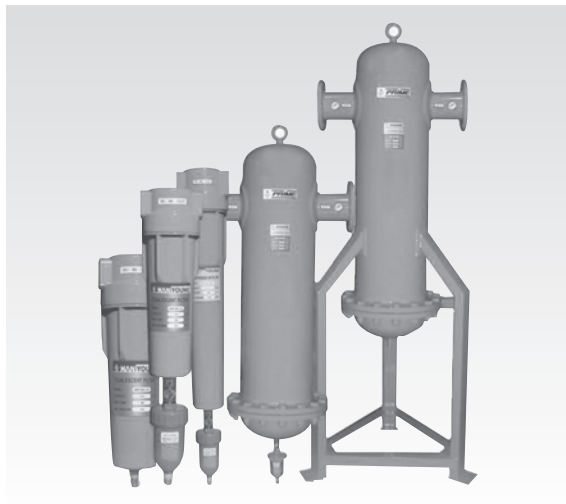


# Air Preparation Equipment



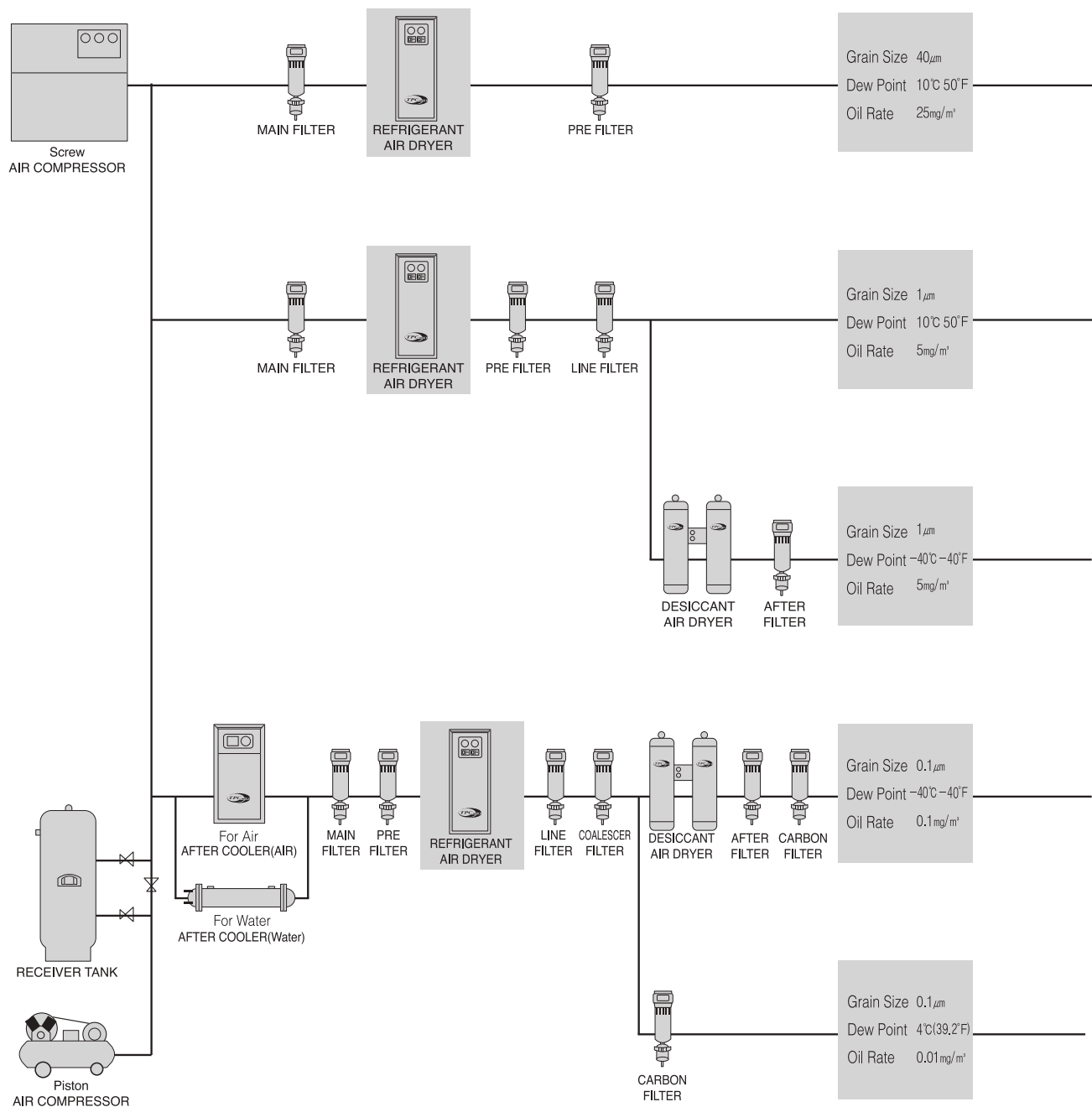
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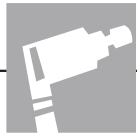
● Air Filter	
Series TXF	..... 1008
● Air Dryer	
Series TAD	..... 1015

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※ Specifications in this catalogue may be changed for product performance upgrade without notice.  
Inquiries can be made to the manufacturer when purchasing the product.

# Applied Industry Fields / Application Areas—Main Line Air Treatment





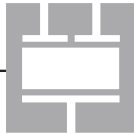
Service Air

- Air Tools



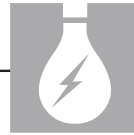
Mining Industry

- Air Tools
- Breathable Air



Service Air

- Control System
- Forging Facilities
- Blowing System
- Conveyor System



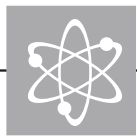
Electric Power Industry

- Gas Turbine & Gas Booster
- Control System
- Emergency Generator
- Gas Booster



Glass & PET Manufacture

- Control System
- Conveyor System
- Bottle Manufacture



Nuclear Power Industry

- Emergency Generator
- Control System
- Generator Cooling
- Service Air



Paper & Fabric Industry

- Control System
- Conveyor System
- Service Air



Machinery

- Automation System
- Service Air



Gas Industry

- Liquefaction
- Preservation
- Boosting



Painting Industry

- Painting
- Cleaning
- Service Air



Air Supply Instrumentation

- Engine Starting System
- Service Air



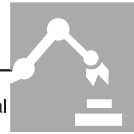
Heavy Industry

- Control System
- Engine Starting System
- Service Air



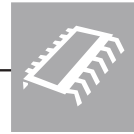
Petrochemical Industry

- Refinery
- Transmissions
- Processing



Automation Industry

- Control System
- Operating System



Electronic Industry

- Control System
- Heat Treatment System
- Coating System



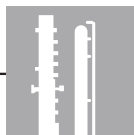
Pharmacy Industry

- Control System
- Conveyor, Mixing System
- Dentist's Air Tools
- Breathable Air



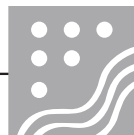
Chemical Industry

- Control System
- Chemical Reaction
- Conveyor System
- Service Air



Air-Liquefaction Separation

- Turn Key Engineering



Powder & Liquid Mixing

- Anti-Oxidation System
- Mixing System
- Transmissions



Food Industry

- Packing
- Storing
- Fermentation
- Carbon Dioxide
- Refrigeration



Environment Industry

- Ozon Generator
- Wastewater Treatment
- Incineration Plant
- Dust Collection Plant
- Desulfurization Plant

# Series **TXF 15A ~ 300A**

## High Performance Air Filter



### HIGH PERFORMANCE AIR FILTER

- REMOVE THE GREAT HAZARDOUS SUBSTANCE IN COMPRESSED AIR.

### High-performance elements protecting expensive high-tech equipment display an excellent performance in removing the fine pollutants in compressed air.

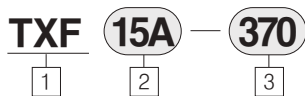
This filter is installed on the main pipe to remove foreign substances such as oil, moisture, and dust in the compressed air, to provide clean air, and to prevent failures due to those foreign substances in devices at the back part.

The compressed air flowed into the filter body passes through the outside (inside) of the filter elements located in the center.

During this process, foreign substances in the air are filtered, while clean air is provided to each device. After passing through the filter, oil, moisture, and dust flow down the surface of the elements, and are collected at the bottom of the filter, while solid matter is discharged through the Auto Drain Trap to the outside.

