

**TVN Valve & Piping Company** 









Operating Pressure: PN 40 Connection Diameter: From 1/4" up to 2" Connection Type: Standard Pipe Thread Operating Temperature: Max. +120 °C

#### **MINI BALL VALVE**



Operating Pressure: PN 16
Connection Diameter: From 1/8" up to 3/4"
Connection Type: Standard Pipe Thread
Operating Temperature: Max. +120

#### **RADIATOR VALVE**



Operating Pressure: PN 16 Connection Diameter: 1/2" Connection type: Straight and corner type Operating Temperature: Max. +80

#### **CHECKVALVE**



Operating Pressure: PN 12 Connection Diameter: From 1/4" up to 4" Connection Type: Standard Pipe Thread Operating Temperature: Max. +80





#### **STRAINER**



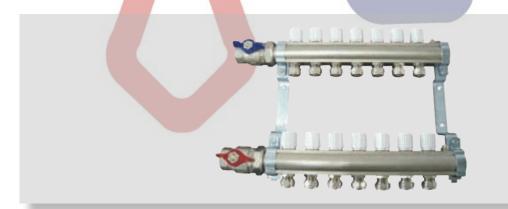
Operating Pressure: PN 16 Connection Diameter: From 1/4" up to 4" Connection Type: Standard Pipe Thread Operating Temperature: Max. +110

#### **BELLOW TYPE STEAM TRAP**



Operating Pressure: PN 10 Connection Diameter: From 1/2" up to 1" Connection Type: Standard Pipe Thread Operating Temperature: Max. +200 °C

#### **BRASS COLLECTOR GROUP with FLYWHEEL AND CLAPET (SHUT-OFF)**





#### **ULTRASONIC CALORIMETERS**



Connection Diameter: DN 20 - DN 100 Standard: EN 1434 Approval: Approved by MID Measuring Range: 5 °C - 90 °C Test Pressure: 16 bar

#### **MECHANICAL CALORIMETERS**



Connection Diameter: DN 20 Standard: EN 1434 Approval: Approved by MID Measuring Range: 5 °C - 90 °C Test Pressure: 16 bar

#### **HOT WATER METERS**



Connection Diameter: DN 20 Standard: EN 1434 Approval: Approved by MID Measuring Range: 5 °C - 90 °C Test Pressure: 16 bar

#### **COLD WATER METERS**



Connection Diameter: DN 20 Standard: EN 1434 Approval: Approved by MID Measuring Range: 5 °C - 90 °C Test Pressure: 16 bar









#### **THREE-WAY VALVES**



Connection Diameter: DN 40-DN 200 Material: GG 25 cast iron Standard: PN 6-10 Measuring Range: 5 °C - 90 °C Test Pressure: 16 bar

#### **VALVE ACTUATOR**



OPERATING VALVE: 60,000 shut-offs Supply: 220 v

Torque: 8 Nm

Operating Temperature: 50°C

Protection: IP 40

#### **DIFFERENTIAL PRESSURE VALVE**



Connection Diameter: DN 20 - DN 100

Material: Brass Impulse Material: Copper Pressure Range: 5-25 kpa

AGRICULTURAL IRRIGATION METER



Connection Diameter: DN 32 - DN 250

Standard: EN 1434

Approval: Approved by MID

Test Pressure: 16 bar

With or without prepayment, electronic





#### **STATIC BALANCING VALVES**



Connection Diameter: DN 10 - DN 200

Material: Brass Pressure Class: PN 20

Max. Operating Temperature: 120°C

#### **DYNAMIC BALANCING VALVES**



Connection Diameter: 1/4"-2"

