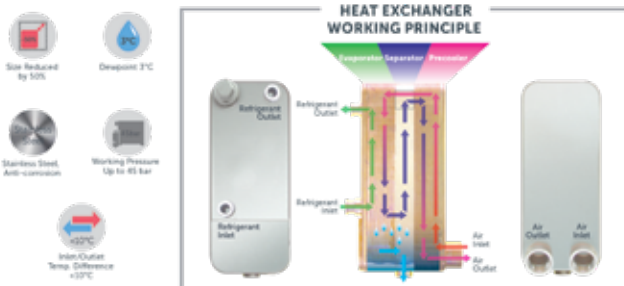


This design achieves a hyper-efficient 100 % contact between the air and refrigerant circuits, delivering state-of-the-art performance and great cooling efficiency.

The state-of-the-art 3-in-1 design features very low differential pressure delivering significant energy savings. The 3-in-1 Heat-Exchanger is compact and allows the dryer to be smaller and reduces the space required for the dryer. Dalgakiran offers a variety of 3-in-1 dryers equipped with the 3-in-1 Heat-Exchanger to meet a full range of capacity and power requirements.



Dalgakiran DK HPN range High Pressure Air Dryer Series have stainless steel brazed plate heat exchanger. It is designed for high pressure air dryers. The heat exchanger has the following sections in one module:

- Air/Air heat exchanger (Economizer)
- Air/Refrigerant heat exchanger (Evaporator)
- Water separator

With reliable stainless steel and optimized design, Dalgakiran DK HPN heat exchangers supply size reduction, anti corrosion and great heat transfer.



THE SEPARATOR EFFICIENCY

- Double centrifugation due to the bottom fin
- Reserved direction for the compressed air
- Gravity effect to the condensed water
- Special anti-return system
- Integrated separator

REFRIGERANT CIRCUIT

- Two valve regulation system (thermal and by-pass), allowing to fill properly the exchanger and giving a max. temperature to the exchanger
- High quality security test of potential leakage
- Use of hermetic compressor as standard
- High quality, long lasting components
- Quick start and reaction time



SCROLL COMPRESSOR

- Better coefficient of power
- Less energy consumption
- Higher resistance to liquid shocks

DK HPN Series

High Pressure Compressed Air Dryers

DALGAKIRAN

TECHNICAL DATA

Model	Capacity*		Connection Size	Voltage	Maximum Working Pressure	Maximum Ambient Temperature	Maximum Inlet Temperature	Dimensions (mm)			Weight
	m ³ /min	cfm			bar	°C	°C	Length	Width	Height	Kg
DK 50 HPN	0,83	29	G ¾"	230V/1/50 Hz	45	45	50	454	361	553	36
DK 90 HPN	1,50	53	G ¾"	230V/1/50 Hz	45	45	50	454	361	553	38
DK 150 HP	2,50	88	G ¾"	230V/1/50 Hz	45	45	50	453	401	623	45
DK 220 HPN	3,67	130	G ¾"	230V/1/50 Hz	45	45	50	453	401	623	45
DK 300 HPN	5,00	177	G 1 ¼"	230V/1/50 Hz	45	45	50	505	451	761	70
DK 400 HPN	6,67	236	G 1 ¼"	230V/1/50 Hz	45	45	50	505	451	761	72
DK 500 HPN	8,33	294	G 1 ¼"	230V/1/50 Hz	45	45	50	505	451	812	78
DK 575 HPN	9,58	338	G 1 ¼"	230V/1/50 Hz	45	45	50	505	451	812	80
DK 775 HPN	12,9	456	G 1 ¼"	230V/1/50 Hz	45	45	50	675	501	984	115
DK 910 HPN	15,2	537	G 1 ¼"	230V/1/50 Hz	45	45	50	675	501	984	120
DK 1000 HPN	16,7	590	G 2"	230V/1/50 Hz	45	45	50	947	727	1170	218
DK 1160 HPN	19,4	685	G 2"	230V/1/50 Hz	45	45	50	947	727	1170	220
DK 1500 HPN	25,0	883	G 2"	230V/1/50 Hz	45	45	50	947	727	1170	225
DK 1600 HPN	26,7	943	G 2"	400V/3/50Hz	45	45	50	947	797	1460	263
DK 1800 HPN	30,0	1059	G 2"	400V/3/50Hz	45	45	50	947	797	1460	265
DK 2200 HPN	36,7	1296	G 2 ½"	400V/3/50Hz	45	45	50	1162	797	1495	352
DK 2500 HPN	41,7	1473	G 2 ½"	400V/3/50Hz	45	45	50	1162	797	1495	353
DK 2700 HPN	45,0	1589	G 2 ½"	400V/3/50Hz	45	45	50	1162	797	1495	355
DK 3000 HPN	50,0	1766	G 2 ½"	400V/3/50Hz	45	45	50	1162	797	1495	422
DK 3300 HPN	55,0	1942	G 2 ½"	400V/3/50Hz	45	45	50	1162	797	1495	423
DK 3600 HPN	60,0	2119	G 2 ½"	400V/3/50Hz	45	45	50	1162	797	1495	425

- DALGAKIRAN reserves its rights to change the specifications without any prior notice.

* Nominal flow is calculated at the following conditions: Inlet Pressure: 40 bar, Inlet Temperature: 35°C Ambient Temperature 25°C for other conditions please refer to the correction factor table.

PRE FILTER (X)

Efficiency rating:
1 Micron particle
removal & 0.5mg/m³
oil removal

FINE FILTER (Y)

Efficiency rating:
0.01 Micron particle
removal & 0.01mg/m³
oil removal

PARTICLE FILTER (P)

Efficiency rating:
5 Micron particle
removal
(removes desiccant
particles after the dryer)

ACTIVATED CARBON FILTER (A)

Efficiency rating:
0.01 Micron particle
removal & 0.003 mg/m³
oil removal

CORRECTION FACTORS FOR DK-HPN SERIES

Pressure (bar)	20	25	30	35	40	45	-	-	-
F1	0,84	0,91	0,93	0,96	1	1,02	-	-	-
Ambient Temperature (°C)	-	-	-	-	25	30	35	40	45
F2	-	-	-	-	1	0,93	0,87	0,82	0,79
Inlet Temperature (°C)	-	-	-	-	35	40	45	50	-
F3	-	-	-	-	1	0,85	0,72	0,63	-

DK HPN Dryer Sizing Example:

If a compressor delivers 20 m³/min at 35 bar, the dryer inlet temperature is 40°C and the ambient temperature is 30°C, please choose your dryer as follows:

$$\text{Dryer Capacity} = 20 / 0,96 / 0,82 / 0,63 = 40,3 \text{ m}^3/\text{min}$$

The correct dryer model for this application is DK 2500 HPN.