This air filter displays its maximum performance in both cost and efficiency only when right filters for applications (e.g. particulate filter for particle removal, and coalescing filter for oil removal) are used.

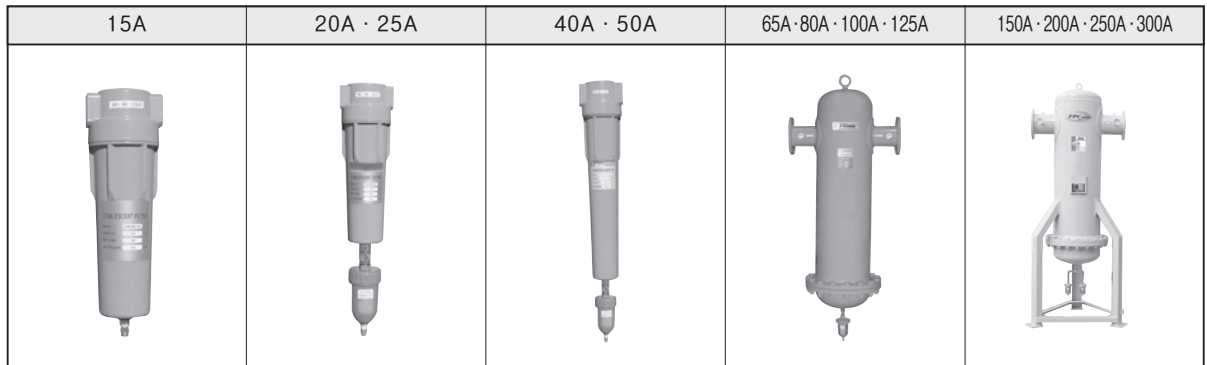
## How to Order



① High Performance Air Filter (TXF)

② Element Size (TXE)  
: See the Specifications Table

③ Attachment  
Filtration  
370 : 20  $\mu\text{m}$   
320 : 3  $\mu\text{m}$   
310 : 1  $\mu\text{m}$   
130 : 0.01  $\mu\text{m}$   
150 : 0.01 ppm

**Air Filter**

**Specification**

Filter Type		CAPACITY(Nm <sup>3</sup> /min)				
		Main Filter	Pre Filter	Line Filter	Coalescent Filter	Absorbent Filter
		370(20 $\mu$ m)	320(3 $\mu$ m)	310(1 $\mu$ m)	130(0.01 $\mu$ m)	150(0.01ppm)
Model						
TXF-15A	1/2" (S)	2.2	1.8	1.2	1.0	1.0
TXF-20A	3/4" (S)	5.7	3.5	2.8	1.9	1.9
TXF-25A	1" (S)	8.0	5.7	5.0	3.4	3.4
TXF-40A	1½" (S)	17.0	14.0	11.0	10.0	10.0
TXF-50A	2" (S)	29.0	25.0	22.0	14.0	14.0
TXF-65A	2½" (F)	58.0	50.0	48.0	28.0	28.0
TXF-80A	3" (F)	88.0	75.0	72.0	42.0	42.0
TXF-100A	4" (F)	145.0	125.0	110.0	70.0	70.0
TXF-125A	5" (F)	174.0	150.0	132.0	84.0	84.0
TXF-150A	6" (F)	282.0	221.0	176.0	112.0	112.0
TXF-200A	8" (F)	447.0	331.0	308.0	196.0	196.0
TXF-250A	10" (F)	733.0	555.0	528.0	336.0	336.0
TXF-300A	12" (F)	1103.0	850.0	792.0	504.0	504.0

※ S: Socket, F: Flange ※ TXF-65A or higher are produced to order. ※ The above products may be changed without prior notice.

**Dimension**

Model	Width	Height	Weight
TXF-15A	88	278	1.25
TXF-20A	89	500	2.5
TXF-25A	100	600	4.5
TXF-40A	138	835	13.7
TXF-50A	148	910	21
TXF-65A	492	1134	85
TXF-80A	492	1134	95
TXF-100A	620	1305	125
TXF-125A	620	1305	140
TXF-150A	812	2060	250
TXF-200A	1000	2425	340
TXF-250A	1200	2270	400
TXF-300A	1450	2620	450

**Element Q' TY**

Model	370	320	310	130	150
TXE-15A			1		
TXE-20A			1		
TXE-25A			1		
TXE-40A			1		
TXE-50A			1		
TXE-65A			2		
TXE-80A			3		
TXE-100A			5		
TXE-125A			6		
TXE-150A			11		
TXE-200A			14		
TXE-250A			24		
TXE-300A			36		

# Series TXF

## Elements



### FEATURES

- SINCE HOUSING IS ONE-TOUCH CLAMP TYPE PROVIDING DIRECT FIXING OF ELEMENTS, IT IS EASY AND CONVENIENT TO EXCHANGE ELEMENTS.
- THESE HAVE THE ELEMENTS OF MEDIA NECESSARY FOR THE REMOVAL OF OIL, MOISTURE, AND SPECIAL GASES AS WELL AS FINE PARTICLES.

### SPECIFICATIONS

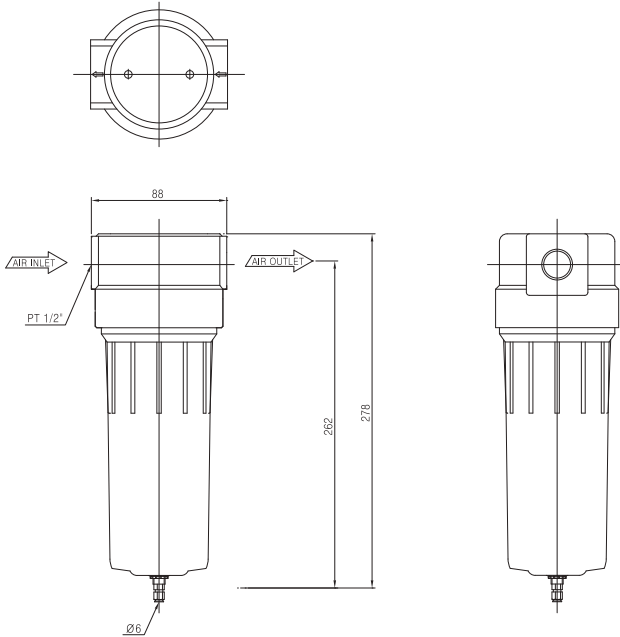
MAIN TXE-370		Filtration : 20 $\mu$ m Use : Remove 20 $\mu$ m or larger particles of liquid water, oil, rust, and sediments.
PRE TXE-320		Filtration : 3 $\mu$ m Use: Remove 3 $\mu$ m or larger particles of liquid water, oil, rust, and sediments, and is generally used the most.
LINE TXE-310		Filtration : 1 $\mu$ m Use : Used for tools for cutting, and for general air tools.
COALESCENT TXE-130		Filtration : 0.01 $\mu$ m Use : Remove spray paint and oil mist up to 99 %, but cannot remove the smell.
ADSORBENT TXE-150		Filtration : 0.01PPM Use : Element with oil mist removal function upgraded. Used for the production process of precision electronics, semiconductor, and pharmaceutical products.

