

**HITACHI**  
Inspire the Next

*OIL-FREE SCREW COMPRESSORS*

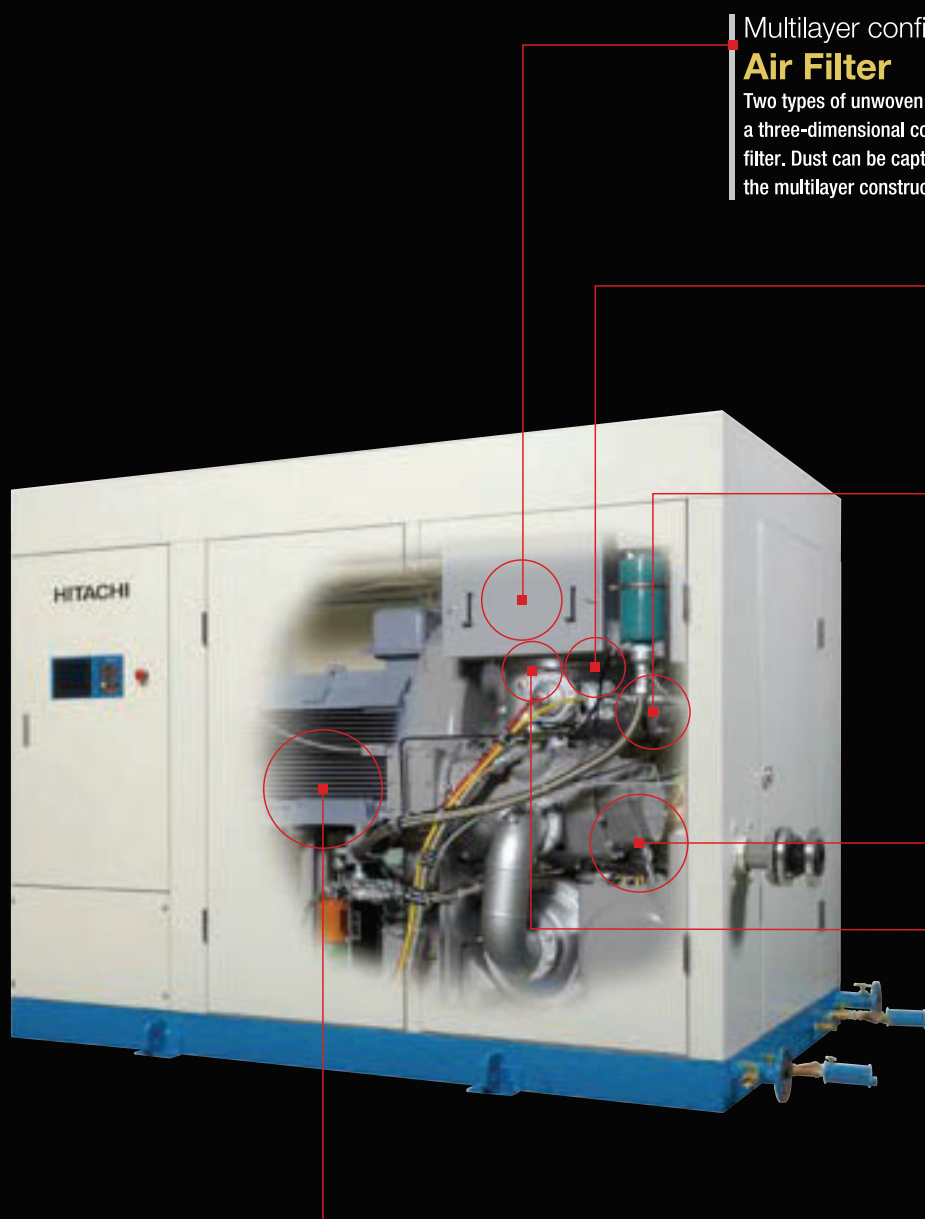
# AIR ZEUS

*SDS-U SERIES*



Hitachi Global Air Power (Changshu) Co., Ltd.

# Pursuing High Quality in Every Detail



Multilayer configuration

## Air Filter

Two types of unwoven chemical fiber, combined with a three-dimensional construction, are used for air filter. Dust can be captured three-dimensionally with the multilayer construction.



New-design **NEW**

## Discharge Silencer

providing lower noise level  
This silencer reduces irritating high-frequency noises by reducing the pressure pulsations of the compressor air.

**Check Valve** supporting longer product life

This time-proven lift-type check valve is used to prevent the backflow of air. The valve construction with a reduced number of moving and sliding parts assures longer life and higher reliability.



Highly durable **NEW**

## Capacity Regulator Valve

A simple construction that drives the intake valve by the hydraulic piston is adopted. Its excellent durability contributes to energy-saving as pressure setting range can be reduced during a load state.

**Main Motor** with **NEW** improved reliability

A totally enclosed flange-type motor is used for the main motor to improve reliability.

Environment-friendly

## Oil Capturing System

OMCS (Oil Mist Capturing System) is commonly equipped in this series. It collects smoke from the gear casing.

### ISO 8573-1 2010 Class Zero Certification

These oil-free screw compressors have been certified by TÜV Rheinland, an independent third-party test house, which is known as having the most strict criteria worldwide, as "Class 0 (zero)", meaning that it has the lowest level of exhaust emissions.

**NEW**

## Noise Control Cover in Robust Construction

preventing noise leakage  
Advanced measures are incorporated to prevent various kinds of noise such as the panel-transmitting noise and the noise leaking from the (suction) inlet and the air vent.

# AIR ZEUS OIL-FREE SCREW COMPRESSORS

## SDS-U SERIES

Energy saving[Calculation value] by 2.5% compared with Hitachi's conventional model

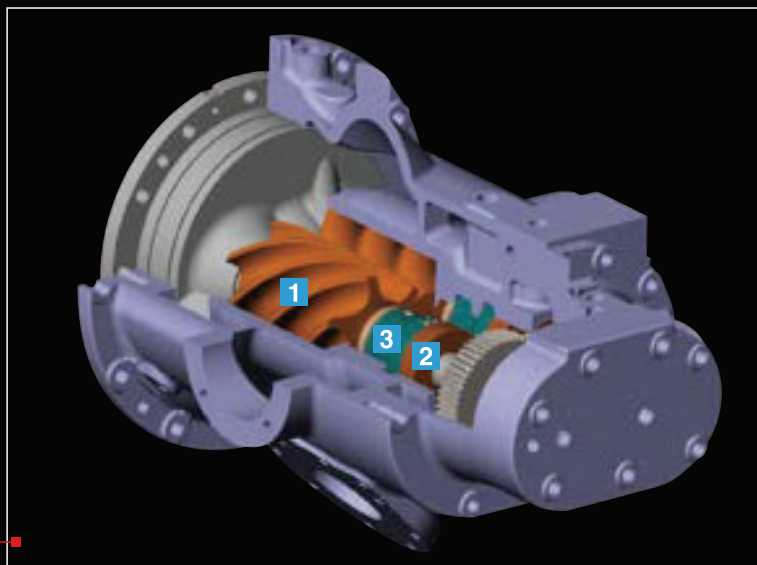
Reducing approximately  
**56,000kW**  
in energy  
consumption annually  
(Calculation value)

Reducing CO<sub>2</sub> emission by  
approximately  
**31 tons**  
annually  
\* 1  
(Calculation value)

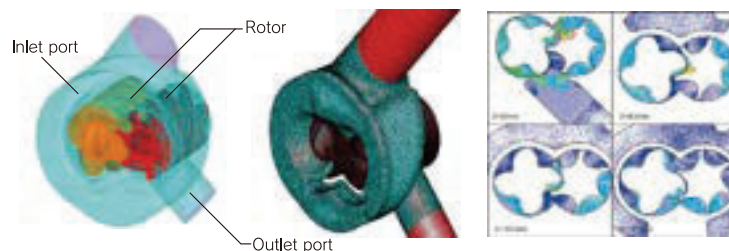
NEW

SDS-U280(280kW)

## New-Type Air Block Improving efficiency and saving energy



### Air Block Fluid Analysis applying CFD Technology



The essence of our original technologies behind abundant track record, is concentrated into profiling Air Block. The 3-D fluid analysis that makes full use of an advanced CFD (Computational Fluid Dynamics) technology simulates to assist in optimizing shapes of air flow path, inlet, outlet and rotor.

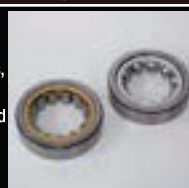
#### 1 3-D Screw Rotor Compensating Thermal Deformation

A 3-D screw rotor (patented) that compensates for the thermal deformation distribution from the difference in air temperature between the inlet and outlet sides. The rotor, for which the high precision machining technology is applied, has a surface coated with a new resin material (patented), which gives the rotor a high level of durability.



#### 2 Long-Life Bearings

In addition to high quality materials and high precision technology used for the bearings, advanced analysis technologies and lubricating theory are applied to select the type of lubricant, cleanliness, spray nozzle shape and other items affecting the bearings. Every effort is made to give the bearings a longer life.



#### 3 Highly Reliable Shaft Seal

Through the use of a wear-resistant floating seal, air leakage can be sealed for a long time. High quality thread seals are also employed for bearings, providing double prevention against oil mist entering the compression chamber.



\* 1: CO<sub>2</sub> emission coefficient of 0.555 kg CO<sub>2</sub>/kWh (compared with Hitachi's conventional model)

# Energy-Efficient Control Functions Empowered by Multi-Control System

## New and Highly-Functional Control Panel featuring quick and simple operation

An easy-to-watch, highly maneuverable and color LCD touch panel is adopted. Quick navigation function works to instantly reach your desired screen and facilitates your operation. It is capable of setting various parameters and displaying various histories as well as trend graphs. HELP function also has been upgraded. Multi-control, data communication and remote monitoring can be selected as optional functions.



### Easy-to-Watch Monitoring Display

MONITOR



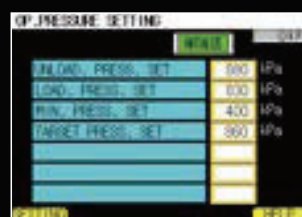
Operation monitoring



Measured value display

### Simple Setting Display

SETTING



Input



10-key input

### Operation History (Value/Graph)

HISTORY



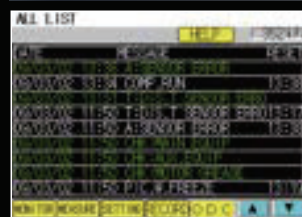
Operation history display  
(set and measured values)



Trend graphs display

### Trip History (Detail/List)

HISTORY



Trip history list display



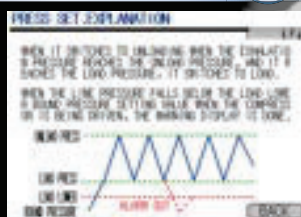
Trip history detail display

### Easy-to-Understand HELP Function

HELP



HELP display



## A Variety of Optional Functions

### Multiple Unit Control Function

Multiple unit control function can be installed in a control panel to operate up to nine compressor units.