Material: Brass
Pressure Class: PN 16

Max. Operating Temperature: 120°C

#### **COMBINATION CONTROL VALVES**



Connection Diameter: DN 10 - DN 150 Material: Brass and non-metallic

Pressure Class: PN 16

Max. Operating Temperature: 120°C

#### **DIFFERENTIAL PRESSURE CONTROL VALVES**



Connection Diameter: DN 10 - DN 200

Material: Non-metallic Pressure Class: PN 16

Max. Operating Temperature: 120°C



#### FLANGES, PATENTS, FITTING MATERIALS AND OTHER CONNECTION EQUIPMENT

#### **FLANGES**



DIMENSIONS : DN 15-DN 2000

FLANGE CLASSES : PN 6 PN 10 PN 16 PN 25 PN 40 PN 100

NORMS : DIN, ANSI

FLANGE MATERIALS : ST 37, AISI 304, GG 25

#### **PATENT ELBOWS AND REDUCTIONS**



DIMENSIONS : DN 15-DN 2000

FLANGE CLASSES : PN 6 PN 10 PN 16 PN 25 PN 40 PN 100

NORMS : DIN, ANSI

MATERIALS : ST 37, AISI 304, GG 25

#### **FITTING MATERIALS**



DIMENSIONS : 1/8" - 4" NORMS : DIN, ANSI

MATERIALS : AISI 304, 316, GG25, ST 37









#### **2 AND 3-WAY CONTROL VALVES**



- Globe type two-way control valve
- Equal percentage control valve curve
- Flanged ductile cast iron or ductile cast iron body
- Stainless steel valve seat, shaft, and clapet
- Superior impermeability
- Compliance with Ontrol and Belimo servomotors
- Linear shaft movement

#### **VALVE SERVOMOTORS**



MVS series valve servomotors are used for positioning three-way or two-way control valves in heating, ventilation, and air conditioning systems. These servomotors conform with control panels that have 2-10V DC proportional outputs.

#### 2- AND 3-WAY FAN-COIL VALVES



- 230 VAC Power Supply
- On/Off Control
- Off when non-energized
- Internal Thread

#### **OUTDOOR AIR TYPE SENSOR**



#### CHANNEL TYPE SENSOR



#### ROOM TYPE SENSOR



#### CHANNEL TYPE HYGROSTAT SENSOR



#### IMMERSION TYPE SENSOR



#### FREEZE THERMOSTAT







#### **COLD WATER METERS**



- Single beam design
- · High resistance to pressure with special glass
- Cap that rotates 360 degrees
- Brass body with electrostatic paint
- Resistance to 50°C heat

#### **HOT WATER METER**



- Single beam design
- High resistance to pressure with special glass
- Cap that rotates 360 degrees
- Brass body with electrostatic paint
- Resistance to 90°C heat

#### **FLANGED INDUSTRIAL METERS**



- Multiple beam design
- High resistance to pressure with special glass
- Cap that rotates 360 degrees
- Brass body with electrostatic paint
- Resistance to 90°C heat
- DN 50 flange





#### **FLANGED INDUSTRIAL METERS**

- Suitable for optical reading
- Conforming with IP 68
- Diameter range of DN 65-DN 200
- Impact resistant thick glass
- Resistance to 90°C heat

#### **PREPAID WATERING METER**



- Invoicing with prepayment
- Complete management of water consumption
- A climate conditions confirming and corrosion resistant body
- Complete isolation against outer effects with contactless card
- Elimination of the need to meter reading process
- Easy statistics preparation and service provision in computer environment



#### **GPRS - SMART CARD WATERING METER**

- Complete management of water consumption
- Corrosion resistant body
- Isolation against outer effects
- DN 32-DN 250 Nominal diameter





#### **STEAM FITTINGS**



**Boiler Feeding Device** 

Connection :Threaded or Flanged

Max. Pressure : 25 bar Max. Temperature : 200°C

Application Areas : Steam boilers, water boosters





#### Steam Traps

These devices release condensate (water) and air from steam systems. It has such types as thermodynamic, thermostatic, float, and inverse bucket

Nominal diameters: Up to 1/2"-2" and DN 15-DN 65

Connection: Threaded or Flanged

Body Material: Ductile cast, ST 37, ductile, stainless, and brass



Magnetic Level Indicators

These indicators provide visual monitoring of the level changes thanks to the level indicator by-passed to the tank.

Connection: Flanged threaded G1/2"- 3/4"-1" Flanged DN 15-DN 20-25

Body Material: Stainless Steel



Vacuum Breaker Body and Cap: Brass or Stainless Steel

Internal Parts: AISI 3044 Stainless Steel

Connections: Threaded Nominal Diameter: DN 15 (1/2")



#### Boiler Blowdown Valve

Blowdown is the process of discharging a certain portion of boiler feed in order to reduce dissolved or suspended solid matter amount with increased concentration occurring as a result of vaporizing in the boiler feed down to the pre-determined limits in the boiler.

