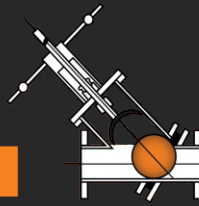




DUAL



ONE STOP SLURRY SOLUTION



AIR RELEASE VALVES





TABLE OF CONTENTS

Valves

- Dual Air Release Valve (DARV)
- Dual Slurry Air Release Valve (DSARV)



DUAL AIR RELEASE VALVE (DARV)

DUAL's Air Release Valve offers a tri-functional air valve that not only breaks vacuum, but also reduces surge on pipeline filling and releases air under operating conditions. Dual's vacuum break valves should be located on the apex of a pipeline to allow air to enter if the pipe ruptures or a scour valve is opened.

FEATURES

- No blocking or leakage.
- No sticking of the floats.
- EPDM O Ring for positive seal.
- The solid float will not deform under pressure.
- The cylindrical design also increases the effectiveness of the valve's operation during vacuum conditions.



PRODUCT SPECIFICATION

VALVE BODY:	Stainless Steel (304 or 316).
BARREL:	304 Stainless Steel.
FLANGES:	Mild Steel, FBE coated or threaded (BSP)
FLOATS:	Guided HDPE.
SCREEN AND COVER PLATE:	304 Stainless Steel.
PRESSURE RATING:	Working pressure standards are Pn 10, PN 16, PN 25 and PN 40.
SEALS AND O RINGS:	EPDM.
DRILLING PATTERNS:	ANSI B16.5, DIN, Screwed, SABS & BS Optional.
SIZES:	50mm through to 200mm Larger sizes on request.
TEMPERATURE RATINGS:	Operating temperatures to 80°C. Higher conditions are possible if the valve is constructed from suitable materials.
MATERIAL CERTIFICATION:	Certified chemical and physical test reports can be supplied.

FEATURES

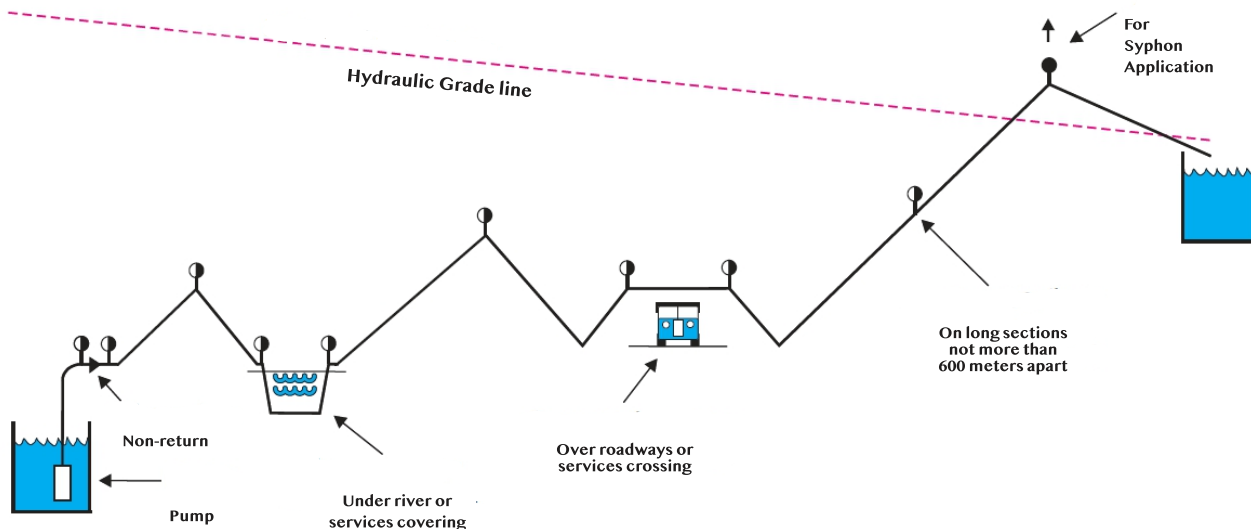
- Triple function.
- Light weight.
- Non slam.
- Cost effective.
- No sticking.
- Small orifice to bleed air.
- Controlled velocity.
- Anti shock function.