### Communication Function

An office PC can remotely access and obtain operating data, when communication ports are mounted on control panels.

### Remote Monitoring Function

On a LAN basis, multiple PCs can remotely monitor operating status.



# AIR ZEUS OIL-FREE SCREW COMPRESSORS

## SDS-U SERIES



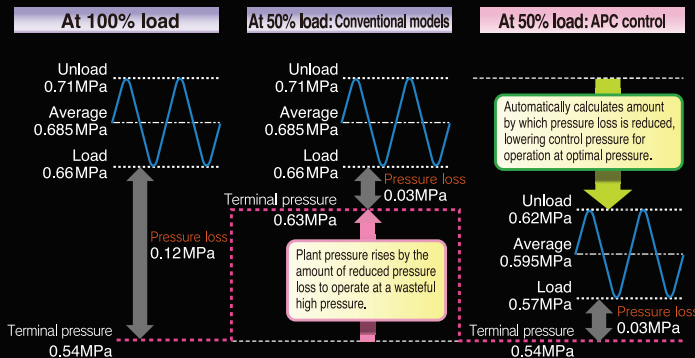
### Power Saving Control (Standard)

Capable of saving energy and reducing CO<sub>2</sub> emission by controlling energy consumption multi-functionally

### End Pressure Control with APC (Active Power Control)

SETTING

Air pressure discharged from a compressor loses as air decreases through various equipment. It automatically calculates and controls its pressure setting value to maintain constant end pressure to a user, reducing redundant high pressure operation and contributing to energy saving.



#### Tentative calculation \*2

SDS-U280(280kW)

Average Load Factor: 70%

9% Energy Saving  
[Calculation value]



Reducing approximately  
**163,000kW**  
in energy  
consumption annually  
[Calculation value]

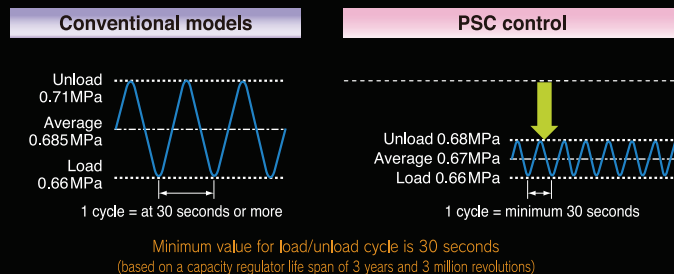
Reducing CO<sub>2</sub> emission by  
approximately  
**91 tons**  
annually  
[Calculation value]

\*2: For annual operation of 8,000 hours under conditions a CO<sub>2</sub> emission coefficient of 0.555 kg CO<sub>2</sub>/kWh; operating pressure of 0.69 MPa; and the lowest end pressure of 0.54 MPa when 100% loaded and pressure loss of 0.12 MPa (compared with Hitachi's conventional model).

### Precision Pressure Control with PSC (Power Save Control)

SETTING

It can automatically control pressure range while ensuring a specified load-unload cycle time, which leads to reducing abundant air pressure and contributing to energy saving.



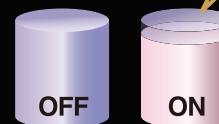
To achieve a 30-second load/unload cycle, the unload pressure is automatically lowered to operate at the lowest pressure.

#### Tentative calculation \*3

SDS-U280(280kW)

Average Load Factor: 70%

2% Energy Saving  
[Calculation value]



Reducing approximately  
**43,600kW**  
in energy  
consumption annually  
[Calculation value]

Reducing CO<sub>2</sub> emission by  
approximately  
**24 tons**  
annually  
[Calculation value]

\*3: For annual operation of 8,000 hours under conditions a CO<sub>2</sub> emission coefficient of 0.555 kg CO<sub>2</sub>/kWh; operating pressure of 0.69 MPa; and pressure range of 0.05 MPa → 0.02 MPa (compared with Hitachi's conventional model).

### Automatic Start/Stop with ASS (Auto Start & Stop)

SETTING

A compressor automatically stops as line pressure rises up to a certain preset pressure and also unload state continues over a specified time period. It automatically starts up when the line pressure drops to the preset pressure level.

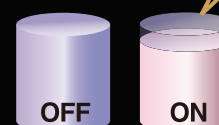


#### Tentative calculation \*4

SDS-U280(280kW)

Daily Continuous  
Unload Time: 20%

5% Energy Saving  
[Calculation value]



Reducing approximately  
**85,800kW**  
in energy  
consumption annually  
[Calculation value]

Reducing CO<sub>2</sub> emission by  
approximately  
**48 tons**  
annually  
[Calculation value]

\*4: For annual operation of 8,000 hours under conditions a CO<sub>2</sub> emission coefficient of 0.555 kg CO<sub>2</sub>/kWh; operating pressure of 0.69 MPa (compared with Hitachi's conventional model).

# Products Lineup

**AIR ZEUS** OIL-FREE SCREW COMPRESSORS  
**SDS-U SERIES**

## Standard specification for double-stage model

Frequency			50Hz												
Discharge pressure(MPaG)	Inlet air conditions		20°C, RH0%, atmospheric pressure(0.1MPa(A))												
	Frame No.		UH20E	UH20D	UH20C	UH20B	UH20A	UH31D	UH31C	UH31B	UH31A	UH42D	UH42C	UH42B	UH42A
	Model		SDS-U90-C	SDS-U115-C	SDS-U145-C	SDS-U160-C	SDS-U185-C	SDS-U200-C	SDS-U220-C	SDS-U250-C	SDS-U280-C	SDS-U315-C	SDS-U350-C	SDS-U390-C	SDS-U440-C
0.7 (Max 0.71)	Capacity	m <sup>3</sup> /h	1,000	1,295	1,550	1,780	1,990	2,245	2,480	2,770	3,110	3,630	3,970	4,380	4,910
		m <sup>3</sup> /min	16.7	21.6	25.8	29.7	33.1	37.4	41.3	46.2	51.8	60.5	66.2	73.0	81.8
	Output	kW	90	115	145	160	185	200	220	250	280	315	350	390	440
	Cooling water flow	m <sup>3</sup> /h	12	14	16	18	19	23	25	27	30	34	37	42	46
0.8 (Max 0.86)	Model		-	-	SDS-U145-CS	SDS-U165-CS	SDS-U205-CS	-	SDS-U220-CS	SDS-U245-CS	SDS-U270-CS	SDS-U315-CS	SDS-U355-CS	SDS-U400-CS	SDS-U450-CS
	Capacity	m <sup>3</sup> /h	-	-	1,425	1,590	1,990	-	2,190	2,480	2,770	3,180	3,630	4,080	4,585
		m <sup>3</sup> /min	-	-	23.7	26.5	33.1	-	36.5	41.3	46.2	53.0	60.5	68.0	76.4
	Output	kW	-	-	145	162	203	-	218	245	272	306	342	387	428
0.8 (Max 0.93)	Model		SDS-U90-CH	SDS-U110-CH	SDS-U132-CH	SDS-U150-CH	SDS-U180-CH	SDS-U185-CH	SDS-U200-CH	SDS-U235-CH	SDS-U270-CH	SDS-U300-CH	SDS-U340-CH	SDS-U380-CH	SDS-U430-CH
	Capacity	m <sup>3</sup> /h	900	1,070	1,360	1,520	1,770	1,825	2,100	2,360	2,670	3,090	3,490	3,930	4,360
		m <sup>3</sup> /min	15.0	17.8	22.7	25.3	29.5	30.4	35.0	39.3	44.5	51.5	58.2	65.5	72.7
	Output	kW	90	110	132	150	180	180	200	235	270	300	340	380	430
1.0 (Max 1.03)	Model		SDS-U90-CU	SDS-U110-CU	SDS-U140-CU	SDS-U155-CU	SDS-U180-CU	SDS-U185-CU	SDS-U210-CU	SDS-U240-CU	SDS-U275-CU	SDS-U300-CU	SDS-U340-CU	SDS-U390-CU	SDS-U430-CU
	Capacity	m <sup>3</sup> /h	820	990	1,225	1,420	1,680	1,680	1,900	2,160	2,470	2,800	3,155	3,595	4,000
		m <sup>3</sup> /min	13.7	16.5	20.4	23.7	28.0	28.0	31.7	36.0	41.2	46.7	52.6	59.9	66.7
	Output	kW	90	110	140	155	185	185	210	240	275	300	340	390	430
Frequency			60Hz												
Discharge pressure(MPaG)	Inlet air conditions		20°C, RH0%, atmospheric pressure(0.1MPa(A))												
	Frame No.		UH20E	UH20D	UH20C	UH20B	UH20A	UH31D	UH31C	UH31B	UH31A	UH42D	UH42C	UH42B	UH42A
	Model		SDS-U90-C	SDS-U115-C	SDS-U145-C	SDS-U160-C	SDS-U185-C	SDS-U200-C	SDS-U220-C	SDS-U250-C	SDS-U280-C	SDS-U315-C	SDS-U350-C	SDS-U390-C	SDS-U440-C
0.7 (Max 0.71)	Capacity	m <sup>3</sup> /h	1,010	1,290	1,560	1,775	2,010	2,220	2,500	2,810	3,115	3,630	3,935	4,435	4,865
		m <sup>3</sup> /min	16.8	21.5	26.0	29.6	33.5	37.0	41.7	46.8	51.9	60.5	65.6	73.9	81.1
	Output	kW	90	115	145	160	185	200	220	250	280	315	350	390	440
	Cooling water flow	m <sup>3</sup> /h	12	14	16	18	19	23	25	27	30	34	37	42	46
0.8 (Max 0.86)	Model		-	-	SDS-U145-CS	SDS-U165-CS	SDS-U205-CS	-	SDS-U220-CS	SDS-U245-CS	SDS-U270-CS	SDS-U315-CS	SDS-U355-CS	SDS-U400-CS	SDS-U450-CS
	Capacity	m <sup>3</sup> /h	-	-	1,405	1,560	2,010	-	2,155	2,505	2,810	3,180	3,630	4,080	4,605
		m <sup>3</sup> /min	-	-	23.4	26.0	33.5	-	35.9	41.7	46.8	53.0	60.5	68.0	76.7
	Output	kW	-	-	143	158	205	-	215	245	273	309	344	382	429
0.8 (Max 0.93)	Model		SDS-U90-CH	SDS-U110-CH	SDS-U132-CH	SDS-U150-CH	SDS-U180-CH	SDS-U185-CH	SDS-U200-CH	SDS-U235-CH	SDS-U270-CH	SDS-U300-CH	SDS-U340-CH	SDS-U380-CH	SDS-U430-CH
	Capacity	m <sup>3</sup> /h	900	1,055	1,350	1,530	1,810	1,830	2,070	2,360	2,690	3,090	3,505	3,890	4,390
		m <sup>3</sup> /min	15.0	17.6	22.5	25.5	30.2	30.5	34.5	39.3	44.8	51.5	58.4	64.8	73.2
	Output	kW	90	110	132	150	180	180	200	235	270	300	340	380	430
1.0 (Max 1.03)	Model		SDS-U90-CU	SDS-U110-CU	SDS-U140-CU	SDS-U155-CU	SDS-U180-CU	SDS-U185-CU	SDS-U210-CU	SDS-U240-CU	SDS-U275-CU	SDS-U300-CU	SDS-U340-CU	SDS-U390-CU	SDS-U430-CU
	Capacity	m <sup>3</sup> /h	815	970	1,210	1,390	1,680	1,685	1,895	2,100	2,460	2,820	3,185	3,610	4,045
		m <sup>3</sup> /min	13.6	16.2	20.2	23.2	28.0	28.1	31.6	35.0	41.0	47.0	53.1	60.2	67.4
	Output	kW	90	110	140	155	185	185	210	240	275	300	340	390	430
Motor Type			Totally enclosed fan cooled type												
Oil tank capacity		L	70									100			
Port size	Air outlet		21/3" (65A)						3" (80A)			4" (100A)			
	Water inlet & outlet		2" (50A)						21/2" (65A)			3" (80A)			
Dimensions	Length	mm	3,000						3,200			3,800			
	Width	mm	1,700						1,700			1,950			
	Height	mm	2,050						2,200			2,300			

