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HANSHIN
AIR COMPRESSORS

FYH
SERIES



- Specification in this catalogue is subject to change for performance improvement without advanced notice.

HISTORY



Since Hanshin was established in 1969 under the name of Hanshin Machinery Mfg. Co., Ltd., Hanshin has led the Korean air compressor industry by marking many “first domestically manufactured product in Korea”. Beginning with the piston-type compressor in the 1970s, to the vane, screw compressor in the 1980s, and oil-free screw compressor in 1983. Hanshin had become listed air compressor manufacturing company in 1987. In 1999, we became the first company to supply localized oil-free compressors for nuclear power plants. In 2001, Hanshin once again marked the first factory in China specialized in manufacturing air compressors.

There have been lots of air compressor manufacturers in the world which is not in business for a long time, but Hanshin has grown steadily and now we are considered as representative company in Korean compressor market.

However we're still starving and struggling to satisfy our customer.

50th Anniversary **(1969~2019)**

- 1969.09 : Established “Hanshin Machinery Mfg. Co., Ltd.”
- 1976.11 : Convert corporation as Hanshin Machinery Co., Ltd.
- 1977.02 : Participate international machinery exhibition in Toronto, Canada
- 1979.02 : Started to produce piston compressor (Water cooled) in technical cooperation with Meiji (Japan)
- 1980.02 : Started to produce vane type compressor in technical cooperation with Hydrovane (UK)
- 1983.10 : Started to produce screw compressor in technical cooperation with Kobe Steel Co., Ltd.(Japan)
- 1985.10 : Started to produce oil free screw compressor first in Korea
- 1985.12 : Started to export air compressor to USA
- 1986.03 : Started to export air compressor to China through Hongkong
- 1987.11 : Be awarded by Minister of commerce and industry of Korea as an Excellent Korean Manufacturing company
- 1987.11 : Listed stocks in Korea Stock Trading Market
- 1990.01 : Started to produce oil free piston compressor in technical cooperation with Meiji (Japan)
- 1992.11 : Acquired “품” mark of excellent quality control factory



1970's

Piston compressor

1970's

Water cooled
Piston compressor

1980's

Oil Injected
Screw compressor

1980's

Oil Free
Screw compressor

1990's

Piston compressor

1970's

Head Quater

1970's

Manufacturing Line

1970's

Paint handling tank

1980's

COAX Exhibition



Panoramic View of Hanshin Machinery
Mfg. Co., Ltd. in 1969

**Hanshin Machinery
Mfg. Co., Ltd.**
In 1969
(Seoul, Korea)

- 1993.01 : Started to manufacturing localized refrigerant air dryer
- 1997.11 : Acquired ISO 9001 / 14001 certificate.
- 1999.02 : Supplied localized oil free screw compressors to Korean nuclear power plant (KEPCO) first in Korea (5th, 6th Plants in Young Gwang)
- 2001.09 : Established China corporation
- 2003.07 : Acquired certificate of excellent after sales service company
- 2005.12 : Complete to buliding Qingdao factory, China.
- 2006.06 : Acquired certificate of excellent after sales quality company
- 2010.08 : Registered as authorized supplier in Korean Western Power Co., Ltd.
- 2011.03 : Acquired excellent cooperative certificate from POSCO E&C
- 2011.03 : Supplied localized oil free screw compressors to Korean nuclear power plant (KEPCO) (New Ul-jin and Gori)
- 2012.01 : Signing to supply oil free screw compressor to ADNOC, UAE.
- 2016.08 : Complete to buliding Hwaseong Factory, Korea
- 2018.04 : Acquired class 'O' ISO 8573-1 certification for AL2 series
- 2019.09 : 50th Anniversary

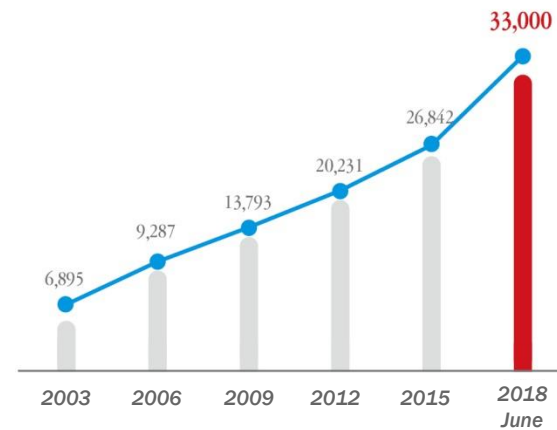
WHY HANSHIN

3 Reasons for why Hanshin

1. **Total sales Quantity** **33,000 Sets**

Since Hanshin launched screw compressor on 1997 until launched new FYH series, we sold more than 33,000 sets of screw compressor called GRH Series, it recorded the largest sales quantity in the Korean industry. It means Hanshin's screw compressor is "Korea's best air compressor".

