anval

Building & Supporting a Global Presence

FIRST IN FEEDERS AND AIRLOCKS

CE

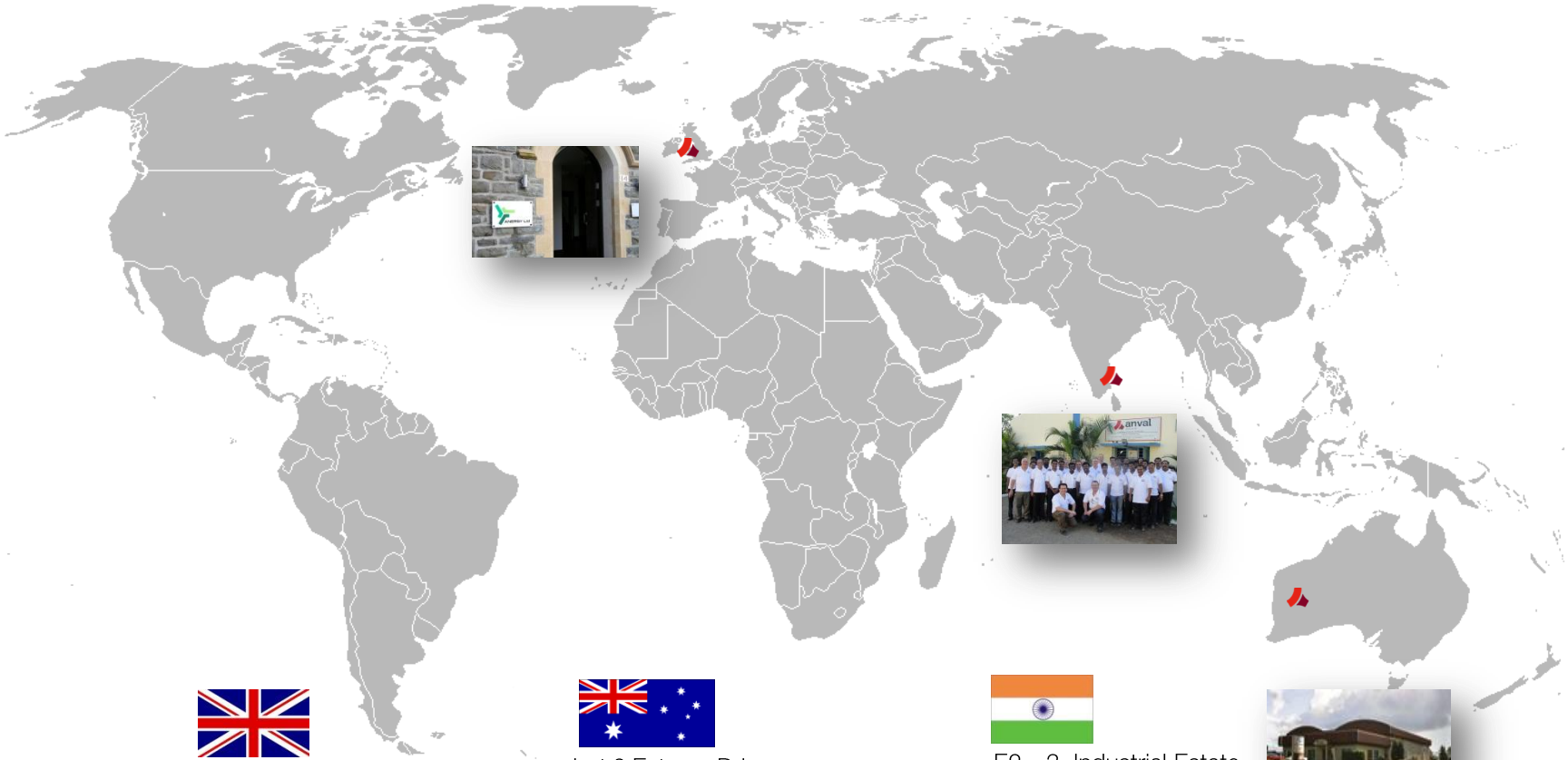
GUARDIAN INDEPENDENT CERTIFICATION

UKAS QUALITY MANAGEMENT 045

Reg.No. 687645

ISO 9001:2008 Certified

ANVAL GLOBAL



First Floor,
14 St Andrews Crescent
Cardiff CF10 3DD
UK

Lot 2 Estuary Drive
Bunbury, WA 6230
Australia

E2 – 3, Industrial Estate,
Maraimalai Nagar,
Chennai- 603 409.
India

EVOLUTION

1988: Ansac, Founded by Mr. Charlie Martella in Bunbury, Australia.

2009: The feeders and airlocks division was re-branded to Anval.