Notes: 1. Capacity shows the corresponding values in terms of the suction state of compressor. 2. Discharge pressure shows gauge pressure. 3. Output indicates nominal output of compressor.

# AIR ZEUS INVERTER SDS-UV SERIES

OIL-FREE SCREW COMPRESSORS



## Standard specification for single-stage model

Frequency			50Hz												
Discharge pressure(MPa(g))	Inlet air conditions		20°C, RH0%, atmospheric pressure (0.1MPa(A))												
	Frame number		UH2E	UH2D	UH2C	UH2B	UH2A	UH3D	UH3C	UH3B	UH3A	UH4D	UH4C	UH4B	UH4A
	Model		SDS-U55L-C	SDS-U75L-C	SDS-U90L-C	SDS-U110L-C	-	SDS-U132L-C	SDS-U160L-C	SDS-U180L-C	-	SDS-U200L-C	SDS-U240L-C	SDS-U270L-C	SDS-U280L-C
0.25 (Max 0.25)	Capacity	m3/h	955	1,250	1,565	1,860	-	2,290	2,710	3,010	-	3,475	4,120	4,700	4,840
		m3/min	15.9	20.8	26.1	31.0	-	38.2	45.2	50.2	-	57.9	68.7	78.3	80.7
	Output	kW	55	75	90	110	-	132	160	180	-	200	240	270	280
	Cooling water flow	m3/h	7	8	10	13	-	16	17	20	-	25	28	30	32
0.34 (Max 0.35)	Model		-	SDS-U75L-CH	SDS-U95L-CH	SDS-U110L-CH	SDS-U132L-CH	-	SDS-U145L-CH	SDS-U185L-CH	SDS-U210L-CH	-	SDS-U240L-CH	SDS-U275L-CH	SDS-U315L-CH
	Capacity	m3/h	-	1,005	1,295	1,505	1,745	-	2,070	2,550	2,825	-	3,385	3,840	4,360
		m3/min	-	16.8	21.6	25.1	29.1	-	34.5	42.5	47.1	-	56.4	64.0	72.7
	Output	kW	-	75	95	110	132	-	145	185	210	-	240	275	315
	Cooling water flow	m3/h	-	8	10	13	15	-	18	21	25	-	28	33	37
Frequency			60Hz												
Discharge pressure(MPa(g))	Inlet air conditions		20°C, RH0%, atmospheric pressure (0.1MPa(A))												
	Frame number		UH2E	UH2D	UH2C	UH2B	UH2A	UH3D	UH3C	UH3B	UH3A	UH4D	UH4C	UH4B	UH4A
	Model		SDS-U55L-C	SDS-U75L-C	SDS-U90L-C	SDS-U110L-C	-	SDS-U132L-C	SDS-U160L-C	SDS-U180L-C	-	SDS-U200L-C	SDS-U240L-C	SDS-U270L-C	SDS-U280L-C
0.25 (Max 0.25)	Capacity	m3/h	960	1,255	1,535	1,865	-	2,290	2,730	3,015	-	3,495	4,170	4,680	4,810
		m3/min	16.0	20.9	25.6	31.1	-	38.2	45.5	50.3	-	58.3	69.5	78.0	80.2
	Output	kW	55	75	90	110	-	132	160	180	-	200	240	270	280
	Cooling water flow	m3/h	7	8	10	13	-	16	17	20	-	25	28	30	32
0.34 (Max 0.35)	Model		-	SDS-U75L-CH	SDS-U95L-CH	SDS-U110L-CH	SDS-U132L-CH	-	SDS-U145L-CH	SDS-U185L-CH	SDS-U210L-CH	-	SDS-U240L-CH	SDS-U275L-CH	SDS-U315L-CH
	Capacity	m3/h	-	975	1,290	1,510	1,770	-	2,085	2,580	2,830	-	3,385	3,895	4,375
		m3/min	-	16.3	21.5	25.2	29.5	-	34.8	43.0	47.2	-	56.4	64.9	72.9
	Output	kW	-	75	95	110	132	-	145	185	210	-	240	275	315
	Cooling water flow	m3/h	-	8	10	13	15	-	18	21	25	-	28	33	37
Motor Type			Totally enclosed fan cooled type												
Oil tank capacity		L	70									100			
Port size	Air outlet		3" (80A)						4" (100A)				6" (150A)		
	Water inlet & outlet		11/2" (40A)						2" (50A)				21/2" (65A)		
Dimensions	Length	mm	3,000						3,200				3,800		
	Width	mm	1,700						1,700				1,950		
	Height	mm	2,050						2,200				2,300		

Notes: 1. Capacity shows the corresponding values in terms of the suction state of compressor. 2. Discharge pressure shows gauge pressure. 3. Output indicates nominal output of compressor.

# Products Lineup

**AIR ZEUS** OIL-FREE SCREW COMPRESSORS  
**SDS-U SERIES**



## Standard specification for double-stage model

Frequency		50/60Hz												
Discharge pressure(MPaG)	Inlet air conditions		20°C, RH0%, atmospheric pressure (0.1MPa(A))											
	Frame No.		UH20E	UH20D	UH20C	UH20B	UH20A	UH31D	UH31C	UH31B	UH31A	UH42D	UH42C	UH42B
	Model		SDS-UV90-C	SDS-UV115-C	SDS-UV145-C	SDS-UV160-C	SDS-UV185-C	SDS-UV200-C	SDS-UV220-C	SDS-UV250-C	SDS-UV280-C	SDS-UV315-C	SDS-UV350-C	SDS-UV390-C
0.7 (Max 0.71)	Capacity	m <sup>3</sup> /h	1,010	1,290	1,560	1,775	2,010	2,220	2,500	2,810	3,115	3,630	3,935	4,435
	Output	kW	90	115	145	160	185	200	220	250	280	315	350	390
	Cooling water flow	m <sup>3</sup> /h	12	14	16	18	19	23	25	27	30	34	37	42
	Model		-	-	SDS-UV145-CS	SDS-UV165-CS	SDS-UV205-CS	-	SDS-UV220-CS	SDS-UV245-CS	SDS-UV270-CS	SDS-UV315-CS	SDS-UV355-CS	SDS-UV400-CS
0.8 (Max 0.86)	Capacity	m <sup>3</sup> /h	-	-	1,405	1,560	2,010	-	2,155	2,505	2,810	3,180	3,630	4,080
	Output	kW	-	-	143	158	205	-	215	245	273	309	344	382
	Cooling water flow	m <sup>3</sup> /h	-	-	16	18	21	-	25	27	30	35	39	43
	Model		SDS-UV90-CH	SDS-UV110-CH	SDS-UV132-CH	SDS-UV150-CH	SDS-UV180-CH	SDS-UV185-CH	SDS-UV200-CH	SDS-UV235-CH	SDS-UV270-CH	SDS-UV300-CH	SDS-UV340-CH	SDS-UV380-CH
0.8 (Max 0.93)	Capacity	m <sup>3</sup> /h	900	1,055	1,350	1,530	1,810	1,830	2,070	2,360	2,690	3,090	3,505	3,890
	Output	kW	90	110	132	150	180	180	200	235	270	300	340	380
	Cooling water flow	m <sup>3</sup> /h	12	14	16	18	21	23	25	27	30	35	39	43
	Model		SDS-UV90-CU	SDS-UV110-CU	SDS-UV140-CU	SDS-UV155-CU	SDS-UV180-CU	SDS-UV185-CU	SDS-UV210-CU	SDS-UV240-CU	SDS-UV275-CU	SDS-UV300-CU	SDS-UV340-CU	SDS-UV390-CU
1.0 (Max 1.03)	Capacity	m <sup>3</sup> /h	815	970	1,210	1,390	1,680	1,685	1,895	2,100	2,460	2,820	3,185	3,610
	Output	kW	90	110	140	155	185	185	210	240	275	300	340	390
	Cooling water flow	m <sup>3</sup> /h	12	14	16	18	21	23	25	28	31	37	41	44
	Model		SDS-UV90-CU	SDS-UV110-CU	SDS-UV140-CU	SDS-UV155-CU	SDS-UV180-CU	SDS-UV185-CU	SDS-UV210-CU	SDS-UV240-CU	SDS-UV275-CU	SDS-UV300-CU	SDS-UV340-CU	SDS-UV390-CU
Motor Type		Totally enclosed fan cooled type												
Oil tank capacity		L	70						100					
Port size	Air outlet		2 1/2" (65A)						3" (80A)					
	Water inlet & outlet		2" (50A)						2 1/2" (65A)					
Dimensions	Length	mm	3,000						3,200					
	Width	mm	1,700						1,700					
	Height	mm	2,050						2,200					

Notes: 1. Capacity shows the corresponding values in terms of the suction state of compressor. 2. Discharge pressure shows gauge pressure. 3. Output indicates nominal output of compressor.