The best screw compressor in Korea, Hanshin.



Total sales quantity for 16 years

2. **Buy corporate culture with compressor**

Since 1987, Hanshin has been listed in Korean stock market(KOSPI) for 30 years with excellent achievements.

There are lots of compressor manufacturers who have low price and quality but sometimes there are quite many consumers suffered from finding parts and poor after-sales service.

As a Korea's only and first listed air compressor company, we have led the Korean compressor industries both quality and after-sales market. Hanshin believes when our customers purchase compressed air system, they are not paying on just air compressor only but also such Hanshin corporate culture.

Count on Hanshin, we're ready to meet your highest expectation.



Head quarter in Ansan, Korea

3. **World wide After Sales network**

Hanshin has supplied lots of compressors to all over the world through global companies like Samsung Engineering, Hyundai Engineering, Posco E&C, etc. To meet customer demand, we developed service providers & distributors from Middle East to South America.

Choose Hanshin, and enjoy Hanshin's 8/4 system(after sales service within 8 hrs/ supply parts within 4 hrs) all over the world!



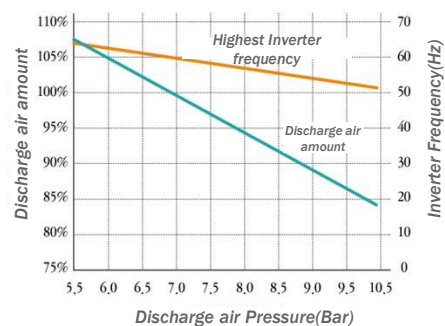
Global Hanshin Network



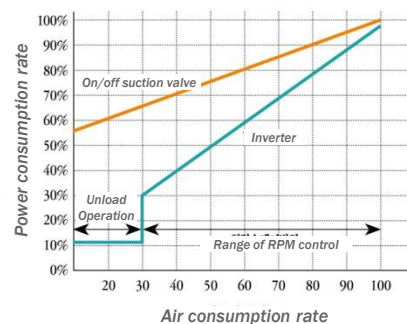


C-D R I V E R

FYH-50AC



The most efficient operation frequency and discharge amount for different ranges of pressure



Air consumption vs. Power consumption

Maximized efficiency by intelligent Micom

Hanshin's own brand C-driver is from the adaptability of Chameleon. Built with artificial intelligent Micom, this artificial intelligence model offers outstanding savings in power consumption with the most efficient rpm control.

Minimized power consumption control

C-driver reduces power consumption by changing motor rpm down to 20 Hz, and it also makes compressor operate in unload condition when air consumption has been reduced.

When the compressor run in unload condition for a specific time, it makes the motor stop operating for maximizing energy saving.

Optimized air flow control

The maximum amount of discharge air is realized by automatically artificial Micom and it switches motor rpm to the most efficient operation way within the range of operation pressure.

Economic calculation of VSD

Load rate : 70% / Operating hour : 8,400 Hrs per year / Electric charge 0.1 USD / kWh