Model	370, 320, 310, 130, 150
TXF-15A	1
TXF-20A	1
TXF-25A	1
TXF-40A	1
TXF-50A	1
TXF-65A	2
TXF-80A	3
TXF-100A	5
TXF-125A	6
TXF-150A	11
TXF-200A	14
TXF-250A	24
TXF-300A	36

### DIMENSION

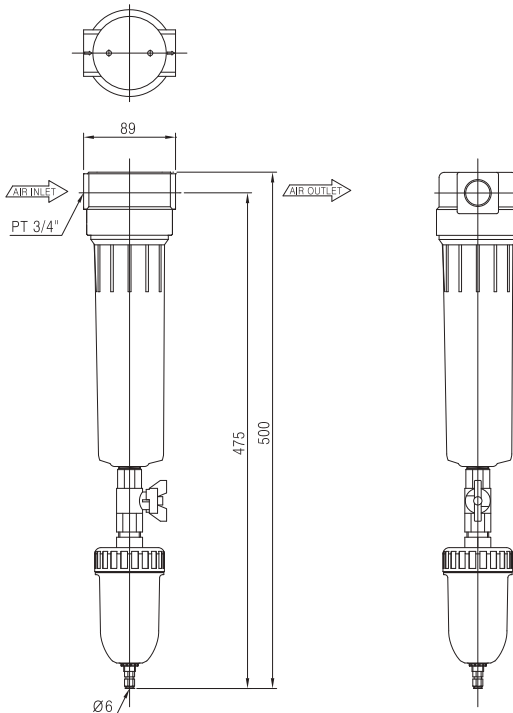
SIZE	15A	20A	25A	40A	50A
(mm)	48×105	48×151	48×200	68×450	78×460

Outside Views of TXF 15A-370, 320, 310, 130, and 150



Model	CAPACITY(l/min)	FILTER ELEMENT
370	2.2	MAIN ELEMENT(20u)
320	1.8	PRE ELEMENT(3u)
310	1.2	LINE ELEMENT(1u)
130	1.0	COALESCENT ELEMENT(0.01u)
150	1.0	ADSORBENT ELEMENT(0.01ppm)

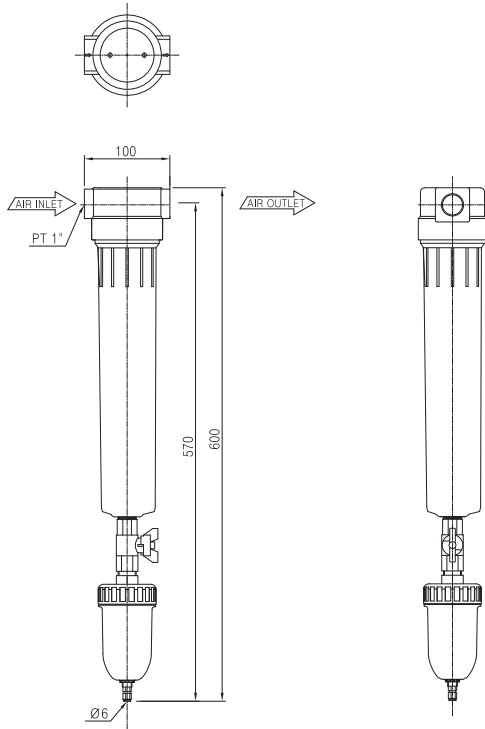
Outside Views of TXF 20A-370, 320, 310, 130, and 150



Model	CAPACITY(l/min)	FILTER ELEMENT
370	5.7	MAIN ELEMENT(20u)
320	3.5	PRE ELEMENT(3u)
310	2.8	LINE ELEMENT(1u)
130	1.9	COALESCENT ELEMENT(0.01u)
150	1.9	COALESCENT ELEMENT(0.01ppm)

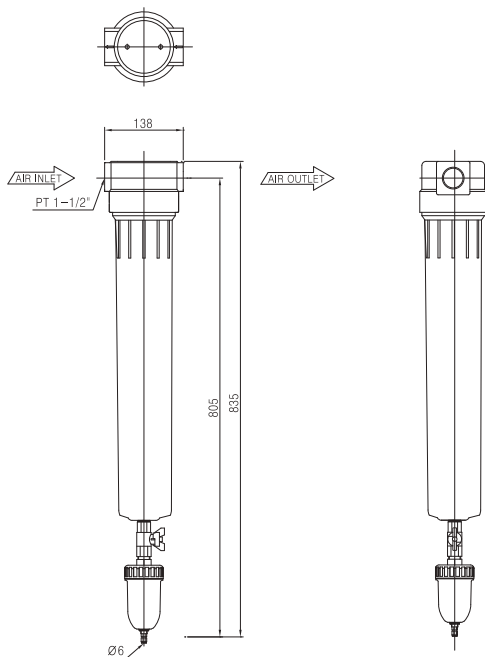
# Series TXF

## Outside Views of TXF 25A-370, 320, 310, 130, and 150



Model	CAPACITY(l/min)	FILTER ELEMENT
370	8.0	MAIN ELEMENT(20u)
320	5.7	PRE ELEMENT(3u)
310	5.0	LINE ELEMENT(1u)
130	3.4	COALESCENT ELEMENT(0.01u)
150	3.4	COALESCENT ELEMENT(0.01ppm)

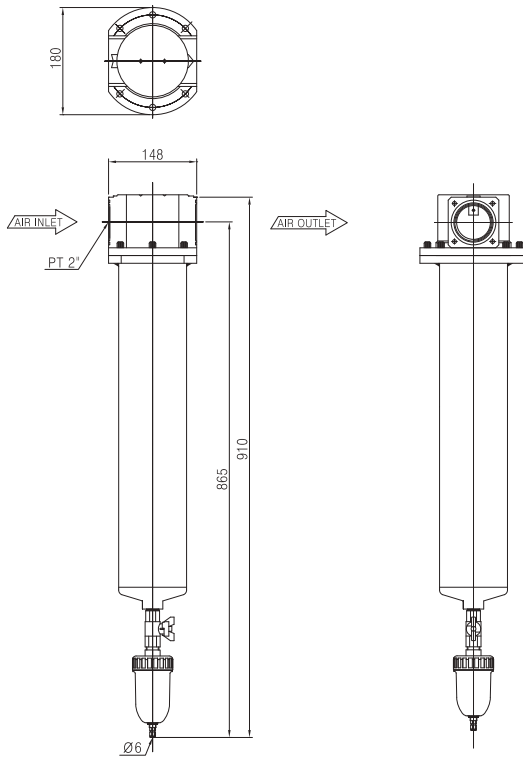
## Outside Views of TXF 40A-370, 320, 310, 130, and 150



Model	CAPACITY(l/min)	FILTER ELEMENT
370	17	MAIN ELEMENT(20u)
320	14	PRE ELEMENT(3u)
310	11	LINE ELEMENT(1u)
130	10	COALESCENT ELEMENT(0.01u)
150	10	ADSORBENT ELEMENT(0.01ppm)



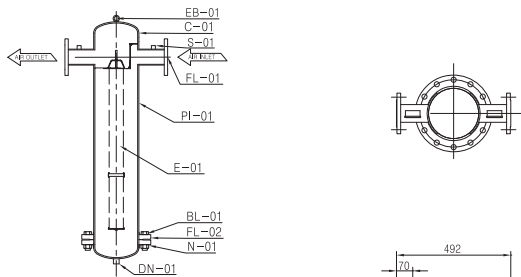
Outside Views of TXF 50A-370, 320, 310, 130, and 150



Model	CAPACITY(lm <sup>3</sup> /min)	FILTER ELEMENT
370	29	MAIN ELEMENT(20u)
320	25	PRE ELEMENT(3u)
310	22	LINE ELEMENT(1u)
130	14	COALESCENT ELEMENT(0.01u)
150	14	ADSORBENT ELEMENT(0.01ppm)

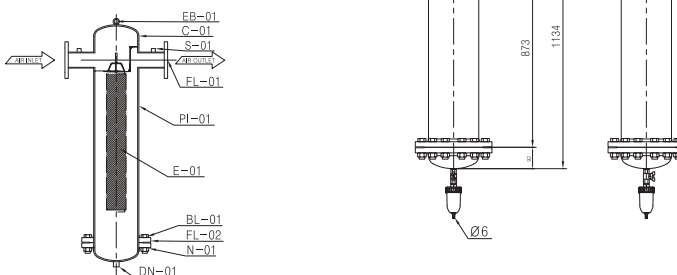
Outside Views of TXF 65A-370, 320, 310, 130, and 150

AIR FILTER 370,320



Model	CAPACITY(lm <sup>3</sup> /min)	FILTER ELEMENT
70	58.0	MAIN ELEMENT(20u)
320	50.0	PRE ELEMENT(3u)
310	48.0	LINE ELEMENT(1u)
130	28.0	COALESCENT ELEMENT(0.01u)
150	28.0	ADSORBENT ELEMENT(0.01ppm)