# AIR ZEUS INVERTER SDS-UV SERIES

OIL-FREE SCREW COMPRESSORS

## 1 Conserves energy with rotation speed control by the inverter

The inverter suppresses fluctuations in discharge pressure to about 0.01 MPa, thereby reducing discharge pressure and power consumption. This permits energy savings of about 14% (Calculation value) compared to two-step devices when the load ratio is 60%. \*1

Reduce average operation pressure



Reduced power consumption

\*1: Compared with the 185 kW class model from Hitachi

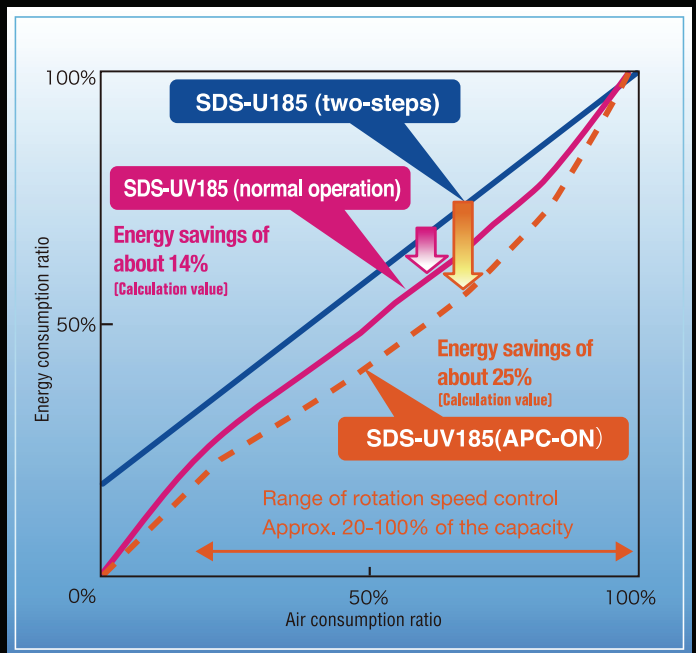
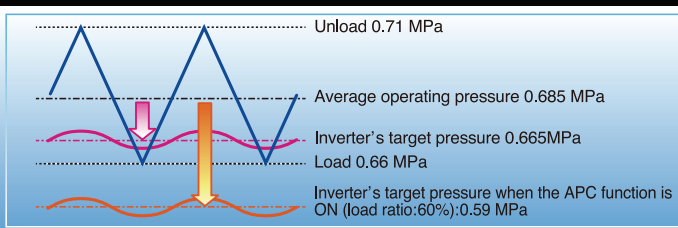
## 2 Hitachi's unique APC control has been added, for saving energy further

Addition of Hitachi's unique Active Power Control (APC) function permits control of the end pressure, which enables greater energy savings of about 25% (Calculation value) compared to two-step devices when the load ratio is 60%. \*2

\*2: Compared with Hitachi 185 kW class, in case of single-stage operation at 0.69 MPa specification and 0.12 MPa pressure loss at 100% load factor.

## 3 Wide range of rotation speed control

The rotation speed may be controlled at about 20-100% of the capacity. \*3 \*3: Applies to operation at 0.69 MPa



## Standard specification for double-stage model (Inverter)

Frequency			50/60Hz												
Discharge pressure[MPaG]	Inlet air conditions		20°C, RH0%, atmospheric pressure (0.1MPa(A))												
	Frame number		UH2E	UH2D	UH2C	UH2B	UH2A	UH3D	UH3C	UH3B	UH3A	UH4D	UH4C	UH4B	UH4A
	Model		SDS-UV55L-C	SDS-UV75L-C	SDS-UV90L-C	SDS-UV110L-C	-	SDS-UV132L-C	SDS-UV160L-C	SDS-UV180L-C	-	SDS-UV200L-C	SDS-UV240L-C	SDS-UV270L-C	SDS-UV280L-C
0.25 (Max 0.25)	Capacity	m3/h	960	1,255	1,535	1,865	-	2,290	2,730	3,015	-	3,495	4,170	4,680	4,810
		m3/min	16.0	20.9	25.6	31.1	-	38.2	45.5	50.3	-	58.3	69.5	78.0	80.2
	Output	kW	55	75	90	110	-	132	160	180	-	200	240	270	280
	Cooling water flow	m3/h	7	8	10	13	-	16	17	20	-	25	28	30	32
0.34 (Max 0.35)	Model		-	SDS-UV75L-CH	SDS-UV95L-CH	SDS-UV110L-CH	SDS-UV132L-CH	-	SDS-UV145L-CH	SDS-UV185L-CH	SDS-UV210L-CH	-	SDS-UV240L-CH	SDS-UV275L-CH	SDS-UV315L-CH
	Capacity	m3/h	-	975	1,290	1,510	1,770	-	2,085	2,580	2,830	-	3,385	3,895	4,375
		m3/min	-	16.3	21.5	25.2	29.5	-	34.8	43.0	47.2	-	56.4	64.9	72.9
	Output	kW	-	75	95	110	132	-	145	185	210	-	240	275	315
	Cooling water flow	m3/h	-	8	10	13	15	-	18	21	25	-	28	33	37
Motor Type			Totally enclosed fan cooled type												
Oil tank capacity		L	70									100			
Port size	Air outlet		3" (80A)						4" (100A)			6" (150A)			
	Water inlet & outlet		1 1/2" (40A)						2" (50A)			2 1/2" (65A)			
Dimensions	Length	mm	3,000						3,200			3,800			
	Width	mm	1,700						1,700			1,950			
	Height	mm	2,050						2,200			2,300			

Notes: 1. Capacity shows the corresponding values in terms of the suction state of compressor. 2. Discharge pressure shows gauge pressure. 3. Output indicates nominal output of compressor.



Suitable for dry oil-free air compressor with high temperature exhaust

Data monitoring of inlet pressure, outlet temperature, regeneration temperature, cooling temperature and dew point is realized by sensors.

Using the heat discharged by the air compressor for heat regeneration, it is a type of dryer with remarkable energy-saving effect (widely used in pharmaceutical, steel, chemical and electronic industries)

Using PLC smart control, combined with color touch screen, it has a good man-machine interface, easy to operate, and can more flexibly meet the requirements of customers

The designed pressure dew point of product air is  $-20^{\circ}\text{C}$ , and the pressure dew point  $-40^{\circ}\text{C}$  dryer can also be customized according to user needs

Equipped with a complete adsorbent comprehensive test platform, optimize the high-quality adsorbent for the heat of compression dryer

Make full use of the waste heat discharged by the oil-free air compressor to regenerate the adsorbent, which significantly reduces the power consumption.

Compressed air for regeneration is returned to the inlet of the adsorption tower, and compressed air is not consumed in the regeneration process, so zero air loss of the dryer is realized.

#### Example of proposal [a semiconductor factory]

#### Zero Air Loss Heat of Compression

Power consumption  
(including compressed air consumption)

**2,000kWh/year**

saving

**99.6%**

#### Heatless regeneration type (14.5% air consumption)

Power consumption  
(including compressed air consumption)

**571,300kWh/year**

Power consumption  
(including compressed air consumption)

**569,300kWh/year saving 99.6%**

Remarks: Comparison of Heatless regeneration type and Zero Air Loss Heat of Compression type

Design conditions: Airflow  $81.8\text{ m}^3/\text{min}$ , Inlet pressure  $0.7\text{ MPaG}$ , Inlet temperature  $160^{\circ}\text{C}$ , Outlet pressure dew point  $-20^{\circ}\text{C}$ , Operation time:  $8000\text{ h/year}$   
Compressor: oil free screw fixed speed type / the cost of consumable parts is not included in the operation cost.

# AIR ZEUS OIL-FREE SCREW COMPRESSORS

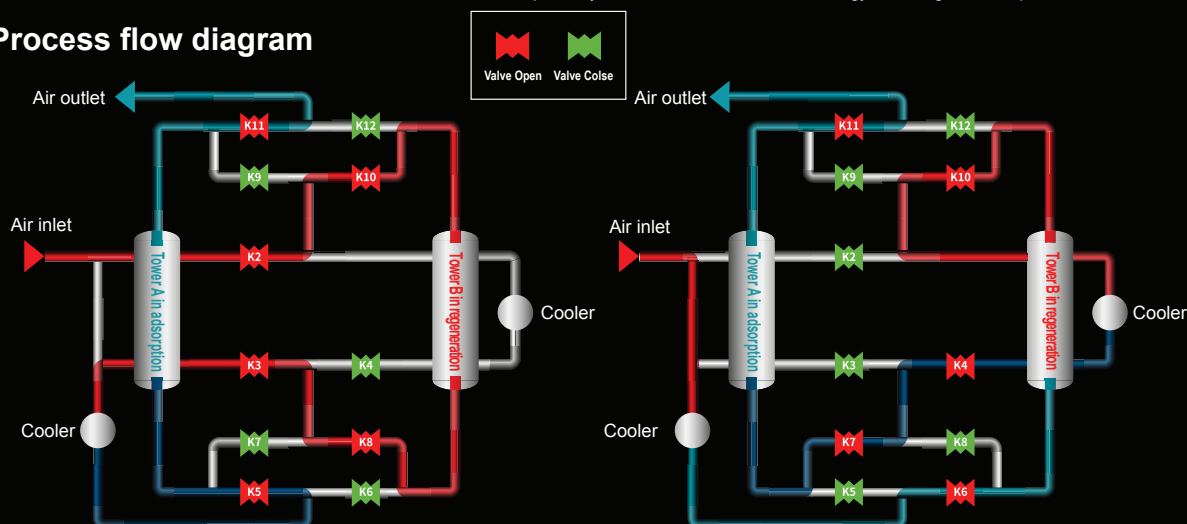
## SDS-U SERIES

Touch panel



During the operation of the air compressor, some mechanical energy will be converted into heat energy, that is heat of compression energy. This part of heat energy increases the discharge temperature. Generally, the discharge temperature of dry oil-free compressor can reach 150~180 °C. According to the currently widely used compressed air purification process, the compressed air needs to be cooled before further drying (purification), and a large amount of heat energy carried by the high-temperature discharge by the compressor is wasted. If this part of heat energy can be used to heat and regenerate the adsorbent, the adsorption dryer can consume zero or less energy in the regeneration process.