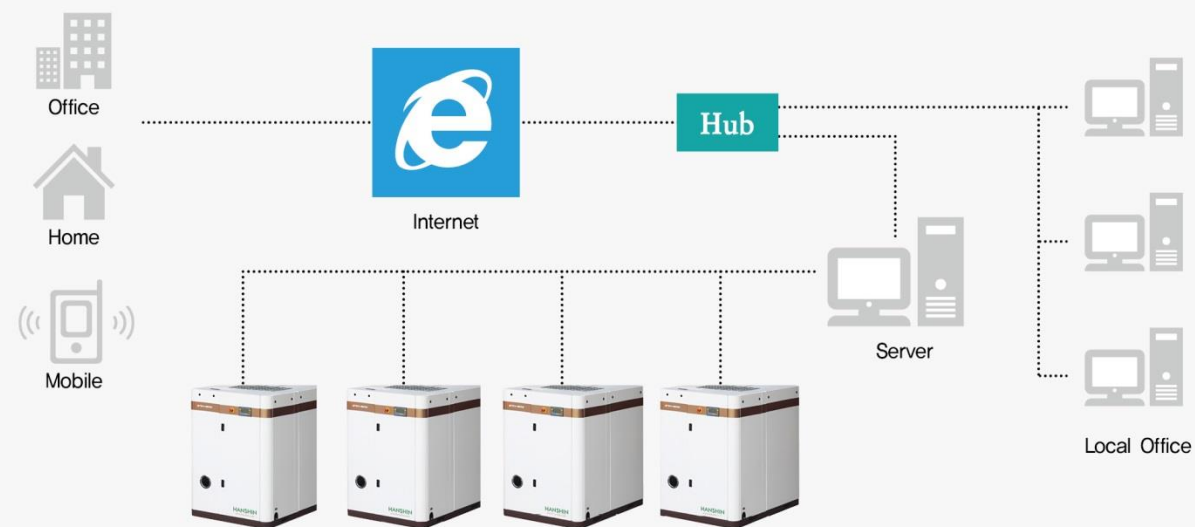
Model name		FYH-30AC	FYH-50AC	FYH-75AC	FYH-100AC	GRH2-150AC
TYPE	Capacity (HP/kW)	30/20	50/37	75/55	100/75	150/110
	Power consumption(kW)	19.36	32.56	48.4	66.0	96.8
	Annual power consumption(kWh)	162,624	273,504	406,560	554,400	813,120
Y-D Type	Annual electric charge(USD)	US\$16,262.40	US\$27,350.40	US\$40,656.00	US\$55,440.00	US\$81,312.00
	Power consumption(kW)	15.4	25.9	38.5	52.5	77
	Annual power consumption(kWh)	129,360	217,560	323,400	441,000	646,800
VSD Type	Annual electric charge	US\$12,936.00	US\$21,756.00	US\$32,340.00	US\$44,100.00	US\$64,680.00
	Saved power consumption	3.96	6.66	9.9	13.5	19.8
	Annual saved consumption(kWh)	33,264	55,944	83,160	113,400	166,320
VSD Efficiency	Power saving rate(%)	20%	20%	20%	20%	20%
	Annual saved electric charge(USD)	US\$3,326.40	US\$5,594.40	US\$8,316.00	US\$11,340.00	US\$16,632.00
	Period to return initial investment	1.53 Year	1.01 Year	0.87 Year	0.83 Year	1.17 Year

✳ When you use VSD, you can return initial investment for just 1 year, and electric saving charge will be retruned to the customer after 1 year.

COSMOS

(Compressor Status Monitoring System)

COSMOS SYSTEM allows to manage compressors anytime, anywhere in the world by internet. You can stop and run compressor and check compressor status by remote operation by LAN or dedicated communication line.



SYSTEM FUNCTIONS

- Real-time status monitoring of compressor
- Change operating value
- Display setup and alarm history
- Check animated compressor operating condition.
- Remote control from mobile(android)
- Automatic daily saving for operating record

Manage compressor status anytime

COSMOS SYSTEM applied on the **FYH SERIES** marked 1st domestically developed system. it allows customer not only to check compressor status but also control compressor run and stop condition in anywhere and anytime through the internet.

It also can communicate with the company server of the customer, and provide required data for calculating power and air consumption to build smart factory.



