

20-65,3
m³/min

706-2306
cfm



VARIABLE SPEED REFRIGERATED AIR DRYERS

Thanks to variable speed technology, the next-generation R513a refrigerant, and a hermetically sealed refrigeration circuit, the HRD VSD Series offers maximum efficiency, minimal energy consumption, and an environmentally friendly solution for your facility.

Refrigerated air dryers equipped with variable speed technology automatically optimize the speed of the compressor and fan motor according to the actual air demand. As a result, the system uses only the required amount of energy, effectively preventing unnecessary energy consumption.



Key Features

- Environmentally friendly
- Closed refrigerant circuit
- Variable speed (inverter) technology
- Hermetically sealed refrigerant circuit
- Integrated filters
- Touch screen controller
- Electronic zero-loss drain
- EC (electronically commutated) fan
- Reduced refrigerant gas usage
- Refrigerant-oil separator
- Condenser filter
- 10-year warranty for the aluminum plate heat exchanger

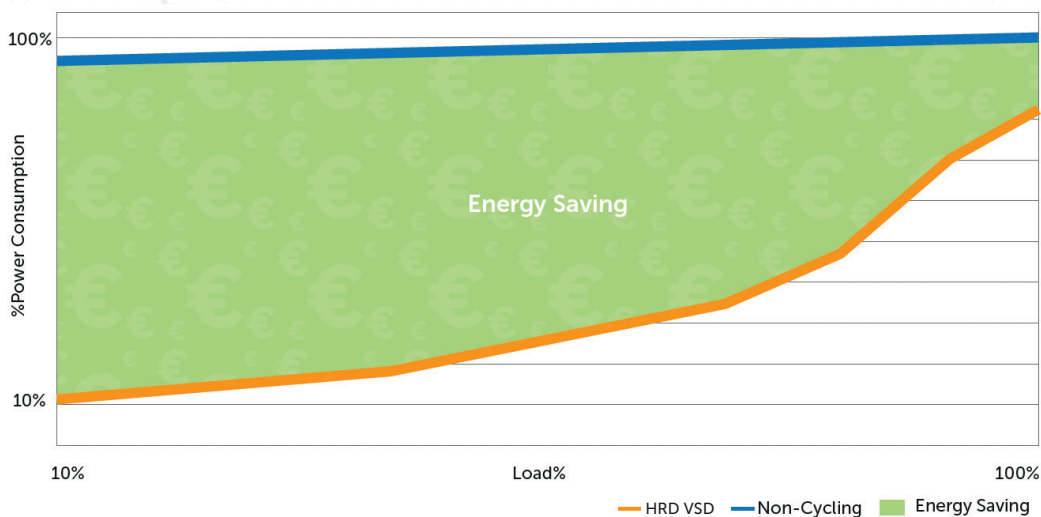


Working Principle

Thanks to reduced refrigerant gas usage, integrated filters, an oil separator, and a condenser filter, the system delivers superior energy savings. Real-time factory tests show that the HRD VSD Series consumes up to one-third less energy compared to non-cycling models. Unlike conventional fixed-speed dryers that operate continuously at full capacity, variable speed systems activate only when required, thereby providing optimal efficiency. This operating principle not only reduces energy consumption but also enables a more environmentally friendly and sustainable operation.

- The environmentally friendly R-513A refrigerant is used to increase energy efficiency and reduce environmental impact.
- Thanks to our microchannel condenser technology, HRD VSD models use 35% less refrigerant gas, which corresponds to a 35% reduction in carbon emissions.
- Factory tests show that HRD VSD reduces energy consumption by up to one third compared to conventional non-cycling dryers.
- The integrated hot gas bypass line eliminates issues such as freezing, ensuring long service life and reliable operation.
- It optimizes energy usage by delivering high performance when demand increases and low energy consumption when demand decreases.
- By preventing unnecessary operation, it significantly reduces electricity costs.
- Due to lower mechanical stress, the service life of the equipment is significantly extended.

Power Consumption Compared to Other Types of Refrigerated Air Dryers



Model	Capacity		Voltage	Connection Size	Integrated Filter and Type	Refrigerant	Dimensions (mm)		
	m ³ /min	cfm					Length	Width	Height
HRD VSD 130	20	706	400V / 3 / 50 Hz	2"	GKON1205 X / Y	R513a	800	950	1530
HRD VSD 150	30	1059	400V / 3 / 50 Hz	3"	GKON1805 X / Y	R513a	1000	950	1550
HRD VSD 170	46,3	1635	400V / 3 / 50 Hz	3"	GKON2775 X / Y	R513a	1160	780	1720
HRD VSD 190	65,3	2306	400V / 3 / 50 Hz	DN 100	GK05850M X / Y	R513a	1580	995	1900

CORRECTION FACTORS FOR HRD VSD AIR DRYERS									
Inlet Air Temperature °C	30	35	40	45	50	60	-	-	
F1	1,29	1	0,92	0,78	0,65	0,45	-	-	
Ambient Temperature °C	20	25	30	35	40	45	50	-	
F2	1,05	1	0,98	0,93	0,84	0,76	0,7	-	
Pressure (bar)	4	6	7	8	10	12	14	16	
F3	0,80	0,94	1	1,04	1,11	1,16	1,22	1,25	