Connection: DN 40 Flange Body Material: Stainless Steel

Fluids it is used for: Steam, Hot and Steaming Water

#### Safety Valves

These are valve mechanisms that automatically release gas when reached the pressure limit or temperature determined in steam boiler, pressure tank, and other systems.

Connection: Threaded or Flanged

Nominal Diameters: Up to DN 15\*DN 100

Body Material: GG 25 Ductile Cast and GGG 40 Ductile Cast Iron









#### **ELECTRIC CONTACT MANOMETERS**





#### **GLYCERIN FILLED MANOMETERS**

#### **BI-METAL THERMOMETERS**





#### **LIQUID FILLED THERMOMETERS**

#### **MERCURY FILLED THERMOMETERS**





#### **BUTTERFLY VALVES with MONITORING KEY**

#### **SPRINKLER**

K-Factor: 40.3 (2.8), 57 (4.2), 80 (5.6), 115 (8.0) Temperature Sensor: 5 mm Glass Bulb Connection Diameter: 1/2"NPT - 3/4"NPT- 1"NPT Temperature: 57°C, 68°C, 79°C, 93°C, 141°C, 182°C

Surface: Brass, Chrome, White, Black

Pressure Class: 175~250 psi

Hazard Class: Mild, medium and high hazard Assembly Type: Parallel to floor or roof pitch

Approvals: FM, UL, ULC, VdS, CE

#### **FLUSH TYPE**



#### **SIDEWALL TYPE**



#### **PENDANT TYPE**



#### **UPRIGHT TYPE**



#### **HIDDEN TYPE**







#### **BUTTERFLY VALVES with MONITORING KEY**

**UL/FM** Approved

These are essential to the automatic sprinkler system.

They turn the water pass on or off.

They automatically signal in the off position and notify that they are off.

Nominal Diameters: 11/2"-8"









#### **GATE VALVES with or without RISING STEM**

**UL/FM** Approved

These are essential to the automatic sprinkler system.

They are used in suction and force collectors of the pump.

They notify the position optionally in the off mode.

Nominal Diameters: 21/2"-12"







#### **ALARM VALVES**

**UL/FM Approved** 

These act as checkvalves and indicate sub and gauge pressures. In the event of sprinkler stepping in, they warn the area audibly through

They notify water pass if connected to an automation system. Nominal Diameters: 21/2"-8"

#### **Wet Alarm Valve**



#### **Dry Alarm Valve**



#### **Pre-action Alarm Valve**



#### **Deluge Alarm Valve**



#### **TEST DRAINAGE VALVES**



**UL/FM Approved** 

These provide testing the system as well as drainage in the system.



## TVN COMPANY



**UL/FM** Approved

These are water inlet valves for fire department.

In the event of shortage reserve or pumps being disabled, these are used for fire department

to connect and obtain water. One Storz Kaplin, cap and chain.

Nominal Diameters: 21/2" NPT Threaded (fire department connection valve)

4x21/2x21/2 NPT Threaded (siamese connection)

#### **Siamese connection**



#### **TSE Type**



#### **UL/FM Type**



#### **MONITORING KEY AND FLOW SWITCH**

UL/FM Approved.

These are a part of automatic sprinkler system and notify the automation room about water pass in the event of sprinkler system start operating. Nominal Diameters: 21/2"-8"

#### **OS&Y Gate Valve Monitoring Key**



#### **Flow Switch**







#### **RELIEF VALVES**



UL/FM Approved
These are used for balancing the pressure during fire.
Nominal Diameters: 21/2"-8"

#### **FLOW METERS**



UL/FM Approved
These are used to gauge flow during fire.
Nominal Diameters: 21/2"-8"

#### **PRESSURE REDUCERS**



UL/FM Approved These are used to reduce excessive pressure during fire. Nominal Diameters: 21/2"-8"

#### **CHECKVALVES**



UL/FM Approved These are used to prevent backrush in the fire equipment. Nominal Diameters: 21/2"-8"





#### **STRAINERS**



**STRAINERS UL/FM Approved** These are used to filter the water in order to prevent damage on systems in fire equipment. Nominal Diameters: 21/2"-8"