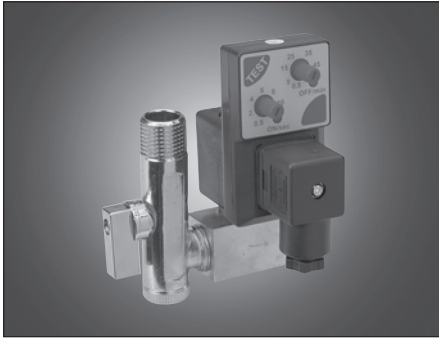
AIR FILTER 310,130,150



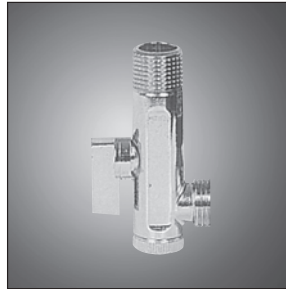
No.	Name of Part
EB-01	EYE BOLT
C-01	CAP
FL-01	KS10K RF FLANGE
S-01	PRESSURE GAUGE
PI-01	PIPE
E-01	ELEMENT
BL-01	BOLT
FL-02	KS10K SORF FLANGE
N-01	NUT
DN-01	DRAIN NOZZLE

# Series TXF

## Electronic Trap



TDED-015



STRAINER VALVE / FILTER VALVE (OPTIONAL)

## Specifications

Model	TDED-015	TDED-006
Type	Direct acting Valve	
Maximum Service Pressure	1.57MPa (227.5psi)	3.9MPa (568.9psi)
Connection Caliber	PT 1/2"	PT 1/4"
Voltage	AC 1Ø 220V 50Hz / 60Hz	

### ● Features

- Direct-acting solenoid valve with wide caliber (TDED)
- Protect it from dust and impurities, and prevent malfunctions with the application of Filter Valve (Strainer Valve).
- Control operation and set the machine with the timer.

## AUTO DRAIN TRAP



TDAD-125



TDAD-300

## FLOAT



TD-12

## Differential Pressure Gauge

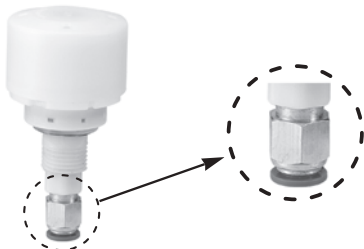


TPG-15

## Specifications

MODEL	TDAD-125	TDAD-300	TD-12	TDDPG-15
Service Pressure	0.15~0.97MPa(1.5 - 9.9Kgf/cm <sup>2</sup> )			
Maximum Service Pressure	9.9~13Kgf/cm <sup>2</sup>	9.9Kgf/cm <sup>2</sup>	16Kgf/cm <sup>2</sup>	-
Service Temperature	60℃ ↓			
Connection Caliber	PT1/2"	M30	Drain Connection 1/8 NPT"	1/8" / 1/4"
Application	Filter(20A-150A) · TANK		Filter, Trap	Filter

### ● Features



- Maintenance cost is low since power is not necessary.
- Float is mounted in the body, and the portion is automatically discharged to the outside, if a certain amount of condensed water is filled.

# Series TAD-5 ~ TAD-800

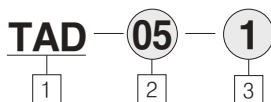
## Features of Refrigerated Air Dryer

TXF  
TAD



- EXCELLENT MOISTURE REMOVAL THROUGH FORCED CONDENSATION BY REFRIGERANT GAS.
- COOLING DEVICE NECESSARY FOR STABLE SYSTEM CONSTRUCTION.
- CONVENIENT INSPECTION OF OPERATION DUE TO A CONSTRUCTION OF GRAPHIC CONTROL PANEL, ON/OFF SWITCH, ON/OFF LAMP, REFRIGERANT GAUGE, AND AIR GAUGE.

### How to Order



1 Refrigerated Air Dryer (TPC Air Dryer)

2 Standard Size

Sign	Applied Air Compressor (HP)
5	5
7	7
10	10
15	15
20	20
30	30
50	50
75	75
100	100
150	150
200	200
250	250
300	300
400	400
500	500
600	600
800	800

3 Rated Power

1	AC220V, 1Ø, 60Hz	TAD-5~TAD-100
2	AC220V, 3Ø, 60Hz	TAD-150~TAD-800
3	AC380V, 3Ø, 60Hz	
4	AC440V, 3Ø, 60Hz	

# Series TAD-5 ~ TAD-800

## Pressure and Temperature Conversion Multiplier Table

Inlet Pressure(kgf/cm <sup>2</sup> )	3	4	5	6	7	8	9	10	11	12	13	14	15
Conversion Factor(C1)	0.74	0.84	0.91	0.96	1.00	1.04	1.06	1.09	1.11	1.12	1.14	1.15	1.17

Processing Capacity Setting Method(FA)

$$FA = \text{Processing Flow} \times C1 \times C2 \times C3$$

Inlet Temp-(°C)	30	35	38	40	43
Conversion Factor(C3)	1.48	1.28	1.1	1.0	0.91

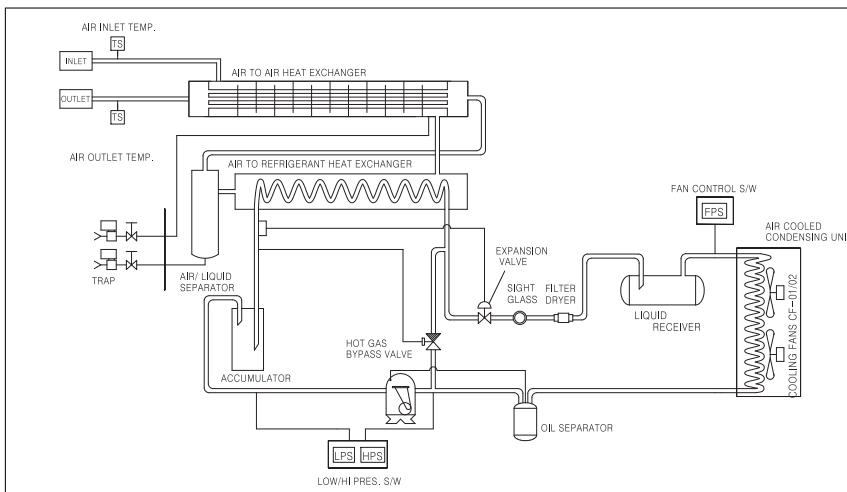
Inlet Temperature(°C)	30	35	38	40	43	45	50	55	60
Conversion Factor(C3)	1.32	1.15	1.00	0.92	0.83	0.78	0.65	0.52	0.39

## SPECIFICATIONS(Air Cooling Type)

MODEL	TAD-5	TAD-7	TAD-10	TAD-15	TAD-20	TAD-30	TAD-50	TAD-75	TAD-100	TAD-150	TAD-200	TAD-250	TAD-300	TAD-400	TAD-500	TAD-600	TAD-800	
Connection Caliber (Inch)	3/4"(S)				1"(S)	2"(S)	2"(S)	2"(S)	3"(F)	4"(F)			6"(F)		8"(F)			
Flow Capacity(cm <sup>3</sup> /min)	60Hz	0.62	0.97	1.35	1.96	2.6	3.9	7.2	11.1	14.6	21.85	31.32	40.13	47.56	59.47	73.92	89.56	112.47
	50Hz	0.57	0.89	1.23	1.8	2.4	3.5	6.6	10.5	13.3	20.0	28.6	36.6	43.5	54.3	67.5	81.8	102.7
Refrigerant Gas (Freon Gas)	R-134a				R22													
Dew Point	1.7°C~4°C																	
Maximum Pressure	0.97MPa(9.9kg/cm <sup>2</sup> )																	
Fluid	Compressed Air																	
Permissible Inlet Temperature	40°C																	
Ambient Temperature	1.7°C~40°C																	
Condenser	AIR COOLED TYPE																	
Rated Power	Voltage (V)	AC 220V 1Ø 60Hz									AC 220V/380V/440V 3Ø 60Hz							
	Current (A)	1.14	1.14	2.5	3.5	5.1	5.1	6	10	12.5	12.2	17	17	17	26	37	37	43.1
	Power Consumption(kw)	0.2	0.2	0.4	0.6	0.9	0.9	1.0	1.9	2.8	3.8	5.2	5.2	5.2	5.6	12.2	12.2	13.8
Weight	40	40	40	45	84	86	117	170	196	325	380	468	660	790	1560	1700	1780	
Dimension W×L×H	310×575×535			310×670 ×560	320×700× 670	411×1020× 940	411×1030× 1030	500×1500× 1450	650×1750× 1520	700×1800× 1570	2500× 1250×2500							

- As standard R22 (Freon) is used for refrigerant gas, R22 or 134a can be produced to order for refrigerant gas, depending on models.
- Air processing capacity factor is based on Inlet Pressure 0.7 MPa (7.0 kgf/cm<sup>2</sup>), Inlet Temperature 40 °C, Ambient Temperature 38 °C, and Operation Dew Point 4 °C.
- Model: Electronic trap (Direct-acting type) is basically attached to Model TAD-20 or higher for a complete discharge of condensate up to a very small amount.
- Rated-power products with special specifications can be produced to order.
- Air processing capacity factor is based on Inlet Pressure 7.0 kgf/cm<sup>2</sup>, Inlet Temperature 38 °C, and Ambient Temperature 4 °C.
- Above products may be changed without prior notice due to technology development.

