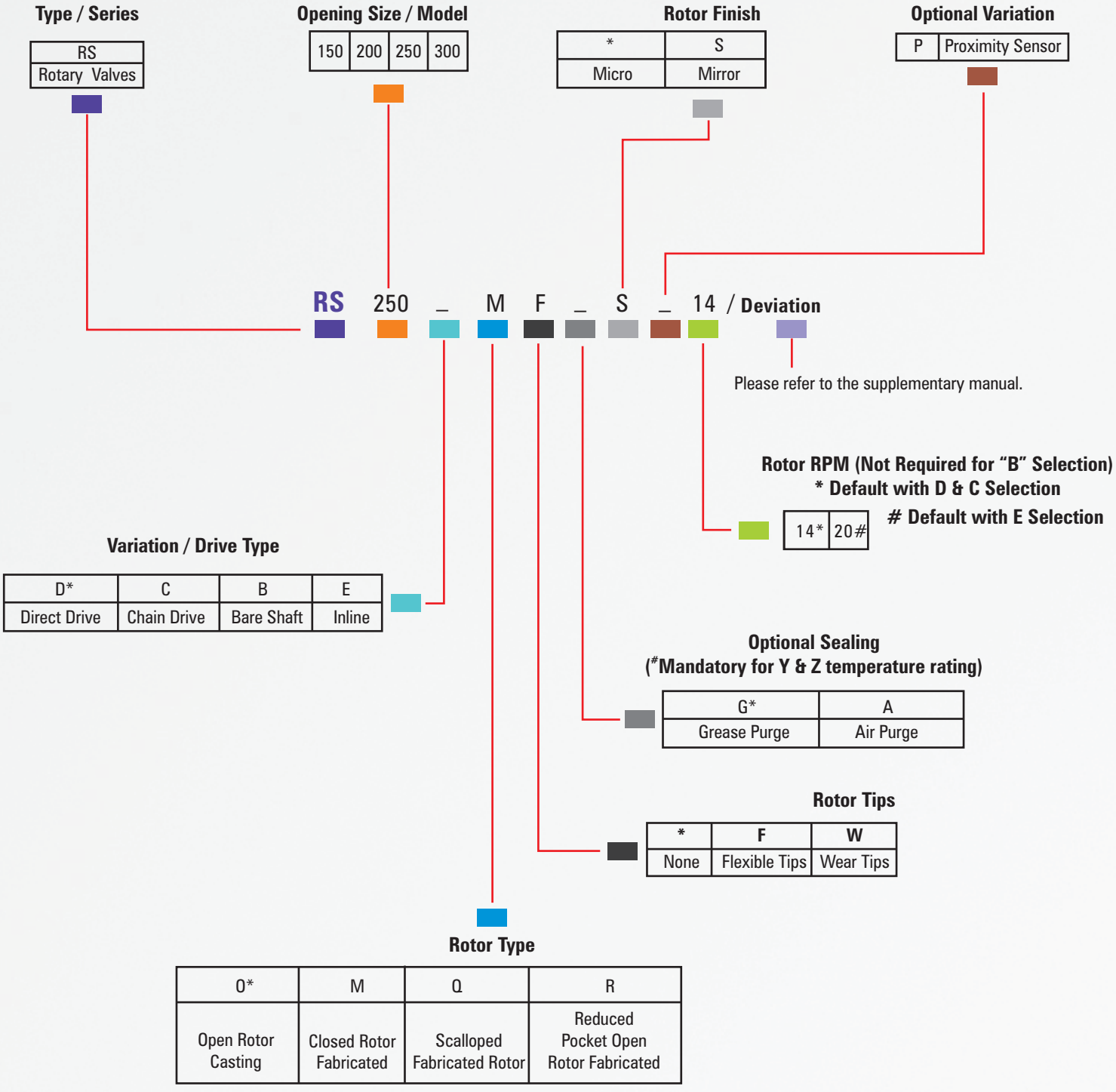
Anval RS Series Rotary valves are in complete cast Stainless Steel construction with internal surfaces machined to high precision. Ideally suited for chemical, plastic, animal feed, metallurgy, flour-mills and other food industries.

Product Specifications

Opening Size	:	150, 200, 250, and 300 mm
Flange Opening	:	Square
Drives	:	Direct Driven / Chain Driven / Inline / Bare Shaft
Material of Construction	:	Stainless Steel
Capacity Range	:	Up to 33 m^3/hr Max.
End Cover Material	:	Stainless Steel
Shaft	:	EN - 8
Seals	:	Labyrinth Seals (Sealing Washer)
Gearbox	:	Heliworm or Worm (D) / Helical Gears (C & I)
Rotor	:	Stainless Steel
Rotor Type:	:	Closed Rotor Casting (O) / Closed Rotor Fabricated (M) / Scalloped Rotor Fabricated (Q) / Reduced Pocket Open Rotor Fabricated (R)
Rotor Tips	:	Flexible Tips (F) / Wear Tips (W)
Special Seals	:	Grease Purge (G) / Gas Purge (A)
Bearings	:	Cartridge Type
Surface Treatment (Anval Standard)	:	Guards Golden Yellow Y14 for guards

Product Codification

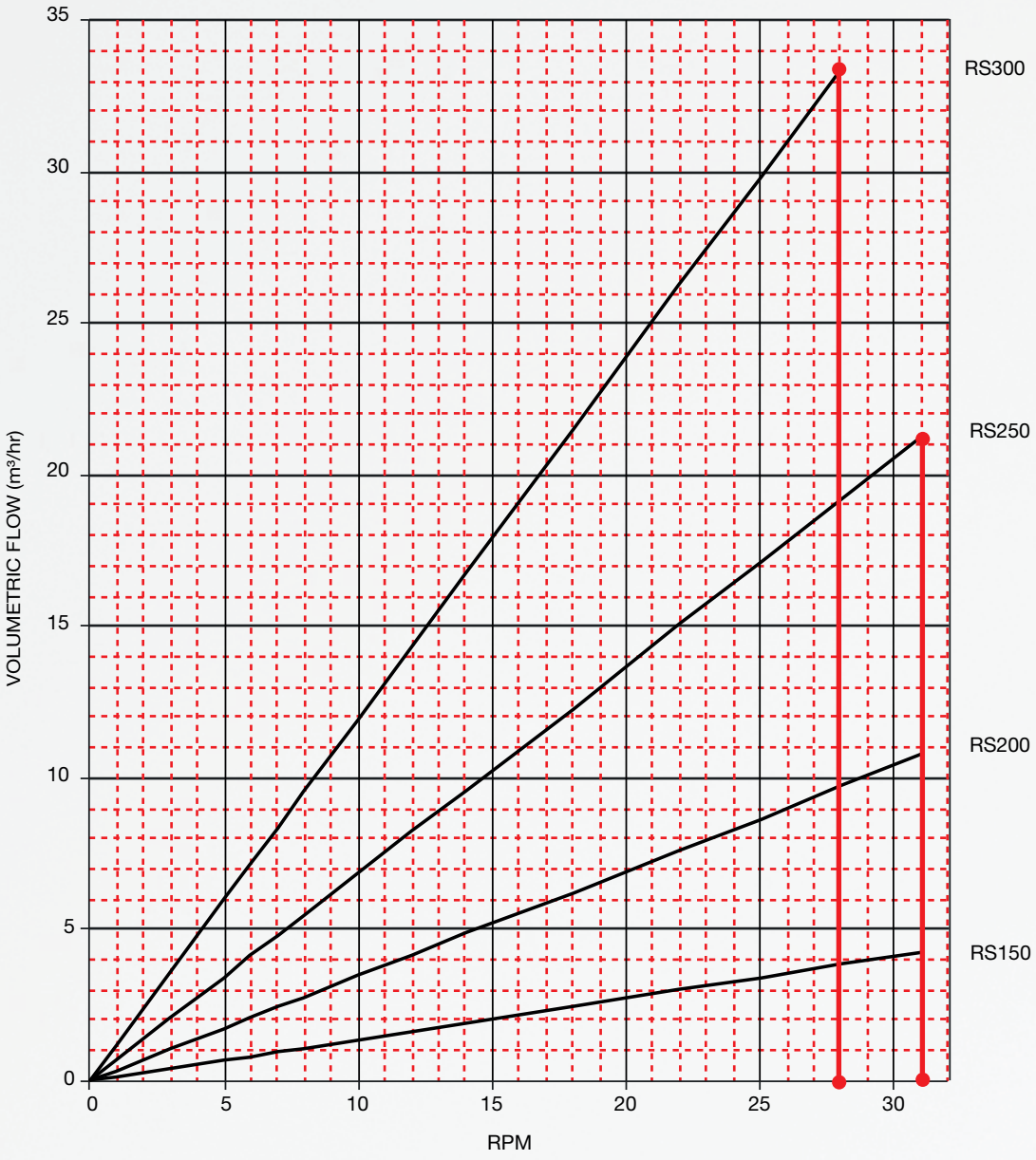
The table below represents the codification format for choosing the model



*Default Selection

Model Selection Chart

Speed Vs Throughput

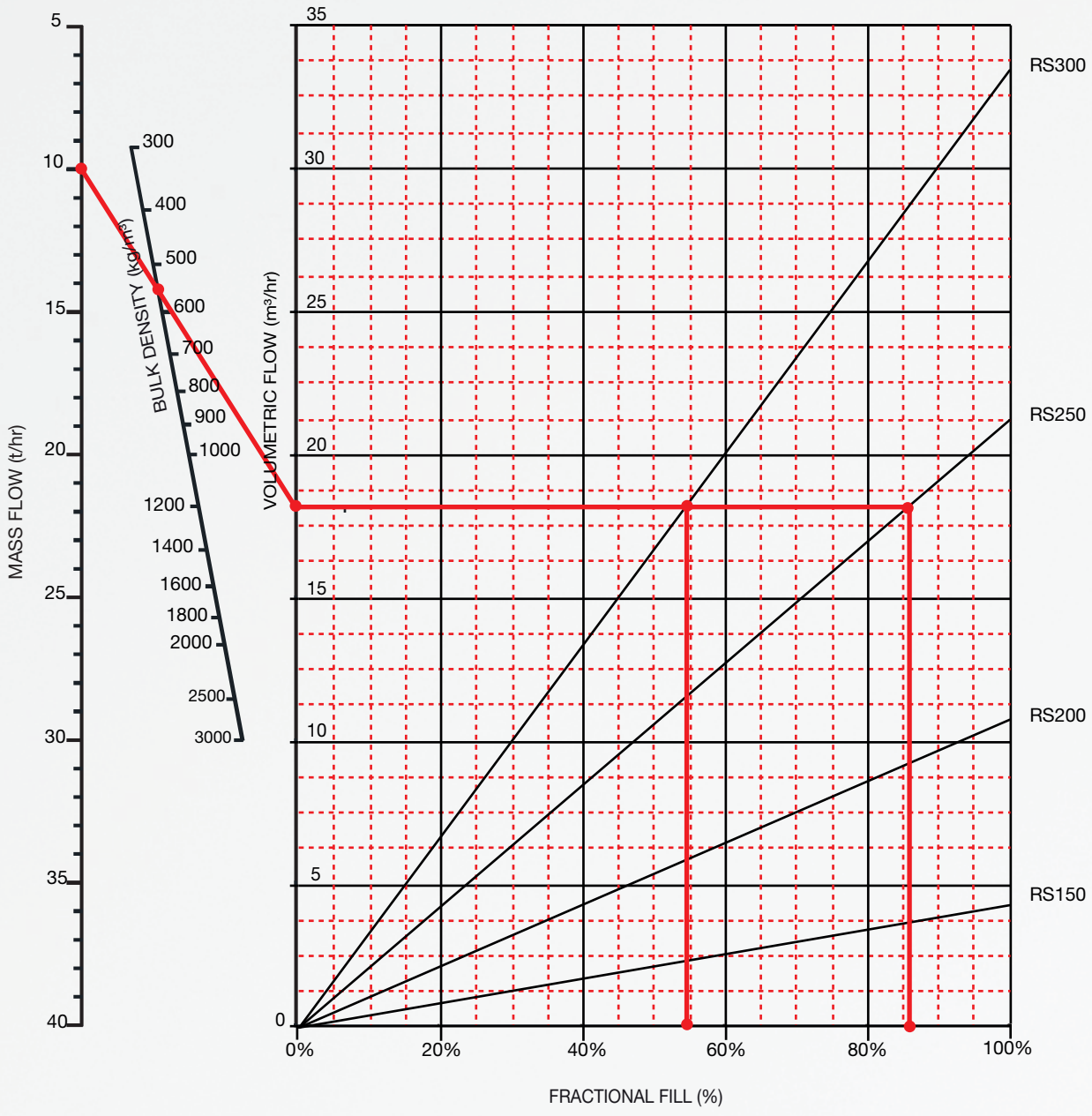


Model	Speed (RPM)	Capacity (m^3/hr)
RS150	31	4.2
RS200	31	10.7
RS250	31	21.2
RS300	28	33.4

31 RPM default for RS150 / 200 / 250
28 RPM default for Rs300

Note: This chart is prepared for guidance purpose only, considering 31 RPM for RS150/200/250 and 28 RPM for RS300.

Capacity Chart



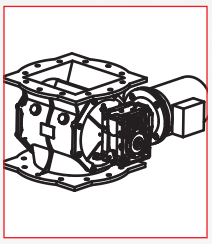
Example: A material with a density of 550kg/m^3 and required capacity of 10t/hr will operate at 86% filling capacity with 31 RPM and also by RS 300 at 54% filling capacity with 28 RPM.

Note: This chart is prepared for guidance purpose only, considering 31 RPM for RS150/200/250 and 28 RPM for RS300.

Defining Features

RS Body

The standard RS Series body is cast from a single piece of Stainless Steel, reducing the prevalence of seams, in turn increasing corrosion resistance and durability. This unique trait also lends itself to increase thermal stability of the valve.

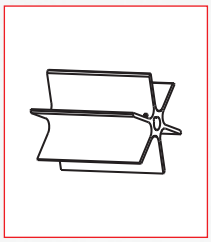


RL Body

Open Rotor

The RS Series rotors are perfectly designed and manufactured to have a close radial and axial clearance of 0.20 mm (Max.).

Comes with open-end style, as standard and also available in closed, scallopped, and reduced pocket types, adjustable flexible or wear tipped rotors are available for typical applications.

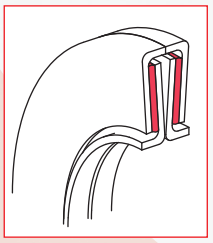


Open Rotor

Labyrinth Seal

A Labyrinth Seal is a mechanical seal that fits around the axle or shaft to prevent any leakage of particles and is composed of many threads or grooves that are tightly fit inside the casing, thus making it difficult for the dust to pass through.

By providing a non-contact sealing action on the rotating shafts, the passage of particles through a variety of chambers by centrifugal motion is controlled. 'Double Labyrinth Seals' fitted with flock pads, and greased on each side of the valve, are standard with all Rotary Valves. Double “Labyrinth Seals” are filled with flock pads and greased on either side of the valve. This procedure is standard with all of the Rotary Valves.



Labyrinth Seal

Key Features

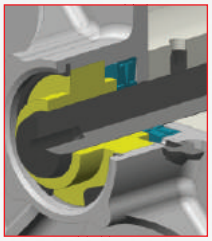
- Investment casting for excellent surface finish
- Mirror finish internals
- Single piece cast construction with universal flange
- Drive Options: Direct or Chain or Inline

Defining Features

Purge Sealing

Grease Purge (G) Sealing as Standard

For extreme duty, valves can be fitted with a grease purge unit over a labyrinth seal. By creating a grease filled cavity between the seals, it prevents the escape of any dust particles or gases. **a**



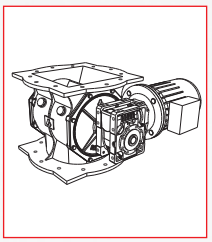
Grease Purge (G) Sealing

Gas Purge (A) Sealing as Optional

When grease cannot be used, air or other gases can be used to purge the seal so all dust particles or product cases are flushed back into the product stream.

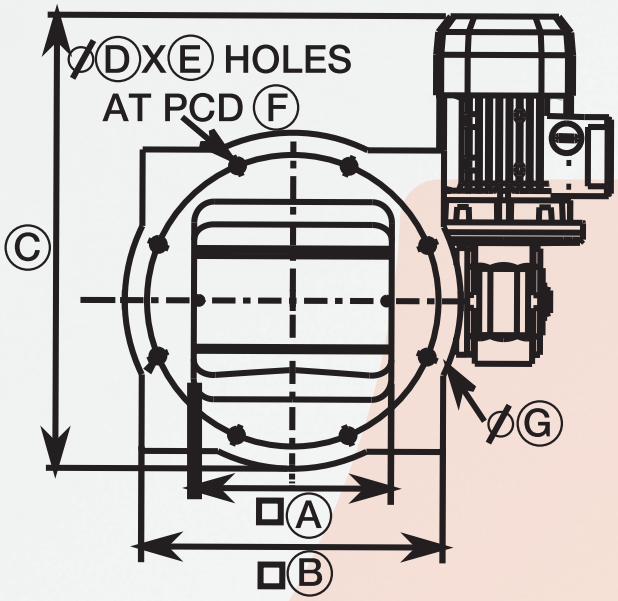
Air Vent / Cleaning

Based on the application requirement, air vent is optionally available for rotary valve to release the gas leakage when feeding a positive pressure system.

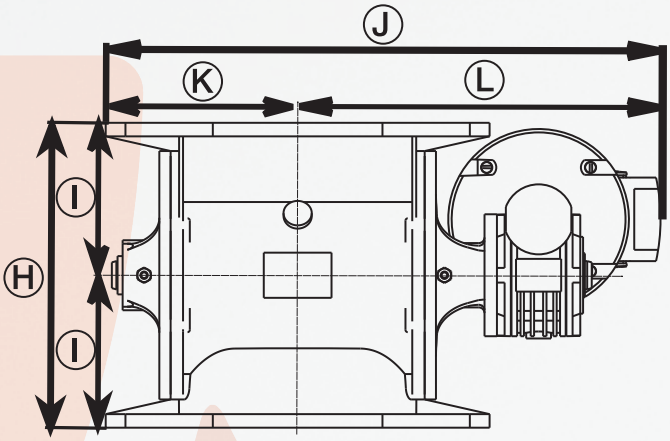


Air Vent / Cleaning

Direct Drive - Dimension Details



TOP VIEW



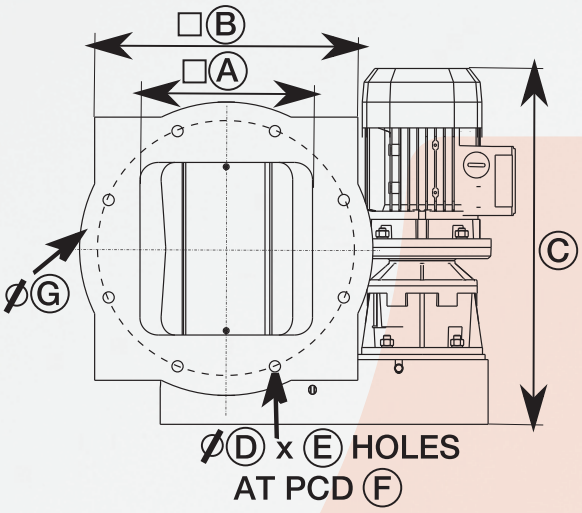
FRONT VIEW

Name	RS 150	RS 200	RS 250	RS 300
A	150	200	250	300
B	250	305	360	400
C#	430 OA	460 OA	540 OA	575 OA
D	13	13	13	17.5
E	8	8	12	12
F	240	295	350	400
G	280	340	406	455
H	210 OA	270 OA	330 OA	400 OA
I	105	135	165	200
J#	445 OA	495 OA	580 OA	635 OA
K	140	170	203	227.5
L#	305	325	377	407.5
Net Weight	29	48	65	93
Gross weight	33	57	90	118

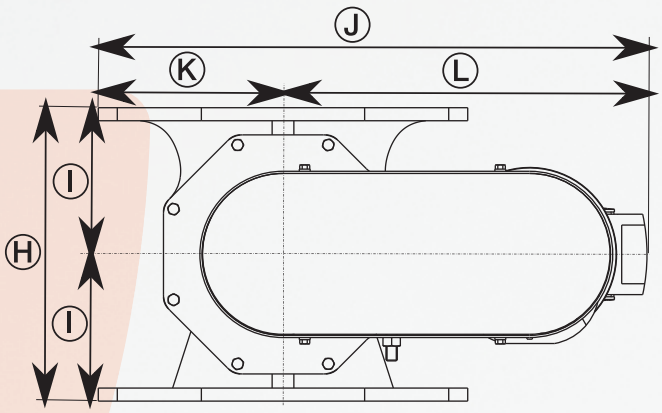
All dimensions in mm. Weight in Kgs

#Approximate dimensions only; dimensions vary with motor size and gear box variation.

Chain Drive - Dimension Details



TOP VIEW



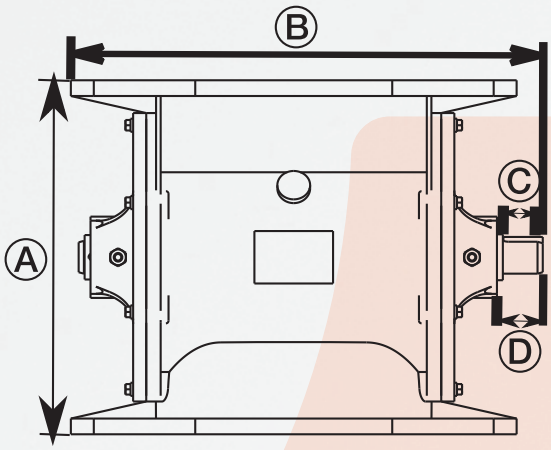
FRONT VIEW

Name	RS 150	RS 200	RS 250	RS 300
A	150	200	250	300
B	250	305	360	400
C#	400 OA	424 OA	460 OA	500 OA
D	13	13	13	17.5
E	8	8	12	12
F	240	295	350	400
G	280	340	406	455
H	210 OA	270 OA	330	400
I	105	135	165	200
J#	425 OA	505 OA	565	630
K	140	170	203	227.5
L#	285	335	362	402.5
Net Weight	29	48	65	93
Gross weight	33	57	90	118

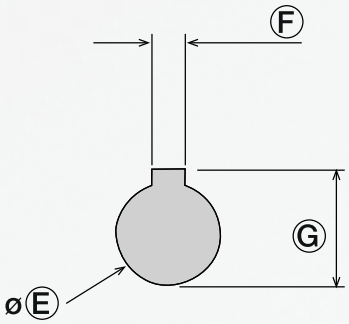
All dimensions in mm. Weight in Kgs

#Approximate dimensions only; dimensions vary with motor size and gear box variation.

Bare Shaft - Dimension Details



TOP VIEW



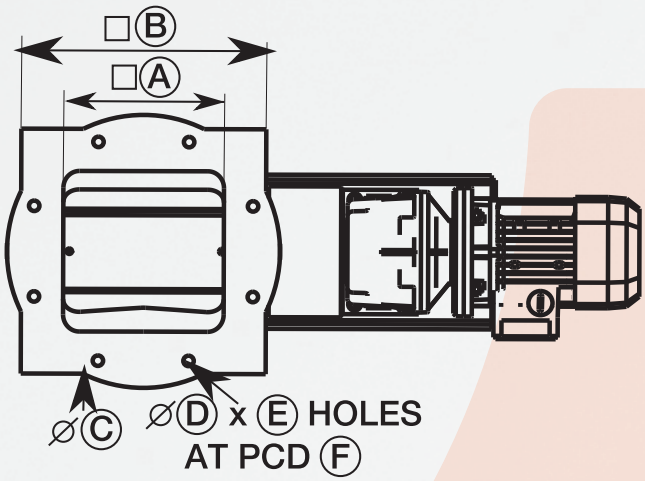
(BARE SHAFT)
DRIVEN SHAFT SECTION

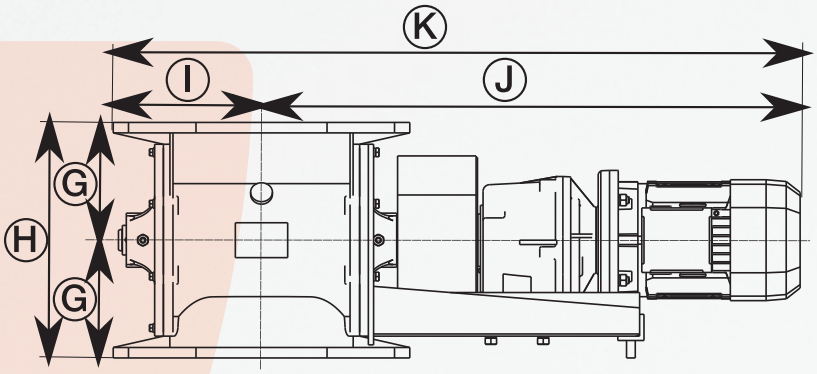
Name	RS 150	RS 200	RS 250	RS 300
A	210 OA	270 OA	330 OA	400 OA
B	315 OA	364 OA	424 OA	480 OA
C	30	30	30	35
D	45	45	45	50
E	25	25	25	30
F	8	8	8	10
G	28	28	28	33
Net Weight	29	48	65	93
Gross weight	33	57	90	118

All dimensions in mm. Weight in Kgs

#Approximate dimensions only; dimensions vary with motor size and gear box variation.

Inline Drive - Dimension Details





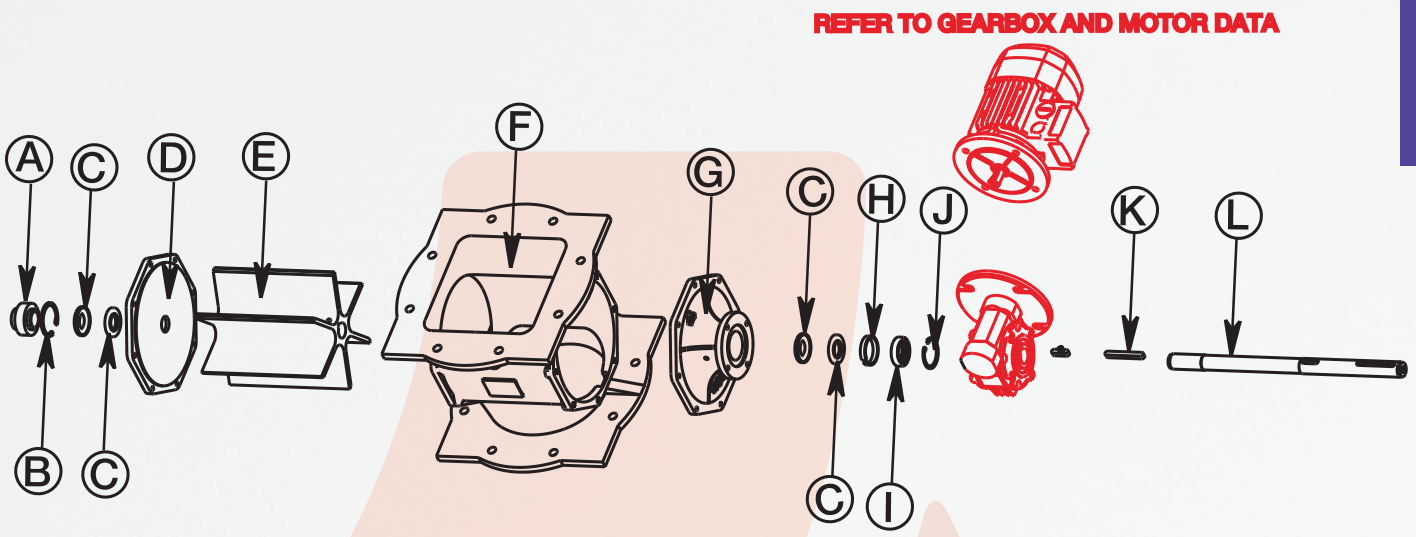
Name	RS 150	RS 200	RS 250	RS 300
A	150	200	250	300
B	250	305	360	400
C#	280 OA	340 OA	406 OA	455 OA
D	13	13	13	17.5
E	8	8	12	12
F	240	295	350	400
G	105	135	165	200
H	210 OA	270 OA	330 OA	400 OA
I	140	170	203	227.5
J	590	618	667	772.5 OA
K#	730 OA	785 OA	870 OA	1000 OA
Net Weight	29	48	65	93
Gross weight	33	57	90	118

All dimensions in mm. Weight in Kgs

#Approximate dimensions only; dimensions vary with motor size and gear box variation.

Component Details

Direct Drive (D)



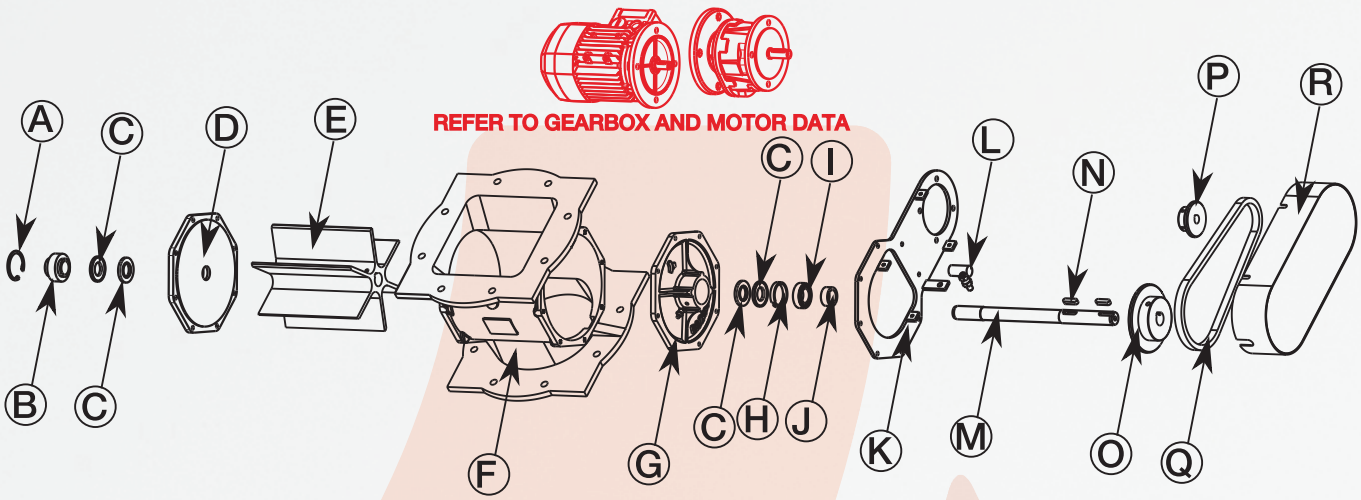
DIRECT DRIVE (D) COMPONENTS

Name	Description	RS 150	RS 200	RS 250	RS 300
		Quantity	Quantity	Quantity	Quantity
A	BEARING	1	1	1	1
B	CIRCLIP	2	1	1	1
C	LABYRINTH SEAL	2	2	2	2
D	BEARING SIDE PLATE	1	1	1	1
E	ROTOR	1	1	1	1
F	ROTOR	1	1	1	1
G	DRIVE SIDE PLATE	4	4	4	4
H	SPACER	2	2	2	2
I	OIL SEAL	1	1	1	1
J	CIRCLIP	1	1	1	1
K	KEY	1	1	1	1
L	SHAFT	1	1	1	1

Note: Above details represents the quantity of each component and may subject to change with variation.

Component Details

Chain Drive (C)



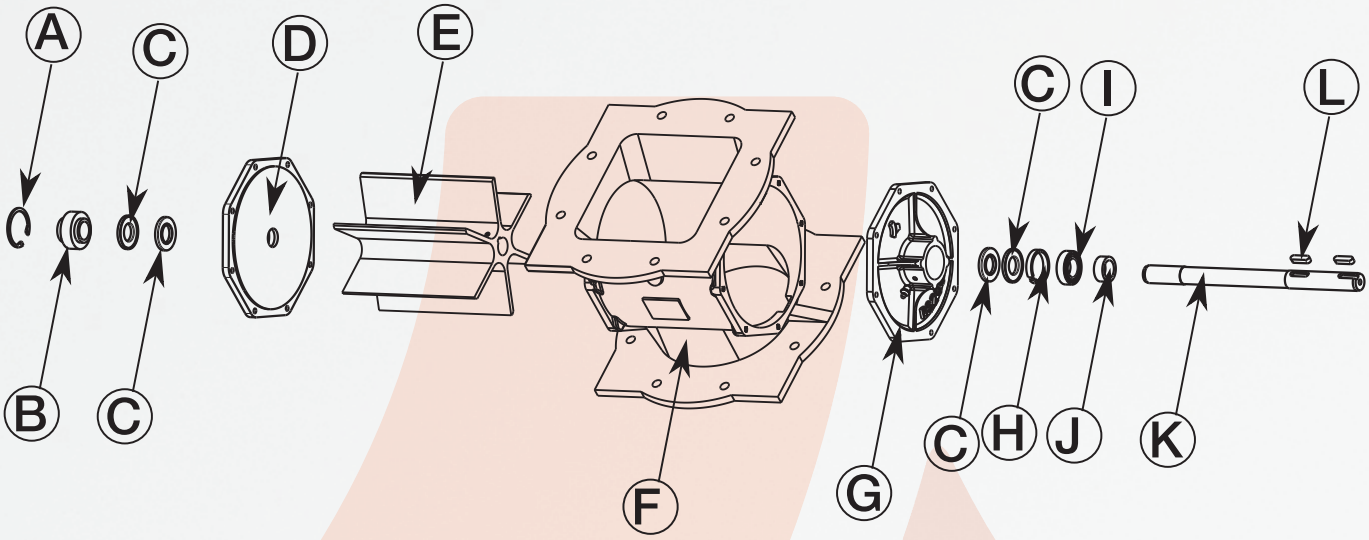
CHAIN DRIVE (C) COMPONENTS

Name	Description	RS 150 Quantity	RS 200 Quantity	RS 250 Quantity	RS 300 Quantity
A	CIRCLIP	1	1	1	1
B	BEARING	2	1	1	1
C	LABYRINTH SEAL	2	2	2	2
D	BEARING SIDE PLATE	1	1	1	1
E	ROTOR	1	1	1	1
F	BODY	1	1	1	1
G	DRIVE SIDE PLATE	4	4	4	4
H	SPACER	2	2	2	2
I	BEARING	1	1	1	1
J	SPACER	1	1	1	1
K	GEARBOX MOUNT	1	1	1	1
L	CHAIN TENSIONER	1	1	1	1
M	SHAFT	1	1	1	1
N	KEY	1	1	1	1
O	DRIVEN SPROCKET	1	1	1	1
P	DRIVE SPROCKET	1	1	1	1
Q	CHAIN	1	1	1	1
R	CHAIN GUARD	1	1	1	1

Note: Above details represents the quantity of each component and may subject to change with variation.

Component Details

Bare Shaft (B)



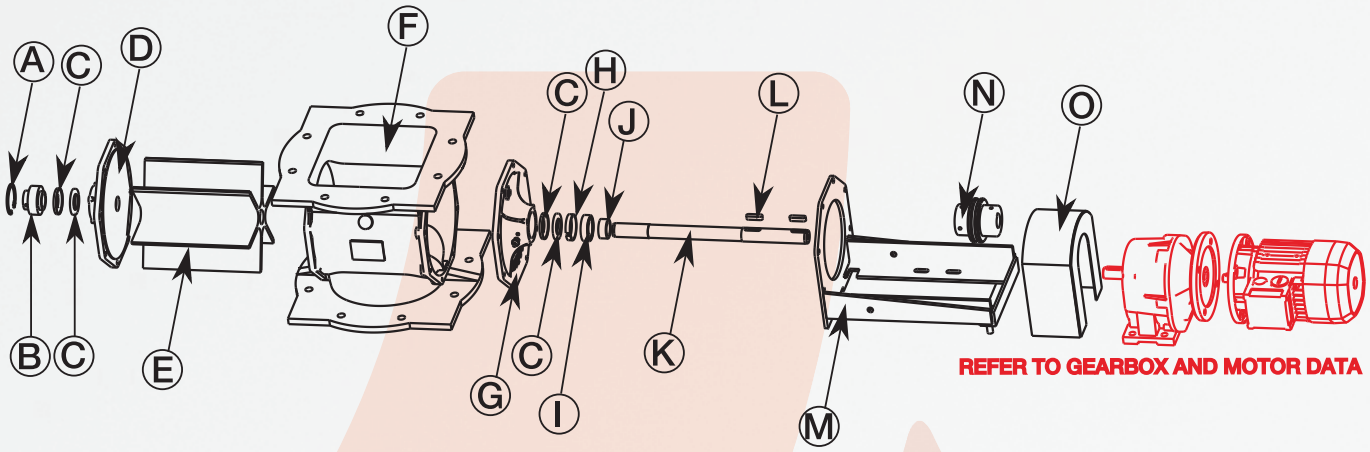
BARE SHAFT (B) COMPONENTS

Name	Description	RS 150 Quantity	RS 200 Quantity	RS 250 Quantity	RS 300 Quantity
A	SHAFT	1	1	1	1
B	BEARING SIDE PLATE	2	1	1	1
C	BEARING	2	2	2	2
D	BODY	1	1	1	1
E	GEARBOX BRACKET	1	1	1	1
F	ROTOR	1	1	1	1
G	LABRYNTH SEAL	4	4	4	4
H	CIRCLIP	2	2	2	2
I	DRIVEN SPROCKET	1	1	1	1
J	DRIVE SPROCKET	1	1	1	1
K	CHAIN	1	1	1	1
L	CHAIN GUARD	1	1	1	1

Note: Above details represents the quantity of each component and may subject to change with variation.

Component Details

Inline Drive (E)



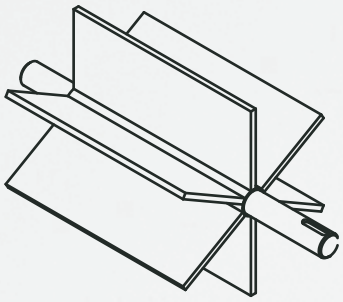
INLINE DRIVE (E) COMPONENTS

Name	Description	RS 150 Quantity	RS 200 Quantity	RS 250 Quantity	RS 300 Quantity
A	CIRCLIP	1	1	1	1
B	BEARING	2	1	1	1
C	LABYRINTH SEAL	2	2	2	2
D	BEARING SIDE PLATE	1	1	1	1
E	ROTOR	1	1	1	1
F	BODY	1	1	1	1
G	DRIVE SIDE PLATE	4	4	4	4
H	SPACER	2	2	2	2
I	BEARING	1	1	1	1
J	SPACER	1	1	1	1
K	SHAFT	1	1	1	1
L	KEY	1	1	1	1
M	GEARBOX MOUNT	1	1	1	1
N	COUPLING	1	1	1	1
O	COUPLING GUARD	1	1	1	1

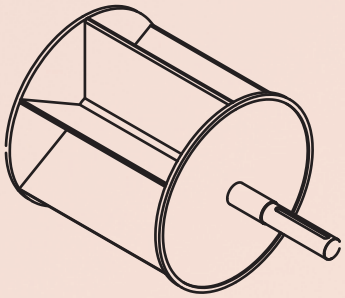
Note: Above details represents the quantity of each component and may subject to change with variation.

Model Rotor Variation

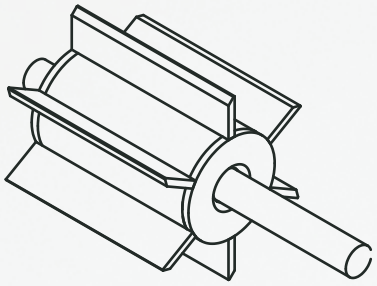
Open Rotor Casting (O)



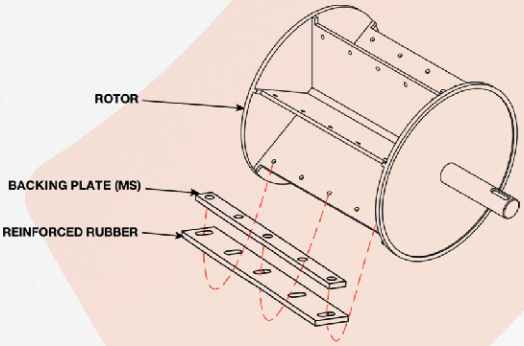
Closed Fabricated Rotor (M)



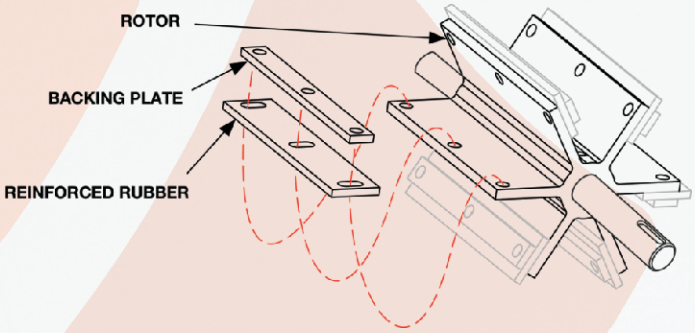
Reduced Pocket Open Fabricated Rotor (R)



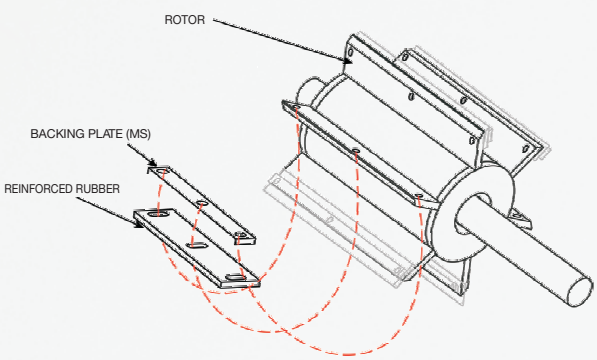
Closed Tipped Fabricated Rotor with Flexible Tips(MF)



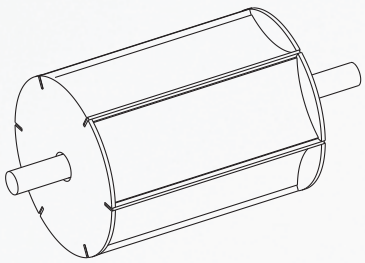
Open Rotor Fabricated with Flexible Tips(MF)



Reduced Pocket Open Rotor Fabricated with Flexible Tips(MF)

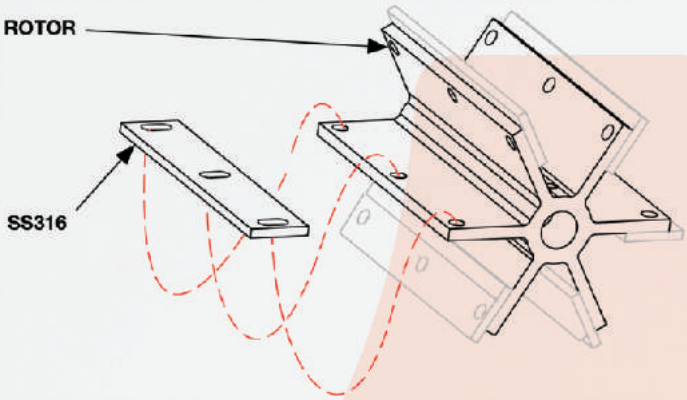


Scalloped Rotor Fabricated (Q)

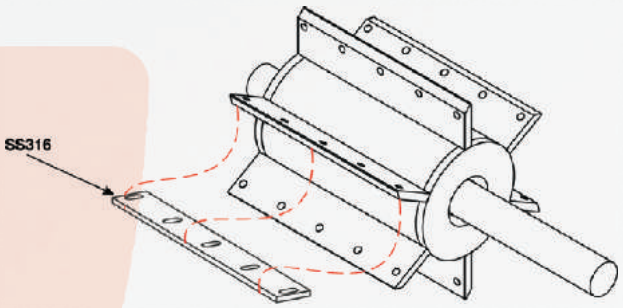


Model Rotor Variation

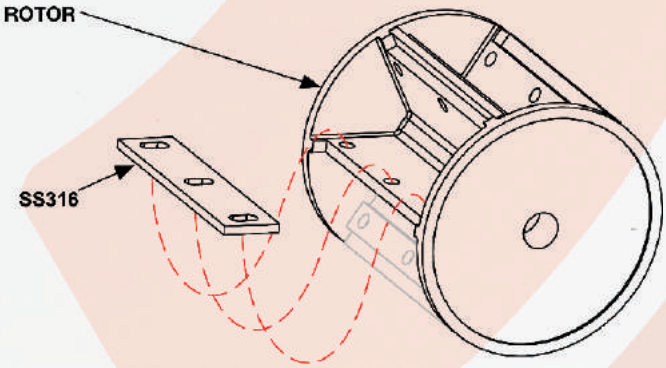
Wear Tips(W) - Open Rotor Fabricated



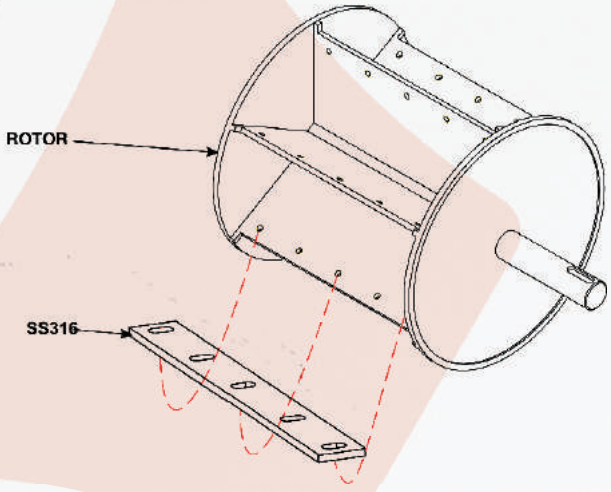
Wear Tips(W) - Reduced Pocket Open Rotor Fabricated



Wear Tips(W) - Closed Rotor

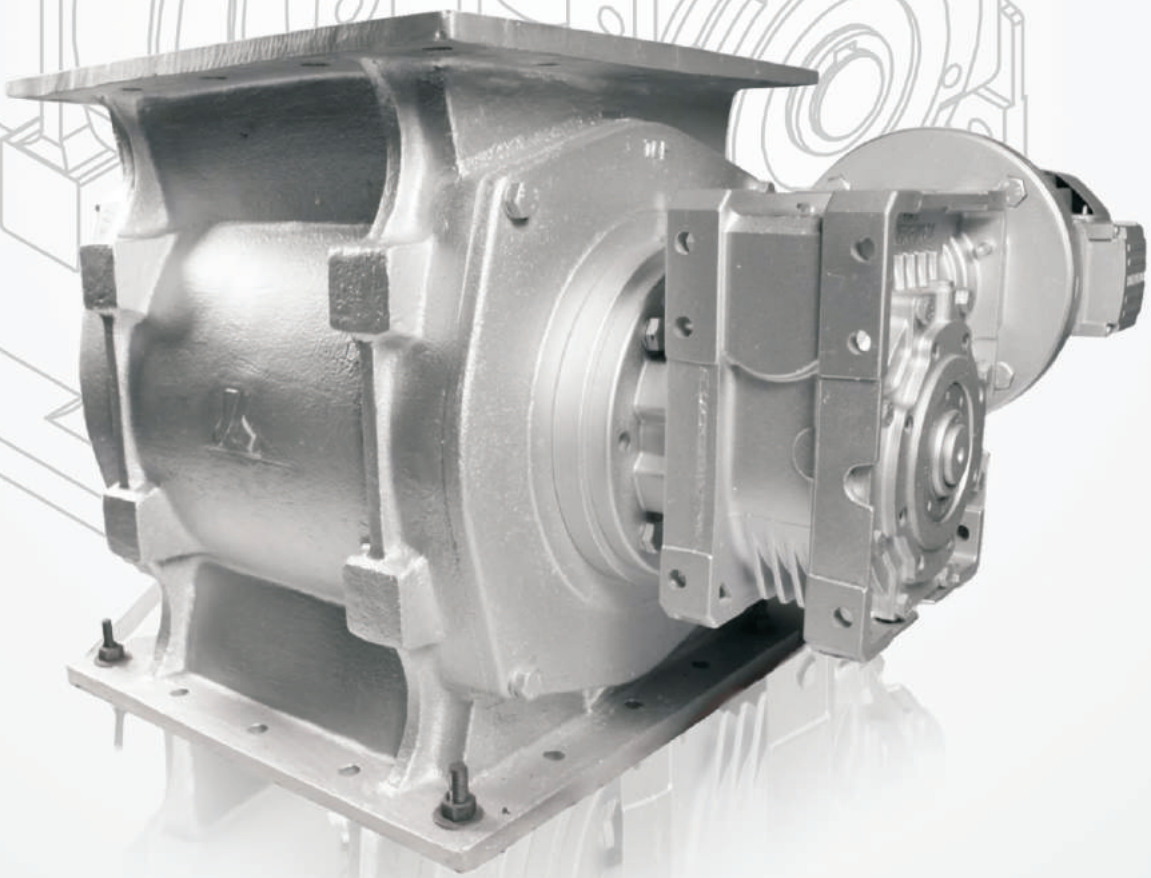


Wear Tips(W) - Closed Rotor Fabricated



RH SERIES

ROBUST, VERSATILE AND HIGHLY EFFICIENT



Product Overview

Manufactured to suit specific requirements, the Anval RH Series Rotary Valves can serve an extensive range of applications from heavy mineral industries to light agricultural uses. The heavy duty cast iron construction enables it to operate even under harsh conditions with easy maintenance.

Product Features

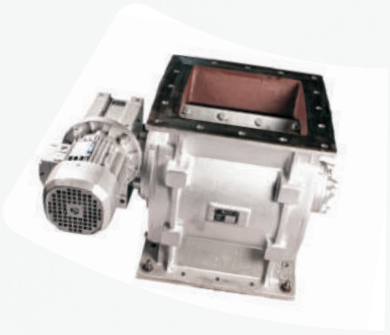
- Can be customised as per customer's requirements
- Direct-mounted gearbox
- Minimal maintenance
- Equipped with replaceable “Labyrinth Seals”
- Heavy-duty cast iron construction
- Available in a range of speeds
- Wide selection of rotors

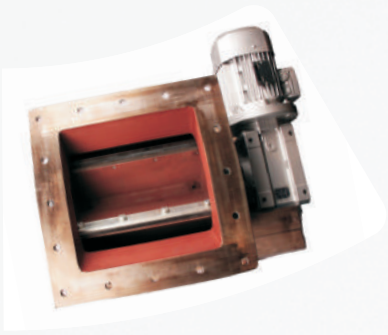
Applications

Anval RH Series Valves are suitable for a wide range of industries including chemicals, food, steel, cement, wood, steel, power, mineral processing and many others. They can also be fully customised and fabricated to meet the needs of the customer.

