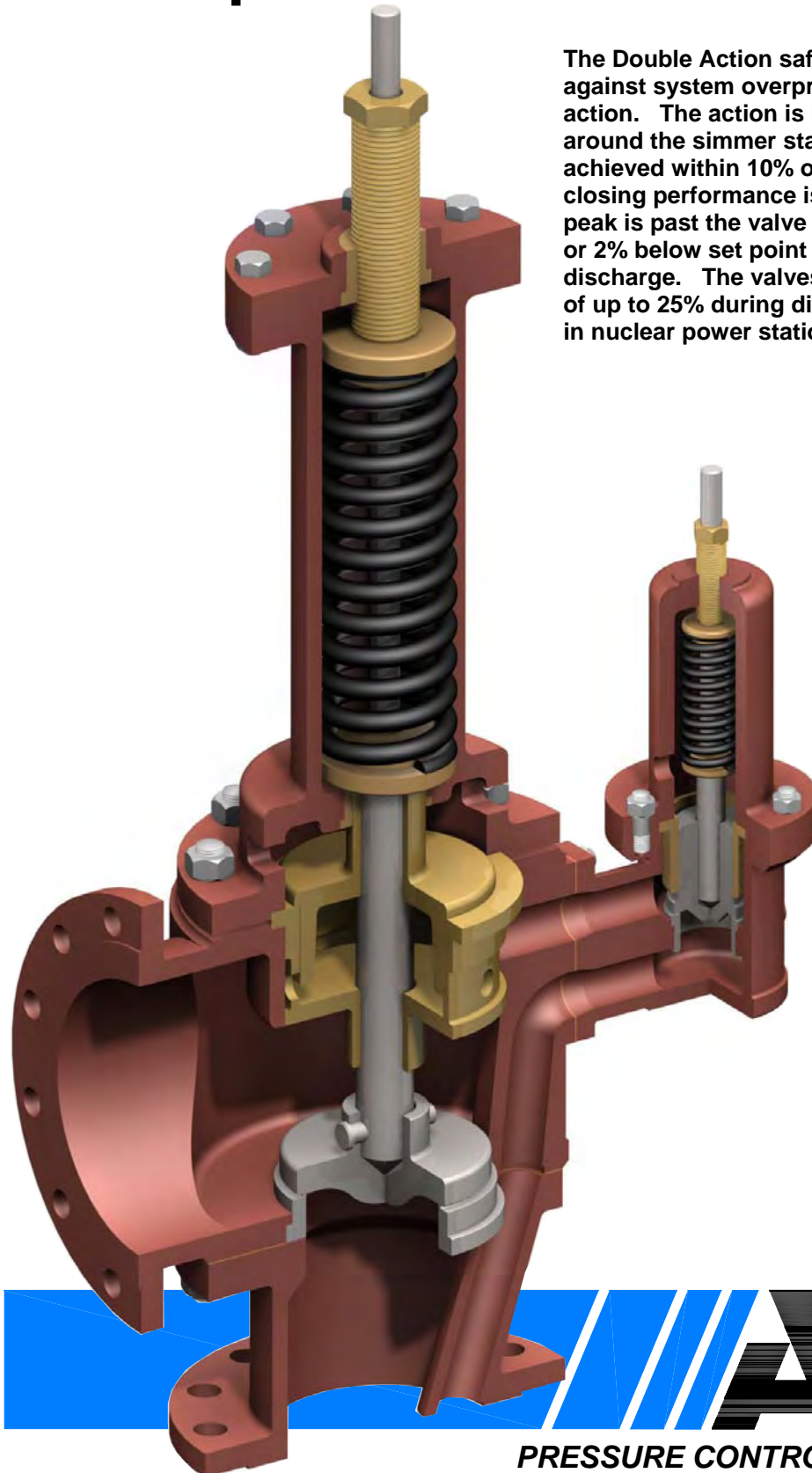


# DA Full Lift Safety Valve

...sure safe action against overpressure time after time.

The Double Action safety valve gives reliable protection against system overpressure in a clean crisp opening action. The action is linear and very stable particularly around the simmer stage. Full rated discharge is achieved within 10% overpressure from set point. The closing performance is good too. When the pressure peak is past the valve reseats and positively closes at 1 or 2% below set point so containing the cost of discharge. The valves are insensitive to back pressure of up to 25% during discharge. A failsafe design used in nuclear power stations.