## Functions of Air Dryer



### Basic Principles of Motion for Refrigerated Air Dryer

Warm and humid air enters AIR TO AIR HEAT EXCHANGER, not mixed with cold air. The cooled air condenses the saturated air to minimize heat load. The condensate is removed through drain, and the cooled air flows into AIR TO REF. HEAT EXCHANGER again to cool down to 4 °C - 10 °C. The moisture of the compressed air is separated by the impingement separator, and automatically discharged. The cool air is reheated by the warm air flowed in, and flows out through AIR TO AIR HEAT EXCHANGER. Reheat increases the volume of air, decreasing relative humidity.

## Considerations for Installation

Please read carefully the following before installing Air Dryer for extended use without breakdown.

### 1) Appropriate Places for Installation of AIR DRYER

- ① Flat place
- ② Place without acidic or alkaline substances
- ③ Place without combustible gas
- ④ Place easy for AIR piping and electric wiring
- ⑤ Place without dust and vibration
- ⑥ Place easy to check and repair the product
- ⑦ Place with appropriate ambient temperature in winter and summer (1.7°C – 40°C)

### 2) Precautions for Installation

- ① A minimum space of 1.5 M or more for the product shall be secured for sufficient fresh air and easy maintenance.
- ② The strength of the base for installation shall be considered before installation, and foundation work shall be done, if the ground is unstable.

### ※ Places to Particularly Avoid

Slope, place with severe vibration, place exposed to direct sunlight, heated place, place exposed to rains, place with much dust and pollutants, place with bad ventilation, and place with standard service temperature (1.7 °C – 40 °C) unavailable.

- ① If the temperature falls below 2 °C, the inside of DRAIN TRAP may be frozen.
- ② If the temperature rises above 40 °C, AIR DRYER may stop working.

## How to Lay Pipes

The assembly of pipes shall be adjusted, using tools such as a wrench, and piping shall be provided for sections with defective screws to prevent air leakage. If not fixed, the case may be damaged.

### ※ Caution

Be sure to close BY-PASS VALVE while in use.

- ① The inlet and outlet of AIR DRYER shall be correctly connected in piping.
- ② Be careful that the weight of piping is not loaded on the body.
- ③ Make sure that the vibration of AIR COMPRESSOR is not transmitted to DRYER, and avoid vertical piping.
- ④ Install a BY-PASS pipe between inlet and outlet of AIR DRYER.
- ⑤ For convenience purpose, union or flange shall be applied to the inlet and outlet of DRYER for connection.
- ⑥ Zinc-plated pipe shall be used.
- ⑦ The condensed water from the drain outlet shall be discharged to the outside through a separate drainpipe.

### ※ Note

Since if the drainpipe is vertical or extended, pressure is produced in the pipe, the condensed water may not be discharged.

## Method for Daily Operation

- 1) Press the operation switch.
- 2) The RUN lamp is lighted, and the refrigeration compressor is operated.
- 3) Check if the needle on the refrigerant pressure gauge indicates 2.5 – 3.5 kgf/cm<sup>2</sup> (R-134c) ~ 3.5 – 5.5 kgf/cm<sup>2</sup> (R-22).
- 4) Allow compressor air to flow in 5 minutes after operation.

## How to Wire

### ① Electric Wire

The capacity of power cable is as follows.

Form	Model	TAD-5~ TAD-100	TAD-100	TAD-150~ TAD-250	TAD-300~ TAD-400
Rated Power		1PH	3PH		
		AC 220V 50Hz/60Hz	AC 220V/380V/440V 50Hz/60Hz		
Power Cable(mm <sup>2</sup> )		2.0 or more		3.5 or more	5.5 or more

- ② A single-phase circuit breaker for wiring shall be installed for overload protection and to prevent an electric shock due to leakage before installing AIR DRYER.
- ③ Be sure to install Ground Cord. (Third-class grounding work is required.)
- ④ DRYER shall be operated within ±5 % of the standard voltage to meet the rated power.

## How to Operate

### 1) Start-up

After installation is completed, start-up shall be provided after thoroughly checking the following.

#### ☞ Checkpoints

- ① Aren't there any problems in the installed air-pressure pipe and line?
- ② Is the valve of BY-PASS pipe closed?
- ③ Is the valve of Drain Discharge pipe opened?

#### ☞ Checkpoints for Power

- ① Is voltage normal?
- ② Isn't the capacity of fuse circuit breaker for wiring different from the designated.

### 2) How to Operate

Press the ON button of the power switch.

☞ If the power lamp is lighted, operation starts. If the needle on the refrigerant pressure gauge indicates 2.5~3.5kgf/cm<sup>2</sup>(R-134c)~3.5~5.5kgf/cm<sup>2</sup>(R-22) in one minute after the refrigeration compressor has started to operate, it means a normal state.

☞ In 5 minutes after operation, compressed air flows in slowly while the air compressor is in operation. (Be careful that pressure is not loaded on AIR DRYER at once.)

### ※ Note

To restart after stop, an interval of 5 minutes or more is required.

## Safety Device

For safe use, it has a safety device mounted. If the safety device functions, AIR DRYER stops automatically.

### 1) Electric Circuit: MOTOR PROTECTOR

If over current flows in Refrigeration Compressor, MOTOR PROTECTOR works to stop AIR DRYER.

### 2) How to Release

- ① Remove the cause of stop (see Causes of Failure and Measures.)
- ② Press the START button for operation.

# Series TAD-5 ~ TAD-800

## Daily Checks and Cleaning

### 1) Daily Checks

- ① Check the Auto Drain Trap.
- ② Check if the timer of Electronic Trap has been correctly set (ON 2 seconds, OFF 2 minutes).
- ③ Check if there are any air leaks.
- ④ Check if it works normally. (Check if water comes out.)
- ⑤ Check inlet temperature for compressed air and ambient temperature, and clean Condenser and After cooler for the removal of dust on a regular basis.

### 2) Cleaning

- ① Cleaning of Condenser
  - Clean the condenser on a regular basis, using a vacuum cleaner, a brush, or an air gun.
  - DRYER CASE shall have both sides disassembled one by one.
  - If dust is accumulated on the condenser, it is not only good for heat exchange, but also may stop the operation of AIR DRYER as Safety Device works, if severe.

### ※ Note

Be careful not to deform the fins of Condenser while cleaning.

### ② Cleaning of Auto Drain Trap (Solenoid Valve)

- Disassemble and clean the auto drain trap on a regular basis for a regular operation all the time.

## Tips for Adjustment of Hot Gas Bypass Valve

- 1) Since the hot gas bypass valve has been adjusted when shipped, it shall be adjusted only if abnormalities are found. Loosen the nut of the valve, and adjust the valve with a driver, seeing the refrigerant pressure gauge, until the needle on the refrigerant pressure gauge is within the normal scope.