Product Specifications

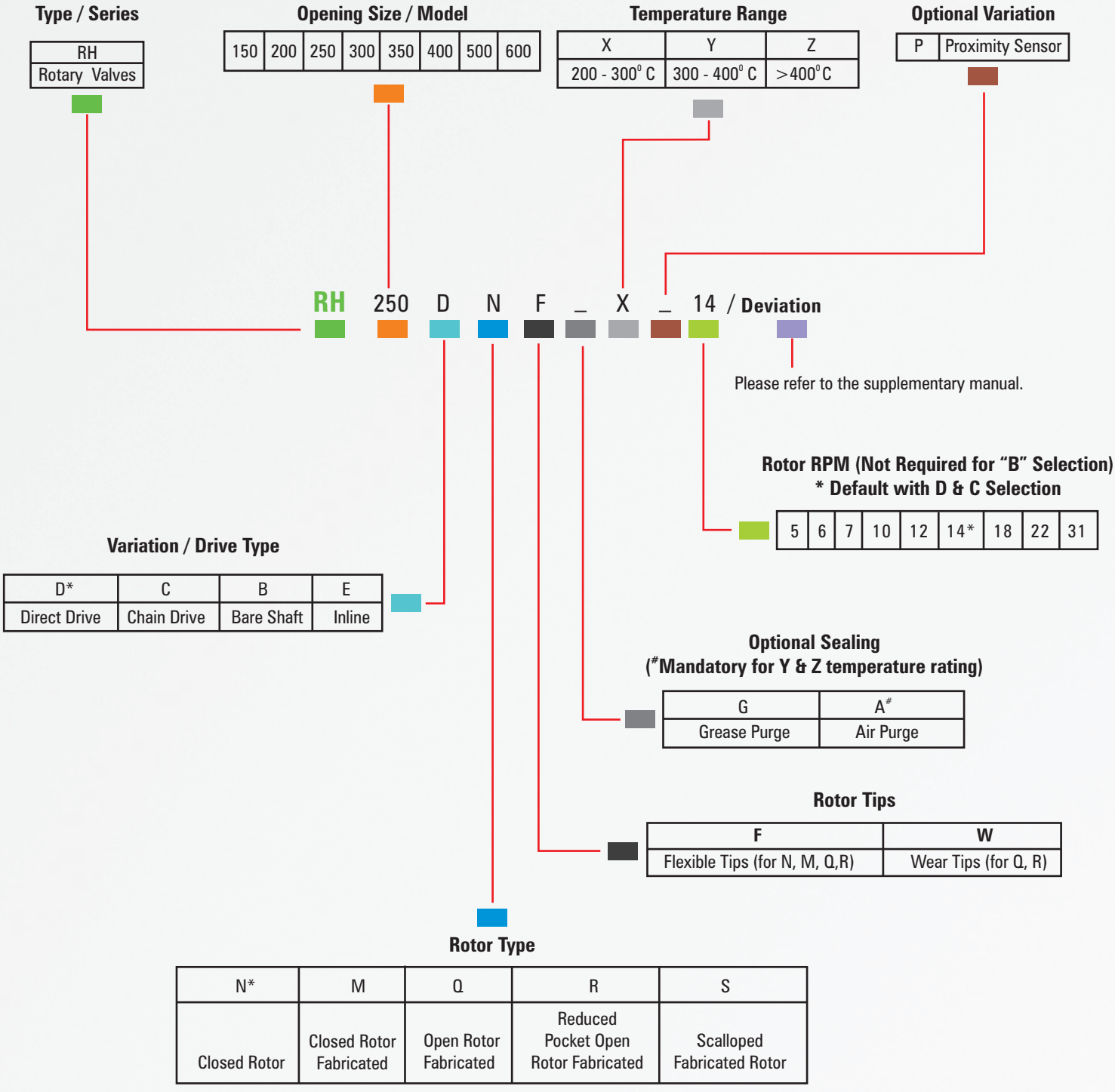
Opening Size	:	150, 200, 250, 300, 350,400, 500, 600 and 750 mm
Flange Opening	:	Square
Drives	:	Direct Driven / Chain Driven / Bare Shaft
Material of Construction	:	Cast Iron
Capacity Range	:	Up to 344 m^3/hr Max.
Painting Standard	:	Dark Grey Blue
End Cover Material	:	Cast Iron
Shaft	:	CS1030
Seals	:	Labyrinth Seals (Sealing Washer)
Gearbox	:	Heliworm or Helibevel Gears (D) / Helical Gears (C)
Rotor	:	Cast Iron / CS1030
Rotor Type:	:	Closed Rotor (N) / Closed Rotor Fabricated (M) / Open Rotor Fabricated (Q) / Reduced Pocket Open Rotor Fabricated (R)
Rotor Tips	:	Flexible Tips (F) / Wear Tips (W)
Special Seals	:	Grease Purge (G) / Air Purge (A)
Bearings	:	Cartridge Type
Surface Treatment (Anval Standard)	:	50μm Grey Primer 50μm Paracryl IFC Tinted to B53 Guards Golden Yellow Y14
Surface Treatment (High Temperature)	:	75μm Es600 Zinc Silicate Primer 40μm Heat Kote Aluminium





Product Codification

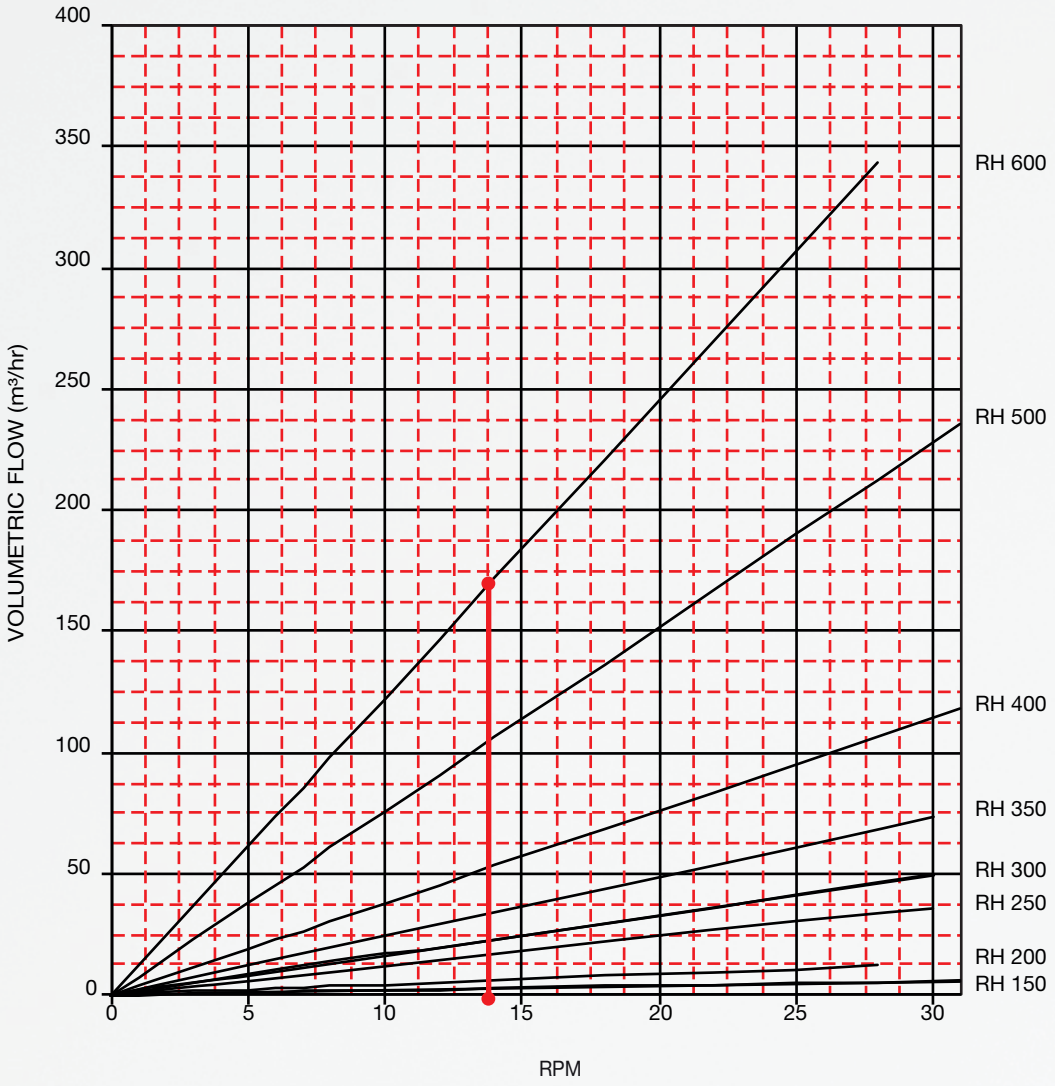
The table below represents the codification format for choosing the model



*Default Selection

Model Selection Chart

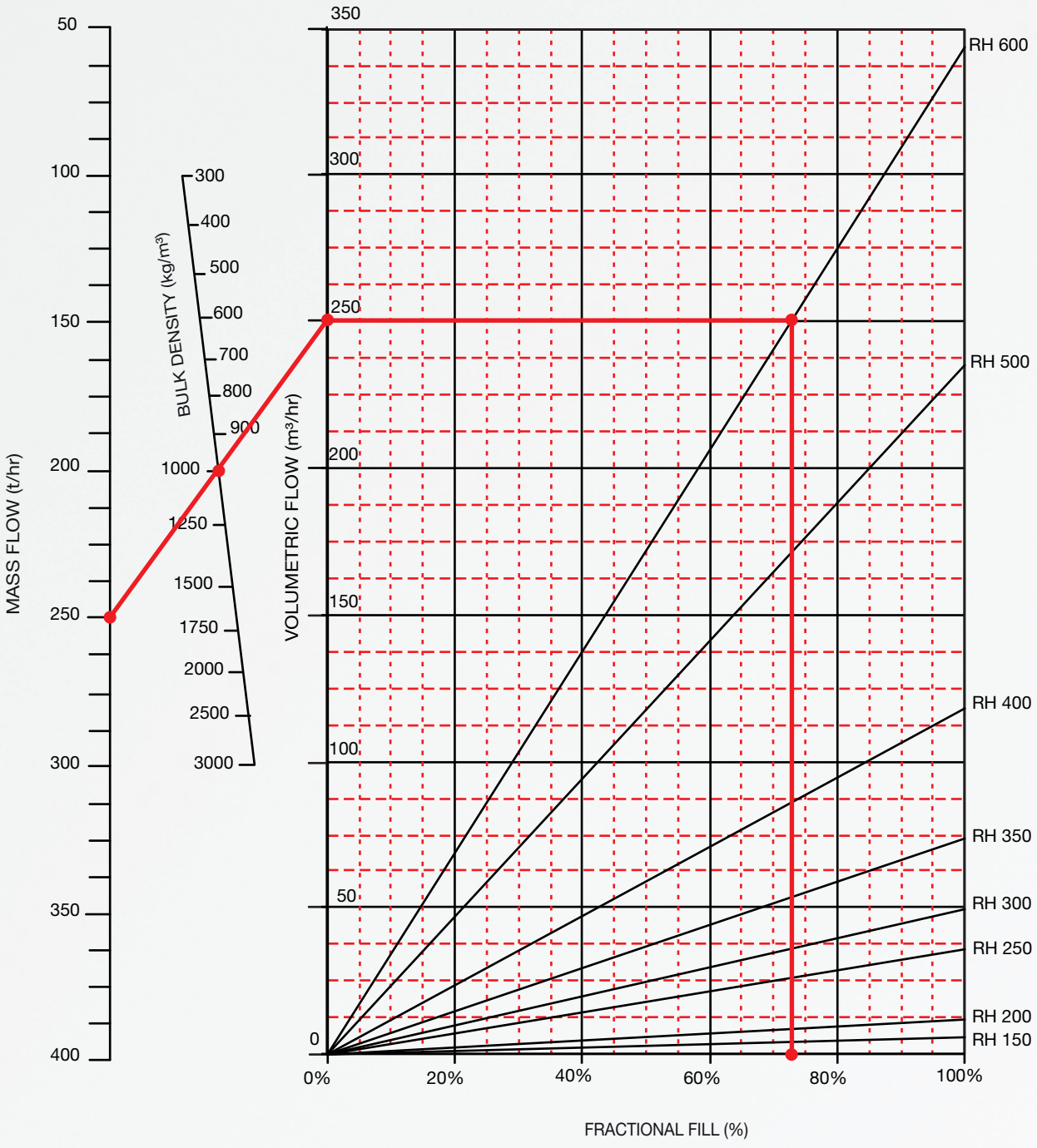
Speed Vs Throughput



Model	Speed (RPM)	Capacity (m^3/hr)
RH150	31	6
RH200	28	12
RH250	30	36
RH300	30	50
RH350	30	74
RH400	31	118
RH500	31	235
RH600	28	344

Note: This chart is indicative and for guidance only, considering 100% filling capacity.

Capacity Chart



Example: A material with a bulk density of 1000 (kg/m^3) and required capacity of 250 (t/hr) can be achieved by RH600 at 74% filling capacity with 28 RPM.

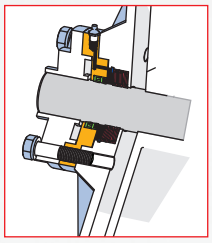
Note: This chart is indicative and for guidance only, considering maximum RPM.

Defining Features

Purge Sealing

Grease Purge Sealing (G)

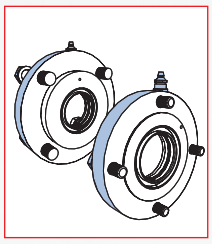
In order to prevent the escape of any dust particles or gases, a grease purge unit can be fitted into the valves, over the labyrinth seal. This creates a grease filled cavity between the seals, taking care of extreme duty cases.



Grease Purge Sealing (G)

Air Purge Sealing (A)

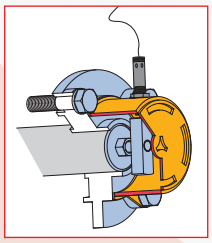
In situations where grease cannot be used, air or other gases are employed to purge the seals so that all dust particles or product fragments are flushed back into the product stream.



Air Purge Sealing (A)

Proximity Sensors (P)

Under Speed Sensors that are about 12mm in diameter with a CD-PNP connection and IP67 protection can be fitted to these valves by mounting them on a specially designed bracket that is bolted on to the bearing. These sensors can function in a temperature range of (-)25°C to (+)70°C.



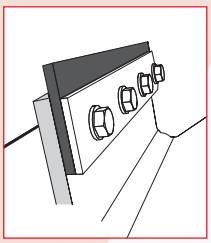
Proximity Sensors (P)

Customisation To Withstand High Temperature (H)

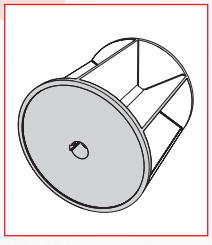
In order to allow these valves to function in extreme temperatures ranging from 250°C to 500°C, it is advisable that the product is coated with heatkote aluminium. Ceramic fibre sheets and flocks are also provided to protect the bearings and seals.

Rotor Configurations

The closed rotor configuration is standard on all RH Series Valves, since it minimises the possibility of wear and tear. However, for certain applications, open-rotors can be provided if required. In case of stickiness in the material used and possibility of the rotors getting jammed, rotors with adjustable rubber tips can be provided as well. The rubber tips are reversible and can be turned over for a new surface.



Typical Tipped Rotor Blade



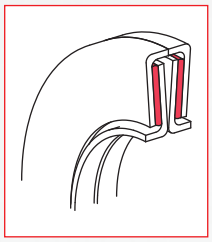
Typical Closed Rotor

Defining Features

Labyrinth Seal

A Labyrinth Seal is a mechanical seal that fits around the axle or shaft to prevent any leakage of particles and is composed of many threads or grooves that are tightly fit inside the casing, thus making it difficult for the dust to pass through.

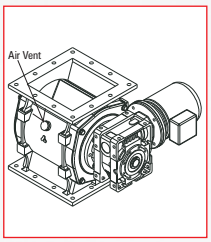
By providing non-contact sealing action on the rotating shafts, the passage of particles through a variety of chambers by centrifugal motion is controlled. 'Double Labyrinth Seals' fitted with flock pads, and greased on each side of the valve, are standard with all Blow Through Valves.



Labyrinth Seal

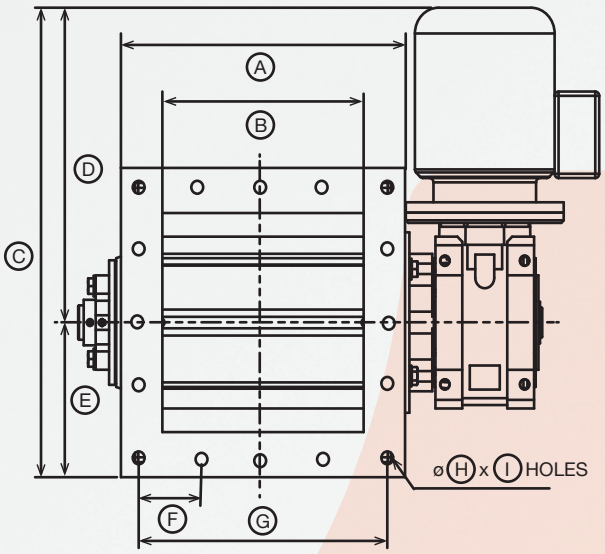
Air Vent / Cleaning

Air vent is available for RH rotary valves to release the gas leakage when feeding a positive pressure system.

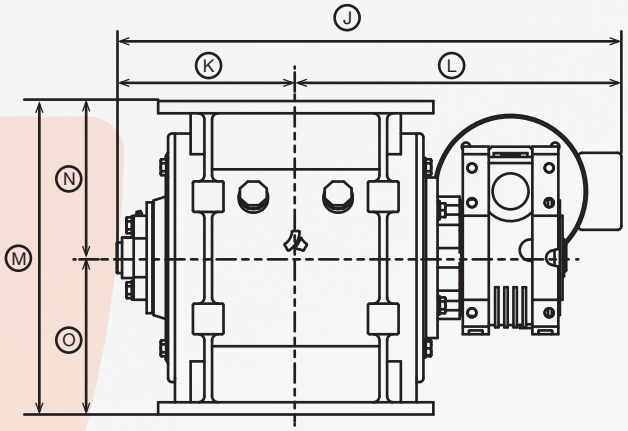


Air Vent / Cleaning

Direct Drive - Dimension Details



TOP VIEW



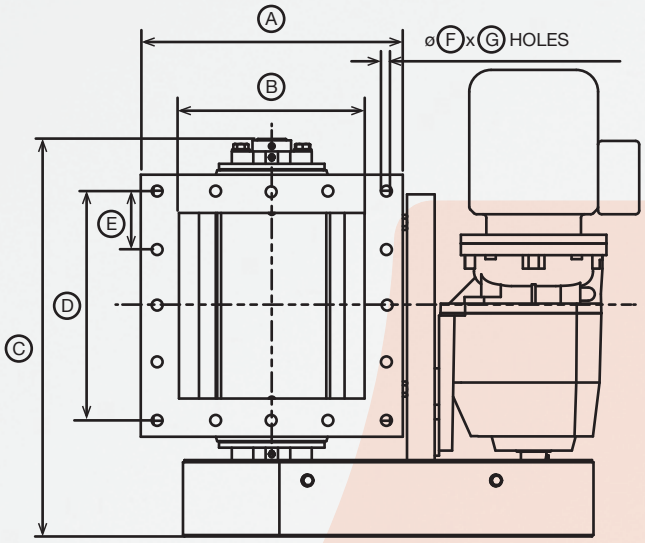
FRONT VIEW

Name	RH 150	RH 200	RH 250	RH 300	RH 350	RH 400	RH 500	RH 600
A	? 240	? 300	? 360	? 430	? 480	? 530	? 630	? 760
B	? 150	? 200	? 250	? 300	? 350	? 400	? 500	? 600
C#	440	517	563	598	678	894	1026	1068
D#	320	367	383	383	438	629	711	940
E	120	150	180	215	240	265	315	380
F	70	85	105	94	106	94	114	100
G	210	255	315	376	424	470	570	700
H	12	14	15	15	15	15	15	18
I	12	12	12	16	16	20	20	28
J#	507	574	660	718	800	932	1089	1182
K	150	190	232	250	290	325	375	457
L#	357	384	428	468	510	607	714	725
M	240	330	410	470	525	620	760	900
N	120	165	205	235	262.5	310	380	450
O	120	165	205	235	262.5	310	380	450
Net Weight	50	84	146	183	255	400	650	1058
Gross weight	65	105	165	210	280	430	685	1095

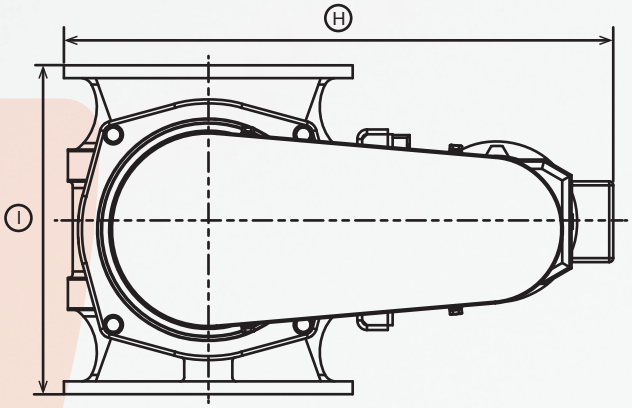
All dimensions in mm. Weight in Kgs

#Approximate dimensions only; dimensions vary with motor size and gear box variation.

Chain Drive - Dimension Details



TOP VIEW



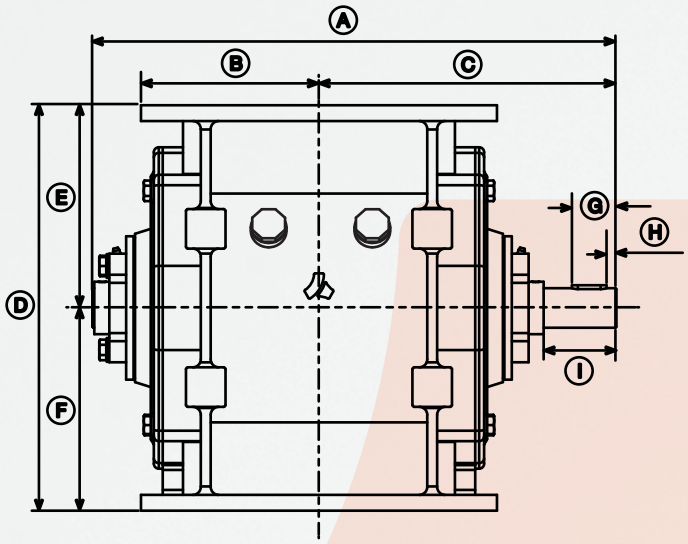
FRONT VIEW

Name	RH 150	RH 200	RH 250	RH 300	RH 350	RH 400	RH 500	RH 600
A	?240	?300	?360	?430	?480	?530	?630	?760
B	?150	?200	?250	?300	?350	?400	?500	?600
C#	350	452	546	616	650	754	925	1110
D	210	255	315	376	424	470	570	700
E	70	85	105	94	106	94	114	100
F	12	14	15	15	15	15	15	18
G	12	12	12	16	16	20	20	28
H#	451	600	617	710	750	846	980	1195
I	240	330	410	470	525	620	760	900
Net Weight	68	102	164	214	340	400	608	1143
Gross weight	85	122	186	237	365	428	636	1179

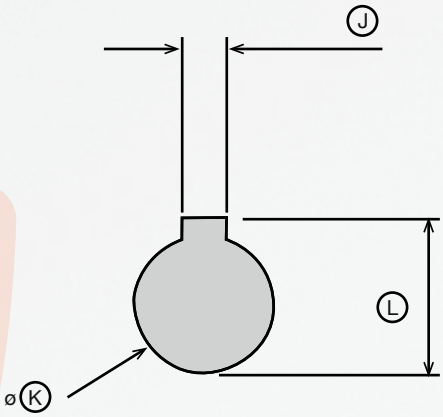
All dimensions in mm. Weight in Kgs

#Approximate dimensions only; dimensions vary with motor size and gear box variation.

Bare Shaft - Dimension Details



TOP VIEW



(BARE SHAFT)
DRIVEN SHAFT SECTION

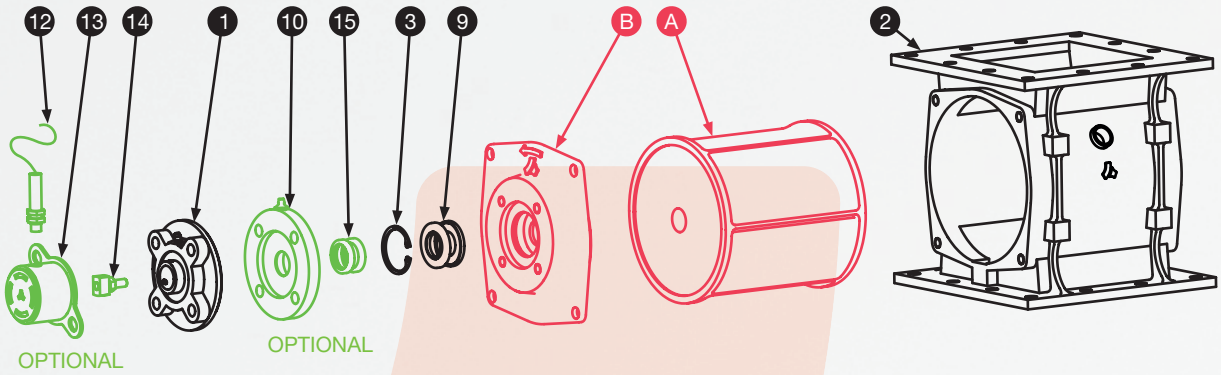
Name	RH 150	RH 200	RH 250	RH 300	RH 350	RH 400	RH 500	RH 600
A	375	437	530	590	630	730	870	1025
B	150	150	180	215	290	265	315	380
C	225	260	300	331	350	396	455	505
D	240	330	410	470	525	620	760	900
E	120	165	205	235	262.5	310	380	450
F	120	165	205	235	262.5	310	380	450
G	30	35	45	45	65	55	50	75
H	5	5	10	10	5	5	10	10
I	60	60	75	75	72	77	51	55
J	8	8	12	12	14	14	18	18
K	25	30	40	40	45	50	60	60
L	28.3	33.3	43.3	43.3	48.3	53.3	63.3	63.3
Net Weight	35	61	116	161	210	331	513	950
Gross weight	43	70	128	173	225	350	536	985

All dimensions in mm. Weight in Kgs

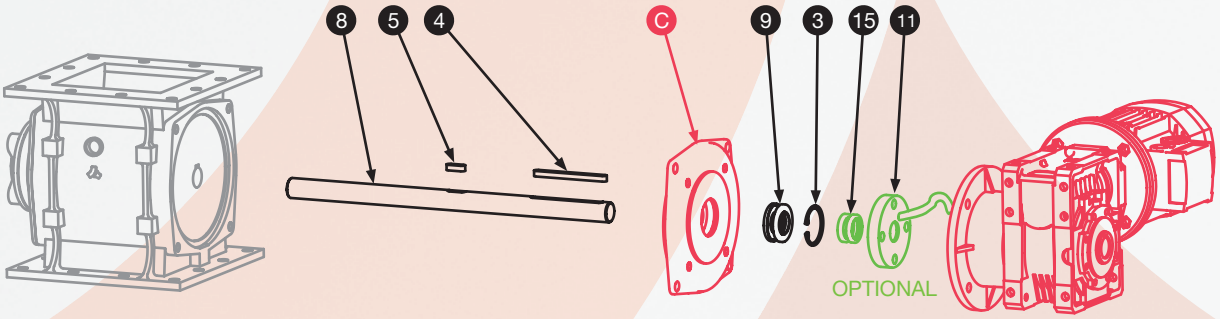
#Approximate dimensions only; dimensions vary with motor size and gear box variation.

Component Details

Direct Drive(D) and Bare Shaft(B)



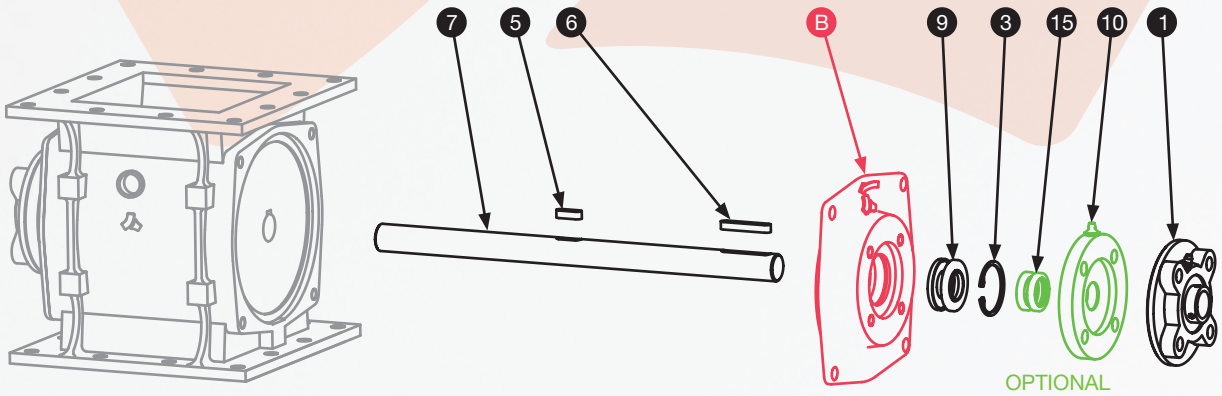
NON DRIVE END COMPONENTS



STANDARD COMPONENTS

REFER TO GEARBOX & MOTOR DATA

DIRECT END COMPONENTS



STANDARD COMPONENTS

BARE SHAFT COMPONENTS

Component Details

Name	Description	RH150		RH200		RH250		RH300		RH350		RH400		RH500		RH600	
		D	B	D	B	D	B	D	B	D	B	D	B	D	B	D	B
1	BEARING CARTRIDGE ASSEMBLY	100-7643		100-7156		100-6922		100-6922		101-3668		100-4140		100-1003		100-1003	
		1	2	1	2	1	2	1	2	1	2	1	2	1	2	1	2
2	BODY	100-7698		101-3435		101-3792		101-3975		101-3994		101-4041		101-4467		101-4479	
		1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
3	CIRCLIP	100-8214		100-8778		101-1786		101-1786		100-7362		100-6310		100-7463		100-7463	
		2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
4	KEY (GEAR BOX)	100-6751		101-3912		101-3963		101-3963		101-1679		100-2202		101-4527		101-4527	
		1	0	1	0	1	0	1	0	1	0	2	0	2	0	2	0
5	KEY (ROTOR)	101-3724		101-2591		101-3962		101-3979		101-3993		100-2202		101-4527		101-4527	
		1	1	1	1	1	1	1	1	1	1	1	1	1	0	1	0
6	KEY (SPROCKET)	101-3724		101-2591		101-3962		101-3962		100-2201		102-0739		100-9732		101-4527	
		0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
7	SHAFT (BARE DRIVE (B))	103-0748		102-1074		102-9504		102-9515		102-9518		102-9531		102-9673		103-0765	
		0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
8	SHAFT (DIRECT DRIVE (D))	101-3723		102-0533		101-3915		101-3978		101-3992		101-4036		101-4465		101-4478	
		1	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0
9	LABYRINTH SEAL	100-6826		100-4177		100-6828		100-6828		100-6112		100-6288		100-5723		100-5723	
		4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4

* Optional Component
D = Direct Drive Quantity, B = Bare Shaft Quantity

Note: Above details represents the part no. of each component and may subject to change with variation.

Component Details

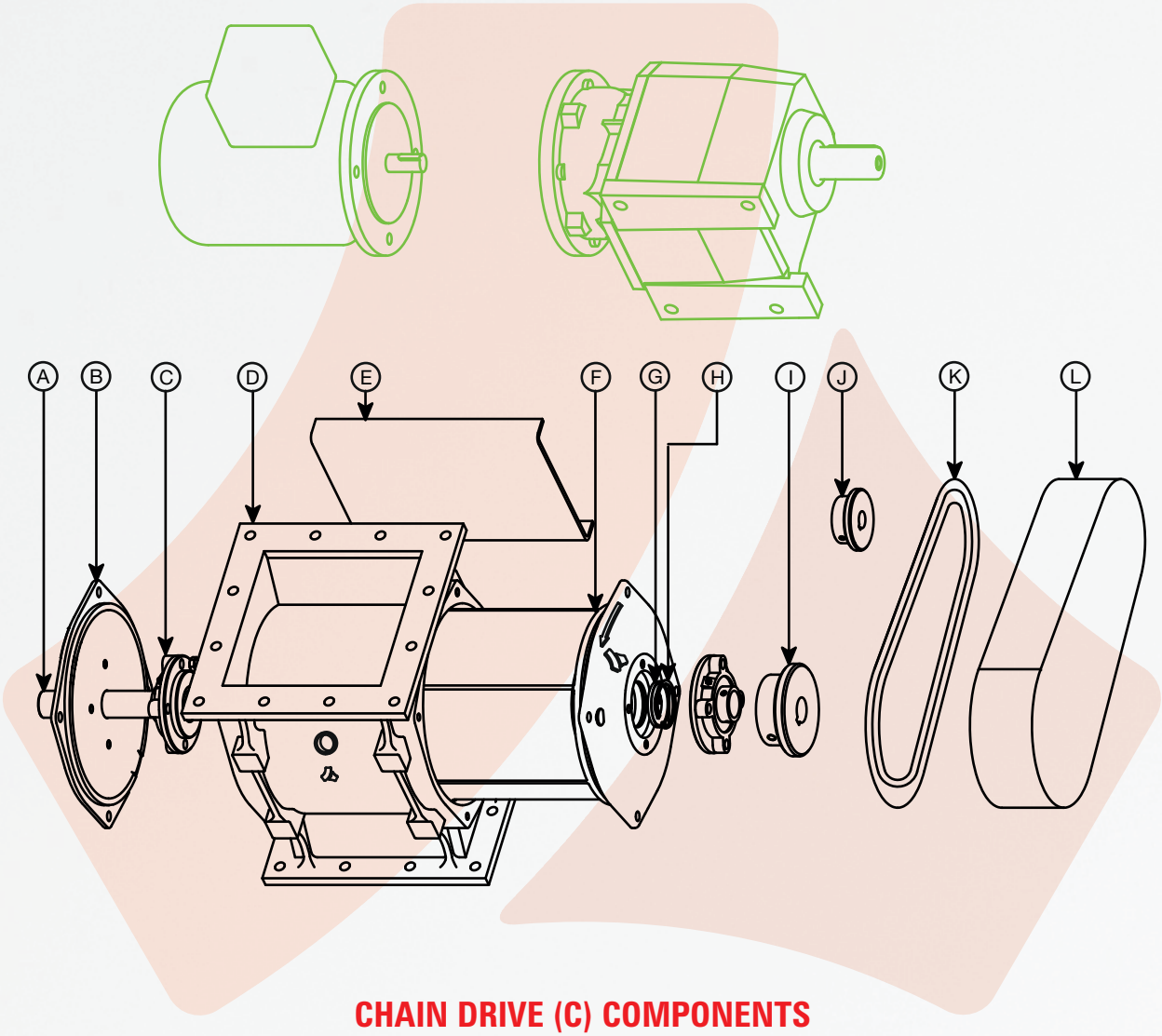
Name	Description	RH150		RH200		RH250		RH300		RH350		RH400		RH500		RH600	
		D	B	D	B	D	B	D	B	D	B	D	B	D	B	D	B
10	AIR PURGE BEARING (A)	101-9892		103-0785		102-0032		102-0032		103-0787		103-0791		102-4380		103-0808	
	SIDE SEAL*	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
10	GREASE PURGE BEARING (G)	103-0783		101-9944		101-9969		101-9969		102-0075		101-9218		103-0789		103-0806	
	SIDE SEAL*	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
11	AIR PURGE DRIVE (A)	101-9893		103-0786		102-0876		102-0876		103-0788		103-0792		103-0803		103-0807	
	SIDE SEAL*	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
11	GREASE PURGE DRIVE (G)	103-0784		101-9947		101-9972		101-9972		102-0078		103-0790		103-0804		103-0805	
	SIDE SEAL*	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
12	UNDERSPEED SENSOR*	103-0904		103-0904		103-0904		103-0904		103-0904		103-0904		103-0905		103-0905	
		1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
13	UNDERSPEED SENSOR BRACKET*	101-7377		102-0903		101-5931		101-5931		101-1493		101-1493		102-4801		102-4801	
		1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
14	UNDERSPEED SENSOR TARGET*	101-7376		102-0924		101-5935		101-5935		101-0403		101-0403		102-4810		102-4810	
		1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
15	VITON SEAL *	101-9895		101-9946		101-9971		101-9971		101-3186		101-6977		102-4394		102-4394	
		2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
A	ROTOR *	101-3722		101-3909		101-3795		101-3977		101-3999		101-4044		101-4470		101-4482	
		1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
B	BEARING SIDE PLATE	101-3717		101-3463		101-3793		101-3976		101-3995		101-4042		101-4468		101-4480	
		1	2	1	2	1	2	1	2	1	2	1	2	1	2	1	2
C	DRIVE SIDE PLATE	101-3726		101-3700		101-3794		101-3981		101-3998		101-4043		101-4469		101-4481	
		1	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0

* Optional Component
D = Direct Drive Quantity, B = Bare Shaft Quantity

Note: Above details represents the part no. of each component and may subject to change with variation.

Component Details

Chain Drive (C)



CHAIN DRIVE (C) COMPONENTS

Component Details

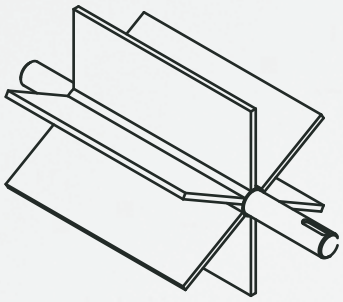
Name	Description	RH150	RH200	RH250	RH300	RH350	RH400	RH500	RH600
		Quantity	Quantity	Quantity	Quantity	Quantity	Quantity	Quantity	Quantity
A	SHAFT	103-0748	102-1074	102-9504	102-9515	102-9518	102-9531	102-9673	103-0765
		1	1	1	1	1	1	1	1
B	BEARING SIDE PLATE	101-3717	101-3463	101-3793	101-3976	101-3995	101-4042	101-4468	101-4480
		2	1	1	1	1	1	1	1
C	BEARING	100-7643	100-7156	100-6922	100-6922	101-3668	101-4140	100-1003	100-1003
		2	2	2	2	2	2	2	2
D	BODY	100-7698	101-3435	101-3792	101-3975	101-3994	101-4041	101-4467	101-4479
		1	1	1	1	1	1	1	1
E	GEAR BOX BRACKET	103-0739	102-0459	102-9506	102-9514	102-9519	102-9533	102-9677	103-0754
		1	1	1	1	1	1	1	1
F	ROTOR	101-3722	101-3909	101-3795	101-3977	101-3999	101-4044	101-4470	101-4482
		1	1	1	1	1	1	1	1
G	LABYRINTH SEAL	100-6826	100-6827	100-6828	100-6828	100-6112	100-6288	100-5723	100-5723
		4	4	4	4	4	4	4	4
H	CIRCLIP	100-8214	100-8778	101-1786	101-1786	100-7362	100-6310	100-7463	100-7463
		2	2	2	2	2	2	2	2
I	DRIVEN SPROCKET	103-0749	102-0470	102-0911	102-0911	102-4861	102-9535	102-5359	102-5359
		1	1	1	1	1	1	1	1
J	DRIVE SPROCKET	103-0750	100-6739	102-9505	102-9505	102-9523	102-9536	102-9536	103-0762
		1	1	1	1	1	1	1	1
K	CHAIN	103-0752	102-0471	102-0909	102-9516	1024873	102-9539	102-9688	103-0763
		1	1	1	1	1	1	1	1
L	CHAIN GUARD	103-0738	102-0464	102-0916	101-6346	102-4867	101-9024	102-9681	103-0759
		1	1	1	1	1	1	1	1

* Optional Component

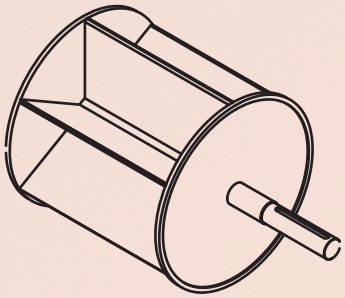
Note: Above details represents the part no. of each component and may subject to change with variation.

Model Rotor Variation

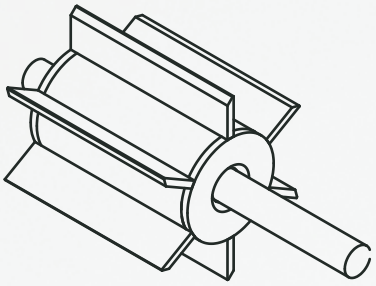
Open Fabricated Rotor (Q)



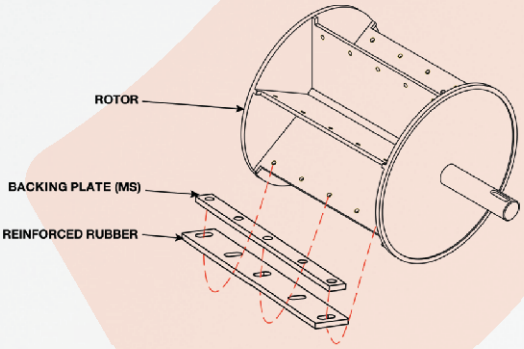
Closed Fabricated Rotor (M)



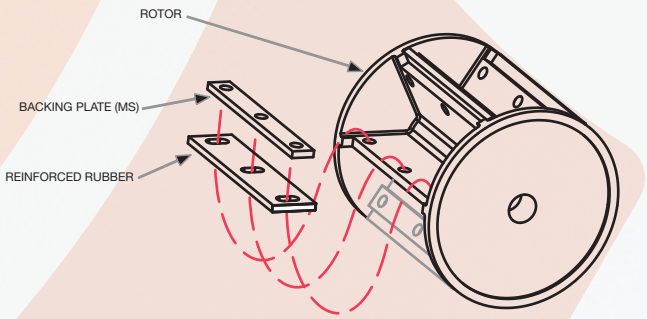
Reduced Pocket Open Fabricated Rotor (R)



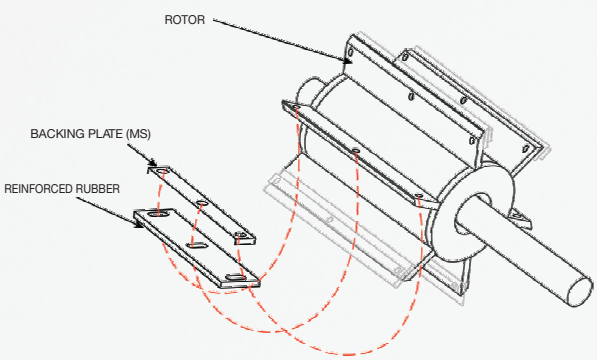
Closed Tipped Fabricated Rotor with Flexible Tips(MF)



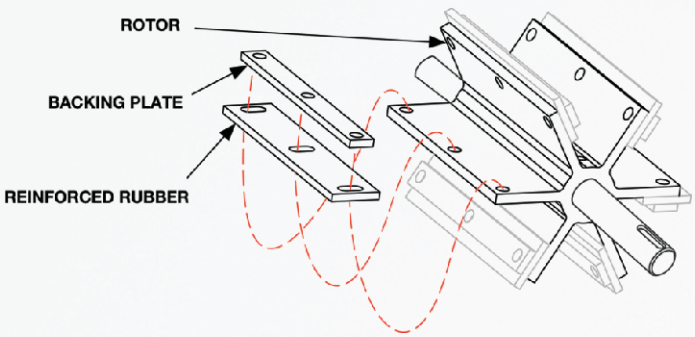
Closed Tipped Rotor with Flexible Tips(MF)



Reduced Pocket Open Rotor Fabricated with Flexible Tips(MF)

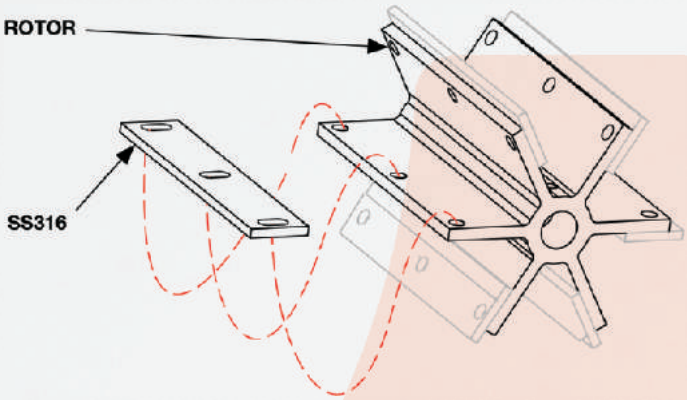


Open Rotor Fabricated with Flexible Tips(MF)

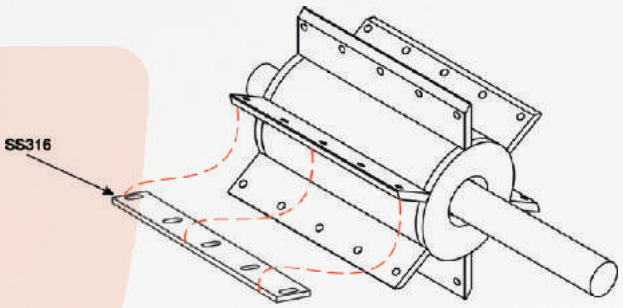


Component Details

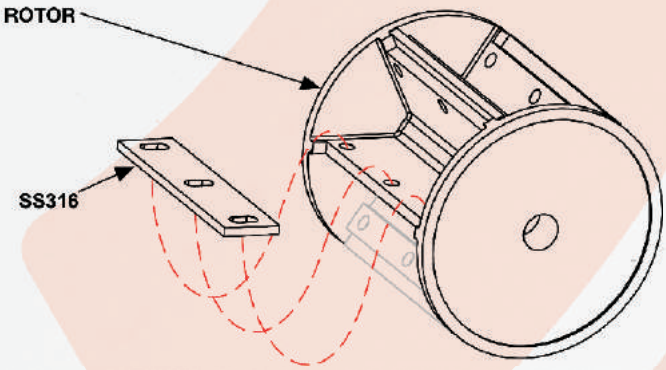
Wear Tips(W) - Open Rotor Fabricated



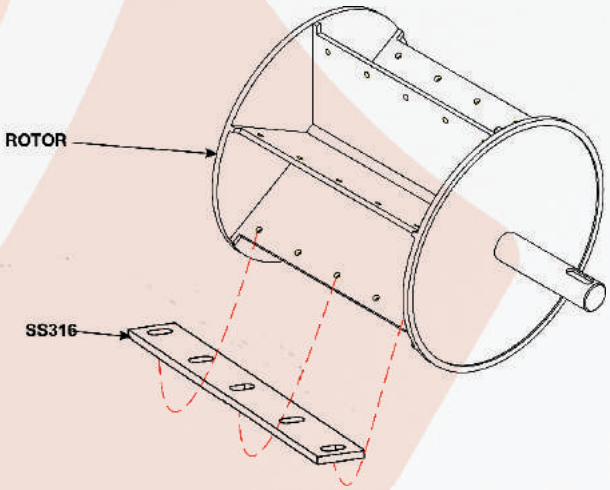
Wear Tips(W) - Reduced Pocket Open Rotor Fabricated



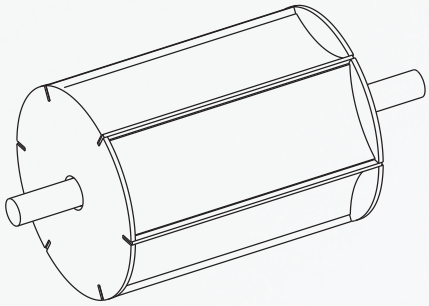
Wear Tips(W) - Closed Rotor



Wear Tips(W) - Closed Rotor Fabricated

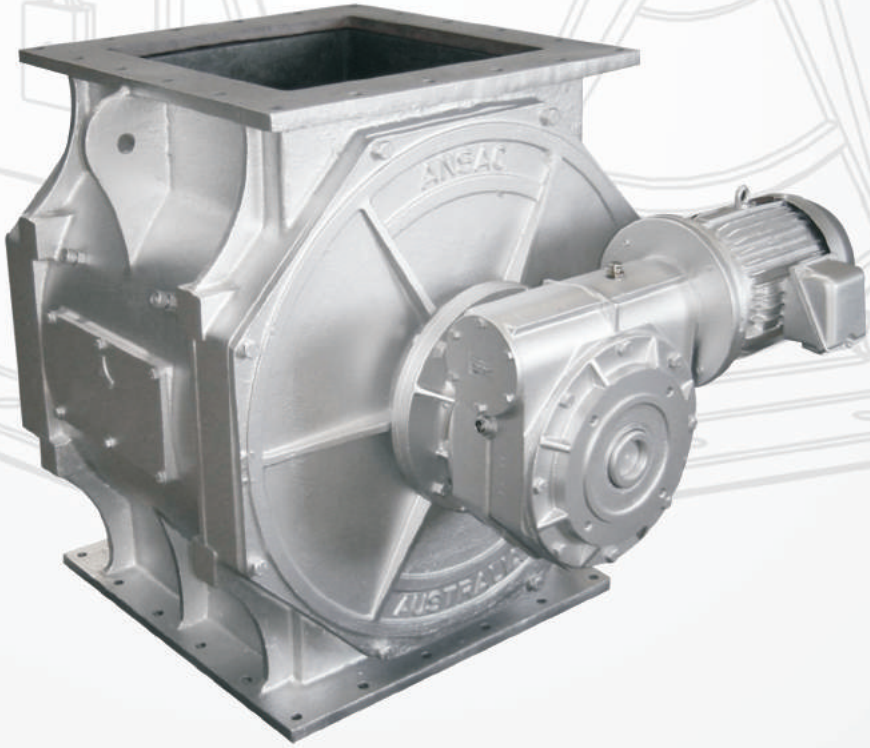


Scalloped Rotor Fabricated (Q)



RFS SERIES

THE TOUGH, HARD WEARING AIRLOCK OR METERING SOLUTION



Product Overview

Forming an integral part of the Anval range, the Rotary Floating Shoe or RFS Valve in an ultra heavy duty product specifically designed for high wear applications.

The RFS Series body is built from a piece of hard wearing cast iron with bolt-on side plates and a rotating, webbed rotor placed in between. This unique design enables the valve to operate efficiently in both positive and negative pressure environments.

Product Features

- Ultra heavy duty cast iron construction
- Ceramic tipped rotor
- Adjustable, hardened cast iron shoe
- Available in direct drive or chain drive
- Feasibility in maintenance
- Available in a range of speeds

Technology

In order to achieve 100% positive sealing, the RFS Series utilises a technology referred to as "Floating Shoe". The shoe slides tightly into the main body top port flange and rides onto the rotor through gravitational force. The shoe slide is sealed with a double 'O' ring between the shoe and the main body. Where the shoe rides on the rotor, the contact surface between the two parts forms a mechanical seal.

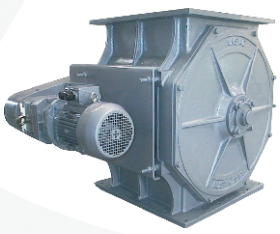
Applications

The RFS Series Valves are designed for such high tolerance levels that maintenance requirements over their long service life are diminished. This is a particularly important aspect of this product given that the expected service life is around 4 times that of a competitor's standard rotary valve.

As part of the RFS range, an overhaul service is offered by Anval whereby out of service RFS valves are re-conditioned and returned to operational capacity. This minimises the spare parts inventory and on-site training required by the customer, improving cost efficiency. Those customers who choose not to fully utilise Anval's extensive service range can be confident that they will receive full support, should the occasion arise when sourcing spare parts.

