

## For Engineering Industry



### Range of Products



India's Largest Exporter of Compressed Air Treatment Products



**General :** Compressed air is a vital part in Engineering industry in all phases of Plant Automation, Air Logistics, Pneumatic Tools, Conveying, General Instrumentation, Air Motor, Blowguns / Painting, Gauging Equipments and Critical Instrumentation. The quality of compressed air required to be on various specification based on the industry, are:

**Air Bearings & Air Motors :** As air bearings rotate on high speed the condensation forms, if the air is not dry and clean. The condensation forms due to drop in temperature and sudden cooling while high RPM. A dessiccant dryer would be the ideal solution with necessary filters.

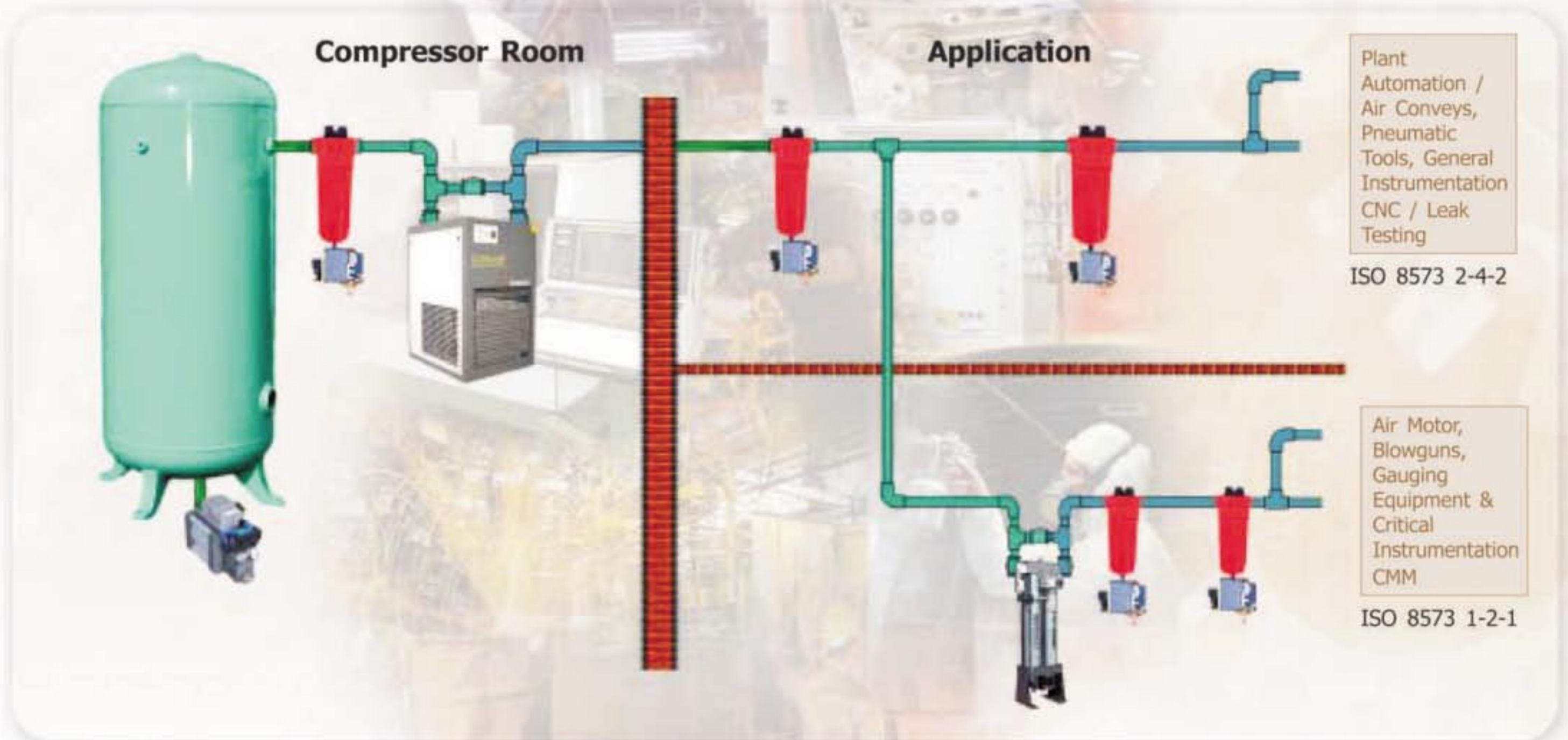
**3D Measuring Machines :** As 3D Measuring Machines operate on rodless cylinders it is very much necessary to safe guard the cylinders to meet the precision timings and movement. Any change in air flow due to corrosion can cause a delay or over speed on the movement of the measuring device.