### Pressure Scope of Refrigerant R-22

- Low Pressure : 0.4~0.45MPa(4~ 4.5kgf/cm<sup>2</sup>)
- High Pressure : 1.3~1.75MPa(13 ~ 20kgf/cm<sup>2</sup>)

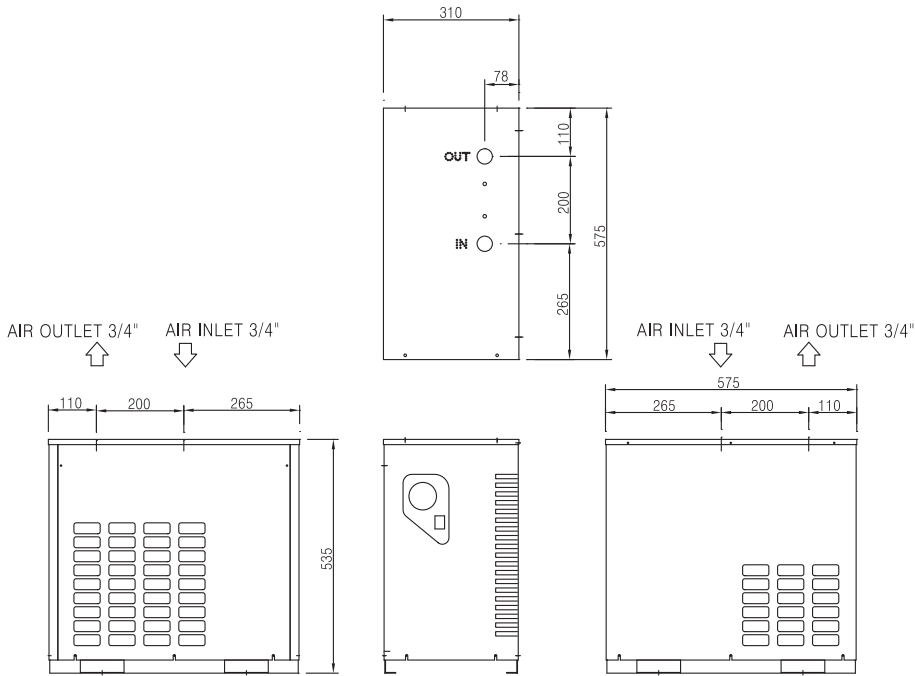
## Causes of Failure and Measures

☞ If failure is suspected while using, please check the following.

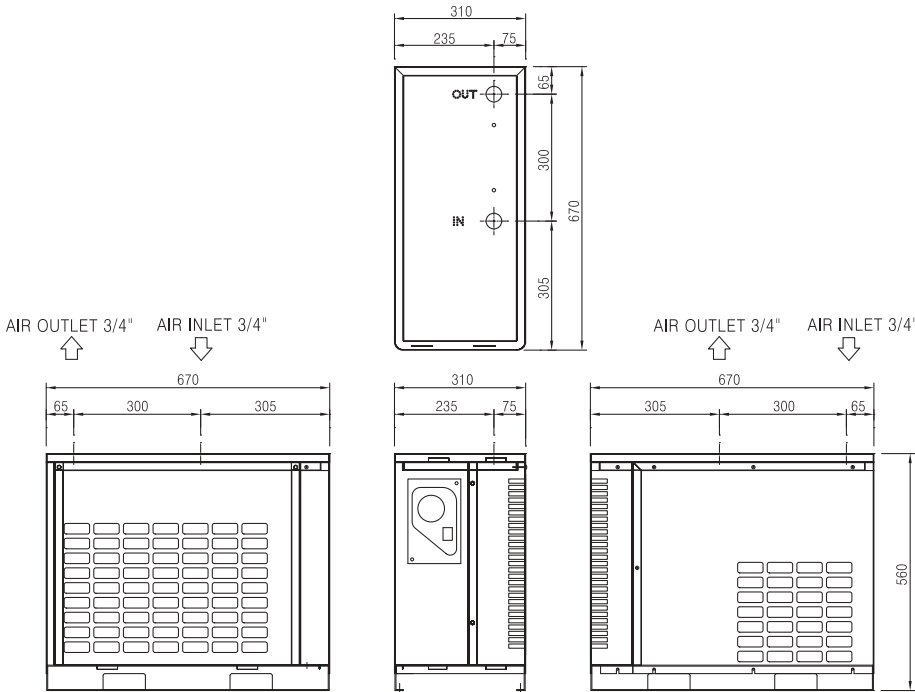
Symptoms	Causes											Measures						
	Refrigerant leaks	Thermal Relay is defective	Bypass Valve is opened	Light from Lamp is blocked	Switch is defective	Power voltage is too low	Refrigeration Compressor is defective	Solenoid Valve is defective	Solenoid Valve has foreign substance	Solenoid Valve has been frozen	Air processing volume is too much		Cooling capacity has decreased	Hot Gas Bypass Valve is defective	Condenser is clogged	The ambient temperature is too high	Fan Motor is defective	Compressor Magnet is defective
Even though the switch is turned ON, it does not operate.	Operation Lamp is OFF	○		○	○	○		○										
	Operation Lamp is ON						○										○	
Water and oil come out while the needle on the refrigerant pressure gauge indicates normal.			○					○	○	○	○							
The needle on the refrigerant pressure gauge indicates high pressure, and water and oil come out.							○	○	○	○	○	○	○	○	○			○
Condensed water is not discharged from the Auto Drain.								○	○	○								
The temperature of Air Outlet is equal to or higher than that of Air Inlet.	○		○				○					○	○					
The machine has stopped during operation.	○	○					○				○			○	○	○	○	○
High Pressure Alarm Lamp is lighted.	○													○	○	○	○	○
Over Current Alarm Lamp is lighted.		○						○								○	○	○
	Check gas leak areas	Exchange	Close the Bypass Valve	Exchange	Exchange	Use Regulated Voltage	Exchange	Exchange	Disassemble and Clean	Set the ambient temperature to more than 23	Air processing volume shall be set at the normal	Check gas leakage and refrigerant amount	Exchange and Adjust	Clean	Lower the ambient temperature	Exchange	Exchange	