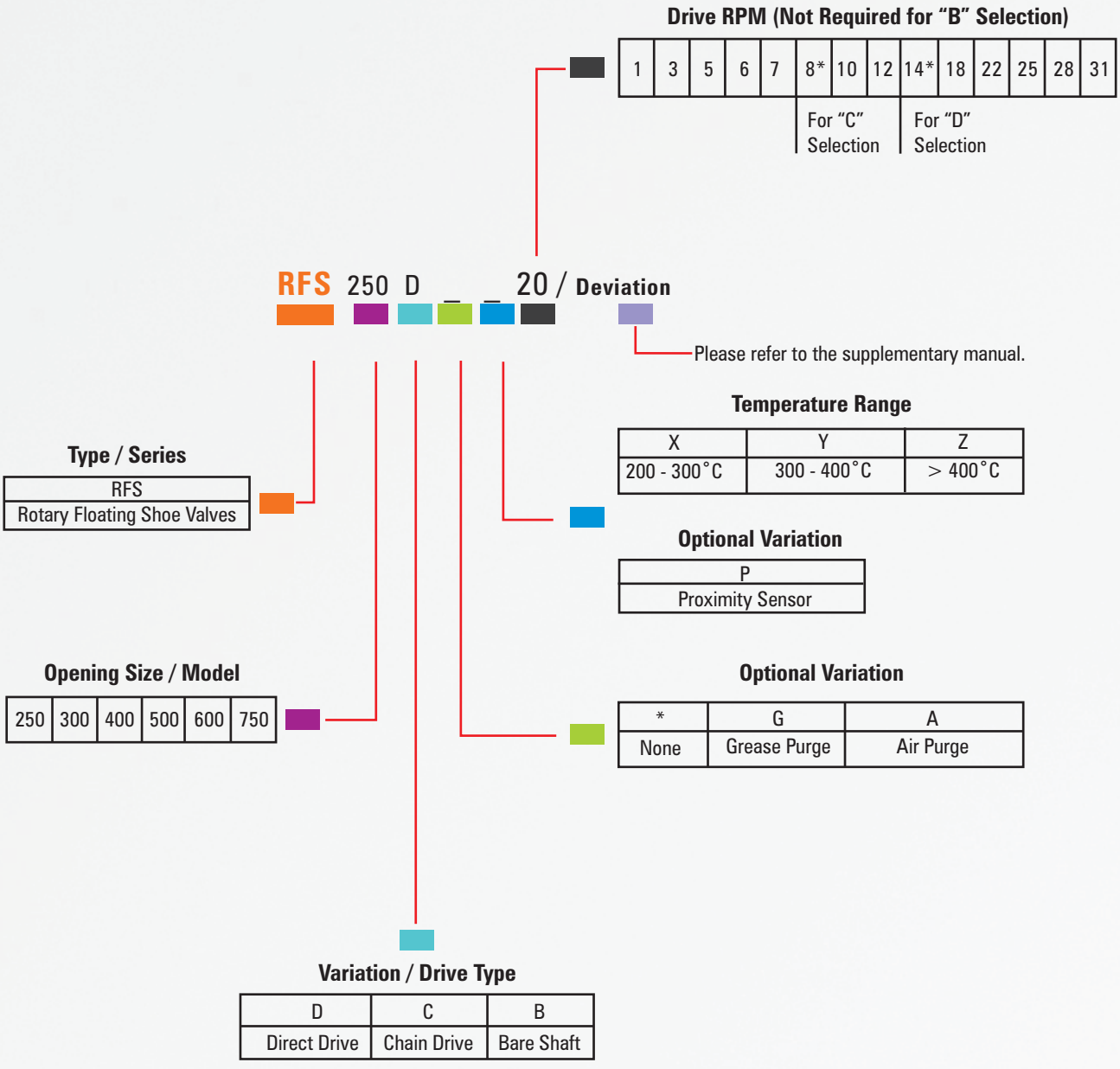
Product Specifications

Opening Size	:	250, 300, 400, 500, 600,750 mm
Flange Opening	:	Square
Drives	:	Direct Driven / Chain Driven / Bare Shaft
Material of Construction	:	Cast Iron
Capacity Range	:	up to 621 m^3/hr
Painting standard	:	Dark Grey Blue
End cover Material	:	Cast Iron
Shaft	:	CS 1030
Seals	:	Labyrinth Seals (Sealing Washer)
Gearbox	:	Heliworm / Helibevel Gears (D) / Helical Gears (C)
Rotor Tips	:	Ceramic Tips
Floating Shoe Material	:	Hardened SG iron
Rotor Type	:	Closed Rotor
Sensor	:	Proximity Sensor
Special Seals	:	Grease Purge (G) / Air Purge (A)
Bearings	:	Cartridge Type
Surface Treatment (Anval Standard)	:	50μ Rapid Prime (Grey) 50μ Paracryl IFC Tinted to B53 Dark Grey Blue Guards Golden Yellow Y14
Surface Treatment (High Temperature)	:	75μ ES600 Zinc Silicate Primer 40μ Heat Kote Aluminium



Product Codification

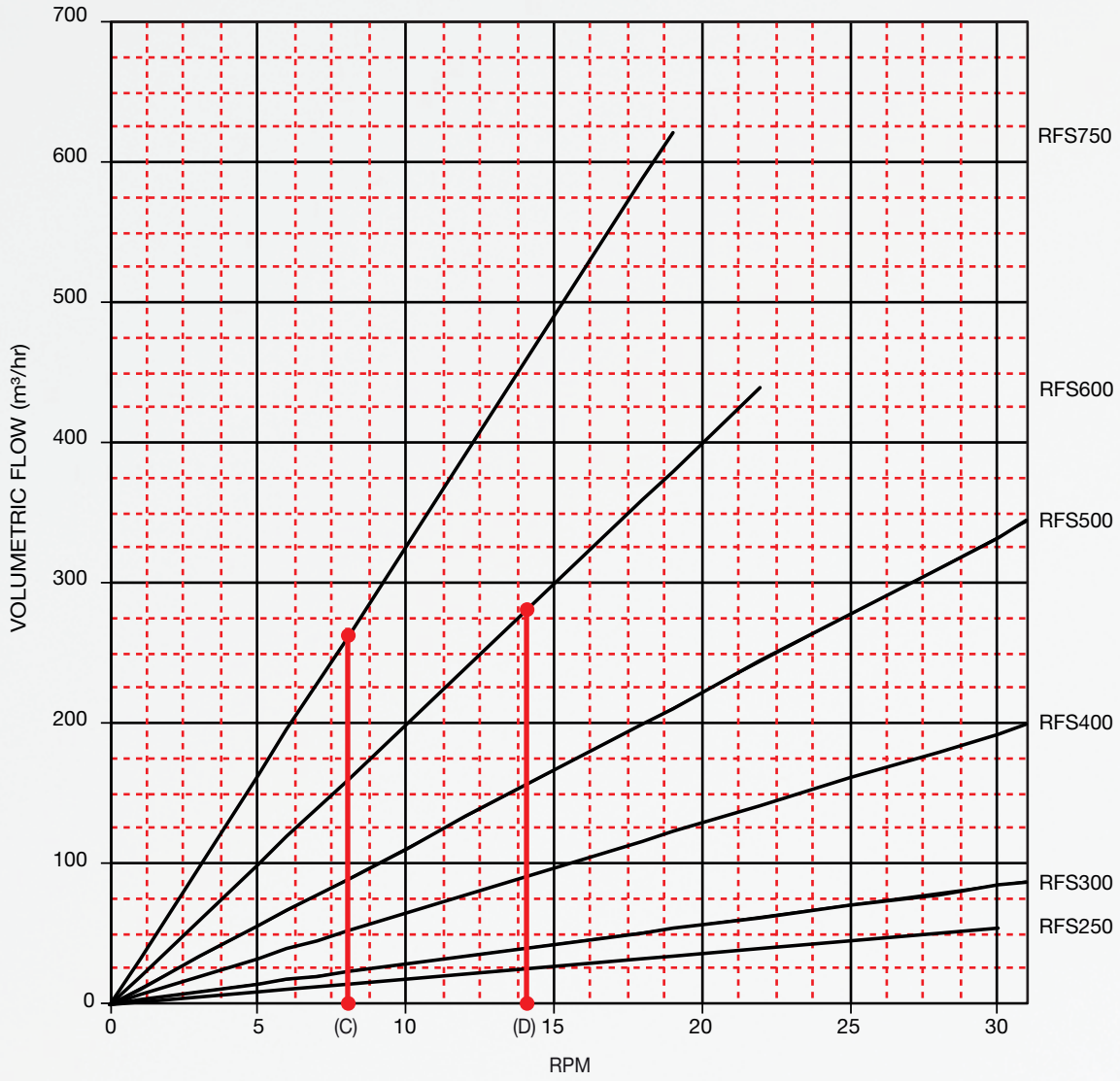
The table below represents the codification format for choosing the model



*Default Selection

Model Selection Chart

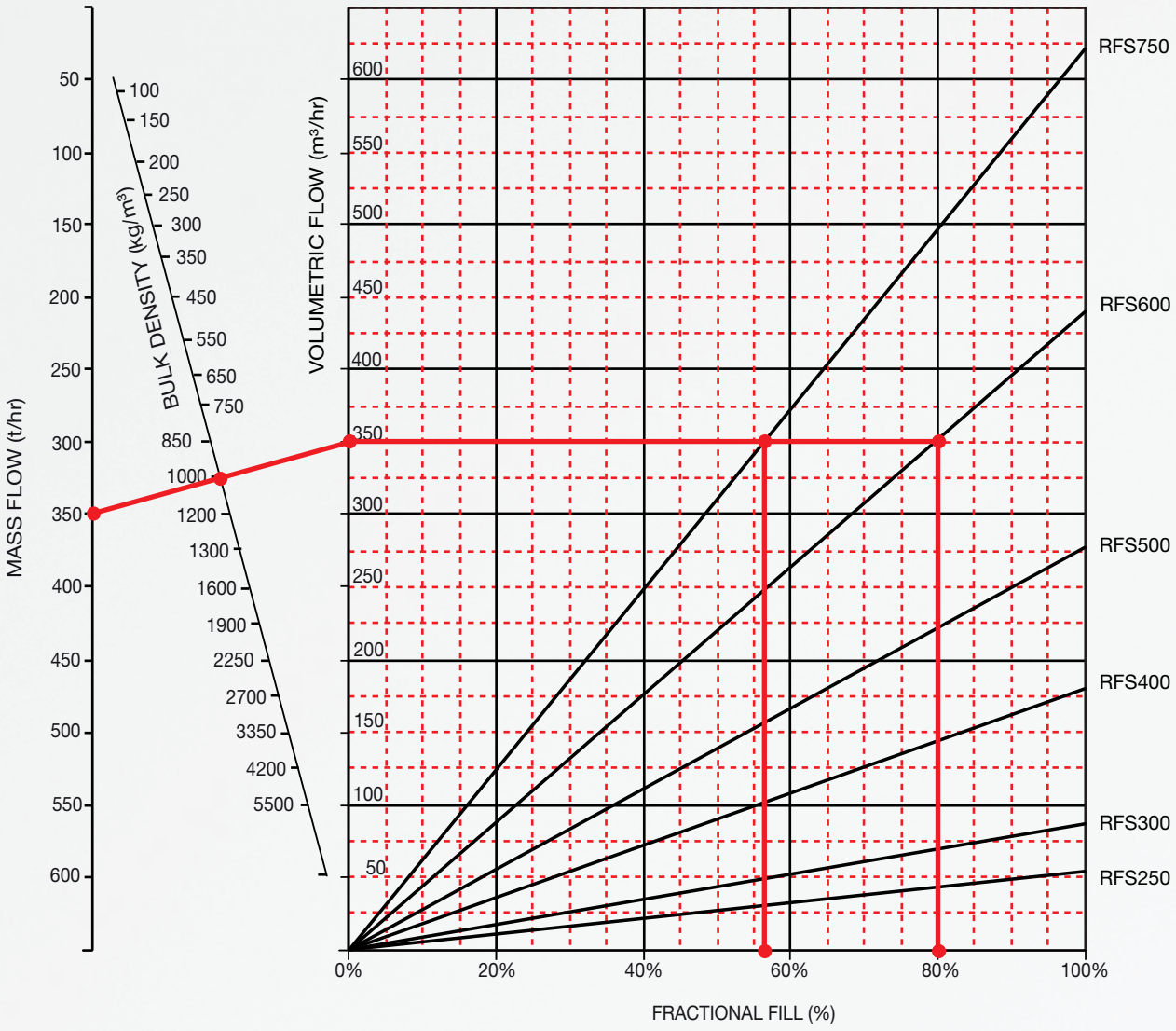
Speed Vs Throughput



Model	Speed (RPM)	Capacity (m^3/hr)
RFS250	30	54
RFS300	31	87
RFS400	31	199
RFS500	31	344
RFS600	22	440
RFS750	19	621

8 RPM default for Chain Drive (C)
14 RPM default for Direct Drive (D)
Note: This chart is prepared for guidance purposes only, considering 100% filling capacity.

Capacity Chart



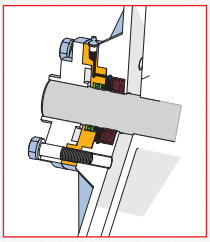
Example: A material with a density of 1000 kg/m^3 and required capacity of 350 t/hr can be achieved by RFS600 at 80% filling capacity with 22 RPM and also by RFS750 at 56% filling capacity with 19 RPM.
Note: This chart is prepared for guidance purposes only taking into consideration the maximum RPM.

Defining Features

Purge Sealing

Grease Purge Sealing (G)

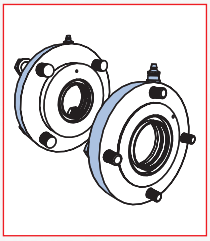
Fitting a grease purge unit into the valves, over the labyrinth seal, helps prevent the escape of any dust particles or gasses. This creates a grease filled cavity between the seals, taking care of extreme duty cases.



Grease Purge (G) Sealing

Air Purge Sealing (A)

In situations where grease cannot be used, air or other gasses are employed to purge the seals so that all dust particles or product fragments are flushed back into the product stream.



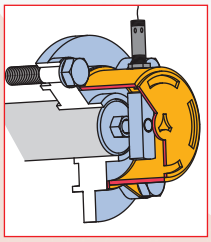
Air Purge (A) Sealing

Proximity Sensors (P)

Proximity Sensors that are about 12mm in diameter with a CD-PNP connection and IP67 protection can be fitted to these valves by mounting them on a specially designed bracket that is bolted onto the bearing. These sensors can function in a temperature range of (-)25°C to (+)70°C.

Customisation To Withstand High Temperature (H)

In order to allow these valves to function in extreme temperatures ranging from 250°C to 500°C, it is advisable that the product is coated with heatkote aluminium. Ceramic fibre sheets and flocks are also provided to protect the bearings and seals.

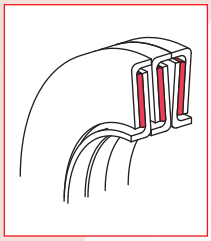


Proximity Sensors(P)

Labyrinth Seal

A Labyrinth Seal is a mechanical seal that fits around the axle or shaft to prevent any leakage of particles and is composed of many threads or grooves that are tightly fit inside the casing, thus making it difficult for the dust to pass through.

By providing non-contact sealing action on the rotating shafts, the passage of particles through a variety of chambers by centrifugal motion is controlled. Triple “Labyrinth Seals” fitted with flock pads, and greased on each side of the valve, are standard with all Rotary Valves. Triple ”Labyrinth Seals” are filled with flock pads and greased on either side of the valve. This procedure is standard with all of the RFS Series Valves.



Key Features

- Longer life span
- No scoring on the shaft
- No need for adjustments
- Overall cost reduction

Note: Special constructions are available for higher differential pressure and temperature beyond 500°C.

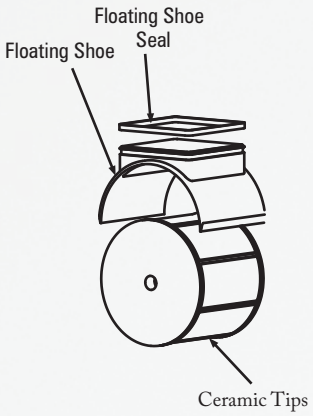
Defining Features

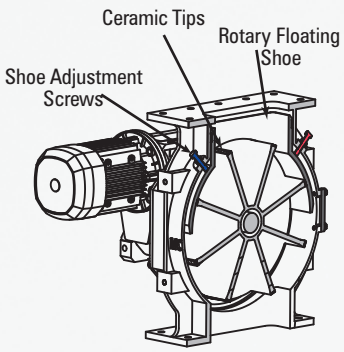
Rotary Floating Shoe

The Anval RFS valve is designed in a manner that creates additional sealing performance through the use of a "Floating Shoe". This is where the ceramic tips of the rotor create a seal with an adjustable shoe as opposed to the body; as the valve wears, the seal can be maintained by adjusting the tips and shoe. This mechanism leads to a significantly lower wear rate in the body and therefore, an increased level of consistency and performance throughout the extended life of the Anval RFS valve.

The reduction in the wear levels of the valve body means that when the shoe reaches its wear limit, it can be easily replaced, returning the valve to normal operation without having to replace the entire valve rotor and body.

The testing conducted by the University of Western Australia (UWA) has proven that the ceramic tipped rotor with the hardened cast iron shoe, allows the Anval RFS valve to efficiently traverse all manner of materials with a minimum or wear. Therefore, the RFS can be used to transport even the most aggressive product and still have a significantly prolonged lifecycle when compared to its rivals. With an extended life, lower running costs and minimised maintenance requirements, the RFS really has proven its ability to outperform.

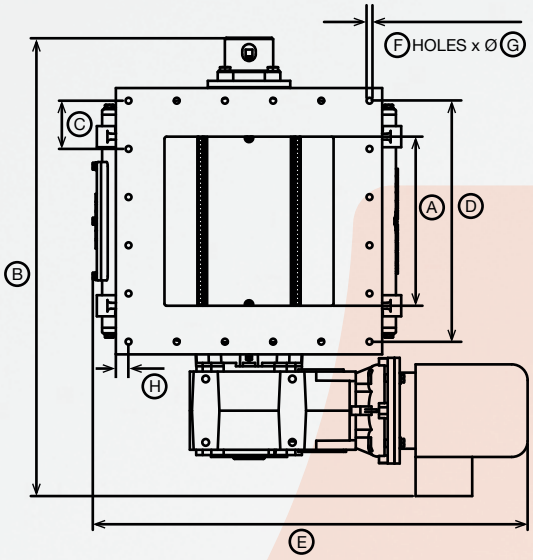




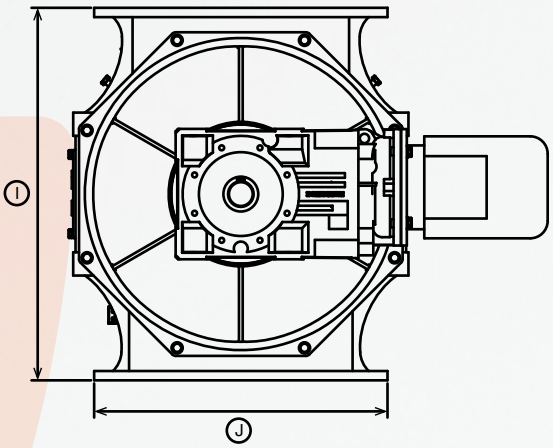
Benefits of Floating Shoe

- The Floating Shoe creates a physical seal with the rotor and minimises the leakage rate.
- Minimum maintenance cost.
- A thin lubricating layer formed during the operation of the valve reduces wear.
- Uniform wearing is achieved with the help of floating shoe design.
- Running costs are minimized.

Direct Drive - Dimension Details



TOP VIEW



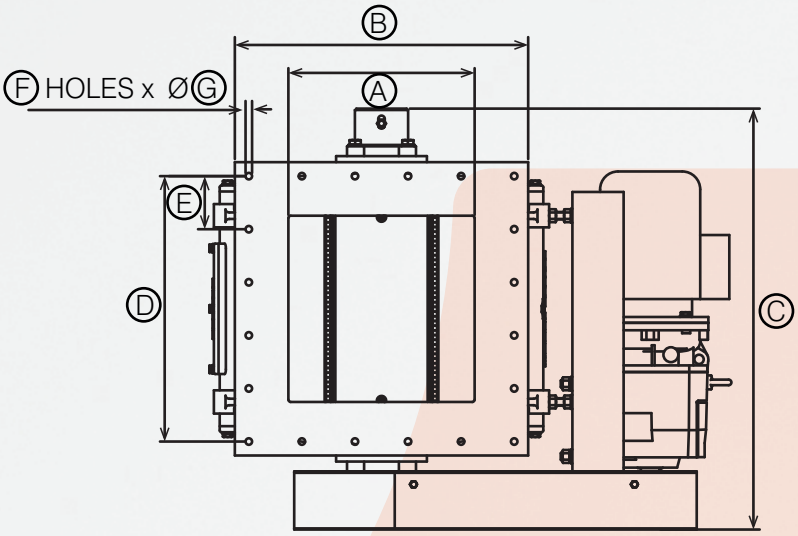
FRONT VIEW

Name	RFS 250	RFS 300	RFS 400	RFS 500	RFS 600	RFS 750
A	☐ 250	☐ 300	☐ 400	☐ 500	☐ 600	☐ 750
B#	720	950	1029	1150	1250	1423
C	94	106	114	130	150	150
D	376	424	570	650	750	900
E#	800	850	1024	1150	1320	1567
F	16	16	20	20	20	24
G	15	15	14	18	18	22
H	56	55	60	62.5	59.5	66
I	560	600	800	940	1130	1300
J	☐ 430	☐ 480	☐ 630	☐ 700	☐ 844	☐ 1000
Net Weight	268	331	643	1038	1546	2239
Gross weight	290	361	673	1068	1575	2270

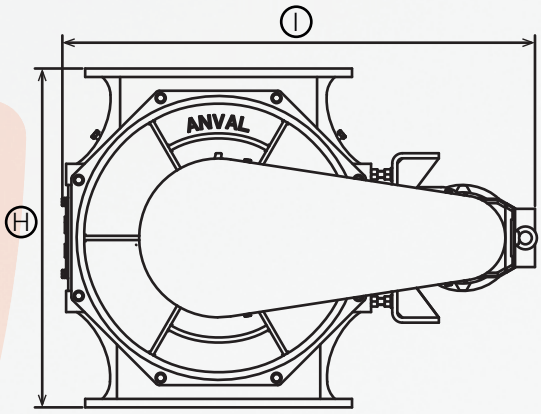
All dimensions in mm. Weight in Kgs

#Approximate dimensions only; dimensions vary with motor size and gear box variation.

Chain Drive - Dimension Details



TOP VIEW



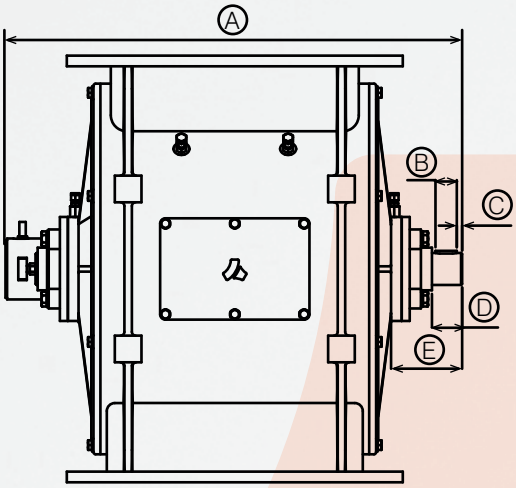
FRONT VIEW

Name	RFS 250	RFS 300	RFS 400	RFS 500	RFS 600	RFS 750
A	☐ 250	☐ 300	☐ 400	☐ 500	☐ 600	☐ 700
B	☐ 430	☐ 480	☐ 630	☐ 700	☐ 844	☐ 1000
C#	700	750	904	1000	1220	1400
D	376	424	570	650	750	900
E	94	106	114	130	150	150
F	16	16	20	20	20	24
G	15	15	14	18	18	22
H	560	600	800	940	1130	1300
I	900	950	1116	1300	1530	1872
Net Weight	293	354	675	1132	1735	2480
Gross weight	318	384	705	1165	1765	2510

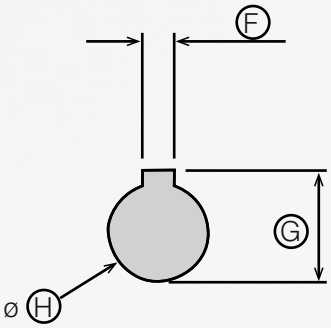
All dimensions in mm. Weight in Kgs

#Approximate dimensions only; dimensions vary with motor size and gear box variation.

Bare Shaft - Dimension Details



TOP VIEW



(BARE SHAFT)
DRIVEN SHAFT SECTION

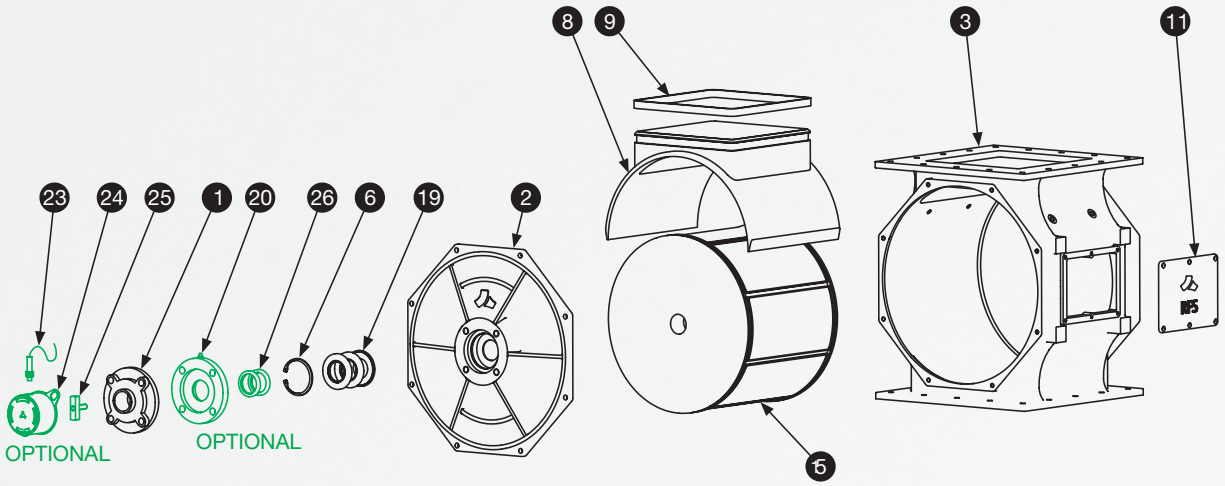
Model	RFS250	RFS300	RFS400	RFS500	RFS600	RFS750
A#	615	723	857	1026	1198	1397
B	57	57	50	50	57	95
C	7	7	10	7	7	10
D	82	91	57	87	87	142
E	124	124	133	146	153	200
F	14	14	18	18	20	22
G	53.5	53.5	64	69	79.5	85
H	50	50	60	65	75	80

All dimensions in mm. Weight in Kgs

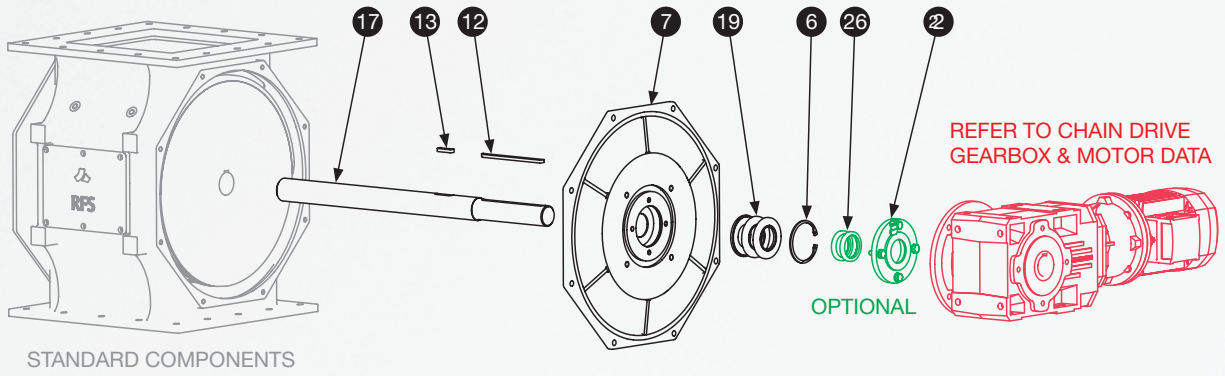
#Approximate dimensions only; dimensions vary with motor size and gear box variation.

Component Details

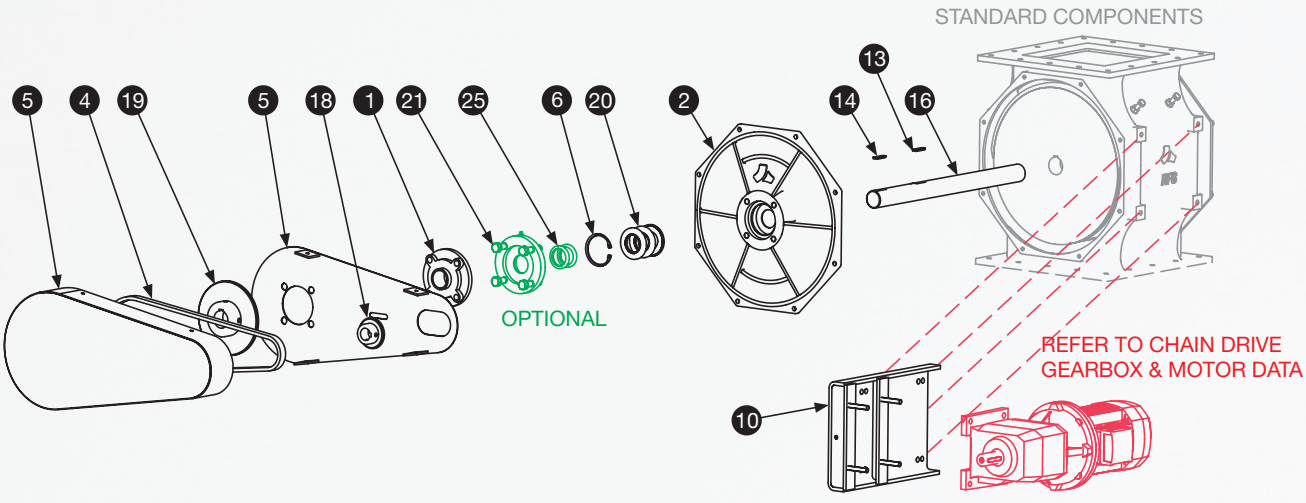
Direct Drive (D), Chain Drive (C) and Bare Shaft (B)



NON DRIVE END COMPONENTS



DIRECT DRIVE(D) END COMPONENTS



CHAIN DRIVE(C) COMPONENTS

Component Details

Name	Description	RFS250			RFS300			RFS400			RFS500			RFS600			RFS750		
		D	C	B	D	C	B	D	C	B	D	C	B	D	C	B	D	C	B
1	BEARING CARTRIDGE ASSEMBLY	100-4140			100-4140			100-1003			100-6283			100-6284			100-9521		
		1	2	2	1	2	2	1	2	2	1	2	2	1	2	2	1	2	2
2	BEARING SIDE PLATE	101-6197			100-6206			102-4234			100-6209			100-6210			102-4240		
		1	2	2	1	2	2	1	2	2	1	2	2	1	2	2	1	2	2
3	BODY	100-6136			100-6338			102-4232			100-6510			100-6584			102-4238		
		1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
4	CHAIN ASSEMBLY	101-9071			101-9030			102-5361			101-9084			101-9112			102-5346		
		0	1	0	0	1	0	0	1	0	0	1	0	0	1	0	0	1	0
5	CHAIN GUARD	101-9064			100-9024			102-5348			101-9090			100-6266			102-5333		
		0	1	0	0	1	0	0	1	0	0	1	0	0	1	0	0	1	0
6	CIRCLIP	100-6310			100-6310			100-7463			100-6299			100-6297			100-9551		
		2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
7	DRIVE SIDE PLATE	100-6272			101-9200			102-4235			101-9194			101-9195			102-4241		
		1	0	0	1	0	0	1	0	0	1	0	0	1	0	0	1	0	0
8	FLOATING SHOE	101-3746			101-3745			102-4236			101-8092			101-8094			102-4242		
		1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
9	FLOATING SHOE SEAL	101-3748			101-3745			102-4389			101-8198			101-9018			102-4413		
		1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
10	GEAR BOX MOUNTING ASSEMBLY	101-9059			101-9031			102-5354			101-9072			101-6605			102-5339		
		0	1	0	0	1	0	0	1	0	0	1	0	0	1	0	0	1	0
11	INSPECTION OPENING COVER	100-6227			100-6226			102-4237			100-6225			100-6224			102-4243		
		1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
12	KEY (GEAR BOX)	101-1679			100-6506			101-9731			101-9180			100-9181			102-4410		
		1	0	0	1	0	0	1	0	0	1	0	0	1	0	0	1	0	0
13	KEY (ROTOR)	101-0391			100-0391			102-4388			100-6303			100-6681			102-4411		
		1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1

* Optional Component

D = Direct Drive Quantity, B = Bare Shaft Quantity, C = Chain Drive Quantity.

Note: Above details represents the part no. of each component and may subject to change with variation.

Component Details

Name	Description	RFS250			RFS300			RFS400			RFS500			RFS600			RFS750		
		D	C	B	D	C	B	D	C	B	D	C	B	D	C	B	D	C	B
14	KEY (SPROCKET)	101-0391			100-0391			102-4388			101-7681			100-6681			102-4411		
		0	1	1	0	1	1	0	1	1	0	1	1	0	1	1	0	1	1
15	ROTOR ASSEMBLY	100-6141			100-6142			102-4233			101-8134			102-6599			102-4239		
		1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
16	SHAFT (CHAIN DRIVE (C))	101-9057			101-9023			102-5357			101-9082			101-9520			102-5342		
		0	1	1	0	1	1	0	1	1	0	1	1	0	1	1	0	1	1
17	SHAFT (DIRECT DRIVE (D))	101-9127			101-9130			102-4382			101-9177			101-9014			102-4405		
		1	0	0	1	0	0	1	0	0	1	0	0	1	0	0	1	0	0
18	SPROCKET (DRIVE)	101-9043			101-9043			102-5358			101-8905			101-9111			102-5343		
		0	1	0	0	1	0	0	1	0	0	1	0	0	1	0	0	1	0
19	SPROCKET (DRIVEN)	101-9021			101-9021			102-5359			101-8901			101-9110			102-5344		
		0	1	0	0	1	0	0	1	0	0	1	0	0	1	0	0	1	0
20	LABYRINTH SEAL	100-6288			100-6288			100-5723			100-6286			100-6287			100-9519		
		6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6
21	AIR(A) / GREASE PURGE(G)	101-9218			101-9218			102-4380			101-9421			101-9422			102-4400		
	BEARING SIDE SEAL*	1	2	2	1	2	2	1	2	2	1	2	2	1	2	2	1	2	2
22	AIR / GREASE PURGE DRIVE SIDE	101-9334			101-9415			102-4383			101-9412			101-9418			102-4403		
	SEAL*	1	0	0	1	0	0	1	0	0	1	0	0	1	0	0	1	0	0
23	UNDERSPEED SENSOR*	100-6565			100-6565			102-4391			100-6565			100-6565			102-4391		
		1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
24	UNDERSPEED SENSOR BRACKET*	101-1493			101-1493			102-4801			100-6522			101-6565			102-4802		
		1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
25	UNDERSPEED SENSOR TARGET*	101-0403			101-0403			102-4810			100-7683			101-7683			101-9373		
		1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
26	VITON SEAL*	101-6977			101-6977			102-4394			101-9423			101-6977			101-4402		
		4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4

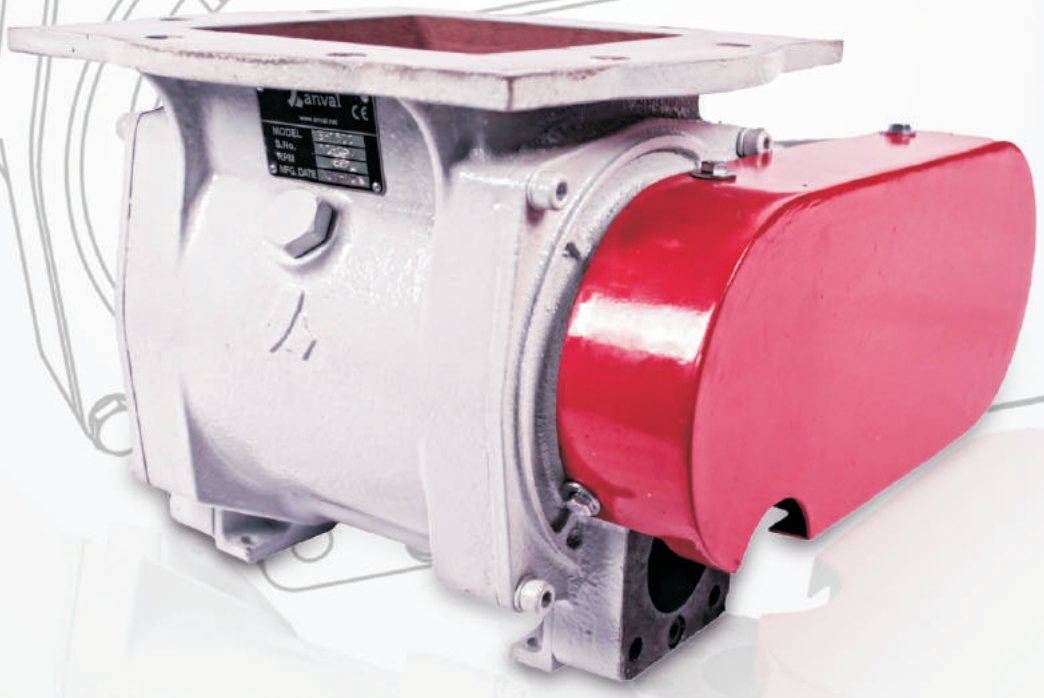
* Optional Component

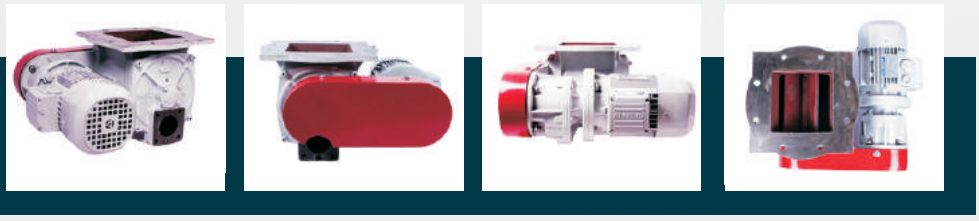
D = Direct Drive Quantity, B = Bare Shaft Quantity, C = Chain Drive Quantity.

Note: Above details represents the part no. of each component and may subject to change with variation.

BH SERIES

HIGH EFFICIENCY BLOW THROUGH VALVES





Product Overview

The BH Series Valves are designed specifically to achieve a smoother flow of materials in pneumatic conveying systems. This series is intended to be utilised in the processing of non-abrasive materials such as food stuffs. Their unique design facilitates the management of a consistently pressurized environment by minimizing the drops in pressure that can occur with other types of valves.

Product Features

- Designed for pneumatic conveying systems
- Achieves a smoother flow of materials
- For use with non-abrasive materials
- Minimises pressure drop
- Stainless Steel Construction is also available

Applications

BH Valves are best suited for the following industries:

- Food, flour & grain
- Plastics
- Chemicals
- Pharmaceutical milling

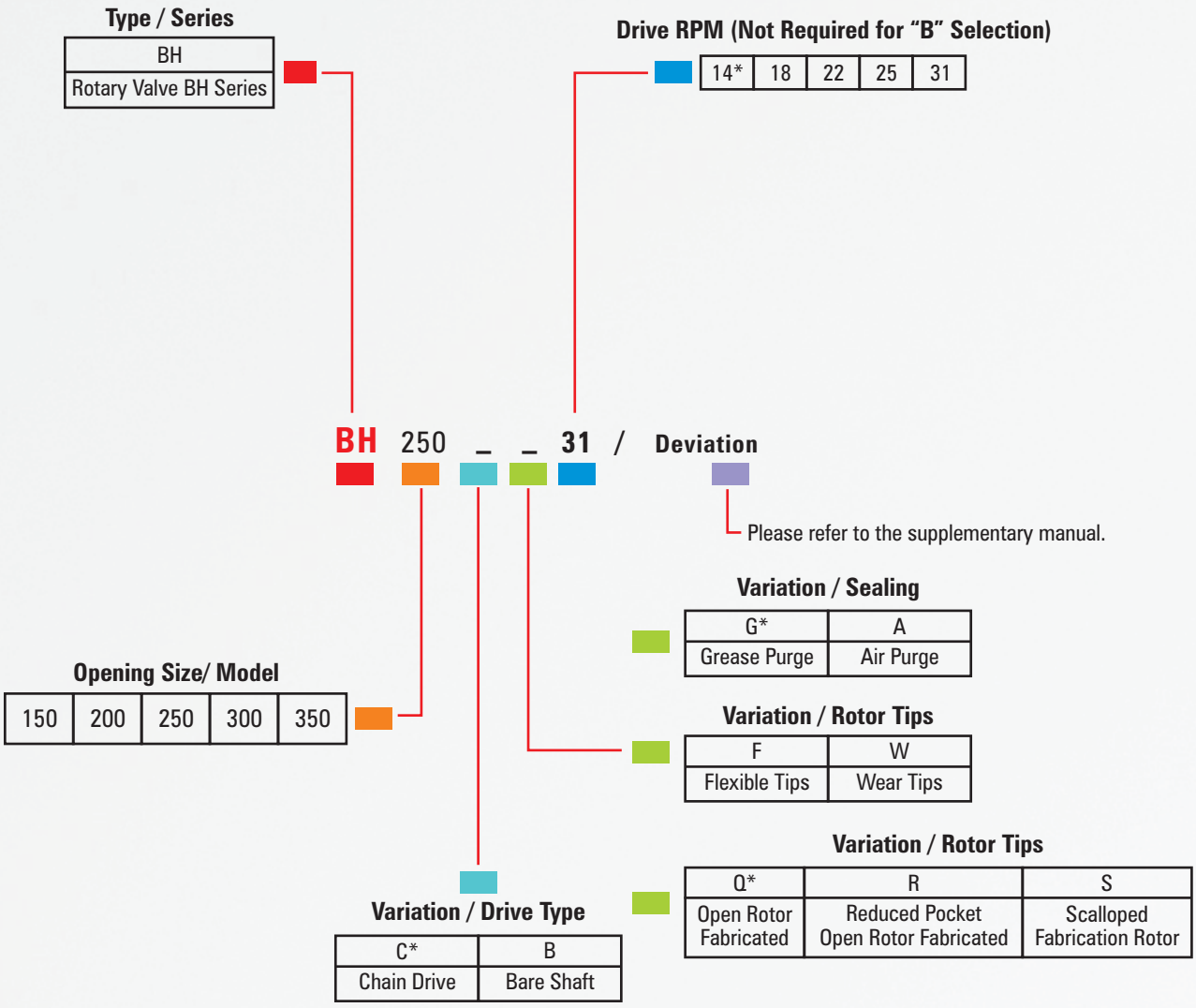
Product Specifications

Opening Size	:	150, 200, 250, 300, 350mm
Flange Opening	:	Universal Flange with Square Opening
Drives	:	Chain / Bare Shaft
Material of Construction	:	Cast Iron
Capacity Range	:	Up to 76 m^3/hr. Max
Rotor	:	MS Fabricated - Open Rotor Type
Gearbox	:	Helical Gears
Seals	:	Labyrinth (Sealing Washer)
Painting Standard	:	Dark Grey Blue
Special Seals	:	Grease Purge / Air Purge
Bearings	:	Inboard
Shaft	:	CS1030
Surface Treatment	:	50μm Grey Prime
(Anval Standard)		50μm B53 Dark Grey Blue Guards Golden Yellow Y14

Note: Stainless Steel Construction is also available.

Product Codification

The table below represents codification format for choosing the model

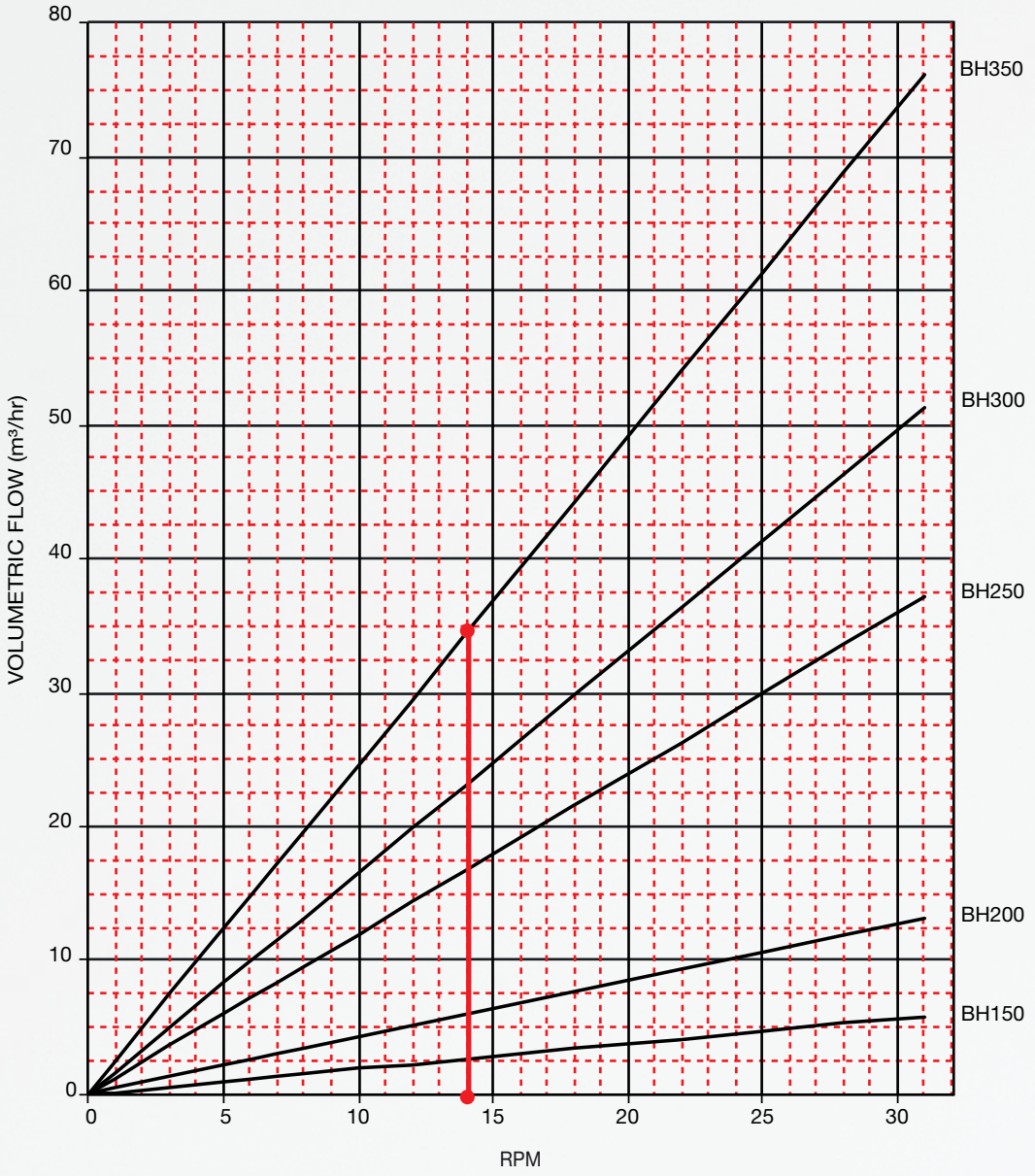


Note: Stainless Steel Construction is also available.

* Default Selection

Model Selection Chart

Speed Vs Throughput

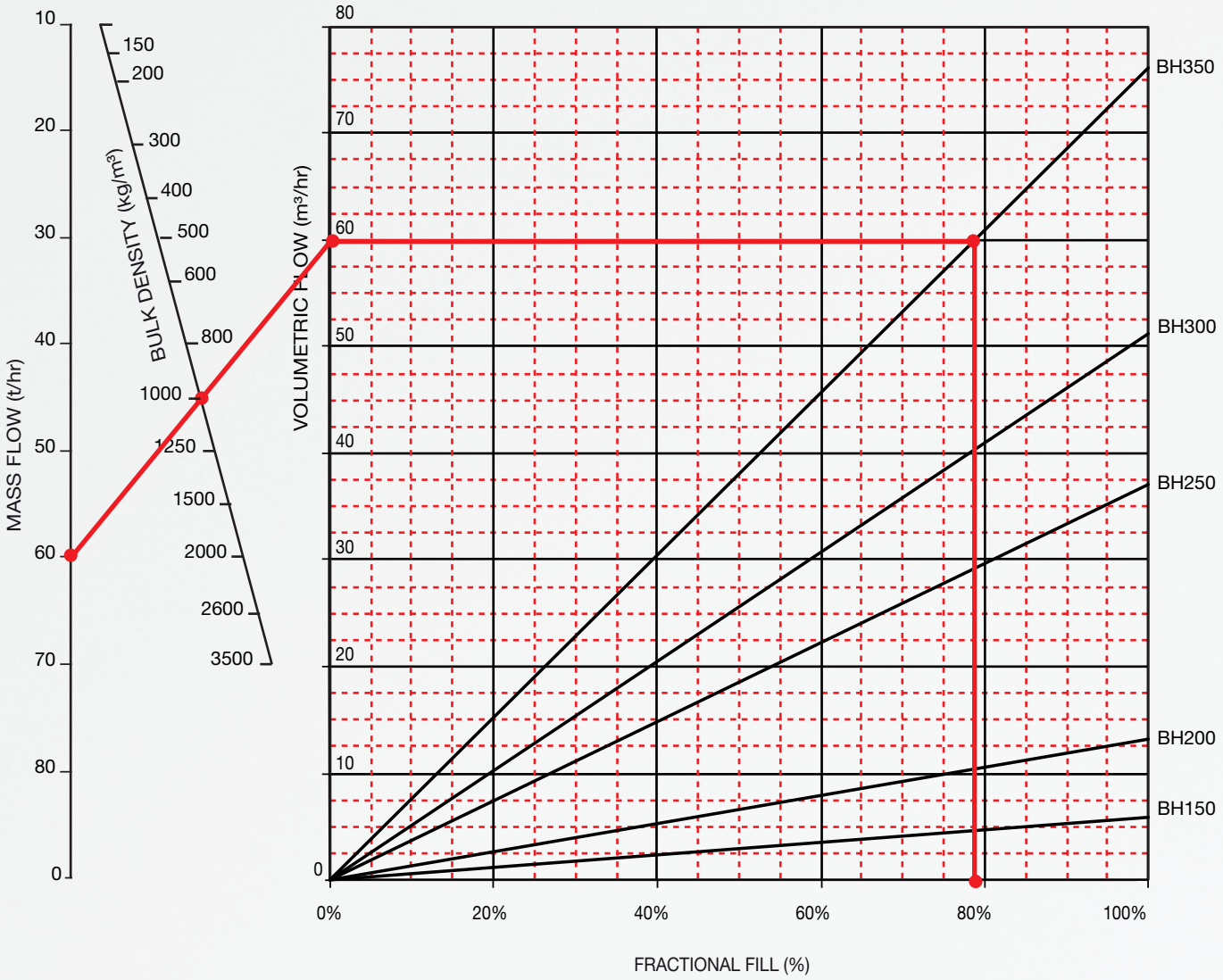


Model	Speed (RPM)	Capacity (m^2/hr)
BH150	31	5.87
BH200	31	13.2
BH250	31	37
BH300	31	51.2
BH350	31	76

- 14 RPM default for Chain Drive (C)
- RPM not required for Bare Shaft (B)

Note: This chart is prepared for guidance purpose only, considering 100% filling capacity.

Capacity Chart



Example: A material with a bulk density of 1000 (kg/m^3) and required capacity of 60 (t/hr) can be achieved by BH350 at 78% filling capacity with 31 RPM.

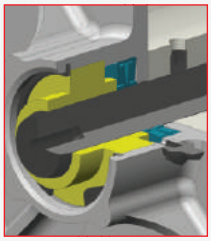
Note: This chart is prepared for the guidance purpose only, considering maximum RPM.

Defining Features

Purge Sealing

Grease Purge (G) Sealing

For extreme duty, valves can be fitted with a grease purge unit over the labyrinth seal. Creating a grease filled cavity between the seals prevents the escape of any dust particles or gases.



Grease Purge (G) Sealing

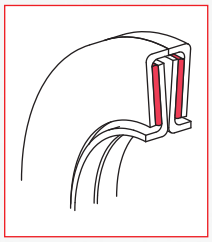
Air Purge (A) Sealing

When grease cannot be used, air or other gases can be used to purge the seal so all dust particles or product cases are flushed back into the product stream.

Labyrinth Seal

A Labyrinth Seal is a mechanical seal that fits around the axle or shaft to prevent any leakage of particles and is composed of many threads or grooves that are tightly fit inside the casing, thus making it difficult for the dust to pass through.