#### **SCREWED COUPLINGS**



**UL/FM Approved** These are used for the connection of screwed systems in fire equipment. Nominal Diameters: 1"-10"

#### **FIRE PUMPS**



**UL/FM Approved** They have a flow rate capacity of up to 1,500 GPM

#### **SNT Type Centrifugal Pump**



DN: From 32mm up to 250mm Q: Up to 1,700m<sup>3</sup>/h Hm: Up to 100m n: Up to 2,900rpm t: From  $-10^{\circ}$ C up to  $+140^{\circ}$ C p: 10bar (16bar)

#### **SNL Type In - Line Pump**



DN: From 40mm up to 250mm Q: Up to 500m<sup>3</sup>/h Hm: Up to 95m n: Up to 2,900rpm t: From -10°C up to +110°C p: 10bar (16bar)

#### **SKY Type Hot Oil Pump**



DN: From 32mm up to 150mm Q: Up to 500m<sup>3</sup>/h Hm: Up to 95m n: Up to 2,900rpm t: Up to 320°C p: 16bar

#### **SDS Type Double Suction Pump**



DN: From 65mm up to 400mm Q: Up to 3,500m<sup>3</sup>/h Hm: Up to 180m n: Up to 2,900rpm t: From -20°C up to +80°C p: 16bar (25bar)

#### SKM Type Multistage Pump



DN: From 32mm up to 250mm Q: Up to 1,000m<sup>3</sup>/h Hm: Up to 400m n: Up to 2,900rpm t: From -10°C up to +110°C (140°C) p: 30 bar (50bar)

#### SKM-V Type Vertical Multistage Pump



DN: From 32mm up to 65mm Q: Up to 95m<sup>3</sup>/h Hm: Up to 120m n: Up to 2,900rpm t: From -5°C up to +110°C p: 16bar

#### C Type Submersible **Sewage Pump**



DN: From 50mm up to 300mm Q: Up to 1,600m<sup>3</sup>/h Hm: Up to 95m n: Up to 2,900rpm t: Up to 40°C p: Up to 10bar

#### **PC Type Centrifugal Sewage Pump**



DN: From 40mm up to 300mm Q: Up to 1,600m<sup>3</sup>/h Hm: Up to 95m n: Up to 2,900rpm t: Up to 110°C p: 10bar (16bar)

#### **SBM Type Booster Set**



Q: Up to 15m<sup>3</sup>/h Hm: Up to 100m n: Up to 2,900rpm t: Up to 60°C p: Up to 16bar

#### **SBT-V Type Booster Set**



Q: From 5 m<sup>3</sup>/h up to 1200m<sup>3</sup>/h Hm: From 30m up to 300m n: Up to 2,900rpm t: Up to 60°C p: Up to 40bar

#### SKM-V Type Booster Set



Q: Up to 1,000m<sup>3</sup>/h Hm: Up to 300m n: Up to 2,900rpm t: Up to 60°C p: Up to 40bar

#### **SB Type Vertical Centrifugal Pump**



D: R1" and R1(1/2") Q: Up to  $15\text{m}^3/\text{h}$ Hm: Up to 120m n: Up to 2,900rpm t: Up to 60°C p: 10bar-16bar











**UL/FM Certified Fire Pumps** 



#### **PACKAGE BOOSTER PUMPS**



#### **STRUCTURE TYPE**

Water supply system with high efficiency, ready for connection (with normal suction).

2 to 6 parallel-connected high-pressure centrifugal pumps with stainless steel wet rotor on vertical surface, including Comfort-Controller CC (with or without frequency converter).

#### **Application Area**

Water supply and pressure converter and pressure boosting applications in dwelling-houses, offices and administrative buildings, hotels, hospitals, shopping centers and industrial systems.

Used for pumping drinking water, service water, cooling water, fire extinguishing water (excepting fire extinguishing systems conforming to DIN 14462 norm) or other service waters which have neither chemical, nor mechanical effect on the materials used for the pump and which do not involve corrosives or long lifts. Qmax: 80 m3/h Hmax: 160 m

#### **CIRCULATION PUMPS**



#### STRUCTURE TYPE

Circulation pump with coupling or flange connection and wet rotor.

#### **Application Area**

Hot water heating installation of all systems, industrial type circulation systems, air conditioning systems, and closed circuit cooling systems.

