

# Oil-Free Rotary Screw Air Compressors

Premium Air for Your Application

DSP Series



SDS Series



Throughout history Hitachi has been a global leader of the compressed air evolution, driving innovation and developing solutions to compressed air needs.



**2015**



Next Series Introduction

World's First Variable  
Speed Drive Oil-Free Rotary

**2000**



**1999**



New Generation Oil-Free  
Rotary Screw DSP Series

First DSP Series Oil-Free  
Rotary Screw

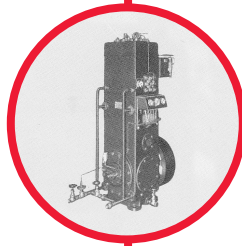
**1982**



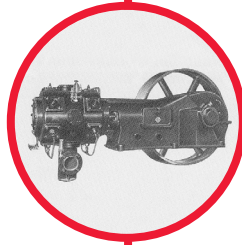
**1968**  
First Dry Screw

Oil-Free 22kW Reciprocating

**1954**



**1911**



75kW Reciprocating  
First Compressor in Japan

Start Benefiting from Over 100 Years of Innovation

## DSP Series

3

YEAR WARRANTY

Hitachi DSP Series rotary screw compressors are the premium, oil-free air solution for your application. With Hitachi, reliability comes standard, making downtime a distant memory. Hitachi also understands that air quality isn't a nice-to-have, it's a necessity, that's why Hitachi DSP compressors are ISO Class Zero certified. Build the foundation of your compressed air system with Hitachi DSP Series compressors. You'll be glad you did.



## SDS Series

While most manufacturers top out at 500hp, your compressed air needs don't, and neither does Hitachi. The SDS Series features two-stage models up to 900hp. Not only do the Hitachi SDS compressors go bigger, they also last longer, thanks to Hitachi's legendary reliability founded upon a culture of quality. Technological innovations found in the SDS Series, such as PLC control, result in a compressor that outperforms and outlasts the competition. With Hitachi, reliable premium air comes standard.

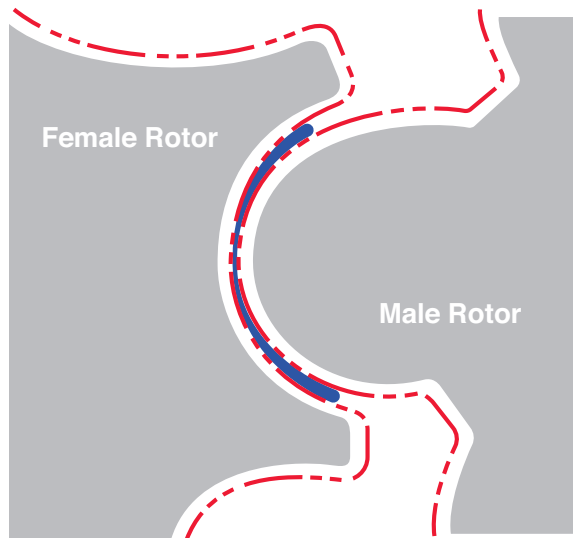


# DSP Series

**30 – 300 HP**  
(20 – 240 kW)

The Hitachi DSP Series is the pinnacle in oil-free rotary screw air compressor technology thanks to innovations that increase efficiency, maximize reliability, and promote eco-friendliness.

## Proprietary Rotor Profile



**Thermal Expansion** — — —  
**Optimized Clearance** ———



### Innovative Air End Design

Hitachi innovations in air end design result in a highly reliable, ultra efficient air compressor

- Stainless steel 1st and 2nd stage rotors **S**
- Patented HX-18 coating
- High efficiency design improves capacity



### VSD Control

- Constant Pressure Control
- Hitachi original control PID logic (55–240kW)
- High efficiency DCBL drive (37/55/75kW)



### Oil Mist Remover

Hitachi's patented oil mist remover (OMR) eliminates oil deposits on the compressor and surrounding production area leading to a cleaner production environment



### Ultimate Air Quality

- True oil-free air rated at ISO Class 0

## Air Cooled



### Hi-Precooler

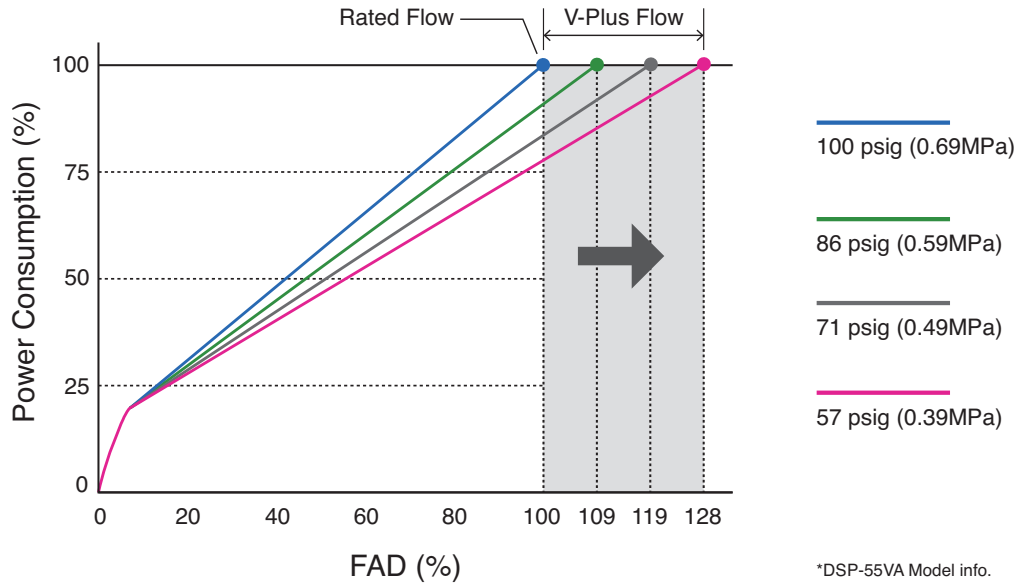
- Increases reliability by reducing thermal fatigue