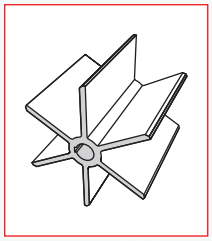
By providing non-contact sealing action on the rotating shafts, the passage of particles through a variety of chambers by centrifugal motion is controlled. 'Double Labyrinth Seals' fitted with flock pads, and greased on each side of the valve, are standard with all Blow Through Valves.



Labyrinth Seals

Key Features

- Longer life span
- No scoring on the shaft
- No need for adjustments
- Overall cost reduction



Open Rotor

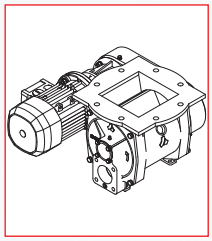
Open Rotor

Open Rotors refer to the open pocket at each end of the rotor.

The BH Series rotors, by default come with 8 vanes and a close axial and radial clearance of 0.15 mm (max).

Air Vent / Cleaning

Air vent is available for BH rotary valves to release the gas leakage when feeding a positive pressure system.

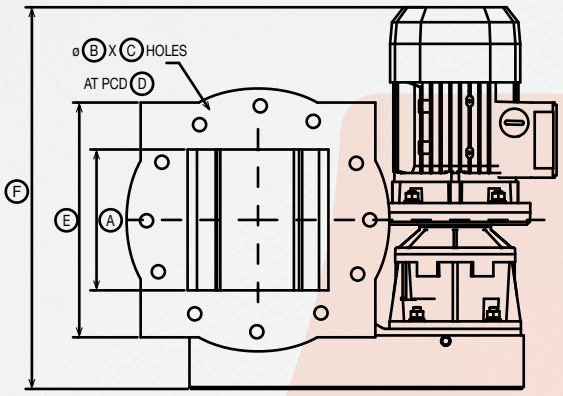


Air Vent / Cleaning

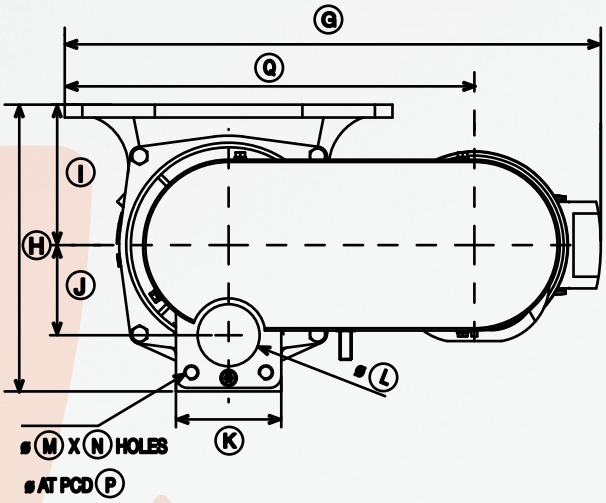
Note: Stainless Steel Construction is also available.

Dimension Details

Chain Drive(C) - BH150, BH200, BH250, BH300



TOP VIEW



FRONT VIEW

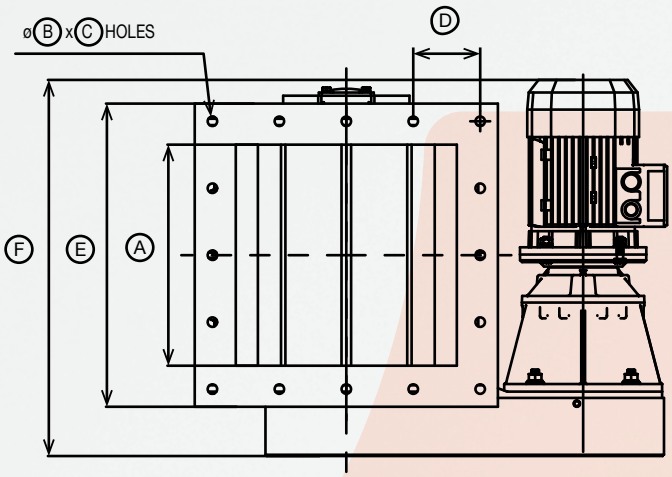
Name	BH 150	BH 200	BH 250	BH 300
A	☐ 150	☐ 202	☐ 255	☐ 300
B	Ø 14	Ø 14	Ø 22	Ø 17.5
C	8	8	8	12
D	240	295	350	400
E	☐ 250	☐ 305	☐ 360	☐ 400
F#	407	442	473	473
G#	458	528	607	673
H	245	320	405	470
I	120	165	205	235
J	77	96	120	140
K	☐ 90	☐ 110	☐ 150	☐ 180
L	Ø 53	Ø 63	Ø 103	Ø 125
M	M12	M16	M16	M16
N	4	4	4	4
P	90	115	165	195
Q	350	420	508	558
Net Weight	39	65	115	150
Gross weight	48	78	128	169

All dimensions in mm. Weight in Kgs

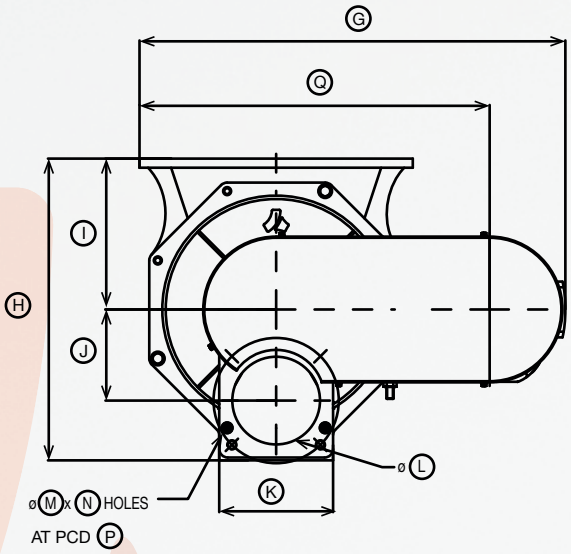
#Approximate dimensions only; dimensions vary with motor size and gear box variation.

Dimension Details

Chain Drive(C) - BH350



TOP VIEW



FRONT VIEW

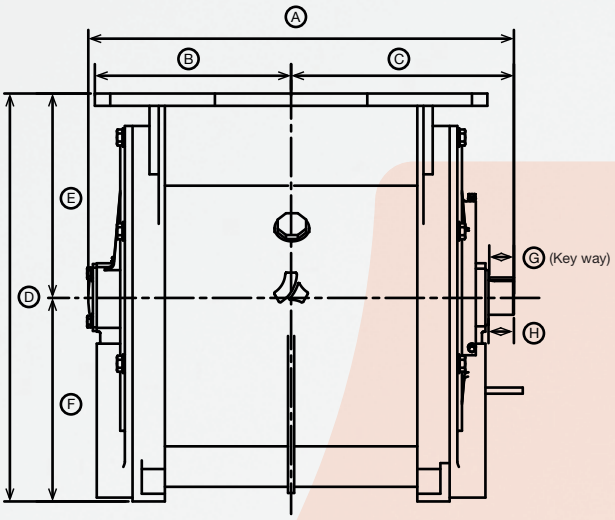
Name	BH 350
A	□ 350
B	Ø 15
C	16
D	106
E	□ 480
F#	596
G#	748
H	530
I	265
J	160
K	□ 200
L	Ø 154
M	M16
N	4
P	220
Q	615
Net Weight	216
Gross weight	236

All dimensions in mm. Weight in Kgs

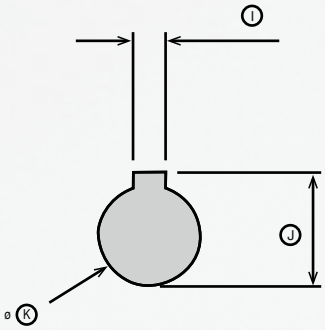
#Approximate dimensions only; dimensions vary with motor size and gear box variation.

Component Details

Bare Shaft (B) - BH150, BH200, BH250, BH300, BH350



TOP VIEW



(BARE SHAFT)
DRIVEN SHAFT SECTION

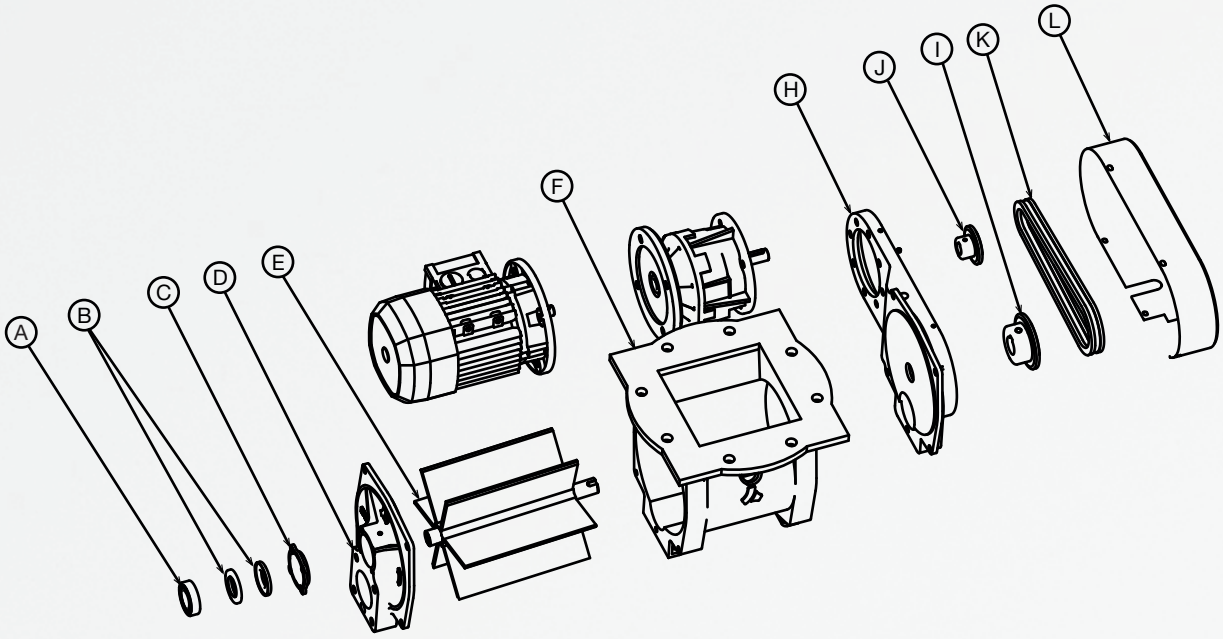
Name	BH 150	BH 200	BH 250	BH 300	BH 350
A	300	351	431	498	553
B	140	170	197.5	227.5	235
C	160	181	233.5	270.5	318
D	245	320	405	470	530
E	120	165	205	235	265
F	125	155	200	235	265
G	25	26	25	25	32
H	26	26	26	32.3	33
I	8	8	12	12	14
J	28	33	43	43	48.5
K	25	30	40	40	45
Net Weight	30	49	90	116	172
Gross weight	40	68	118	129	190

All dimensions in mm. Weight in Kgs

#Approximate dimensions only; dimensions vary with motor size and gear box variation.

Component Details

Chain Drive(C)

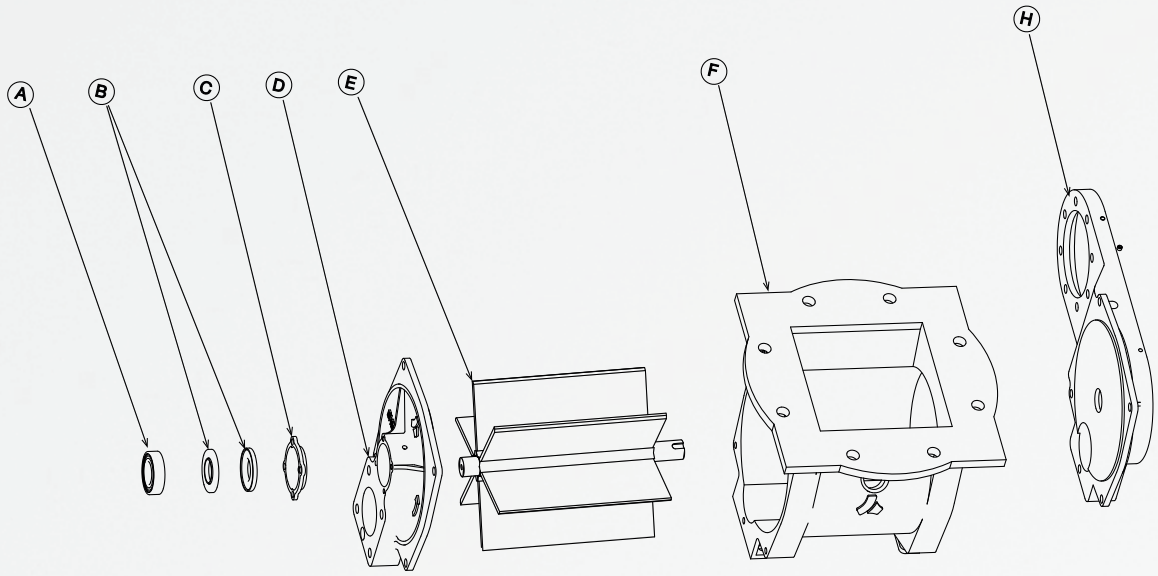


Name	Description	Quantity	BH150	BH200	BH250	BH300	BH350
A	Bearing	2	102-6281	102-6282	102-9600	102-9600	102-9435
B	Labyrinth Seal	4	100-6826	102-6827	100-6828	100-6828	102-6112
C	Bearing End Cap	1	102-6267	102-6280	102-9601	102-9601	102-9450
D	Bearing Side Plate	1	102-9552	102-9542	102-9582	103-1896	102-9564
E	Fabricated Rotor	1	102-9713	102-9714	103-2170	103-2192	102-9928
F	Body	1	102-9551	102-9541	102-9581	103-1895	102-9563
H	Drive Side Plate	1	102-9553	102-9543	102-9583	103-1897	102-9565
I	Driven Sprocket	1	102-9361	102-9406	102-9612	102-9612	102-9440
J	Drive Sprocket	1	102-9362	102-9407	102-9613	102-9613	102-9441
K	Chain	1	102-9359	102-9405	102-9614	103-1899	102-9442
L	Chain Guard Assembly	1	102-9556	102-9547	102-9584	103-1900	102-9571

Note: Above details represents the part no. of each component and may subject to change with variation.

Component Details

Bare Shaft (B)

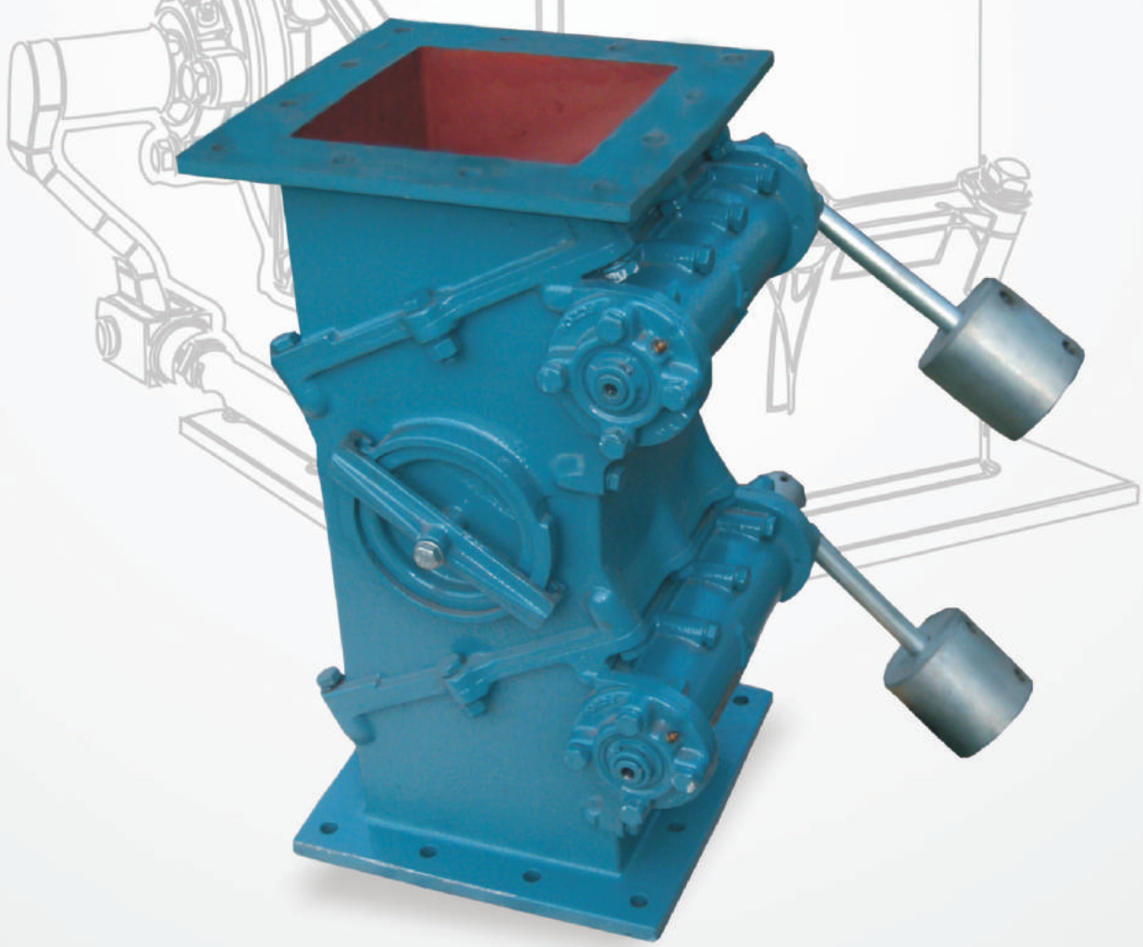


Name	Description	Qty.	BH 150	BH 200	BH 250	BH 300	BH 350
A	Bearing	2	102-6281	102-6282	102-9600	102-9600	102-9435
B	Labyrinth Seal	4	102-6828	102-6827	100-6828	100-6828	102-6112
C	Bearing End Cap	1	102-6267	102-6280	102-9601	102-9601	102-9450
D	Bearing Side Plate	1	102-9552	102-9542	102-9582	103-1896	102-9564
E	Fabricated Rotor	1	102-9713	102-9714	103-2170	103-2192	102-4848
F	Body	1	102-9551	102-9541	102-9581	103-1895	102-9563
H	Bearing Drive Plate	1	102-9553	102-9543	102-9583	103-1897	102-9565

Note: Above details represents the part no. of each component and may subject to change with variation.

DH SERIES

LOW COST, HIGH EFFECTIVE AIRLOCK IN VACUUM OR PRESSURE CONDITIONS



Product Overview

The Anval DH Series valve provides a cost effective and versatile air locking valve solution for the discharge of bulk solids while restricting the back flow of air. The DH Series can be effectively utilised in either vacuum or pressurised conditions. The design if the DH Series allows for the discharge of material from one flap whilst the other creates and maintains the seal.

Designed to be highly efficient, with an emphasis on total sealing and continuous uninterrupted discharge, the DH Series Dump Valve range assures a long service life with minimal maintenance.

Product Features

- Wide range of options - Single Dump / Double Dump / Gravity fed / Motorised / Pneumatic
- Heavy duty iron cast construction
- Minimal maintenance requirements
- Compact and robust design
- High quality airlock
- Custom-made to suit specific requirements

Applications

Intended for applications where total sealing and occasional or regular discharge of solids is required, these valves currently provide consistent service in the following processes:

- Dust collectors
- Hoppers
- Bag houses
- Conveyors
- Electrostatic precipitators handling fly ash, cement, sand, limestone, sawdust etc.

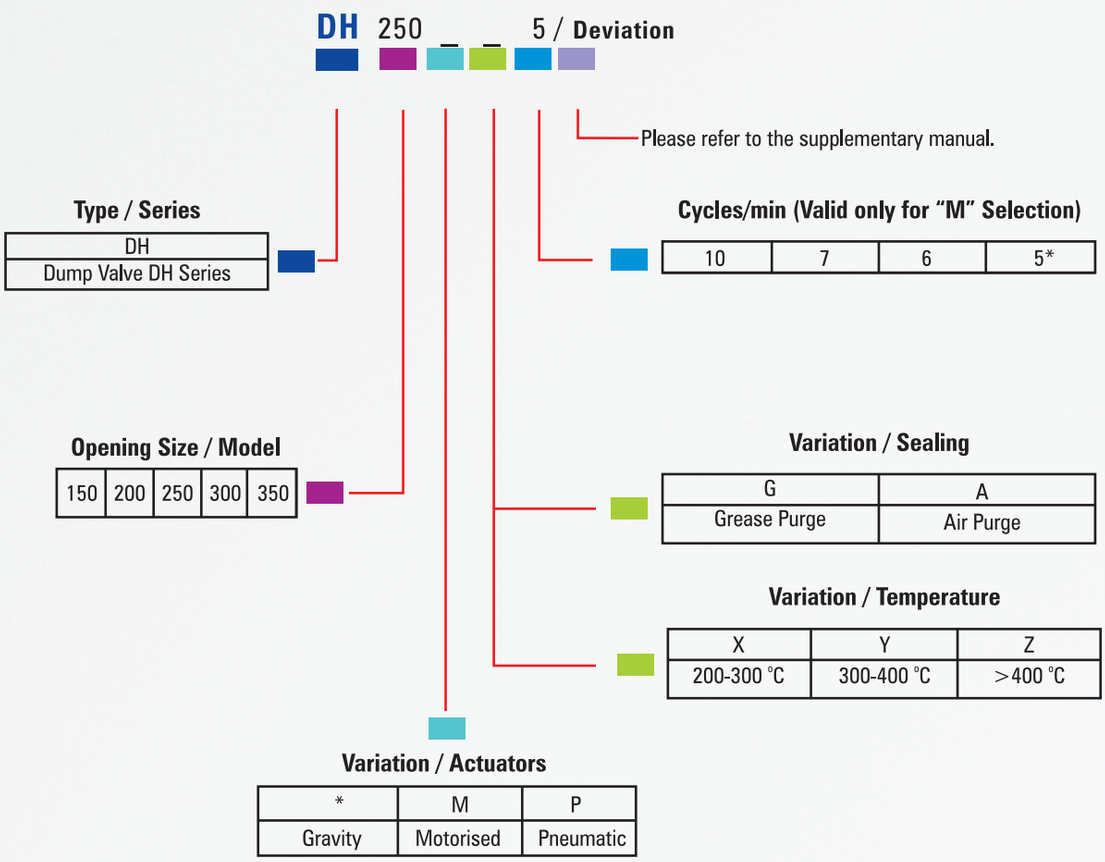
Product Specifications

The Anval DH Series Dump Valve range is specially designed with emphasis on total sealing to assure long life with minimal maintenance. These valves are best suited for applications which involve continuous and uninterrupted discharge.

Opening Size	:	150, 200, 250, 300, 350mm
Flange Opening	:	Square
Actuators	:	Gravity / Motorised / Pneumatic
Material of Construction	:	Cast Iron
Flap Type	:	Single / Double
Sealing	:	Labyrinth (Sealing Washer)
Surface Treatment (Anval Standard)	:	50 Microns Rapid Prime (Grey) 50 Microns to B53 Dark Grey Blue Guards Golden Yellow Y14
Surface Treatment (High Temperature)	:	75 Microns ES600 Zinc Silicate Primer 40 Microns Heat Kote Aluminium

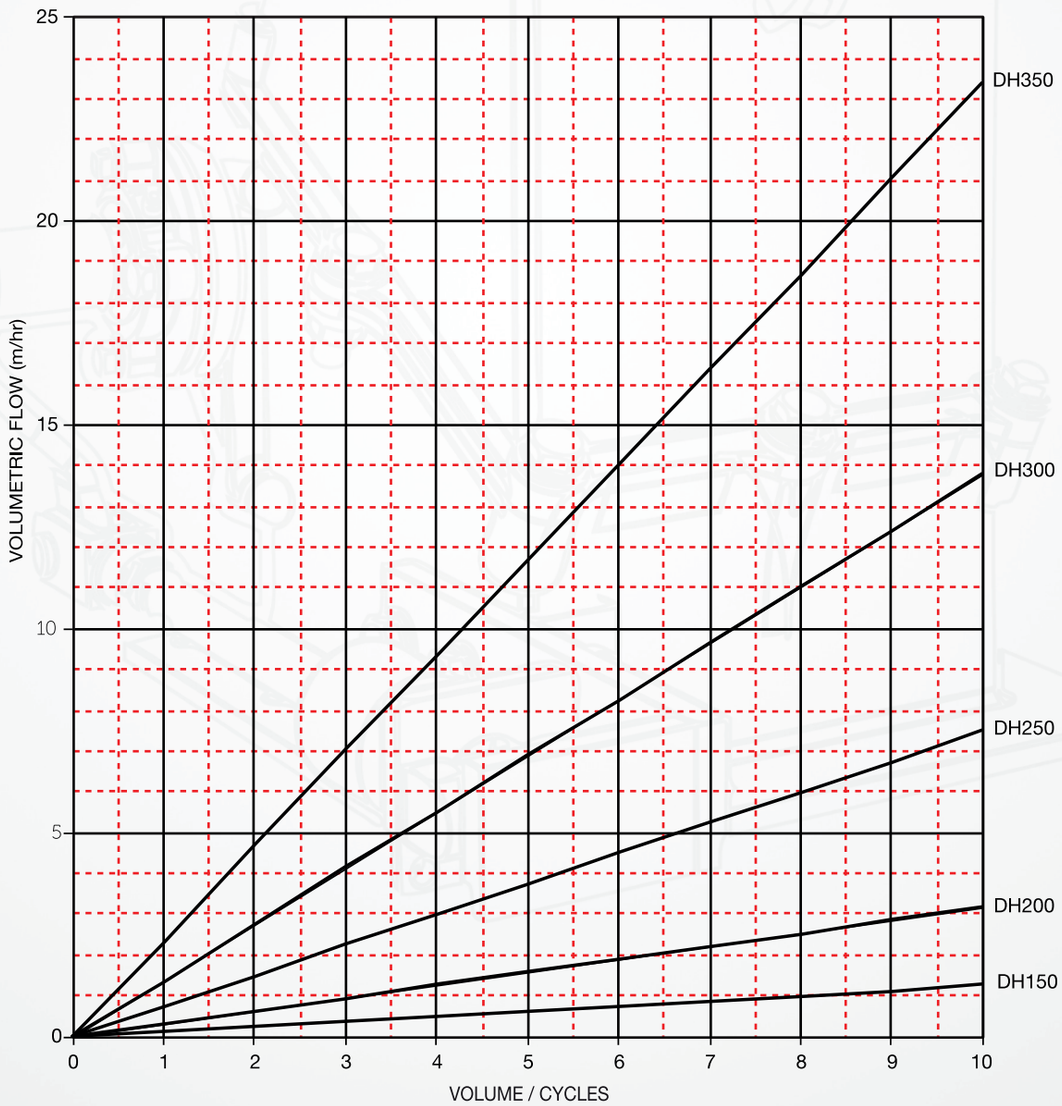
Product Codification

The table below represents the codification format for choosing the model



*Default Selection

Capacity Chart



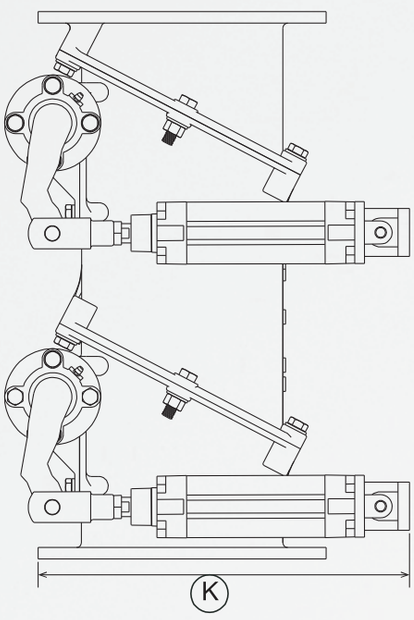
Note: This chart is prepared for the guidance purpose only, considering maximum volumes per cycles..

Capacity Table

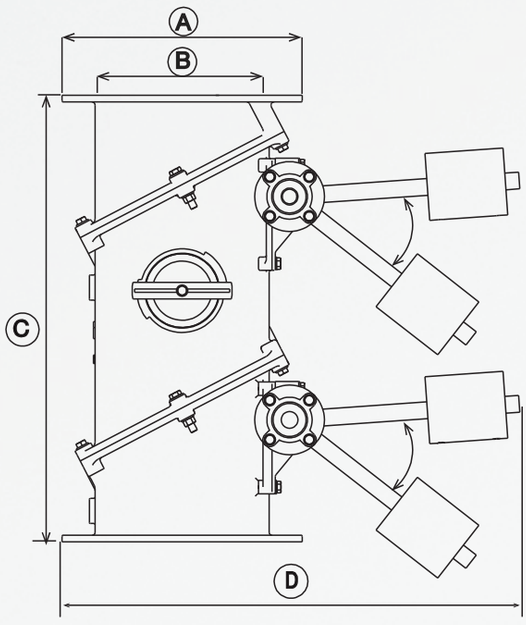
	DH150	DH200	DH250	DH30	DH350
Vol / Cyc	0.0021	0.0053	0.0125	0.0230	0.0390
Cyc/Min					
1	0.13	0.32	0.75	1.38	2.34
2	0.25	0.64	1.50	2.76	4.68
3	0.38	0.95	2.25	4.14	7.02
4	0.50	1.27	3.00	5.52	9.36
5	0.63	1.59	3.75	6.90	11.70
6	0.76	1.91	4.50	8.28	14.04
7	0.88	2.23	5.25	9.66	16.38
8	1.01	2.54	6.00	11.04	18.72
9	1.13	2.86	6.75	12.42	21.06
10	1.26	3.18	7.50	13.80	23.40

Note: This table was generated taking 100 % fractional fil.

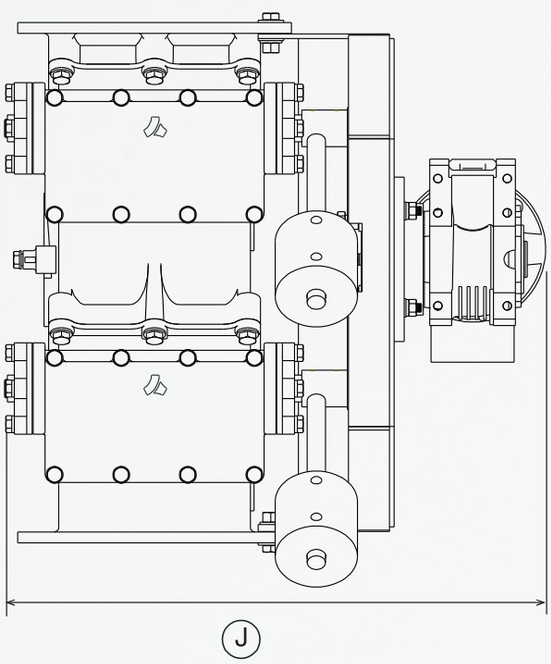
Dimension Details



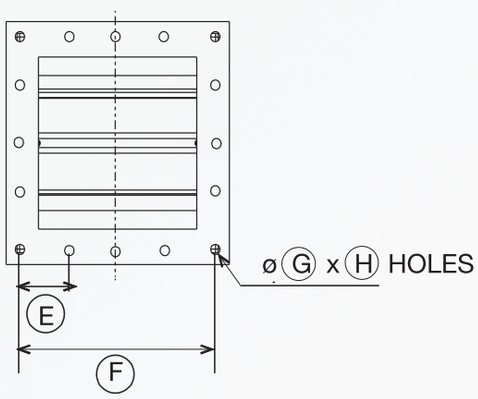
PNEUMATIC



GRAVITY



MOTORISED



FLANGE OPENING

Dimension Table

Name	DH150	DH200	DH250	DH300	DH350
A	250	300	360	430	480
B	150	200	250	300	350
C	460	570	710	800	930
D	500	570	665	820	870
E	70	85	105	94	106
F	210	255	315	376	424
G	12	14	14	15	15
H	12	12	12	16	16
J	622	687	753	849	919
K	435	413	416	484	515
Net Weight	75	99	144	206	256
Gross Weight	85	115	160	225	280

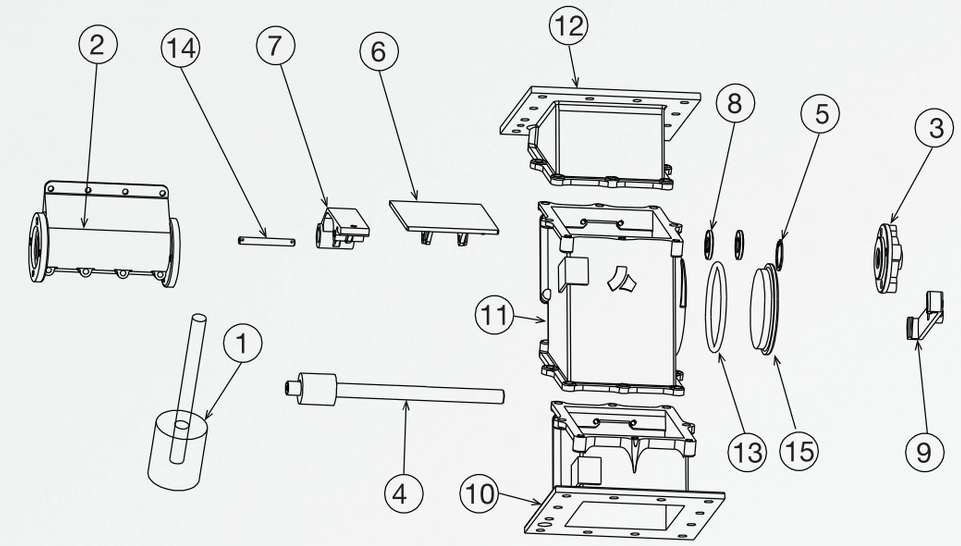
All dimensions in mm. Weight in Kgs

Type	DH150	DH200	DH250	DH300	DH350
Gravity	320x500x460	394x570x570	470x665x710	565x820x800	820x870x930
Pneumatic	350x460x460	387x447x570	454x456x710	561x523x800	619x555x930
Motorised	622x640x460	687x658x570	753x672x710	849x802x800	919x852x930

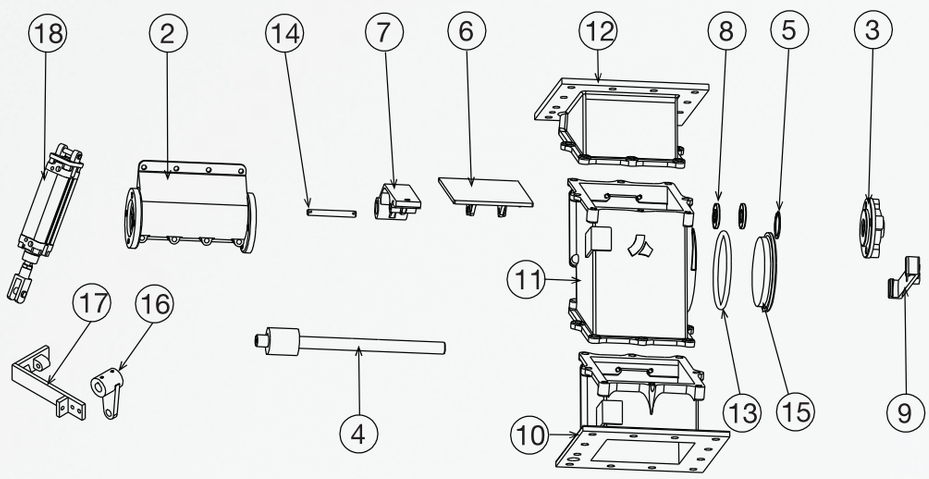
All dimensions in mm. Indicates length x breadth x height of the valve.

#Approximate dimensions only; dimensions vary with motor size and gear box variation.

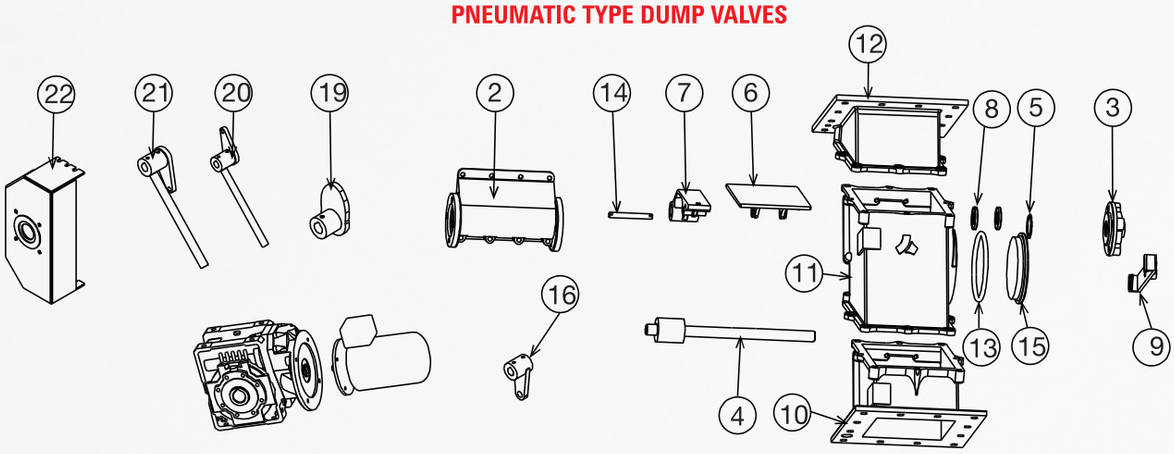
Component Details



GRAVITY TYPE DUMP VALVES



PNEUMATIC TYPE DUMP VALVES



MOTORISED TYPE DUMP VALVES

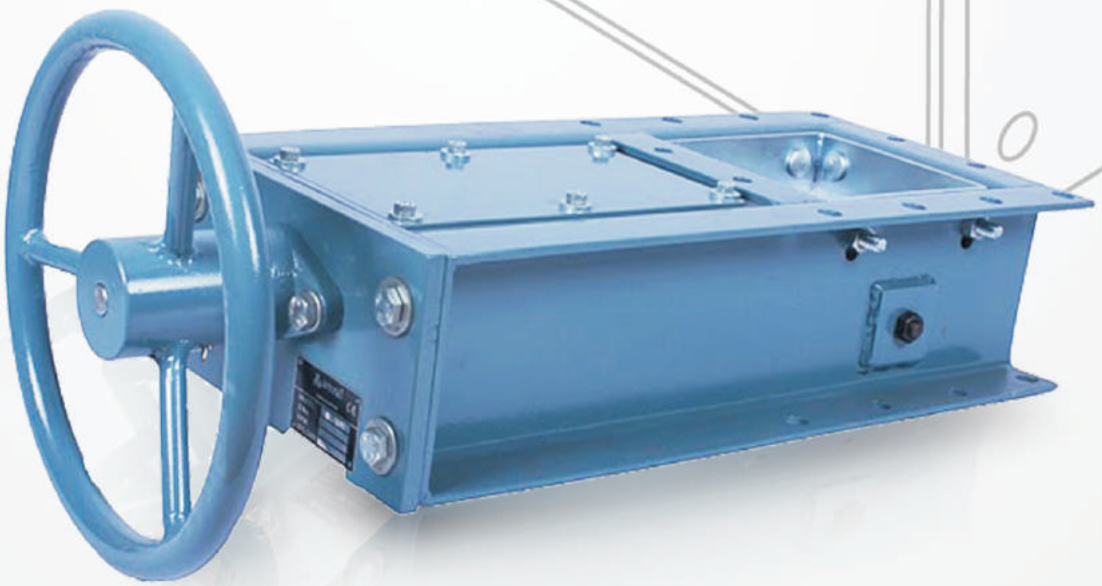
Component Description Table

NAME	DESCRIPTION	DH150			DH200			DH250			DH300			DH350		
		G	P	M	G	P	M	G	P	M	G	P	M	G	P	M
1	Assembly Cantilever Arm	101-4049			101-2838			101-7095			103-3288			103-3288		
		2	0	0	2	0	0	2	0	0	2	0	0	2	0	0
2	Bearing Mount	100-8216			100-8186			100-8017			103-3011			103-3014		
		2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
3	Bearing & Housing	101-3573			101-3573			100-7643			100-7156			100-7156		
		4	4	4	4	4	4	4	4	4	4	4	4	4	4	4
4	Shaft	102-4754			101-3584			102-5754			103-3012			103-3015		
		2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
5	Circlip Internal	102-4771			100-8214			101-4962			100-8778			100-8778		
		4	4	4	4	4	4	4	4	4	4	4	4	4	4	4
6	Dump Flap	101-4052			101-2834			101-7076			103-3009			103-3042		
		2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
7	Dump Flap Arm	101-4051			101-2835			101-7078			103-3010			103-3043		
		2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
8	Labyrinth Seal	100-6825			100-6829			100-4546			100-6827			100-6827		
		8	8	8	8	8	8	8	8	8	8	8	8	8	8	8
9	Locking Bar	101-4060			101-4060			102-3095			102-3095			102-3095		
		1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
10	Lower Body Section	102-4746			101-3564			102-4744			103-3008			103-3041		
		1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
11	Middle Body Section	102-4745			101-3557			102-4743			103-3007			103-3040		
		1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
12	Upper Body Section	101-4045			101-2831			101-7073			103-3006			103-3039		
		1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
13	O RING Ø8 X ID115 L=386	101-7092			101-7092			101-7092			101-7092			101-7092		
		1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
14	Flap Connecting Rod	101-4114			101-7083			101-7083			103-3428			103-3377		
		2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
15	Sealing Plate	101-4053			101-4053			101-4053			101-4053			101-4053		
		1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
16	Assembly Pneumatic Arm	102-5565			102-1580			102-7840			103-3130			103-3424		
		0	2	0	0	2	0	0	2	0	0	2	0	0	2	0
17	Assembly Pneumatic Pivot Bracket	102-5562			102-1581			102-1622			103-3267			103-3421		
		0	2	0	0	2	0	0	2	0	0	2	0	0	2	0
18	Ram Pneumatic Cylinder *	102-5561			103-3208			103-3208			103-3488			103-3422		
		0	2	0	0	2	0	0	2	0	0	2	0	0	2	0
19	Assembly Cam	102-2304			102-2183			102-1754			103-3264			103-3378		
		0	0	1	0	0	1	0	0	1	0	0	1	0	0	1
20	Assembly Cantilever Arm – Bottom	102-2295			102-1805			102-8072			103-3265			103-3384		
		0	0	1	0	0	1	0	0	1	0	0	1	0	0	1
21	Assembly Cantilever Arm – Top	102-2294			102-1804			102-8071			103-3266			103-3385		
		0	0	1	0	0	1	0	0	1	0	0	1	0	0	1
22	Assembly Motor Mounting Bracket	102-5440			102-2191			102-8140			103-3252			103-3356		
		0	0	1	0	0	1	0	0	1	0	0	1	0	0	1

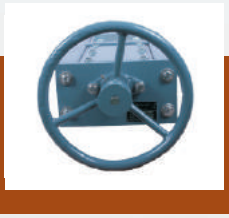
Note: Above details represents the part no. of each component and may subject to change with variation.

SL SERIES

A SIMPLE, ROBUST AND ECONOMICAL ISOLATION UNIT








Product Overview

The Anval SL Slide Gate Valve is designed to efficiently isolate solids by gliding the valve blade into its seat using cam rollers. The SL Series Valves have a pressure-tight support frame that ensure minimal leakage and no clogging whilst the material flow remains free. As with any other product, the SL Series Valve has been designed in adherence to exacting quality standards.

The SL Series Valves are capable of handling bulk material flow of an industrial nature in both a continuous or intermittent manner, depending on the nature of the process. Easy to install, these valves can be directly bolted into the flow-line in any position, provided that the flow of materials has been correctly aligned using the dexterous flanges provided.

Product Features

- An economical and reliable solution for bulk material isolation
- Compact, simple and robust design
- Manual and Pneumatic actuation
- Pressure-tight support frame
- Minimal leakage of materials without clogging
- Easy to install and maintain
- Heavy-duty isolation
- Designed and manufactured to meet international standards
- Custom-made to suit specific requirements

Product Specifications

Applications

The SL Series valves are used as outlet control points on:

- Storage bins
- Silos
- Conveyors
- Bulk handling of dry materials

Sealing Method

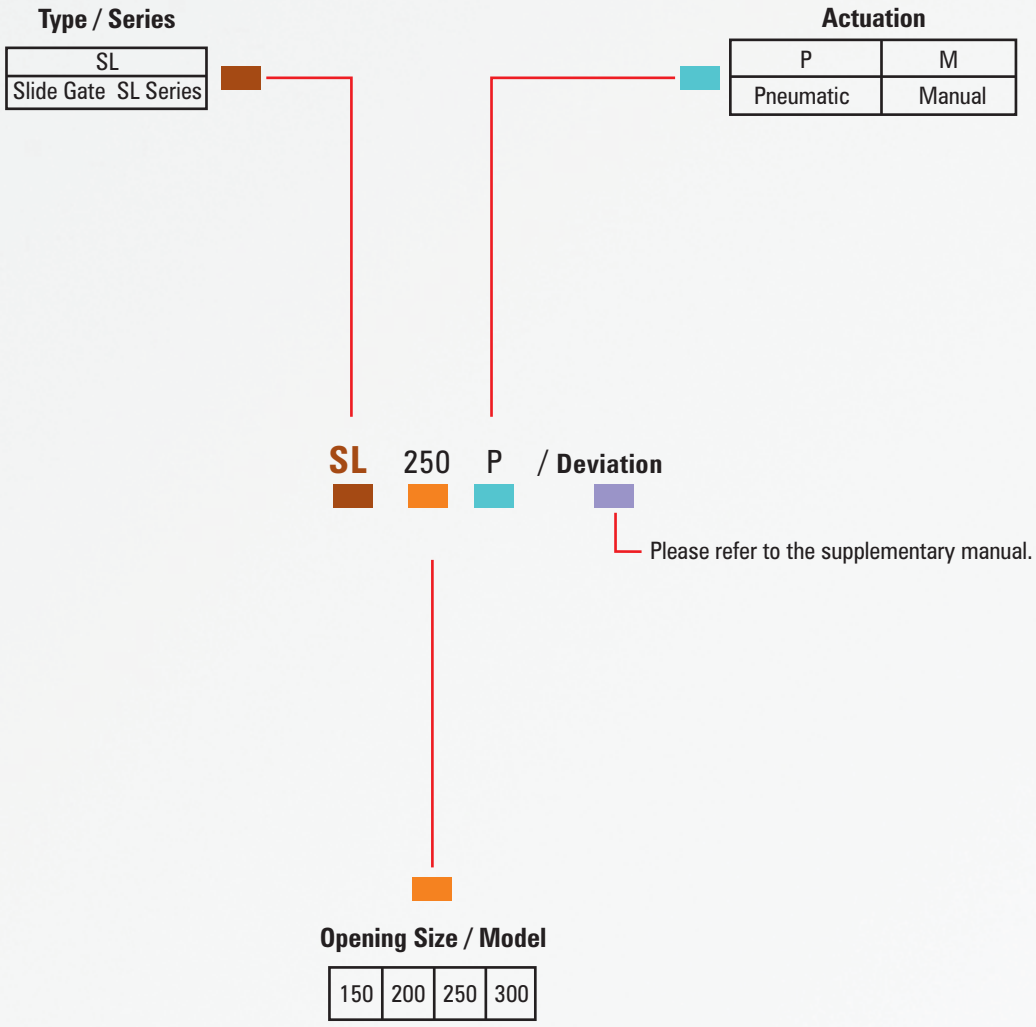
The SL Series valves incorporate Anval's Trigger Lock Technology which helps in providing absolute sealing while withstanding higher temperatures.

Specifications

Opening Size	:	150, 200, 250, 300 mm
Flange Opening	:	Square
Material of Construction	:	Fabricated Mild Steel / Stainless Steel
Actuators	:	Manual / Pneumatic

Product Codification

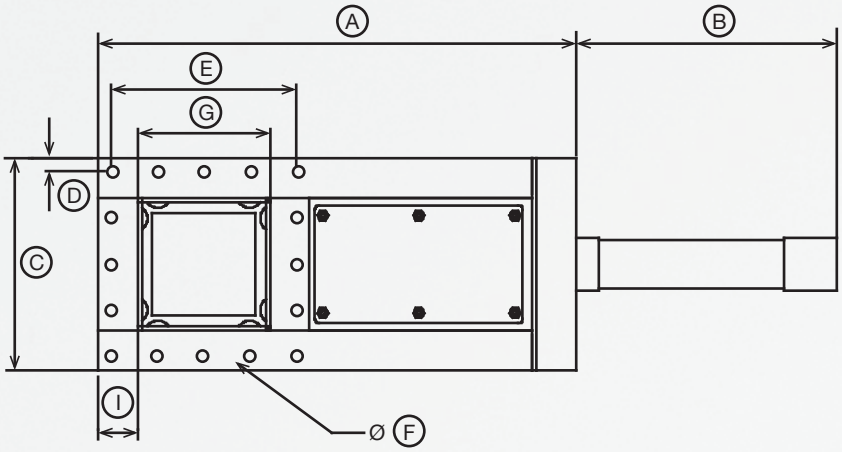
The table below represents codification formats for choosing the model

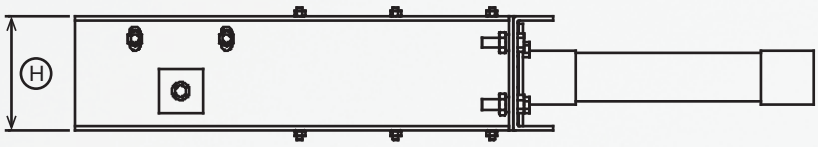


Dimension Details

Pneumatic

TOP VIEW





SIDE VIEW

Name	SL 150	SL 200	SL 250	SL 300
A	542	640	760	880
B	238	288	328	368
C	240	290	360	430
D	15	17.5	22.5	27
E	3 spaces @70 = 210	3 spaces @85 = 255	3 spaces @105=315	4 spaces @94=376
F	Ø 12	Ø 14	Ø 14	Ø 15
G	150	200	250	300
H	130	130	130	130
J	45	45	55	65

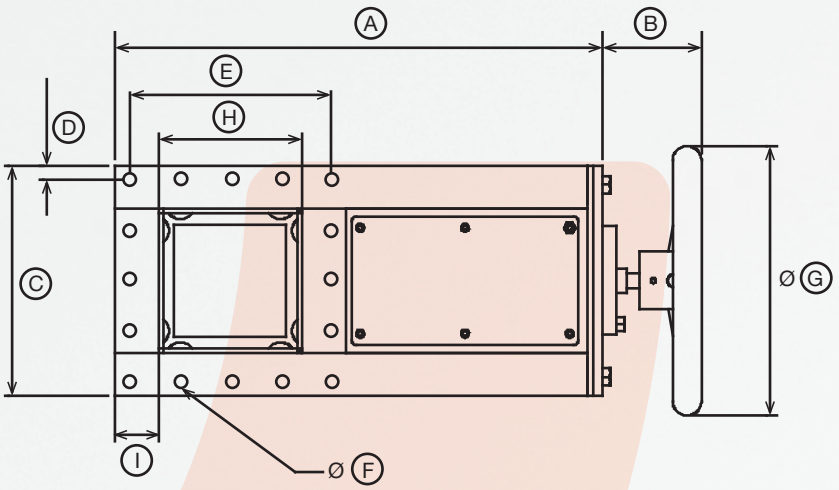
All dimensions in mm.

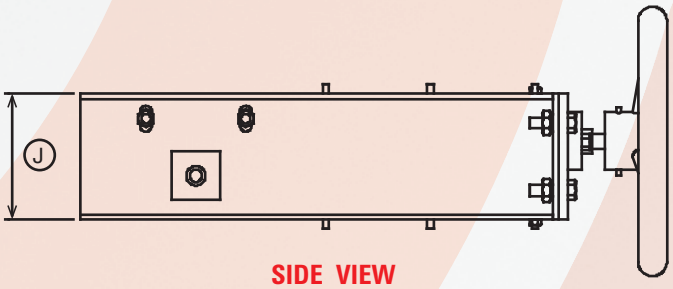
#Approximate dimensions only; dimensions vary with variation.

