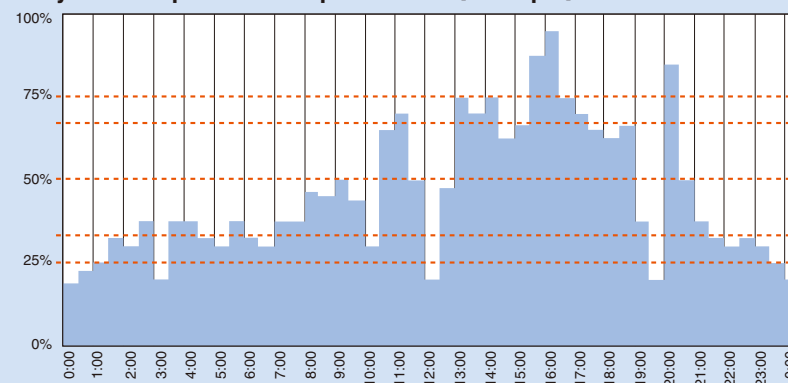


VPLUS Maximized Effect of Energy-Saving by V-M Combination System

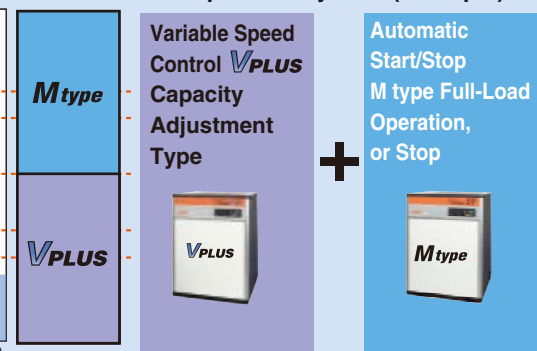
V-M Combination Type Ideal Energy-Saving Operation by the combination of V plus and M type

In case of installing 1 unit of V plus type with variable speed control, it is possible to adjust the capacity with the V plus type. And part of the load operation on the fixed speed type is significantly reduced so as to achieve efficient operation.

Daily Consumption of Compressed Air (Example)



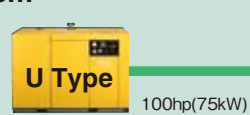
Structure of Compressor System (Example)



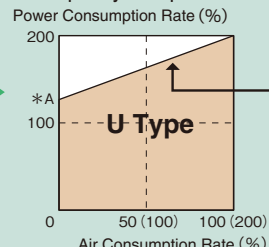
V-M Combination Type (JP 3547314) (2-3 units)

Conventional System

Conventional Compressor of Suction Throttle Type 1 unit



Air capacity and power consumption of 1 unit of 50hp(37kW) is displayed as 100%.



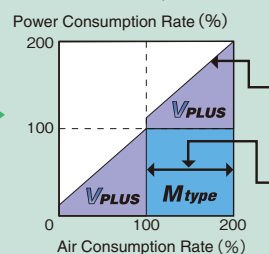
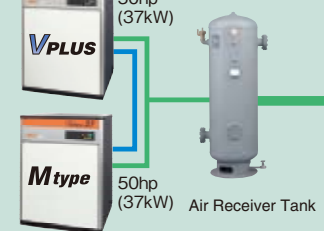
Explanation

U Type

Air Capacity Adjustment under U Type Control Energy-Saving effect is not much
*A: Discharge Air Capacity→0% Power Consumption→140%

V-M Combination Type

HISCREW VPLUS + HISCREW M type



Explanation

VPLUS

All-time operation, all-time capacity adjustment, responding to the air consumption at all area for power reduction

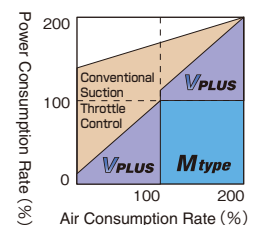
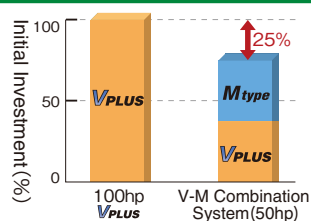
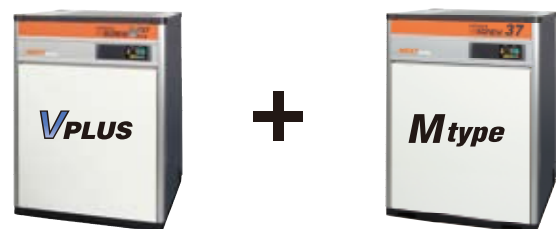
M type

Full load or automatic stop

Example of Energy-Saving Effect

- Power consumption is same featured as 100hp(75kW) V plus.
- Reduction of **25%** in initial investment is possible.
- Reduction of power consumption up to **39%**, or about **165MWh/year** when the air consumption rate is 60%.