Process flow diagram



Technical Data Sheet

Model	Nominal Capacity m <sup>3</sup> /min	Diameter of Air connection	Cooling water connection	Power supply V/Ph/Hz	Rated power kW	Max. Cooling water consumption (T/h)	Overall dimension L×W×H(mm)	Weight kg
HNE-150RHS	15	DN50	DN65	220/1/50	0.25	19.1	2100×1100×2397	1800
HNE-200RHS	20	DN65	DN65	220/1/50	0.25	25.5	2480×1250×2595	2375
HNE-220RHS	22	DN65	DN65	220/1/50	0.25	28.0	2480×1250×2595	2425
HNE-250RHS	25	DN65	DN65	220/1/50	0.25	31.9	2480×1250×2595	2500
HNE-350RHS	35	DN80	DN65	220/1/50	0.25	44.6	2600×1300×2661	2950
HNE-450RHS	45	DN100	DN65	220/1/50	0.25	57.4	2700×1500×2667	3450
HNE-500RHS	50	DN100	DN65	220/1/50	0.25	63.8	2700×1500×2667	3600
HNE-600RHS	60	DN100	DN65	220/1/50	0.25	76.5	2850×1500×2680	4000
HNE-700RHS	70	DN125	DN65	220/1/50	0.25	78.2	3550×1850×2839	4250
HNE-800RHS	80	DN125	DN65	220/1/50	0.25	84.8	3550×1850×2839	5200
HNE-900RHS	90	DN150	DN80	220/1/50	0.25	95.4	3950×2050×2990	6900
HNE-1000RHS	100	DN150	DN80	220/1/50	0.25	112.6	3950×2050×2990	7500

**Applicable working conditions:** Inlet air temperature  $\geq 160$  °C, Working pressure range 0.5 ~ 1.0MPaG; Cooling water inlet pressure range 0.2 ~ 0.6MPaG, Cooling water inlet temperature  $\leq 35$  °C, Pressure loss  $\leq 0.045$ MPa. There is also an optional model which has auxiliary electric heater(Power supply:380V/3Ph/50Hz) . For other non-standard models and parameters, please contact the manufacturer for technical data.

**Setting conditions:** rated working condition: Inlet pressure 0.7MPaG, Inlet temperature 160 °C (RH=3%), Cooling water inlet temperature 32 °C, Pressure dew point -20 °C

### Selection method

Setting condition: rated working condition: Inlet pressure 0.7MPaG, Inlet air temperature  $\geq 160$  °C, Pressure dew point -20 °C, Cooling water temperature 32 °C

Inlet pressure KA

MPaG	0.5	0.55	0.6	0.7	0.8	0.9	1.0
KA	0.75	0.81	0.87	1.00	1.06	1.12	1.17

$$\text{Nominal capacity of Adsorption dryer} = \frac{\text{Actual capacity}}{KA \times KC'}$$

Cooling water temperature KC'

°C	25	30	32	35
KC'	1.13	1.11	1.00	0.85

# HITACHI **HNE-RES/DPS** Zero Loss/Small Air Loss Heated Blower Adsorption Air Dryer



Suitable for large air compressor rear section use

Adopt LDCS (Load Depend Control System) combined with DPOS (Dew Point Operation System), it can achieve energy-saving in different seasons and working conditions

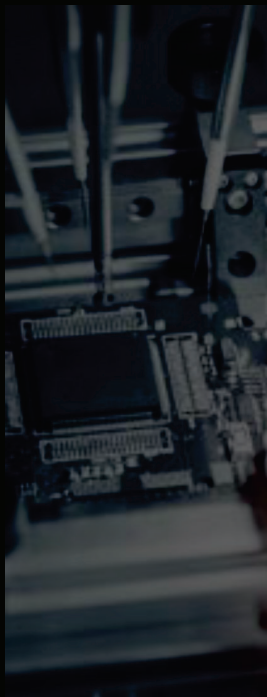
The designed pressure dew point of processed air is  $-40^{\circ}\text{C}$ , and pressure dew point of  $-70^{\circ}\text{C}$  can also be customized according to user needs

High quality blower and reliable spare parts are used to ensure the normal operation of the dryer system

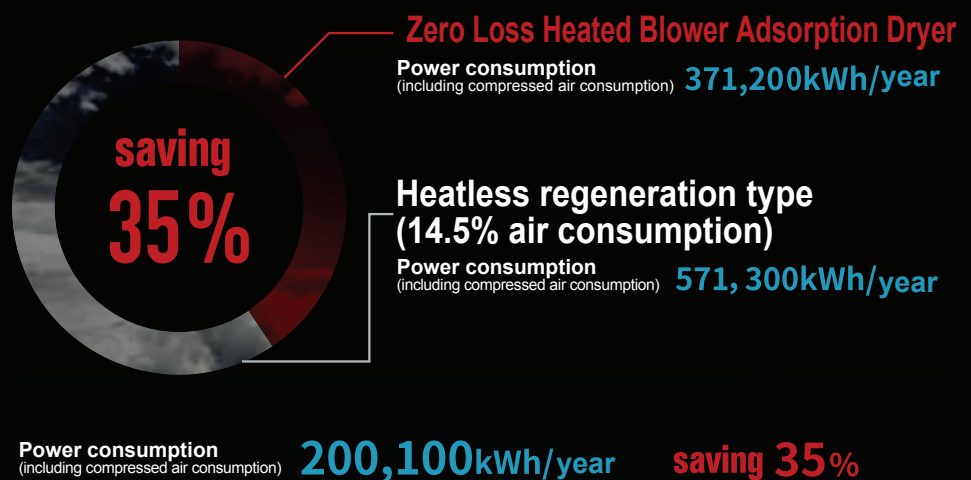
Small air loss type can be adopted when without cooling water

Switch the operating phase of two towers every 4 hours, the switching cycle is long. If working under low load condition or having an pre refrigeration dryer ahead, an extra long switching time can be reached (more than 12 hours at most), which is more energy-saving

The ambient air is sucked in by the blower and is slightly pressurized and heated to make this part of the air have enough regenerative heat energy to complete the heat regeneration of the dryer.



Example of proposal [an electronic product manufacturer ]

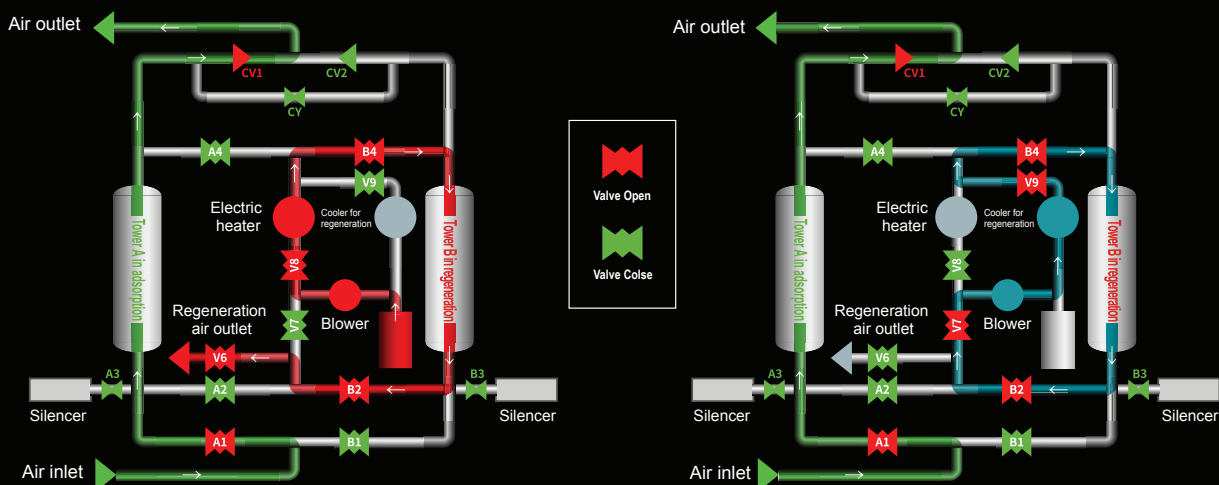


Remarks: Comparison of Heatless regeneration type and Zero Loss Heat of Compression type

Design conditions: Airflow  $81.8\text{ m}^3/\text{min}$ , Inlet pressure  $0.7\text{MPaG}$ , Inlet temperature  $160^{\circ}\text{C}$ , Outlet pressure dew point  $-20^{\circ}\text{C}$ , Operation time:  $8000\text{h/year}$   
Compressor: oil free screw fixed speed type / the cost of consumable parts is not included in the operation cost.



### Process flow diagram



The air in the atmosphere is sucked by the blower, heated by the heater, then used for regenerating the adsorbent, so that the dry compressed air produced by compressor can no longer be consumed, so as to achieve the purpose of zero air loss and energy saving.

### Technical Data Sheet

Model	Nominal Capacity m³/min	Diameter of Air connection	Cooling water connection	Power supply V/Ph/Hz	Rated power kW	Max. Cooling water consumption (T/h)	Overall dimension L×W×H(mm)	kg
HNE-180RES	18	DN65	Rc1"	380/3/50	20.5	2.38	1765×1300×2603	1970
HNE-220RES	22	DN65	Rc1"	380/3/50	20.5	2.38	1765×1300×2603	2090
HNE-250RES	25	DN65	Rc1"	380/3/50	20.5	2.38	1765×1300×2603	2165
HNE-330RES	33	DN80	Rc1"	380/3/50	28.5	3.15	1956×1370×2639	2680
HNE-440RES	44	DN100	Rc2"	380/3/50	39.0	4.90	2316×1670×2665	3600
HNE-500RES	50	DN100	Rc2"	380/3/50	39.0	4.90	2316×1670×2665	3750
HNE-600RES	60	DN100	Rc2"	380/3/50	57.5	7.00	2516×1630×2678	4285
HNE-700RES	70	DN125	Rc2"	380/3/50	75.0	9.10	3840×1560×2837	5600
HNE-800RES	80	DN125	Rc2"	380/3/50	75.0	9.10	3840×1560×2837	5900
HNE-900RES	90	DN150	Rc2"	380/3/50	86.5	10.50	4200×1760×2985	6600
HNE-1000RES	100	DN150	Rc2"	380/3/50	86.5	10.50	4200×1760×2985	7750

**Applicable working conditions:** Inlet air temperature ≤ 45 °C, Working pressure 0.5 ~ 1.0MPaG, Maximum ambient temperature 40 °C; Pressure loss ≤ 0.02MPa, Cooling water inlet temperature ≤ 35 °C, Cooling water pressure 0.2 ~ 0.6MPaG.