Dimension Details

Manual

TOP VIEW





SIDE VIEW

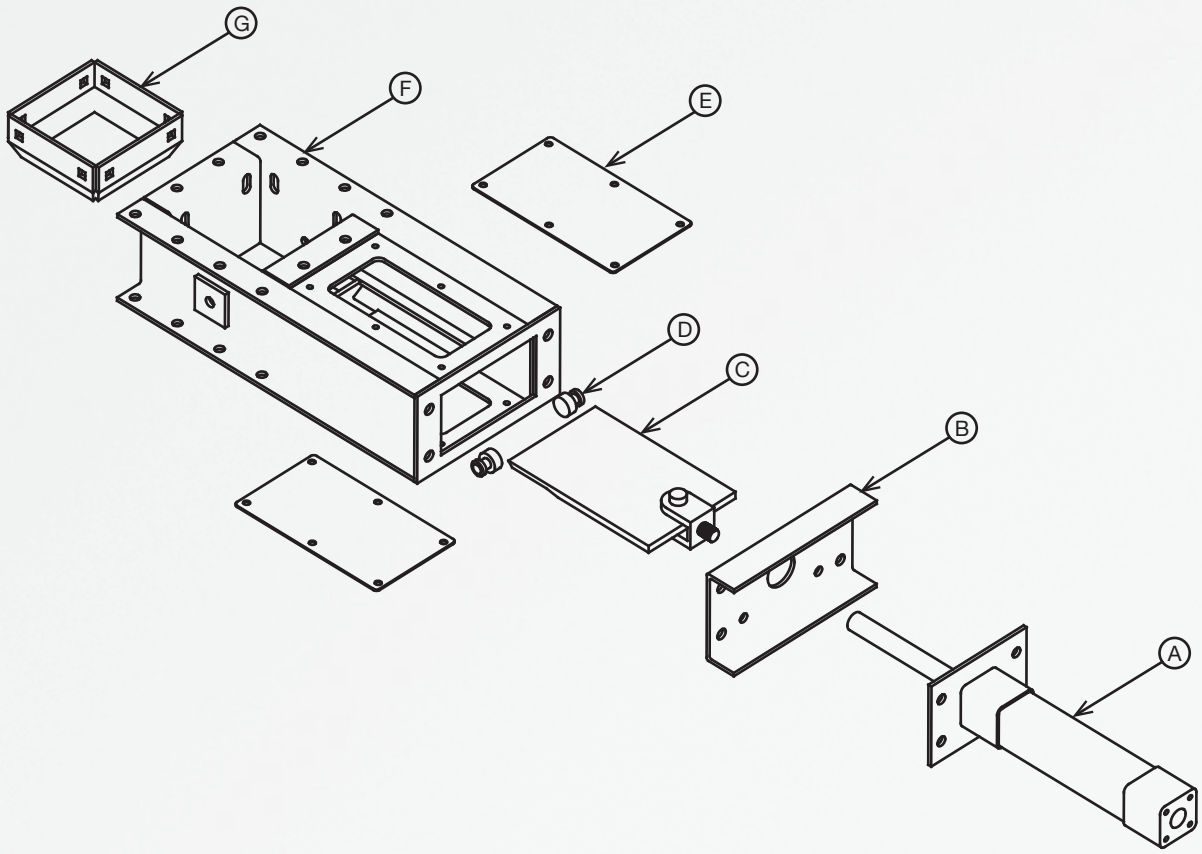
Name	SL 150	SL 200	SL 250	SL 300
A	507	605	715	825
B	101	100	100	101
C	240	290	360	430
D	15	17.5	22.5	27
E	3 spaces @70 = 210	3 spaces @85 = 255	3 spaces @105=315	4 spaces @94=376
F	Ø 12	Ø 14	Ø 14	Ø 15
G	Ø 280	Ø 280	Ø 280	Ø 280
H	150	200	250	300
J	130	130	130	130
K	45	45	55	65

All dimensions in mm.

#Approximate dimensions only; dimensions vary with variation.

Component Details

Pneumatic (P)

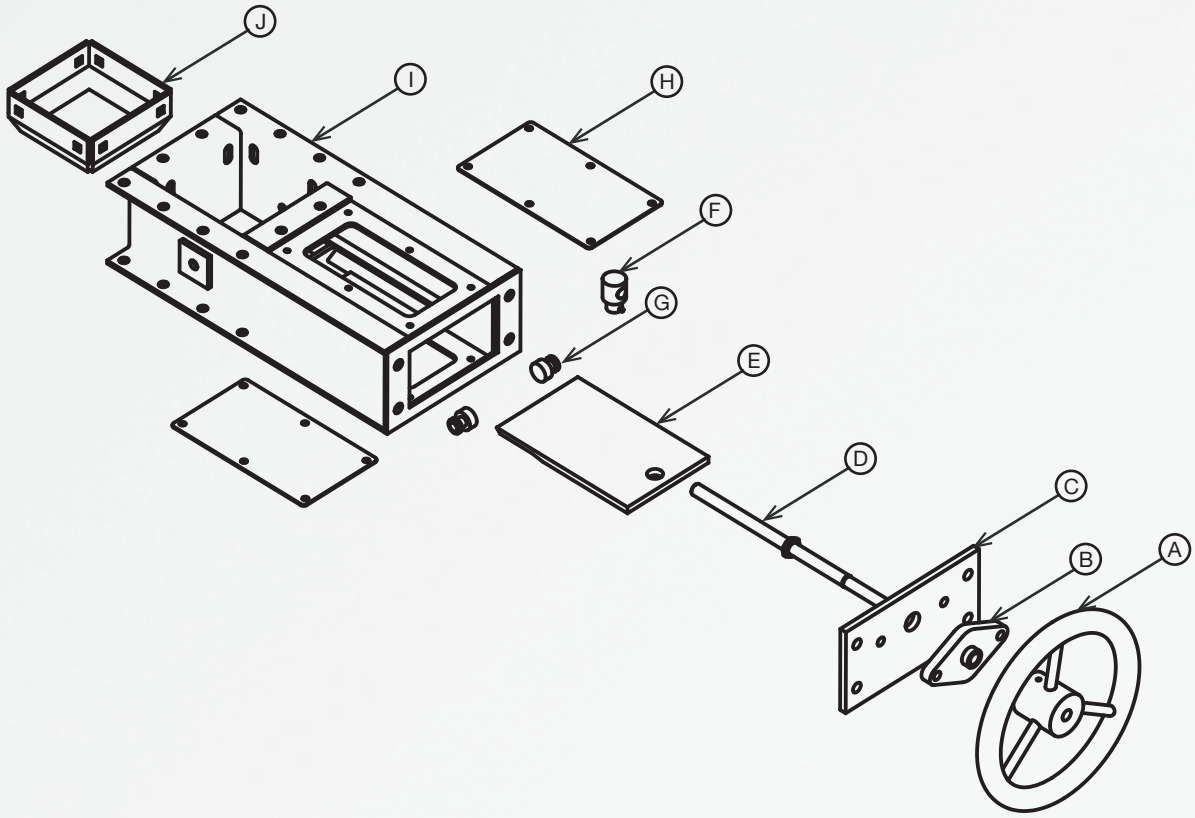


Name	Description	SL150	SL200	SL250	SL300
A	Pneumatic Cylinder	102-8399	102-8421	102-8445	102-8448
B	Pneumatic Ram Adapter	102-8398	102-8420	102-8422	102-8447
C	Slide Blade	102-8390	102-8413	102-8440	101-5722
D	Cam Follower	100-5540	100-5540	100-5540	100-5540
E	Cover	102-8395	102-8418	102-8444	101-5726
F	Valve Body	102-8381	102-8403	102-8430	101-5714
G	Valve Chute	102-8392	102-8414	102-8441	101-5728

Note: Above details represents the part no. of each component and may subject to change with variation.

Component Details

Pneumatic (P)

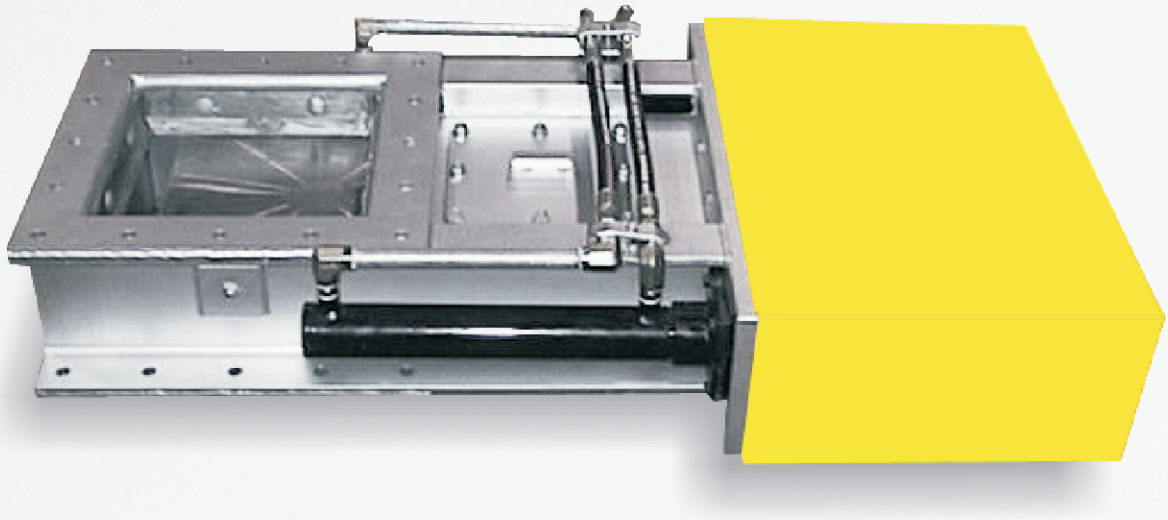


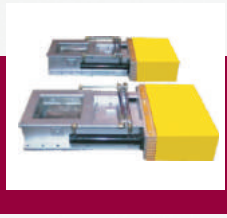
Name	Description	SL150	SL200	SL250	SL300
A	Hand wheel	101-5690	101-5690	101-5690	101-5690
B	Bearing	101-0946	101-0946	101-0946	101-0946
C	End Plate	102-8393	102-8415	102-8442	101-5724
D	Thread Rod	102-8394	102-8416	102-8443	101-5725
E	Slide Blade	102-8390	102-8413	102-8440	101-5722
F	Blade Nut	102-8396	102-8396	101-5711	101-5711
G	Cam Follower	100-5540	100-5540	100-5540	100-5540
H	Cover	102-8395	102-8418	102-8444	101-5726
I	Valve Body	102-8381	102-8403	102-8430	101-5714
J	Valve Chute	102-8392	102-8414	102-8441	101-5728

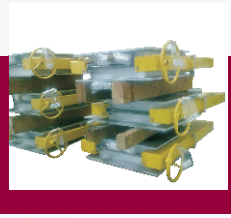
Note: Above details represents the part no. of each component and may subject to change with variation.

SG SERIES

ABSOLUTE ISOLATION FOR SOLID APPLICATIONS







Product Overview

The Anval Slide Gate Valve Series is excellent for industries and applications where there is a need for the isolation of solids. Absolute isolation is achieved by forcing the blade into the valve seat using cam rollers.

Simple, robust, compact and easy to install, the Anval SG Valves are in cast construction have been designed to meet international standards, specifically ISO185, besides meeting high internal design requirements.

Product Features

- Heavy duty isolation
- Available with various materials of construction
- Manual / Pneumatic / Motorised actuation
- Compact and robust design
- Can withstand higher temperatures
- Operates under variable pressure
- "Anval Trigger Lock Technology" for absolute sealing
- Easy to maintain

Applications

Anval SG Valves are designed to handle bulk materials in all industrial applications, both for continuous and intermittent operations .

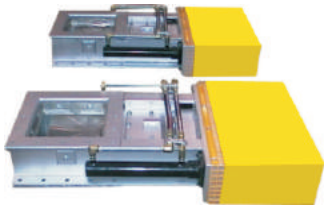
Product Specifications

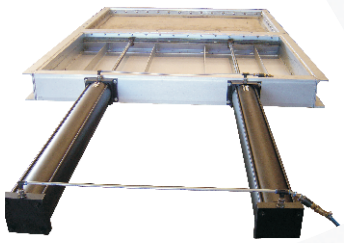
Sealing Method

The SG Series Valves incorporate the Anval Trigger Lock Technology which helps to provide absolute sealing and also enables the product to withstand higher temperatures.

Specifications

Opening Size	:	350, 400, 450, 750 mm
Flange Opening	:	Square
Temperature	:	Can handle higher temperatures
Material of Construction	:	Cast Iron
Actuators	:	Manual / Pneumatic

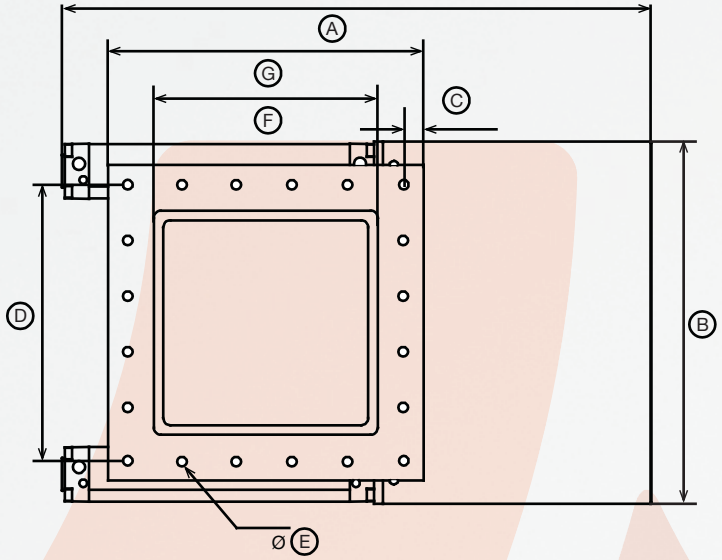


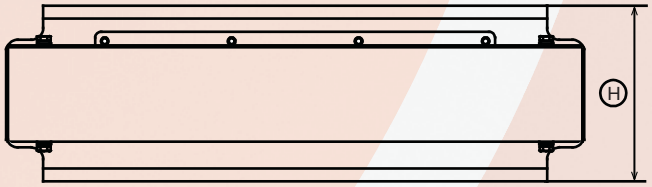


Dimension Details

Pneumatic

TOP VIEW





SIDE VIEW

Name	SG 300	SG 350	SG 400	SL 450	SG750
A	803	907	1021	1155	1781
B	493	586	636	938	1420
C	27	28	30	30	50
D	4 spaces @94 = 376	4 spaces @106 = 424	5 spaces @94 = 470	5 spaces @114 = 570	6 spaces @150 = 900
E	Ø 13	Ø 13	Ø 13	Ø 15	Ø 22
F	?305	?355	?400	?450	?750
G	?430	?480	?530	?630	?1000
H	150	160	136	190	250

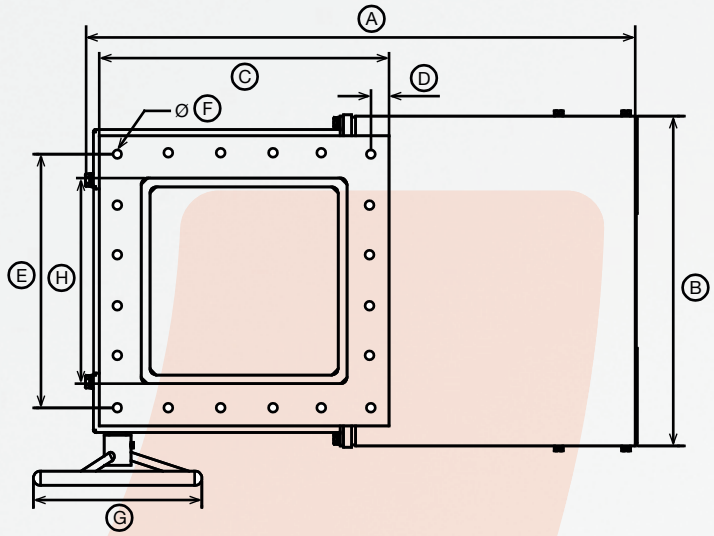
All dimensions in mm.

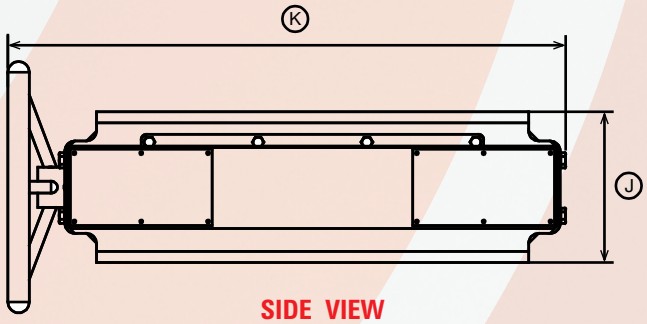
#Approximate dimensions only; dimensions vary with variation.

Dimension Details

Manual

TOP VIEW





SIDE VIEW

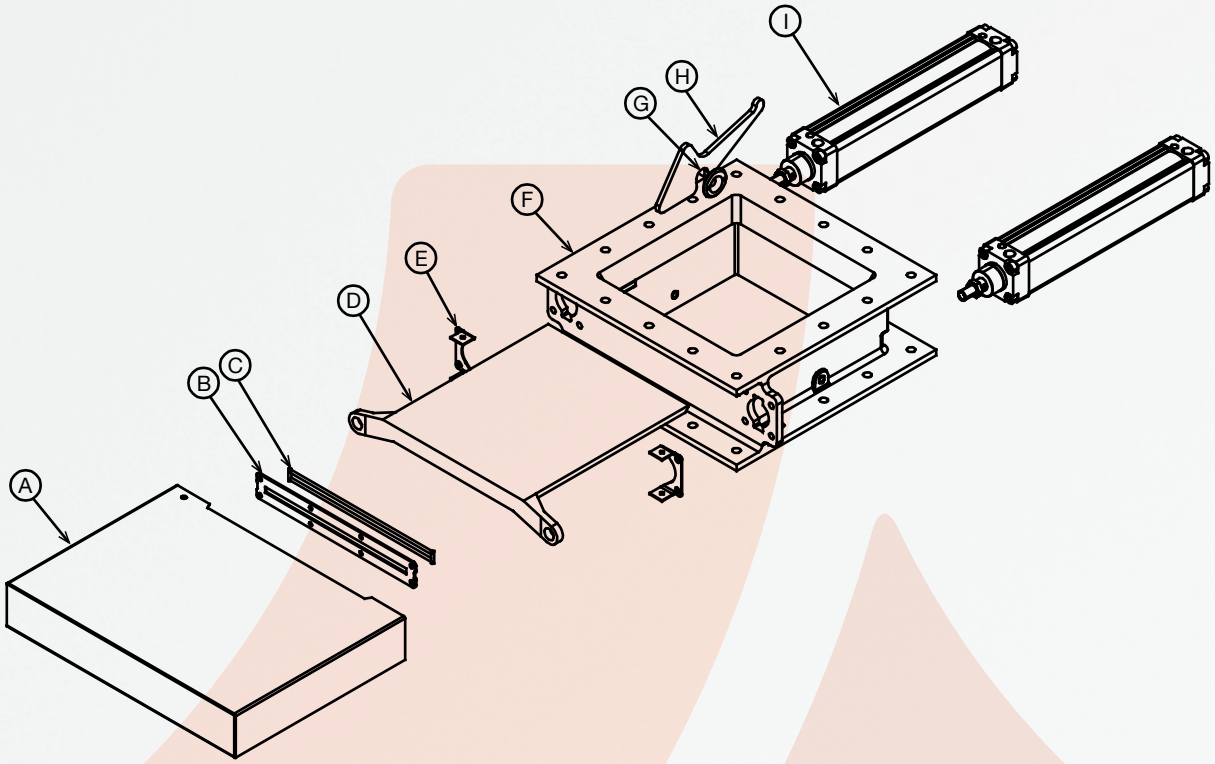
Name	SG 300	SG 350	SG 400	SG 450	SG750
A	818	935	1026	1169	1797
B	489	581	631	715	1120
C	□430	□480	□530	□630	□1000
D	27	28	30	30	50
E	4 spaces @94 = 376	4 spaces @106 = 424	5 spaces @94 = 470	5 spaces @114 = 570	6 spaces @150 = 900
F	Ø13	Ø13	Ø13	Ø15	Ø22
G	Ø250	Ø250	Ø250	Ø250	Ø400
H	□305	□355	□400	□450	□750
J	150	160	160	190	250
K	555	642	692	800	1250

#Approximate dimensions only; dimensions vary with variation.

All dimensions in mm.

Component Details

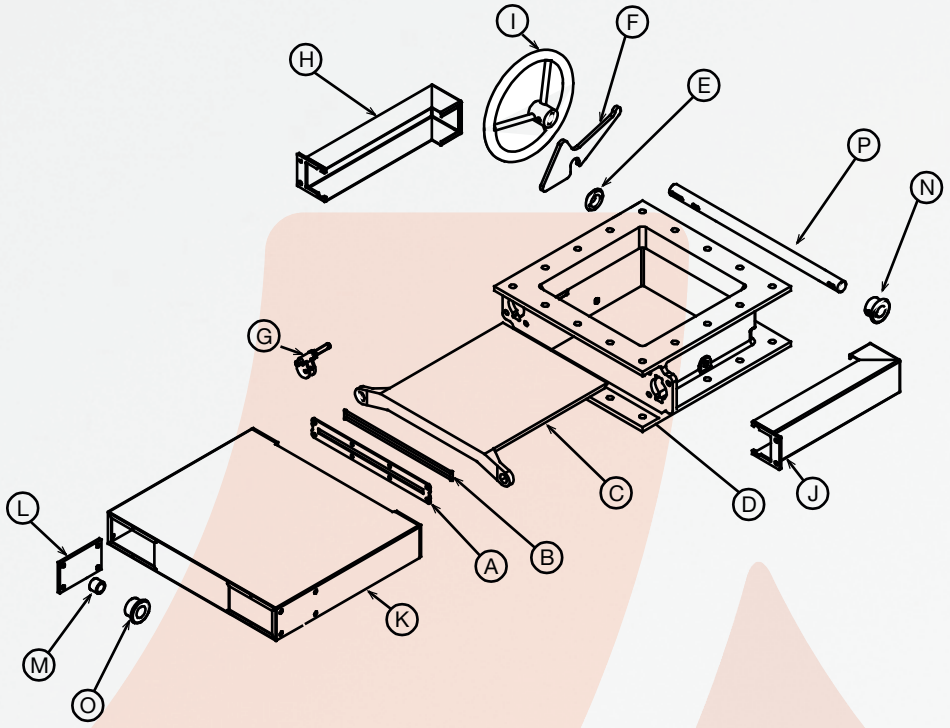
Pneumatic (P)



Name	Description	Qty	SG300	SG350	SG400	SG450	SG750
A	Rear Cover	1	102-3167	102-3296	102-3327	102-4457	102-4492
B	Seal Plate	1	102-3165	102-3292	102-3335	102-4455	102-4489
C	O-Ring-Rubber	1	102-3164	102-3293	102-3334	103-0448	102-4488
D	Blade	1	102-3163	102-3291	102-3333	102-4245	102-4446
E	Rear Cover Mounting Plate	2	102-3110	102-3319	102-3319	102-4456	102-4491
F	Body	1	102-3162	102-3290	102-3332	102-4244	102-4444
G	Toggle Pin	2	102-3104	102-3294	102-3294	102-4460	102-4495
H	Toggle Clamp	2	102-3166	102-3295	102-3336	102-4461	102-4496
I	Cylinder	2	102-3179	102-3302	102-3348	102-4452	102-4486

Component Details

Manual (M)

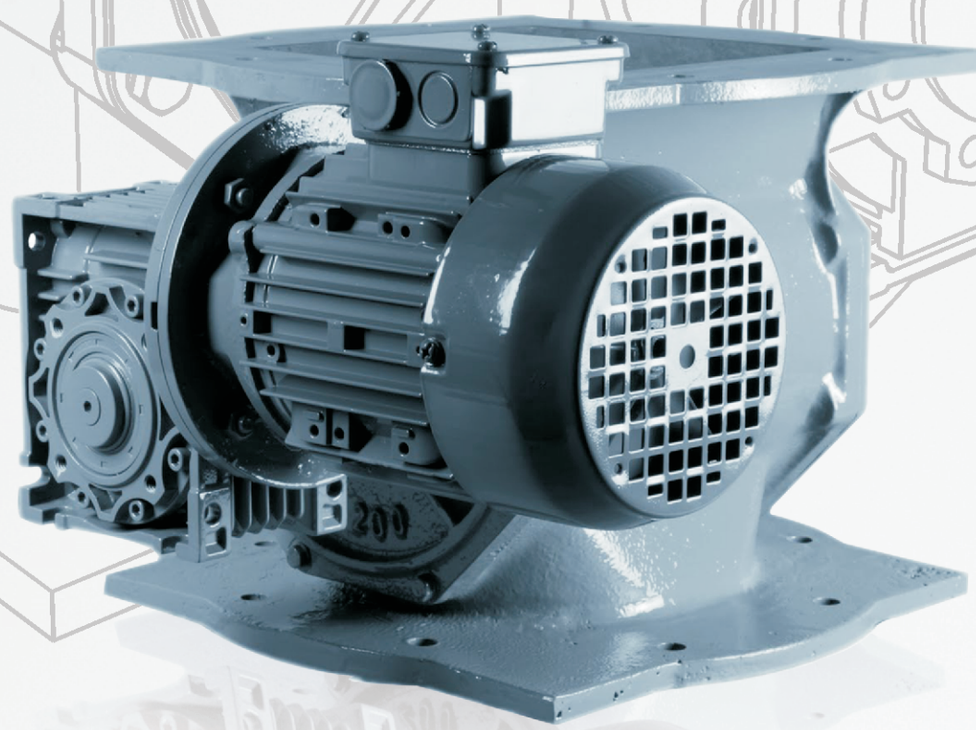


Name	Description	Qty	SG300	SG350	SG400	SG450	SG750
A	Seal plate	1	102-3165	102-3292	102-3335	102-4455	102-4489
B	O-Ring	1	102-3164	102-3293	102-3334	102-0448	102-4488
C	Blade	1	102-3163	102-3291	102-3333	102-4245	102-4446
D	Body	1	102-3162	102-3290	102-3332	102-4244	102-4444
E	Toggle Pin	1	102-3104	102-3294	102-3294	102-4460	102-4495
F	Toggle Clamp	1	102-3166	102-3295	102-3336	102-4461	102-4496
G	Assembly Blade Clamp	1	102-3136	102-3320	102-3320	102-4477	102-4500
H	Assembly Drive Side Cover	1	102-3184	102-3313	102-3344	102-4479	102-4511
I	Hand Wheel	1	102-3120	102-3120	102-3120	102-3120	102-4530
J	Assembly Non Drive Side Cover	1	102-3177	102-3317	102-3345	102-4483	102-4515
K	Assembly Rear Cover	1	102-3170	102-3304	102-3338	102-4465	102-4502
L	Assembly Sprocket Bracket	2	102-3132	102-3310	102-3310	102-4471	102-4510
M	Bearing	1	102-3099	102-3099	102-3099	102-3099	102-4529
N	Drive Sprocket	2	102-3115	102-3115	102-3115	102-4463	102-4523
O	Driven Sprocket	2	102-3116	102-3116	102-3116	102-4475	102-4534
P	Shaft	1	102-3175	102-3303	102-3337	102-4462	102-4497

Note: Above details represents the part no. of each component and may subject to change with variation.

RLX SERIES

SIMPLE, STABLE & ECONOMICAL AIRLOCKS



Product Overview

The RLX series valves are of valves are the embodiment of Anval's simple design solutions, offering a low maintenance and ready to use product.

Suitable for use in heavy mineral industries to light agricultural applications, the RLX Series is cost effective and robust in design. The valves are available in opening sizes ranging from 150 mm to 300 mm.

Product Features

- Robust design
- High performance drive
- No complex adjustments
- Minimal maintenance requirements
- Heavy-duty sealing capacity
- Available in Direct/Chain drive types
- Excellent airlock performance
- Cost effective
- Universal square flange

Applications

Ideally suited for dust collection systems or solid metering applications, the Rotary Air Lock Valves can serve a vast range of industries and applications.

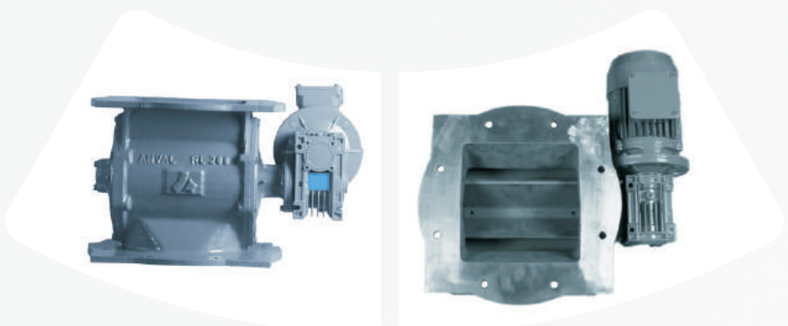
RLX Series are employed in the process of solid gas separation applications or solid metering applications.

The RLX Series Valves are best suited for the following applications:

- Dust collection systems
- Rice and flour mills

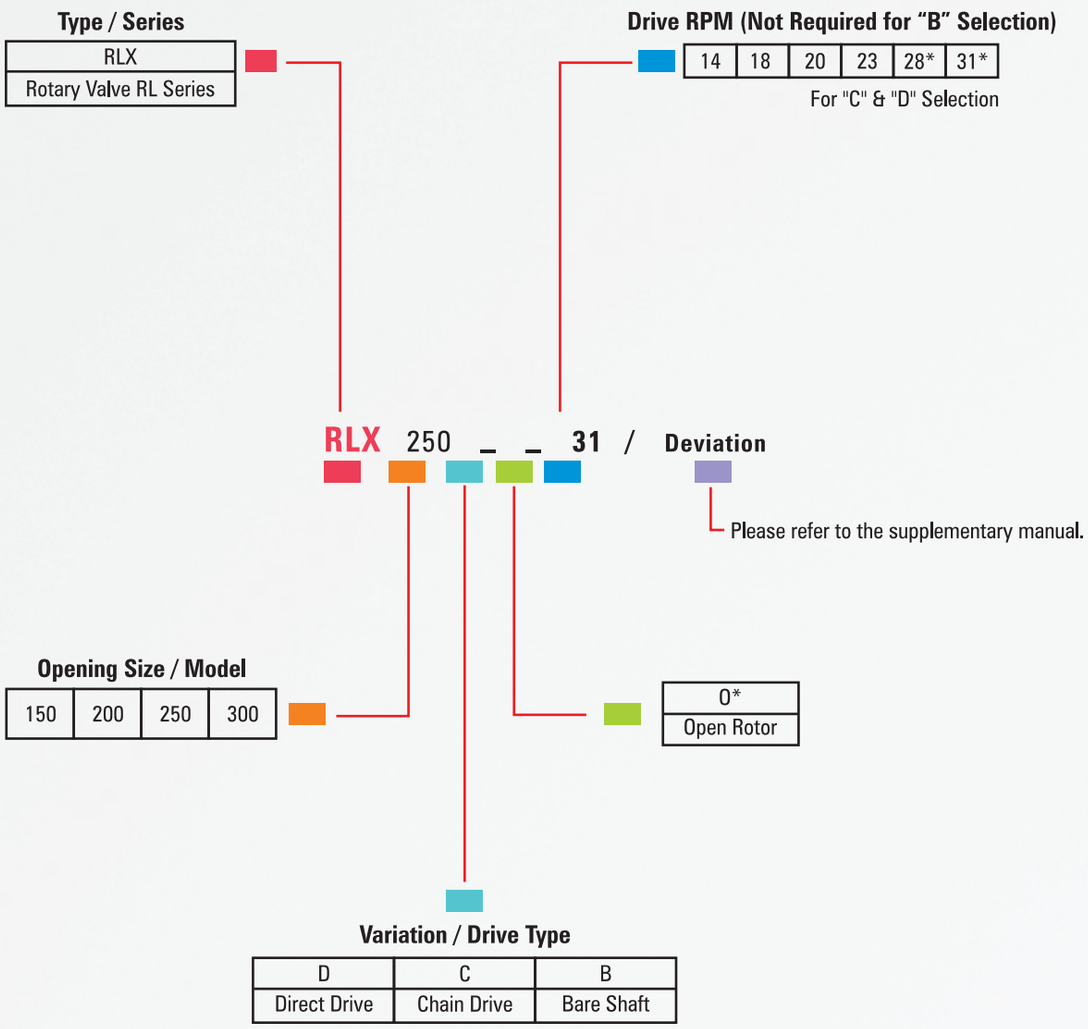
Product Specifications

Opening Size	:	150, 200, 250, 300 mm
Flange Opening	:	Universal with square opening
Drives	:	Direct Driven / Chain Driven/ Bare Shaft
Material of Construction	:	Cast Iron
Capacity Range	:	Up to 33 m^3/hr Max.
Painting Standard	:	Dark Grey Blue
Bearings	:	Inboard
Shaft	:	CS1030
Seals	:	Labyrinth Seals (Sealing Washer)
Special Seals	:	Grease Purge / Air Purge
Gearbox	:	Heliworm Gears (D) / Helical Gears (C)
Rotor Type	:	Open Rotor
Surface Treatment (Anval standard)	:	50μm Wattyl Rapid Prime (Grey) 50μm Wattyl Paracryl IFC tinted to B53 dark Grey Blue; Guards tinted to Y14 Golden Yellow.



Product Codification

The table below represents the codification format for choosing the model

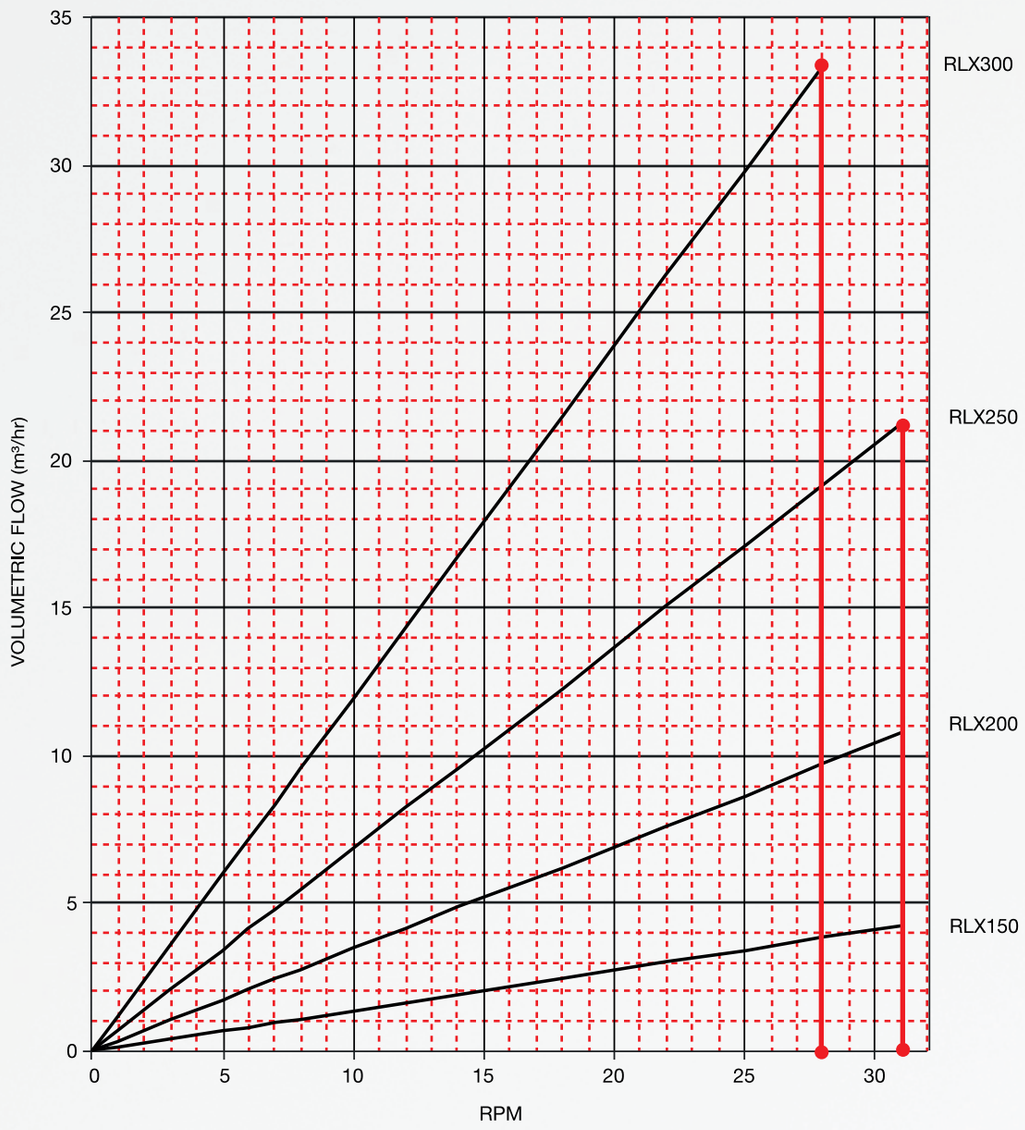


*Default Selection

RLX150 / 200 / 250 - 31 RPM
RLX300 - 28 RPM

Model Selection Chart

Speed Vs Throughput

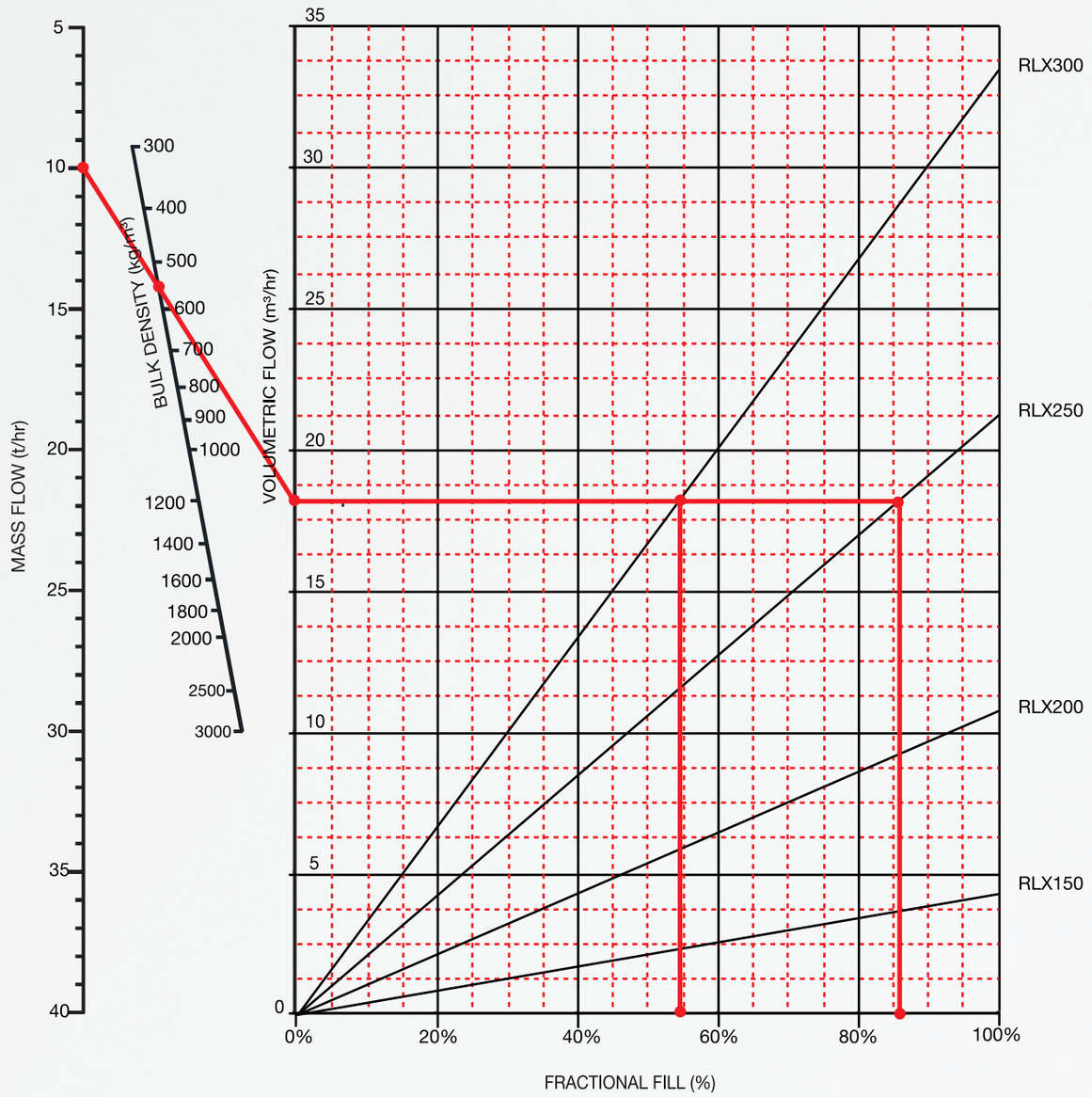


Model	Speed (RPM)	Capacity (m^3/hr)
RLX150	31	4.2
RLX200	31	10.7
RLX250	31	21.2
RLX300	28	33.4

31 RPM default for RLX150 / 200 / 250
28 RPM default for RLX300

Note: This chart is prepared for guidance purpose only, considering 31 RPM for RLX150/200/250 and 28 RPM for RLX300.

Capacity Chart



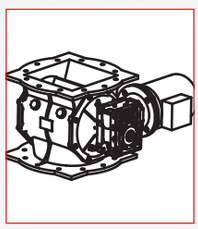
Example: A material with a density of 550kg/m^3 and required capacity of 10t/hr will operate at 86% filling capacity with 31 RPM and also by RLX 300 at 54% filling capacity with 28 RPM.

Note: This chart is prepared for guidance purpose only, considering 31 RPM for RLX150/200/250 and 28 RPM for RLX300.

Defining Features

RLX Body

The standard RLX Series body is cast from a single piece of iron, reducing the prevalence of seams, in turn increasing corrosion resistance and durability. This unique trait also lends itself to increase thermal stability of the valve.

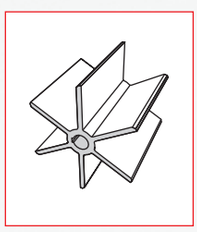


RL Body

Open Rotor

Open Rotors refer to the open pocket at each end of the rotor.

The RLX Series rotors, by default come with 6 vanes and a close radial clearance tolerance of 0.15 mm (max).

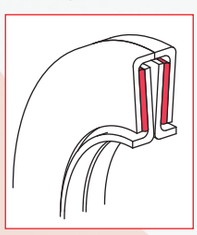


Open Rotor

Labyrinth Seal

A Labyrinth Seal is a mechanical seal that fits around the axle or shaft to prevent any leakage of particles and is composed of many threads or grooves that are tightly fit inside the casing, thus making it difficult for the dust to pass through.

By providing a non-contact sealing action on the rotating shafts, the passage of particles through a variety of chambers by centrifugal motion is controlled. 'Double Labyrinth Seals' fitted with flock pads, and greased on each side of the valve, are standard with all Rotary Valves. Double “Labyrinth Seals” are filled with flock pads and greased on either side of the valve. This procedure is standard with all of the Rotary Valves.



Labyrinth Seal

Key Features

- Longer life span
- No scoring on the shaft
- No need for adjustments
- Overall cost reduction

Defining Features

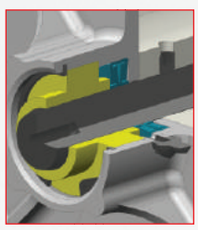
Purge Sealing

Grease Purge (G) Sealing as Standard

For extreme duty, valves can be fitted with a grease purge unit over a labyrinth seal. By creating a grease filled cavity between the seals, it prevents the escape of any dust particles or gases.

Air Purge (A) Sealing as Optional

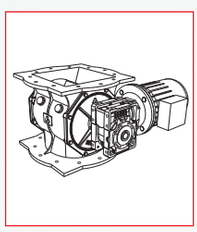
When grease cannot be used, air or other gases can be used to purge the seal so all dust particles or product cases are flushed back into the product stream.



Grease Purge (G) Sealing

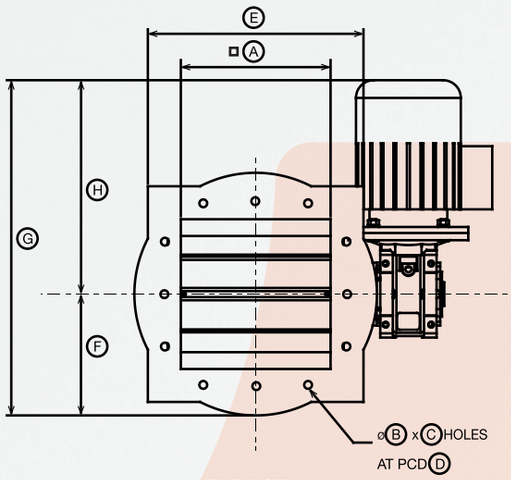
Air Vent / Cleaning

Based on the application requirement, air vent is optionally available for rotary valve to release the gas leakage when feeding a positive pressure system.

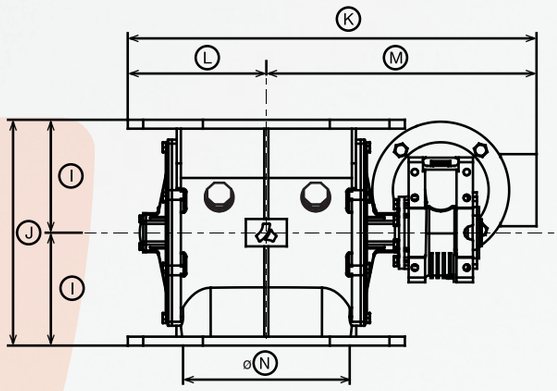


Air Vent / Cleaning

Direct Drive - Dimension Details



TOP VIEW



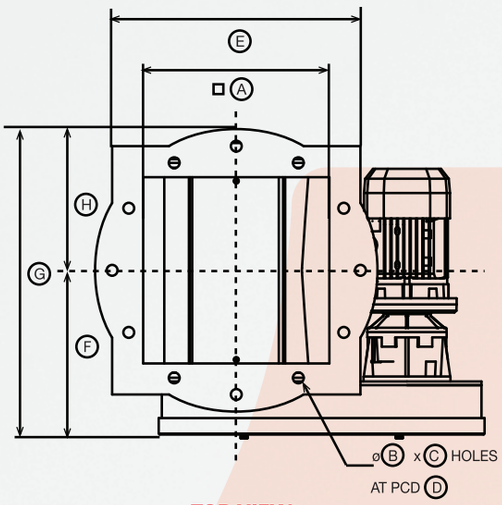
FRONT VIEW

NAME	RLX 150	RLX 200	RLX 250	RLX 300
A	150	200	250	300
B	13	13	13	18
C	8	8	12	12
D	240	295	350	400
E	□250	□305	□360	□400
F	140	170	202.5	228
G#	429	459	560	616
H#	289	289	357	388
I	105	135	165	200
J	210	270	330	400
K#	444	492	598	649
L	140	170	203	228
M#	304	322	395	408
N	147	198	249	299
Net Weight	29	47	65	93
Gross Weight	34	55	75	105

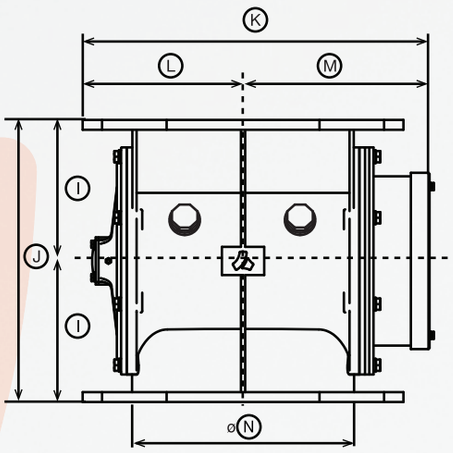
All dimensions in mm. Weight in Kgs

#Approximate dimensions only; dimensions vary with motor size and gear box variation.

Chain Drive - Dimension Details



TOP VIEW



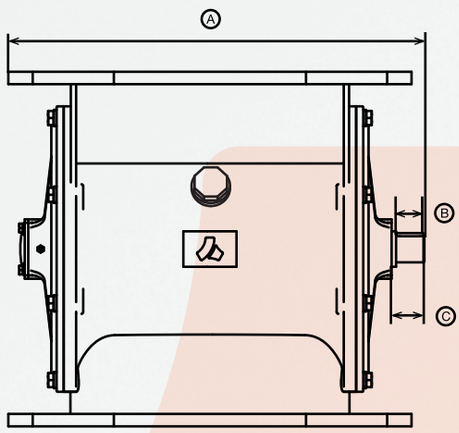
FRONT VIEW

NAME	RLX 150	RLX 200	RLX 250	RLX 300
A	150	200	250	300
B	13	13	13	18
C	8	8	12	12
D	240	295	350	400
E	□250	□305	□360	□400
F	188	170	242.5	270
G	328	386	445	498
H	140	216	202.5	228
I	105	135	165	200
J	210	270	330	400
K#	382	474	564	628
L	140	170	202.5	228
M#	242	304	361.5	400
N	147	198	249	299
Net Weight	28	46	63	90
Gross Weight	33	53	73	102

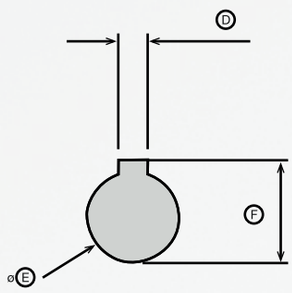
All dimensions in mm. Weight in Kgs

#Approximate dimensions only; dimensions vary with motor size and gear box variation.

Bare Shaft - Dimension Details



TOP VIEW



(BARE SHAFT)
DRIVEN SHAFT SECTION

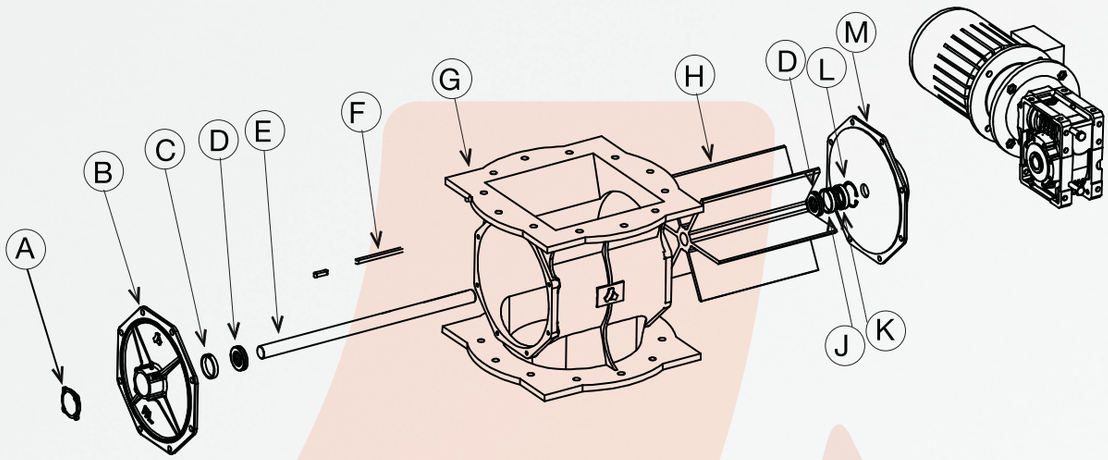
NAME	RLX 150	RLX 200	RLX 250	RLX 300
A	294	351	416	469
B	26.5	27	34	32
C	31	31	37	37
D	8	8	8	8
E	25	25	25	30
F	28	28	28.3	33

All dimensions in mm.

