

Compressed **Air System**

Compressed Air Dryer | Air Filter



HANSHIN

Refrigerated Air Dryer

Refrigerated air dryer with outstanding durability and efficiency

AD-5X~AD-15X - Small

1. Applied with static condenser without cooling fan Condenser

- Optimized for indoor installation due to no noise
- Reduction of electricity cost because there is no fan motor - Approximately 20% reduction in electricity cost compared to other brands
- Reduction in maintenance cost because there is no breakage caused by contaminated condenser

2. Compressed air - refrigerant heating system

- Maximization of energy efficiency by reusing waste heat as refrigerant
- The refrigerant that has been primarily condensed in the static condenser exchanges heat in the re-heater with compressed low temperature air that has passed through the evaporator. Here, the compressed air is heated and discharged, whereas the refrigerant is condensed for the second time.

3. Used in all weather conditions

- There is no freezing during the winter, and the system can withstand overloading during the summer.

4. Economic price is possible through mass production

- The best choice for small compressors below 15 horsepower that you were reluctant to install due to high costs

5. Supply of clean quality compressed air through pure copper tube heat exchanger

6. Refrigerant leak-proof cooling pipe

- Perfectly leak-proof through blazing of all refrigerant pipes



AD-5X~15X

(0.47~1.92 Nm/min)

AD-20X~AD-150X - Medium

1. Adoption of stainless steel plate heat exchanger

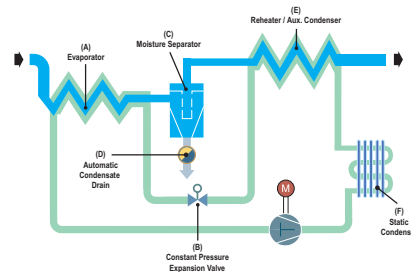
- High heat exchange efficiency, stable dew point
- 3 all-in-one system of separator, reheater, and evaporator

2. High efficiency condensing design - Models above AD-50X

- Optimum efficiency and reinforced durability through aluminum material
- Improved condenser air vent design, ensures favorable installation space

3. Applied with digital control board (DCB-II) - Models above AD-50X

- Applied with dew point indicator - LED method
- Electronic drain valve control function



FLOW DIAGRAM



AD-20X~150X

(2.73~20.6 Nm/min)

AD-X Series Small/Medium Technical Specification

Model	Flow rate (Nm³/min)	Power consumption (kw)	Dew point	Ambient TEMP. (°C)	Inlet TEMP. (°C)	Power Source	Conne- ctions (PT)	Weight (kg)	Dimensions			Refrigerant gas
									H	W	D	
AD-5X	0.53	0.24	4°C at Press.	2~43	4~60	220V-1P- 60hz	3/8"	20	382	320	320	R-134A
AD-7X	0.95	0.34					3/4"	32	568	368	394	
AD-10X	1.46	0.42					3/4"	32	568	368	394	
AD-15X	2.15	0.58					3/4"	44	568	500	500	
AD-20X	3.06	0.52		1"	50		601	363	601	R-22		
AD-30X	3.92	0.65		1"	53		601	363	601			
AD-40X	6.18	0.77		1"	58		601	363	601			
AD-50X	7.65	0.86		2"	68		761	443	761			
AD-75X	13.04	1.2		2"	81		761	443	761			
AD-100X	15.84	1.86		2"	88		761	443	761			
AD-150X	23.07	2.55				2-1/2"	119	761	494	761		

※ Processing rate of discharge is based on inlet temperature of 35°C, ambient temperature of 38°C, inlet pressure of 6.9 barg, and pressure dew point of 4°C with maximum working pressure of 16 barg.