**Design conditions:** rated working condition: inlet pressure 0.7MPaG, Inlet air temperature 38 °C, Pressure dew point -40 °C, Cooling water temperature 32 °C. If there is a special demand of airflow of 100 m³/min and above, please consult the sales personnel.

$$\text{Nominal capacity of Adsorption dryer} = \frac{\text{Actual capacity}}{\text{KA} \times \text{KB} \times \text{KC}'}$$

**ICooling water temperature KC'**

°C	25	30	32	35
KC'	1.40	1.12	1.00	0.85

### Technical Data Sheet

Model	Nominal Capacity m³/min	Diameter of Air connection	Power supply V/Ph/Hz	Rated power kW	Overall dimension L×W×H(mm)	Weight kg
HNE-150DPS	15	DN50	380/3/50	11.4	1560×750×2395	1250
HNE-180DPS	18	DN65	380/3/50	20.5	1760×770×2608	1400
HNE-220DPS	22	DN65	380/3/50	20.5	1760×770×2608	1530
HNE-250DPS	25	DN65	380/3/50	20.5	1760×770×2608	1715
HNE-330DPS	33	DN80	380/3/50	23.5	1958×940×2661	2100
HNE-440DPS	44	DN100	380/3/50	34.5	2316×1400×2644	2690
HNE-500DPS	50	DN100	380/3/50	42.0	2316×1425×2644	2980
HNE-600DPS	60	DN100	380/3/50	42.0	2516×1525×2659	3390
HNE-700DPS	70	DN125	380/3/50	57.5	2712×1490×2830	4190
HNE-800DPS	80	DN125	380/3/50	57.5	2712×1490×2830	4600
HNE-900DPS	90	DN150	380/3/50	86.5	4000×1700×2979	5800
HNE-1000DPS	100	DN150	380/3/50	86.5	4000×1700×2979	6300

**Applicable working conditions:** Inlet air temperature ≤ 45 °C, Working pressure 0.5 ~ 1.0MPaG, Maximum ambient temperature 40 °C; Pressure loss ≤ 0.02MPa, Cooling water inlet temperature ≤ 35 °C, Cooling water pressure 0.2 ~ 0.6MPaG.

**Design conditions:** rated working condition: inlet pressure 0.7MPaG, Inlet air temperature 38 °C, Pressure dew point -40 °C, Cooling water temperature 32 °C. If there is a special demand of airflow of 100 m³/min and above, please consult the sales personnel.

### Selection method

Setting condition: rated working condition: Inlet pressure 0.7MPaG, Inlet air temperature ≥ 38 °C, Pressure dew point -40 °C, Cooling water temperature 32 °C

$$\text{Nominal capacity of Adsorption dryer} = \frac{\text{Actual capacity}}{\text{KA} \times \text{KB}}$$

**Inlet pressure KA**

MPaG	0.5	0.55	0.6	0.7	0.8	0.9	1.0
KA	0.75	0.81	0.87	1.00	1.13	1.25	1.37

**Inlet temperature KB**

°C	35	38	40	42	45
KB	1.18	1.00	0.90	0.81	0.69

# HITACHI HNE-HS

## External Heated Adsorption Dryer



Suitable for small air compressor rear section use

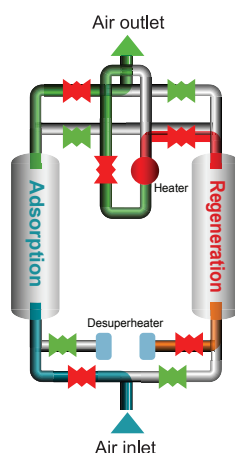
Adopt customized PLC panel to more flexibly meet the requirements of customers

Dew point meter can be selected to realize energy saving of dew point control

Low procurement cost

Switch the operating phase of two towers every 4 hours

The designed pressure dew point of processed air is  $-40^{\circ}\text{C}$ , and the pressure dew point of  $-70^{\circ}\text{C}$  can also be customized according to user needs



**Technical index:**  
dew point temperature:  $-20^{\circ}\text{C} \sim -40^{\circ}\text{C}$ ,  
average regeneration air consumption:  $\leq 9\%$

### Product features

- Long switching cycle and low air consumption.
- Compact structure, simple installation and convenient maintenance.
- Adopt low power density electric heater with long service life.

The External Heated Adsorption Dryer increases the temperature of the regeneration air by heating, so as to accelerate the transfer of water vapor from the adsorbent to the air and improve the efficiency of regeneration process of the adsorbent. Thus, the drying and regeneration cycles of the two towers operate alternately to continuously provide dry compressed air.

## Technical Data Sheet

Model	Nominal Capacity (m <sup>3</sup> /min)	Diameter of Air connection	Power supply (V/Ph/Hz)	Rated power (kW)	Overall dimension (mm)	Weight (kg)
HNE-60HS	6	DN50	380/3/50	3.0	1454×750×2216	510
HNE-80HS	8	DN50	380/3/50	3.0	1454×750×2216	520
HNE-100HS	10	DN50	380/3/50	6.0	1550×750×2420	585
HNE-120HS	12	DN50	380/3/50	6.0	1550×750×2420	600
HNE-150HS	15	DN50	380/3/50	8.0	1550×750×2420	680
HNE-200HS	20	DN65	380/3/50	10.0	1756×770×2643	870
HNE-250HS	25	DN65	380/3/50	12.0	1756×770×2643	975
HNE-300HS	30	DN80	380/3/50	15.0	1956×890×2686	1150
HNE-350HS	35	DN80	380/3/50	18.0	1956×890×2686	1150
HNE-400HS	40	DN80	380/3/50	21.0	1956×890×2686	1350
HNE-500HS	50	DN100	380/3/50	27.0	2316×1000×2669	1600
HNE-600HS	60	DN100	380/3/50	30.0	2316×1000×2669	2100

**Applicable working conditions:** Inlet air temperature  $\leq 45^{\circ}\text{C}$ , Working pressure 0.5 ~ 1.0MPaG, please consult the sales personnel.

**Design conditions:** rated working condition: inlet pressure 0.7MPaG, Inlet air temperature  $38^{\circ}\text{C}$ , Pressure dew point  $-40^{\circ}\text{C}$ .

## Selection method

**Design conditions:** rated working condition: inlet pressure 0.7MPaG, Inlet air temperature  $38^{\circ}\text{C}$ , Pressure dew point  $-40^{\circ}\text{C}$ .

$$\text{Nominal capacity of Adsorption dryer} = \frac{\text{Actual capacity}}{\text{KA} \times \text{KB}}$$

### Inlet pressure KA

MPaG	0.5	0.55	0.6	0.7	0.8	0.9	1.0
KA	0.75	0.81	0.87	1.00	1.13	1.25	1.37

### Inlet air temperature KB

$^{\circ}\text{C}$	35	38	40	42	45
KB	1.18	1.00	0.90	0.81	0.69

# HITACHI HPS Heatless Adsorption Dryer

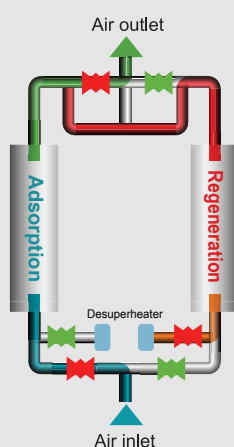


Suitable for small air compressor rear section use

Controlled by PCB single chip microcomputer, the performance is stable and the cost is low

The standard pressure dew point is  $-40^{\circ}\text{C}$ , and the lowest dew point can be  $70^{\circ}\text{C}$  according to customer requirements(customized).

Switch ( the operating phase of two towers ) once every 3 minutes



**Technical index:**  
dew point temperature:  $40^{\circ}\text{C}$ ,  
average regeneration air consumption: 14%~18%

**Product features**

- save installation space
- low initial cost
- simple structure and easy maintenance

The adsorbent (mainly activated alumina) is used for dehumidification of tower A and B. When the tower A is absorbing water from compressed air, tower B regenerates the adsorbent. Tower A and Tower B cycle and switch their job for a fixed time. It is a machine that can continuously provide good quality dry air. Because the heatless dryer does not use heater when regenerate the adsorbent, and mechanism is simple, so the initial cost is low.

## Technical Data Sheet

Model	Nominal Capacity (m <sup>3</sup> /min)	Diameter of Air connection	Power supply (V/Ph/Hz)	Rated power (kW)	Overall dimension (mm)	Weight (kg)
HPS-20	2	Rc1"	220/1/50	0.2	856×350×1692	198
HPS-30	3	Rc1"	220/1/50	0.2	945×350×1604	325
HPS-60	6	DN40	220/1/50	0.2	973×347×1999	510
HPS-80	8	DN40	220/1/50	0.2	973×347×1999	520
HPS-100	10	DN50	220/1/50	0.2	1100×454×2069	585
HPS-120	12	DN50	220/1/50	0.2	1100×454×2069	600
HPS-150	15	DN50	220/1/50	0.2	1100×454×2069	680
HPS-200	20	DN65	220/1/50	0.2	1350×599×1990	870
HPS-250	25	DN65	220/1/50	0.2	1350×599×1990	975
HPS-300	30	DN80	220/1/50	0.2	1550×756×2057	1150
HPS-350	35	DN80	220/1/50	0.2	1550×756×2057	1275
HPS-400	40	DN80	220/1/50	0.2	1550×756×2057	1350
HPS-500	50	DN100	220/1/50	0.2	1800×916×2294	1600
HPS-600	60	DN100	220/1/50	0.2	1800×916×2294	2100

**Applicable working conditions:** Inlet air temperature  $\leq 50^{\circ}\text{C}$ , Working pressure 0.5 ~ 1.0MPaG, please consult the sales personnel.  
**Design conditions:** rated working condition: inlet pressure 0.7MPaG, Inlet air temperature  $42^{\circ}\text{C}$ , Pressure dew point  $-40^{\circ}\text{C}$ .

## Selection method

**Design conditions:** rated working condition: inlet pressure 0.7MPaG, Inlet air temperature  $42^{\circ}\text{C}$ , Pressure dew point  $-40^{\circ}\text{C}$ .

$$\text{Nominal capacity of Adsorption dryer} = \frac{\text{Actual capacity}}{\text{KA} \times \text{KB}}$$

**Inlet pressure KA**

MPaG	0.5	0.55	0.6	0.7	0.8	0.9	1.0
KA	0.75	0.81	0.87	1.00	1.13	1.25	1.37

**Inlet air temperature KB**

$^{\circ}\text{C}$	35	38	40	42	45	50
KB	1.00	1.00	1.00	1.00	0.85	0.71

# HITACHI HRF Refrigeration Air Dryer Air-cooled Type



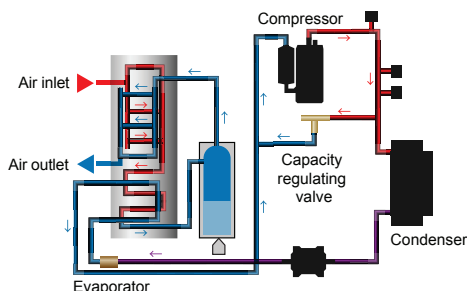
Adopt Environmental friendly refrigerant, which is high and energy-saving

Adopt digital display control panel to realize local reading of inlet air temperature, dew point and other data

Touch screen PLC panel can be selected to more flexibly meet the requirements of customers

Adopt stainless steel or aluminum plate-fin heat exchanger, with large heat exchange area, good effect, corrosion resistance and stable dew point

Compact structure, simple operation, using well-known brand parts, stable and reliable operation



The hot and humid air entering the air dryer, through the heat exchanger, then a large amount of condensed water is separated through the cyclone water separator, and finally discharged through the drain, ensuring the dew point performance. At the same time, the high-temperature and high-pressure refrigerant steam condenses into low-temperature and low-pressure liquid refrigerant after heat exchange with the air condenser, and then returns to the evaporator for heat exchange with the compressed air again.