TXF  
TAD

Outside Dimensions of TAD 5, 7 and 10

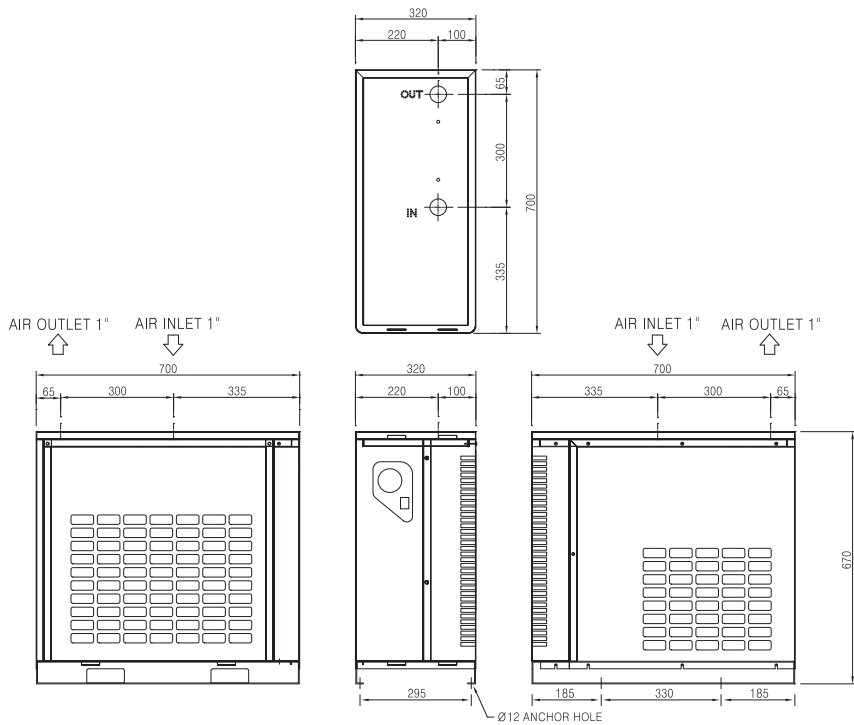


Outside Dimension of TAD 15

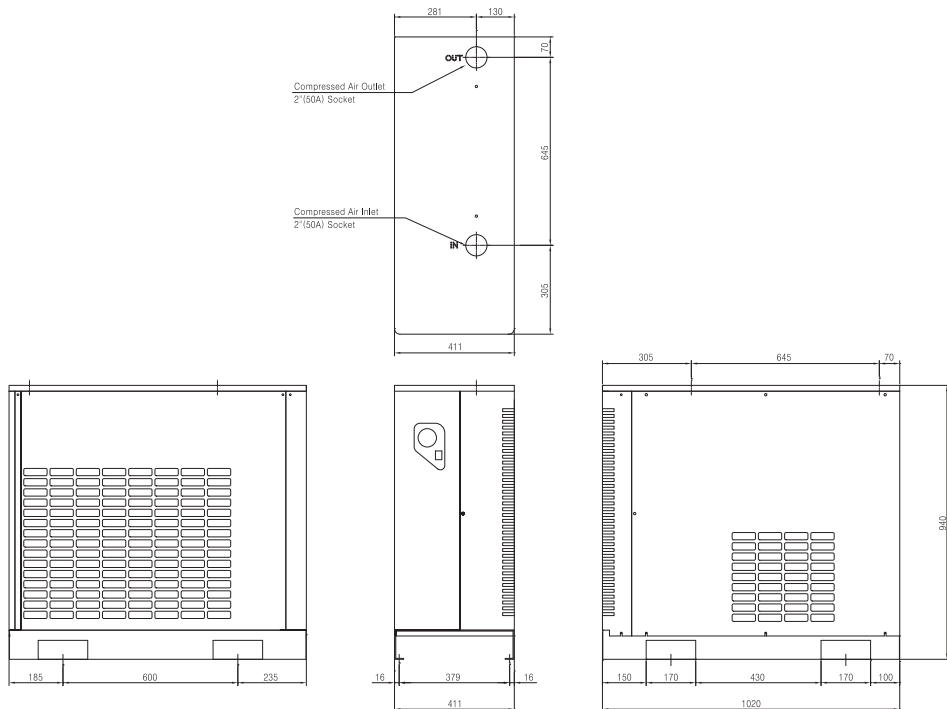


# Series TAD-5 ~ TAD-800

## Outside Dimensions of TAD 20 ~ 30



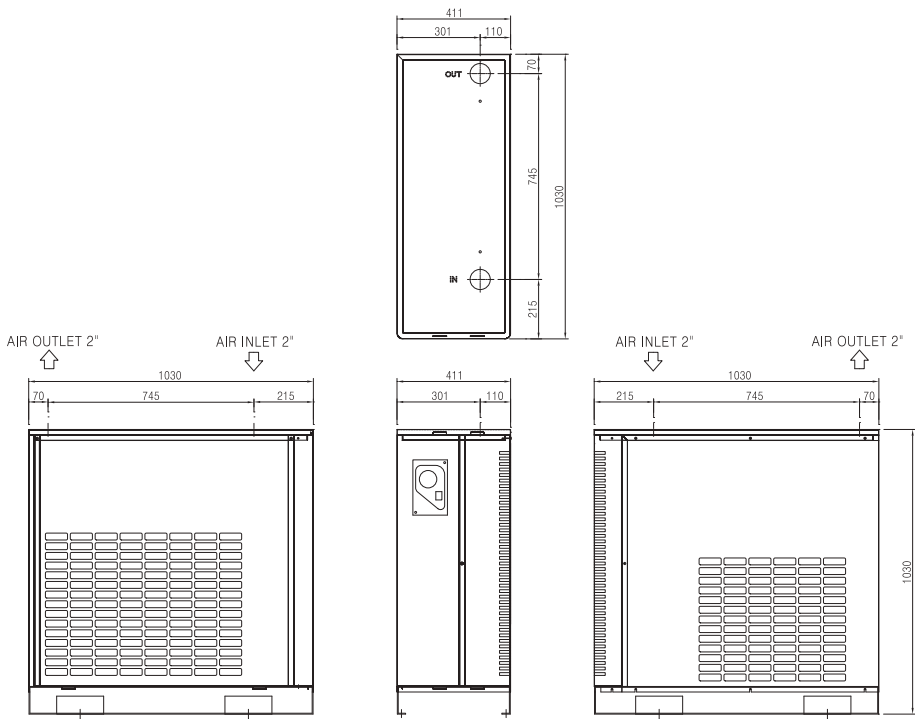
## Outside Dimensions of TAD 50 ~ 75



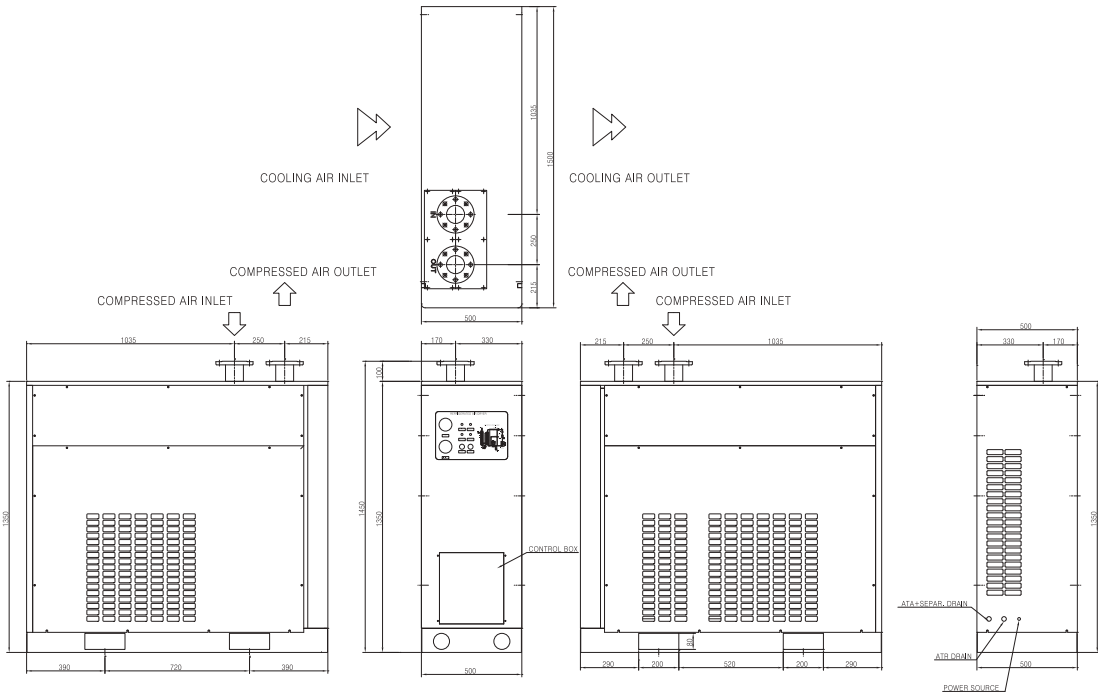


TXF  
TAD

Outside Dimension of TAD 100