* Calculation condition: operation time is 6,000h/year, discharge pressure is 87psig



Pay attention to the ventilation of air compressor.

It is impossible to operate HISCREW in an airtight room.

Prepare equipment to exchange heat generated by the HISCREW.

(1) Ventilation without Exhaust Duct (Figure A)

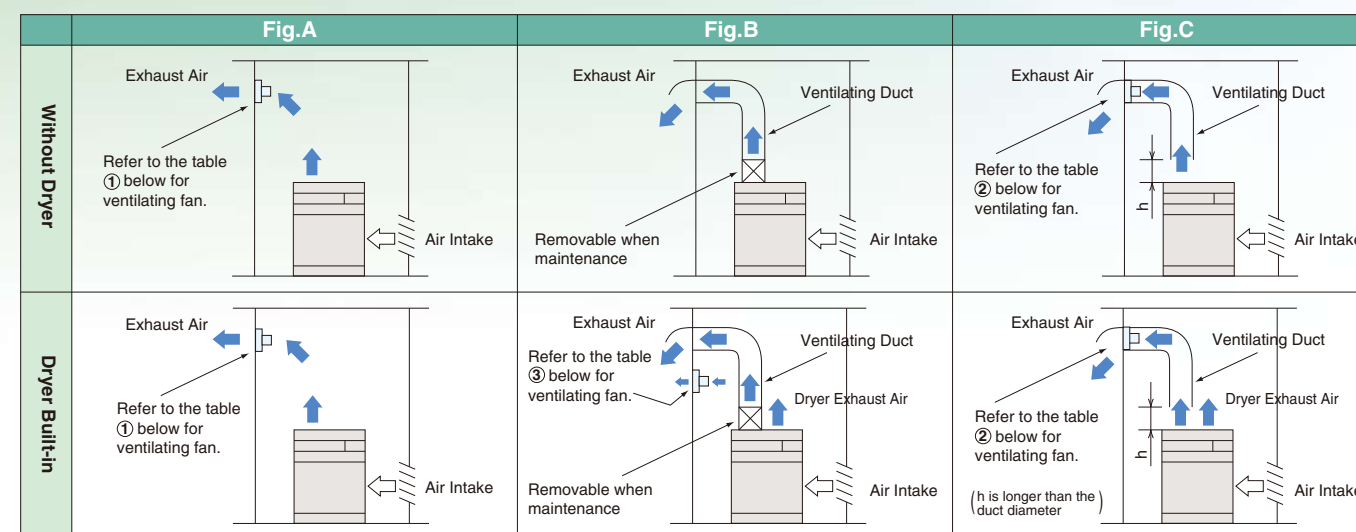
When the whole compressor room is ventilated, the ventilating fan capacity shall be larger than **recommended fan capacity ①** in the table below. (This value is calculated under the condition when the room temperature rise is 9°F or below.) Install the ventilating fan as high as possible on the wall.

(2) Ventilation with Exhaust Duct (Figure B)

● If the pressure loss (resistance of the exhaust air through the duct) is **within 0.0029psig{0.079inAq}**, ventilating fan in the duct is not required. In this case, install the ventilating duct directly to the exhaust port of the compressor as shown in **Figure B**. Also, make sure the ventilating duct is removable for the convenience during maintenance. Meanwhile, to ventilate the exhaust air from dryer, install a ventilating fan which has a capacity larger than **recommended fan capacity ③** in the table below.

● If the pressure loss (resistance of the exhaust air through the duct) is **larger than 0.0029psig{0.079inAq}**, ventilating fan whose capacity is larger than **recommended fan capacity ②** in the table below installed in the duct is necessary. Keep in mind the rise in temperature of exhaust air during selecting ventilating fan. In this case, set up a hood on the duct inlet port and make sure to take a distance **h**, which is longer than the duct diameter as shown in **Figure C**.