**Special Purpose Machinery :** SPM are always designed with more of automation. As these machines are vital for productivity necessary filters with a clean and dry air required for smooth operations.

**Gauge and Tyre Inflation :** Basic level of filtration and drying required to safe guard pneumatic tools and systems in order to avoid any variation due to corrosion.

**Forging / Foundry :** A drain valve is a must in order to remove the condensate sludge from air receivers. As the atmosphere around this industry is basically dusty the compressor intake fine dusts which has to be avoided through fine filters to avoid dirty atmosphere inside compressed air piping and pneumatic systems.

**CNC :** As door closing and tool change automatic is done through pneumatics the controls has to kept clean to meet the required productivity. Hence a point of use application dryers are highly recommended.



**For Optimum Airtreatment Solutions**

**ISO 8573.1 Quality Classes**

Application	Auto Drain	Filters	Refrigeration Dryers	Dessiccant Dryer
Plant Automation / Air Conveys, Pneumatic Tools, General Instrumentation	✓	✓	✓	✗
Air Motor, Blowguns, Gauging Equipment & Critical Instrumentation	✓	✓	✓	✓

Quality Class	Dirt Particle size in Micron	Water Dewpoint °C (ppm. vol.) at 7 bar g	Oil (Including vapour) mg/m <sup>3</sup>
1	0.1	-70 (0.3)	0.01
2	1	-40 (16)	0.1
3	5	-20 (128)	1.0
4	15	+3 (940)	5
5	40	+7 (1240)	25
6	—	+10 (1500)	—



## SELECTION CHART

Capacity		Trident Product details (Model #)					
Comp HP	Flow (cfm)	1 Drain valve	2 Pre-Filter	3 Oil Filter	4 Refrigeration Dryer	5 Desiccant Dryer	6 After Filter
25	100	CTD 11B / LDV 1000	G 250 P EA	G 250 X EA	COLDSPELL 100	DRYSPELL 100 / DP 192	G 250 Y EA
30	130	CTD 11 B / LDV 1000	G 250 P EA	G 250 X EA	COLDSPELL 150	DP 288 / DRYSPELL 150 P	G 250 Y EA
50	210	LDV 2000	G 600 P EA	G 600 X EA	COLDSPELL 250	DP 384	G 600 Y EA
75	335	LDV 2000	G 600 P EA	G 600 X EA	COLDSPELL 400	DP 576	G 600 Y EA
100	450	LDV 2000	G 851 P EA	G 851 X EA	COLDSPELL 500	DP 960	G 851 Y EA

Note:- Refer the Layout drawing to understand the corresponding product numbers and its application areas. Refer product catalogue for Higher flow and pressure.

### Dryspell

The latest technology in Desiccant Air Dryers offers total cleaning and drying solution for lubricated as well as non-lubricated Compressors. Coalescing filters (boro silicate micro glass fibres) assure maximum removal of oil and liquid moisture upto 0.3 microns. Compressed air at -40°C dew point.