AD-200X~AD-800X - Large

- 1. Adoption of stainless steel plate heat exchanger**
 - There is no concern for rust or corrosion
 - High efficiency and performance - counter flow
- 2. Integrated system of reheater and evaporator**
 - Excellent cooling function, and optimization of product size and installation space
 - Reduction of operation cost and installation cost
- 3. Use of EGI (Electro Galvanized Coil) case**
 - Resistant to scratches, corrosion, and contamination
- 4. Applied with stylish digital control monitor**
 - Dew Point Monitor (LED Indicator)
 - Electronic drain valve control function



Digital Control Board (DCB-II)



Stainless Steel Heat Exchanger



FLOW DIAGRAM



AD-200X~800X
(28, 1~99, 8 Nm³/min)

Optional item **SCM-II** (System Control Monitor-II)

- 1. LCD Monitoring**
 - Display of air dryer operation status
 - Display of fan motor operation status
 - Display of refrigerant and air temperature
 - Alarm history memory (up to 50)
 - Display of automatic drain valve operation
 - Display of system status and alarm
 - Display of refrigerant pressure (high/low pressure)
- 2. Dryer Start/Stop button**
- 3. Alarm Off button**
- 4. Menu button : Search modes, change setting**
 - Setting of automatic drain valve cycle
 - Function for setting refrigerant and air alarm temperature
 - Function for cooling system monitoring
 - Fan motor's operation pressure can be set individually.
 - Password can be set and changed
 - Built-in communication function (RS-485 Serial Port)
 - Built-in control system operation test function

AD - X Series Large Technical Specification

Model	Flow rate (Nm ³ /min)	Power consumption (kw)	Dew point	Ambient TEMP. (°C)	Inlet TEMP. (°C)	Power Source	Connections (PT)	Weight (kg)	Dimensions			Refrigerant gas
									H	W	D	
AD-200X	31.47	5.6	4°C at Press.	2~43	4~49	380V-3P- 60hz	3"	280	1,564	724	1,054	R-22
AD-300X	47.82	8.9					4"	338	1,644	724	1,154	
AD-400X	56.48	9.8					4"	850	1,560	860	1,600	
AD-500X	74.52	10.6					6"	1,000	1,628	1,050	1,800	
AD-600X	93.15	13.0					6"	1,050	1,628	1,050	1,800	
AD-800X	111.78	14.5					6"	1,100	1,628	1,050	1,800	

※ Processing rate of discharge is based on inlet temperature of 35°C, ambient temperature of 38°C, inlet pressure of 6.9 bar.g, and pressure dew point of 4°C with maximum working pressure of 9.7 bar.g.

※ Please inquire separately for models above 800HP

Correction Factor

■ Pressure correction table (bar.g)

Inlet pressure	4	5	6	6.9	8	9	9.7
Correction factor	0.75	0.84	0.92	1.00	1.03	1.07	1.07

■ Pressure dew point correction table (°C)

Pressure dew point	4	10
Correction factor	1.0	1.2

■ Inlet temperature correction table (°C)

Inlet temperature	27	30	32	35	38	40	43	45	50
Correction factor	1.32	1.22	1.11	1	0.92	0.84	0.77	0.71	0.58

■ Ambient temperature correction table (°C)

Ambient temperature	25	27	30	32	35	38	40	43	45
Correction factor	1.14	1.12	1.09	1.06	1.03	1	0.92	0.84	0.8

Refrigerated Air Dryer

Refrigerated air dryer with outstanding durability and efficiency

It enables Oil Free Line through use of Stainless Steel Shell, guarantees uniform dew point through outstanding cooling efficiency, has very economic maintenance cost, and inspections are very convenient.



AD-10~200 (1, 2~30, 0 Nl/min)



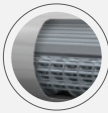
1. High performance through reliable design

· AD-Series maximizes dryer function through reliable and high performance design based on excellent cooling technology.



2. Applied with high-efficiency Cross-Wave Fin

· Maximizes moisture removal through repetitive collision with cooling based on redundant (Cross-Wave Fin) heat exchanger system
· Because the internal cooling fin acts as a separator as well, the product is smaller than existing products.