DARV

PLACEMENT

The graphic shows most of the common places where AV (air release valves) are fitted. High points are a natural start, also where the pipeline crosses obstacles like rivers and roads. Check for syphon application above the hydraulic grade line. To control pump start and pump trip, AV should be placed before and after the check valve.

PUMPED EXAMPLE



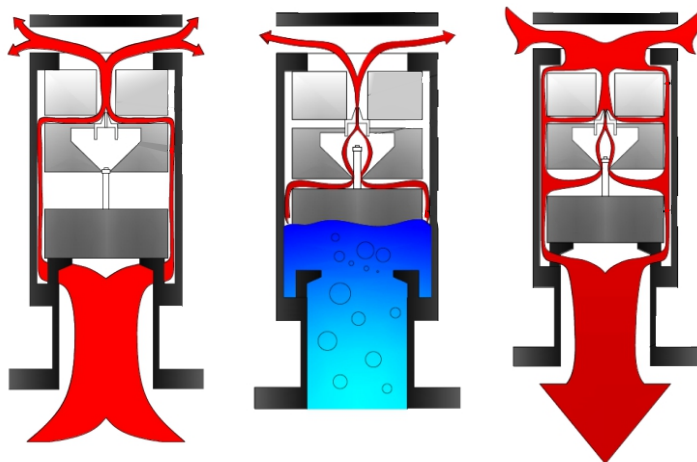
APPLICATIONS

- Deep well pumping.
- Waterlines.
- Sewage.
- Pump suction.
- Pump discharge.

ANTI-SHOCK

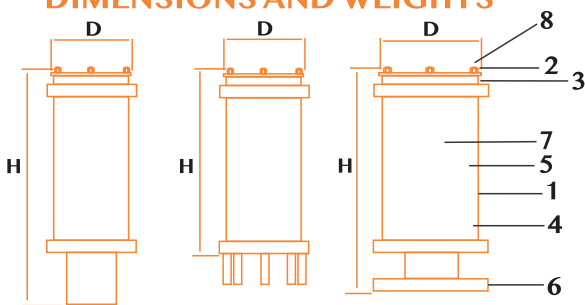
SMALL ORIFICE

TRIPLE FUNCTION



VACUUM
BREAK

DIMENSIONS AND WEIGHTS



VALVE SIZE (mm)	HEIGHT	DIAMETER	BLEED NOZZLE OD	ANTI SHOCK OD	WEIGHT (kg)
25	325	95	1.1	3.3	5
50	335	115	1.5	6.5	8
80	330	120	1.8	10.5	16
100	330	165	1.8	13.5	20
150	440	285	3	20	60
200	520	300	3	27	90

Contact Dual Valves for larger sizes. Dimensions are for guidance only - detailed dimension drawings available on request. All dimensions are in millimeters, unless stated.

	PART	DESCRIPTION
1	Body	304 Stainless Steel
2	Cover Plate	304 Stainless Steel
3	Screen	304 Stainless Steel
4	Barrel	304 Stainless Steel
5	Floats	HDPE
6	Bottom Flange	FBE Coated Mild Steel
7	Seals & O-ring	EPDM
8	Tie Rods	304 Stainless Steel



DUAL SLURRY AIR RELEASE VALVE (DSARV)

DUAL's Air Vacuum Release and Vacuum Breaker's function is to automatically exhaust large volumes of air from the system when it is being filled and also to allow air to re-enter the pipe line when being emptied. The orifice size is generally the same size as the valve inlet and outlet.

In operation, when the system is filled, the fluid lifts the ball until it closes the orifice. The orifice will remain closed until the system is emptied. Air may enter the valve and displace the fluid while the system is in operation, however, internal pressure will continue to hold the valve closed. The valve will not re-open until the system pressure drops to near atmospheric pressure and the ball is no longer buoyant.