Mobile

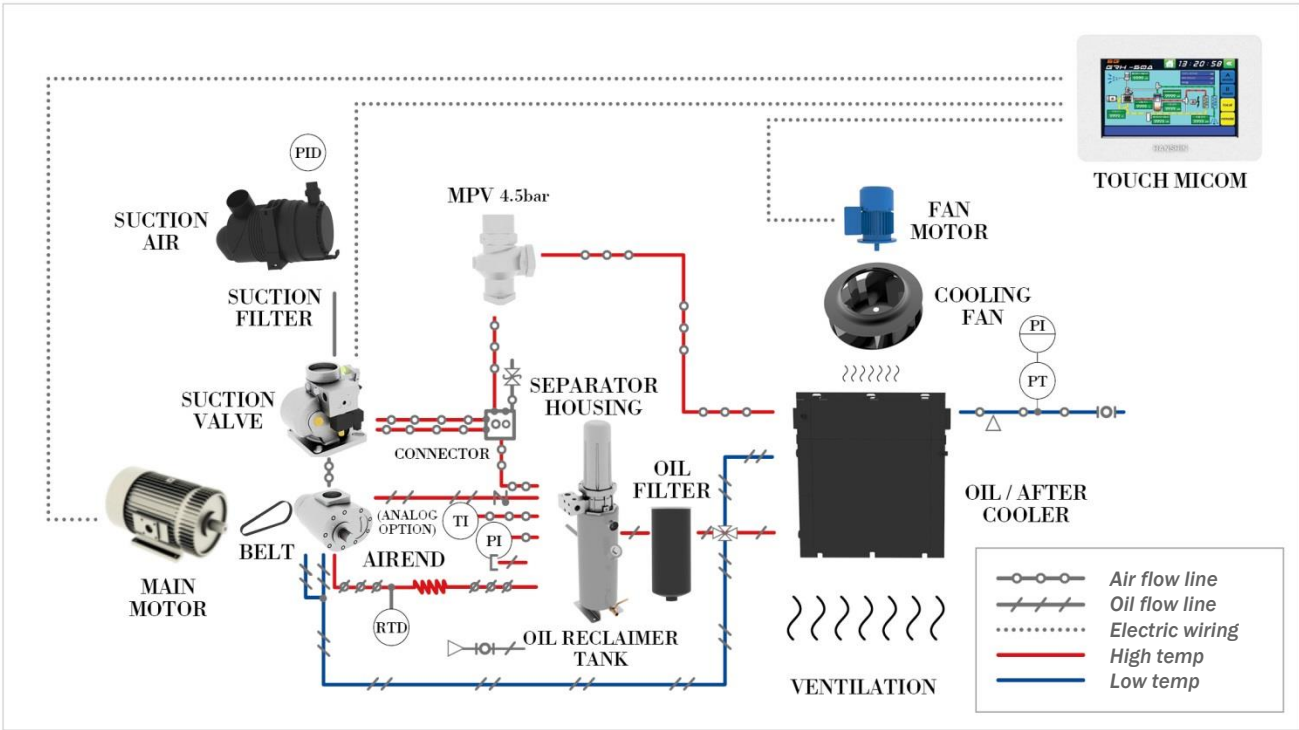
Desktop

Remote monitoring system

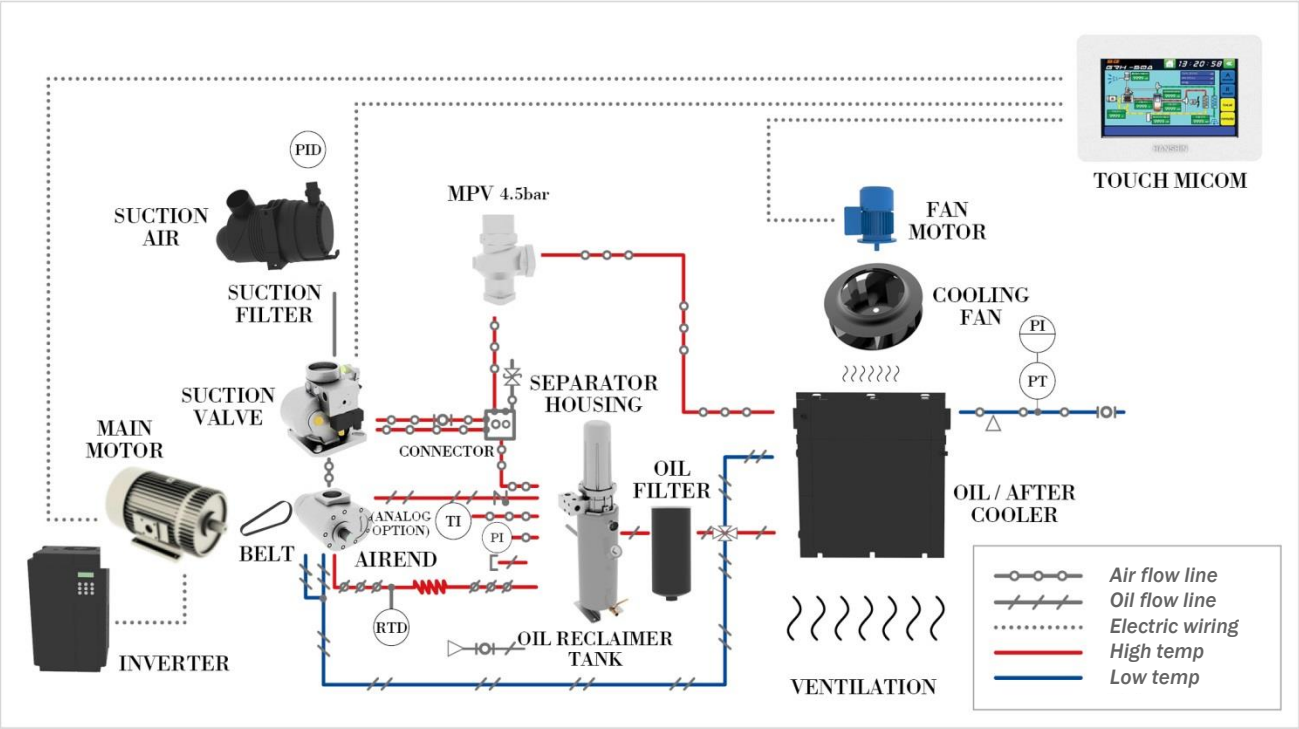


FLOW DIAGRAM

1. Y-D flow diagram

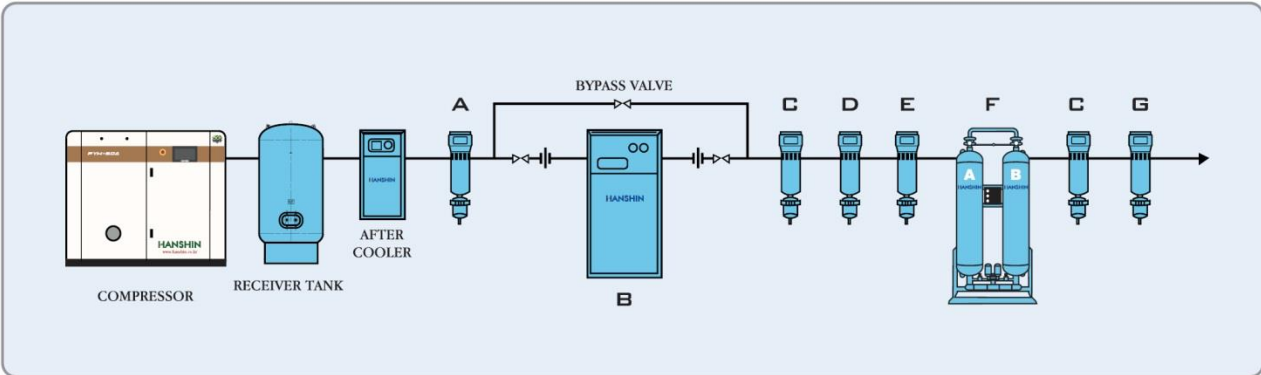


2. Inverter flow diagram



COMPRESSED AIR SYSTEM

When the air from the atmosphere is drawn in and pressurized by the compressor, various impurities and pollutant particles that are generated by the compressor and the production line, resulting in negative effects on productivity and quality. Therefore, special consideration of the pollution issue in the pneumatic system is required, and a proper **air filtering system** that supports performance and special features of pneumatic components has to be selected, before comprehensively reviewing the economic efficiency, reliability, stability, and maintenance of the product.



Description	A	B	C	D	E	F	G
Item	Main Filter	Refrigerant Air Dryer	Pre Filter	Line Filter	Coalescer Filter	Desiccant Air Dryer	Adsorbent Filter

Air filtering system for different purposes

SYSTEM 1	Extra dry, odorless air, non freezing line	A B C D E F G	Extra dried system for electronic parts Chemical analysis systems(gas, gas recharging) Chemical analysis systems(gas, gas recharging)
SYSTEM 2	Oil free, dried, odorless, clean air	A B C D E G	Medical and Food industry (transport, mix, dry, pack) Breathing Aids
SYSTEM 3	Oil free, dried clean air	A B C D E	Measuring Instruments, electrostatic painting Precision machinery, Precision parts drying
SYSTEM 4	Dried clean air	A B C	Pneumatic mahinery and tools, general drying