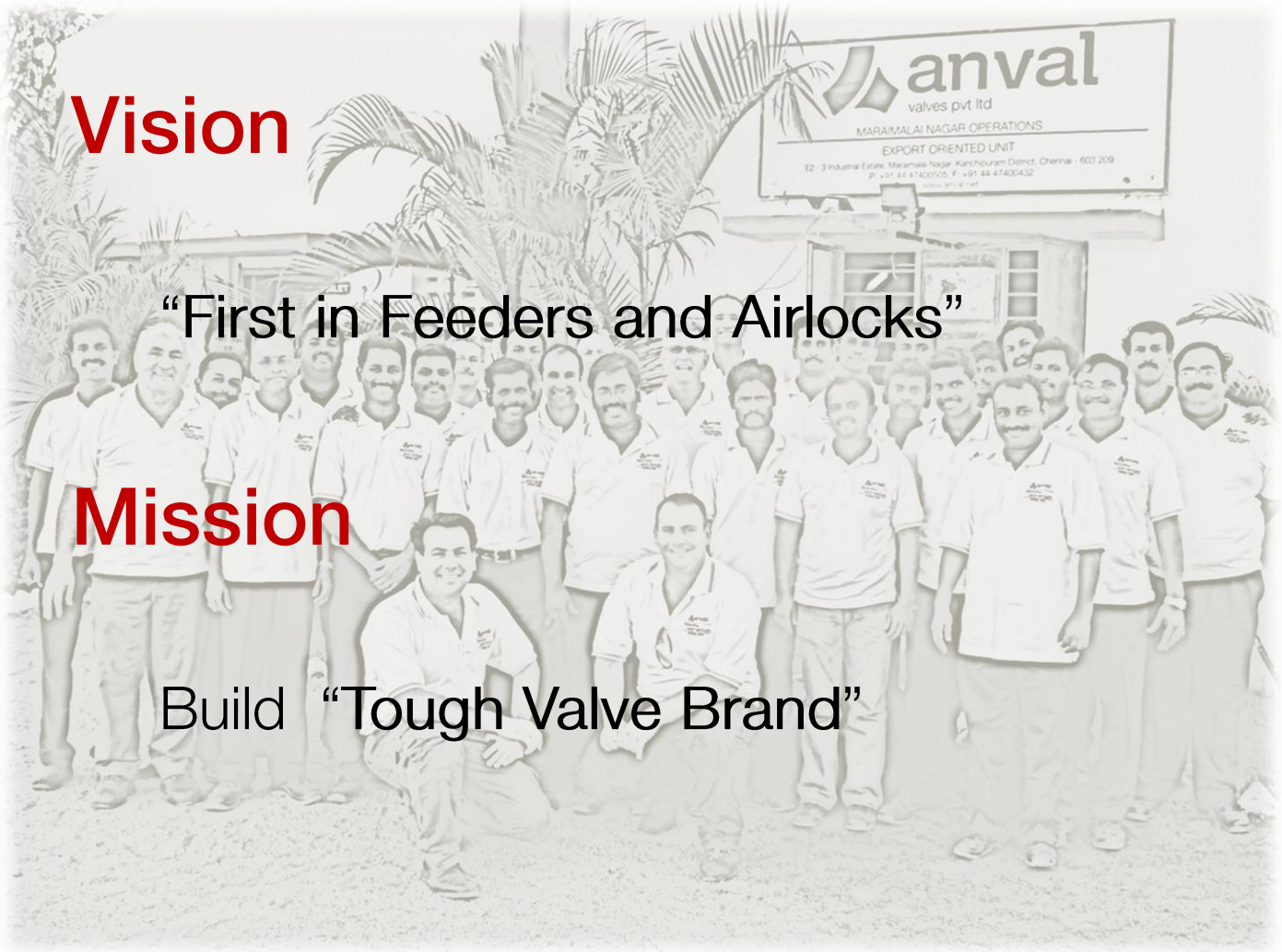
2011: Anergy Ltd was formed to take care of design, development and construction of thermal renewable power generation plants.

Actinon Group – Singapore was formed as a corporate body to take care of Ansac, Anval and Anergy business line.

1988 2009 2011 2012

ANSAC anval ANERGY Ltd ACTINON

DRIVING FACTORS



Vision

"First in Feeders and Airlocks"

Mission

Build "Tough Valve Brand"

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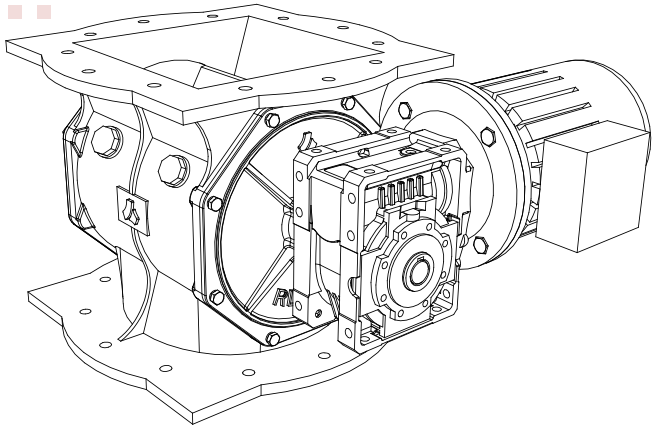
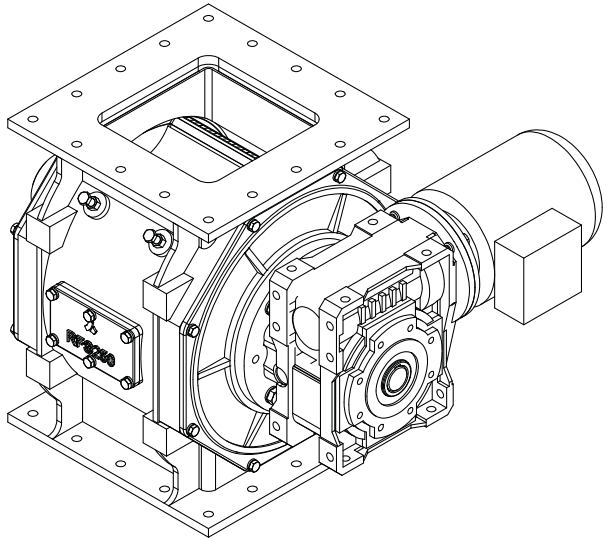
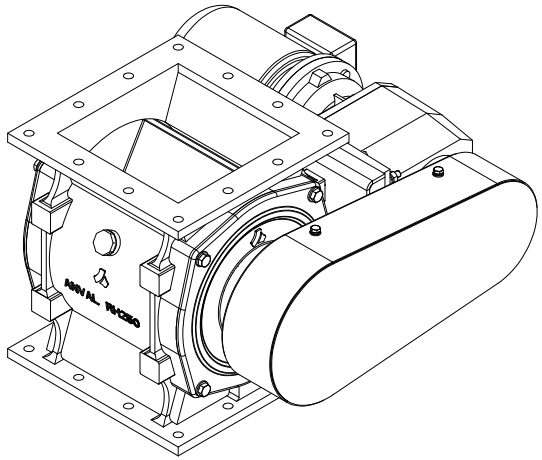
PRODUCT LINE



