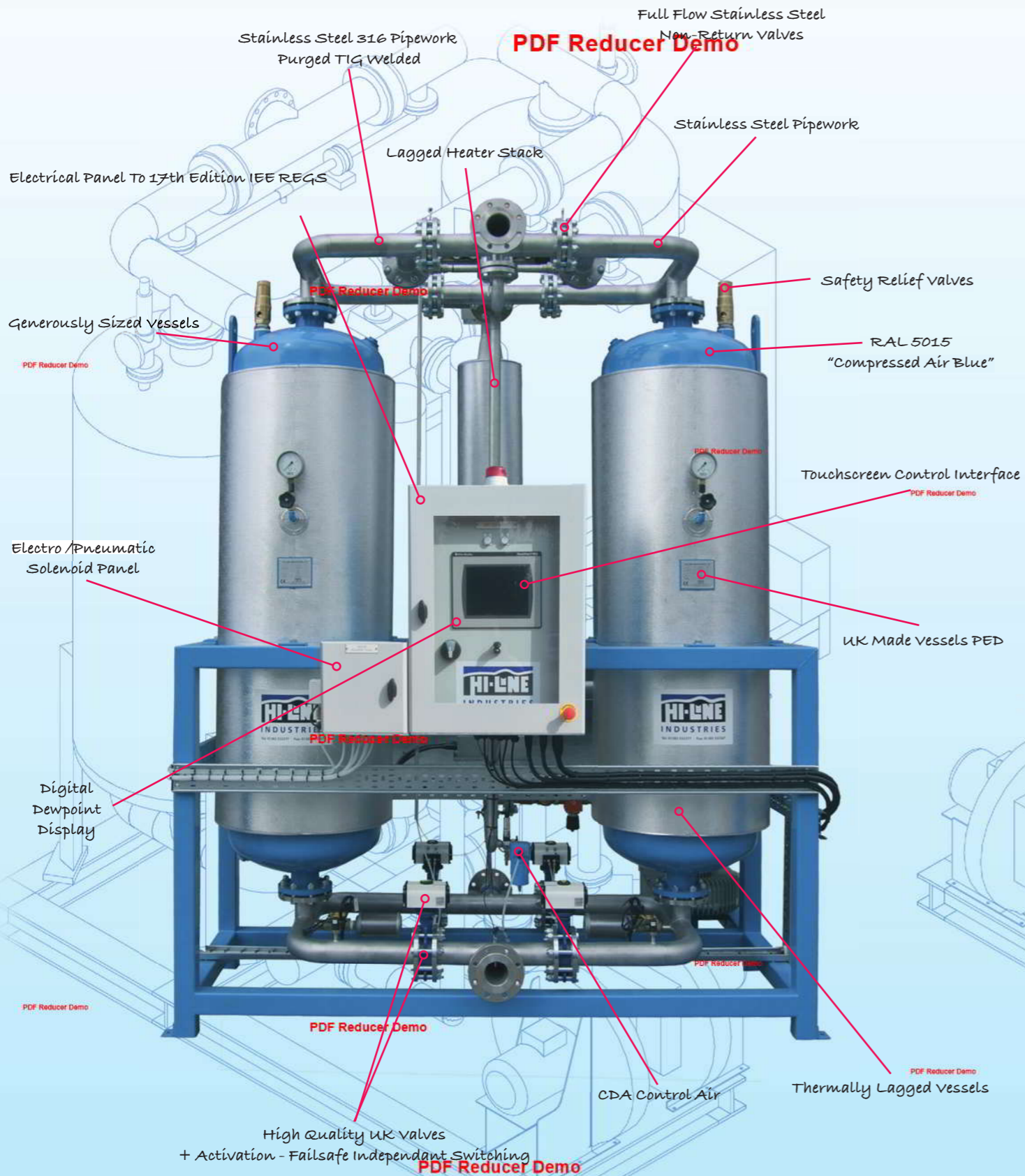


HBP - ZL

*Hi-line Blower Programme
Zero-Loss Desiccant Air Dryer*



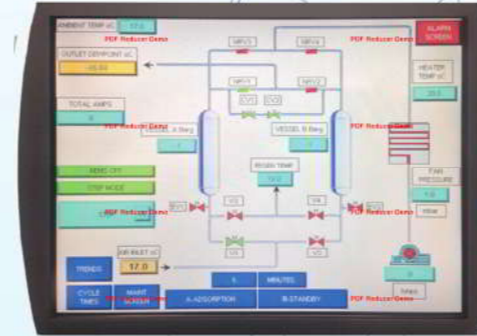


Principle of Operation

The HBP range of dryers is our flagship product and one which has been evolving over the last fifteen years. In our world control is everything, if you can't control your energy, you can't save energy! With agenda setting control technology, Hi-lines Adsorption Air Dryers provide the lowest possible running costs.

The purpose built AEMS (Automatic Energy Management System) is permanently taking data from around the dryer and processing that data and changing the dryer cycles to its optimum. Extending cycle times, reducing heater energy and even deciding the most cost effective time to regenerate based on energy tariffs. No compressed air is lost or wasted.

Regeneration is by an external heat source and bi-directional blower, so cooling of the desiccant is achieved by blower method rather than the compressed air. Heat regeneration sources can be electrical, oil, steam and heat of recovery or dual heat – allowing the optimum energy efficient method to be selected.



Touch Screen Interface

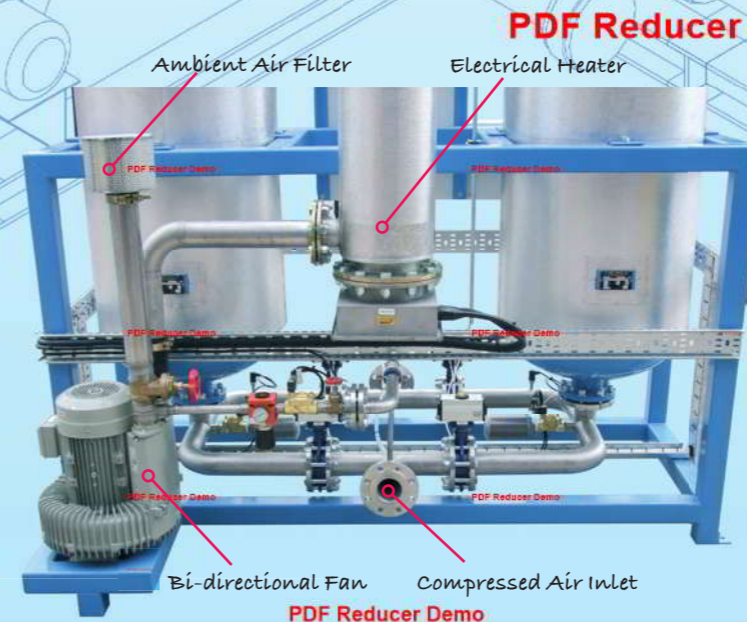
Lowest possible running costs

The Hi-line HBP- ZL offers its users the lowest possible energy costs/cost of ownership, by continually taking readings of its operational parameters and feeding information back to the controller. The controller then processes this information and adjusts the dryer to operate at its optimum. With high quality Rockwall lagging and thermally efficient heaters the HBP range of dryers can spend a high proportion of its cycle

time on standby duty, due to the generously sized adsorption vessels. Additional features such as a soft start and dual bi-directional fans help reduce energy costs further. The AEMS (Automatic Energy Management System) has built into it a data logging feature which can be extracted via its USB port. Dial-in modems and Bluetooth facilities are also available.



Dryer Under Construction



Ambient Air Filter

Electrical Heater

Bi-directional Fan

Compressed Air Inlet

Bespoke Dryers as Standard

Although we have a standard range of HBP dryers featured in the table overleaf, all our dryers are bespoke. Before you have placed an order for a Hi-line Dryer, our Technical Department will visit your site and discussed fully with you your application. We take on board the site location of the dryer, the air quality requirement, the possibilities of heat recovery and use of by product heat, (waste return steam, compressor oil, cooling water etc.) We may need to design the dryer with height in mind, or a smaller footprint than normal. Maybe you need to have different software to communicate to your factories BMS? All these options are available even down to colour choice!