● Do not use the duct installed ventilating fan for dryer exhaust. It may cause freezing on the inside of the aftercooler of the dryer by enforced exhaust.



Ventilation Data

Air-Cooled HISCREW (Without a Built-in Air Dryer)

*: shows V plus of NEXT series, while < > shows M type.

Item/Unit	(hp/kW)	10/7.5*	15/11*	20/15*	30/22*	50/37*	75/55*	100/75*	135/100	200/150 (Dual)	
Heat Generation	Btu/h	33,363 <32,226>	47,201 <45,590>	61,134 <59,239>	83,408 <83,408>	142,173 <142,173>	223,685 <223,685>	312,780 <312,780>	417,040	597,125	
Air Exhaust (air compressor)	CFM	706 <706>	988 <988>	988 <988>	1,765 <1,589>	3,177 <3,177>	4,589 <4,589>	4,942 <4,942>	7,060	12,708	
Model for Ambient Temperature of 113°F	CFM	—	—	—	1,765 <1,589>	3,177 <3,177>	4,589 <4,589>	4,942 <4,942>	—	—	
Approx. Temp. Rise (exhaust air)	°F	45 <45>	50 <50>	63 <58>	54 <54>	65 <65>	49 <49>	63 <63>	54	54	
Model for Ambient Temperature of 113°F	°F	—	—	—	54 <50>	59 <65>	49 <49>	63 <63>	—	—	
Maximum Pressure Loss (exhaust air)	psig (inAq)	0.0029 (0.079)									
Recommended Fan Capacity ①	CFM	3,283 <3,177>	4,660 <4,483>	6,036 <5,825>	8,225 <8,225>	13,944 <13,944>	21,992 <21,992>	30,817 <30,817>	41,301	58,704	
Recommended Fan Capacity ②	CFM	812 <812>	1,130 <1,130>	1,130 <1,130>	2,047 <1,836>	3,671 <3,248>	5,295 <5,295>	5,683 <5,683>	8,119	7,307x2	
Model for Ambient Temperature of 113°F	CFM	—	—	—	2,259 <1,836>	3,671 <3,707>	5,295 <5,295>	5,683 <5,683>	—	—	

Air-Cooled HISCREW (With Built-in Air Dryer)

*: shows V plus of NEXT series, while < > shows M type.

Item/Unit	(hp/kW)	10/7.5*	15/11*	20/15*	30/22*	50/37*	75/55*	100/75*	
Heat Generation	Btu/h	36,586 <35,448>	52,035 <50,424>	67,674 <65,779>	96,677 <96,677>	162,077 <162,077>	247,380 <247,380>	356,379 <356,379>	
Air Exhaust (air compressor)	CFM	706 <706>	988 <988>	988 <988>	1,765 <1,589>	3,177 <2,824>	4,589 <4,589>	4,942 <4,942>	
Air Exhaust (air dryer)	CFM	353 <353>	635 <635>	635 <635>	1,059 <1,059>	1,765 <1,765>	2,118 <2,118>	2,471 <2,471>	
Approx. Temp. Rise (exhaust air)	°F	45 <45>	50 <50>	63 <58>	54 <54>	65 <65>	49 <49>	63 <63>	
Maximum Pressure Loss (exhaust air)	psig (inAq)	0.0029 (0.079)							
Recommended Fan Capacity ①	CFM	3,601 <3,495>	5,119 <4,977>	6,672 <6,495>	9,602 <9,602>	16,167 <16,167>	24,322 <24,322>	35,124 <35,124>	
Recommended Fan Capacity ②	CFM	1,165 <1,165>	1,659 <1,659>	1,836 <1,836>	3,389 <3,212>	5,860 <5,436>	7,625 <7,625>	9,990 <9,990>	
Recommended Fan Capacity ③	CFM	353 <353>	530 <530>	706 <706>	1,377 <1,377>	2,189 <2,189>	2,330 <2,330>	4,307 <4,307>	

Line-Up
Type
Instruction
Specification
In Common
NEXTseries
10-20hp
(7.5-15kW)
NEXTseries
30/50hp
(22/37kW)
NEXTseries
75/100hp
(55/75kW)
NEXTseries
30-100hp
(22-75kW)
Option
200series
155hp
(110kW)
200series
Dual type
200hp
(150kW)
2-stage
200-300hp
(150-240kW)
V-M
Combination
System
Precaution