

# Hyperdryer

adsorption dryers



domnick hunter hiross SpA

**HIROSS**

Compressed Air Treatment

# HYPERDRYER: THE ULTIMATE DRYING EXPERIENCE

As industry becomes more sophisticated, so the need for ever cleaner compressed air increases accordingly. Hiross' new range of Hyperdryer adsorption dryers perfectly cater for those industries which require very dry compressed air. Choosing Hyperdryer offers the user significant benefits; reduced system downtime, longer equipment life and improved finished product quality together ensure that the investment in Hyperdryer is repaid within a very short period. Hyperdryer can offer dew points of as low as  $-40^{\circ}\text{C}$  or even, on request,  $-70^{\circ}\text{C}$ . Moreover, unlike traditional adsorption dryer concepts, it can be programmed according to the exact dew point and air flow required, in order to avoid unnecessary energy wastes. Thanks to the EconoMax control, standard on all models, this high performance comes hand in hand with very simple day to day operation. Hyperdryer represents extended proof of the ever more sophisticated industrial solutions the Hiross product range offers its Customers.

## BENEFITS

- very dry air
- reduced factory downtime with increased product quality
- low power consumption
- EconoMax control system
- high reliability



twin pressure gauges

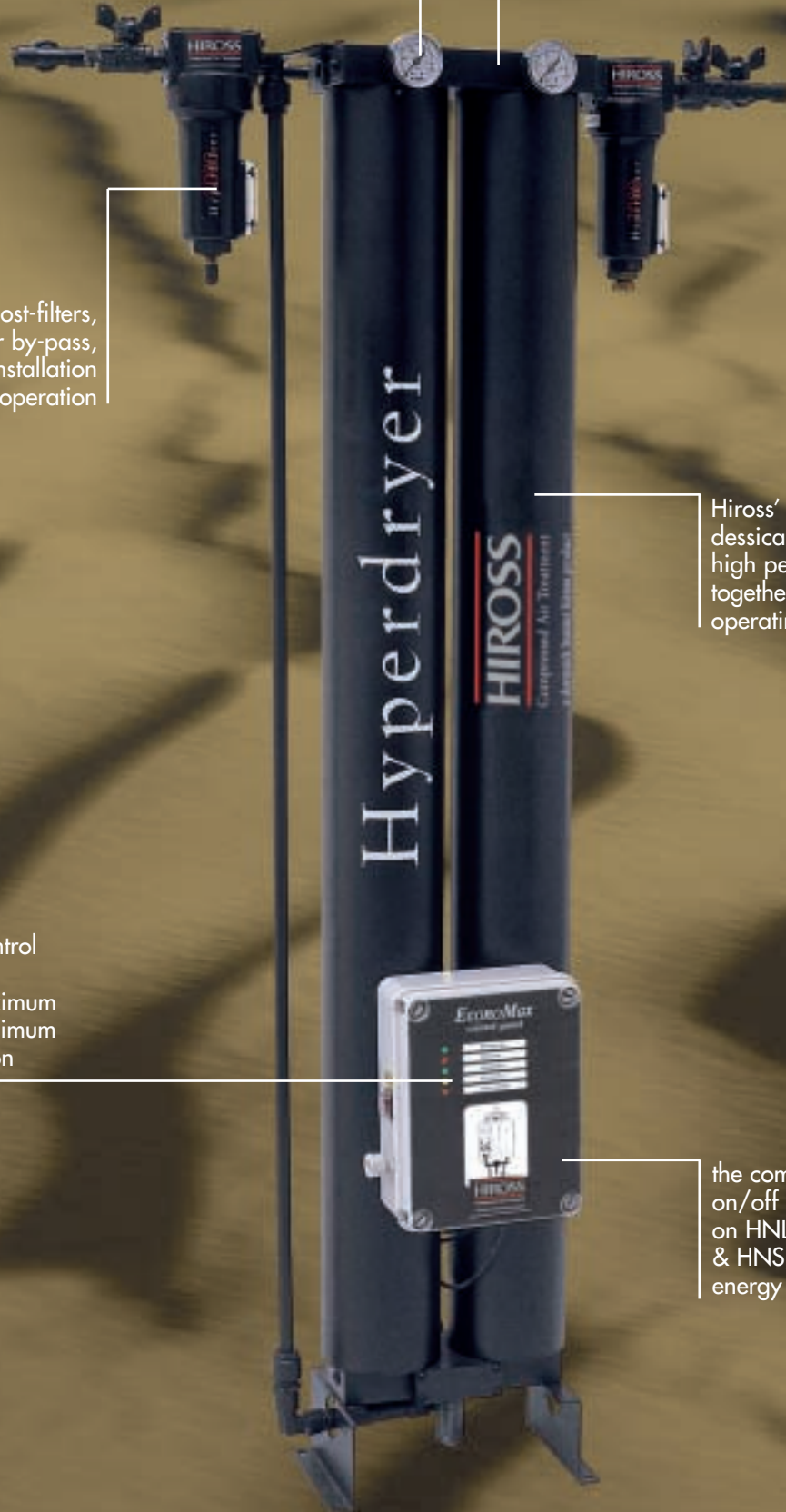
front seat piston valves, controlled by the EconoMax, guarantee maximum reliability