FEATURES

- No blocking or leakage.
- No sticking due to rotating ball.
- Natural rubber secondary seal for positive seal.
- Fabricated and can be repaired in line.
- Self cleaning ball action.
- Cast body or fabricated.

PRODUCT SPECIFICATION

VALVE HOUSING:	Valve housing is cast SG Iron, fabricated Carbon Steel or Stainless Steel (304 or 316).
LINING:	Valve housing can be epoxy coated or natural rubber lined. A range of elastomer grades are available for corrosive duties.
BALL:	Guided HDPE floating ball, solid Urethane or hollow Stainless Steel for high pressure.
PRESSURE RATING:	Working pressure standards are 10 up to 160 Bar for Air Release Valves and up to 25 Bar for combination valves for use on slurries.
VALVE SEAT:	Natural Rubber or Stainless Steel (304 or 316).
DRILLING PATTERNS:	ANSI B16.5, DIN, SABS & BS optional.
SIZES:	50mm through to 200mm Larger sizes on request.
TEMPERATURE RATINGS:	Operating temperatures to 80C. Higher conditions are possible if the valve is constructed from suitable materials.
MATERIAL CERTIFICATION:	Certified chemical and physical test reports can be supplied.

DSARV

HOW THE DUAL VENT VACUUM BREAKER WORKS

Automatically releases air from the pipeline when filled and stops air from entering the pipeline when emptied.

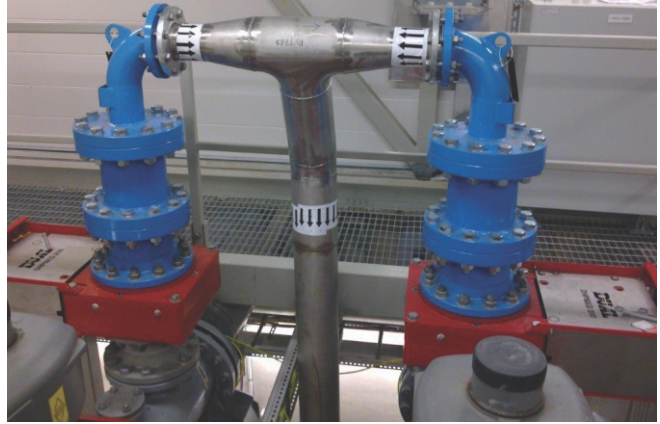
APPLICATIONS

- Slurry pipelines.
- Deep well pumping.
- Waterlines.
- Sewage.
- Pump suction.
- Pump discharge.

BOTTOM ASH APPLICATION



VENT ONLY DUAL VACUUM BREAKER



DIMENSIONS AND WEIGHTS

VALVE SIZE (mm)	2" 50mm	3" 80mm	4" 100mm	6" 150mm	8" 200mm
A	299	387	422	587	714
B	285	402	437	554	711
C	50	80	100	150	200
Weight(kg)	25	35	50	70	90

Contact Dual Valves for larger sizes. Dimensions are for guidance only - detailed dimension drawings available on request. All dimensions are in millimeters, unless stated.

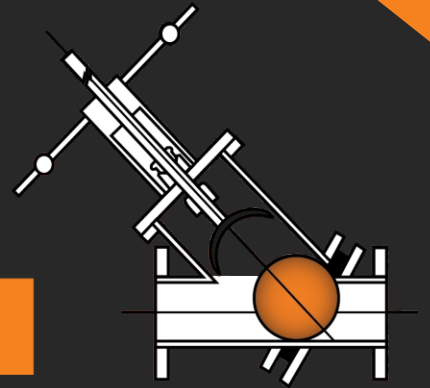
	PART	DESCRIPTION
1	Body	Carbon, Cast or Stainless Steel
2	Ball	HDPE, Urethane or Stainless Steel
3	Seat	Stainless Steel, Urethane or Natural Black Rubber
4	Air Vent	Carbon or Stainless Steel
5	Secondary ARV	Reinforced Nylon with Rubber or EPDM Seal
6	Ball Guides	Carbon or Stainless Steel
7	Lining	Optional



ONE STOP SLURRY SOLUTION



DUAL



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