3. All models for all weather conditions are applied with Stainless Steel Shell heat exchanger

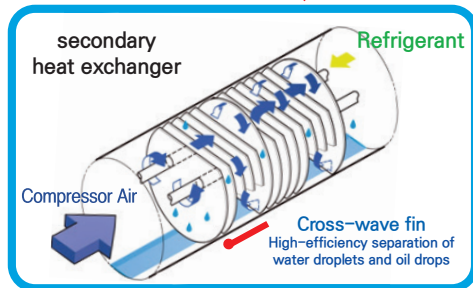
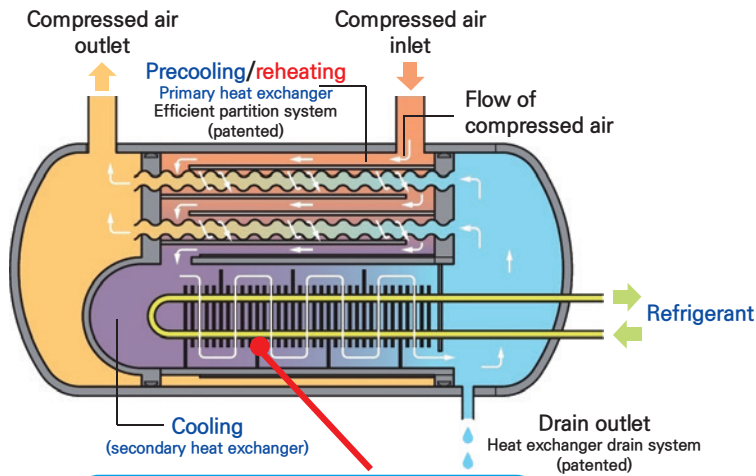
· There is no freezing during the winter, and the system can withstand overloading during the summer.



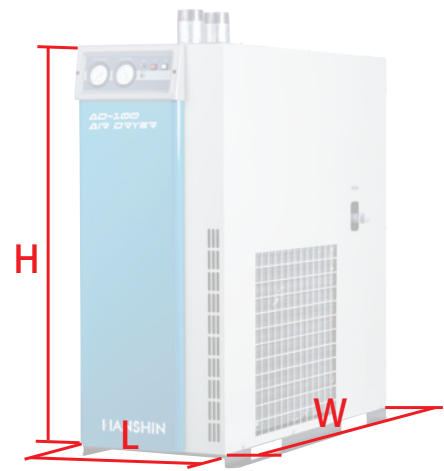
4. Applied with high performance Drain Trap

· Condensate water discharge function has been improved through external installation of high performance Auto Drain Trap, which enables more convenient maintenance and repair.

AD-Series



FLOW DIAGRAM



Dimension Information



ADT-100
Applied to
AD-10~20



AD-5
Applied to above
AD-35

AD - Series Technical Specification

Model	Flow rate (Nm ³ /min)		Power consumption (kw)	Dew point	Ambient TEMP. (°C)	Inlet TEMP. (°C)	Power Source	Connections (PT)	Weight (kg)	Dimensions			Refrigerant gas
	50Hz	60Hz								L	W	H	
AD-10	1.0	1.2	0.47	3~7°C at Press.	5~45	4~55	220V-1P-60hz	3/4" (PT)	29	297	564	538	R-22
AD-15	1.5	1.8	0.47					1" (PT)	29	297	564	538	
AD-20	2.1	2.6	0.5					1" (PT)	40	297	744	720	
AD-35	3.9	4.7	0.52					1" (PT)	43	297	744	730	
AD-50	5.6	6.8	0.94					1-1/2" (PT)	53	297	888	760	
AD-75	8.6	10.5	1.3					2" (PT)	72	392	870	932	
AD-100	12.0	14.0	1.7					2" (PT)	78	392	870	962	
AD-150	17.0	20.0	2.9					2-1/2" (FLG)	165	617	817	1,333	
AD-200	25.0	30.0	3.1					3" (FLG)	168	617	817	1,333	

※ Processing rate of discharge is based on inlet temperature of 35°C, ambient temperature of 38°C, inlet pressure of 6.9 bar.g, and pressure dew point of 4°C with maximum working pressure of 9.7 bar.g.

※ Please contact us if there are differences in the above standard power specifications.

※ High pressures above design pressure of 9.7bar.g are manufactured only through special orders.

※ Because all models are standard air cooled types and because water-cooled types must be specially ordered, please contact us for relevant inquiries.

