Hitachi Rotary Screw Compressors

HITACHI
Inspire the Next

HISCREW

NEXT II series (11-75kW)

More Efficiency
Fit to Improve Productivity
Higher Level of User-friendly

NEXT II series

Full Range Loaded with High Efficiency Motor

New Developed Air-End

Hitachi Latest Innovation of Air-End Technology

- High efficiency Air-End with low-noise and low-vibration supplies compressed air, constantly.

(22/37kW)

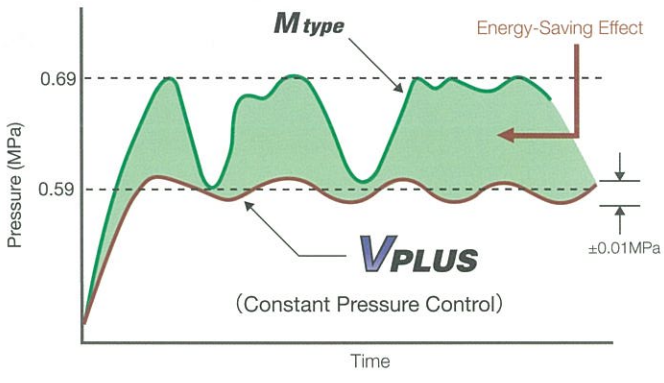
High Efficiency Capacity Control

VPLUS

Since Constant Pressure Control allows highly precise pressure control within range of ±0.01MPa, supply of compressed air at necessary pressure is possible with high efficiency.

M type

On M type models, I+P control (purge + motor auto START/STOP) is applicable during partial load operation.



IPC Control (Intelligent Pressure Control)

VPLUS Mtype

By estimating use point pressure in accordance with air consumption, IPC control decreases discharge pressure during low load operation, which enables Energy-Saving.

Patent JP4425768 and others

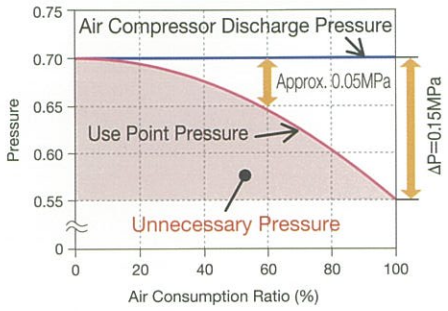
Example of effect by IPC

Conditions ● Air compressor: OSP-37VAN2 ● Control pressure setting: 0.70MPa ● Use point pressure during full load: 0.55MPa ● Piping pressure loss during full load: 0.15MPa

Graph of pressure change (Theoretical values)

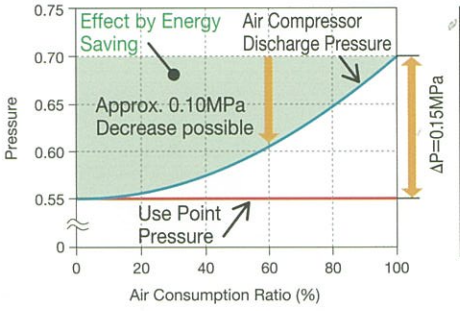
① IPC-OFF (Conventional inverter control model)

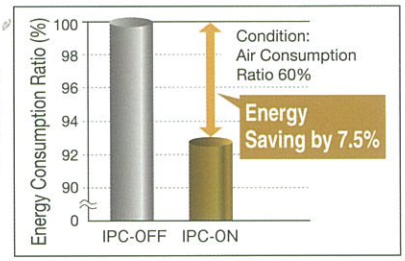
・Control the air compressor discharge pressure at 0.70MPa



② IPC-ON (NEXT II series)

・Control the use point pressure at 0.55MPa





*Due to estimation control, use point pressure varies in accordance with use conditions.

Multi-Function Touch Panel*

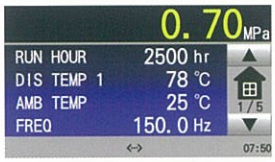
Significant Improvement of User-friendly

*The image described above has been modified.