**Qmax:** 76 m3/h **Hmax:** 19 m

#### **WASTE WATER AND DRAINAGE PUMPS**



#### **Structure Type**

Waste water pump with submersible motor

#### **Application Area**

Site drainage, water conservation, and domestic water intake for pumping waste water with solid content from waste treatment facilities and pump stations.

Construction and industrial uses

**Qmax:** 380 m3/h **Hmax:** 51 m

#### **INLINE CIRCULATION PUMPS**



#### **Structure Type**

Inline type dry rotor pump with coupling or flange connection

#### **Application Area**

Heating Water (complies with VDI 2035), heating with water-glycol mixtures, pumping of cooling and cold water that do not contain corrosive substances found in cold and cooling water systems.

**Qmax:** 195 m3/h **Hmax:** 52 m



#### **CGB SERIES FULL CONDENSING BOILER**



- 395kW capacity with 4 boilers with cascade connection
- High standard efficiency up to 110% for the highest possible energy economy.
- Suitable for natural gas and propane use.
- Fixed installation, operation, and maintenance thanks to easy access to all parts.





#### **PANEL RADIATORS**



Alarko panel radiators allows for selecting radiators according to the heating needs of the environment with its dimensions most suitable for architectural and decorative design thanks to its models manufactured at 5 different heights ranging between 300 and 900mm, at 21 different lengths (with increasing lengths in 100mm intervals in 400-1800mm sizes). As standard, they are painted white (RAL 9010). For bulk orders, painting in desired colours may be possible.

TYPE 21 PKP  HEIGHT (H)  A  (kg/m)  (kg/m)  (Lt/m)  300  245  13,6  3,6  400  345  18,2  4,2  5  600  545  28  5,6  900  845  42,5  8  300  2445  16,2  3,6  400  345  21,1  4,2  TYPE 22 PKKP  500  445  25,7  5  600  545  31,4  5,6  900  845  46,9  8  300  245  22,8  5,4  400  345  30,6  6,3	TYPE	DIMENSIONS		WEIGHT	WATER VOLUME
TYPE 21 PKP  500  445  23,2  5  600  545  28  5,6  900  845  42,5  8  300  2445  16,2  3,6  400  345  21,1  4,2  TYPE 22 PKKP  500  445  25,7  5  600  545  31,4  5,6  900  845  46,9  8  300  245  22,8  5,4		HEIGHT (H)	А	(kg/m)	
TYPE 21 PKP 500 445 23,2 5 600 545 28 5,6 900 845 42,5 8 300 2445 16,2 3,6 400 345 21,1 4,2 TYPE 22 PKKP 500 445 25,7 5 600 545 31,4 5,6 900 845 46,9 8 300 245 22,8 5,4	TYPE 21 PKP	300	245	13,6	3,6
600     545     28     5,6       900     845     42,5     8       300     2445     16,2     3,6       400     345     21,1     4,2       500     445     25,7     5       600     545     31,4     5,6       900     845     46,9     8       300     245     22,8     5,4		400	345	18,2	4,2
900     845     42,5     8       300     2445     16,2     3,6       400     345     21,1     4,2       500     445     25,7     5       600     545     31,4     5,6       900     845     46,9     8       300     245     22,8     5,4		500	445	23,2	5
TYPE 22 PKKP 500 445 25,7 5 600 545 31,4 5,6 900 845 46,9 8 300 245 22,8 5,4		600	545	28	5,6
TYPE 22 PKKP 500 445 25,7 5 600 545 31,4 5,6 900 845 46,9 8 300 245 22,8 5,4		900	845	42,5	8
TYPE 22 PKKP 500 445 25,7 5 600 545 31,4 5,6 900 845 46,9 8 300 245 22,8 5,4	TYPE 22 PKKP	300	2445	16,2	3,6
600     545     31,4     5,6       900     845     46,9     8       300     245     22,8     5,4		400	345	21,1	4,2
900 845 46,9 8 300 245 22,8 5,4		500	445	25,7	5
300 245 22,8 5,4		600	545	31,4	5,6
		900	845	46,9	8
400 345 30,6 6,3	TYPE 33 PKKPKP	300	245	22,8	5,4
		400	345	30,6	6,3
TYPE 33 PKKPKP 500 445 40,1 7,5		500	445	40,1	7,5
600 545 48,3 8,4		600	545	48,3	8,4
900 845 74,3 12		900	845	74,3	12