#### Salient features :

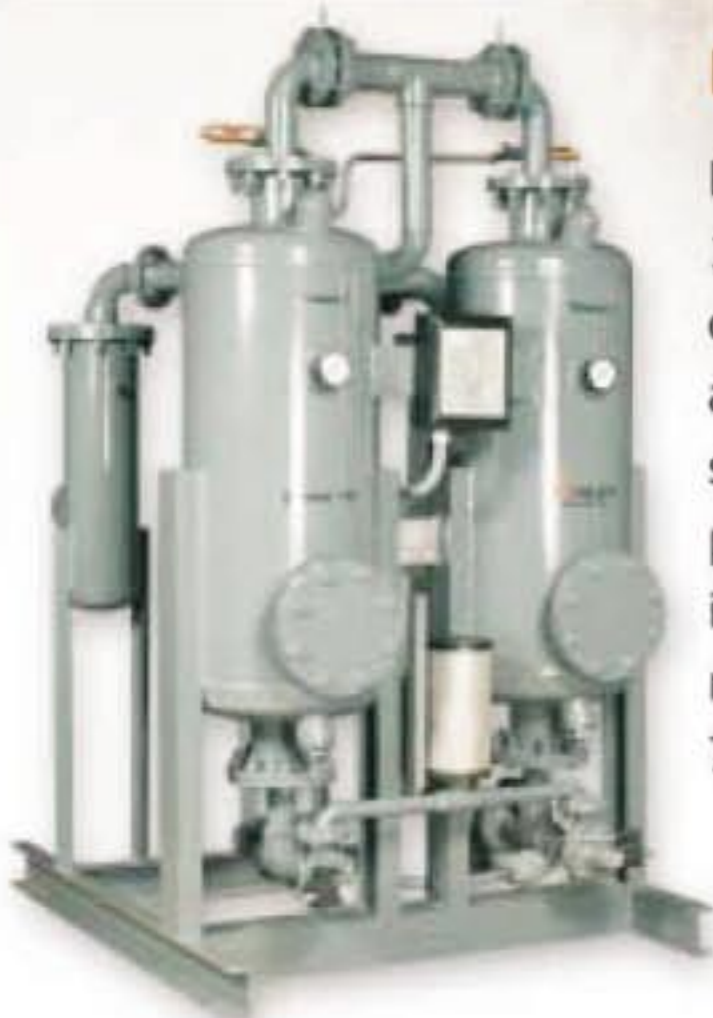
- Microprocessor Controller • Pre-filter rating 0.3 microns (coalescer) • Shuttle valve for Low Pressure drop
- All Aluminium resist oxidation & scale formation • Dewpoint better than -40° C • Design Patented



Model	Flow cfm	End Connection BSP	Dimensions (mm)			Weight KGS	Recommended Accessories	
			H	W	D		Pre filter (1)	Post filter (2)
Dryspell 5	5	1/2"	390	280	200	9	G 24 P	G 24 Y
Dryspell 10	10	1/2"	600	280	200	11	G 24 P	G 24 Y
Dryspell 20	20	1/2"	1015	280	200	16	G 100 P	G 100 Y
Dryspell 30	30	1/2"	810	350	260	28	G 100 P	G 100 Y
Dryspell 45	45	1/2"	1055	350	260	34	G 100 P	G 100 Y
Dryspell 60 A	60	3/4"	1250	350	285	43	G 100 P	G 100 Y
Dryspell 100	100	1"	1540	415	300	81	G 250 P	G 250 Y

### DP Series

Designed and tested to provide 100% clean, dry, oil free compressed air at -40°C atmospheric dew point, to safeguard your valuable pneumatic equipment. Available in 19 models to suit specific requirements. For pressures upto 70 bar and flow upto 10,000 cfm.



**Salient features :** • Extensive Mimic display with Electronic Controller • Energy saving purge economiser • Stainless Steel Filter Cartridges • Fabrication Code : IS 2825 • Dewpoint better than -40° C

**Optional :** • Fabrication Code : ASME SEC VIII DIV I • Dewpoint based changeover

Model	Inlet Flow cfm	End Connection	Dimensions (mm)			Weight Kg
			Height	Width	Depth	
DP - 192	114	1" BSP	2000	750	650	380
DP - 288	172	1" BSP	2050	750	650	440
DP - 384	229	1 1/2" BSP	2100	750	650	550
DP - 480	286	2" NB	1640	1200	1300	620
DP - 576	343	2" NB	1975	1200	1300	700
DP - 768	458	2" NB	1860	1200	1300	850
DP - 960	572	2" NB	2200	1200	1300	950
DP - 1440	860	3" NB	1925	1500	1500	1265
DP - 1920	1144	3" NB	2350	1500	1500	1575

• Operating voltage - 230 V AC 50 Hz 1 Ph.