## Technical Data Sheet (Normal temperature air-cooled type, inlet air temperature $\leq 60^{\circ}\text{C}$ )

Model	Diameter of Air connection	Nominal Capacity (m <sup>3</sup> /min)	Overall dimension (mm)	Weight (kg)	Power supply (V/Ph/Hz)	Rated power (kW)	Recommended filter Pre-Filter Model	Recommended filter After-Filter Model
HRF-06	Rc1/2"	0.6	500×250×500	25	220V/1Ph/50Hz	0.3	HFG-0017(G)EP	HFG-0017(G)EO
HRF-09	Rc1/2"	0.9	500×250×500	25	220V/1Ph/50Hz	0.3	HFG-0017(G)EP	HFG-0017(G)EO
HRF-12	Rc1/2"	1.2	600×310×500	30	220V/1Ph/50Hz	0.6	HFG-0030(G)EP	HFG-0030(G)EO
HRF-15	Rc1/2"	1.5	600×310×500	30	220V/1Ph/50Hz	0.6	HFG-0030(G)EP	HFG-0030(G)EO
HRF-18	Rc1/2"	1.8	600×310×500	30	220V/1Ph/50Hz	0.6	HFG-0030(G)EP	HFG-0030(G)EO
HRF-24	Rc3/4"	2.4	750×360×550	50	220V/1Ph/50Hz	0.9	HFG-0058(G)EP	HFG-0058(G)EO
HRF-30	Rc3/4"	3.0	750×360×550	50	220V/1Ph/50Hz	0.9	HFG-0058(G)EP	HFG-0058(G)EO
HRF-36	Rc3/4"	3.6	750×360×550	55	220V/1Ph/50Hz	1.0	HFG-0058(G)EP	HFG-0058(G)EO
HRF-40	Rc3/4"	4.0	750×360×550	55	220V/1Ph/50Hz	1.0	HFG-0080(G)EP	HFG-0080(G)EO
HRF-60	Rc1-1/2"	6.5	760×592×913	78	220V/1Ph/50Hz	1.6	HFG-0145(G)EP	HFG-0145(G)EO
HRF-80	Rc1-1/2"	8.8	760×592×913	80	220V/1Ph/50Hz	2.0	HFG-0145(G)EP	HFG-0145(G)EO
HRF-100	Rc1-1/2"	11	760×592×913	85	220V/1Ph/50Hz	2.0	HFG-0220(G)EP	HFG-0220(G)EO
HRF-120	Rc2"	13	1000×710×1030	130	220V/1Ph/50Hz	2.4	HFG-0220(G)EP	HFG-0220(G)EO
HRF-150	Rc2"	17	1000×710×1030	140	220V/1Ph/50Hz	3.7	HFG-0330(G)EP	HFG-0330(G)EO
HRF-200	Rc2"	22	1000×710×1030	150	380V/3Ph/50Hz	4.5	HFG-0430(G)EP	HFG-0430(G)EO
HRF-250	Rc2-1/2"	27	1000×830×1600	250	380V/3Ph/50Hz	5.4	HFG-0620(G)EP	HFG-0620(G)EO
HRF-300	Rc2-1/2"	33	1000×830×1600	260	380V/3Ph/50Hz	6.8	HFG-0620(G)EP	HFG-0620(G)EO
HRF-350	Rc2-1/2"	37	1000×830×1600	270	380V/3Ph/50Hz	7.9	HFG-0620(G)EP	HFG-0620(G)EO
HRF-400	DN100	45	1250×1120×1750	500	380V/3Ph/50Hz	7.9	HFG-0830(F)EP	HFG-0830(F)EO
HRF-500	DN100	55	1250×1120×1750	510	380V/3Ph/50Hz	10.6	HFG-1000(F)EP	HFG-1000(F)EO
HRF-600	DN100	65	1250×1120×1750	550	380V/3Ph/50Hz	12.6	HFG-1200(F)EP	HFG-1200(F)EO
HRF-700	DN125	73	1250×1120×1750	580	380V/3Ph/50Hz	12.6	HFG-1300(F)EP	HFG-1300(F)EO
HRF-800	DN150	80	1460×2000×1770	700	380V/3Ph/50Hz	16.2	HFG-1300(F)EP	HFG-1300(F)EO
HRF-900	DN150	90	1460×2000×1770	720	380V/3Ph/50Hz	16.2	HFG-1950(F)EP	HFG-1950(F)EO
HRF-1000	DN150	100	1460×2000×1770	940	380V/3Ph/50Hz	19.1	HFG-1950(F)EP	HFG-1950(F)EO

**Applicable working conditions:** Inlet air temperature  $\leq 60^{\circ}\text{C}$ , 0.3 ~ 1.5MPaG Maximum ambient temperature  $50^{\circ}\text{C}$ ; Please consult the manufacturer for other models and specific parameters.

**Design conditions:** rated working condition: inlet pressure 0.7MPaG inlet air temperature  $38^{\circ}\text{C}$  ambient temperature  $38^{\circ}\text{C}$  pressure dew point  $10^{\circ}\text{C}$

## Selection method

**Design conditions:** rated working condition: inlet pressure 0.7MPaG inlet air temperature  $38^{\circ}\text{C}$  ambient temperature  $38^{\circ}\text{C}$  pressure dew point  $10^{\circ}\text{C}$

$$\text{Nominal capacity of Adsorption dryer} = \frac{\text{Actual capacity}}{\text{KA} \times \text{KB} \times \text{KC}}$$

**Working pressure KA**

MPaG	0.3	0.4	0.5	0.6	0.7	0.8	0.9	1.0	1.1	1.2	1.3	1.4	1.5
KA	0.76	0.86	0.92	0.93	1.00	1.04	1.08	1.11	1.15	1.18	1.22	1.25	1.28

**Inlet air temperature KB**

$^{\circ}\text{C}$	35	38	40	46	49	54	60
KB	1.11	1.00	0.92	0.76	0.69	0.56	0.46

**Ambient temperature KC**

$^{\circ}\text{C}$	25	30	35	38	40	45	50
KC	1.15	1.10	1.02	1.00	0.89	0.79	0.69





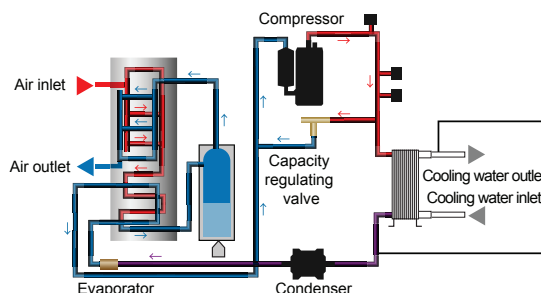
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Adopt stainless steel or aluminum plate-fin heat exchanger, with large heat exchange area, good effect, corrosion resistance and stable dew point



The hot and humid air entering the air dryer, through the heat exchanger, then a large amount of condensed water is separated through the cyclone water separator, and finally discharged through the drain, ensuring the dew point performance. At the same time, the high-temperature and high-pressure refrigerant steam condenses into low-temperature and low-pressure liquid refrigerant after heat exchange with the air condenser, and then returns to the evaporator for heat exchange with the compressed air again.

### Technical Data Sheet (Normal temperature water-cooled type, inlet air temperature $\leq 60^{\circ}\text{C}$ )

Model	Diameter of Air connection	Nominal Capacity (m <sup>3</sup> /min)	Overall dimension (mm)	Weight (kg)	Cooling water connection	Max. Cooling water consumption (T/h)	Power supply (V/Ph/Hz)	Rated power (kW)	Recommended filter Pre-Filter Model	Recommended filter After-Filter Model
HRW-120	Rc2"	13.0	1000×710×1030	135	3/4"	0.53	220V/1Ph/50Hz	2.43	HFG-0220(G)EP	HFG-0220(G)EO
HRW-150	Rc2"	17.0	1000×710×1030	140	3/4"	0.73	220V/1Ph/50Hz	3.25	HFG-0330(G)EP	HFG-0330(G)EO
HRW-200	Rc2"	22.0	1000×710×1030	150	3/4"	0.96	380V/3Ph/50Hz	4.27	HFG-0430(G)EP	HFG-0430(G)EO
HRW-250	Rc2-1/2"	27.0	1000×830×1600	250	1"	1.07	380V/3Ph/50Hz	4.84	HFG-0620(G)EP	HFG-0620(G)EO
HRW-300	Rc2-1/2"	33.0	1000×830×1600	260	1"	1.38	380V/3Ph/50Hz	6.29	HFG-0620(G)EP	HFG-0620(G)EO
HRW-350	Rc2-1/2"	37.0	1000×830×1600	270	1"	1.61	380V/3Ph/50Hz	7.42	HFG-0620(G)EP	HFG-0620(G)EO
HRW-400	DN100	45.0	1100×1010×1750	500	1-1/4"	1.79	380V/3Ph/50Hz	7.42	HFG-0830(F)EP	HFG-0830(F)EO
HRW-500	DN100	55.0	1100×1010×1750	510	1-1/4"	2.29	380V/3Ph/50Hz	9.71	HFG-1000(F)EP	HFG-1000(F)EO
HRW-600	DN100	65.0	1100×1010×1750	550	1-1/4"	2.77	380V/3Ph/50Hz	11.73	HFG-1200(F)EP	HFG-1200(F)EO
HRW-700	DN125	73.0	1100×1010×1750	560	1-1/4"	3.05	380V/3Ph/50Hz	11.73	HFG-1300(F)EP	HFG-1300(F)EO
HRW-800	DN150	80.0	1100×1500×1800	680	1-1/2"	3.18	380V/3Ph/50Hz	14.43	HFG-1300(F)EP	HFG-1300(F)EO
HRW-900	DN150	90.0	1100×1500×1800	700	1-1/2"	3.74	380V/3Ph/50Hz	14.43	HFG-1950(F)EP	HFG-1950(F)EO
HRW-1000	DN150	100.0	1100×1700×1800	930	1-1/2"	3.98	380V/3Ph/50Hz	17.34	HFG-1950(F)EP	HFG-1950(F)EO

**Applicable working conditions:** the working pressure is 0.3 ~ 1.5MPaG, the inlet pressure of cooling water is 0.2 ~ 0.6MPaG, and the inlet temperature is  $\leq 38^{\circ}\text{C}$ .