※ Models above AD-150 model are subject to design and performance inspection by Korea Occupational Safety & Health Agency (KOSHA).

Correction Factor

Pressure correction table (bar.g)

Inlet pressure	5	6	7	8	9	10	11	12	13
Correction factor	0.9	0.96	1	1.03	1.06	10.8	1.1	1.12	1.13

Inlet temperature correction table (°C)

Inlet temperature	30	35	40	45	50	55
Correction factor	1.24	1	0.82	0.69	0.58	0.45

Pressure dew point correction table (°C)

Pressure dew point	4	10
Correction factor	1.0	1.2

Ambient temperature correction table (°C)

Ambient temperature	21	25	27	32	38	43
Correction factor	1.18	1.14	1.12	1.06	1	0.94

Refrigerated Air Dryer for High Temp.

High-efficiency separation of water droplets and oil drops

1. Protection from over-cooling through after cooler manual operation button

- There is a separate after cooler button other than the dryer power button.

Over-cooling due to after cooler operation during the winter time can be prevented in advance.

When the temperature falls below a certain level during the winter, the after cooler button can be turned off and used.

2. Outstanding filtration performance through high efficiency filter

- Through the use of Pre Filter (5um) & After Filter (1um) adopted with Premium Element, a cleaner compressed air can be ensured.

3. Applied with high performance Drain Trap

- Condensate water discharge function has been improved through external installation of high performance Auto Drain Trap, which enables more convenient maintenance and repair.



AD-5HT~100HT

(0.62~14.6 Nm³/min)

AD-HT Series Technical Specification

Model	Flow rate (Nm ³ /min)		Power consumption (kw)	Dew point	Ambient TEMP. (°C)	Inlet TEMP. (°C)	Power Source	Connections (PT)	Weight (kg)	Dimensions			Refrigerant gas
	60Hz	50Hz								L	W	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	2.6	2.2	0.996					1" (PT)	108	470	800	1130	R-22
AD-30HT	3.9	3.2	0.996						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	800	1200	1380	

※ Processing rate of discharge is based on inlet pressure of 7.0 bar.g and maximum working pressure of 9.7 bar.g.

※ Please contact us if there are differences in the above standard power specifications.

AD-HT Series

Minimization of installation space

With all-in-one system of built-in after cooler and filter within the refrigerated dryer, it can be installed and used freely in confined places or locations that obstruct piping work.

General Air Line System



고온일체형 모델 사용 후의 Air Line System



AD-HT Series system

High-temperature compressed air is cooled by the after cooler first.

In addition, the air flows into the refrigerated dryer after passing through the Pre Filter, and then the moisture is cooled and discharged. And because the air passes the After Filter, foreign substances are completely filtered, which enables cleaner and dry compressed air.



High performance
quality guaranteed!



AD-5HT ~ AD-30HT



AD-50HT ~ AD-100HT



- Reduction of installation space! 
- Reduction of installation cost! 
- Reduction of work! 

Compressed Air Filter

High efficiency & performance filter

The compressed air that is discharged from air compressors contain foreign substances such as oil, water, and dust, which can become the cause of various failures in the overall production process such as reduced efficiency of production facility, lifespan of facility, and increase of corroded parts.

AF - Series is a high performance air filter that can prevent such issues. The series contain 6 specific types for each function and purpose, which can be selected based on the user environment.

Differentiation of AF-Series

1. Implementation of lightweight aluminum die casting for all models for the first time in the country (AF-15~50A)
2. All models attached with external Drain Traps
3. Applied with Stainless Steel internal element chamber for models above AF-65A
(Prevention of internal corrosion and adhesion of element fixing bolts)
4. Attached with triangle-shape distributor (applied to AF-15~50A)
5. Increase of drying effect through primary collision of inflowing air in the head (Applied to AF-15~50A)
6. Detachable connection adapter-mounted system (Option)
Repair and maintenance can be done easily.