Various Functions Available

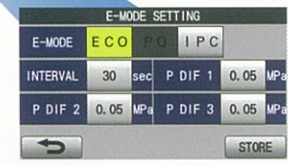
Menu

Monitor Indication



Notice Indication

E-MODE



Operation Data Logging

Main Functions

① Schedule Operation (Weekly Timer)
② Instantaneous Power Interruption (IPI) Restart Function
③ Alternate Operation (Option)
④ Multi-unit Control (Option)
⑤ AUTO Operation
⑥ Communication Function
⑦ Web Server Function
⑧ Display/Store of Operation Data
⑨ Store/Load of Settings
⑩ Maintenance Time Notification
⑪ Operation Data Memory, Display in Graph
⑫ Display of Shutdown and Alarm History

*Touch panel less option does NOT have these functions. (Touch panel less option is available only for 18/22/30/37MAN2.)
Touch Panel is NOT available for 11/15kW.

IT Communication Functions*

USB Flash Memory Possible for Data Logging

*Necessary to prepare a USB flash memory device (5.5 cm or smaller) on user's side.
*Operation data for one day is approximately 400kB. (For reference)

Web Server Function via Bluetooth®

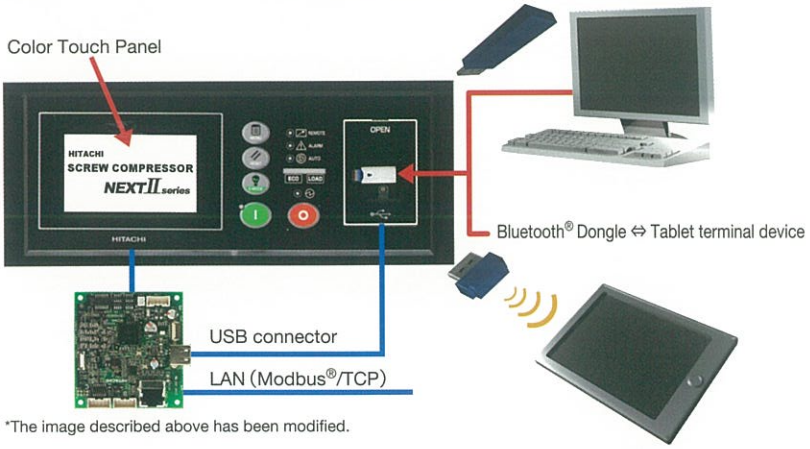
*Necessary to prepare a Bluetooth® USB dongle on your side.
*For setting changes, part of the items are applicable.

Modbus® Communication

Open network serial communication Modbus®/RTU is supported as standard

*Modbus®/TCP support is optional.

USB flash memory (data retrieving)
(Standard) pressure/temperature/current/history/time



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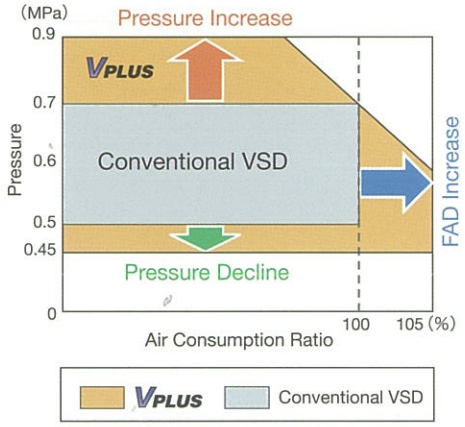
・Bluetooth is the registered trademark of Bluetooth SIG, Inc (US).
・Modbus is the registered trademark of Schneider Automation Inc.

Versatility in Hitachi Original Technology

PQ WIDE MODE

PQ WIDE MODE, by automatically adjusting the maximum rotation speed of the compressor, enables to increase the discharge FAD in case that the pressure declines. Compared to conventional VSD, compressor is possible to operate at a wider range of pressure (P) and FAD (Q).



FAD at PQ WIDE MODE

Unit: m³/min.

Model \ Discharge Pressure MPa	0.45	0.50	0.60	0.70	0.85	0.90
11kW	-	1.79	1.79	1.79	1.63	1.53
15kW	-	2.4	2.4	2.4	2.15	2.04
22kW	4.3	4.3	4.3	4.1	3.6	-
37kW	7.1	7.1	7.1	6.8	6.2	-
55kW	10.6	10.6	10.6	10.1	9.1	-
75kW	14.0	14.0	14.0	13.3	12.0	-

Various System Combinations with VPLUS

To respond to the change of air use, Hitachi provides various system combinations with VSD for further Energy-Saving.

V-M Combination System

If 2 or 3 compressors are necessary, Hitachi V-M combination system is your excellent choice. There is great merit on Hitachi V-M combination system which divides 1 compressor into 2.