RLSERIES
Simple, Stable ,Plug & Play Airlocks



RFSSERIES
The Tough, Hard Wearing Airlock for Metering Solution



RHSERIES
Robust, Versatile & Highly Efficient Airlock

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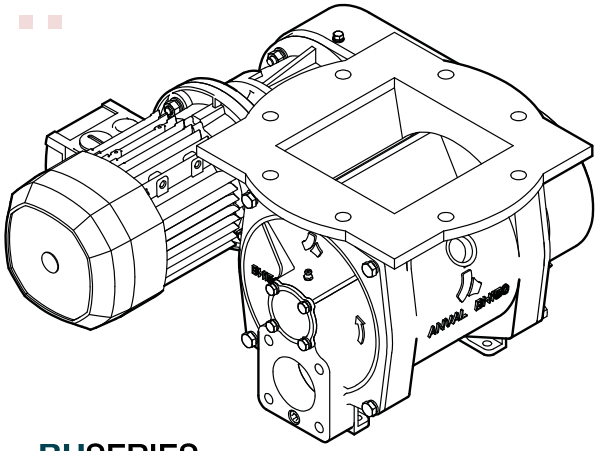
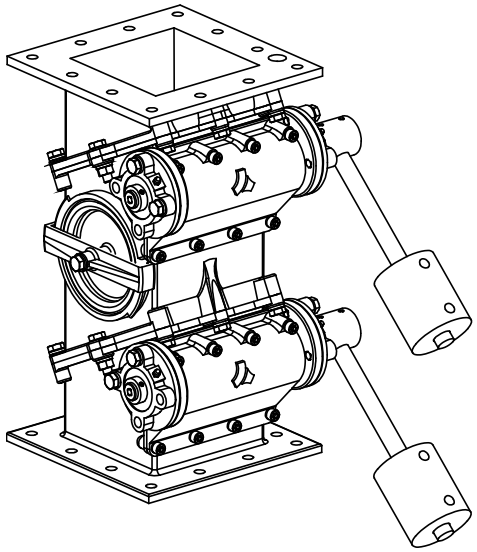
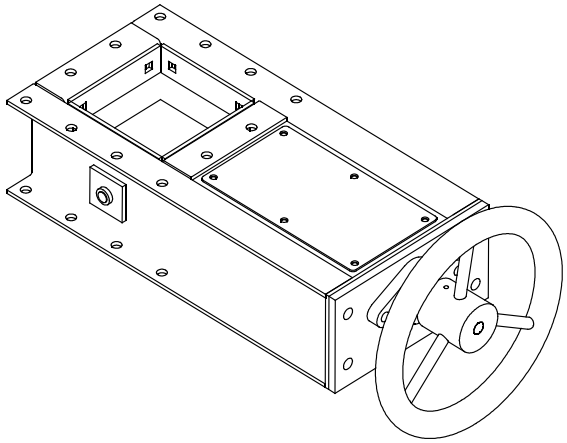
PRODUCT LINE



BHSERIES
High Efficiency Blow Through Valves



DHSERIES
Efficient Double Dump Airlock Valve
Vacuum or Pressure Conditions



SLSERIES
Simple, Robust Isolation Unit

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APPLICATIONS

- Lime stone industry
- Cement industries
- Pneumatic conveying system
- Coal handling systems
- Sugar industry
- Mineral separation & many more
- Dust collection
- Fly ash handling
- Rice mill
- Flour mill
- Wood chip handling
- Food industry

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PRODUCT SELECTION CHART

Valve Type		Material Type						Diff. Pressure (kPa)			Temperature (kPa)			Remarks
		GRANULAR	LARGE CHIP	STRINGY	FLUFFY	ABRASIVE	STICKY	0 - 5	5 - 10	10 +	<150	<250	<400	
A	AIRLOCK													Very Good
	RL								5					Good
	RH		1 2	1 2	1 3				5	4 5		8 7	8 7 6 9	
	RFS		1	1	3								8 7 6 9	Use Larger Size 1
	D													Rubber tipped 2
B	METERING													Vibrate Upstream 3
	RH		1 2	1 2	1 3				5	4 5			8 7 6 9	Vent valve 4
	RFS			1	3								8 7 6 9	Greese Purge seals 5
C	ISOLATION													Air Purge Seals 6
	SG				1		1							High Temp Seals 7
	SL				1		1							Machine to table 8
	D													Insulation Spacer 9
D	PNEUMATIC TRANSFER													
	BH											8 7	8 7 6 9	
	RH												8 7 6 9	
	RFS												8 7 6 9	

- All our products are CE Complied and will shortly be ATEX certified.