Inlet air temperature  $\leq 60^{\circ}\text{C}$ , please consult the manufacturer for other models and specific parameters.

**Design conditions:** rated working condition: Inlet pressure 0.7MPaG, Inlet air temperature  $38^{\circ}\text{C}$ , Cooling water temperature  $32^{\circ}\text{C}$ , Pressure dew point  $10^{\circ}\text{C}$

### Selection method

Design conditions: rated working condition: Inlet pressure 0.7MPaG, Inlet air temperature  $38^{\circ}\text{C}$ , Cooling water temperature  $32^{\circ}\text{C}$ , Pressure dew point  $10^{\circ}\text{C}$

$$\text{Nominal capacity of Adsorption dryer} = \frac{\text{Acutual capacity}}{\text{KA} \times \text{KB} \times \text{KC'}}$$

#### Working pressure KA

MPaG	0.3	0.4	0.5	0.6	0.7	0.8	0.9	1.0	1.1	1.2	1.3	1.4	1.5
KA	0.76	0.86	0.92	0.93	1.00	1.04	1.08	1.11	1.15	1.18	1.22	1.25	1.28

#### Inlet air temperature KB

$^{\circ}\text{C}$	35	38	40	46	49	54	60
KB	1.11	1.00	0.92	0.76	0.69	0.56	0.46

#### Cooling water temperature KC'

$^{\circ}\text{C}$	20	25	32	35	40
KC'	1.17	1.09	1.00	0.92	0.84

# HITACHI

HFG

Series Compressed Air Filter

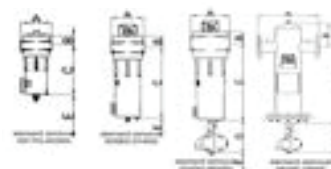


Easy installation, convenient maintenance and replacement of filter element

The filter element is corrosion-resistant and has long service life

High purification efficiency, large amount of dust removal and small resistance loss.

Aluminum, carbon steel and stainless steel filters can be selected, which has been sold to Japan very often.



This product can effectively condense, intercept and filter harmful pollutants such as oil, water and dust in compressed air. The quality of treated compressed air can fully meet the quality requirements of ISO8573-1 compressed air at all levels.

Model	Diameter of Air connection	Nominal Capacity m <sup>3</sup> /min	Overall dimension (mm)					Weight kg
			A	B	C	D	E	
HFG-0017(G)**	Rc1/2"	1.0	89	42	160	-	95	1.1
HFG-0030(G)**	Rc1/2"	1.8	89	42	193	-	130	1.5
HFG-0058(G)**	Rc3/4"	3.6	120	58	252	-	172	2.5
HFG-0080(G)**	Rc1"	4.8	120	58	352	-	272	3.2
HFG-0145(G)**	Rc1-1/2"	8.7	120	58	352	-	272	3.2
HFG-0220(G)**	Rc2"	13.2	162	74	424	180	320	6.6
HFG-0220(F)**	DN50	13.2	353	188	661	125	320	46
HFG-0330(G)**	Rc2"	20.0	162	74	738	180	625	10.9
HFG-0330(F)**	DN65	20.0	353	188	961	125	650	51
HFG-0430(G)**	Rc3"	25.8	200	90	488	180	400	12.9
HFG-0430(F)**	DN80	25.8	379	215	823	200	400	58
HFG-0620(G)**	Rc3"	40.0	200	90	749	180	650	17.5
HFG-0620(F)**	DN80	40.0	379	215	1013	200	650	65
HFG-0830(F)**	DN100	50.0	493	263	1119	200	650	115
HFG-1000(F)**	DN100	60.0	493	263	1119	200	650	115
HFG-1200(F)**	DN125	70.0	617	290	1179	200	650	145
HFG-1300(F)**	DN125	80.0	617	290	1179	200	650	150
HFG-1950(F)**	DN150	120.0	617	300	1207	200	650	195

(G): Threaded connection

(F): Flange connection

\*\* Filtration level

Filtration Grade μm

Residual oil mist content mg/m<sup>3</sup>

Oil and water removal filters: ER / EP / EO / EF

Dust filter: EPA / EOA

Activated carbon filter: EC

**Applicable working conditions:** working pressure 0.1 ~ 1.6MPaG (0620 or lower), 0.1 ~ 1.56MPaG (0830 or above). In addition, 120 °C high temperature resistant filter element (EC grade 50 °C) is used for working temperature. Please consult the manufacturer for non-standard customized filter and relevant parameters.

**Design condition:** rated working condition: Inlet pressure 0.7MPaG

Filtering grade	Filtering precision μm	Residual oil mist content mg/m <sup>3</sup>
ER	25	-
EP	1	0.6
EPA	1	-
EO	0.01	0.01
EOA	0.01	-
EF	0.01	0.001
EC	-	0.003

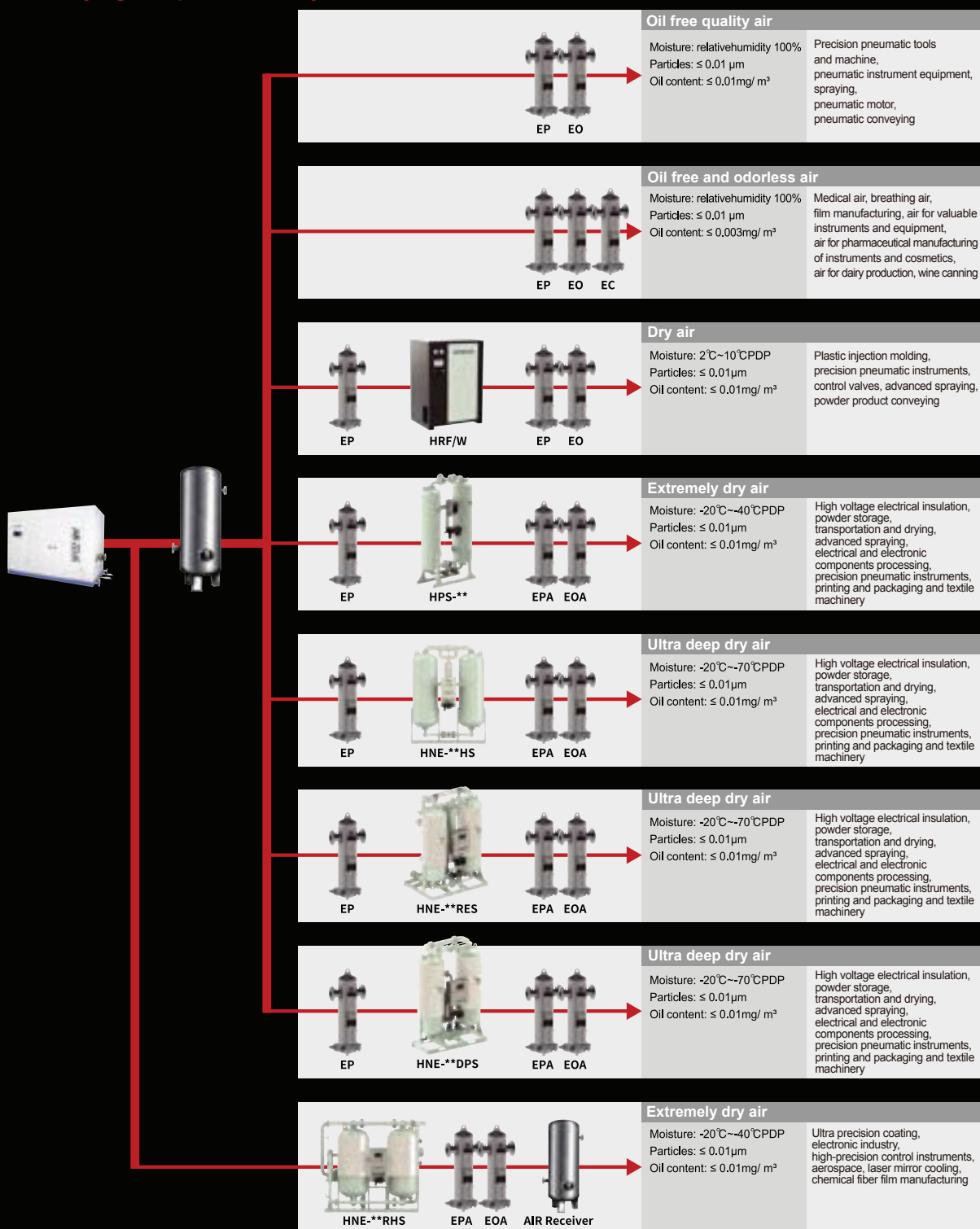
**Filter selection correction** Nominal capacity (m<sup>3</sup> /min) = Rated capacity × KA

Working pressure MPaG	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	1.0	1.1	1.2	1.3	1.4	1.5	1.6
Correction factor	0.38	0.53	0.65	0.76	0.85	0.93	1.00	1.07	1.13	1.20	1.25	1.31	1.36	1.41	1.46	1.51

# AIR ZEUS OIL-FREE SCREW COMPRESSORS

## SDS-U SERIES

### Configuration diagram of compressed air drying and purification system



The above configurations are for reference only, it can be customized by customer's needs.

## Safety Precautions

### ■Regarding compressor application

- The compressor described in this catalog utilizes only air as a gas. Absolutely avoid using it for compression of a gas other than air.
  - this could result in a fire hazard or damage to the equipment.
- Never use compressed air for human breathing.

### ■Regarding installation site

- Install this compressor indoors. (Except products with outdoor specifications)
  - Avoid using it at a place susceptible to moisture such as precipitation or vapors.
    - this could result in a fire hazard, electric shock, rusting or shortened life of parts.
- There should be no explosive or flammable gas (acetylene, propane, etc.), organic solvent, explosive powder or flame used near the compressor.
  - otherwise, there is a fire hazard.
- Avoid using the compressor at a place where there is corrosive gas such as ammonia, acid, salt, sulfurous acid gas, etc.
  - this could result in rusting, shortened life or damage to the equipment.

### ■Regarding usage

- Before use, be sure to read the instruction manual thoroughly for correct use of the compressor.
- Absolutely avoid modifying the compressor or its components.
  - this could result in damage or malfunction.

Specifications in this catalog are subject to change with or without notice, as Hitachi continues to develop the latest technologies and products for its customers.

## Hitachi Global Air Power (Changshu) Co., Ltd.

For further information, please contact your nearest sales representative.