Features of compressed air system

	Momentum Transfer			Heat Transfer			Mass Transfer	
Description	Coalescing filter	Separator	Receiver Tank	Heat exchanger	Refrigerant type	Chiller Tank	Desiccant Type	Deliquescent Type
Application	Eliminate water aerosol Incapable of eliminating water vapor.			Eliminate water vapor Poor ability for eliminating water aerosol			Eliminate water vapor Poor ability for eliminating water aerosol	
Pros	Best Efficiency (Over 99%)	Little pressure loss Collision type <25mmAq Centrifugal type <76mmAq Low risk of pollution	Refrigerant Type	Cools the air decreased moisture volume Dew point of 16~38 ℃	Low efficiency, bulky	Decrease the water vapor elements Dew point of 10~15 ℃	The highest moisture elimination capacity Dew point less than -40 ℃	Simple structure Dew point of 4~27 ℃
Cons	Big pressure loss, over 762mmAq	Low efficiency, Collision type>90% Centrifugal type >98%	Low efficiency Bulky	High dew point	Dew point of less than 0 ℃ Not possible	Separate heat transfer additional route	High initial Cost	High output dew point Generate corrosive drain

FYH SERIES

STAR DELTA / INVERTER TYPE( C-DRIVER)



SPECIFICATIONS & DIMENSIONS

Model		FYH-20A(C)	FYH-25A(C)	FYH-30A(C)	FYH-35A(C)	FYH-50B/D(C)	FYH-75A(C)	FYH-100A(C)
형식 / Type		Single Stage Oil Injection Screw Air Compressor						
메인모터출력(kW) / Main Motor Output		15	18	22	27	37	55	75
전압(V) / Voltage (3Phase)		AC220 / AC380 / AC440						
주파수(Hz) / Frequency		50 / 60						
구동방식 / Drive System		Poly Belt Drive					커플링 직결구동 / Direct Drive	
기동방식 / Starting Method		Direct	Star-Delta Starter					
실토출공기량 (m³/min) / Free Air Delivery	7.0 bar	2.9	3.4	4	4.7	6.8(Belt)	10.4	14.1
	8.5 bar	2.6	3.2	3.7	4.4	6.25(직결)	9.6	13
	9.9 bar	2.4	3	3.5	4.2	6.2(직결)	8.9	12
흡입조건 / Starting Method		대기압, 40℃ 이하 / Atmospheric Pressure						
토출온도(℃) / Discharge Air Temperature		주위온도 + 15℃ 이하 / Atmospheric Temperature + 15℃						
토출관경(Inch) / Air Outlet		1" (25A)				1½" (40A)	2" (50A)	
윤활유충진량(ℓ) / Lubricating Oil Capacity		15				25	50	
크기 및 중량 / Dimensions & Weight	가로(mm) / Width	1000				1175	2000	
	세로(mm) / Depth	1400				1600	1350	
	높이(mm) / Height	1350				1500	1700	
	중량(kg) / Weight	673	700	726	753	1000	1596	1713

1. Can apply food grade oil(for food industry)
2. (C) means inverter type
3. Can make water cooled model.

GRH2 - SERIES

AIR COOLED / WATER COOLED



SPECIFICATIONS & DIMENSIONS

Model		GRH2- 125A(W)	GRH2- 150A(W)	GRH2- 200A(W)	GRH2- 250A(W)	GRH2- 300A(W)	GRH2- 350A(W)	GRH2- 400A(W)	GRH2- 500A(W)
형식 / Type		Single Stage Oil Injection Screw Air Compressor							
메인모터출력(kW) / Main Motor Output		90	110	150	190	220	260	300	375
전압(V) / Voltage (3Phase)		AC220 / AC380 / AC440 / AC3300 / AC6600					AC3300/AC6600		
주파수(Hz) / Frequency		50 / 60							
구동방식 / Drive System		커플링 직결구동 / Direct Drive							
기동방식 / Starting Method		Star Delta, Reactor							
토출공기량 (m³/min) / Free Air Delivery	7.0 bar	17.8	20.8	28	35.2	42	50.8	55	70
	8.5 bar	16.2	19.1	25.8	32.5	35.2	47.1	50.5	65.2
	9.9 bar	15.6	16.1	33.6	30.1	33.8	43.5	46.9	59.6
토출온도(°C) / Discharge Air Temperature		공냉식 : 주위온도 + 15°C 이하 / Ambient Temp. + 15°C / 수냉식 : Cooling Water Inlet Temp. + 10°C or Less							
토출관경(Inch) / Air Outlet		2"(50A)		2½"(65A)	3"(80A)		4"(100A)	5"(125A)	
윤활유충진량(ℓ) / Lubricating Oil Capacity		52		140	260		360		
크기 및 중량 / Dimensions & Weight	가로(mm) / Width	2300		2700	3100		3900	4200	
	세로(mm) / Depth	1550		1700	2200		2200		
	높이(mm) / Height	1724	1950	2000	2100		2200		
	중량(kg) / Weight	2800	3200	4200	4500	4700	5500	6500	7500