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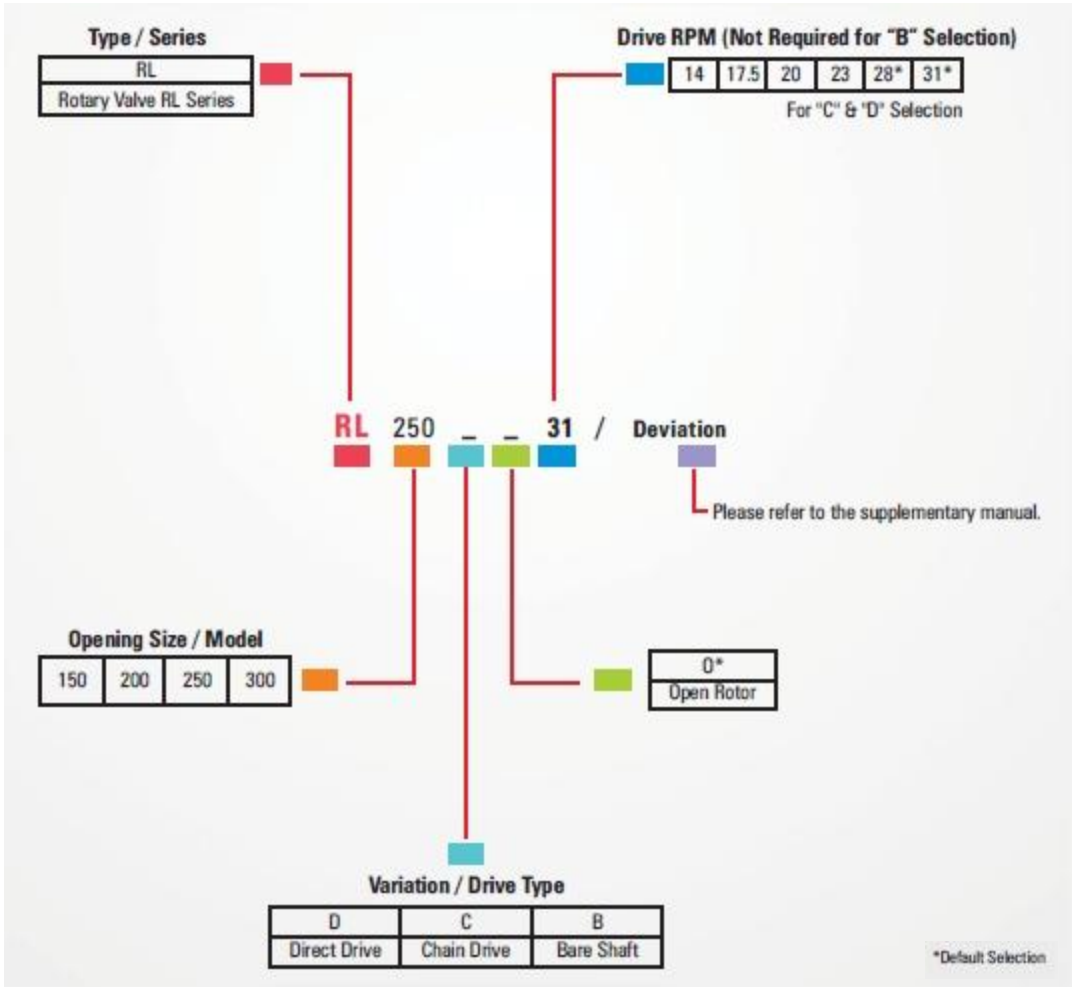
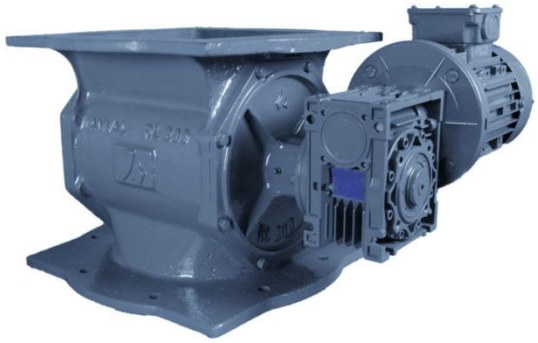
RLSERIES
Simple, Stable , Plug n Play Airlocks





- **Capacity(Max):** 33.6m^3/hr
- **Temperature (Max):** 150˚ C
- **Differential Pressure(Max):** 10kPa

FEATURES

- Robust Design
- Labryinth seal.
- High Performance drive
- Plug n Play
- Minimal Maintenance
- Singl e piece cast
- Universal flange

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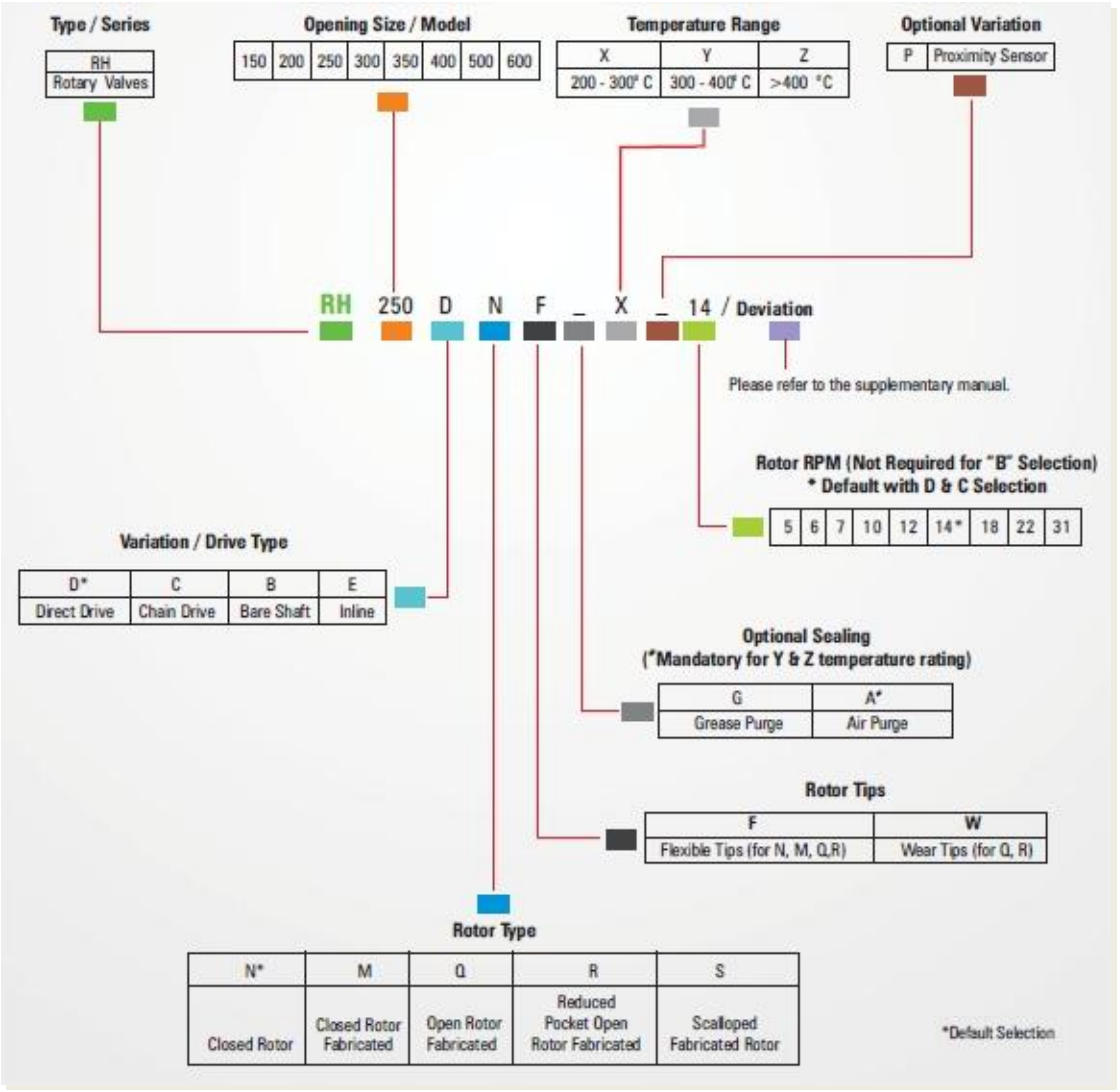
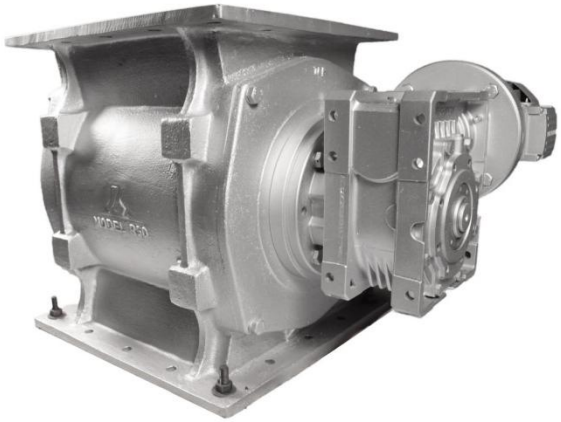
RH SERIES
Robust, Versatile & Highly Efficient Airlock