## Coldspell

Designed and tested to provide 100% clean, dry, oil free compressed air at -23°C atmospheric dew point, to safeguard your valuable pneumatic equipment. Available in 17 models to suit specific requirements. For pressures upto 70 bar and flow upto 5000 cfm.



### Salient features :

- Microprocessor Controller • Anti Freezer • Anti Recycle Controller • Advanced 3 in 1 integral heat exchanger • Large condensor for high ambient temperatures

Model	Flow in cfm	Power Consumption in KW		End Connection	Dimensions in mm			Weight in Kg
		R 134a	R 407c		H	W	D	
Coldspell 20	20	0.36	–	1" BSP	530	450	475	55
Coldspell 40	40	0.36	–	1" BSP	530	450	475	55
Coldspell 50	50	0.36	–	1" BSP	530	450	475	55
Coldspell 60	60	0.36	–	1" BSP	530	450	475	55
Coldspell 80	80	0.85	–	1" BSP	700	490	525	70
Coldspell 100	100	0.85	–	1" BSP	700	490	525	70
Coldspell 150	150	1.02	–	1½" BSP	845	670	700	110
Coldspell 200	200	–	1.40	1½" BSP	845	670	700	130
Coldspell 250	250	–	1.40	1½" BSP	845	670	700	130
Coldspell 300	300	–	1.85	2" NB	1140	830	1080	240
Coldspell 400	400	–	2.10	2" NB	1140	830	1080	260
Coldspell 500	500	–	2.40	2" NB	1140	830	1080	290
Coldspell 650	650	–	3.30	2" NB	1090	1000	1280	350
Coldspell 800	800	–	4.00	3" NB	1120	1400	1500	490
Coldspell 1000	1000	–	4.80	3" NB	1120	1400	1500	580
Coldspell 1250	1250	–	5.20	4" NB	1120	1400	1500	620
Coldspell 1500	1500	–	6.00	4" NB	1200	1180	1730	900
Coldspell 2000	2000	–	8.00	6" NB	1200	1180	1730	1020

For any other capacity contact factory. Specifications are subject to change without notification.

### How to Order

Requirement :	Inlet flow	100 cfm
	working pressure	5 Kg / cm <sup>2</sup>
	Inlet temperature	45° C
	Ambient temperature	38° C
Referring tables :	Factor Pi	= 0.84
	Factor Ti	= 1
	Factor Ta	= 1
Dryer capacity required :	$\frac{\text{Flow}}{\text{Pi} \times \text{Ti} \times \text{Ta}}$	$= \frac{100}{0.84 \times 1 \times 1}$
		= 119 cfm
Choose the nearest higher model :		= Coldspell 150

### Correction Factor

Inlet Air Temperature °C	30	38	45	50
Correction Factor (Ti)	1.14	1.08	1	0.75
Inlet Pressure Kg/cm <sup>2</sup>	5	7	9	12
Factor (Pi)	0.84	1	1.11	1.21
Ambient Temperature °C	25	30	38	43
Factor (Ta)	1.36	1.18	1.0	0.86





## Cleansweep

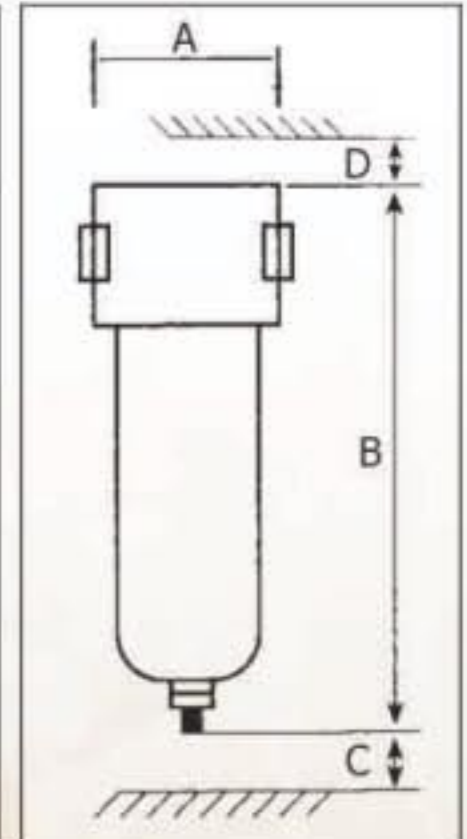
Contaminants in unfiltered compressed air eventually have disastrous effect on the end products. To increase the performance of pneumatic tools these contaminants need to be filtered periodically.