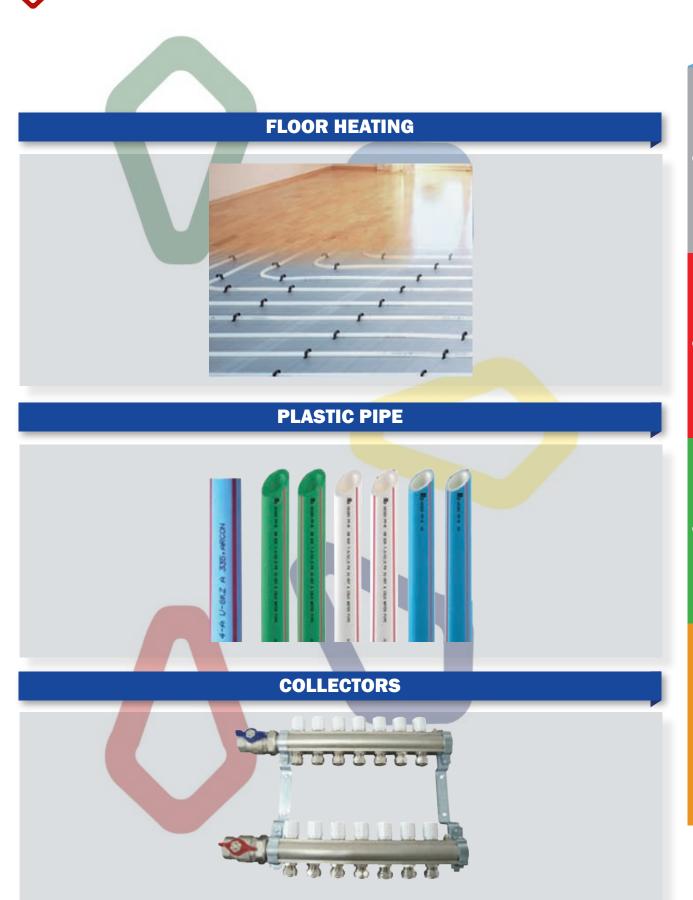
#### LIQUID FUEL BURNERS FOR DIESEL FUEL AND LIGHT, MEDIUM HEAVY AND HEAVY OILS



#### **GAS FUEL BURNERS FOR NATURAL GAS AND LPG**









#### THREE PASS LIQUID AND GAS FUEL STEEL BOILERS



Capacity Range: 80-5,000kW Max. Operating Temperature: 100°C Max. Operating Pressure: 8bar

#### **SOLID FUEL BOILERS**



Capacity Range: 93-698kW Max. Operating Temperature:100°C Max. Operating Pressure: 4bar

#### **WALL TYPE CONDENSING BOILERS**



Capacity Range: 80-125kW Operating Range: 20-100°C Max. Operating Pressure: 8bar Output: 109% Cascade connection is possible.

#### **PACKAGE STEAM BOILERS**



Capacity Range: 100-5,000kW Operating Range: 20-200°C Max. Operating Pressure: 8bar

#### **BOILERS (UNIGAS)**



Capacity Range: 25-10,000kW Fuel Types: Gas, Diesel, Fuel-Oil or dual fuel



#### **PLATE EXCHANGERS**



Independent and housing estates, campuses and recreational facilities, health, education, and sports complexes, cultural and art centres, tourism and accommodation facilities, office, workplace, and commercial buildings, public structures and facilities, metal manufacturing and processing facilities, chemical and pharmaceutical manufacturing facilities, refineries and petrochemistry plants, paper and plastic production facilities, drink production facilities, food production facilities, energy plants

Capacity Ranges: 10-12,000kw

Fluid Type: Hot, cold, super-heated water, salt water, chemical fluids

Temperature Inputs: 90/70-10/60 – 140/110 C Body Material: AISI 304, AISI 316 GG 25, GGG40

Plate Material: AISI 304, AISI 320 Gasket Material: NBR, EPDM, VITON

#### **ACCUMULATION TANKS**



#### **Technical Specifications:**

Capacity ranging between 100lt to 5,000lt

Surfaces in contact with water from 100lt up to 5,000lt are hygienic due to dual enamel coating.