- **Capacity(Max):** 500m^3/hr
- **Temperature (Max):** 200° C
- **Differential Pressure(Max):** 40kPa

FEATURES

- Direct –mounted gearbox
- Minimal maintenance
- Labyrinth Seals.
- Heavy Duty single piece Cast Iron construction
- Wide selection of rotors

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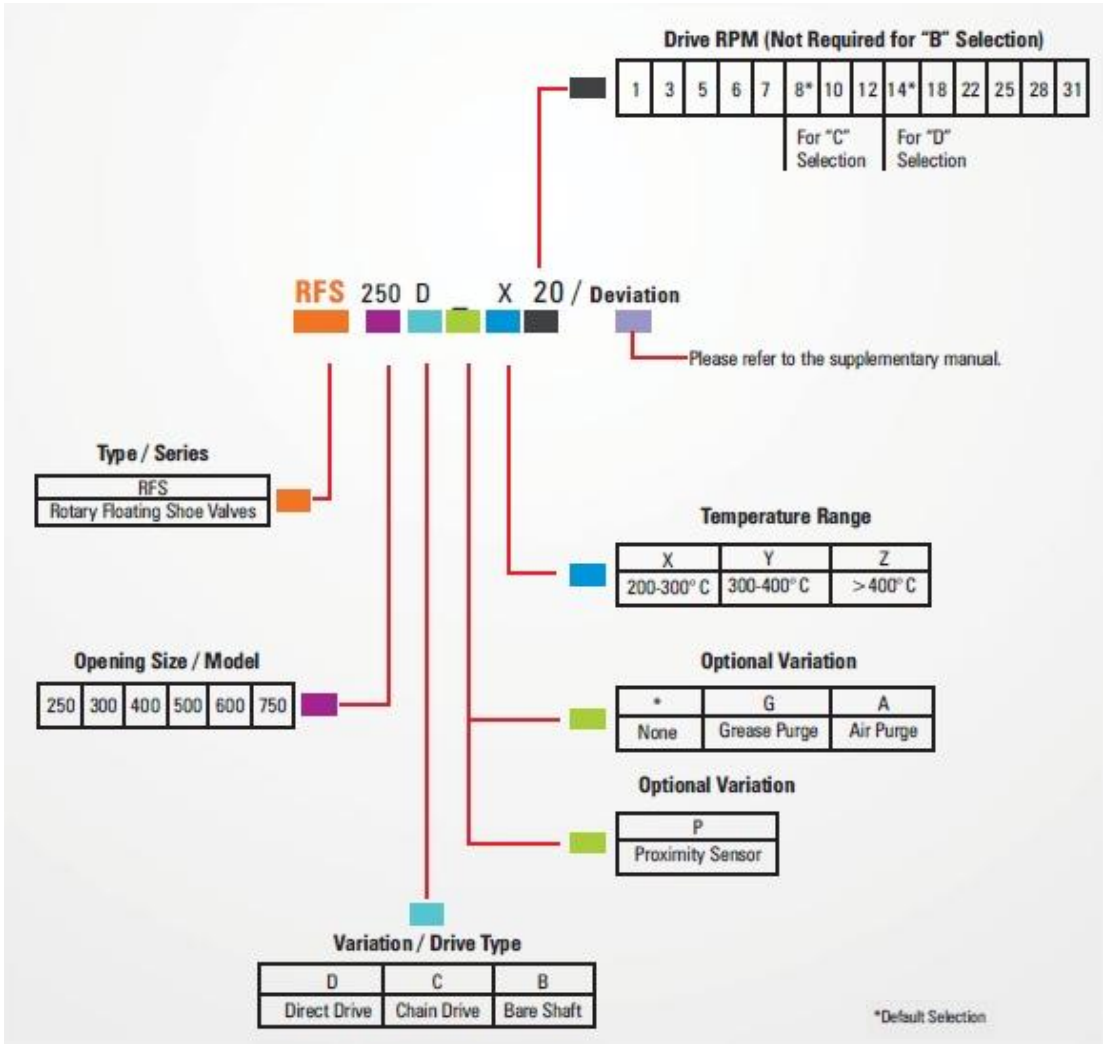
RFS SERIES

The Tough, Hard Wearing Airlock for Metering Solution



- **Capacity(Max):** 621m^3/hr
- **Temperature (Max):** 400˚ C
- **Differential Pressure:** 40kPa

FEATURES

- New tech of Floating shoe concept
- Ultra heavy duty CI construction
- Ceramic tipped rotor
- Adjustable, hardened SG Iron shoe
- Feasible Maintenance
- Available in Direct/Chain drive
- High wear & Tear baring.
- More life when compared to any other models

Note: Special constructions are available for higher differential pressure and temperature