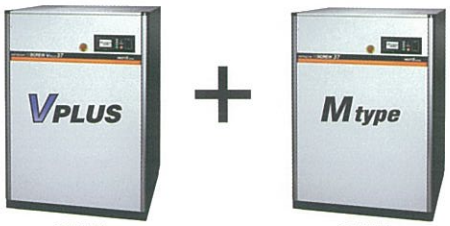
Single-V System/Multi-V System

Besides V-M Combination System, Energy-Saving is also possible with any combination such as Single-V multi-unit control system, or Multi-V multi-unit control system etc.

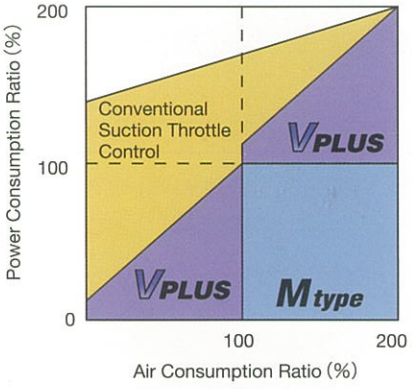
Example Effect of V-M Combination System

1. Energy consumption is similar to the one of 75kW Vplus.
2. Power consumption is saved by 39% or 164MWh/year, when the air consumption ratio is 60% at pressure of 0.6MPa.

＊ Calculation condition: 6,000h/year running



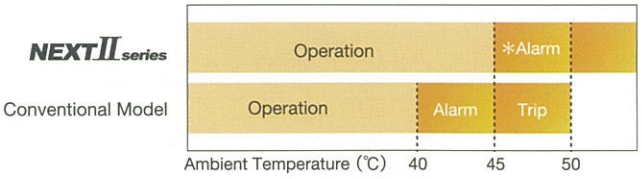
37kW 37kW



High Reliability

Up to 50℃

- Standard up to 45℃
- Operation is possible under 50℃



＊ Ambient temperature alarm will be indicated when ambient temperature is over 45℃. Continuous operation at higher than 45℃ may shorten lifetime of lubricating oil and electric parts.

AC Reactor*

- Protect Fan Inverter against voltage surge due to unstable power supply.

＊For 22/37kW and 55/75kW only

NEW HISCREW OIL NEXT

- Designed for screw air compressor.
- Oil change cycle is every 2 years or 12,000hr which comes first.

Package Filter as Standard

- Easy maintenance
- Maintenance information is indicated on the touch panel periodically.

Standard Specification (11–75kW)

VPLUS

Item · Unit		Model	OSP-11VAN2		OSP-15VAN2		OSP-22VAN2		OSP-37VAN2		OSP-55VAN2		OSP-75VAN2	
Cooling Method		–	Air-Cooled											
Nominal Output		kW	11		15		22		37		55		75	
		HP	15		20		30		50		75		100	
Rated	Discharge Pressure	MPa	0.85				0.7							
		PSI	123				102							
	Discharge Capacity	m³/min	1.63		2.15		4.1		6.8		10.1		13.3	
		CFM	58		76		145		240		357		470	
PQ WIDE MODE	Discharge Pressure	MPa	0.7	0.9	0.7	0.9	0.6	0.85	0.6	0.85	0.6	0.85	0.6	0.85
		PSI	102	131	102	131	87	123	87	123	87	123	87	123
	Discharge Capacity	m³/min	1.79	1.53	2.4	2.04	4.3	3.6	7.1	6.2	10.6	9.1	14.0	12.0
		CFM	63	54	85	72	152	127	251	219	374	321	494	424
Intake Air Pressure/Temperature		–	Atmospheric Pressure / 0 to 45°C											
Discharge Temperature		°C	Atmospheric Temperature + 15 or below											
Driving Method		–	Inverter + 4-Pole TEFC Motor with V-Belt Drive				DCBL Motor Direct Drive				DCBL Motor with Coupling			
Starting Type		–	Soft Start											
Lubricating Oil		–	**HITACHI NEW HISCREW OIL NEXT**											
Lubricating Oil Quantity		L	6		7		10		15		28		39	
Nominal Output of Cooling Fan		kW	–				1.5 (with Inverter Control)						2.2 (with Inverter Control)	
Discharge Pipe Diameter		–	Rc 1				Rc 1-1/2				Rc 2			
Dimension (W×D×H)		mm	950×780×1,250				1,000×1,050×1,550		1,200×1,150×1,650		2,000×1,200×1,800			
Weight		kg	343		378		450		670		1,230		1,405	
Sound Level		dB [A]	58		61		58		60		64		66	