### Inverter Controlled Cooling Fan (37/55/75kW)

- Rotation speed of the cooling fan is optimized in response to the ambient condition and load ratio
- High efficiency DCBL drive

## PQ Wide Mode



### Direct Drive

- Optimized layout and the removal of the V-belt and coupling allows for easy maintenance



### Low Sound Level

A low sound level is achieved by the optimized rotor profile, vibration-isolating drive structure, and sound reducing exhaust and intake ports



### Control Design

- Variable Speed Drive (VSD) can adapt to a variation in demand quickly
- Lead/Lag (2 unit control) **S**
- User-friendly, large LCD monitor and multi-function control board
- Instantaneous Power Interruption (IPI) restart **S**



### Motorized Isolation Valve (MIV)

Redundant protection against condensate backflow **S**

**S** = Standard Features    = Eco-friendly Features

## Water Cooled



## Genuine Hitachi Components



### Hitachi High Efficiency Motor & VFD

Precise selection and application of electrical components enables Hitachi Variable Speed Drive compressors to maintain high efficiency throughout the operational range.



# DSP – Air Cooled – Specifications

## Fixed Speed Specifications

Model	Rated Pressure	Nominal Motor Output	Main Voltage	FAD	Weight	Outlet
	psig (MPa)	HP (kW)	V/Hz	ACFM (m <sup>3</sup> /min)	lb (kg)	NPT
DSP-22AT6N	100 (0.69)	30 (22)	208, 230, 460/60	131 (3.70)	2,490 (1,130)	1 – ½
	125 (0.86)			117 (3.30)		
DSP-30AT6N	100 (0.69)	40 (30)	208, 230, 460/60	166 (4.70)	2,650 (1,200)	1 – ½
	125 (0.86)			141 (4.00)		
DSP-37AT6N	100 (0.69)	50 (37)	208, 230, 460/60	194 (5.50)	2,650 (1,200)	1 – ½
	125 (0.86)			166 (4.70)		
DSP-45AT6N	100 (0.69)	60 (45)	460/60	275 (7.80)	3,350 (1,520)	2 (Flange)
	125 (0.86)			230 (6.50)		
DSP-55AT6N	100 (0.69)	75 (55)	460/60	325 (9.20)	3,350 (1,520)	2 (Flange)
	125 (0.86)			272 (7.70)		
DSP-75AT6N	100 (0.69)	100 (75)	460/60	459 (13.0)	3,990 (1,810)	2 (Flange)
	125 (0.86)			392 (11.1)		
DSP-90A6N	100 (0.69)	125 (90)	460/60	636 (18.0)	5,250 (2,380)	2 (Flange)
	125 (0.86)			544 (15.4)		
DSP-110A6N	100 (0.69)	150 (110)	460/60	724 (20.5)	5,600 (2,540)	2 (Flange)
	125 (0.86)			611 (17.3)		
DSP-132A6	110 (0.75)	175 (132)	460/60	795 (22.5)	8,598 (3,900)	2 ½ (Flange)
	125 (0.86)			742 (21.0)		
	145 (1.00)			671 (19.0)		
DSP-145A6	110 (0.75)	200 (145)	460/60	883 (25.0)	8,598 (3,900)	2 ½ (Flange)
	125 (0.86)			805 (22.8)		
	145 (1.00)			706 (20.0)		
DSP-160A6	110 (0.75)	215 (160)	460/60	971 (27.5)	8,818 (4,000)	2 ½ (Flange)
	125 (0.86)			894 (25.3)		
	145 (1.00)			795 (22.5)		
DSP-200A6	110 (0.75)	250 (200)	460/60	1,254 (35.5)	11,464 (5,200)	3 (Flange)
	125 (0.86)			1,169 (33.1)		
	145 (1.00)			1,059 (30.0)		
DSP-240A6	110 (0.75)	300 (240)	460/60	1,413 (40.0)	11,464 (5,200)	3 (Flange)
	125 (0.86)			1,296 (36.7)		
	145 (1.00)			1,148 (32.5)		

## Variable Speed Specifications

Model	Discharge Air Pressure	Nominal Output	Main Voltage	Capacity	Approximate Weight	Discharge Air Pipe Connection
	psig (MPa)	HP (kW)	V/Hz	ACFM (m <sup>3</sup> /min)	lb (kg)	B
DSP-37VATN	100 (0.69)	50 (37)	280, 230, 460/60	184 (5.20)	2,120 (960)	1 – ½
	125 (0.86)			162 (4.60)		
DSP-55VATN	100 (0.69)	75 (55)	460/60	319 (9.02)	2,980 (1,350)	2 (Flange)
	125 (0.86)			272 (7.70)		
DSP-75VATN	100 (0.69)	100 (75)	460/60	431 (12.2)	3,480 (1,580)	2 (Flange)
	125 (0.86)			385 (10.9)		
DSP-90VA6N	100 (0.69)	125 (90)	460/60	636 (18.0)	5,470 (2,480)	2 (Flange)
	125 (0.86)			544 (15.4)		
DSP-110VA6N	100 (0.69)	150 (110)	460/60	724 (20.5)	5,580 (2,530)	2 (Flange)
	125 (0.86)			611 (17.3)		