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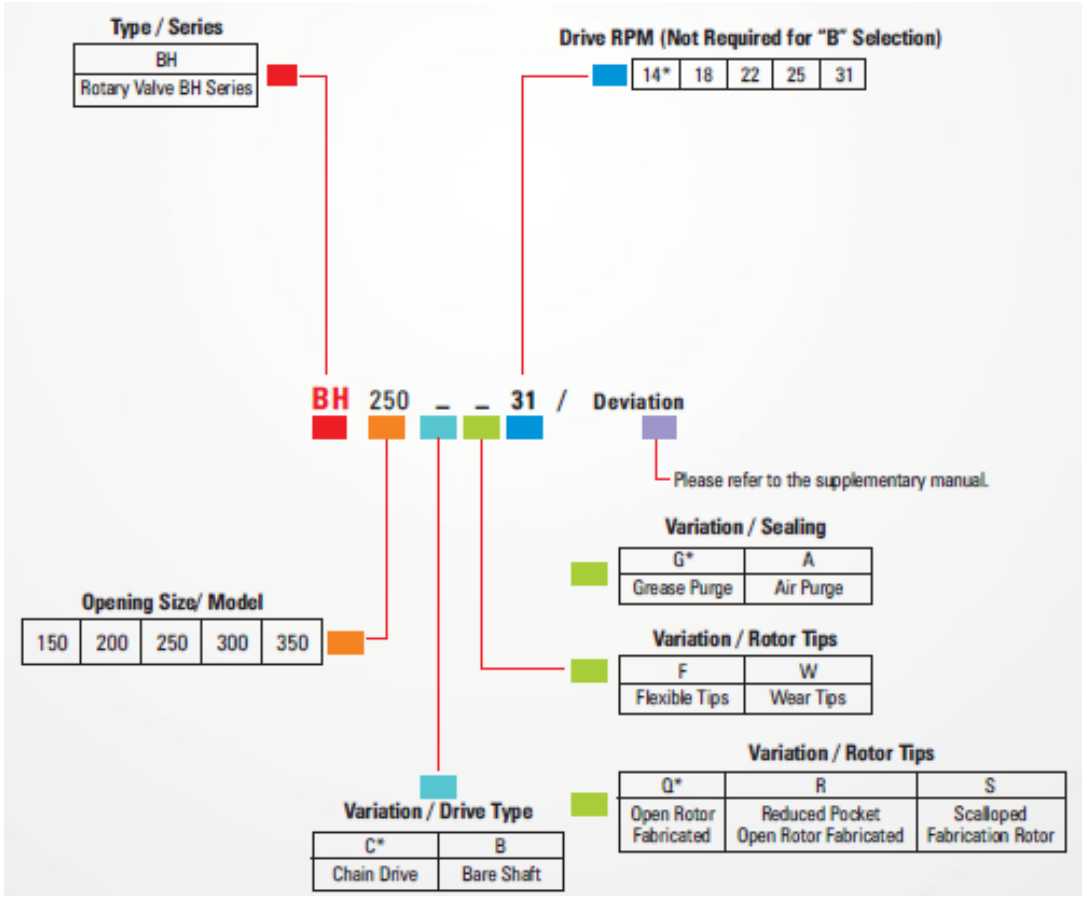
BH SERIES
High Efficiency Blow Through Valves



- **Capacity(Max):** 70m^3/hr
- **Temperature (Max):** 150˚ C
- **Differential Pressure(Max):** 40kPa

FEATURES

- Designed for pneumatic conveying systems
- Achieves a smoother flow of materials
- For use with non-abrasive materials
- Minimizes pressure drop

Note: Special constructions are available for higher differential pressure and temperature

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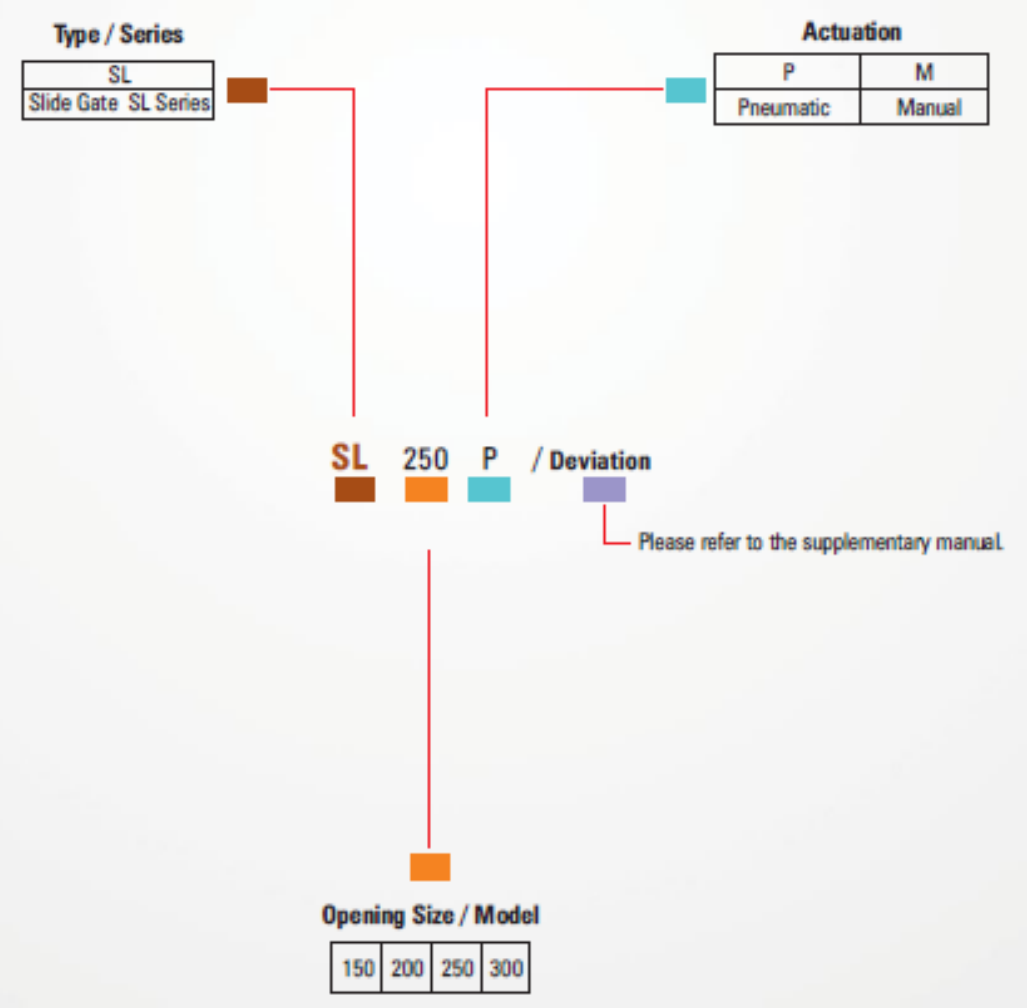
SL SERIES
Simple , Robust Isolation Unit