Technical Specifications - HBP-ZL Dryer Range

Dryer Type	Capacity Scfm	Capacity m3 / min	Capacity Nm3/h	Conn	Dimensions				Installed Power kW
					W	D	H	Wgt	
HBP-165	165	4.60	280	1 1/2" PN16	1500	950	2080	960	8.50
HBP-225	225	6.37	382	1 1/2" PN16	1500	950	2300	1200	10.50
HBP-280	280	7.92	476	2" PN16	1650	950	2200	1300	11.20
HBP-350	350	9.91	595	2" PN16	1650	950	2400	1500	14.20
HBP-450	450	12.70	765	2 1/2" PN16	1800	1100	2400	1700	17.20
HBP-565	565	15.90	960	2 1/2" PN16	1600	1100	2900	1900	22.00
HBP-850	850	24.00	1250	3" PN16	2700	950	2500	2100	26.00
HBP-1000	1000	28.31	1700	3" PN16	2350	1300	2960	2500	33.00
HBP-1130	1130	31.99	1920	4" PN16	2350	1200	3040	2700	34.50
HBP-1400	1400	39.64	2380	4" PN16	2700	1700	2640	2900	37.50
HBP-1700	1700	48.13	2890	5" PN16	2520	1700	3200	3100	40.00
HBP-2500	2500	70.70	4250	5" PN16	2700	1700	3100	3500	51.50
HBP-3000	3000	84.95	5100	6" PN16	2700	1700	3800	4000	61.00
HBP-4250	4250	120.00	7225	8" PN16	4500	2400	3200	6700	100.00
HBP-5500	5500	155.74	9350	8" PN16	4500	2400	4400	7500	138.00



Dryer Sizing Example:

Max Flow (VT):1000 cfm (1700 m3/h)
 Max Comp Air Inlet Temp:+ 30°C
 Minimum Working Pressure:.....6 bar

Conversion Factor: 1.09

$$V_{corr} = \frac{VT}{CF1} = \frac{1000cfm}{1.09} = 917.4 \text{ cfm}$$

Dryer Type for Application = HBP-ZL 1000

Sizing is for guidance only.

A site survey is recommended to ensure correct application.

Terms of Warranty: Qualified commissioning with warranty service contract (Mandatory)

Capacity related to 1 bar abs, 20°C and 35°C inlet temperature.

- Pre & after filtration included
- PN 16 flange connection as standard
- Electrical connection 3/415 V/50 Hz + N
- Standard Pressure 11 Bar max – Higher Pressure on request
- Cooling by side channel blower @ 150mbar
- PLC control – Allen Bradley as standard
– Mitsubishi, Siemens on request
- HMI – Human Machine Interface - Touch screen
- Collective fault indicator with alarm page
- Trending on Dewpoint
- Energy monitoring & display on HMI
- Pressure indication by Transducer on HMI
- IP55 complete with alarm beacon/relay
- Stainless steel desiccant diffusers
- Stainless steel pressure gauges with shut off valve
- Dewpoint control by AEMS (Automatic Energy Management System)
- Cycle time 6 hours – Standard – Variable with load
- 5 years warranty with maintenance agreement

Conversion Factor (CF1) relating to operating pressure at -40°C dewpoint

Inlet temperature	Working overpressure (bar)						
	4	5	6	7	8	9	10
30°C	0.72	0.92	1.09	1.25	1.36	1.45	1.51
35°C	0.55	0.70	0.86	1.00	1.12	1.25	1.37
40°C	0.33	0.45	0.58	0.71	0.82	0.92	1.02

Service Division

All HBP dryers are fully supported by a nationwide team of Hi-line Service Technicians. All factory trained and fully conversant with energy management of compressed air. HBP's are normally sold with a Hi-line Maintenance Agreement which then extends the warranty period to 5 years full warranty.

Hi-line Technicians are available to service other brands of dryers and retro fit our energy saving touch screen panel to less sophisticated dryers.



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