# DSP – Water Cooled – Specifications

## Fixed Speed Specifications

Model	Discharge Air Pressure	Nominal Output	Main Voltage	Capacity	Approximate Weight	Discharge Air Pipe Connection
	psig (MPa)	HP (kW)	V/Hz	ACFM (m <sup>3</sup> /min)	lb (kg)	B
DSP-45WT6N	100 (0.69)	60 (45)	460/60	279 (7.90)	3,280 (1,490)	2 (Flange)
	125 (0.86)			236 (6.70)		
DSP-55WT6N	100 (0.69)	75 (55)	460/60	332 (9.40)	3,280 (1,490)	2 (Flange)
	125 (0.86)			279 (7.90)		
DSP-75WT6N	100 (0.69)	100 (75)	460/60	466 (13.2)	3,660 (1,660)	2 (Flange)
	125 (0.86)			399 (11.3)		
DSP-90W6N	100 (0.69)	125 (90)	460/60	646 (18.3)	5,030 (2,280)	2 (Flange)
	125 (0.86)			551 (15.6)		
DSP-110W6N	100 (0.69)	150 (110)	460/60	742 (21.0)	5,380 (2,440)	2 (Flange)
	125 (0.86)			622 (17.6)		
DSP-132W6N	110 (0.75)	175 (132)	460/60	826 (23.4)	8,378 (3,800)	2 ½ (Flange)
	125 (0.86)			770 (21.8)		
	145 (1.00)			692 (19.6)		
DSP-145W6N	110 (0.75)	200 (145)	460/60	918 (26.0)	8,378 (3,800)	2 ½ (Flange)
	125 (0.86)			837 (23.7)		
	145 (1.00)			727 (20.6)		
DSP-160W6N	110 (0.75)	215 (160)	460/60	1,006 (28.5)	8,378 (3,800)	2 ½ (Flange)
	125 (0.86)			925 (26.2)		
	145 (1.00)			819 (23.2)		
DSP-200W6N	110 (0.75)	250 (200)	460/60	1,307 (37.0)	10,582 (4,800)	3 (Flange)
	125 (0.86)			1,169 (33.1)		
	145 (1.00)			1,059 (30.0)		
DSP-240W6N	110 (0.75)	300 (240)	460/60	1,430 (40.5)	10,582 (4,800)	3 (Flange)
	125 (0.86)			1,303 (36.9)		
	145 (1.00)			1,148 (32.5)		

## Variable Speed Specifications

Model	Discharge Air Pressure	Nominal Output	Main Voltage	Capacity	Approximate Weight	Discharge Air Pipe Connection
	psig (MPa)	HP (kW)	V/Hz	ACFM (m <sup>3</sup> /min)	lb (kg)	B
DSP-55VWTN	100 (0.69)	75 (55)	460/60	326 (9.22)	2,930 (1,330)	2 (Flange)
	125 (0.86)			283 (8.00)		
DSP-75VWTN	100 (0.69)	100 (75)	460/60	441 (12.5)	3,130 (1,420)	2 (Flange)
	125 (0.86)			403 (11.4)		
DSP-90VW6N	100 (0.69)	125 (90)	460/60	646 (18.3)	5,250 (2,380)	2 (Flange)
	125 (0.86)			551 (15.6)		
DSP-110VW6N	100 (0.69)	150 (110)	460/60	742 (21.0)	5,360 (2,430)	2 (Flange)
	125 (0.86)			622 (17.6)		
DSP-160VW6N	110 (0.75)	215 (160)	460/60	1,006 (28.5)	8,820 (4,000)	2 ½ (Flange)
	125 (0.86)			925 (26.2)		
	145 (1.0)			819 (23.2)		
DSP-240VW6N	110 (0.75)	300 (240)	460/60	1,430 (40.5)	11,240 (5,100)	3 (Flange)
	125 (0.86)			1,303 (36.9)		
	145 (1.0)			1,148 (32.5)		



## DSP – Air Cooled – Dimensions

### Fixed Speed Dimensions

Model	Width inch (mm)	Depth inch (mm)	Height inch (mm)
DSP-22AT6N	60.2 (1,530)	45.3 (1,150)	65.0 (1,650)
DSP-30AT6N			
DSP-37AT6N			
DSP-45AT6N	78.8 (2,000)	51.2 (1,300)	70.9 (1,800)
DSP-55AT6N			
DSP-75AT6N	88.6 (2,250)	51.2 (1,300)	70.9 (1,800)
DSP-90A6N	84.6 (2,150)	59.8 (1,520)	77.8 (1,975)
DSP-110A6N			
DSP-132A6	114.2 (2,900)	67.3 (1,710)	75.8 (1,925)
DSP-145A6			
DSP-160A6			
DSP-200A6	126 (3,200)	74.4 (1,890)	76.8 (1,950)
DSP-240A6			

### Variable Speed Dimensions

Model	Width inch (mm)	Depth inch (mm)	Height inch (mm)
DSP-37VATN	60.2 (1,530)	45.3 (1,150)	65.0 (1,650)
DSP-55VWTN	78.8 (2,000)	51.2 (1,300)	70.9 (1,800)
DSP-75VATN	88.6 (2,250)	51.2 (1,300)	70.9 (1,800)
DSP-90VA6N	84.6 (2,150)	59.8 (1,520)	77.8 (1,975)
DSP-110VA6N			

## DSP – Water Cooled – Dimensions

### Fixed Speed Dimensions

Model	Width inch (mm)	Depth inch (mm)	Height inch (mm)
DSP-45WT6N	78.8 (2,000)	51.2 (1,300)	70.9 (1,800)
DSP-55WT6N			
DSP-75WT6N			
DSP-90W6N	84.6 (2,150)	59.8 (1,520)	71.9 (1,825)
DSP-110W6N			
DSP-132W6N	98.4 (2,500)	63.0 (1,600)	75.8 (1,925)
DSP-145W6N			
DSP-160W6N			
DSP-200W6N	110.2 (2,800)	70.9 (1,800)	76.9 (1,950)
DSP-240W6N			