FEATURES

- Economical and reliable solution for bulk material isolation
- Compact , simple and robust design
- Manual and Pneumatic actuation
- Up to 200° C product temperature
- Pressure tight support frame
- Easy to install , operate and maintain

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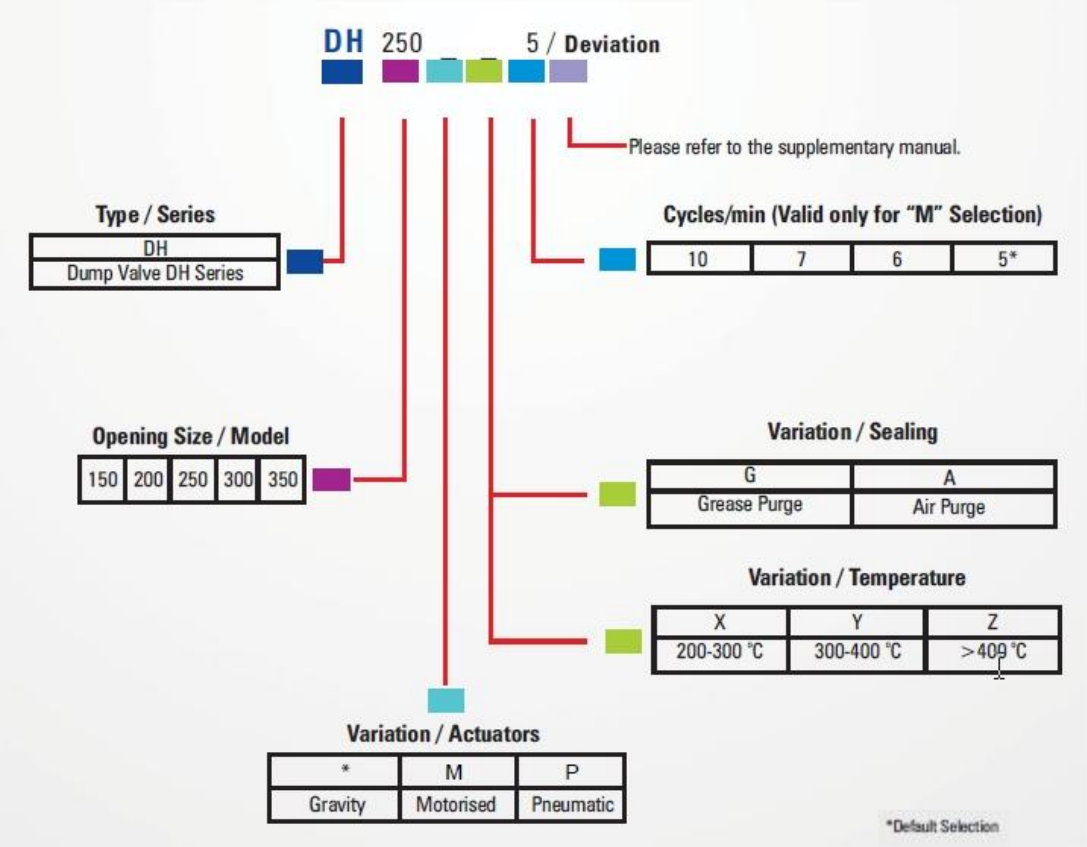
DH SERIES
Double Dump Effective Airlock Valve for Vacuum/Pressure conditions



FEATURES

- Wide range of options- Single / Double / Gravity fed / Motorized/Pneumatic
- Heavy duty Cast Iron construction
- High quality airlock
- Compact & Robust design
- Minimal maintenance

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QUALITY SYSTEM

Identification–Every component accompany Inspection Report implies current status

Quality System procedure for Inspection displayed at relevant places – In coming Inspection / Machining / Assembly

CE

Reg.No. 687645

ISO 9001:2008 Certified

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OPERATION FACILITIES

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TEST RIG

Automated test rig used to calculate and verify the leakage rate & Cv Value for Rotary valves using tank filling method.

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CLIENTS

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CLIENTS

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SUCCESS STORIES

Anval Wins Major Expansion Contract With Proven Reliability

REDUCED PLANT DOWN TIME THROUGH COLLABORATION, APPLIED ENGINEERING AND OUTSTANDING PRODUCTS WINS ANVAL VALVES A MAJOR PLANT EXPANSION CONTRACT FROM GLOBAL SILICON PRODUCER

Global silicon producer Simcoa have recently selected the Anval Rotary Floating Shoe (RFS) valve for some of the toughest duties at their Western Australian Plant. The Simcoa site based 2 hours south of Perth close to Bunbury has recently undergone a major expansion of its operations. The plant runs 24/7 and, like any successful operation, needs to minimize unforeseen break downs and stoppages in production. One area of concern for the new expansion was the reliability of another brand of rotary valve which the plant had been using over the last decade. The valves in question were of a unique fabrication which was subject to high wear and subsequent leakage within the process line. Up to three times a year these valves would require work shop maintenance involving the total disassembly and re-machining of vital elements.

Anval was invited to provide a technical solution to counter these on-going maintenance issues and furnish Simcoa with a long term solution for the existing operation that could also be applied to the plant expansion. Anval's engineering team studied the situation in collaboration with the Simcoa team and selected the heavy duty RFS valve to deal with this challenging process situation. A RFS unit was installed at the Simcoa plant in June 2010 in the cyclone discharge to handle silica fume. Over a 12 month period this valve was monitored and analysed by Anval's engineers to gauge any abrasion or loss of functionality in its installed duty.