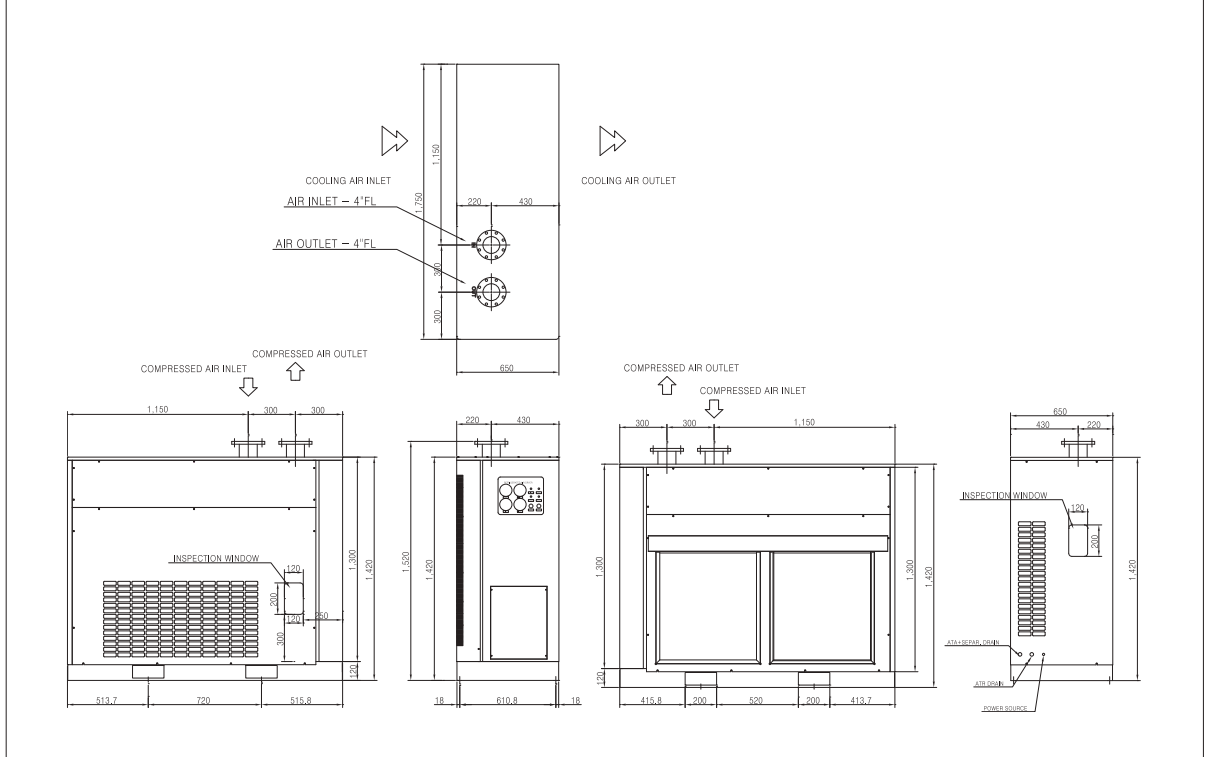


Outside Dimensions of TAD 150 ~ 200

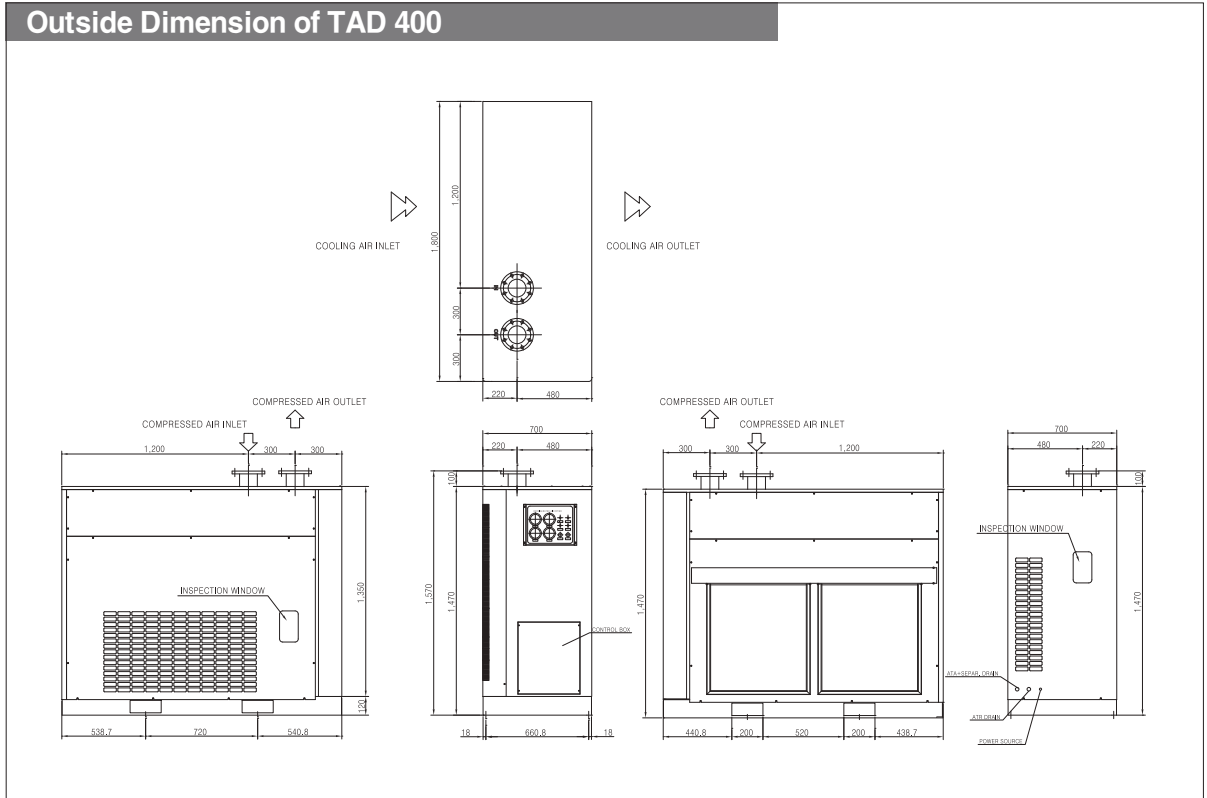


# Series TAD

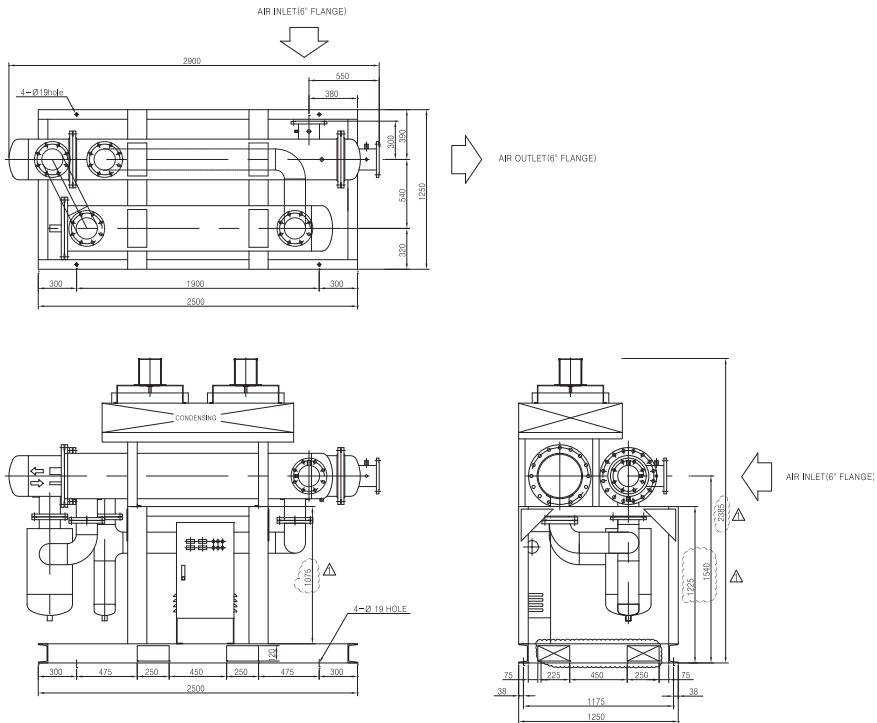
## Outside Dimensions of TAD 250 ~ 300



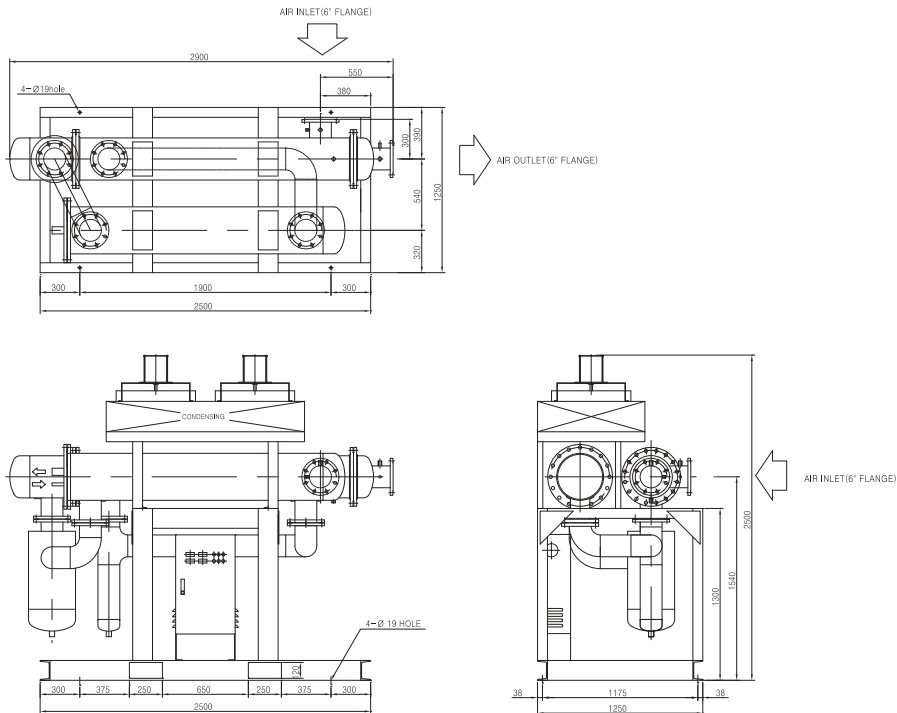
## Outside Dimension of TAD 400



Outside Dimension of TAD 500



Outside Dimension of TAD 600



# Series TAD

## Outside Dimension of TAD 800