### Variable Speed Dimensions

Model	Width inch (mm)	Depth inch (mm)	Height inch (mm)
DSP-55VWTN	78.8 (2,000)	51.2 (1,300)	70.9 (1,800)
DSP-75VWTN			
DSP-90VW6N	84.6 (2,150)	59.8 (1,520)	71.9 (1,825)
DSP-110VW6N			
DSP-160VW6N	98.4 (2,500)	63.0 (1,600)	75.8 (1,925)
DSP-240VW6N	110.2 (2,800)	70.9 (1,800)	76.8 (1,950)

#### Notes:

- Capacity is measured according to ISO 1217, Third Edition, Annex C.
- Hitachi may make improvements and/or changes in the appearance and/or specifications described in this publication at anytime without notice.
- DSP Series air compressors are not designed, intended or approved for breathing air applications.





# SDS Series

## 335–900 HP (250–680 kW)

The Hitachi SDS Oil-Free Screw Compressor embodies the culmination of over a century of compressed air innovation.



### Discharge Silencer

Through the reduction of press pulsations, the discharge silencer reduces noise levels



### Noise Control Cover

Robust construction aids in the reduction of noise leakage caused by vibration and air turbulence (*inlet and vent*)



### Main Motor

Reliability is increased thanks to a totally enclosed fan-type motor (TEFC)



### Highly Durable Capacity Regulator Valve

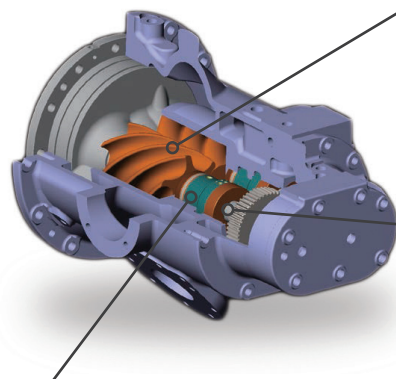
The intake valve is driven by a simple hydraulic piston allowing for a reduced pressure setting range during load, which improves the compressor's efficiency



### Oil Capture

An Oil Mist Capturing System (OMCS) collects oil mist discharged from the gear casing

## NEW Air Block



1

### 3-D Screw Rotor (*patented*)

A new rotor design compensates for thermal deformation distribution due to air temperature differences from inlet to outlet. The rotors also received a new, patented resin coating, increasing durability.

2

### Long-Life Bearings

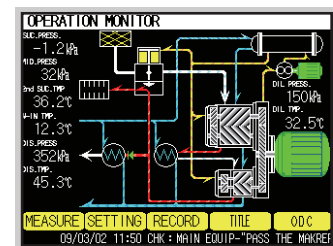
Precision machining, high quality materials, advanced analysis, and lubricating theory are used in the design of the SDS Air Block bearings ensuring increased longevity.

3

### Highly Reliable Shaft Seal

The entrance of oil mist into the compression chamber is reduced through the use of a wear-resistant floating seal and high quality thread seals.

## Intuitive Control Panel



- LCD Color Touch Screen
- Easily Input Settings
- View Operation History (Value/Graph)
- View Trip History (Detail/List)
- Power Saving Control (*Standard*)

Optional | Multi-unit Control  
Remote Communication  
Remote Monitoring

# Energy Conservation via Inverter Control



- 1 Rotation speed control**  
 An inverter suppresses discharge pressure fluctuations to approximately 1.45 psi (0.01 MPa), thereby reducing discharge pressure and power consumption. This allows for energy savings of around 14% compared to two-step devices when the load ratio is 60%. <sup>\*1</sup>
- 2 Hitachi's unique APC control**  
 The addition of Hitachi's unique Active Power Control (APC) function permits control of the end pressure, which enables greater energy savings of about 25% compared to two-step devices when the load ratio is 60%. <sup>\*2</sup>
- 3 Wide range of rotation speed control**  
 The rotation speed may be controlled at about 20-100% of capacity. <sup>\*3</sup>
- 4 Greatly improved motor maintainability**  
 The earth brush, indispensable for inverter-driven motors, was a consumable product. The new device adopts new structural parts that eliminate the need for maintenance work, significantly improving maintainability.

\*1 Compared with the 250 hp (185 kW) class model from Hitachi  
 \*2 Compared with Hitachi 250 hp (185 kW) class. In case of single-stage operation at 100 psi (0.69 MPa) specification and 17 psi (0.12 MPa) pressure loss at 100% load factor  
 \*3 Applies to operation at 100 psi

## SDS-UV Series (Inverter)

### Standard Specification for two-stage model

Discharge Pressure (psi)	Model		SDS-UV280	SDS-UV450
	Frame Number		UH31A	UH42A
	Inlet Air Conditions		86°F 75% RH, atmospheric pressure	
100	Capacity	cfm	1,834.7	2,863
	Motor Output	hp	375	610
	Cooling Water Flow	gpm	128	
135	Capacity	cfm	1,584.4	2,889
	Motor Output	hp	389	590
	Cooling Water Flow	gpm	128	
Motor Type		Totally enclosed fan cooled		
Port Size	Air Outlet	in	3	4
	Water Inlet & Outlet	in	3	4
Dimensions	Length	in	157	134 w/o starter 173 w/ starter
	Width	in	67	77
	Height	in	85	91
Approx. Mass		lbs	14,771	19,842 w/o starter 21,605 w/ starter

### Standard Specification for single-stage model

Discharge Pressure (psi)	Model		SDS-UV120L	SDS-UV195L	SDS-UV285L
	Frame Number		UH2B	UH3B	UH4B
	Inlet Air Conditions		86°F 75% RH, atmospheric pressure		
36	Capacity	cfm	1,098.5	1,775.8	2,756.5
	Motor Output	hp	161	241	369
	Cooling Water Flow	gpm	55	88	133
49	Capacity	cfm	889.4	1,519.6	2,294.2
	Motor Output	hp	154	261	382
	Cooling Water Flow	gpm	55	94	143
Motor Type		Totally enclosed fan cooled			
Port Size	Air Outlet	in	18	18	6
	Water Inlet & Outlet	in	2	2	3
Dimensions	Length	in	142	150	181
	Width	in	67	67	77
	Height	in	85	85	91
Approx. Mass		lbs	11,795	13,448	19,070

### Multi-Unit Control Panel

Save even more energy through the addition of an optional multi-unit control panel.