The installation of this valve has been a tremendous success and the original valve has lasted for over 14 month without any maintenance or adjustment. Mr Drew Harris, Project Manager for the Simcoa expansion said:

"Early indications of the performance of the Anval RFS exceeded expectations such that we have purchased over 20 of these high performance units for our plant expansion."

The chronic failures that were symptomatic of the previously installed valves have now been alleviated and the Simcoa site has selected the Anval RFS as the valve of choice in its current expansion and for all future replacements within the existing process plant.

Mr Danny Griffin General Manager of Arval Australia commented "We have always prided ourselves on the reliability and durability of the RFS range of valves. We were confident that their sturdy and simple construction would be ideal for this abrasive environment." A particularly pleasing aspect of this project has been the close cooperation of Anval and Simcoa's engineers, each thoroughly assessing the process conditions and data to ensure a long term success for their operation.

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Simcoa Operations

TATA STEEL

Anval Increase Efficiency and Reduce Downtime for Tata Steel

ANVAL VALVES PROVIDE A LONG TERM SOLUTION TO ON-GOING OPERATIONAL ISSUES AT TATA STEEL'S SCUNTHORPE WORKS BY USING SIMPLE AND ROBUST DESIGN SOLUTIONS

Anval are constantly developing and widening their range of equipment to cater for the ever increasing demands 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. Anval prides itself on using simple and robust design solutions to effectively fulfil customers' performance requirements.

To this end, Anval where recently approached by Miss Paula Saxby of Tata Steel in Scunthorpe. Miss Saxby requested a long term technical solution to an on-going operational issue at the Scunthorpe Steel site; the manufacturer of the existing valves would, or could not provide any spare parts or even a site visit to help with the trouble shooting of operational issues.

The valves where being used to manage the flow of fly ash from a large furnace; there were 12 Rotary Valves in operation, each sitting below a Filter Bin. This number of valves allowed for a certain degree of failure, with other bins able to compensate for the extra flow through, however the valves could only be worked on during a furnace shut down period. Each Filter Bin was also fitted with a high level sensor that would detect an excessive level of fly ash and trip out the furnace, the fewer valves in operation; the sooner the furnace would be tripped.

The valves in use would break down or cause the furnace to be tripped, on average, 4 times a month; each furnace shut down was estimated to cost Tata Steel between £8,000 and £10,000.

With this in mind, Anval's technical team put forward the suggestion that Tata Steel implement the use of an SL Series Slide Gate Valve above the Rotary Floating Shoe Valve. In this case the SL300M was the correct fit with RFS250D. This set up would allow the cessation of flow through the RFS valve for a maintenance period whilst the furnace was still in operation. Though this set up does not allow an infinite maintenance period, it does allow for minor repairs and servicing where the previous system did not (approximately 8 hours in this case).

Anval's competitive pricing of this highly durable valve was the icing on the cake for Miss Saxby with the first order for 2 of each valve being placed shortly after our first site visit and a planned roll out of 12 such valve combinations for the fly ash management system based around this large furnace.

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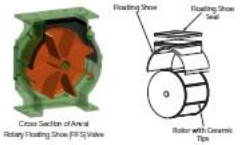
University Tests Prove Durability of Anval Valves

THE SCHOOL OF MECHANICAL ENGINEERING AT THE UNIVERSITY OF WESTERN AUSTRALIA CARRIED OUT A SERIES OF RIGOROUS WEAR TESTS ON ANVAL'S ROTARY FLOATING SHOE VALVE RANGE

The wear testing was conducted over a period of months by University of Western Australia (UWA) under-graduate and graduate mechanical engineers with the assistance of the Anval engineering team in order to establish wear rates and the operational capacity of the RFS valve.

The RFS range of rotary airlocks and feeders has been in existence for over ten years, initially being produced by Anval's sister company, Ansac. However, in order to conclusively prove the durability of the valve range, Anval decided that an objective third party would be invited to conduct prolonged wear testing and author a technical paper on the results. The wear trials were concluded in June 2010, with the completion of the peer review process in September of that year.



The testing focused on the ceramic and cast iron interface unique to Anval's RFS range of valves. The ceramic 'tipped' rotors have been designed to maintain continuous contact with the hardened SG cast iron floating shoe, ensuring an adequate seal between the inlet and outlet flange.

This interface is subjected to a constant level of wear as the rotor turns during normal operation. The amount and rate of interface wear has then been microscopically analysed by the engineering teams, confirming the durability of the RFS valve.

The extensive testing of the interface involved subjecting the valve to various types of material flow with varying degrees of abrasiveness. This enabled Anval to establish accurate data confirming the low wearing properties of the construction materials selected for the valve construction; utilizing ceramics and cast iron floating shoe.

"RFS Valves can be used to transport even the most aggressive product and still have a lifecycle of years instead of months."

"The final report has proven that the ceramic tipped rotor in contact with the hardened SG cast iron shoe allows the rotary feeder to efficiently traverse all manner of materials with a minimum of wear" explained Mr Brian Cing, Sales Representative for Ansac and Anval within Australia. "Therefore, the RFS can be used to transport even the most aggressive product and still have a lifecycle of years instead of months."

"The results are as we predicted. We always know the RFS was a far more durable unit than a standard rotary valve, and now we have the data and report to prove it."

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As featured in the Australian Bulk Handling Review: September / October 2010

THE UNIVERSITY OF WESTERN AUSTRALIA

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EXHIBITION & PARTCIPATIONS

IME
It is Prime time for Mining

POWDER & BULK SOLIDS INDIA
EXHIBITION & CONFERENCE

BULKEX
AUSTRALASIA'S BULK HANDLING EXHIBITION

POWTECH

PROMOTIONAL MEDIA PARTNERS

AUSTRALIAN BULK HANDLING REVIEW

EQUIPMENT INDIA
India's First Infrastructure Equipment Magazine

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QUESTIONS ?

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