#Approximate dimensions only;

Component Details

Direct Drive (D)

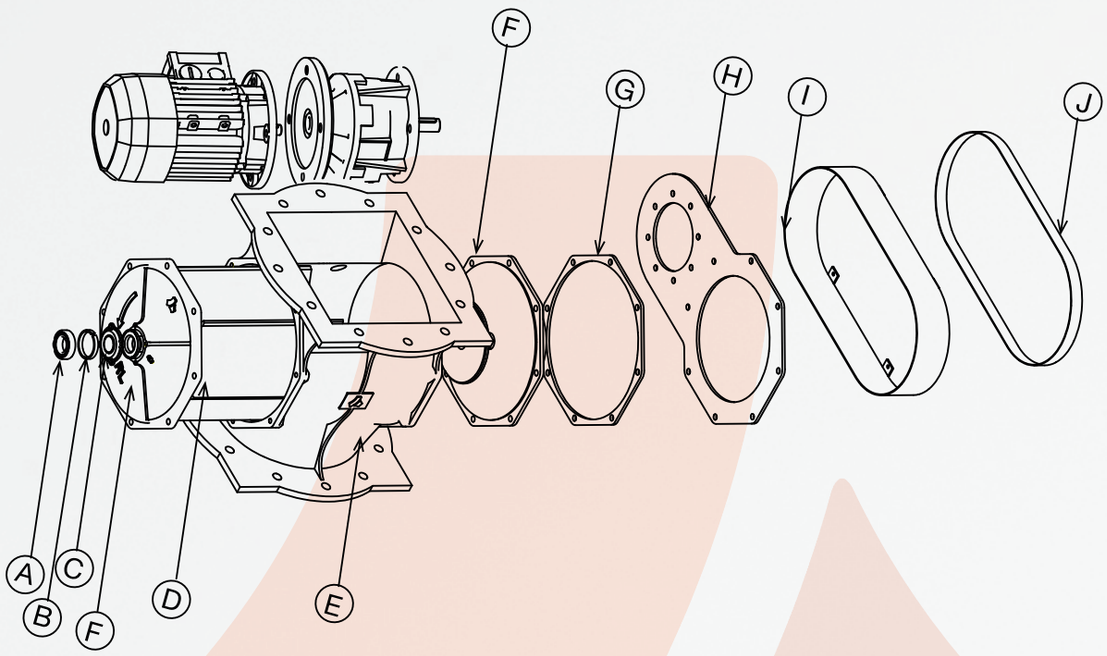


NAME	DESCRIPTION	RLX 150	RLX 200	RLX 250	RLX 300
A	Bearing End Cap	102-6267	102-6267	102-6267	102-6280
B	Bearing Side Plate	102-6265	102-6270	102-6274	102-6278
C	Bearing	102-6281	102-6281	102-6281	102-6282
D	Labyrinth Seal	100-6826	100-6826	100-6826	100-6827
E	Shaft	102-6455	102-6456	102-6457	102-6458
F	Key	101-7039	101-7039	100-6864	102-6480
G	Body	102-6264	102-6269	102-6273	102-6277
H	Open rotor	102-6291	102-6292	102-6293	102-6294
J	Spacer	102-6289	102-6289	102-6289	102-6290
K	Oil Seal	102-6284	102-6284	102-6284	102-6285
L	Circlip	100-8214	100-8214	100-8214	100-8778
M	Drive Side Plate	102-6266	102-6271	102-6275	102-6279

Note: Above details represents the part no. of each component and may subject to change with variation.

Component Details

Chain Drive(C) / Bare Shaft (B)



NAME	DESCRIPTION	RLX 150	RLX 200	RLX 250	RLX 300
A	Bearing	102-6281	102-6281	102-6281	102-6282
B	Spacer	102-6289	102-6289	102-6289	102-6290
C	Bearing End Cap	102-6267	102-6267	102-6267	102-6280
D	Rotor	102-6291	102-6292	102-6293	102-6294
E	Body	102-6264	102-6269	102-6273	102-6277
F	Bearing Side Plate	102-6265	102-6270	102-6274	102-6278
G	Bracket Spacer	102-9317	102-9325	102-9332	102-9339
H	Bracket	102-9318	102-9326	102-9333	102-9340
I	Chain Guard	102-9323	102-9331	102-9338	102-9345
J	Chain Guard Cover	102-9322	102-9330	102-9337	102-9344

For Bare Shaft(B), item names G, H, I and J will not be available.

Note: Above details represents the part no. of each component and may subject to change with variation.

RSX SERIES

ATEX CERTIFIED STAINLESS STEEL ROTARY VALVES




Product Overview

RSX Series Rotary Valves are in SIngle piece Stainless Steel cast construction with internal surfaces machined to high precision to prevent corrosion, rust or stain problems in highly demanding applications across industries.

Anval is constantly developing and widening its range of equipment to cater for increasingly demanding needs of their customers. With three decades of experience, Anval have a vast and exciting selection of Rotary valves including the newly launched corrosive resistant RSX Series that not only robust, rigid and durable but can also be customized to the specific requirements of a given application.

These valves are manufactured to robust design standards and an efficacious Quality Management System that enables the valve to operate under even the toughest conditions with minimal maintenance. This series is available with Direct / Chain / Inline drive options, alternatively these valves can also be supplied as 'Bare Shaft'.

RSX Series rotors are perfectly designed and manufactured to have a close radial and axial clearance of 0.20 mm (max.). It comes with open-end style as standard and also available in closed, scallopped, and reduced pocket types available for typical applications.

Product Features

- ATEX Certified
- Investment casting for excellent surface finish
- Mirror finish internals
- Single piece cast construction with universal flange
- Drive Options: Direct or Chain or Inline
- "Labyrinth Seals" for high degree of shaft sealing
- Wide range of rotor types
- Available with Gas or Grease purging options
- Comes in opening sizes from 150 to 300 mm
- Minimal maintenance requirement

Applications

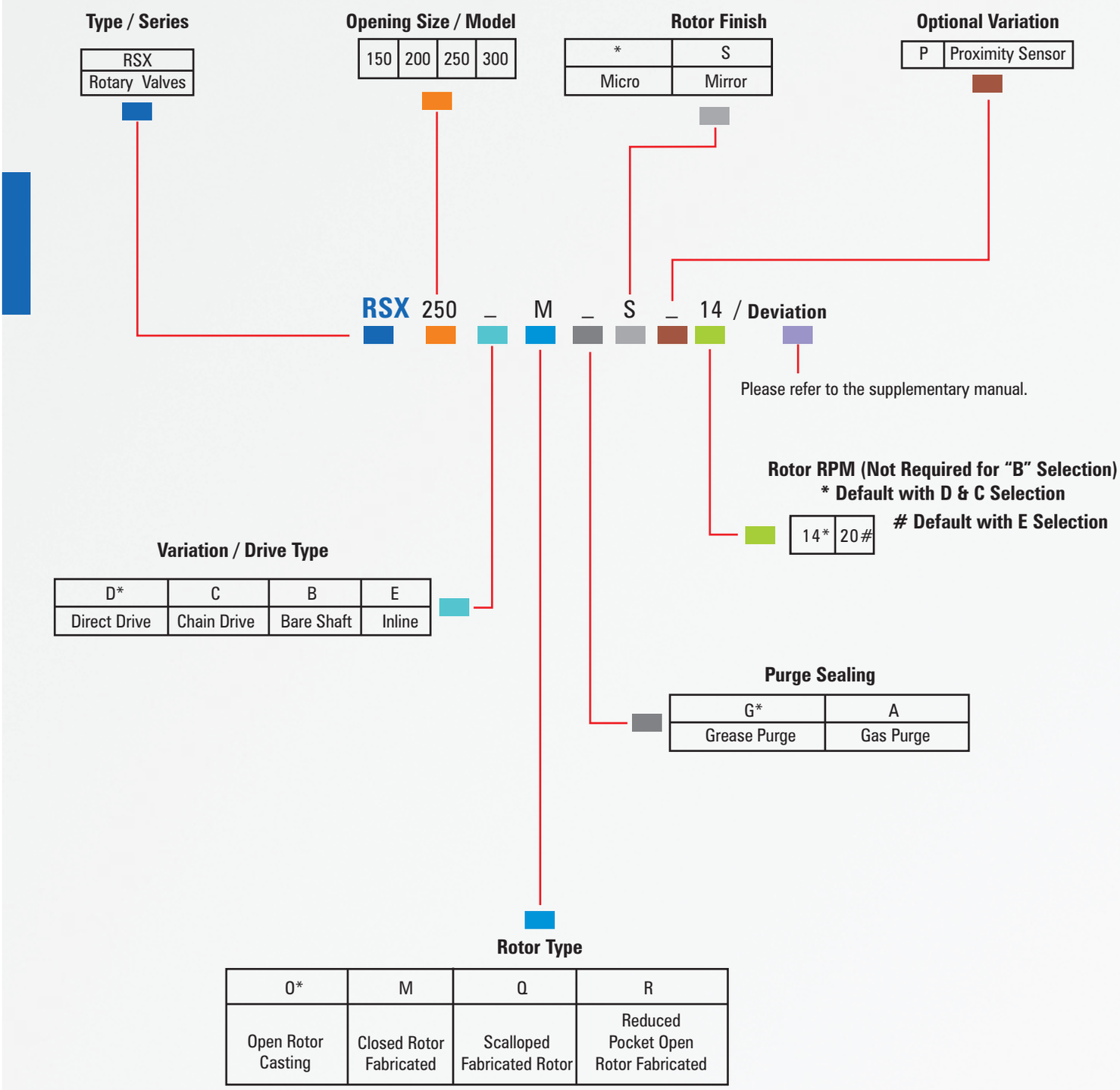
Ideally suited for chemical, plastic, animal feed, metallurgy, flour-mills, other food industries and also for explosive environment.

Product Specifications

Opening Size	:	150, 200, 250, and 300 mm
Flange Opening	:	Universal with Square opening
Drives	:	Direct Driven / Chain Driven / Inline / Bare Shaft
Material of Construction	:	Stainless Steel
Capacity Range	:	Up to 33 m^3/hr Max.
End Cover Material	:	Stainless Steel
Shaft	:	Stainless Steel
Seals	:	Labyrinth Seals
Gearbox	:	Heliworm or Worm (D) / Helical Gears (C & I)
Rotor	:	Stainless Steel
Rotor Type:	:	Cast Open Rotor (O) / Closed Rotor Fabricated (M) / Scalloped Rotor Fabricated (Q) / Reduced Pocket Open Rotor Fabricated (R)
Special Seals	:	Grease Purge (G) / Gas Purge (A)
Bearings	:	Cartridge Type
Surface Treatment (Anval Standard)	:	Guards Golden Yellow Y14 for guards

Product Codification

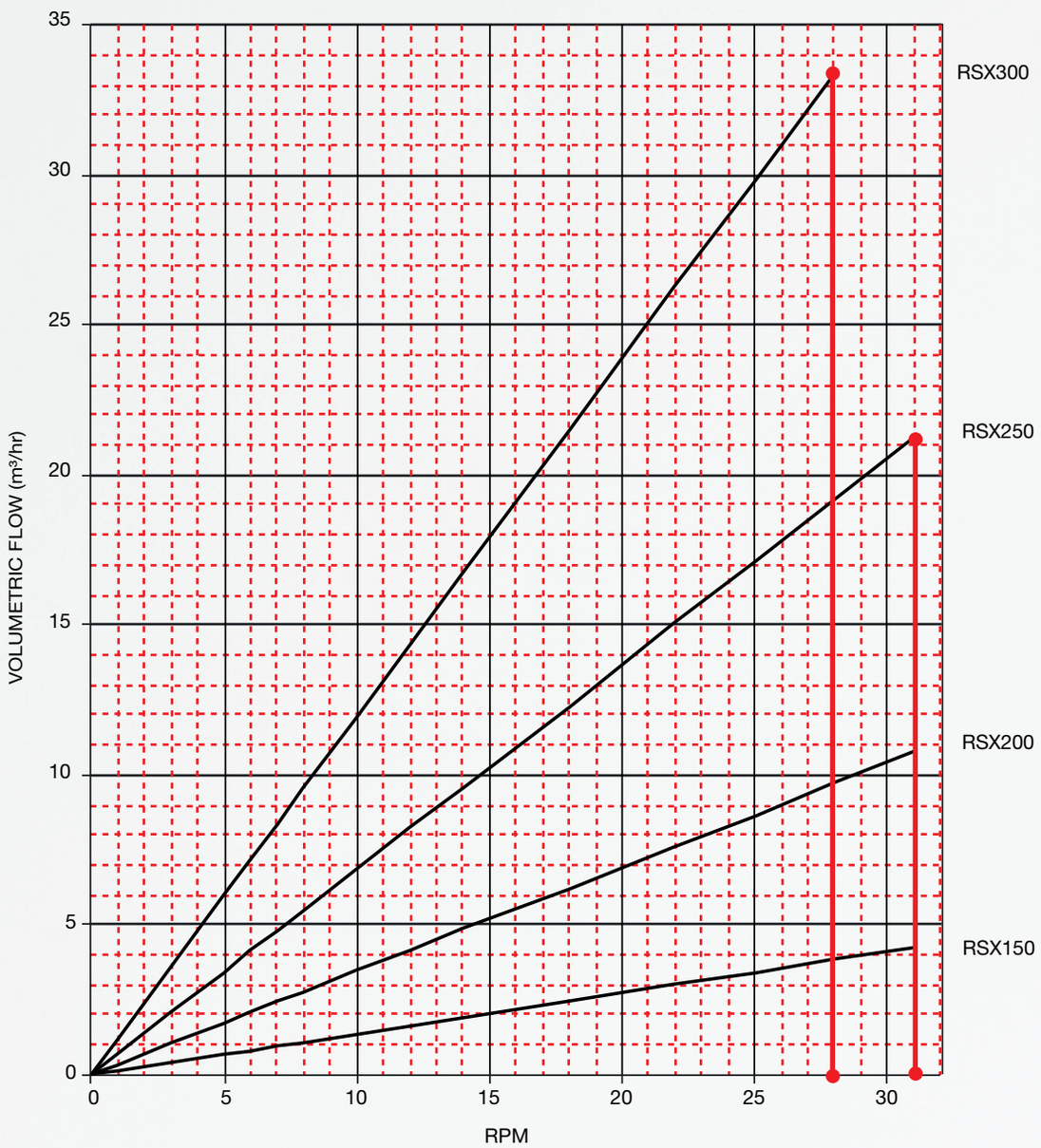
The table below represents the codification format for choosing the model



*Default Selection

Model Selection Chart

Speed Vs Throughput

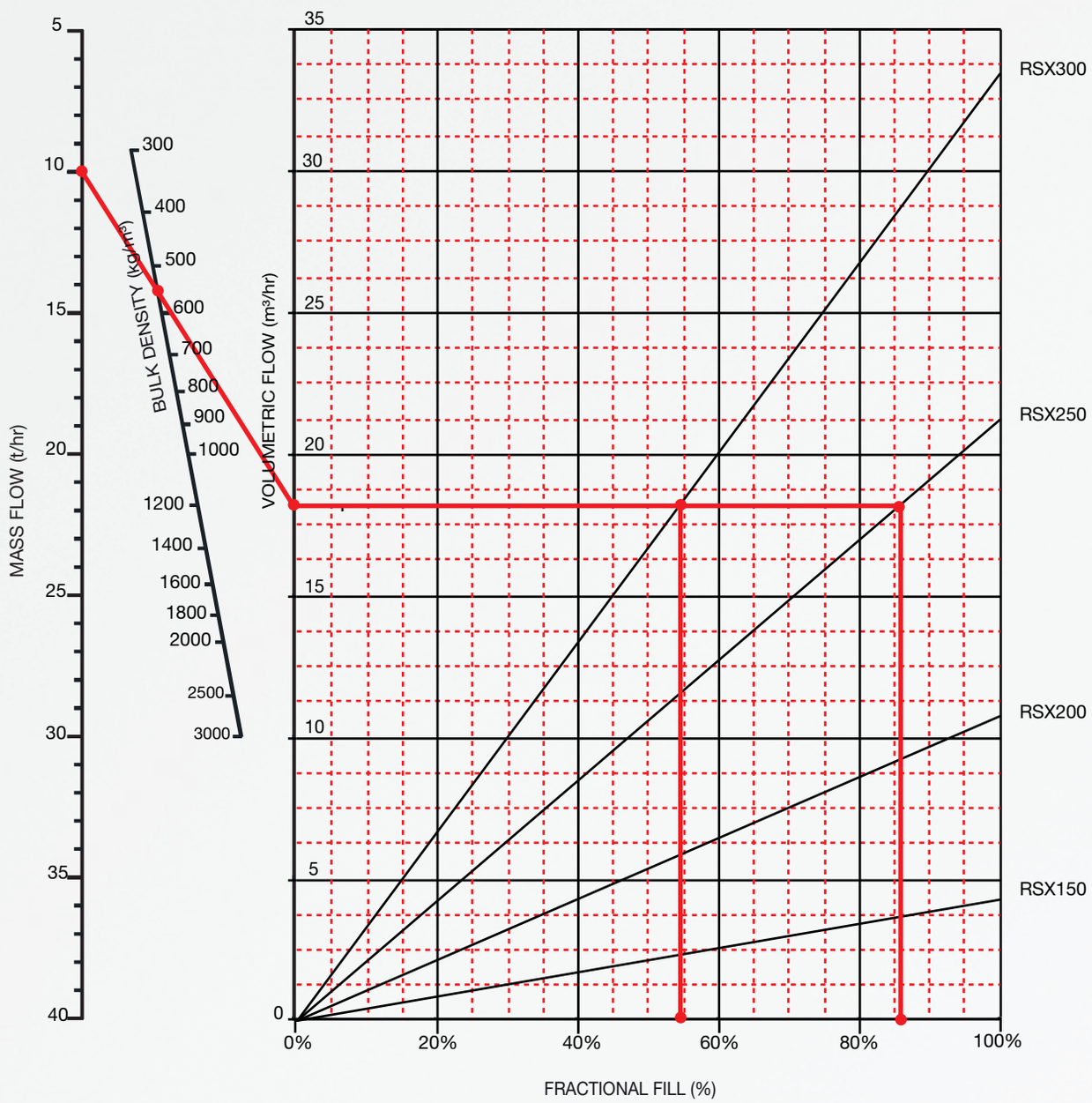


Model	Speed (RPM)	Capacity (m^3/hr)
RSX150	31	4.2
RSX200	31	10.7
RSX250	31	21.2
RSX300	28	33.4

31 RPM default for RSX150 / 200 / 250
28 RPM default for RSX300

Note: This chart is prepared for guidance purpose only, considering 31 RPM for RSX150/200/250 and 28 RPM for RSX300.

Capacity Chart



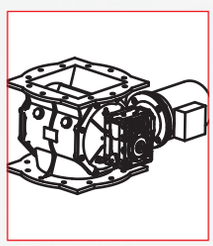
Example: A material with a density of 550kg/m^3 and required capacity of 10t/hr will operate at 86% filling capacity with 31 RPM and also by RSX 300 at 54% filling capacity with 28 RPM.

Note: This chart is prepared for guidance purpose only, considering 31 RPM for RSX150/200/250 and 28 RPM for RSX300.

Defining Features

RSX Body

The standard RSX Series body is cast from a single piece of Stainless Steel, reducing the prevalence of seams, in turn increasing corrosion resistance and durability. This unique trait also lends itself to increase thermal stability of the valve.

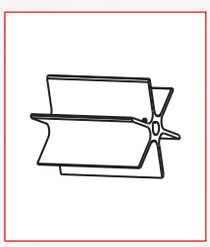


RSX Body

Open Rotor

The RSX Series rotors are perfectly designed and manufactured to have a close radial and axial clearance of 0.20 mm (max.).

It comes with open-end style as standard and also available in closed, scallopped, and reduced pocket types are available for typical applications.

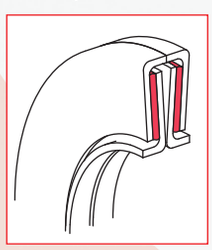


Open Rotor

Labyrinth Seal

A Labyrinth Seal is a mechanical seal that fits around the axle or shaft to prevent any leakage of particles and is composed of many threads or grooves that are tightly fit inside the casing, thus making it difficult for the dust to pass through.

By providing a non-contact sealing action on the rotating shafts, the passage of particles through a variety of chambers by centrifugal motion is controlled. 'Double Labyrinth Seals' fitted with flock pads, and greased on each side of the valve, are standard with all Rotary Valves. Double “Labyrinth Seals” are filled with flock pads and greased on either side of the valve. This procedure is standard with all of the Rotary Valves.



Labyrinth Seal

Key Features

- ATEX Certified
- Investment casting for excellent surface finish
- Mirror finish internals
- Single piece cast construction with universal flange
- Drive Options: Direct or Chain or Inline

Defining Features

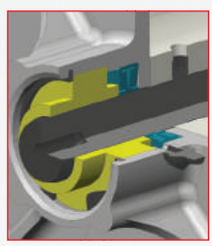
Purge Sealing

Grease Purge (G) Sealing as Standard

For extreme duty, valves can be fitted with a grease purge unit over a labyrinth seal. By creating a grease filled cavity between the seals, it prevents the escape of any dust particles or gases. a

Gas Purge (A) Sealing as Optional

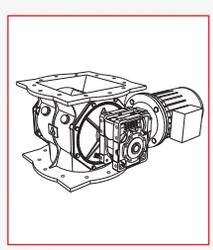
When grease cannot be used, air or other gases can be used to purge the seal so all dust particles or product cases are flushed back into the product stream.



Grease Purge (G) Sealing

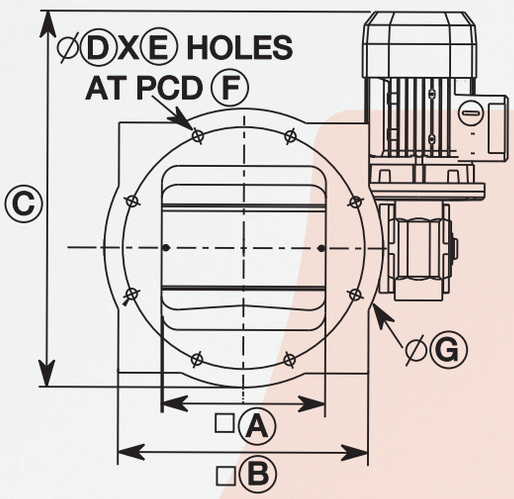
Air Vent / Cleaning

Based on the application requirement, air vent is optionally available for rotary valve to release the gas leakage when feeding a positive pressure system.

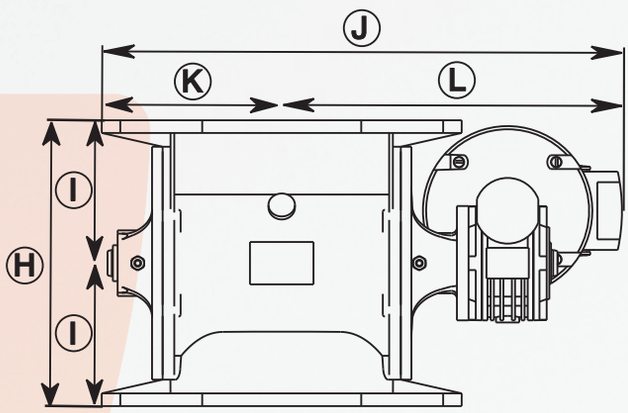


Air Vent / Cleaning

Direct Drive - Dimension Details



TOP VIEW



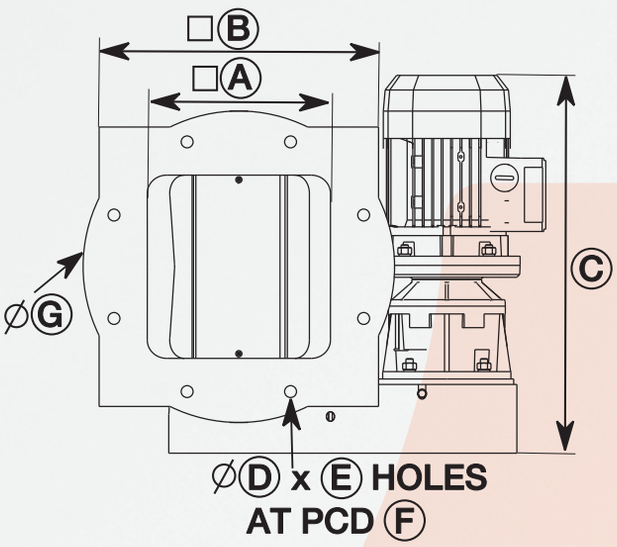
FRONT VIEW

LEGENDS	RSX 150	RSX 200	RSX 250	RSX 300
A	150	200	250	300
B	250	305	360	400
C#	430 OA	460 OA	540 OA	575 OA
D	13	13	13	17.5
E	8	8	12	12
F	240	295	350	400
G	280	340	406	455
H	210 OA	270 OA	330 OA	400 OA
I	105	135	165	200
J#	445 OA	495 OA	580 OA	635 OA
K	140	170	203	227.5
L#	305	325	377	407.5
Net Weight	29	48	65	93
Gross weight	33	57	90	118

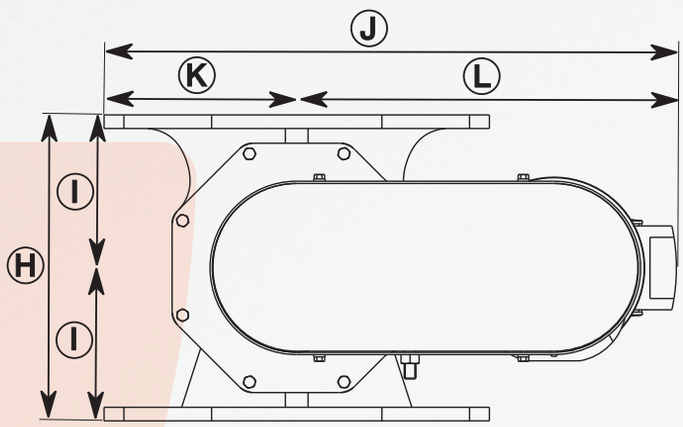
All dimensions in mm. Weight in Kgs

#Approximate dimensions only; dimensions vary with motor size and gear box variation.

Chain Drive - Dimension Details



TOP VIEW



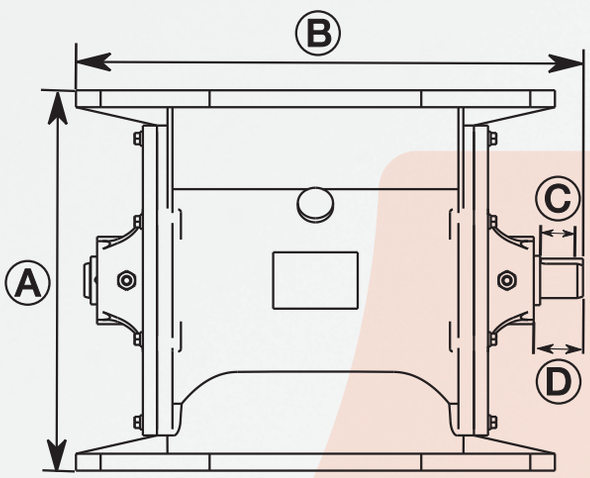
FRONT VIEW

LEGENDS	RSX 150	RSX 200	RSX 250	RSX 300
A	150	200	250	300
B	250	305	360	400
C#	400 OA	424 OA	460 OA	500 OA
D	13	13	13	17.5
E	8	8	12	12
F	240	295	350	400
G	280	340	406	455
H	210 OA	270 OA	330	400
I	105	135	165	200
J#	425 OA	505 OA	565	630
K	140	170	203	227.5
L#	285	335	362	402.5
Net Weight	29	48	65	93
Gross weight	33	57	90	118

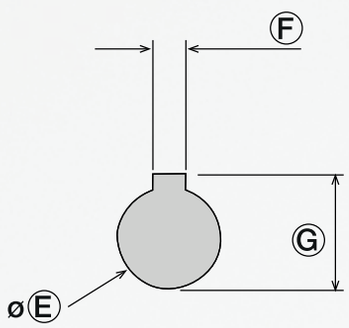
All dimensions in mm. Weight in Kgs

#Approximate dimensions only; dimensions vary with motor size and gear box variation.

Bare Shaft - Dimension Details



TOP VIEW



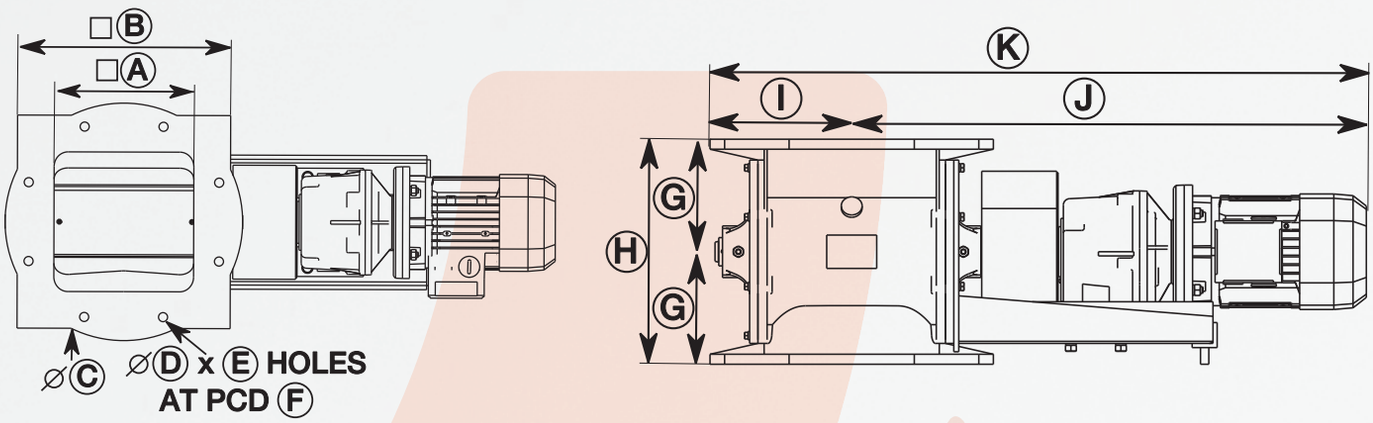
(BARE SHAFT)
DRIVEN SHAFT SECTION

LEGENDS	RSX 150	RSX 200	RSX 250	RSX 300
A	210 OA	270 OA	330 OA	400 OA
B	315 OA	364 OA	424 OA	480 OA
C	30	30	30	35
D	45	45	45	50
E	25	25	25	30
F	8	8	8	10
G	28	28	28	33
Net Weight	29	48	65	93
Gross weight	33	57	90	118

All dimensions in mm. Weight in Kgs

#Approximate dimensions only; dimensions vary with motor size and gear box variation.

Inline Drive - Dimension Details



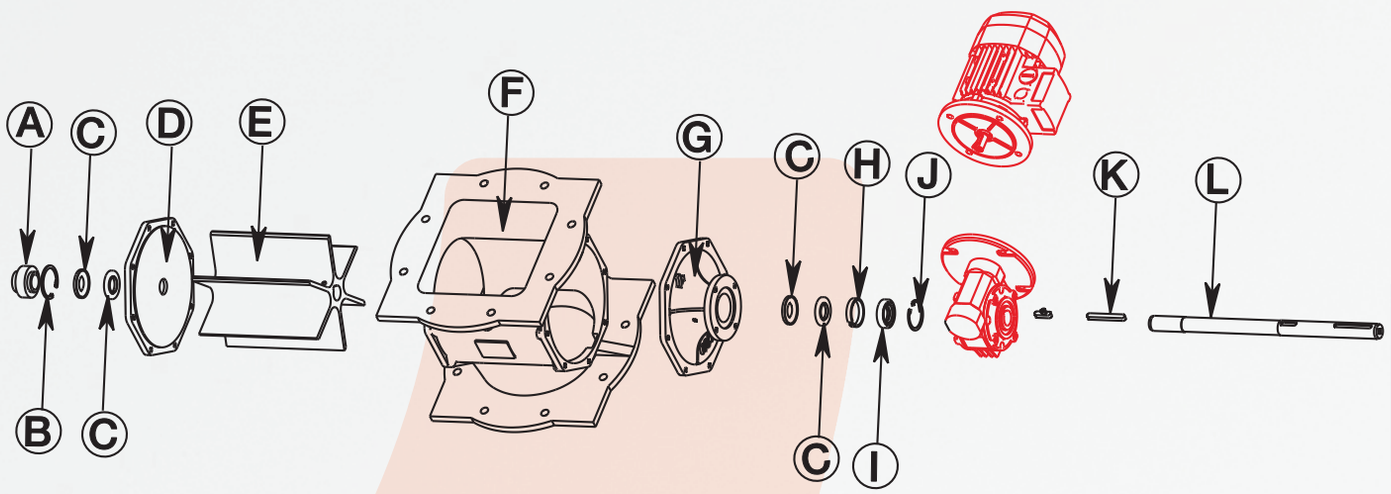
LEGENDS	RSX 150	RSX 200	RSX 250	RSX 300
A	150	200	250	300
B	250	305	360	400
C#	280 OA	340 OA	406 OA	455 OA
D	13	13	13	17.5
E	8	8	12	12
F	240	295	350	400
G	105	135	165	200
H	210 OA	270 OA	330 OA	400 OA
I	140	170	203	227.5
J	590	618	667	772.5 OA
K#	730 OA	785 OA	870 OA	1000 OA
Net Weight	29	48	65	93
Gross weight	33	57	90	118

All dimensions in mm. Weight in Kgs

#Approximate dimensions only; dimensions vary with motor size and gear box variation.

Component Details

Direct Drive (D)



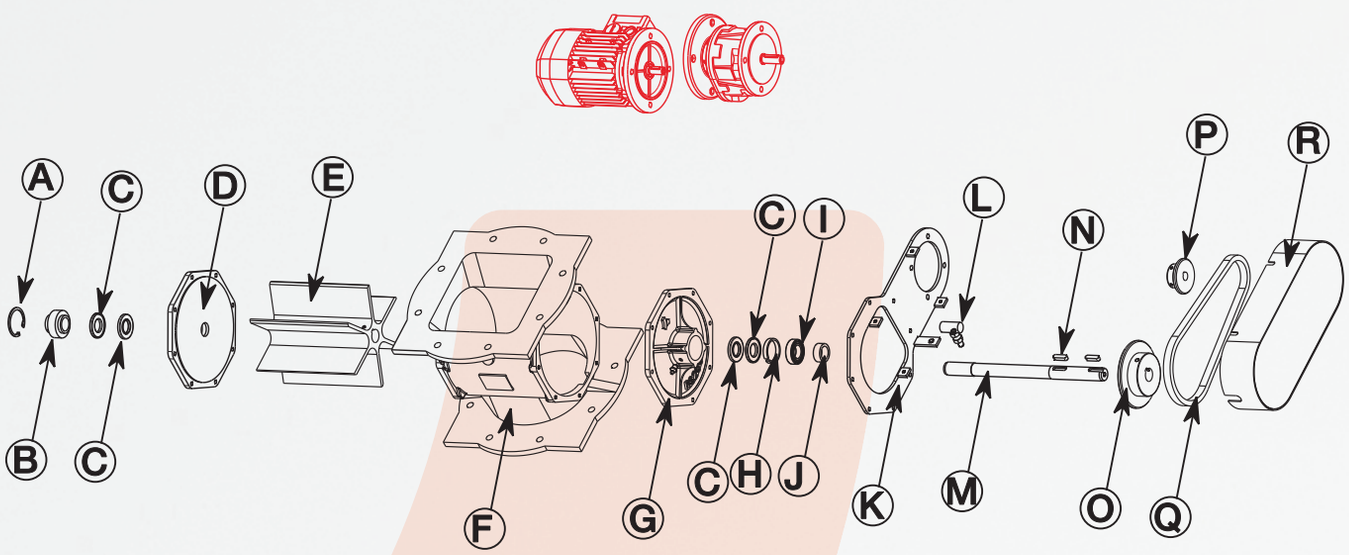
DIRECT DRIVE (D) COMPONENTS

Legends	Description	RSX 150	RSX 200	RSX 250	RSX 300
A	BEARING	104-0856	104-0856	104-0856	104-1223
B	CIRCLIP	101-4962	101-4962	101-4962	104-0470
C	LABYRINTH SEAL	100-6826	100-6826	100-6826	100-6827
D	BEARING SIDE PLATE	104-0931	104-0847	104-0966	104-0995
E	ROTOR	104-0184	104-0724	104-1026	104-0193
F	BODY	104-0181	104-0722	104-0967	104-0190
G	DRIVE SIDE PLATE	104-0183	104-0723	104-0968	104-0192
H	SPACER	102-6289	102-6289	102-6289	102-6290
I	OIL SEAL	102-6284	102-6284	102-6284	102-6285
J	CIRCLIP	100-8214	100-8214	100-8214	100-8778
K	KEY	101-7039	101-7039	100-6864	102-6480
L	SHAFT	104-0930	104-0848	104-0965	104-0996

Note: Above details represents the quantity of each component and may subject to change with variation.

Component Details

Chain Drive (C)



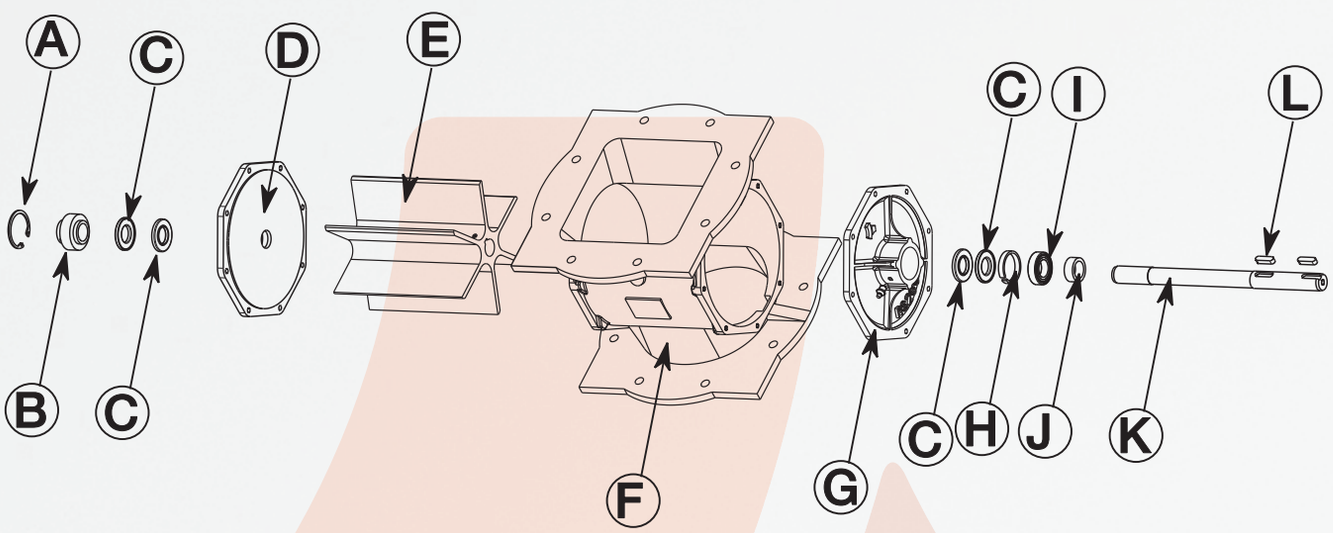
CHAIN DRIVE (C) COMPONENTS

Legends	Description	RSX 150	RSX 200	RSX 250	RSX 300
A	CIRCLIP	101-4962	101-4962	101-4962	104-1223
B	BEARING	104-0856	104-0856	104-0856	104-0470
C	LABYRINTH SEAL	100-6826	100-6826	100-6826	100-6827
D	BEARING SIDE PLATE	104-0931	104-0847	104-0966	104-0995
E	ROTOR	104-0184	104-0724	104-1026	104-0193
F	BODY	104-0181	104-0722	104-0967	104-0190
G	DRIVE SIDE PLATE	104-0931	104-0922	104-0978	104-1007
H	SPACER	102-6289	102-6289	102-6289	102-6290
I	BEARING	102-6281	102-6281	102-6281	102-6282
J	SPACER	104-0959	102-9357	104-0960	104-0961
K	GEARBOX MOUNT	104-0933	104-0867	104-0973	104-1002
L	CHAIN TENSIONER	104-0934	104-0273	104-0972	104-1001
M	SHAFT	104-0932	104-0865	104-0964	104-0997
N	KEY	101-2591	101-2591	101-2591	101-2591
O	DRIVEN SPROCKET	102-9412	102-9375	102-9364	102-9385
P	DRIVE SPROCKET	102-9413	102-9376	102-9363	102-9386
Q	CHAIN	104-0936	102-9378	104-0974	104-1003
R	CHAIN GUARD	104-0935	104-0866	104-0971	104-1000

Note: Above details represents the quantity of each component and may subject to change with variation.

Component Details

Bare Shaft (B)



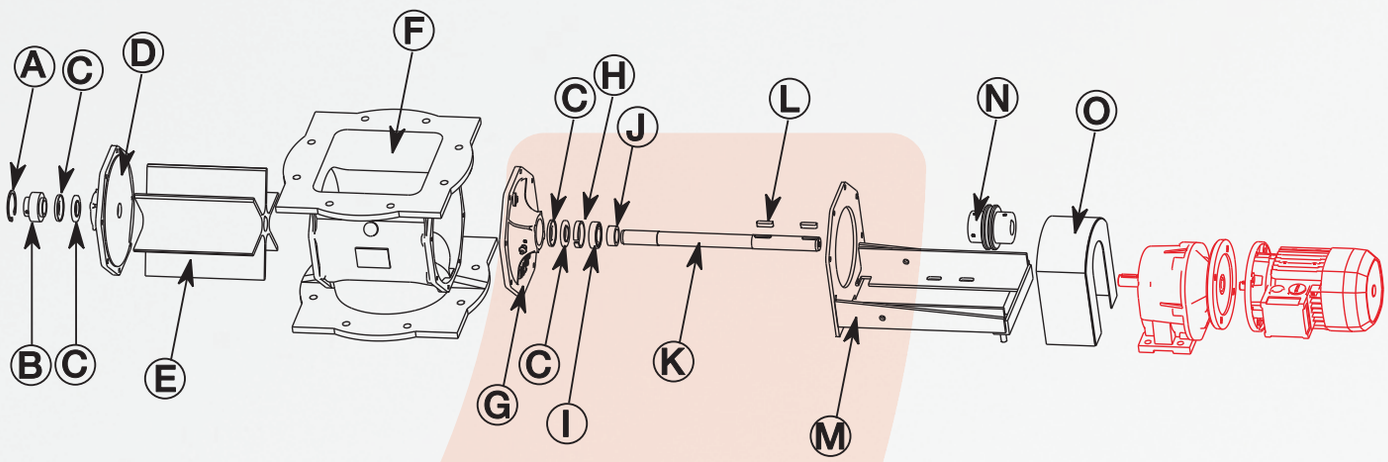
BARE SHAFT (B) COMPONENTS

Legends	Description	RSX 150	RSX 200	RSX 250	RSX 300
A	CIRCLIP	101-4962	101-4962	101-4962	104-1223
B	BEARING	104-0856	104-0856	104-0856	104-0470
C	LABYRINTH SEAL	100-6826	100-6826	100-6826	100-6827
D	BEARING SIDE PLATE	104-0931	104-0847	104-0966	104-0995
E	ROTOR	104-0184	104-0724	104-1026	104-0193
F	BODY	104-0181	104-0722	104-0967	104-0190
G	DRIVE SIDE PLATE	104-0931	104-0922	104-0978	104-1007
H	SPACER	102-6289	102-6289	102-6289	102-6290
I	BEARING	102-6281	102-6281	102-6281	102-6282
J	SPACER	104-0959	102-9357	104-0960	104-0961
K	SHAFT	104-0932	104-0865	104-0964	104-0997
L	KEY	101-2591	101-2591	101-2591	101-2591

Note: Above details represents the quantity of each component and may subject to change with variation.

Component Details

Inline Drive (E)



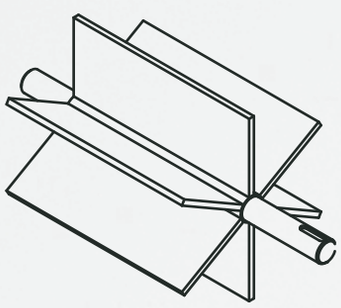
INLINE DRIVE (E) COMPONENTS

Legends	Description	RSX 150	RSX 200	RSX 250	RSX 300
A	CIRCLIP	101-4962	101-4962	101-4962	104-1223
B	BEARING	104-0856	104-0856	104-0856	104-0470
C	LABYRINTH SEAL	100-6826	100-6826	100-6826	100-6827
D	BEARING SIDE PLATE	104-0931	104-0847	104-0966	104-0995
E	ROTOR	104-0184	104-0724	104-1026	104-0193
F	BODY	104-0181	104-0724	104-0967	104-0190
G	DRIVE SIDE PLATE	104-0931	104-0922	104-0998	104-1007
H	SPACER	102-6289	102-6289	102-6289	102-6290
I	BEARING	102-6281	102-6281	102-6281	102-6282
J	SPACER	104-0959	102-9357	104-0969	104-0961
K	SHAFT	104-0932	104-0865	104-0964	104-0997
L	KEY	101-2591	101-2591	101-2591	101-2591
M	GEARBOX MOUNT	104-0956	104-0856	104-0977	104-1006
N	COUPLING	104-0957	104-0923	104-0975	104-1004
O	COUPLING GUARD	104-0958	104-0544	104-0976	104-1005

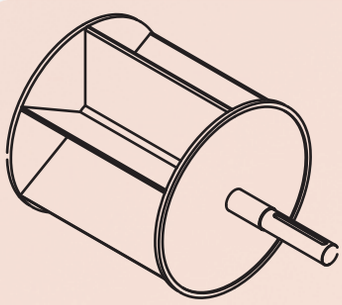
Note: Above details represents the quantity of each component and may subject to change with variation.

Rotor Variations

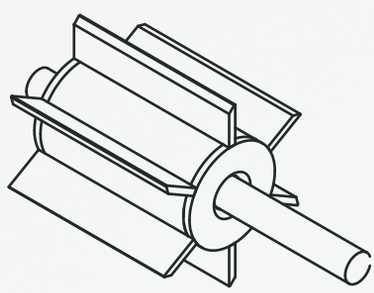
Open Rotor Casting (O)



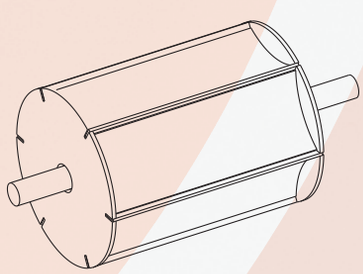
Closed Fabricated Rotor (M)



Reduced Pocket Open Fabricated Rotor (R)

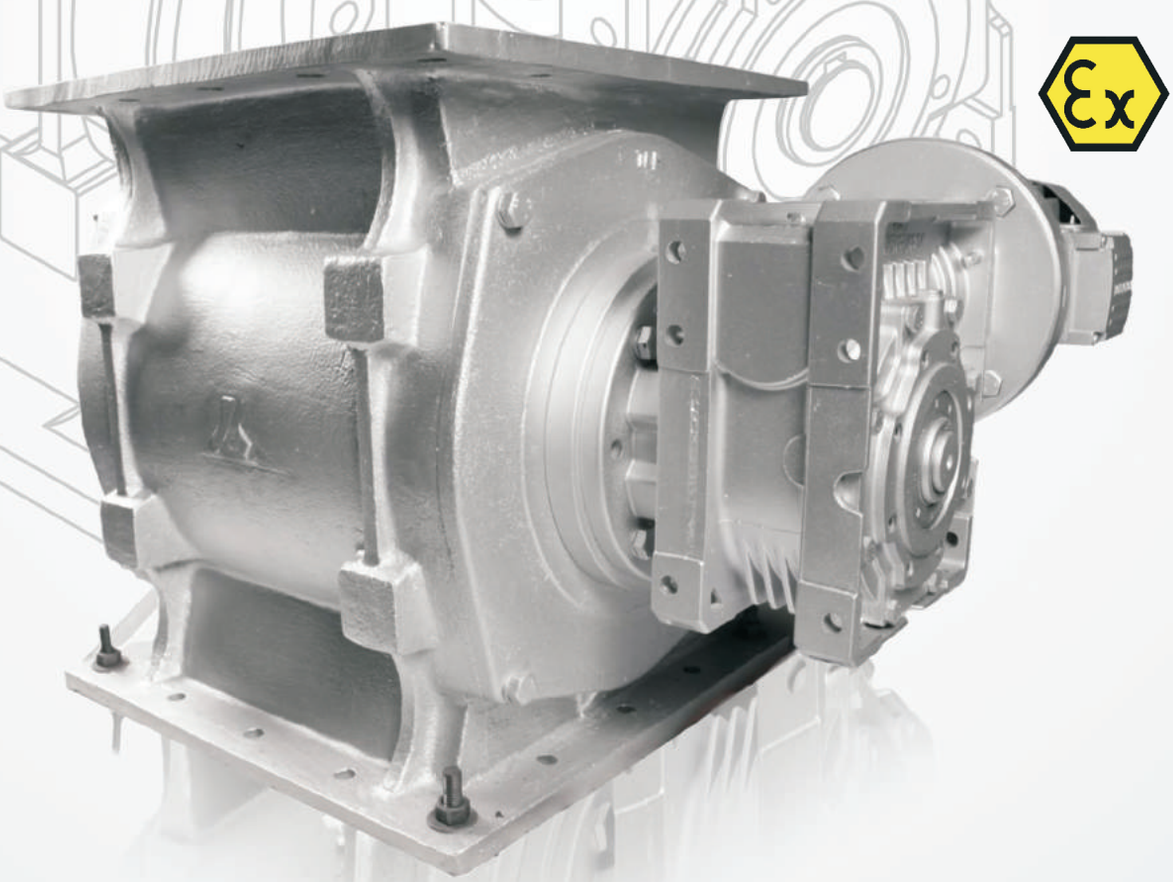


Scalloped Rotor Fabricated (Q)



RHX SERIES

ATEX CERTIFIED HEAVY DUTY ROTARY VALVES



Product Overview

Manufactured to suit specific requirements, the ATEX Certified Anval RHX Series Rotary Valves can serve an extensive range of applications from heavy mineral industries to light agricultural uses. The heavy duty cast iron construction enables it to operate even under harsh conditions with easy maintenance.

Product Features

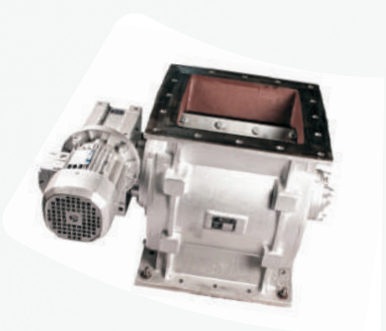
- ATEX Certified
- Can be customised as per customer's requirements
- Direct-mounted gearbox
- Minimal maintenance
- Equipped with replaceable “Labyrinth Seals”
- Heavy-duty cast iron construction
- Available in a range of speeds
- Wide selection of rotors

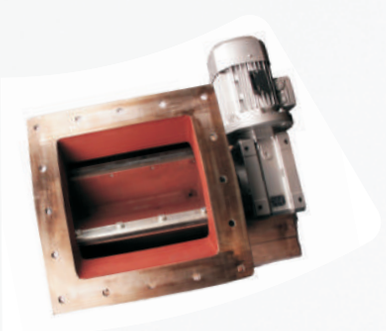
Applications

Anval RHX Series Valves are suitable for a wide range of industries including chemicals, food, steel, cement, wood, steel, power, mineral processing and many others. They can also be fully customised and fabricated to meet the needs of the customer.