#### Notes:

1. Capacity shows the corresponding values in terms of the suction state of compressor.
2. Discharge pressure shows gauge pressure.
3. Motor output indicates nominal output.
4. Applies only when power-supply voltage is 400V class.
5. Dimensions indicate model equipped with inverter panel.
6. Approximate mass indicates dry mass for model equipped with inverter panel.
7. Hitachi is prepared to offer high-discharge pressure specifications (149 psi). Contact us for details.

# SDS-U Series (Fixed Speed)

## Standard Specification for single-stage model

Discharge Pressure (psi)	Model	SDS-U60L	SDS-U75L	SDS-U100L	SDS-U120L	SDS-U135L	SDS-U150L	SDS-U160L	SDS-U195L	SDS-U220L	SDS-U230L	SDS-U250L	SDS-U285L	SDS-U325L	
	Frame Number	UH2E	UH2D	UH2C	UH2B	UH2A	UH3D	UH3C	UH3B	UH3A	UH4D	UH4C	UH4B	UH4A	
	Inlet Air Conditions	86°F 75% RH, atmospheric pressure													
36	Capacity	cfm	565.4	739.2	904.1	1,098.5	-	1,348.8	1,608	1,775.8	-	2,058.6	2,456.1	2,756.5	2,833.1
	Motor Output	hp	80	107	134	161	-	201	221	241	-	308	342	369	389
	Cooling Water Flow	gpm	29.5	37	45.4	55.5	-	71.3	77.1	87.6	-	110.1	122	133	141.3
49	Capacity	cfm	-	574.3	759.8	889.4	1,042.5	-	1,228.1	1,519.6	1,666.9	-	1,993.8	2,294.2	2,576.9
	Motor Output	hp	-	101	134	154	181	-	215	261	295	-	335	382	436
	Cooling Water Flow	gpm	-	37	44.5	55	67.8	-	80.6	94.2	107.9	-	124.6	143.1	160.7
Motor Type		Totally enclosed fan cooled													
Port Size	Air Outlet	in	3.15				3.9				5.9				
	Water Inlet & Outlet	in	1.6				2				2.6				
Dimensions	Length	in	102.36				110.24				133.86				
	Width	in	66.93				66.93				76.77				
	Height	in	78.74				84.65				90.55				
Approx. Mass		lbs	10,141				12,125				17,416				

## Standard Specification for two-stage model

Discharge Pressure (psi)	Model	SDS-U250	SDS-U280	SDS-U325	SDS-U360	SDS-U400	SDS-U450	
	Frame Number	UH31B	UH31A	UH42D	UH42C	UH42B	UH42A	
	Inlet Air Conditions	86°F 75% RH, atmospheric pressure						
100	Capacity	cfm	1,655.1	1,834.7	2,138.1	2,317.7	2,612.2	2,865.5
	Motor Output	hp	335	375	429	469	530	590
	Cooling Water Flow	gpm	114.5	127.7	145.3	158.5	176.1	193.7
135	Capacity	cfm	1,390	1,584.4	1,820	2,064.4	2,291.2	2,585.7
	Motor Output	hp	335	389	429	483	543	617
	Cooling Water Flow	gpm	114.5	127.7	149.7	167.3	180.5	202.5
Motor Type		Totally enclosed fan cooled						
Port Size	Air Outlet	in	3.1		3.9			
	Water Inlet & Outlet	in	2.6		3.1			
Dimensions	Length	in	110.2		133.9			
	Width	in	66.9		76.8			
	Height	in	84.6		90.6			
Approx. Mass		lbs	12787		18739			

### Notes:

- Capacity shows the corresponding values in terms of the suction state of the compressor.
- Discharge pressure shows gauge pressure.
- Motor output indicates nominal output.
- Dimensions of starter panel is not included in approx. dimension.
- Approximate mass indicates dry mass for model with power-supply voltage at 3kV level.
- Hitachi is prepared to offer high-discharge pressure specifications (149 psi). Contact us for details.



# SDS-H Series (High Capacity)

## Standard Specification for two-stage model

Discharge Pressure (psi)	Model		SDS-480	SDS-570	SDS-680	
	Frame Number		SDS-H53C	SDS-H53B	SDS-H53A	
	Inlet Air Conditions					
		86°F 75% RH, atmospheric pressure				
100	Capacity	cfm	3,033.4	3,581.1	4,199.6	
	Motor Output	hp	644	764	912	
	Cooling Water Flow	gpm	194	233	269	
125	Capacity	cfm	2,998	3,539.9	4,152.5	
	Motor Output	hp	738	872	1033	
	Cooling Water Flow	gpm	225	264	313	
Motor Type		Totally enclosed fan cooled				
Port Size	Air Outlet	in	6			
	Water Inlet & Outlet	in	4			
	Length	in	185			
	Width	in	93			
	Height	in	105			
Approx. Mass		lbs	29,542			