1. Can apply food grade oil for food industry
2. Can make inverter type as well.
3. (W) means water cooled model.
4. There are some machine which is using service factor of motor.

ACCESSORIES

SPECIFICATIONS & DIMENSIONS

AD SERIES, Refrigerated type air dryer

Model	Flow Rate(Nm³/min)		Power Consumption (kW)	Dew Point	Ambient Temp. (°C)	Inlet Temp. (°C)	Power Source	Connections	Weight (Kg)	Dimensions			Refrigerant Gas
	60Hz	50Hz								W	D	H	
AD-5	0,5	0,41	0,47	3~7°C at Press	5~45	4~55	220V 1P 60Hz	1/2" PT	18	180	450	480	R-22
AD-7	0,7	0,5	0,47					1/2" PT	18	180	450	480	
AD-10	1,2	1,0	0,47					3/4" PT	29	297	564	538	
AD-15	1,8	1,5	0,47					1" PT	29	297	564	538	
AD-20	2,9	2,4	0,5					1" PT	40	297	744	720	
AD-35	4,7	3,9	0,52					1" PT	43	297	744	730	
AD-50	6,8	5,6	0,94					1-1/2" PT	53	297	888	760	
AD-75	10,5	8,6	1,3					2"PT	72	392	870	932	
AD-100	14,3	12,1	1,7					2"PT	78	392	870	962	
AD-150	20,0	17,0	2,9					2-1/2"PT	165	617	817	1,333	
AD-200	30,0	25,0	3,1					3"FLG	168	617	817	1,333	

1. Flow rate in this table is measured in inlet temp 35 °C, ambient temp 38 °C, inlet pressure 7barg, dew point 4 °C
2. Maximum inlet pressure is 9.7 barg, please contact us when you high pressure model.
3. Please contact us when you need different electric specification.

AD-HT SERIES, Refrigerated type air dryer for high temp

Model	Flow Rate		Power Consumption (kW)	Dew Point	Ambient Temp. (°C)	Inlet Temp. (°C)	Power Source	Connections	Weight (Kg)	Dimensions			Refrigerant Gas
	60Hz	50Hz								W	D	H	
AD-5HT	0,62	0,51	0,41	4~10°C at Press	1,7~40	55~80	220V 1P 60Hz	3/4" PT	63	370	700	890	R-134A
AD-7HT	0,97	0,81	0,41						67	370	700	890	
AD-10HT	1,35	1,12	0,41						68	370	700	890	
AD-15HT	1,96	1,63	0,65						82	370	700	890	
AD-20HT	2,9	2,2	0,99					1" PT	108	470	800	1130	R-22
AD-30HT	4,0	3,2	0,99						110	470	800	1130	
AD-50HT	7,2	6,0	1,37					2"PT	180	590	1020	1330	
AD-75HT	11,6	9,2	1,37						210	590	1020	1330	
AD-100HT	14,6	12,1	3,49						260	600	1200	1380	

1. Flow rate in this table is measured in inlet temp 35 °C, ambient temp 38 °C, inlet pressure 7barg, dew point 4 °C
2. Please contact us when you need different electric specification.
3. 5 um, 1 um filter included in dryer from AD-5HT to 30HT, 5 um filter included in dryer from AD-50HT to 100HT.