optional pre and post-filters, and compressed air by-pass, allow easy installation and operation

Hiross' unique Hisorb dessicant mix guarantees high performance together with a long operating life

the EconoMax control offers perfect dew point control, maximum reliability and minimum power consumption

the compressor controlled on/off function (standard on HNL, optional on HNM & HNS) permits significant energy savings



## SIMPLE TO INSTALL & MAINTAIN



pressure & dew point indicators

Hyperdryer's heatless operation ensures simple operation and maintenance.

The standard pressure gauges allow an easy check to ensure correct operation, whilst the dew point ok indicator warns against incorrect functioning.

To further facilitate operation, Hyperdryer can be specified with pre and post-filters and a compressed air by-pass.

PED approval is offered as standard (where applicable), whilst several world wide approvals are available on request.

## ADVANCED PERFORMANCE



front seat piston valves

Hisorb, Hyperdryer's environmentally friendly desiccant material, offers maximum performance in all conditions. The Hisorb is vibration filled to guarantee optimum dew point levels and a compact desiccant bed.

Front seat piston valves are fitted on all models to ensure highest reliability over time.

Significant energy savings can be achieved using the compressor controlled stand-by function, standard on HNL.

## ECONOMAX CONTROL SYSTEM



EconoMax control system

The EconoMax control system allows the user to program the dryer to achieve the exact dew point requested, whatever the conditions. This not only offers maximum performance, but also ensures significant energy savings.

EconoMax also controls valve operation, for high operational reliability.

A warning lamp alerts to the need to change the desiccant material and filter elements.