Product Specifications

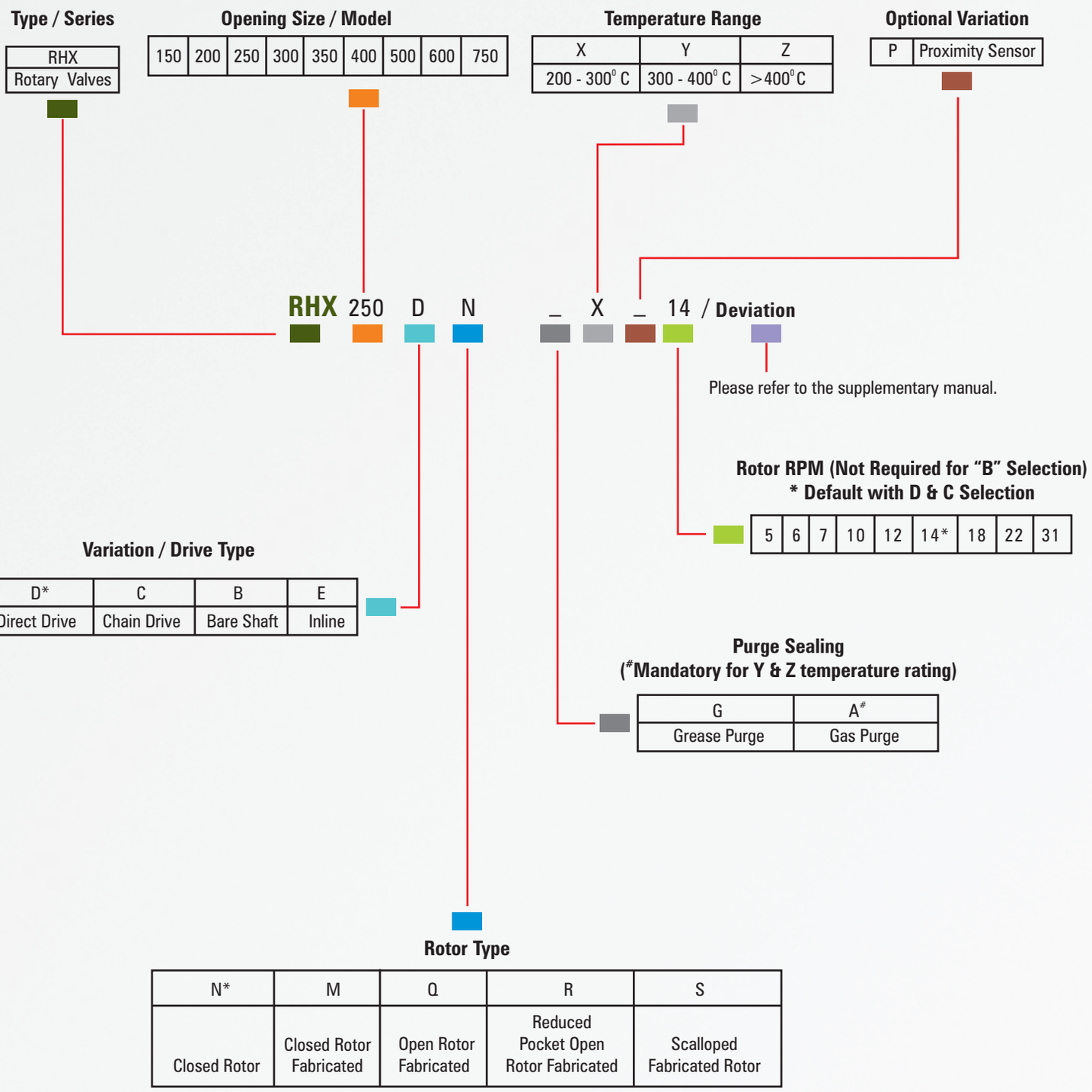
Opening Size	:	150, 200, 250, 300, 350,400, 500, 600 and 750 mm
Flange Opening	:	Square
Drives	:	Direct Driven / Chain Driven / Bare Shaft
Material of Construction	:	Cast Iron
Capacity Range	:	Up to 344 m^3/hr Max.
Painting Standard	:	Dark Grey Blue
End Cover Material	:	Cast Iron
Shaft	:	CS1030
Seals	:	Labyrinth Seals
Gearbox	:	Heliworm or Helibevel Gears (D) / Helical Gears (C)
Rotor	:	Cast Iron / CS1030
Rotor Type:	:	Closed Rotor (N) / Closed Rotor Fabricated (M) / Open Rotor Fabricated (Q) / Reduced Pocket Open Rotor Fabricated (R)
Special Seals	:	Grease Purge (G) / Gas Purge (A)
Bearings	:	Cartridge Type
Surface Treatment (Anval Standard)	:	50μm Grey Primer 50μm Paracryl IFC Tinted to B53 Guards Golden Yellow Y14
Surface Treatment (High Temperature)	:	75μm Es600 Zinc Silicate Primer 40μm Heat Kote Aluminium





Product Codification

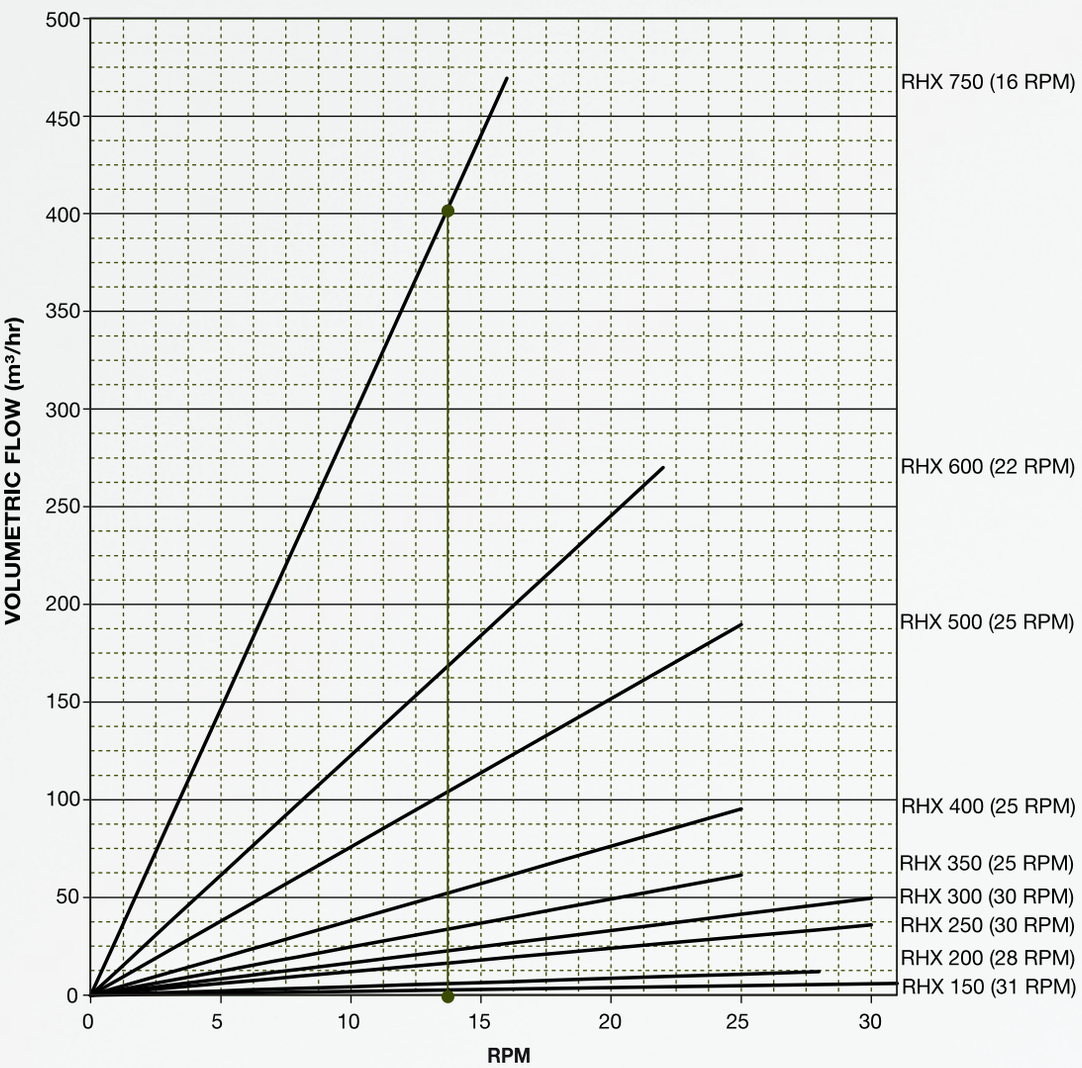
The table below represents the codification format for choosing the model



*Default Selection

Model Selection Chart

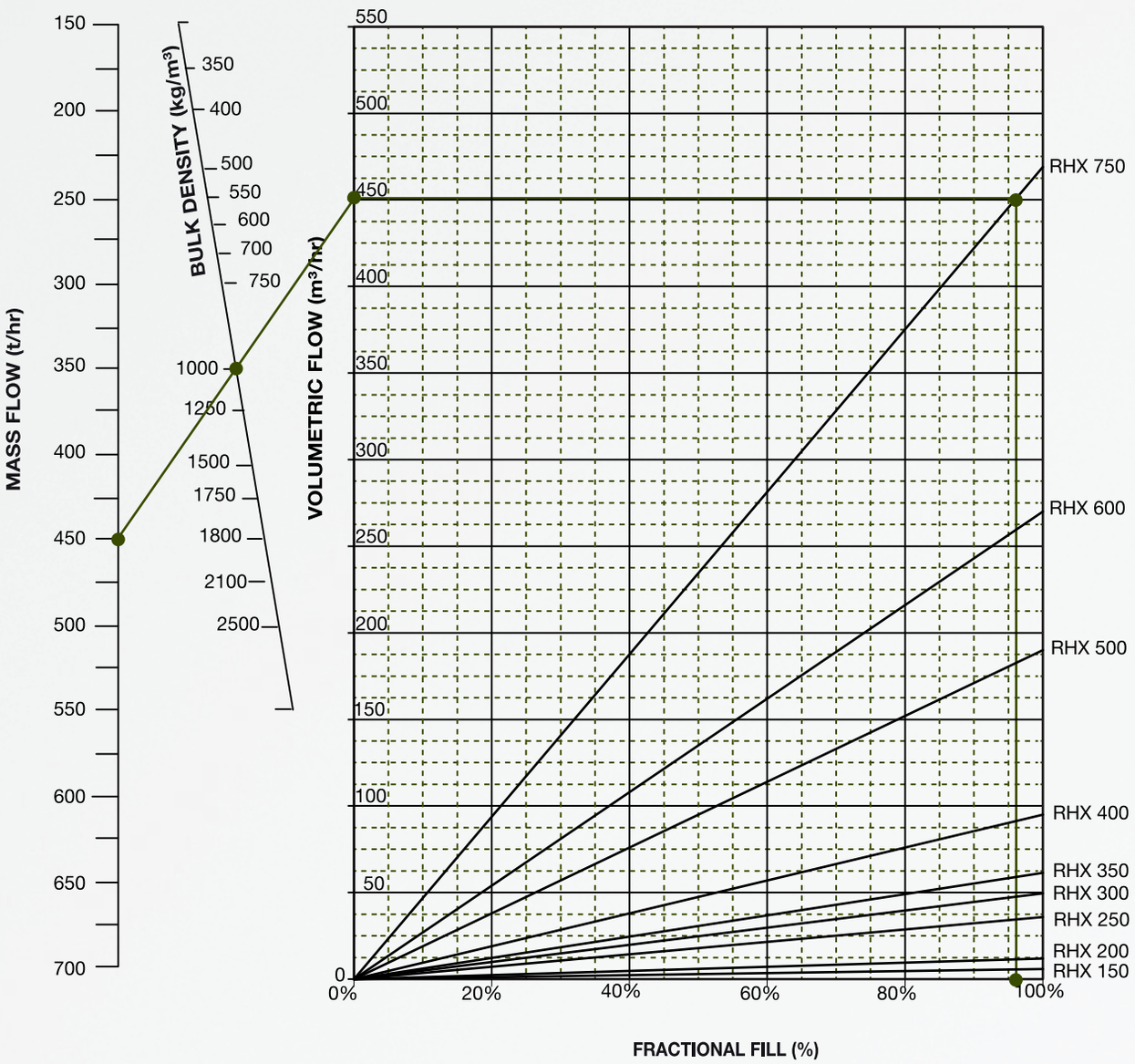
Speed Vs Throughput



MODEL	MAX. RPM
RHX150	31
RHX200	28
RHX250	30
RHX300	30
RHX350	25
RHX400	25
RHX500	25
RHX600	22
RHX750	16

Note: This chart is indicative and for guidance only, considering 100% filling capacity.

Capacity Chart



Example: A material with a density of 1000 kg/m³ and required capacity of 450 t/hr can be achieved by RHX750 at 96% filling capacity with 16 RPM.

NOTE: This chart is prepared for guidance purpose only, considering max. RPM (see the Capacity table for reference)

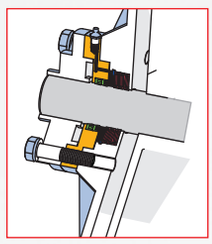
Note: This chart is indicative and for guidance only, considering maximum RPM.

Defining Features

Purge Sealing

Grease Purge Sealing (G)

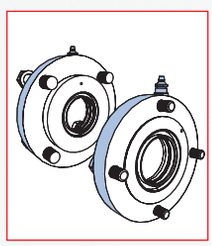
In order to prevent the escape of any dust particles or gases, a grease purge unit can be fitted into the valves, over the labyrinth seal. This creates a grease filled cavity between the seals, taking care of extreme duty cases.



Grease Purge Sealing (G)

Gas Purge Sealing (A)

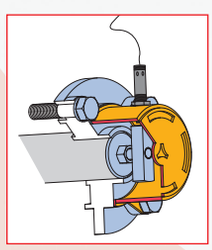
In situations where grease cannot be used, air or other gases are employed to purge the seals so that all dust particles or product fragments are flushed back into the product stream.



Gas Purge Sealing (A)

Proximity Sensors (P)

Under Speed Sensors that are about 12mm in diameter with a CD-PNP connection and IP67 protection can be fitted to these valves by mounting them on a specially designed bracket that is bolted on to the bearing. These sensors can function in a temperature range of (-)25°C to (+)70°C.



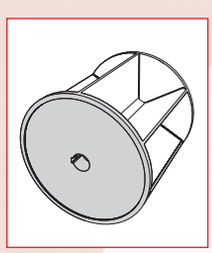
Proximity Sensors (P)

Customisation To Withstand High Temperature (H)

In order to allow these valves to function in extreme temperatures ranging from 250°C to 500°C, it is advisable that the product is coated with heatkote aluminium. Ceramic fibre sheets and flocks are also provided to protect the bearings and seals.

Rotor Configurations

The closed rotor configuration is standard on all RHX Series Valves, since it minimises the possibility of wear and tear. However, for certain applications, open-rotors can be provided if required.



Typical Closed Rotor

ATEX Certified

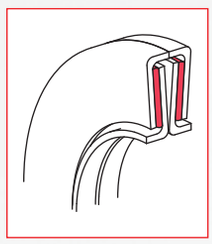
RHX Series are certified for Gas and Dust Explosive environment with Zones 20/21.

Defining Features

Labyrinth Seal

A Labyrinth Seal is a mechanical seal that fits around the axle or shaft to prevent any leakage of particles and is composed of many threads or grooves that are tightly fit inside the casing, thus making it difficult for the dust to pass through.

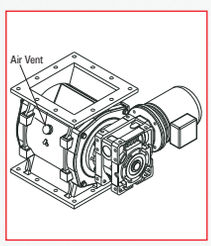
By providing non-contact sealing action on the rotating shafts, the passage of particles through a variety of chambers by centrifugal motion is controlled. 'Double Labyrinth Seals' fitted with flock pads, and greased on each side of the valve, are standard with all Blow Through Valves.



Labyrinth Seal

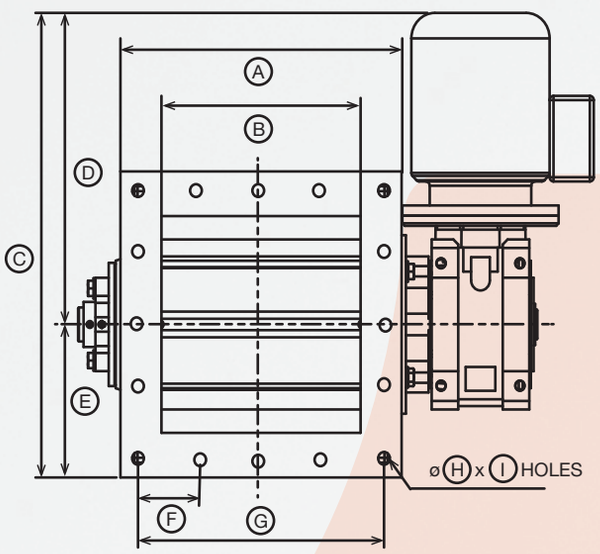
Air Vent / Cleaning

Air vent is available for RHX rotary valves to release the gas leakage when feeding a positive pressure system.

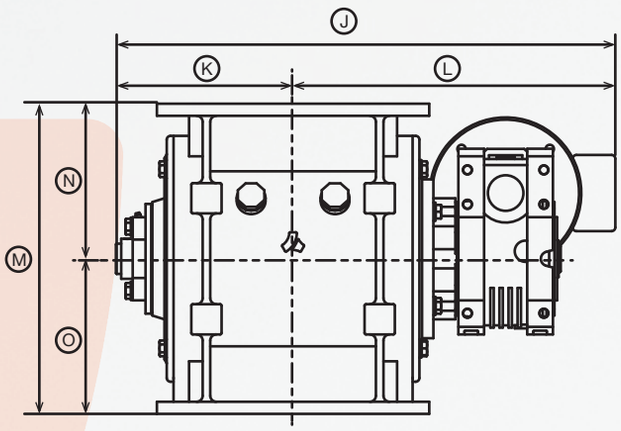


Air Vent / Cleaning

Direct Drive - Dimension Details



TOP VIEW



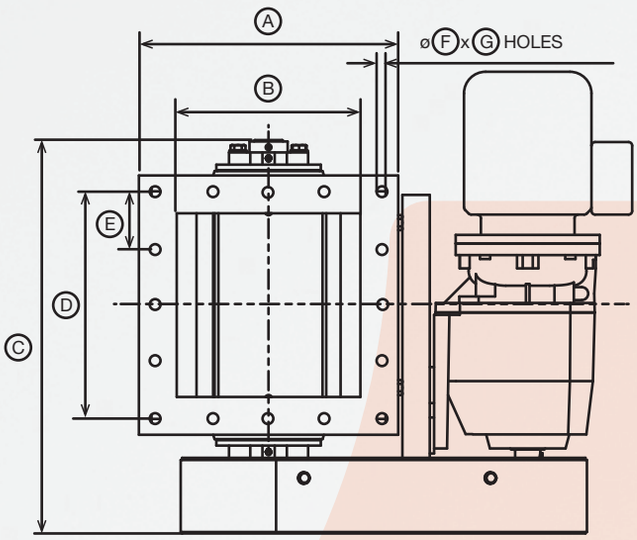
FRONT VIEW

LEGENDS	RHX 150	RHX 200	RHX 250	RHX 300	RHX 350	RHX 400	RHX 500	RHX 600	RHX 750
A	☐ 240	☐ 300	☐ 360	☐ 430	☐ 480	☐ 530	☐ 630	☐ 760	☐ 930
B	☐ 150	☐ 200	☐ 250	☐ 300	☐ 350	☐ 400	☐ 500	☐ 600	☐ 750
C#	440	517	563	598	678	894	1026	1068	1309
D#	320	367	383	383	438	629	711	940	1050
E	120	150	180	215	240	265	315	380	465
F	70	85	105	94	106	94	114	100	108
G	210	255	315	376	424	470	570	700	864
H	12	14	15	15	15	15	15	18	18
I	12	12	12	16	16	20	20	28	32
J#	507	574	660	718	800	932	1089	1182	1376
K	150	190	232	250	290	325	375	457	465
L#	357	384	428	468	510	607	714	725	911
M	240	330	410	470	525	620	760	900	1120
N	120	165	205	235	262.5	310	380	450	560
O	120	165	205	235	262.5	310	380	450	560
Net Weight	50	84	146	183	255	400	650	1500	1750
Gross weight	65	105	165	210	280	430	685	1575	1820

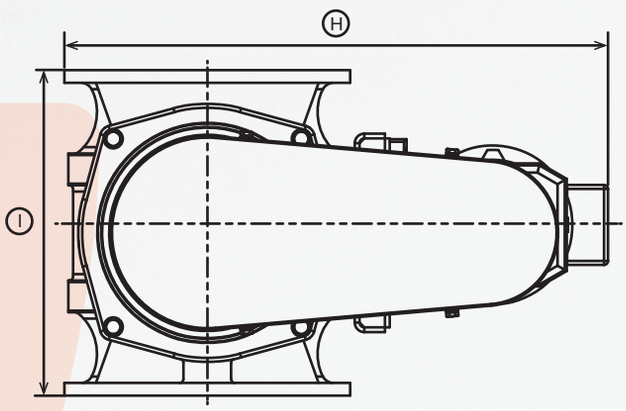
All dimensions in mm. Weight in Kgs

#Approximate dimensions only; dimensions vary with motor size and gear box variation.

Chain Drive - Dimension Details



TOP VIEW



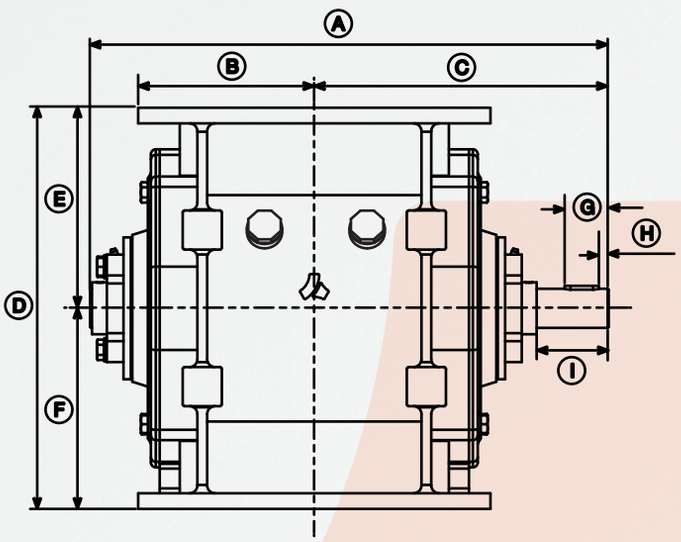
FRONT VIEW

LEGENDS	RHX 150	RHX 200	RHX 250	RHX 300	RHX 350	RHX 400	RHX 500	RHX 600	RHX 750
A	□240	□300	□360	□430	□480	□530	□630	□760	□ 930
B	□150	□200	□250	□300	□350	□400	□500	□600	□ 750
C#	350	452	546	616	650	754	925	1110	1208
D	210	255	315	376	424	470	570	700	864
E	70	85	105	94	106	94	114	100	108
F	12	14	15	15	15	15	15	18	18
G	12	12	12	16	16	20	20	28	32
H#	451	600	617	710	750	846	980	1195	1452
I	240	330	410	470	525	620	760	900	1120
Net Weight	68	102	164	214	340	400	608	1343	1600
Gross weight	85	122	186	237	365	428	636	1400	1690

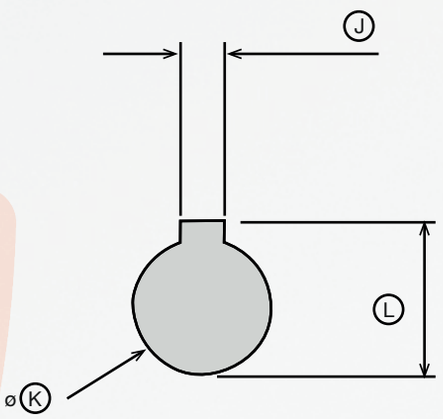
All dimensions in mm. Weight in Kgs

#Approximate dimensions only; dimensions vary with motor size and gear box variation.

Bare Shaft - Dimension Details



TOP VIEW



(BARE SHAFT)
DRIVEN SHAFT SECTION

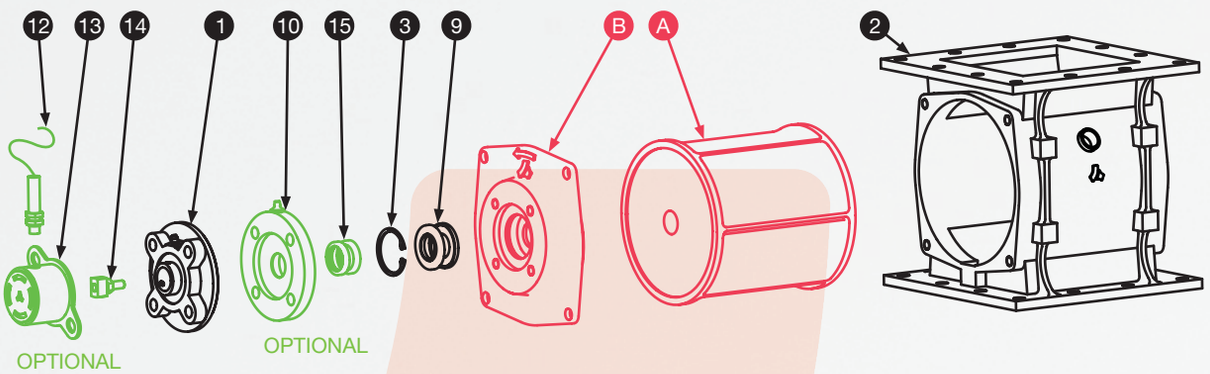
LEGENDS	RHX 150	RHX 200	RHX 250	RHX 300	RHX 350	RHX 400	RHX 500	RHX 600	RHX 750
A	375	437	530	590	630	730	870	1025	1125
B	150	150	180	215	290	265	315	380	465
C	225	260	300	331	350	396	455	505	660
D	240	330	410	470	525	620	760	900	1120
E	120	165	205	235	262.5	310	380	450	560
F	120	165	205	235	262.5	310	380	450	560
G	30	35	45	45	65	55	50	75	50
H	5	5	10	10	5	5	10	10	5
I	60	60	75	75	72	77	51	55	75
J	8	8	12	12	14	14	18	18	20
K	25	30	40	40	45	50	60	60	70
L	28.3	33.3	43.3	43.3	48.3	53.3	63.3	63.3	74.9
Net Weight	35	61	116	161	210	331	513	1200	1500
Gross weight	43	70	128	173	225	350	536	1255	1560

All dimensions in mm. Weight in Kgs

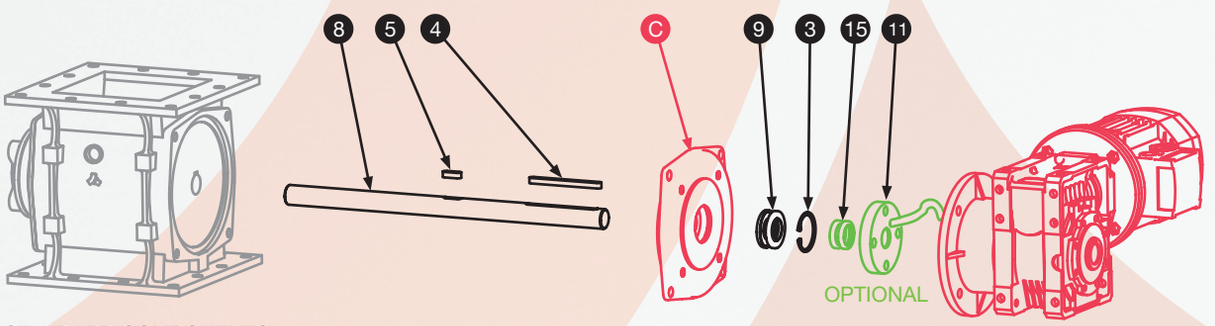
#Approximate dimensions only; dimensions vary with motor size and gear box variation.

Component Details

Direct Drive(D) and Bare Shaft(B)



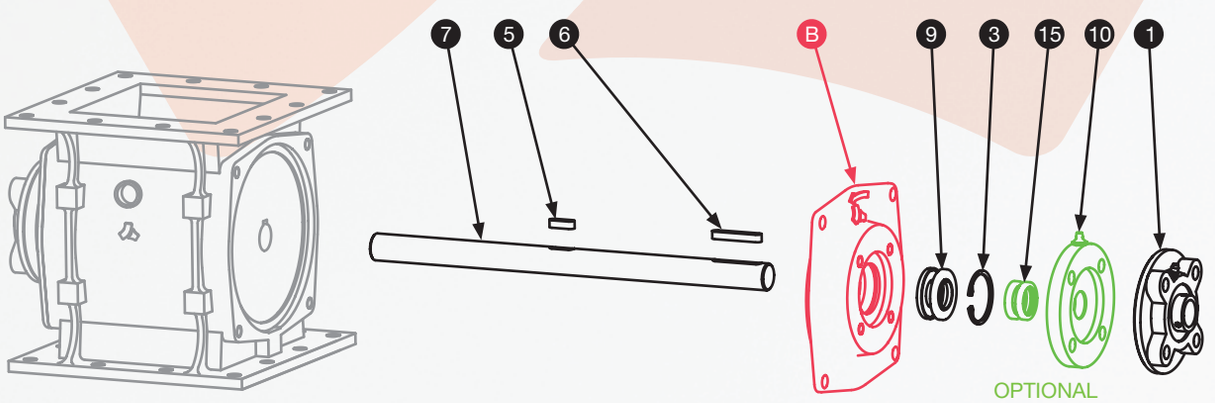
NON DRIVE END COMPONENTS



STANDARD COMPONENTS

REFER TO GEARBOX & MOTOR DATA

DIRECT END COMPONENTS



STANDARD COMPONENTS

BARE SHAFT COMPONENTS

Component Details

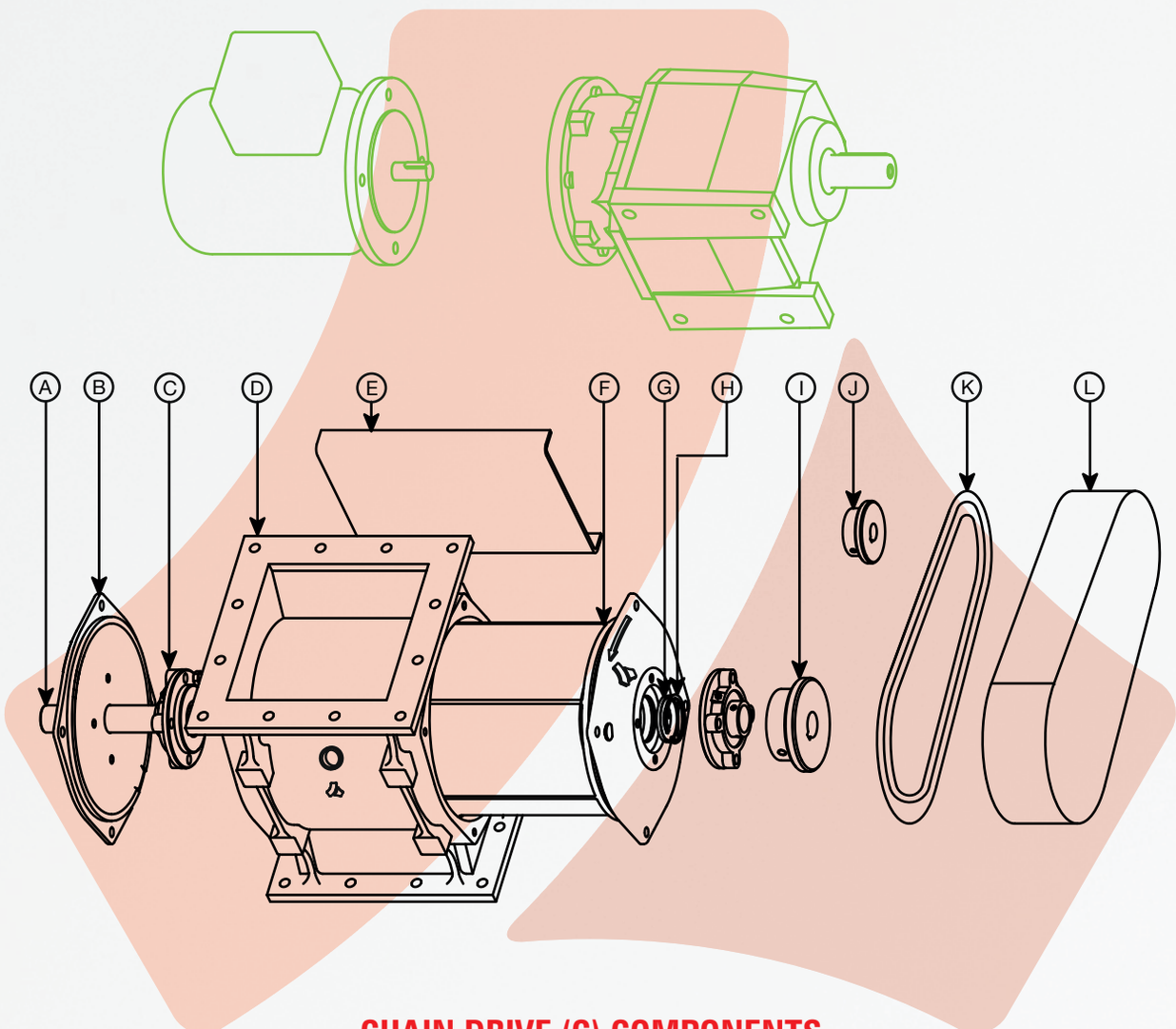
LEGENDS	DESCRIPTION	RHX 150		RHX 200		RHX 250		RHX 300		RHX 350		RHX 400		RHX 500		RHX 600		RHX 750	
		D	B	D	B	D	B	D	B	D	B	D	B	D	B	D	B	D	B
1	BEARING CARTRIDGE ASSEMBLY	100-7643		100-7156		100-6922		100-6922		101-3668		100-4140		100-1003		100-1003		103-2464	
		1	2	1	2	1	2	1	2	1	2	1	2	1	2	1	2	1	2
2	BODY	100-7698		101-3435		101-3792		101-3975		1013994		101-4041		101-4467		101-4479		103-2485	
		1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
3	CIRCLIP	100-8214		100-8778		101-1786		101-1786		100-7362		100-6310		100-7463		100-7463		100-6297	
		2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
4	KEY (GEARBOX)	100-6751		101-3912		101-3963		101-3963		101-1679		100-2202		101-4527		101-4527		102-4410	
		1	0	1	0	1	0	1	0	1	0	2	0	2	0	2	0	2	0
5	KEY (ROTOR)	101-3724		101-2591		101-3962		101-3979		101-3993		100-2202		101-4527		101-4527		-	
		1	1	1	1	1	1	1	1	1	1	1	1	1	0	1	0	0	0
6	KEY (SPROCKET)	101-3724		101-2591		101-3962		101-3962		100-2201		102-0739		100-9732		101-4527		103-2635	
		0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
7	SHAFT (BARE DRIVE (B))	103-0748		102-1074		102-9504		102-9515		102-9518		102-9531		102-9673		103-0765		-	
		0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	0
8	SHAFT (DIRECT DRIVE (D))	101-3723		102-0533		101-3915		101-3978		101-3992		101-4036		101-4465		101-4478		-	
		1	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	0	0
9	LABRYNTH SEAL	100-6826		100-4177		100-6828		100-6828		100-6112		100-6288		100-5723		100-5723		103-2467	
		4	4	4	4	4	4	4	4	4	4	4	4	4	4	6	6	6	6
10	GAS PURGE(A) BEARING SIDE SEAL*	101-9892		103-0785		102-0032		102-0032		103-0787		103-0791		102-4380		103-0808		103-2584	
		1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
10	GREASE PURGE(G) BEARING SIDE SEAL*	103-0783		101-9944		101-9969		101-9969		102-0075		101-9218		103-0789		103-0806		103-2583	
		1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
11	GAS PURGE(A) DRIVE SIDE SEAL*	101-9893		103-0786		102-0876		102-0876		103-0788		103-0792		103-0803		103-0807		103-2586	
		1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
11	GREASE (G) PURGE DRIVE SIDE SEAL*	103-0784		101-9947		101-9972		101-9972		102-0078		103-0790		103-0804		103-0805		103-2587	
		1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
12	UNDERSPEED SENSOR*	103-0904		103-0904		103-0904		103-0904		103-0904		103-0904		103-0905		103-0905		103-0905	
		1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
13	UNDERSPEED SENSOR BRACKET*	101-7377		102-0903		101-5931		101-5931		101-1493		101-1493		102-4801		102-4801		103-2580	
		1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
14	UNDERSPEED SENSOR TARGET*	101-7376		102-0924		101-5935		101-5935		101-0403		101-0403		102-4810		102-4810		102-4810	
		1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
15	VITON SEAL *	101-9895		101-9946		101-9971		101-9971		101-3186		101-6977		102-4394		102-4394		102-9262	
		2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
A	ROTOR *	101-3722		101-3909		101-3795		101-3977		101-3999		101-4044		103-0795		103-0796		103-2382	
		1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
B	BEARING SIDE PLATE	101-3717		101-3463		101-3793		101-3976		101-3995		101-4042		101-4468		101-4480		103-2564	
		1	2	1	2	1	2	1	2	1	2	1	2	1	2	1	2	1	2
C	DRIVE SIDE PLATE	101-3726		101-3700		101-3794		101-3981		101-3998		101-4043		101-4469		101-4481		103-2567	
		1	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0

* Optional Component
D = Direct Drive Quantity, B = Bare Shaft Quantity

Note: Above details represents the part no. of each component and may subject to change with variation.

Component Details

Chain Drive (C)



CHAIN DRIVE (C) COMPONENTS

Component Details

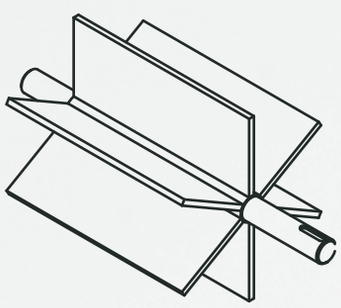
LEGENDS	DESCRIPTION	RHX 150	RHX 200	RHX 250	RHX 300	RHX 350	RHX 400	RHX 500	RHX 600	RHX 750
		Quantity	Quantity	Quantity	Quantity	Quantity	Quantity	Quantity	Quantity	Quantity
A	SHAFT	103-0748	102-1074	102-9504	102-9515	102-9518	102-9531	102-9673	103-0765	-
		1	1	1	1	1	1	1	1	0
B	BEARING SIDE PLATE	101-3717	101-3463	101-3793	101-3976	101-3995	101-4042	101-4468	101-4480	103-2564
		2	2	2	2	2	2	2	2	2
C	BEARING	100-7643	100-7156	100-6922	100-6922	101-3668	101-4140	100-1003	100-1003	103-2464
		2	2	2	2	2	2	2	2	2
D	BODY	100-7698	101-3435	101-3792	101-3975	101-3994	101-4041	101-4467	101-4479	103-2485
		1	1	1	1	1	1	1	1	1
E	GEARBOX BRACKET	103-0739	102-0459	102-9506	102-9514	102-9519	102-9533	102-9677	103-0754	103-2578
		1	1	1	1	1	1	1	1	1
F	ROTOR	101-3722	101-3909	101-3795	101-3977	101-3999	101-4044	102-9672	103-0802	103-2395
		1	1	1	1	1	1	1	1	1
G	LABRYNTH SEAL	100-6826	100-6827	100-6828	100-6828	100-6112	100-6288	100-5723	100-5723	103-2467
		4	4	4	4	4	4	4	6	6
H	CIRCLIP	100-8214	100-8778	101-1786	101-1786	100-7362	100-6310	100-7463	100-7463	100-6297
		2	2	2	2	2	2	2	2	2
I	DRIVEN SPROCKET	103-0749	102-0470	102-0911	102-0911	102-4861	102-9535	102-5359	102-5359	103-2573
		1	1	1	1	1	1	1	1	1
J	DRIVE SPROCKET	103-0750	100-6739	102-9505	102-9505	102-9523	102-9536	102-9536	103-0762	101-9111
		1	1	1	1	1	1	1	1	1
K	CHAIN	103-0752	102-0471	102-0909	102-9516	1024873	102-9539	102-9688	103-0763	103-2638
		1	1	1	1	1	1	1	1	1
L	CHAIN GUARD	103-0738	102-0464	102-0916	101-6346	102-4867	101-9024	102-9681	103-0759	103-2611
		1	1	1	1	1	1	1	1	1

* Optional Component

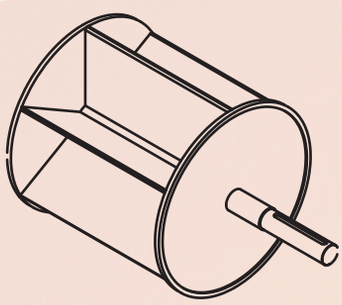
Note: Above details represents the part no. of each component and may subject to change with variation.

Rotor Variations

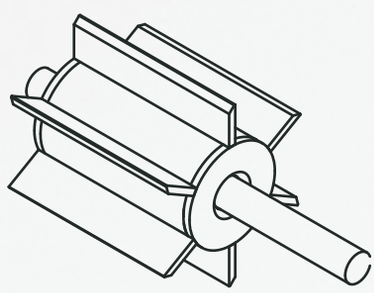
Open Fabricated Rotor (Q)



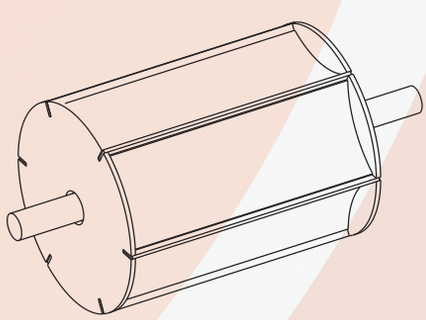
Closed Fabricated Rotor (M)



Reduced Pocket Open Fabricated Rotor (R)

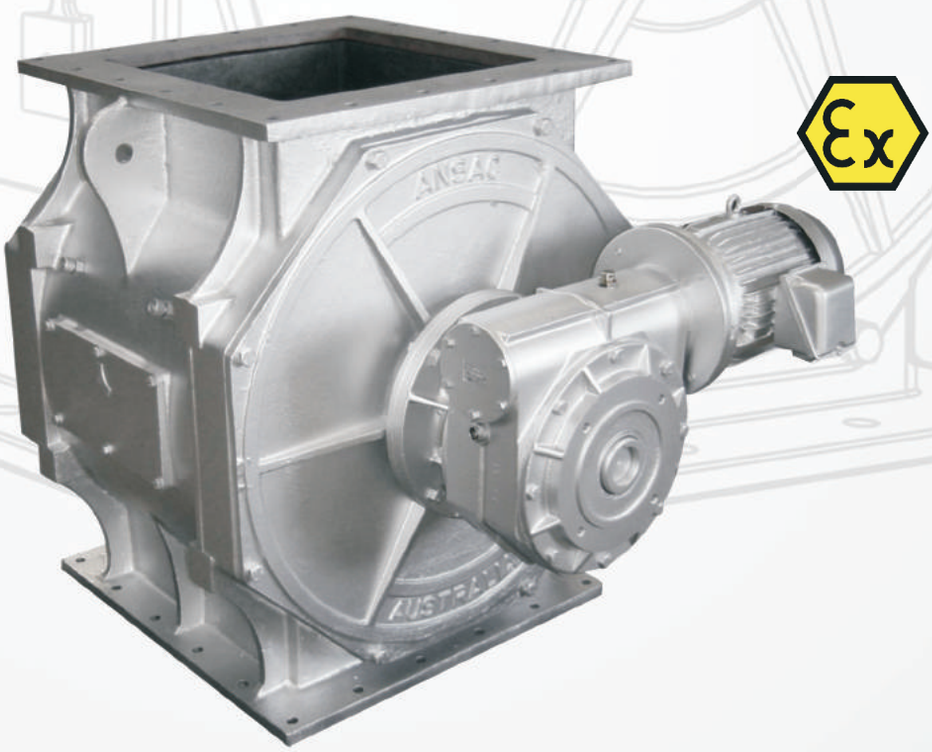


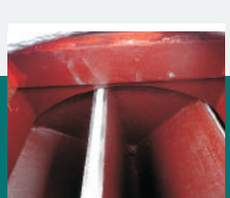
Scalloped Rotor Fabricated (Q)



RFSX SERIES

ATEX CERTIFIED ROTARY FLOATING SHOE VALVE





Product Overview

Forming an integral part of the Anval range, the ATEX Certified Rotary Floating Shoe or RFSX Valve is an ultra heavy duty product specifically designed for high wear applications.

The RFSX Series body is built from a piece of hard wearing cast iron with bolt-on side plates and a rotating, webbed rotor placed in between. This unique design enables the valve to operate efficiently in handling abrasive, high pressure and high temperature environment.

Product Features

- ATEX Certified
- Ultra heavy duty cast iron construction
- Ceramic tipped rotor
- Adjustable, hardened cast iron shoe
- Available in direct drive or chain drive
- Feasibility in maintenance
- Available in a range of speeds

Technology

In order to achieve 100% positive sealing, the RFSX Series utilises a technology referred to as "Floating Shoe". The shoe slides tightly into the main body top port flange and rides onto the rotor through gravitational force. The shoe slide is sealed with a double 'O' ring between the shoe and the main body. Where the shoe rides on the rotor, the contact surface between the two parts forms a mechanical seal.

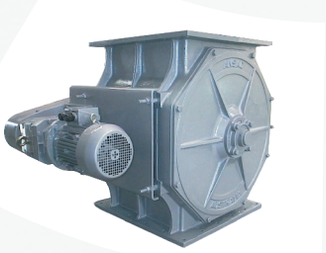
Applications

The RFSX Series Valves are designed for such high tolerance levels that maintenance requirements over their long service life are diminished. This is a particularly important aspect of this product given that the expected service life is around 4 times that of a competitor's standard rotary valve.

As part of the RFSX range, an overhaul service is offered by Anval whereby out of service RFSX valves are re-conditioned and returned to operational capacity. This minimises the spare parts inventory and on-site training required by the customer, improving cost efficiency. Those customers who choose not to fully utilise Anval's extensive service range can be confident that they will receive full support, should the occasion arise when sourcing spare parts.