Structure and characteristic per filtration rate

Model	에어흐름 및 형상	Filtration rate and efficiency	Installation location	교환 주기
Main Filter AE-40 Series		- Removal of Solid Particulate above $40\ \mu\text{m}$ - Removal of more than 90% condensate water and 70% oil	- Main Line of factory piping - Front installation of the refrigerated air dryer line (Effect of large quantity condensate discharge)	Element Exchange Cycle Base on Diff. Press. : 0.3 bar, g or Higher Base on Life Cycle : 3,000hrs or Higher
Pre Filter AE-5 Series		- Removal of Solid Particulate above $5\ \mu\text{m}$ - Removal of more than 97% condensate water and 72% oil	Protection of end device and increase of filtration efficiency by installation at the front of the air dryer and microfine air filter	
Line Filter AE-1 Series		- Removal of Solid Particulate above $1\ \mu\text{m}$ - Removal of 100% condensate water and more than 98% oil	- Collection and removal of absorbent powder by installation at the end of the absorption air dryer - Extend lifespan of filter by installation at the front of the microfine air filter	
Interceptor Filter AF-0.1 Series		- Removal of Solid Particulate above $0.1\ \mu\text{m}$ - Removal of more than 99.5% of condensate water and oil mist	- Removal of microfine coal by installation in line completely free of impurities - At the front of absorption air dryer (extend lifespan of absorbent and increase drying efficiency)	
Coalescing Filter AE-0.01 Series		- Removal of Solid Particulate above $0.01\ \mu\text{m}$ - Removal of more than 99.999% of condensate water and oil mist		
Adsorption Filter AE-0.01C Series		- Installation at the end of coalescent filter - Maintain compressed air oil carry over at 0.003 ppm	- Installation at the end of absorption air dryer or breathable air purifier (removal of absorbent powder) - Lines that have unpleasant odor	

Drain Trap & Accessory Kit

Auto Drain Trap ADT-100	Smart Drain Trap ADT-150	Super Drain Trap ADT-200	Manometer GD-40	Filter adapter	Float F-50

Compressed Air Filter

High efficiency & performance filter



1. Unique system of sintering resin element

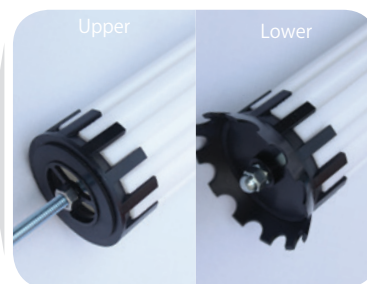
patented

The first in the world gear-type special element that has been designed to have excellent air filtration and moisture removing performance is an unparalleled moisture removing element with proven performance and effect.

2. Top/bottom special element cap (40, 5 μ m)

patented

The triangular horned cylinder that is installed on the bottom surface disperses the flow of fluid. The protruding cylinder on the outside of the top/bottom caps secure the sintering resin filter and create moisture by inducing external liquid collision. The connected angle of inclination allows moisture to flow naturally. In addition, the inclined support at the bottom part prevents backflow of condensate water to the top.



3. High efficiency oil mist and impurity filtration

The specifically designed coalescing element efficiently filters oil mist and various impurities under the same conditions, which allows production of compressed air free of oil. And the top/bottom element caps have been further advanced through aluminum die casting and chrome finish.



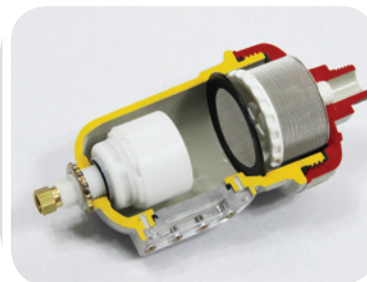
4. All models attached with external Drain Traps

In order to resolve issues that occur with the existing internal float types, the bottoms of all filters have been attached with external drain traps to improve durability and convenience. The drain traps have been divided into mini-type traps and auto-drain traps depending on the connection gauge. (The existing internal float-type 15~20A models are also applied as basic specifications)



5. Installation of secondary strainer for removing impurities inside of drain traps

In order to dramatically improve the blocking of drain traps, stainless steel plate mesh has been added between the strainer and float that were formerly installed on top. It is an excellent quality auto-trap that has completely removed the blocking of traps.