## FULL RANGE OF ACCESSORIES



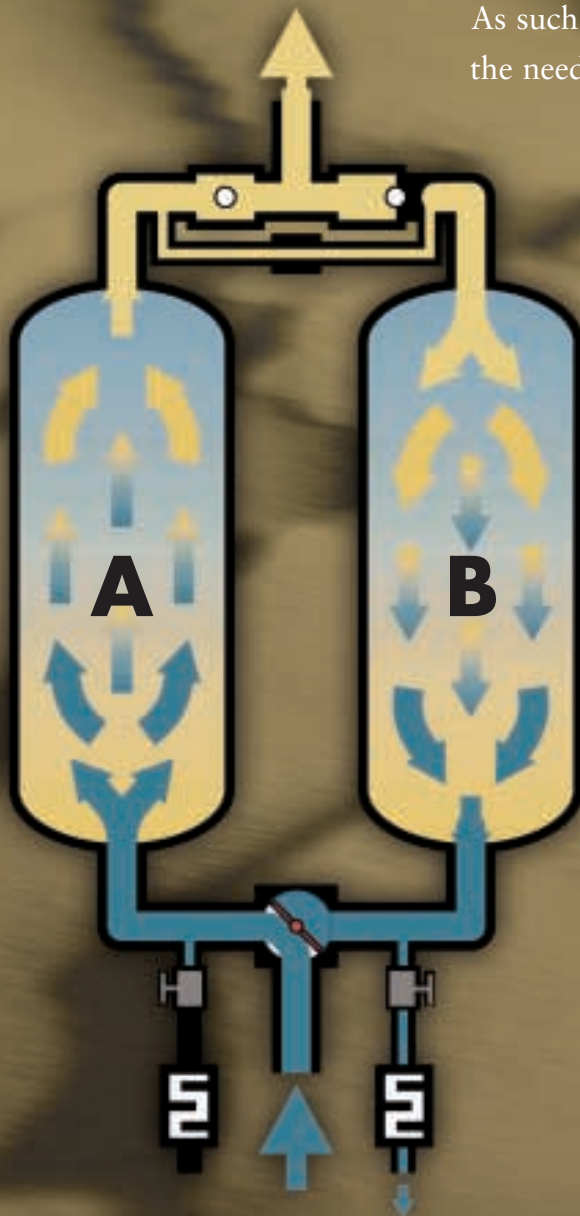
pre and post-filters, by-pass

- Heat regenerated versions for zero purge.
- Pre and post-filters and air by-pass for easy operation and maintenance.
- Dedicated – 70°C dew point models.
- Dry Control, for exact dew point control and minimum energy consumption.
- Pneumatic versions.
- Several voltage options.
- SPDT alarm contacts.

## WHY AN ADSORPTION DRYER?

Compressed air is an essential power source widely used throughout industry, and thus constitutes a key part of many production processes. However, compressed air will contain water, dirt and other impurities which, unless removed effectively, will lead to increased maintenance costs, reduced productivity and, in many cases, damaged finished products. Ever more sophisticated modern high tech industries require air which is not only clean, but also dry. And not just dry, but very dry. Hyperdryer represents a modern concept in technology, offering the very lowest dew points with minimal energy consumption.

As such Hyperdryer offers the perfect solution to the needs of ever higher product quality and ever lower production costs.



### HYPERDRYER'S ADSORPTION DRYING CONCEPT

Hyperdryer utilises heatless adsorption drying to achieve dew points of as low as  $-70^{\circ}\text{C}$ . Compressed air passes through vessel A, containing Hiross' Hisorb desiccant material which adsorbs the condensate in the air as it passes through the vessel.

When the Hisorb becomes saturated, the EconoMax control automatically switches the air flow over to vessel B, waiting in stand-by.

A small amount of dry compressed air is taken from vessel B's outlet and passed through vessel A; hereby vessel A is regenerated. When vessel B is saturated and A has regenerated, the air is again switched over to vessel A.

In this way the same desiccant can be used uninterrupted for thousands of trouble-free working hours.

# CHOOSE YOUR ULTIMATE DRYING EXPERIENCE ...

103572 / 06-04 / 1000 / R0

MODEL	Air flow		Air connect.	Dimensions (mm)			Weight (kg)	Air filter (Hiross HFN)	
	m <sup>3</sup> /min	cfm		A	B	C		Pre-	Post-
HNS001	0.08	2.94	1/2"	246	480	205	10	005S	005D
HNS002	0.17	5.89	1/2"	246	680	205	14	005S	005D
HNS003	0.33	11.8	1/2"	246	1180	205	16	005S	005D
HNS005	0.50	17.7	1/2"	246	1180	205	22	005S	005D
HNS007	0.67	23.5	1/2"	246	1480	205	30	010S	010D
HNMO10	1.0	35.3	1/2"	450	1200	240	60	010S	010D
HNMO17	1.7	58.9	1/2"	450	1270	268	110	018S	018D
HNMO23	2.3	82.4	1"	450	1600	268	180	022S	022D
HNMO33	3.3	118	1"	500	1710	320	220	045S	045D
HNL059	5.8	206	1 1/2"	880	2050	433	300	062S	062D
HNL075	7.5	265	1 1/2"	880	2450	433	350	072S	072D
HNL100	10.0	353	2"	1000	2300	528	450	122S	122D
HNL133	13.3	471	2"	1000	2800	528	650	135S	135D
HNL200	20.0	706	2 1/2"	1400	2600	630	760	205S	205D
HNL250	25.0	883	2 1/2"	1400	2800	630	1050	300S	300D