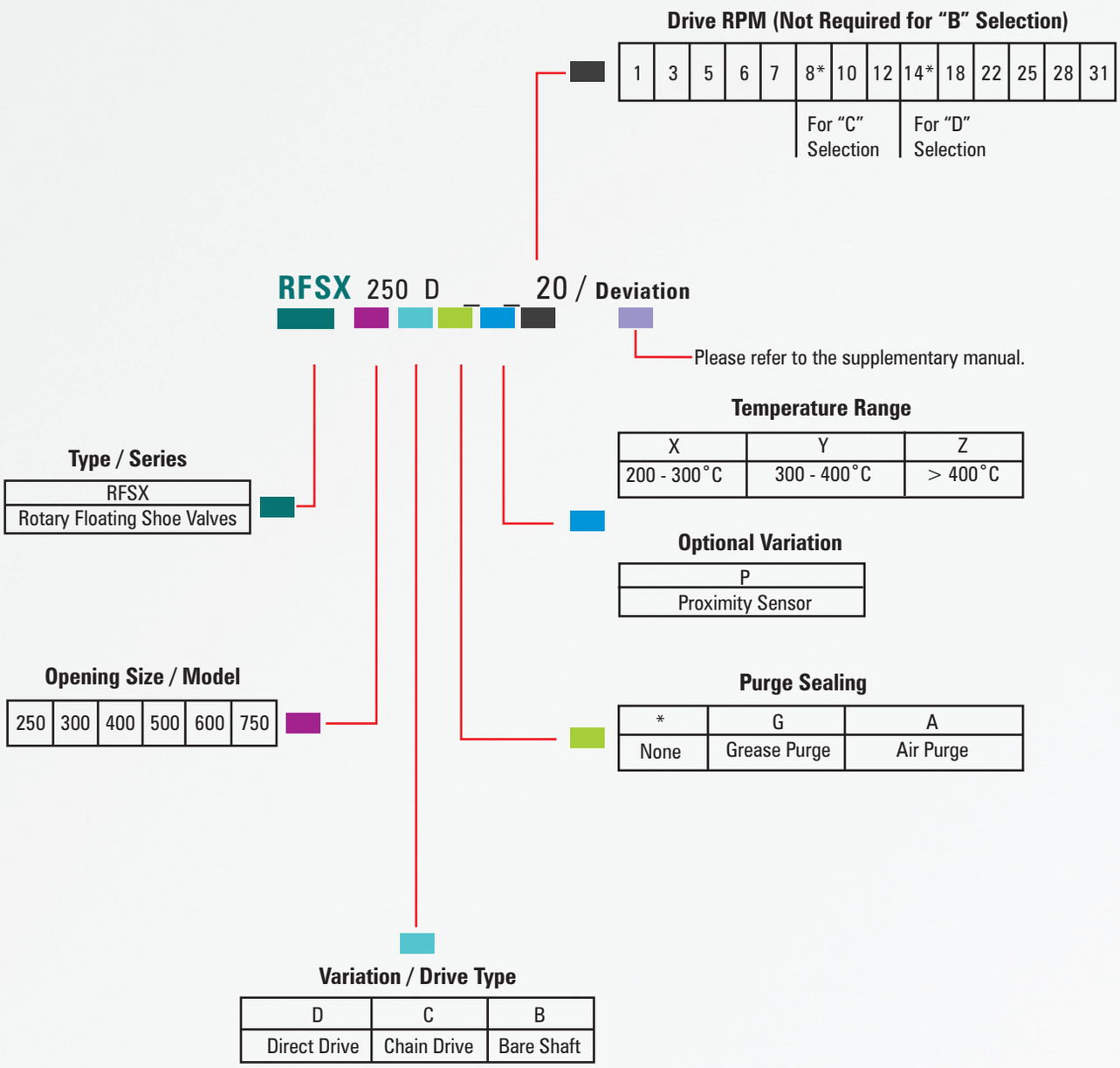
Product Specifications

Opening Size	:	250, 300, 400, 500, 600,750 mm
Flange Opening	:	Square
Drives	:	Direct Driven / Chain Driven / Bare Shaft
Material of Construction	:	Cast Iron
Capacity Range	:	up to 621 m^3/hr
Painting standard	:	Dark Grey Blue
End cover Material	:	Cast Iron
Shaft	:	CS 1030
Seals	:	Labyrinth Seals
Gearbox	:	Heliworm / Helibevel Gears (D) / Helical Gears (C)
Rotor Tips	:	Ceramic Tips
Floating Shoe Material	:	Hardened SG iron
Rotor Type	:	Closed Rotor
Sensor	:	Proximity Sensor
Special Seals	:	Grease Purge (G) / Air Purge (A)
Bearings	:	Cartridge Type
Surface Treatment (Anval Standard)	:	50μ Rapid Prime (Grey) 50μ Paracryl IFC Tinted to B53 Dark Grey Blue Guards Golden Yellow Y14
Surface Treatment (High Temperature)	:	75μ ES600 Zinc Silicate Primer 40μ Heat Kote Aluminium



Product Codification

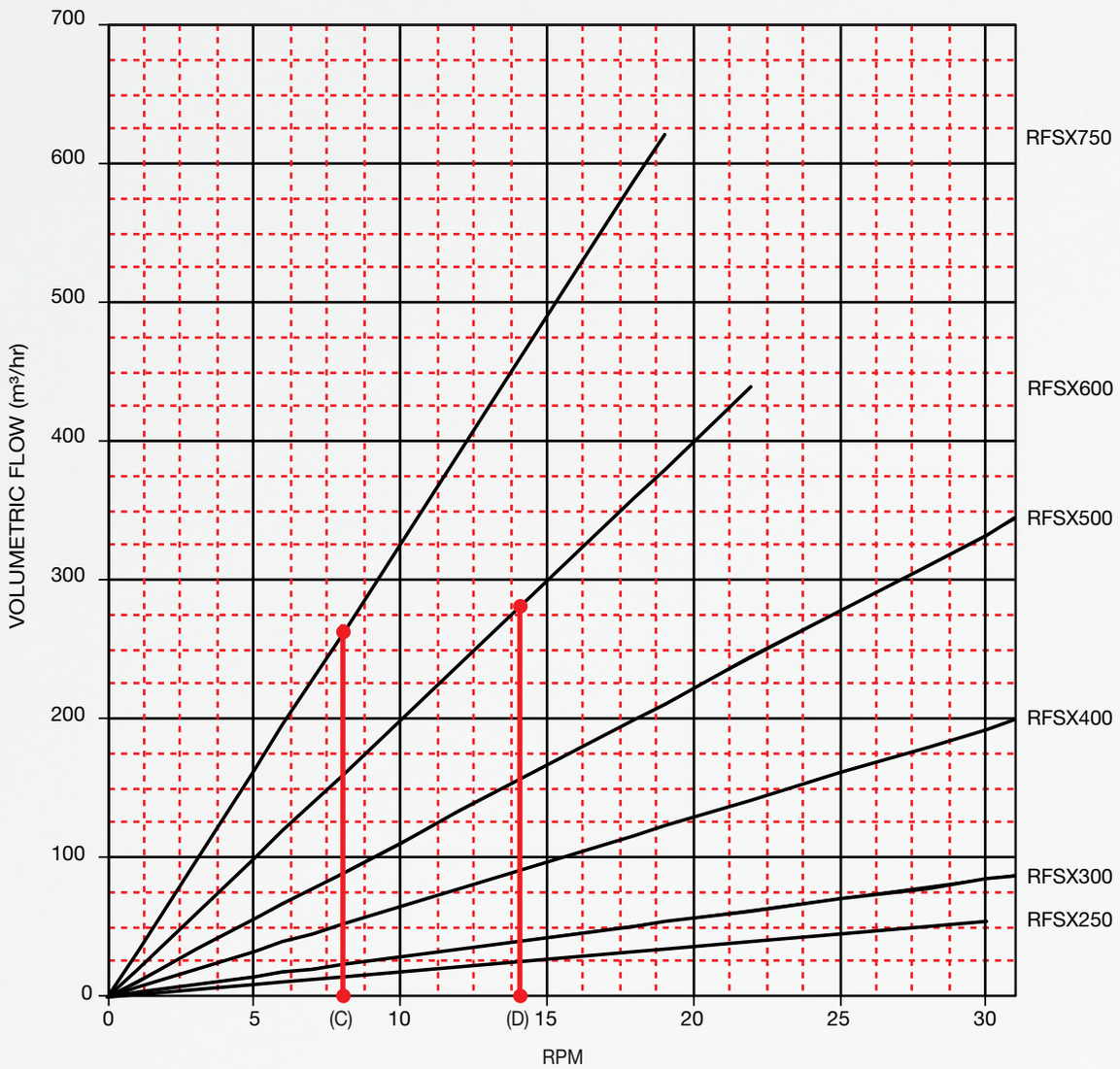
The table below represents the codification format for choosing the model



*Default Selection

Model Selection Chart

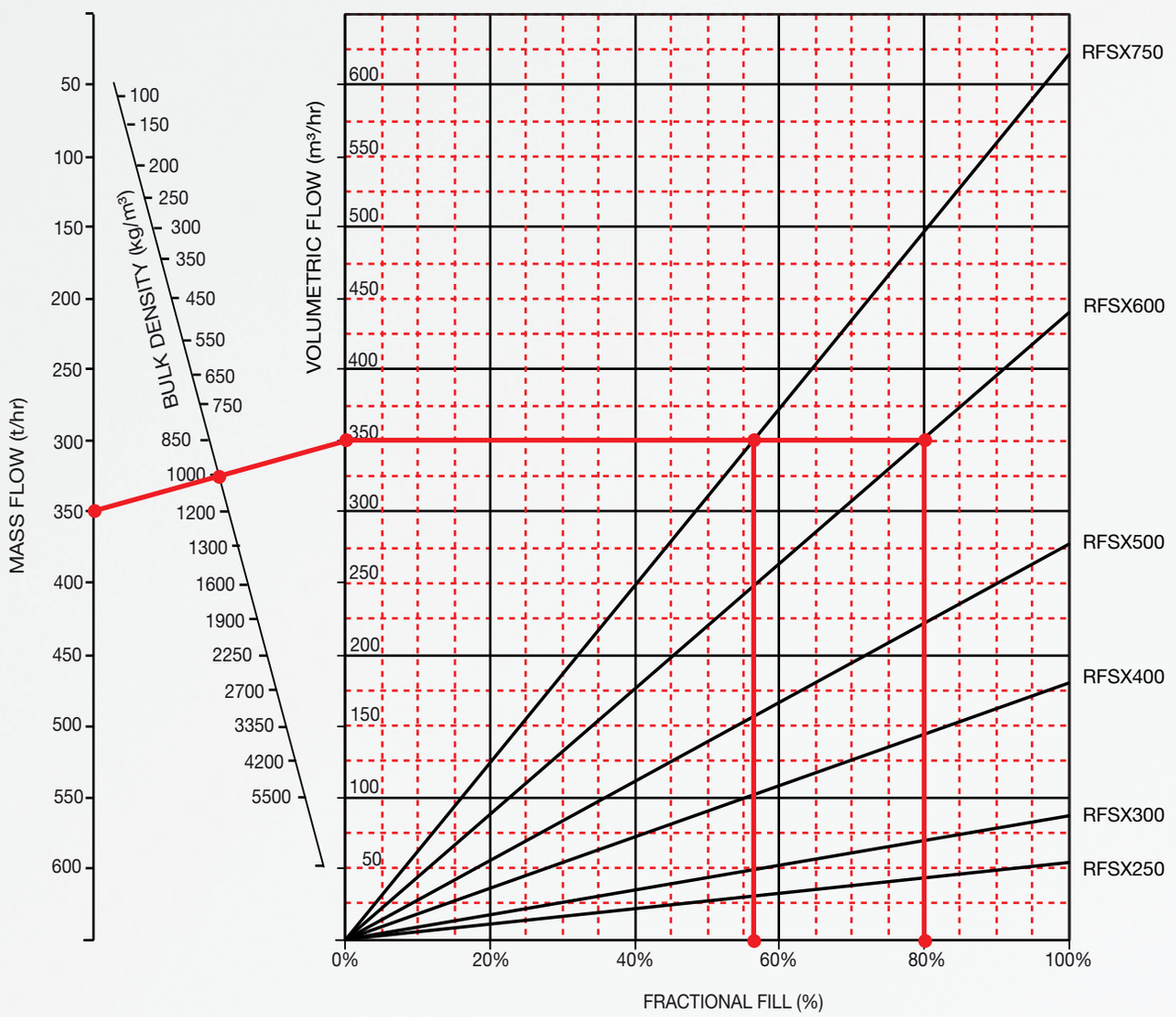
Speed Vs Throughput



Model	Speed (RPM)	Capacity (m^3/hr)
RFSX250	30	54
RFSX300	31	87
RFSX400	31	199
RFSX500	31	344
RFSX600	22	440
RFSX750	19	621

8 RPM default for Chain Drive (C)
14 RPM default for Direct Drive (D)
Note: This chart is prepared for guidance purposes only, considering 100% filling capacity.

Capacity Chart



Example: A material with a density of 1000 kg/m^3 and required capacity of 350 t/hr can be achieved by RFSX600 at 80% filling capacity with 22 RPM and also by RFSX750 at 56% filling capacity with 19 RPM.

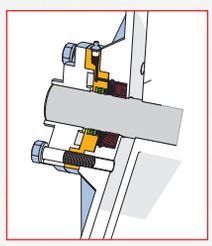
Note: This chart is prepared for guidance purposes only taking into consideration the maximum RPM.

Defining Features

Purge Sealing

Grease Purge Sealing (G)

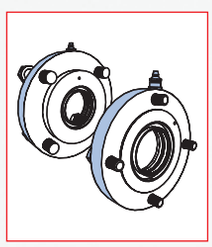
Fitting a grease purge unit into the valves, over the labyrinth seal, helps prevent the escape of any dust particles or gasses. This creates a grease filled cavity between the seals, taking care of extreme duty cases.



Grease Purge (G) Sealing

Gas Purge Sealing (A)

In situations where grease cannot be used, air or other gasses are employed to purge the seals so that all dust particles or product fragments are flushed back into the product stream.



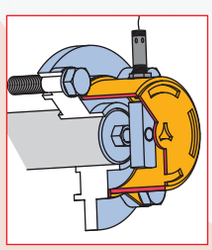
Gas Purge (A) Sealing

Proximity Sensors (P)

Proximity Sensors that are about 12mm in diameter with a CD-PNP connection and IP67 protection can be fitted to these valves by mounting them on a specially designed bracket that is bolted onto the bearing. These sensors can function in a temperature range of (-)25ºC to (+)70ºC.

Customisation To Withstand High Temperature (H)

In order to allow these valves to function in extreme temperatures ranging from 250ºC to 500ºC, it is advisable that the product is coated with heatkote aluminium. Ceramic fibre sheets and flocks are also provided to protect the bearings and seals.

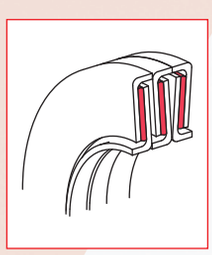


Proximity Sensors(P)

Labyrinth Seal

A Labyrinth Seal is a mechanical seal that fits around the axle or shaft to prevent any leakage of particles and is composed of many threads or grooves that are tightly fit inside the casing, thus making it difficult for the dust to pass through.

By providing non-contact sealing action on the rotating shafts, the passage of particles through a variety of chambers by centrifugal motion is controlled. Triple "Labyrinth Seals" fitted with flock pads, and greased on each side of the valve, are standard with all Rotary Valves. Triple "Labyrinth Seals" are filled with flock pads and greased on either side of the valve. This procedure is standard with all of the RFSX Series Valves.



Labyrinth Seals

Key Features

- ATEX Certified
- Longer life span
- No scoring on the shaft
- No need for adjustments
- Overall cost reduction

Note: Special constructions are available for higher differential pressure and temperature beyond 500ºC.

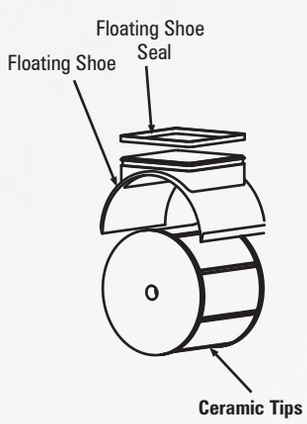
Defining Features

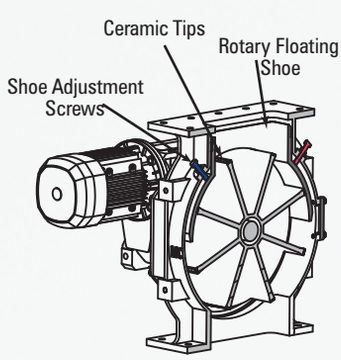
Rotary Floating Shoe

The Anval RFSX valve is designed in a manner that creates additional sealing performance through the use of a "Floating Shoe". This is where the ceramic tips of the rotor create a seal with an adjustable shoe as opposed to the body; as the valve wears, the seal can be maintained by adjusting the tips and shoe. This mechanism leads to a significantly lower wear rate in the body and therefore, an increased level of consistency and performance throughout the extended life of the Anval RFSX valve.

The reduction in the wear levels of the valve body means that when the shoe reaches its wear limit, it can be easily replaced, returning the valve to normal operation without having to replace the entire valve rotor and body.

The testing conducted by the University of Western Australia (UWA) has proven that the ceramic tipped rotor with the hardened cast iron shoe, allows the Anval RFSX valve to efficiently traverse all manner of materials with a minimum or wear. Therefore, the RFSX can be used to transport even the most aggressive product and still have a significantly prolonged lifecycle when compared to its rivals. With an extended life, lower running costs and minimised maintenance requirements, the RFSX really has proven its ability to outperform.

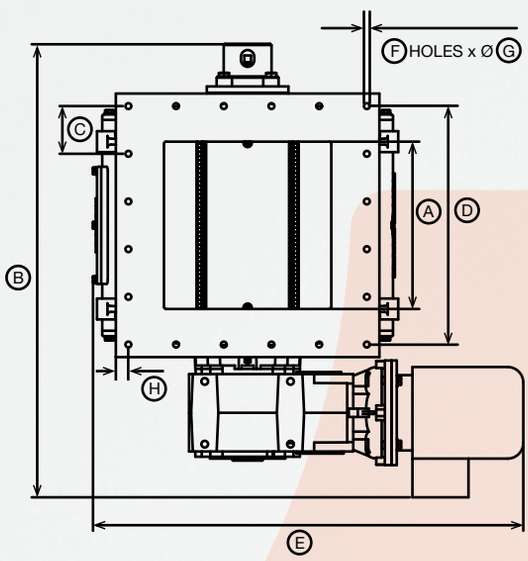




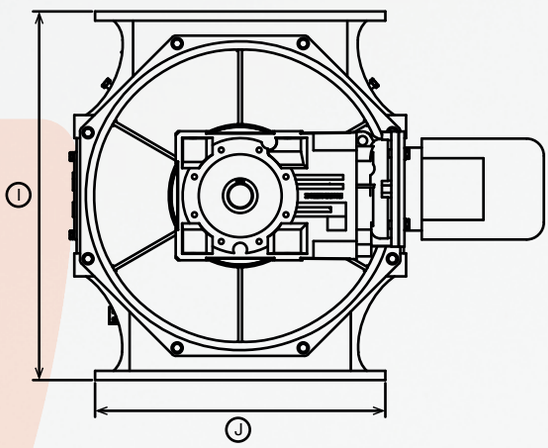
Benefits of Floating Shoe

- The Floating Shoe creates a physical seal with the rotor and minimises the leakage rate.
- Minimum maintenance cost.
- A thin lubricating layer formed during the operation of the valve reduces wear.
- Uniform wearing is achieved with the help of floating shoe design.
- Running costs are minimized.

Direct Drive - Dimension Details



TOP VIEW



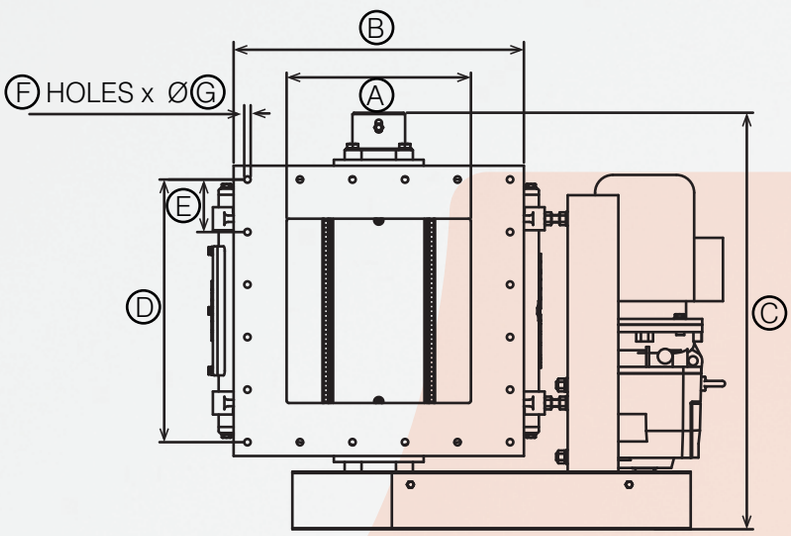
FRONT VIEW

LEGENDS	RFSX 250	RFSX 300	RFSX 400	RFSX 500	RFSX 600	RFSX 750
A	☐ 250	☐ 300	☐ 400	☐ 500	☐ 600	☐ 750
B#	720	950	1029	1150	1250	1423
C	94	106	114	130	150	150
D	376	424	570	650	750	900
E#	800	850	1024	1150	1320	1567
F	16	16	20	20	20	24
G	15	15	14	18	18	22
H	56	55	60	62.5	59.5	66
I	560	600	800	940	1130	1300
J	☐ 430	☐ 480	☐ 630	☐ 700	☐ 844	☐ 1000
Net Weight	268	331	643	1038	1546	2239
Gross weight	290	361	673	1068	1575	2270

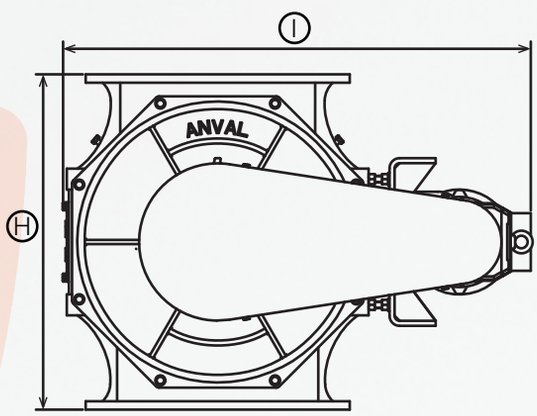
All dimensions in mm. Weight in Kgs

#Approximate dimensions only; dimensions vary with motor size and gear box variation.

Chain Drive - Dimension Details



TOP VIEW



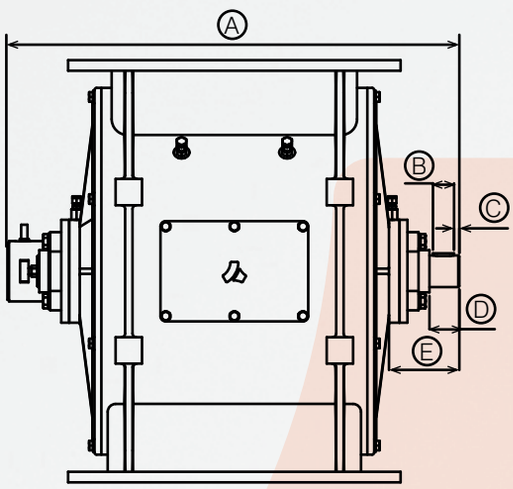
FRONT VIEW

LEGENDS	RFSX 250	RFSX 300	RFSX 400	RFSX 500	RFSX 600	RFSX 750
A	☐ 250	☐ 300	☐ 400	☐ 500	☐ 600	☐ 700
B	☐ 430	☐ 480	☐ 630	☐ 700	☐ 844	☐ 1000
C#	700	750	904	1000	1220	1400
D	376	424	570	650	750	900
E	94	106	114	130	150	150
F	16	16	20	20	20	24
G	15	15	14	18	18	22
H	560	600	800	940	1130	1300
I	900	950	1116	1300	1530	1872
Net Weight	293	354	675	1132	1735	2480
Gross weight	318	384	705	1165	1765	2510

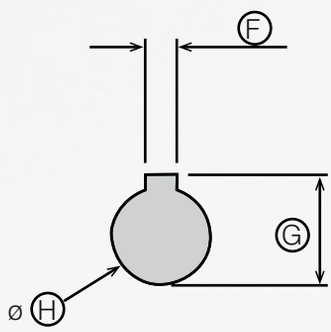
All dimensions in mm. Weight in Kgs

#Approximate dimensions only; dimensions vary with motor size and gear box variation.

Bare Shaft - Dimension Details



TOP VIEW



(BARE SHAFT)
DRIVEN SHAFT SECTION

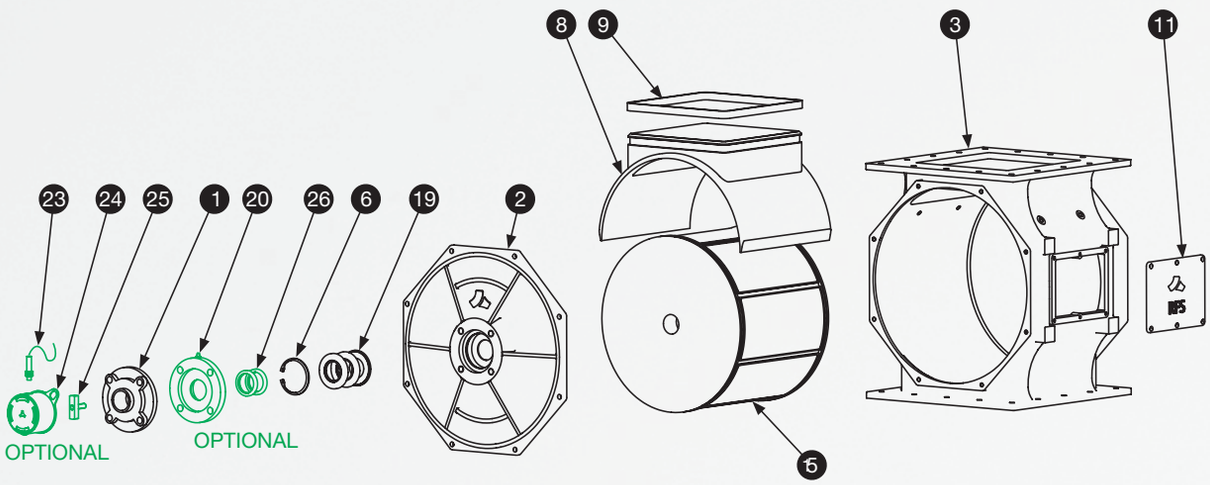
LEGENDS	RFSX 250	RFSX 300	RFSX 400	RFSX 500	RFSX 600	RFSX 750
A#	615	723	857	1026	1198	1397
B	57	57	50	50	57	95
C	7	7	10	7	7	10
D	82	91	57	87	87	142
E	124	124	133	146	153	200
F	14	14	18	18	20	22
G	53.5	53.5	64	69	79.5	85
H	50	50	60	65	75	80

All dimensions in mm. Weight in Kgs

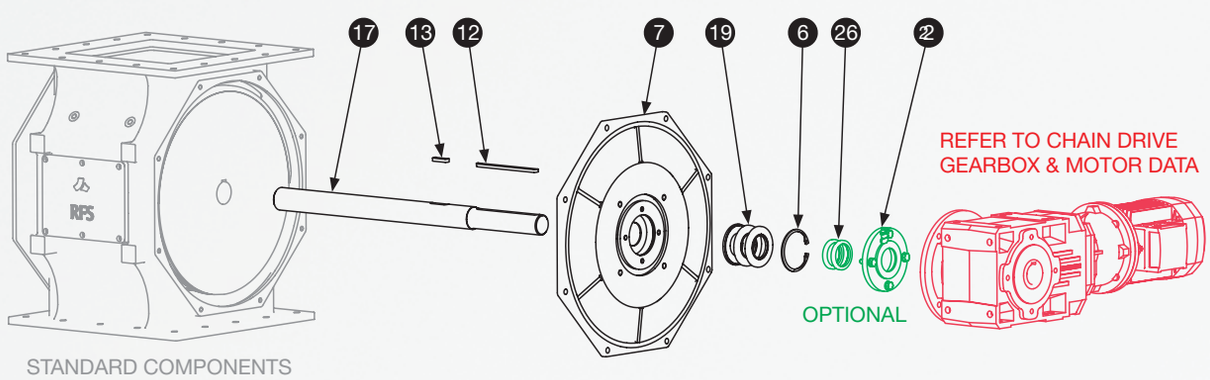
#Approximate dimensions only; dimensions vary with motor size and gear box variation.

Component Details

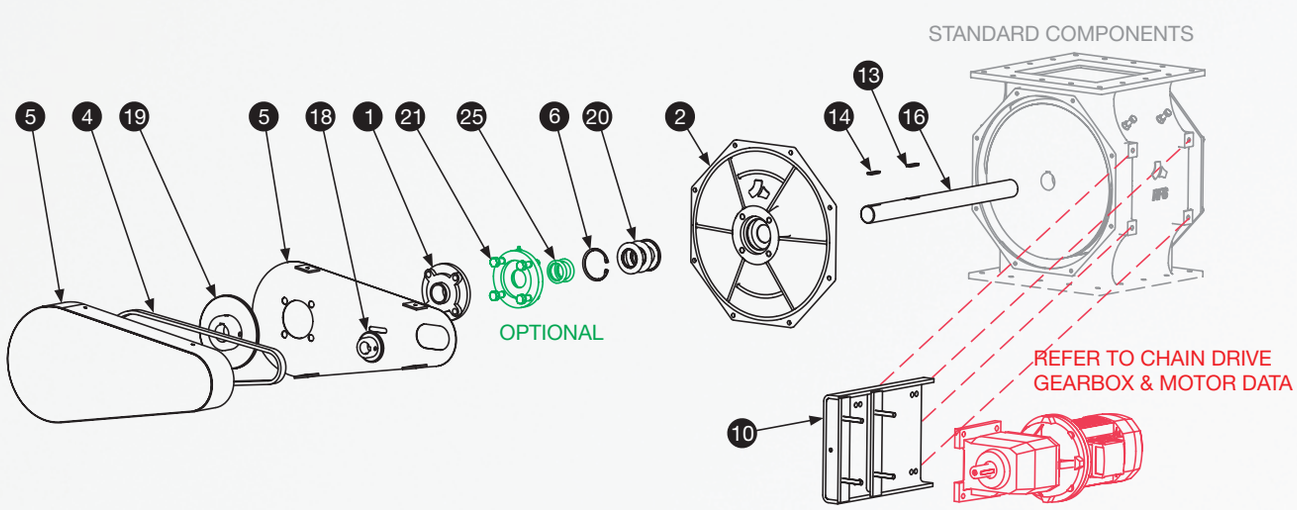
Direct Drive (D), Chain Drive (C) and Bare Shaft (B)



NON DRIVE END COMPONENTS



DIRECT DRIVE(D) END COMPONENTS



CHAIN DRIVE(C) COMPONENTS

Component Details

LEGENDS	DESCRIPTION	RFSX 250			RFSX 300			RFSX 400			RFSX 500			RFSX 600			RFSX 750		
		D	C	B	D	C	B	D	C	B	D	C	B	D	C	B	D	C	B
1	BEARING CARTRIDGE ASSEMBLY	100-4140			100-4140			100-1003			100-6283			100-6284			100-9521		
		1	2	2	1	2	2	1	2	2	1	2	2	1	2	2	1	2	2
2	BEARING SIDE PLATE	101-6197			100-6206			102-4234			100-6209			100-6210			102-4240		
		1	2	2	1	2	2	1	2	2	1	2	2	1	2	2	1	2	2
3	BODY	100-6136			100-6338			102-4232			100-6510			100-6584			102-4238		
		1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
4	CHAIN ASSEMBLY	101-9071			101-9030			102-5361			101-9084			101-9112			102-5346		
		0	1	0	0	1	0	0	1	0	0	1	0	0	1	0	0	1	0
5	CHAIN GUARD	101-9064			100-9024			102-5348			101-9090			100-6266			102-5333		
		0	1	0	0	1	0	0	1	0	0	1	0	0	1	0	0	1	0
6	CIRCLIP	100-6310			100-6310			100-7463			100-6299			100-6297			100-9551		
		2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
7	DRIVE SIDE PLATE	100-6272			101-9200			102-4235			101-9194			101-9195			102-4241		
		1	0	0	1	0	0	1	0	0	1	0	0	1	0	0	1	0	0
8	FLOATING SHOE	101-3746			101-3745			102-4236			101-8092			101-8094			102-4242		
		1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
9	FLOATING SHOE SEAL	101-3748			101-3745			102-4389			101-8198			101-9018			102-4413		
		1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
10	GEARBOX MOUNTING ASSEMBLY	101-9059			101-9031			102-5354			101-9072			101-6605			102-5339		
		0	1	0	0	1	0	0	1	0	0	1	0	0	1	0	0	1	0
11	INSPECTION OPENING COVER	100-6227			100-6226			102-4237			100-6225			100-6224			102-4243		
		1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
12	KEY (GEARBOX)	101-1679			100-6506			101-9731			101-9180			100-9181			102-4410		
		1	0	0	1	0	0	1	0	0	1	0	0	1	0	0	1	0	0
13	KEY (ROTOR)	101-0391			100-0391			102-4388			100-6303			100-6681			102-4411		
		1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
14	KEY (SPROCKET)	101-0391			100-0391			102-4388			101-7681			100-6681			102-4411		
		0	1	1	0	1	1	0	1	1	0	1	1	0	1	1	0	1	1
15	ROTOR ASSEMBLY	100-6141			100-6142			102-4233			101-8134			102-6599			102-4239		
		1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
16	SHAFT (CHAIN DRIVE (C))	101-9057			101-9023			102-5357			101-9082			101-9520			102-5342		
		0	1	1	0	1	1	0	1	1	0	1	1	0	1	1	0	1	1
17	SHAFT (DIRECT DRIVE (D))	101-9127			101-9130			102-4382			101-9177			101-9014			102-4405		
		1	0	0	1	0	0	1	0	0	1	0	0	1	0	0	1	0	0
18	SPROCKET (DRIVE)	101-9043			101-9043			102-5358			101-8905			101-9111			102-5343		
		0	1	0	0	1	0	0	1	0	0	1	0	0	1	0	0	1	0
19	SPROCKET (DRIVEN)	101-9021			101-9021			102-5359			101-8901			101-9110			102-5344		
		0	1	0	0	1	0	0	1	0	0	1	0	0	1	0	0	1	0
20	LABYRINTH SEAL	100-6288			100-6288			100-5723			100-6286			100-6287			100-9519		
		6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6
21	AIR(A) / GREASE PURGE(G) BEARING SIDE SEAL*	101-9218			101-9218			102-4380			101-9421			101-9422			102-4400		
		1	2	2	1	2	2	1	2	2	1	2	2	1	2	2	1	2	2
22	AIR / GREASE PURGE DRIVE SIDE SEAL*	101-9334			101-9415			102-4383			101-9412			101-9418			102-4403		
		1	0	0	1	0	0	1	0	0	1	0	0	1	0	0	1	0	0
23	UNDERSPEED SENSOR*	100-6565			100-6565			102-4391			100-6565			100-6565			102-4391		
		1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
24	UNDERSPEED SENSOR BRACKET*	101-1493			101-1493			102-4801			100-6522			101-6565			102-4802		
		1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
25	UNDERSPEED SENSOR TARGET*	101-0403			101-0403			102-4810			100-7683			101-7683			101-9373		
		1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
26	VITON SEAL*	101-6977			101-6977			102-4394			101-9423			101-6977			101-4402		
		4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4

* Optional Component

D = Direct Drive Quantity, B = Bare Shaft Quantity, C = Chain Drive Quantity.

Note: Above details represents the part no. of each component and may subject to change with variation.

APPENDIX - I

Rotary Valves - Capacity Calculation

Capacity of a Valve

Design capacity (m^3/hr) = V x n x N x 60

V - Volume/ vane in m^3
n - No. of pockets
N - Rotational speed (rev/min)

Note:
Multiply by 60 to convert from minutes to hours

Valve Selection

Example:

Customer Preference Capacity (CPC) - 10 t/hr @ 80% filling rate → 10000 Kg/hr @ 80% filling rate

Bulk Density - 500 m^3/hr (Kindly refer to the bulk index table to find the bulk density of the material)

To select a valve with the above given capacity:

Valve capacity = CPC / [Bulk Density x [filling rate /100]]

= 10000 / [500 x [80/100]]

= 25 m^3/hr

Hence, the valve with 25 m^3/hr needs to be selected.

APPENDIX - II

Dump Valves - Capacity Calculation

Dump valve (m^3/hr) = Flap Volume (m^3) x Stroke Rate (cyc/min) x fractional fill (%)

Flap Volume - Refer to Vol / Cyc
Stroke Rate - Refer Cyc / Min
Fractional Fill - User preference

Dump Valve Selection

Example:

Customer Preference Capacity (CPC) - 10 t/hr @ 80% filling rate → 10000 Kg/hr @ 80% filling rate

Bulk Density - 500 m^3/hr (Kindly refer to the bulk index table to find the bulk density of the material)

To select a valve with the above given capacity:

Valve capacity = CPC / [Bulk Density x [filling rate /100]]
= 10000 / [500 x [80/100]]
= 25 m^3/hr

Hence, the valve with 25 m^3/hr needs to be selected

APPENDIX - III

Bulk Density Chart

Material	Lbs/cu.ft	Kgs/cu.m
Abrasive Compound	148	2371
Abrasive Mix	153	2451
Acetate	35	561
Acetate Flakes	21	336
Acrylic Fibres		144
Acrylic Resin	32	513
Activated Aluminium	15	240
Activated Carbon	20	320
Adipic Acid	40	641
Alcanol	39	625
Alfalfa Leaf Meal	15	240
Alfalfa Meal	17	272
Alfalfa Meal, Fine Ground	19	304
Alfalfa Pellets	42	673
Alfalfa Seed	46	737
Alumina	40	641
Alumina Powder	18	288
Alumina, Activated	48	769
Alumina, Calcined.	63	1009
Alumina, Metal Grade	67	1073
Aluminium Flake	150	2403
Aluminium Fluoride	55	881
Aluminium Magnesium Silicate	21	336
Aluminium Oxide	80	1282
Aluminium Powder	44	705
Aluminium Silicate	33	529
Aluminium Sulphate	65	1041
Ammonium Bromide	76	1218
Ammonium Chloride	38	609
Ammonium Nitrate	49	785

Bulk Density Chart

Material	Lbs/cu.ft	Kgs/cu.m
Ammonium Nitrate Pills	38	609
Ammonium Perchloride	62	993
Ammonium Phosphate	55	881
Ammonium Sulphate	69	1105
Amorphous Silica	11	176
Anthracite, Powdered	35	561
Antimony Oxide	44	705
Antioxidant (Granules)	41	657
Antioxidant (Powder)	28	449
Apple Slices, Diced	15	240
Aquafloc	10	160
Arsenic Trioxide	41	657
Asbestos	22	352
Asbestos Fibre	20	320
Asbestos Powder	28	449
Ascorbic Acid (Coarse)	45	721
Ascorbic Acid (Fine)	32	513
Ash, Ground	105	1682
Ashes , Dry Loose	38	609
Ashes , Wet Loose	47	753
Baking Powder	56	897
Barbasco Root	33	529
Barites	120	1922
Barium Carbonate	55	881
Barium Oxide	63	1009
Barium Stearate	13	208
Barium Sulphate	60	961
Barley (Whole)	40	641
Barley Meal	28	449
Barley, Fine Ground	46	737

Bulk Density Chart

Material	Lbs/cu.ft	Kgs/cu.m
Barley, Ground	25	400
Barley, Malted	30	481
Barley, Rolled	23	368
Barley, Scoured	41	657
Bauxite	45	721
Beans (Soya)	46	737
Beans, White	45	721
Beet Pulp	18	288
Bentonite	50	801
Bicarbonate of Soda	62	993
Bleach Compound	60	961
Blood Flour	30	481
Blood Meal	38.5	617
Bone Meal, Loose	55	881
Bone, Ground Dry	75	1202
Borax	60	961
Boric Acid	54	865
Bran	35	561
Brass Powder	100	1602
Bread Crumbs		96
Brewers Grains (Dry)	16	256
Bronze Powder	78	1250
Buckwheat (Whole)	38	609
Buckwheat Bran	16	256
Buckwheat Flour	41	657
Buckwheat Hulls	13	208
Buckwheat Middlings	22	352
Buttermilk Dried	31	497
Cake Mix	44	705
Calcium	30	481

Bulk Density Chart

Material	Lbs/cu.ft	Kgs/cu.m
Calcium Borate	61	977
Calcium Carbide, Crushed	80	1282
Calcium Carbonate	44	705
Calcium Chloride	60	961
Calcium Fluoride	102	1634
Calcium Hydroxide	40	641
Calcium Phosphate	48	769
Calcium Silicate	10	160
Calcium Stearate	20	320
Calcium Sulphate	45	721
Cane Seed	41	657
Carbon (Pelletised)	42	673
Carbon, Activated	17	272
Carbon, Black	35	561
Carbon, Black (Beads)	19	304
Carbon, Black (Pelletised)	22	352
Carbon, Black Graphite	45	721
Carbon, Crystallized	58	929
Carbon, Dust	38	609
Carbon, Granules	59	945
Casein	36	577
Caustic Soda	31	497
Cellulose Acetate	10	160
Cement	85	1362
Cement (Portland)	94	1506
Cement (Portland) Clinker	95	1522
Cement Dust	50	801
Ceramic Compound	85	1362
Cereal Mix	43	689
Charcoal (Powder)	24	384

Bulk Density Chart

Material	Lbs/cu.ft	Kgs/cu.m
Chemco Burnishing Compound	35	561
Chicory	34	545
Chicory (Powder)	30	481
Chilli Spice	45	721
Chlorine Compound	28	449
Chlorine Powder	36	577
Chocolate Drink Mix	26	417
Chromic Acid Powder	100	1602
Cinders, Blast Furnace	57	913
Cinders, Coal, Ashes & Clinker	40	641
Cinnamon Powder	35	561
Citric Acid	48	769
Clay	50	801
Clay (Bentonite)	50	801
Clay (Calcined)	30	481
Clay (Fine)	62	993
Clay (Fines)	70	1121
Clay (Granite)	32	513
Clay (Kaolin)	48	769
Clinker Dust	90	1442
Clover Seed	48	769
Coagulant	36	577
Coal (Granules)	52	833
Coal (Pulverized)	38	561
Coal Anthracite	58	929
Coal Bituminous	52	641
Coal Dust	35	561
Coal Powder	40	641
Cobalt Carbonate	60	961
Cobalt Fines	256	4101

Bulk Density Chart

Material	Lbs/cu.ft	Kgs/cu.m
Cocoa	35	561
Cocoa Flavouring	55	881
Cocoa Shells	30	481
Coconut Chips	38	609
Coffee (Instant)	19	304
Coffee, Green (Beans)	38	609
Coffee, Roasted (Beans)	23	368
Coke (Granules)	52	833
Coke, Dust	15	240
Coke, Fines	39	625
Coke, Calcined (Course)	56	897
Coke, Calcined (Fines)	59	945
Coke, Calcined (Intermediate)	59	945
Coke, Pulverised	45	721
Copper, Fines	101	1618
Copper Hydroxide	25	400
Copper Sulphate	52	833
Copra Meal, Loose	27	433
Cork, Solid	15	240
Corn Bran	13	208
Corn Flour	51	817
Corn Germ Meal	35	561
Corn Gluten Feed	29	465
Corn Gluten Meal	37	593
Corn Grits	42	673
Corn Mash	45	721
Corn Meal	40	641
Corn Oil Meal	34	545
Corn Starch	42	673
Corn, (Whole shelled)	45	721

Bulk Density Chart

Material	Lbs/cu.ft	Kgs/cu.m
Corn, Chops (Coarse)	42	673
Corn, Chops (Fine)	38	609
Corn, Chops (Medium)	40	641
Corn, Cracked (Coarse)	40	641
Corn, Ground	35	561
Corn, Hominy Feed	27	433
Corn, Kibbled	21	336
Cottonseed Cake	42	673
Cottonseed Delinted	30	481
Cottonseed Flour	56	897
Cottonseed Hulls	12	192
Cottonseed Meats	40	641
Cryolite	86	1378
Detergent (Flake)	32	513
Detergent (Powder)	38	609
Dextrose	36	577
Diammonium Phosphate	50	801
Diatomaceous Earth	16	256
Diatomite	14	224
Dicalite	12	192
Dielectric Compound	45	721
Distillers Grains	18	288
Dolomite	54	865
Dolomite Lime	46	737
Egg Yoke Powder	23	368
Eggs (Powdered)	22	352
Electrolyte	60	961
Epoxy Powder	49	785
Ferric Chloride	43	689
Ferric Sulphate	61	977

Bulk Density Chart

Material	Lbs/cu.ft	Kgs/cu.m
Ferro Silicate	78	1250
Ferro Silicon	87	1394
Ferrous Carbonate	87	1394
Fibreglass	22	352
Filter Cake (Centrifuge)	40	641
Fish meal	38	609
Flaxseed	44	705
Flint	97	1554
Floc	13	208
Floc (Solka)		144
Flour	48	769
Flour (Barley Malt)	45	721
Flour (Barley)	38	609
Flour (Corn)	39	625
Flour (Rye)	42	673
Flour (Soy)	44	705
Flour (Soya)	40	641
Flour (Wheat)	42	673
Fluorite	78	1250
Fluorspar	112	1794
Flux	145	2323
Fly Ash	65	1041
Fullers Earth	35	561
Fumaric Acid	40	641
Garlic (Flakes)	22	352
Garlic (Powder)	20	320
Gelatine	45	721
Glass (Ground)	103	1650
Glass (Powder)	103	1650
Glass Beads	100	1602

Bulk Density Chart

Material	Lbs/cu.ft	Kgs/cu.m
Glass Microspheres	62	993
Gold Powder	53	849
Grain	36	577
Granite, Crushed	97	1554
Graphite	48	769
Graphite (Flakes)	42	673
Graphite (Granules)	68	1089
Graphite (Powder)	35	561
Graphite (Pulverized)	22	352
Gravel	110	1762
Grinding Compound	99	1586
Ground Bone	50	801
Gum Base	42	673
Gum Granules	36	577
Gum Resin	32	513
Gypsum	54	865
Gypsum (Calcined)	55	881
Gypsum (Ground)	42	673
Ice, Crushed	40	641
Iron Chromite	114	1826
Iron Fillings	180	2884
Iron Ore	162	2595
Iron Oxide80	1282	
Iron Oxide (Black)	161	2579
Iron Oxide (Red)	69	1105
Iron Powder	175	2804
Iron Sulphate	80	1282
Kaolin	49	785
Kaolin Clay	50	801
Latex Powder	89	1426

Bulk Density Chart

Material	Lbs/cu.ft	Kgs/cu.m
Lead Arsenate	90	1442
Lead Carbonate	81	1298
Lead Chloride Crystals	72	1153
Lead Oxide	63	1009
Lead Stabilizer	43	689
Ligno Sulfinate	30	481
Lignone	36	577
Lignosol	24	384
Lime	35	561
Lime (Dolomitic)	42	673
Lime (Granular)	80	1282
Lime (Hydrated)	40	641
Lime (Pebble)	45	721
Lime (Pulverised Quick)	60	961
Lime (Quick)	55	881
Limestone	60	961
Limestone (Ground)	59	945
Limestone (Pulverised)	68	1089
Limestone Dust	69	1105
Limestone Filler	63	1009
Limestone Flour	69	1105
Linseed Meal	25	400
Liquorice Powder	28	449
Magnesia	78	1250
Magnesite	27	433
Magnesite Light	40	641
Magnesium Carbonate	12	192
Magnesium Chips	60	961
Magnesium Chloride	12	192
Magnesium Hydroxide	39	625

Bulk Density Chart

Material	Lbs/cu.ft	Kgs/cu.m
Magnesium Oxide	65	1041
Magnesium Silicate	58	929
Magnesium Stearate	21	336
Magnesium Sulphate	52	833
Magnetite	165	2643
Malted Barley Flour	40	641
Malted Wheat Flour	41	657
Manganese Dioxide	70	1121
Manganese Ore	110	1762
Mannitol	38	609
Marble (Granular)	80	1282
Marble (Ground)	93	1490
Meat Meal	37	593
Melamine	45	721
Melamine Powder	32	513
Metallic Flakes	35	561
Metallic Powder	165	2643
Metasol	38	609
Mica (Flakes)	10	160
Mica (Powder)	41	657
Milk (Powdered Whole)	35	561
Milk (Powdered)	13	208
Milk (Whole)	32	513
Millet	40	641
Milo, Ground	34	545
Molasses Feed	22	352
Molding Sand	75	1202
Molybdenum Disulfide	44	705
Molybdenum Oxide	98	1570
Molybdi Oxide	16	256

Bulk Density Chart

Material	Lbs/cu.ft	Kgs/cu.m
Monosodium Phosphate	55	881
Naphthalene Flakes	36	577
Natrosol	28	449
Nickel	60	961
Nickel Oxide	28	449
Nickel Powder	75	1202
Nuts (Almond)	29	465
Nuts (Cashews)	31	497
Nuts (Peanuts)	33	529
Nylon Fibres	10	160
Nylon Flakes	32	513
Nylon Pellets (1/8")	35	561
Nylon Powder	39	625
Oat Flour	33	529
Oat Middlings	38	609
Oats	27	433
Oats (Ground)	29	465
Oats (Rolled)	22	352
Oats Groats (Whole)	46.5	745
Oats, Hulls	128	
Onions (Chopped)	14	224
Onions (Minced)		128
Onions (Powdered)	25	400
Oxalic Acid	52	833
Oxychloride	36	577
Oyster Shell (Ground, - 0.5")	53	849
Peanut Brittle	36	577
Peanut Meal	28	449
Peanuts (Shelled)	43	689
Peanuts (Unshelled)	21	336

Bulk Density Chart

Material	Lbs/cu.ft	Kgs/cu.m
Peat Moss	10	160
Peppermint Powder	34	545
Peppers (Chopped)	21	336
Peppers (Whole)	16	256
Perlite	15	240
Perlite Filter Aid		128
Perlite Ore	65	1041
Petroleum Coke	55	881
Petroleum Coke Dust	25	400
Phenofil	30	481
Phenol Formaldehyde	30	481
Phenolic Powder	32	513
Phosphate	80	1282
Phosphate Rock Crushed	69	1105
Phosphate Rock Dust	90	1442
Phosphate Rock ground	70	1121
Plaster Of Paris	49	785
Plastic (Beads)	46	737
Plastic (Cubes)	38	609
Plastic (Flakes)	48	769
Plastic (Pellets)	45	721
Plastic Powder	42	673
Plastic Resin	40	641
Polyamide Resin	31	497
Polycarbonate Resin	44	705
Polyester Adhesive Powder	30	481
Polyester Flakes	27	433
Polyester Resin	34	545
Polyethylene	43	689
Polyethylene Beads	42	673

Bulk Density Chart

Material	Lbs/cu.ft	Kgs/cu.m
Polyethylene Film		128
Polyethylene Flakes		96
Polyethylene Granular	30	481
Polyethylene Pellets	35	561
Polyethylene Powder	35	561
Polyhedral Alcohol	37	593
Polymer	20	320
Polymer Reagent	39	625
Polymer Resin	38	609
Polypropylene	30	481
Polypropylene Pellets	32	513
Polypropylene Powder	33	529
Polypropylene Flakes	22	352
Polystyrene Beads	40	641
Polystyrene Pellets	38	609
Polystyrene Powder	33	529
Polyurethane Pellets	45	721
Polyvinyl Acetate	39	625
Polyvinyl Alcohol	39	625
Polyvinyl Chloride	41	657
Polyvinyl Chloride Pellets	39	625
Potassium Bromide (5%Moist)	114	1826
Potassium Carbonate (Potash)	74	1185
Potassium Chloride	60	961
Potassium Iodate	129	2067
Potassium Muriate	66	1057
Potassium Sulphate	90	1442
Potatoes (Flakes)	13	208
Potatoes (Powdered)	48	769
Potting Soil	16	256

Bulk Density Chart

Material	Lbs/cu.ft	Kgs/cu.m
Poultry Meal	36	577
Powdered Sugar	35	561
Pumice Powder	39	625
PVC Chips	54	865
PVC Resin	32	513
Raisins (Moist)	38	609
Rapeseed	48.3	774
Red Lead	165	2643
Red Oxide Pigment	72	1153
Rice	45	721
Rice (Puffed)		96
Rice Bran	26	417
Rock Salt	68	1089
Rubber (Granules)	28	449
Rubber Composition Powder	34	545
Rubber Compound	38	609
Rubber Crumb	22	352
Rubber Foam (Chopped)		48
Rubber Powder	33	529
Rye Bran	18	288
Rye Feed	33	529
Rye, Malted	32	513
Rye, Middlings	42	673
Rye, Shorts	33	529
Rye, Whole	44	705
Salt, Fine Table	86	1378
Salt, Granulated	80	1282
Sand	99	1586
Sand (Dry)	110	1762
Sand (Fine)	125	2002

Bulk Density Chart

Material	Lbs/cu.ft	Kgs/cu.m
Sand (Foundry)	100	1602
Sand (Moist)	130	2083
Sand (Molding)	78	1250
Sand Foundry, Coarse	96	1538
Sand Foundry, Fine	104	1666
Sawdust (Coarse)	25	400
Sawdust (Fine)	18	288
Sawdust (Moist)	28	449
Seed (Grass)	40	641
Shellac Resin	81	1298
Silica Flour	80	1282
Silica Gel	42	673
Silica Sand	81	1298
Silicon Carbide	45	721
Silicon Dioxide		48
Silver (Powder)	69	1105
Slate (Crushed)	100	1602
Soap Flakes	29	465
Soap Powder	36	577
Soapstone	47	753
Soda Ash	54	865
Soda Ash-Iron Chromite	77	1234
Sodium Aluminate	61	977
Sodium Benzoate	47	753
Sodium Bicarbonate	50	801
Sodium Bisulphate	90	1442
Sodium Borate	77	1234
Sodium Caseinate	21	336
Sodium Chloride	80	1282
Sodium Chloride	83	1330

Bulk Density Chart

Material	Lbs/cu.ft	Kgs/cu.m
Sodium Hydrosulphate	70	1121
Sodium Hydrosulphite	73	1169
Sodium Hydroxide	60	961
Sodium Metasilicafe	70	1121
Sodium Naptholine Sulph.	27	433
Sodium Nitrate	84	1346
Sodium Perborate	53	849
Sodium Pyrophosphate	63	1009
Sodium Silicate	32	513
Sodium Sulphate	85	1362
Sodium Sulphite	102	1634
Sodium Thiosulfate	55	881
Sodium Tripolyphosphate	60	961
Soybean Flakes	36	577
Soybean Hulls	25	400
Soybean Meal	40	641
Starch (Corn)	43	689
Stearic Acid (Flakes)	32	513
Stearic Acid (Powder)	36	577
Styrene Beads	45	721
Sucrose	53	849
Sucrose Octoacetate	33	529
Sugar (Beet)	50	801
Sugar (Dextrose)	39	625
Sugar (Granulated)	44	705
Sugar (Powdered)	35	561
Sulphur	45	721
Sulphur (Granular)	70	1121
Sunflower Seed	38	609
Talcum Powder	55	881

Bulk Density Chart

Material	Lbs/cu.ft	Kgs/cu.m
Tantalum Powder	40	641
Tea	27	433
Tea (Flakes)	24	384
Tea (Powdered)	27	433
Teflon (Fibre)	30	481
Teflon (Granules)	36	577
Teflon (Powdered)	29	465
Teflon Pellets	60	961
Terepthalic Acid	30	481
Thiamine	47	753
Thionex	30	481
Thorium Oxide	62	993
Titanium Dioxide	48	769
Tobacco (Cigarette)	12	192
Tobacco (Powdered)	28	449
Tricalcium Phosphate	35	561
Trichicrocyanuric Acid	50	801
Tripolyphosphate	80	1282
Trisodium Phosphate	50	801
Tumaric (Acid Fines)	51	817
Tungsten Carbide	250	4005
Uranium (Compound)	191	3060
Uranium (Granules)	184	2948
Uranium Oxide	108	1730
Urea	42	673
Urea Formaldehyde	36	577
Urea Powder	39	625
Urea Prills	45	721
Vermiculite	62	993
Vinyl Acetate	36	577

Bulk Density Chart

Material	Lbs/cu.ft	Kgs/cu.m
Vinyl Chips (Irregular)	20	320
Vinyl Compound	36	577
Vinyl Powder	34	545
Vinyl Resin	36	577
Wax (Flake)	50	801
Wax (Powder)	38	609
Wheat (Hulls)	44	705
Wheat (Shaved)	34	545
Wheat Flour	30	481
Wheat Gluten	43	689
Wheat Middling	15	240
Wheat, Cracked	35	561
Wheat, Whole	49	785
Whey	35	561
White Lead	85	1362
Wood Chips	30	481
Wood Flour	20	320
Wood Shavings	10	160
Yeast	59	945
Zinc Ammonium Chloride	66	1057
Zinc Carbonate	35	561
Zinc Oxide	55	881
Zinc Powder	210	3364

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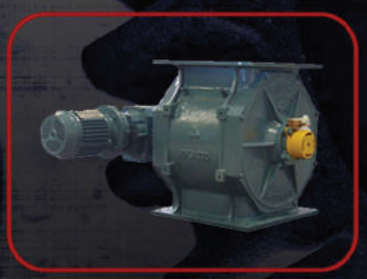

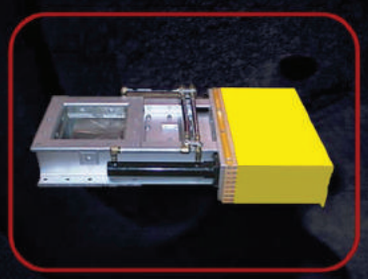

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