Polyurethane insulation with 50mm thickness from 100lt up to 600lt. Special foam insulation from 800lt up to 3,000lt

Electrostatic powder pain cover over galvanized sheet from 100lt up to 600lt

Special winlex cover from 800lt up to 3,000lt

Cathodic anode protection from 100lt up to 3,000lt

High output,

Aesthetic appearance

10 Bar Operating Pressure

Capacity: 100-5,000lt

Coating: Epoxy paint, polyurethane coating

Electricity Power: Between 1 and 30kW

Heat Capacity: Between 20 and 90C

Control Type: Adjustable and fixed, digital and mechanical heat thermostat

#### **SINGLE AND DUAL COIL BOILERS**



#### **Technical Specifications:**

Capacity ranging between 100lt to 5,000lt

Surfaces in contact with water from 100lt up to 5,000lt are hygienic due to dual enamel coating.

Polyure than e insulation with 50 mm thickness from 100 lt up to 600 lt.

Special winlex cover from 800lt up to 3,000lt

**Cathodic Anode Protection** 

High Output,

Optional electric resistance,

Aesthetic appearance, 10bar operating pressure



#### **TOSHIBA VRF SYSTEMS**

#### **EXTERNAL UNITS**



#### **Dc Twin Rotary Compressor**

Fast vector controlled inverter calculus.

Thanks to systems with complete inverter, power is generated as needed by the system.

Not only the momentary but also annual efficiency rate is also high.

Infinite capacity control provides the rotational speed of the compressor the adjustment in 0.1Hz phases. Therefore, momentary capacity needs are met in a quite sensitive manner.

Ease of design with flexible piping.

Very low sound levels.

#### **INTERNAL UNITS**



#### 4-way Cassette Type Internal Unit Standard 90x90

2.8 - 16.0 kW (10 Models)
Washable filter with long life
Drainage Pump (650mm)
Rotating air flaps (Separate / Rotation)



#### 4-way Cassette Type Compact Internal Unit 60x60

2.2 - 5.6 kW (5 Models) Washable filter with long life Drainage Pump (450mm) Rotating air flaps (Rotation)

#### 2-way Cassette Type Internal Unit

2.2 - 16 kW (11 Models) Washable filter with long life Rotating air flaps Drainage Pump (500mm))





#### **One-way Cassette Type Internal Unit**

2.2 - 7.1 kW (6 models) Washable filter with long life Rotating air flaps Drainage Pump (250mm)



#### Channel Type High Static Pressure Internal Unit

5.6 - 28 kW (7 Models) Drainage pump - optional



#### **Channel Type Standard Internal Unit**

2.2 - 16 kW (11 Models) Washable filter with long life Drainage Pump (250mm) Fan speeds can be easily adjusted depending on channel design.



Washable filter with long life (maybe used in rear chamber) Drainage Pump (250mm) Compact design













#### **Ceiling Type Internal Unit**

4.5 - 16.0 kW (7 models) Washable filter Rotating air flap Optional drainage pump (250mm)



#### Wall Type Internal Unit Compact, Standard Wall Type Internal Unit

2.2 - 7.1 kW (6 models)
Washable filter with long life
Rotating air flap



#### **Cabinet Floor Type Internal Unit**

2.2 - 7.1 kW (6 models) Washable filter with long life Manual flap Front blow



#### Floor Type Internal Unit without Cabinet

2.2 - 7.1 kW (6 models)
Washable filter with long life
Above or front blow
Decorative design panels may be installed in the front.

#### **Room Type Internal Unit**

4.5 - 16.0 kW (7 models)
Washable filter with long life
Adjustable air direction vertical/horizontal
Automatic air flap
Section for local control
Suitable for server room applications





#### **COOLING GROUPS**





#### **CENTRIFUGAL COOLING GROUPS**



CAPACITY RANGE: 1,000-3,750KW TYPES: CENTRIFUGAL TYPE

#### **FAN-COIL UNIT**







#### **PRECISION AIR CONDITIONER**



#### **ROOFTOP TYPE AIR CONDITIONER**





#### **AIR-JF SERIES AXIAL TYPE JET FANS**



- Axial type jet fans
- Elliptic wing profiles allowing for two-way blow without any loss of output
- Fan body with embedded mufflers
- Slide motor connection
- Ø 315-355-400-500mm diameter range
- 300°C/2 hours fire resistance complying with EN 12101-3
- Galvanized sheet body, aluminium cast fan wings
- Dynamic balancing complying with ISO 1940/1-1986
- 2 pole and 2/4 pole two stroke engine options
- Class H isolation
- IP55 protection class
- High temperature resistant terminal box coupled over fan
- Protective wire cage and adjustable guide