Mtype

Item · Unit		Model	OSP-11M5AN2	OSP-15M5AN2	OSP-18M5AN2	OSP-22M5AN2	OSP-30M5AN2	OSP-37M5AN2
Cooling Method		–	Air-Cooled					
Nominal Output		kW	11	15	18	22	30	37
		HP	15	20	24	30	40	50
Rated	Discharge Pressure	MPa	0.85 <0.7>	0.85 <0.7>	0.7 <0.85>	0.7 <0.85> [1.0]	0.7 <0.85>	0.7 <0.85> [1.0]
		PSI	123 <102>	123 <102>	102 <123>	102 <123> [145]	102 <123>	102 <123> [145]
	Discharge Capacity	m³/min	1.79 <1.63>	2.4 <2.15>	3.4 <3.0>	4.0 <3.7> [3.3]	6.0 <5.4>	7.2 <6.6> [5.8]
		CFM	63 <58>	85 <76>	120 <106>	141 <131> [117]	212 <191>	254 <233> [205]
Intake Air Pressure/Temperature		–	Atmospheric Pressure / 0 to 45°C					
Discharge Temperature		°C	Atmospheric Temperature + 15 or below					
Driving Method		–	4-Pole TEFC Motor with V-Belt Drive					
Starting Type		–	Direct connection/Star-Delta		Star-Delta			
Lubricating Oil		–	**HITACHI NEW HISCREW OIL NEXT**					
Lubricating Oil Quantity		L	6	7	10		15	
Nominal Output of Cooling Fan		kW	–		1.5	1.5 (with Inverter Control)	1.5	1.5 (with Inverter Control)
Discharge Pipe Diameter		–	Rc 1		Rc 1-1/2			
Dimension (W×D×H)		mm	950×780×1,250		1,000×1,050×1,550		1,200×1,150×1,650	
Weight		kg	338	363	670		930	
Sound Level		dB [A]	58	61	59		65	

Item · Unit		Model	OSP-55M5AN2	OSP-75M5AN2
Cooling Method		–	Air-Cooled	
Nominal Output		kW	55	75
		HP	75	100
Rated	Discharge Pressure	MPa	0.7 <0.85> [1.0]	
		PSI	102 <123> [145]	
	Discharge Capacity	m³/min	10.0 <9.0> [8.3]	13.2 <11.9> [10.9]
		CFM	353 <318> [293]	466 <420> [385]
Intake Air Pressure/Temperature		–	Atmospheric Pressure / 0 to 45°C	
Discharge Temperature		°C	Atmospheric Temperature + 15 or below	
Driving Method		–	2-Pole TEFC Motor with Gear Driving	
Starting Type		–	Star-Delta	
Lubricating Oil		–	**HITACHI NEW HISCREW OIL NEXT**	
Lubricating Oil Quantity		L	29	40
Nominal Output of Cooling Fan		kW	1.5 (with Inverter Control)	2.2 (with Inverter Control)
Discharge Pipe Diameter		–	Rc 2	
Dimension (W×D×H)		mm	2,000×1,200×1,800	
Weight		kg	1,400	1,690
Sound Level		dB [A]	65	67

Notes:

1. Capacity is measured according to ISO 1217, Third Edition, Annex C.
2. Pressures are indicated as the gauge pressure.
3. Sound Level is the converted value under the condition of 1.5m in front and 1m height in an anechoic room.
   It may vary in different operating conditions and/or different environment with echo of actual field installations.
   Sound Level may be increased by 3dB at PQ WIDEMODE ON.
4. Contact the supplier for the dryer and filters selection at PQ WIDEMODE ON.
5. Do NOT use any oil other than "HITACHI NEW HISCREW OIL NEXT".
6. Install the proper size air receiver tank and the earth leakage circuit breaker which are out of scope of supply from Hitachi.
7. Install the air compressor indoors and avoid flammable and corrosive environment, moisture and dust.
8. < > [ ] show values of capacity under different discharge pressures.
9. 1.0 MPa model is ONLY available on 22/37/55/75kW Mtype.
   For details, contact your nearest dealer of Hitachi local representative office.
10. Digital instrument panel can be chosen only for Mtype (18/22/30/37kW) as Touch Panel less option.
11. 11/15kW is only available digital instrument panel (Touch panel less).
    Touch panel is NOT available.