## Standard Specification for single-stage model

Discharge Pressure (psi)	Model		SDS-340L	SDS-400L	SDS-480L	
	Frame Number		SDS-H5C	SDS-H5B	SDS-H5A	
	Inlet Air Conditions					
		86°F 75% RH, atmospheric pressure				
42	Capacity	cfm	2,968.6	3,504.6	4,111.2	
	Motor Output	hp	456	536	644	
	Cooling Water Flow	gpm	141	167	198	
49	Capacity	cfm	2,950.9	3,486.9	4,087.7	
	Motor Output	hp	510	603	711	
	Cooling Water Flow	gpm	154	185	216	
Motor Type		Totally enclosed fan cooled				
Port Size	Air Outlet	in	8			
	Water Inlet & Outlet	in	3			
	Length	in	185			
	Width	in	93			
	Height	in	105			
Approx. Mass		lbs	26,455			

## ⚠ 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

## Hitachi Industrial Equipment

Hitachi Industrial Equipment Systems Co., Ltd.  
Hitachi America, Ltd.

For more information, please contact:

Air Compressor Technologies

☎ 844-429-9676

✉ [airtechinfo@hal.hitachi.com](mailto:airtechinfo@hal.hitachi.com)



ISO14001  
EC97J1107

ISO9001  
JQA-QM3443

Hitachi Screw Compressor is manufactured at a factory approved by Environmental Standard (ISO14001) and Quality Standard (ISO9001) of International Organization for Standardization.

Information in this brochure is subject to change without notice.

# SRL Series

Oil-less Scroll Air Compressors



Pharmaceutical



Research & Development



Food & Beverage



Chemical



Electronic



**H**itachi SRL Series scroll compressors are built on over 100 years of compressed air technology. The ultra-reliable SRL Series is a 100% Oil-Less design making it ideal for your pure air needs.

**2014**



**Simplex** up to 7.5hp  
**Multiplex** 10 to 40hp  
» 2, 3, 4, or 6 pumps

Assembled in the USA 

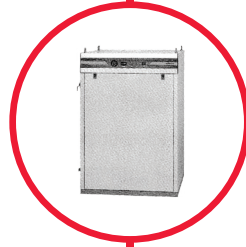
New Oil Free  
Scroll SRL Series

**2005**



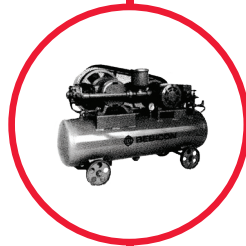
Oil Free Scroll  
SRL Series

**1995**

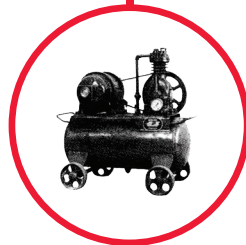


Oil Free Bebicon

**1967**



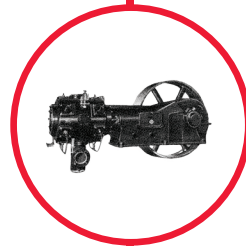
**1946**



First Bebicon

75kW Reciprocating  
First Compressor in Japan

**1911**



# SRL Series

Hitachi SRL Series compressors feature the best in scroll technology. These technological innovations result in a scroll compressor that is small, reliable, efficient, and quiet.



## Quiet

Standard design features make Hitachi Scroll compressors some of the quietest on the market thanks to:

- » Full Enclosure
- » Mechanical and Electrical Vibration Isolation
- » Leak Path minimization



## Compact

A small footprint and easy panel accessibility allow Hitachi Scroll compressors to fit in areas that other compressors can't.



## Durable

Hitachi scrolls have a special Alumite surface treatment that extends scroll life and reduces life cycle cost.



## Stable

Hitachi scroll compressors incorporate two stage cooling which stabilizes discharge temperature.



## High-Performance

The combination of a patented scroll wrap design and proprietary tip seal increases performance by decreasing leakage, improved efficiency and extends service intervals.

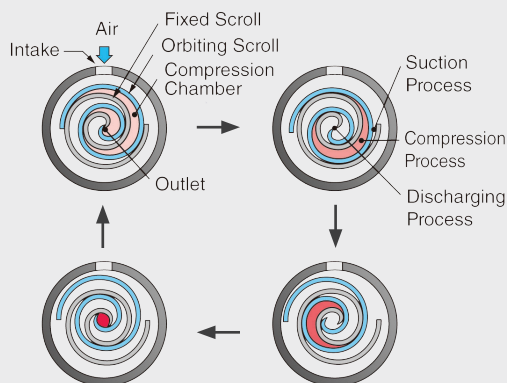



## 100% Oil-Less

Hitachi oil-free scroll technology is 100% oil-less meaning zero oil. This results in a compressor that emits no harmful emissions into the environment, conserves natural resources and produces high quality air for your pure-air applications.

## Scroll Compression Principle

To initiate compression, two scroll members comprised of: 1) Orbiting scroll member and 2) Fixed scroll members are mated to create compression chambers. The continual rotary movement of the orbiting scroll member compresses air from the atmosphere creating Oil-Free and Contaminant-Free air for discriminating compressed air applications.