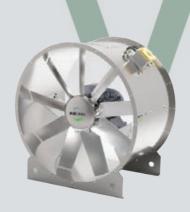
#### **AIR-A SERIES AXIAL TYPE FRESH AIR FANS**



- AIR-A SERIES AXIAL TYPE FRESH AIR FANS
- Dimension range in 400-1250mm diameter
- Galvanized sheet body
- Aluminium cast fan wings (alternative ABS material wings)
- Dynamic balancing complying with ISO 1940/1-1986
- Suitable for horizontal and vertical installation
- Adjustable wing angle
- 2/4/6 pole and two stroke engine options
- Class F isolation
- IP55 protection class
- Terminal box coupled over the fan (optional)
- Protective wire cage over outlet (optional)



#### **AIR-A SERIES AXIAL TYPE SMOKE EXHAUST FANS**



- 300°C/2 hours fire resistance complying with EN 12101-3
- Dimension range in 400-1,250mm diameter
- Hot-dip galvanized sheet body
- · Aluminium cast fan wings
- Dynamic balancing complying with ISO 1940/1-1986
- Suitable for horizontal and vertical installation
- Adjustable wing angle
- 2/4/6 pole and two stroke engine options
- Class H isolation
- IP55 protection class
- Terminal box coupled over fan manufactured from aluminium cast material with high temperature resistance and ceramic connector
- Protective wire cage over outlet (optional)

#### **AIR-AC SERIES AXIAL TYPE FRESH AIR FANS**



- Dimension range in 400-1,250mm diameter
- Galvanized sheet body
- Noise insulation (glass wool layered) body structure
- Aluminium cast fan wings
- Dynamic balancing complying with ISO 1940/1-1986
- Adjustable wing angle, 2/4/6 pole and two stroke engine options
- Class F isolation
- IP55 protection class
- Terminal box coupled over the fan (optional)

#### **AIR-A SERIES AXIAL TYPE CELL SMOKE EXHAUST FANS**



- 300°C/2 hours fire resistance complying with EN 12101-3
- Dimension range in 400-1,250mm diameter
- Galvanized sheet body
- Noise insulation (stone wool layered) body structure
- Aluminium cast fan wings
- Dynamic balancing complying with ISO 1940/1-1986
- Adjustable wing angle
- 2/4/6 pole and two stroke engine options
- Class H isolation
- IP55 protection class
- Terminal box coupled over fan manufactured from aluminium cast material with high temperature resistance and ceramic connector













#### **AIR-AR SERIES AXIAL ROOF TYPE SMOKE EXHAUST FANS**



- 300°C/2 hours fire resistance complying with EN 12101-3
- Dimension range in 400-1,250mm diameter
- Galvanized sheet body
- Noise insulation (stone wool layered) body structure
- Aluminium cast fan wings
- Dynamic balancing complying with ISO 1940/1-1986
- Adjustable wing angle
- 2/4/6 pole and two stroke engine options
- Class H isolation
- IP55 protection class
- Terminal box coupled over fan manufactured from aluminium cast material with high temperature resistance and ceramic connector

#### **AIR-AR SERIES AXIAL ROOF TYPE FRESH AIR FANS**



- 300°C/2 hours fire resistance complying with EN 12101-3
- Dimension range in 400-900mm diameter
- · Galvanized sheet body
- · Horizontal fired mushroom type design
- · Aluminium cast fan wings
- Dynamic balancing complying with ISO 1940/1-1986
- Adjustable wing angle
- 2/4/6 pole and two stroke engine options
- Class H isolation
- IP55 protection class
- Terminal box coupled over fan manufactured from aluminium cast material with high temperature resistance and ceramic connector

\*\*\*AXIAL TYPE FRESH AIR AND SMOKE EXHAUST FANS WITH EMBEDDED MUFFLER TYPES ARE ALSO PRESENT IN OUR PRODUCT RANGE.