HART SERIES, Air receiver tank

Model	Volume(m³)	Anchor Distance	Inlet Hole Height	Outlet Hole Height	Inner Diameter	Height	Weight (Kg)	Nozzle Size					M1		
								Inlet Size	Outlet Size	Pressue Gauge	Safety Valve	Vent Hole			
HART-0050	0,5	670	600	1045	760	1442	270	40A	40A	10A	25A	25A	Hand Hole 100A KS 10K SOFF		
HART-0100	1,0	780	650	1530	900	1963	450	40A	40A						
HART-0150	1,5	920	800	1620	1040	2189	635	50A	50A						
HART-0200	2,0	940	800	1700	1160	2300	775	50A	50A				40A	40A	Man Hole (Internal Type)
HART-0300	3,0	1130	850	1930	1340	2576	1165	65A	65A						
HART-0400	4,0	1130	990	2640	1340	3286	1430	65A	65A						
HART-0500	5,0	1300	1000	2750	1460	3427	1745	80A	80A						
HART-0600	6,0	1510	1100	2350	1740	3049	2300	100A	100A						
HART-0800	8,0	1510	1150	3126	1740	4025	2890	125A	125A						
HART-1000	10,0	1510	1130	4080	1740	4779	3380	125A	125A						

1. In/Out nozzle size can be changed as per customer request.

SPECIFICATIONS & DIMENSIONS

AHL SERIES, Desiccant type air dryer

Model	Flow Rate (Nm³/min)	Connections	Dimensions			Desiccant Weight (kg/2towers)	Weight (kg)
			W	D	H		
AHL-10	1,5	3/4" PT	750	380	1780	32	125
AHL-15	2		750	380	1944	38	140
AHL-20	3	1" PT	800	440	1860	56	215
AHL-25	3,6		800	440	2050	70	235
AHL-30	4,3		800	495	1740	80	255
AHL-35	5		800	495	1880	96	350
AHL-40	6,8	1 1/2" PT	900	495	2105	120	400
AHL-50	8,2		900	550	2085	160	550
AHL-75	11	2" PT	1100	590	2216	210	630
AHL-100	14,5		1100	640	2235	280	780

AF SERIES, Air filter

Model	Flow rate									Element Q'ty	In-Out Size	Dimensions (AxB) mm	Weight (kg)
	40µm (Main)		5µm (Pre)		1µm (Line)		0,1µm / 0,01µm / 0,01 ppm						
	Nm³/min	scfm	Nm³/min	scfm	Nm³/min	scfm	Nm³/min	scfm					
AF-15A	2,2	76	1,8	62	1,3	42	1,2	35	1	15A	106 X 332	1,5	
AF-20A	5,7	194	3,5	121	3,2	97	2,9	66	1	20A	106 X 402	2	
AF-25A	8,0	277	5,7	197	5,0	173	4,2	118	1	25A	106 X 532	2,5	
AF-40A	17,0	588	14,0	484	12	381	11	346	1	40A	179 X 823	12	
AF-50A	29,0	1003	25,0	865	22,0	761	15	484	1	50A	179 X 1032	21	
AF-65A	58,0	2007	49,0	1696	48,0	1794	28,0	969	2	65A	500 X 1050	70	
AF-80A	88,0	3045	73,0	2526	72,0	2691	42,0	1453	3	80A	500 X 1050	70	
AF-100A	139,0	4810	120,0	4651	110,0	3806	70,0	2422	5	100A	730 X 1850	150	
AF-15H	3,0	112	2,0	74	1,38	51	1,15	43	1	15A	106 X 332	1,5	
AF-20H	6,6	246	4,0	150	3,2	120	2,2	82	1	20A	106 X 402	2	
AF-25H	9,2	344	6,6	246	5,8	217	3,9	145	1	25A	106 X 532	2,5	
AF-40H	19,6	732	16,1	601	12,7	475	11,5	430	1	40A	179 X 823	12	
AF-50H	33,4	1249	28,8	1076	25,3	945	16,1	601	1	50A	179 X 1032	21	

AC SERIES, After cooler

Model	Flow Rate (Nm³/min)	Connections	Dimensions			Fan		Power Consumption (kW)	Weight (kg)	Power
			L	W	H	Q'ty	Pole			
AC-10	2	3/4" PT	528	270	534	1	4	0,009	17	220V 1P 60Hz
AC-20	3,2	1" PT	578	283	586	1	4	0,1	22	
AC-30	5,1	1 1/2" PT	738	283	672	1	4	0,1	32	
AC-50	8,2	2" PT	870	350	812	1	4	0,2	53	
AC-75	12,5		1070	385	805	2	4	0,1	67	
AC-100	17,0		1270	400	880	2	4	0,2	95	

1. Please contact us when you need different electric specification.
2. Flow rate in this table is 60Hz model.