 = Eco-Friendly

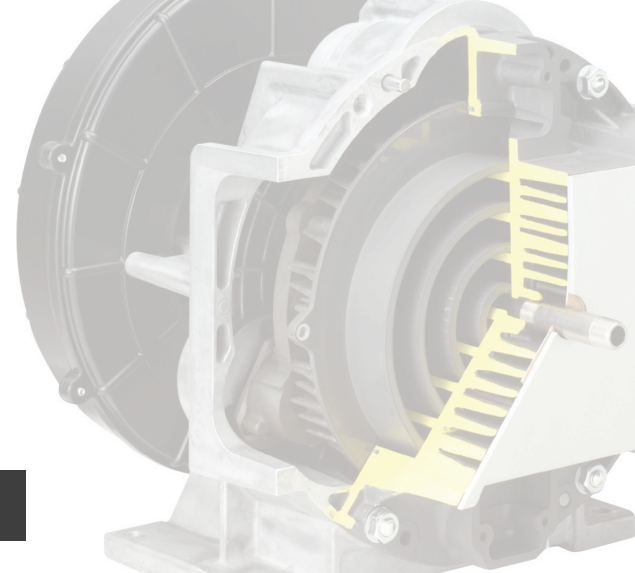




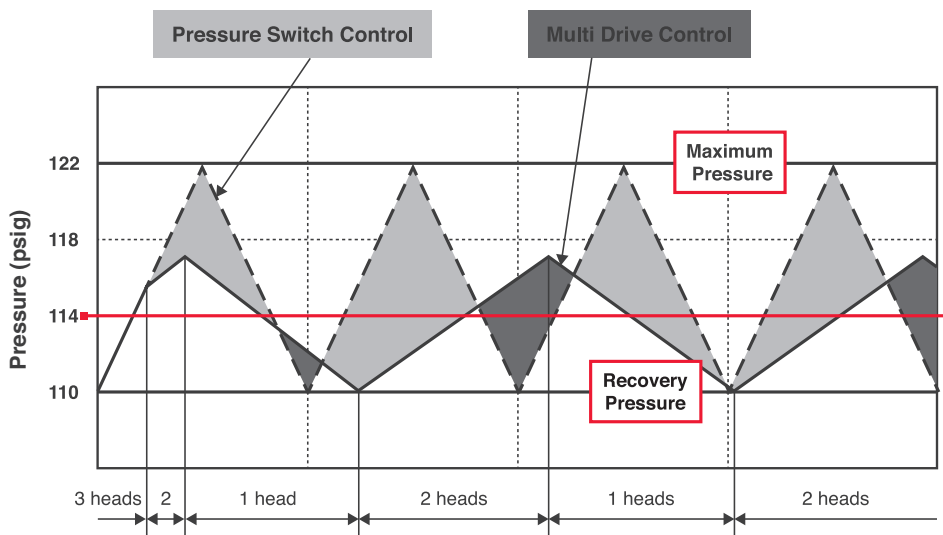
## Versatile

A microprocessor using proprietary control logic allows Hitachi scroll compressors to maintain control pressure while minimizing restart frequency and energy use.

- » Multi-Drive Control (applicable on 7.5kW – 33 kW models)
- » Cycle Control Logic



## Drive Mode Comparison Graph



### Multi-Drive Mode

The operation of the compressor is automatically controlled to ensure that the pressure is kept at the necessary pressure (control pressure). Unnecessary power consumption is prevented by not allowing the pressure to reach the maximum pressure. Therefore energy-savings is realized.

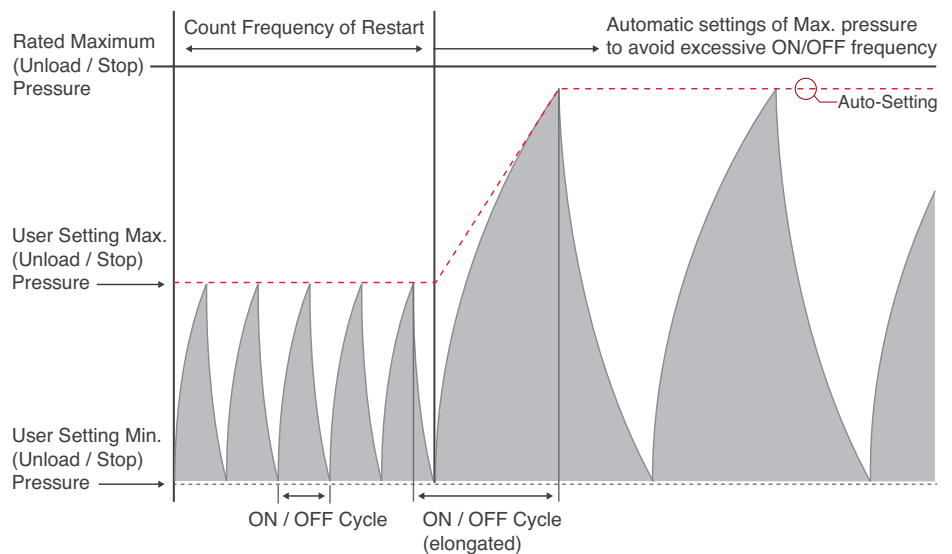
### P-Mode

Operates the same as the conventional Pressure Switch Control method. If the pressure reaches the maximum pressure, the operation of the compressor will stop. Then when the pressure decreases to the cut-in pressure, the operation of compressor will automatically restart.

## Cycle Control Graph

### Cycle Control Logic

Hitachi's unique pressure control method provides high reliability. When maximum pressure is set low for energy saving, short cycle of On-Off may occur. In that case, the maximum pressure is automatically raised to elongate the On-Off cycle and ease the excessive restarting frequency.