- British full lift design to BS 759
- Capacity certified by A.O.T.C.
- Suitable for steam, gas water and other fluids
- High temp. and totally enclosed flow options
- 10 sizes and 3 material options
- Springs to BS 759 and BS 1726 Class A



**AULD**®  
PRESSURE CONTROL AND SAFETY VALVES

# DA FULL LIFT SAFETY VALVE

## DESIGN

The Double Action design comprises a spring loaded main valve incorporating a cylinder with a loose fitting piston and a similar relay valve mounted on the main chest. The relay valve is generally set between 2 and 5 psi above the main valve. In the following example the main valve is set at 200 psi and the relay at 202 psi.

Immediately pressure at the inlet pipe rises above 200 psi the main valve overcomes the main spring loading and opens with a clean action. If the pressure continues to rise and reaches 202 psi the pressure at the relay valve overcomes its spring loading. The discharge from the relay valve is directed by port to the underside of the main piston. This action will further compress the main spring thereby giving the main valve full lift discharge.

The presence of full pressure under the main piston will not affect the action of the relay valve. When the inlet pressure drops below 202 psi the relay valve closes and the pressure under the main piston dissipates through the leakage hole. The relay plug profile is important in delivering this fast crisp action. Pressure settings are controlled by the adjusting screws on the main and relay valve spindles.

## DATA TABLE

Valve size	Inlet Outlet	2" 3"	2½" 3"	2" 4"	3" 4"	4" 5"	4" 6"	5" 6"	6" 6"	8" 8"	10" 10"	12" 12"
Seat orifice diameter		1½"	1¾"	1½"	2"	3"	3"	3½"	4½"	5½"	7"	
Alternative seat				2½"		3½"	4"	5½"	6½"	8½"		
Height C/L - top		17"	17"	21"	21"	22"	33"	33"	43"	48"	54"	
C/L - outlet flange		5½"	5½"	6½"	6½"	8"	8¼"	8¼"	10"	10"	12¾"	
C/L - inlet flange		7"	7"	7½"	7½"	8¾"	10¼"	10¼"	14"	14"	12"	
Finished weight (kg)		55	57	77	80	110	165	170	250	355	443	

## SIZING

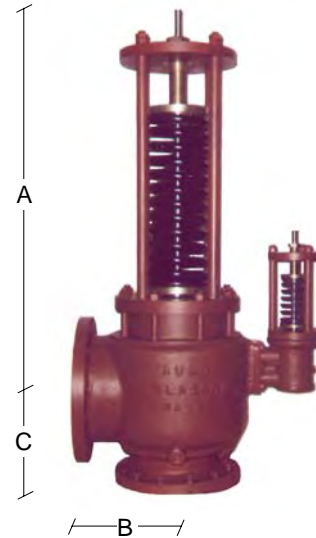
DA Safety Valve capacities are determined by BS 759 1975. A separate sizing catalogue gives rated capacities for the seat sizes shown in the data table. Sizing will be confirmed by Auld and requires the following information:

- Fluid
- Line pressure
- Set pressure
- Maximum discharge capacity
- Operating temperature
- Total temperature if superheated

## AVAILABILITY

Sizes up to 6" carried in stock with standard connections. Flanges can be drilled to other tables or have a specially produced flange from our own in house foundry.

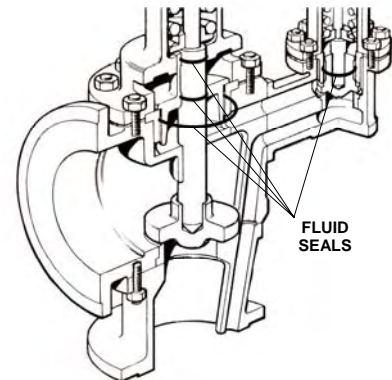
## HIGH TEMPERATURE OPTION



## MATERIAL & LIMITS

Body material	Max. temp	Max. press
Cast iron	425°F	180 psi
Carbon steel	850°F	1000 psi
C. molysteel	950°F	1100 psi
Other wetted parts	Stainless steel	

## TOTALLY ENCLOSED OPTION



## FOR MORE INFORMATION

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