Oil and water are present both in liquid and vapour state. Coalescing filters with filter media (boro silicate micro glass fibres) remove liquid contaminants.

### Salient features :

- Coalescing filters • Aluminium Pressure Die Cast Housing • Coloured Element • Differential Pressure Indicator / Gauge • Internal Drain / External Drain

Model	Element Grade	Drain Type	Pipe Size BSP/ NB	Flow Rate (scfm)	Max Working Pressure kg/cm <sup>2</sup>	Housing Dimensions (mm)				Weight (kgs)
						A	B	C	D	
G 24	P/X/Y/A	IA / EA	¼"	15	16	72	193	100	—	1
G 100	P/X/Y/A	IA / EA	½"	60	16	96	237	150	—	1.5
G 250	P/X/Y/A	IA / EA	1"	150	16	117	465	300	—	3.5
G 600	P/X/Y/A	IA / EA	1½"	350	16	117	530	425	—	4
G 851	P/X/Y/A	IA / EA	2"	500	16	170	722	480	—	10.5
G 1210	P/X/Y/A	IA / EA	2"	710	16	170	722	550	—	11
G 1810	P/X/Y/A	IA / EA	3"	1065	12	235	760	550	—	20
G 2200	P/X/Y/A	IA / EA	4" NB	1200	12	440	1325	—	800	75
G 2600	P/X/Y/A	IA / EA	4" NB	1500	12	650	1500	—	800	85
G 3400	P/X/Y/A	IA / EA	6" NB	2000	12	650	1500	—	800	85



\* Contact factory for high flowrate and pressure.

Description	Element Grade			
	P	X	Y	A
Filter Element	Borosilicate	Borosilicate	Borosilicate	Activated Carbon
Particle Removal	5 (Micron)	1 (Micron)	0.01 (Micron)	0.01 (Micron)
Max. Oil carryover	5 (mg/m <sup>3</sup> )	0.5 (mg/m <sup>3</sup> )	0.01 (mg/m <sup>3</sup> )	0.003 (mg/m <sup>3</sup> )

**Ordering Code : Example :** Model G 24 X EA (or) G 24 X IA

X - Element Grade ; EA - Drain Electro Adjustable ; IA - Drain Internal Automatic

## Compact Timer Drain - CTD Series

CTD is the culmination of years of manufacturing drains. It takes care of all problems normally associated with drains. The controller is now built of ultra reliable microcontroller and feature dual adjustment for both cycle and drain. The valve has a large orifice and special solenoid operator section to discharge dust.

Should the valve still get clogged you can service it without removing from the installation. Press the knob at the bottom of the valve to mechanically clear all the sludge. Electronically flush a few times and now it is fully serviced and ready for use.



**Salient features :** • Easy to mount at all locations • Maintain and clean drain valve without removing from service • On and Off timing adjustable • Large orifice for effective drain of dust and condensate • Design Patented

## Level Sensing Drains - LDV Series



Trident's condensate sensing type automatic drain valve is the latest advancement in drain valve technology. Instead of operating through cycle timer, these valves sense the condensate level for activation, ensuring absolutely no loss of compressed air and hence enormous energy saving. Trident condensate sensing type drain valves are highly efficient and reliable. These drain valves can be fitted directly on the equipment simply by replacing the manual drains.

**Salient features :** • Zero Air Loss • Noise Free • Condensate Sensing Type • Design Patented





**Our Mission :** To deliver quality compressed air.

**What we can offer :** A range of solutions to remove impurities from compressed air. Appropriate solutions to manage and reduce energy cost of compressed air.

**Quality :** In 19 years of global operation, Trident has established a strong market presence through its quality and reliable products. In addition to acquiring ISO 9001 : 2000 status, Trident has approved CE marking for its products. Company has adapted the six sigma process in developing products.

**Technology :** A dedicated team of R&D engineers strive to incorporate latest technology with special emphasis on making products energy efficient.

**Service :** World wide network of business associates and service outlets render prompt service.

#### Our Presence



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