## Oil Free Scroll Air Compressor 2–7.5 HP (1.5–5.5kW)

Specifications	Model	Rated Pressure	Nominal Motor Output	FAD	Main Voltage	Weight	Outlet
		psig (MPa)	HP (kW)	ACFM (L/min)	V/ $\Phi$ /Hz	lb (kg)	NPT
	SRL-1.5MA6	120 (0.83)	2 (1.5)	5.7 (160)	208-230 / 460 / 3-ph / 60	373 (169)	$\frac{3}{8}$
	SRL-2.2MA6	120 (0.83)	3 (2.2)	8.5 (240)	208-230 / 460 / 3-ph / 60	406 (184)	$\frac{3}{8}$
		145 (1.0)		7.1 (200)			
	SRL-3.7MA6	120 (0.83)	5 (3.7)	14.1 (400)	208-230 / 460 / 3-ph / 60	485 (220)	$\frac{3}{8}$
	SRL-5.5MA6	120 (0.83)	7.5 (5.5)	21.2 (600)	208-230 / 460 / 3-ph / 60	551 (250)	$\frac{3}{8}$
		145 (1.0)		15.5 (440)			

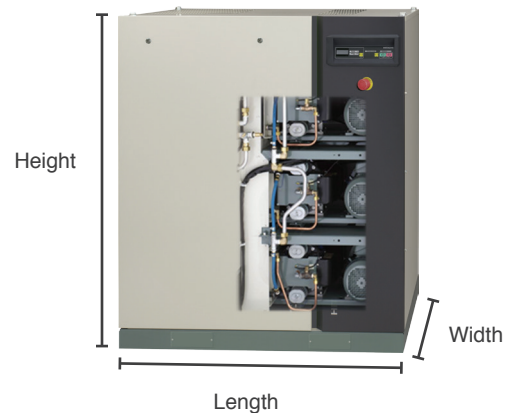
Dimensions	Model	Length inch (mm)	Width inch (mm)	Height inch (mm)
		SRL-1.5MA6	27 (695)	28 (700)
	SRL-2.2MA6			
	SRL-3.7MA6	31 (800)	30 (750)	47 (1,190)
	SRL-5.5MA6			



## Oil Free Multiplex Scroll Air Compressor 10–40 HP (7.7–33kW)

Specifications	Model	Rated Pressure	Nominal Motor Output	FAD	Main Voltage	Weight	Outlet
		psig (MPa)	HP (kW) (pump Config. in kW)	ACFM (L/min)	V/ $\Phi$ /Hz	lb (kg)	NPT
	SRL-7.5MA6	122 (0.84)	10/7.7 (2.2 + 5.5)	30.2 (855)	208/230/460	888 (403)	3/4
		145 (1.0)		23.7 (670)			
	SRL-11MA6	122 (0.84)	15/11 (2x5.5)	43.1 (1,220)	208/230/460	992 (450)	3/4
		145 (1.0)		32.7 (925)			
	SRL-16.5MA6	122 (0.84)	22/16.5 (3x5.5)	64.6 (1,830)	208/230/460	1,367 (620)	1
		145 (1.0)		48.9 (1,385)			
	SRL-22MA6	122 (0.84)	30/22 (4x5.5)	86.2 (2,440)	208/230/460	2,249 (1,020)	1-1/2
		145 (1.0)		67.8 (1,920)			
	SRL-33MA6	122 (0.84)	44/33 (6x5.5)	129 (3,660)	208/230/460	2,778 (1,260)	1-1/2
		145 (1.0)		102 (2,880)			

Dimensions	Model	Length inch (mm)	Width inch (mm)	Height inch (mm)
		SRL-7.5MA6	42.5 (1,080)	30.3 (770)
	SRL-11MA6			
	SRL-16.5MA6	54.3 (1,380)	30.3 (770)	58.9 (1,495)
	SRL-22MA6	58.9 (1,495)	57.9 (1,470)	59.1 (1,500)
	SRL-33MA6			



**Notes:**

1. FAD shows the flow rate converted in suction condition at maximum pressure.
2. Main voltage specification is NOT multi-rating.
3. An air receiver tank must be installed. Please refer to Instruction Manual for proper sizing.
4. The appearance and specifications are subject to change without prior notice.
5. Hitachi Compressors are not designed, intended or approved for Breathing Air Applications.  
Hitachi assumes no responsibility or liability for compressors used in breathing air applications.

**Multiplex Notes:**

1. FAD shows the flow rate converted in suction condition at maximum pressure.
2. Main voltage specification is NOT multi-rating.
3. When Multi-Drive Mode is enabled maximum pressure is reduced for energy savings.
4. An air receiver tank must be installed. Please refer to the Instruction Manual for proper sizing.  
Air receiver tank is NOT attached with the compressor.
5. The appearance and specifications are subject to change without prior notice.
6. Hitachi Compressors are not designed, intended or approved for Breathing Air Applications.  
Hitachi assumes no responsibility or liability for compressors used in breathing air applications.

 **Safety Precautions**

**Applications**

- The compressor described in this catalog utilizes only air as a gas. Never use any gases other than air
  - This could result in a fire hazard or damage to the equipment
- Hitachi Compressors are not designed, intended or approved for Breathing Air Applications
  - Hitachi assumes no responsibility or liability for compressors used in breathing air applications

**Installation**

- Install these compressors indoors. Environments susceptible to moisture such as precipitation or vapors should be avoided
  - This could result in fire hazard, electric shock, rusting, or shortened life of parts
- There should be no explosives, flammable gas (acetylene, propane, etc.), organic solvent, explosive powder, or flame used near the compressor – it may cause 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


**Usage**

- Before use, be sure to read the instruction manual thoroughly for correct use of the compressor
- Do not modify 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.

For more information, please contact:

**Air Compressor Technologies**

 844-429-9676

 [airtechinfo@hal.hitachi.com](mailto:airtechinfo@hal.hitachi.com)

**Hitachi Industrial Equipment**

Hitachi Industrial Equipment Systems Co., Ltd.  
Hitachi America Ltd.



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14001  
JACO  
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UKAS  
MANAGEMENT  
SYSTEMS  
051



JSA  
QMS  
ISO9001  
JSAQ416

Registration No. : JACO-EC99J1177

Hitachi Air Compressor is manufactured at a factory approved by Environmental Standard (ISO 14001) and Quality Standard (ISO9001) of International Organization for Standardization.