Performances refer to air at FAD 20°C/1 bar A and the following working conditions: air suction 25°C/60%RH, 7 bar g working pressure, - 40°C pressure dew point, 35°C compressed air inlet temperature. All indicated data is according to DIN ISO 7183.  
 Power supply: 230V/1Ph/50Hz (pneumatic versions available on request). It is strongly recommended to install Hiross Hyperfilters, sized as above, before and after the Hyperdryer. Models with higher air flows available on request.

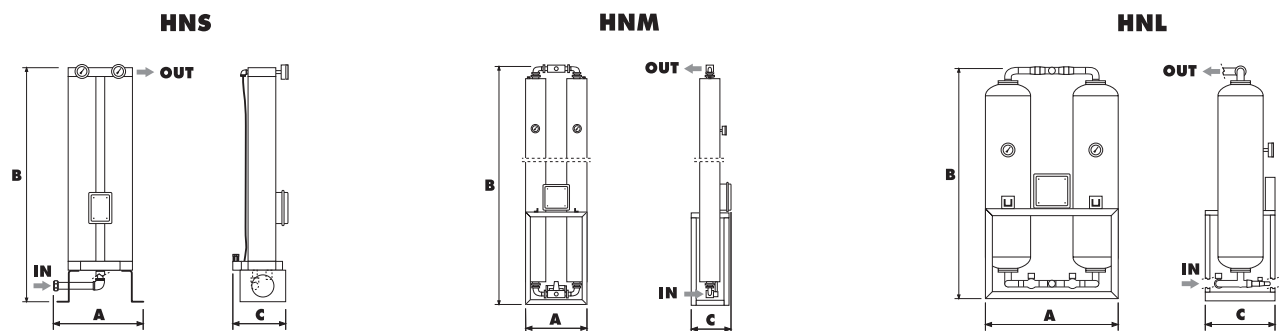
## CORRECTION FACTORS FOR DIFFERING AIR INLET TEMPERATURES & PRESSURES

A) Working pressure	bar g	4	5	6	7	8	9	10
Correction factor		<b>0.63</b>	<b>0.75</b>	<b>0.88</b>	<b>1</b>	<b>1.12</b>	<b>1.25</b>	<b>1.38</b>

B) Air inlet temperature	°C	25	30	35	40	45	50
Correction factor		<b>1.10</b>	<b>1.05</b>	<b>1</b>	<b>0.90</b>	<b>0.77</b>	<b>0.60</b>

To obtain the required air flow multiply the value at nominal conditions by the above correction factors (ie. Air flow x A x B). Hyperdryer can operate with air temperatures in the range 5-50°C and working pressures in the range 4-10 bar g. Size the dryer according to the minimum dryer inlet pressure or, if not known, 1 bar below the compressor minimum working pressure. For a precise selection, please contact your Hiross representative.



The Quality and Environment Management Systems of domnick hunter hiross S.p.A. have been approved by Lloyd's Register Quality Assurance to the following Quality and Environment Management System standards: ISO9001:2000 (Certificate LRC160001) and ISO14001:1996 (Certificate LRC160001/14).

Data contained in this publication is to be considered as indicative only. The manufacturer reserves the right to modify data without prior notice.

The Hiross product range: Aftercoolers, Separators, Filters, Refrigeration Dryers, Adsorption Dryers, Condensate Drains, Oil/Water Separators, Water Chillers, Dry Coolers.

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