AF Series Technical Specification (15A~300A) (at 7.0 bar.g, 40°C)

Model	Flow rate										Dimension (A x B) mm	Weight (kg)
	40 μm (MAIN)		5 μm (PRE)		1 μm (LINE)		0.1 μm / 0.01 μm / 0.003 ppm (Interceptor, Coalescing, Adsorption)		Element Q'TY	IN-OUT SIZE		
	Nm³/min	scfm	Nm³/min	scfm	Nm³/min	scfm	Nm³/min	scfm				
AF-15A	2.2	76	1.8	62	1.2	42	1.0	35	1	15A	106 X 332	1.5
AF-20A	5.7	194	3.5	121	2.8	97	1.9	66	1	20A	106 X 402	2
AF-25A	8.0	277	5.7	197	5.0	173	3.4	118	1	25A	106 X 532	2.5
AF-40A	17.0	588	14.0	484	11.0	381	10.0	346	1	40A	179 X 823	12
AF-50A	29.0	1,003	25.0	865	22.0	761	14.0	484	1	50A	179 X 1,032	21
AF-65A	58.0	2,007	49.0	1,696	48.0	1,794	28.0	969	2	65A	500 X 1,050	70
AF-80A	88.0	3,045	73.0	2,526	72.0	2,691	42.0	1,453	3	80A	500 X 1,050	70
AF-100A	139.0	4,810	120.0	4,651	110.0	3,806	70.0	2,422	5	100A	730 X 1,850	150
AF-125A	162.0	5,605	145.0	5,017	132.0	4,567	84.0	2,907	6	125A	730 X 1,850	150
AF-150A	282.0	9758	221.0	7,647	176.0	6,090	112.0	3,875	8	150A	760 X 1,900	200
AF-200A	447.0	15,467	331.0	11,453	308.0	10,657	196.0	6,782	11	200A	1,000 X 2,350	230
AF-250A	733.0	25,363	555.0	19,204	528.0	18,270	330.0	11,419	19	250A	1,000 X 2,550	230
AF-300A	1103.0	38,166	850.0	29,412	792.0	27,405	504.0	17,439	30	300A	1,100 X 2,900	400

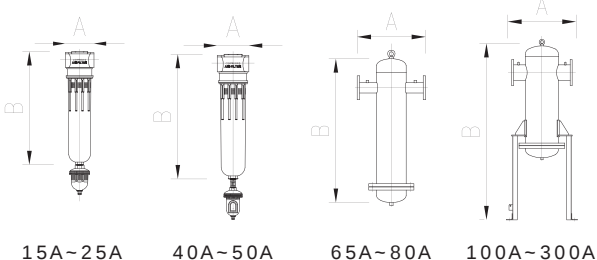
※ Processing rate of discharge is based on inlet temperature of 38°C, working pressure of 7.0 bar.g, and designed pressure of 9.7bar.g.

AF-h Series High Pressure Air Filter Technical Specification (15A~50A) (at 16.0 bar.g, 40°C)

Model	Flow rate										Dimension (A x B) mm	Weight (kg)
	40 μm (MAIN)		5 μm (PRE)		1 μm (LINE)		0.1 μm / 0.01 μm / 0.003 ppm (Interceptor, Coalescing, Adsorption)		Element Q'TY	IN-OUT SIZE		
	Nm³/min	scfm	Nm³/min	scfm	Nm³/min	scfm	Nm³/min	scfm				
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	1,249	28.8	1,076	25.3	945	16.1	601	1	50A	179 X 1,032	21

※ Processing rate of discharge is based on inlet temperature of 38°C, working pressure of 16.0 bar.g, and designed pressure of 18.0 bar.g.

Dimension Information



1. Specifications are subject to change without notice for quality improvement.
2. Depending on the needs of our customers, materials can be changed.
ex) STS304, STS316L...etc.
3. Products above 65A Filter are subject to KOSHA.
4. When selecting element models, please use AE for the filter model name AF.
ex) AF-15A-40 → AE-15A-40A
5. When selecting elements above AF-65A, the above is equally applied, and it is separated by numbers.
6. Please inquire separately for models above 16 bar.G.



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