BALL VALVE TYPE 21, 21α

- EQUIPPED WITH TOP FLANGE, ALLOWING FOR EASY CHANGE TO AUTOMATIC VALVE.
- COMES WITH BOTTOM STAND TO FACILITATE MOUNTING ON RACKS AND PANELS (See the Ensat mounting procedure on page 69).
- DOUBLE O-RING ON THE STEM IMPROVES DURABILITY AND SEALING PROPERTY.

MANUAL



AUTOMATIC





BASIC SPECIFICATIONS

VALVE TYPE——**BALL VALVE TYPE 21, 21α**
SIZE——**15 mm—100 mm (1/2 inch—4 inch)**
BODY MATERIAL——**U-PVC C-PVC PP PVDF**
SEAL MATERIAL / O-RING——**EPDM FKM etc.**
CONNECTION / FLANGED——**JIS5K, JIS10K, DIN PN10, ANSI CLASS150**
SOCKET——**JIS, DIN, ANSI**
THREADED——**Rc, Rp, NPT**
HIGH PURITY SERIES——**LUBRICANT FREE**

	FLUID TEMPERATURE	MAXIMUM WORKING PRESSURE [NORMAL TEMPERATURE] MPa{kgf/cm²}	CONNECTION METHOD		
			FLANGED	SOCKET	THREADED
U-PVC	0℃～ 50℃	1.0 {10.2}	○	○	○
C-PVC	0℃～ 90℃	1.0 {10.2}	○	○	○
PP	-20℃～ 80℃	1.0 {10.2}	○	○	○
PVDF	-20℃～100℃	1.0 {10.2}	○	○	○

NOTE (1) The ball-type valves have dead spaces for structural reasons. Note that volatile liquids, such as hydrogen peroxide (H_2O_2) and sodium hypochlorite (NaClO), vaporize in those dead spaces, which may cause abnormal pressure increase in the valve. (When the internal pressure abnormally increases due to vaporization, the gas will be compressive fluid. If the valve breaks in this state, it will be very dangerous, causing explosion and scattering of fragments.) (2) The maximum working pressure is the value including the water hammer pressure. Be careful that the maximum working pressure is not exceeded during use.

* Concerning the allowable pressure for each temperature and material, see the technical documents at the end of this catalog.

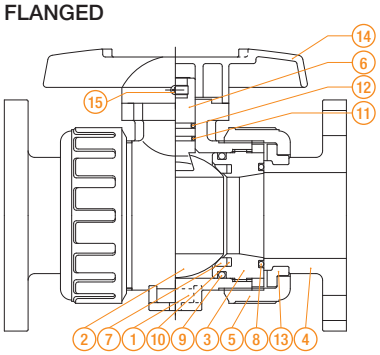


■**Multi Functional Handle**
Removing the handle and placing the raised lugs into the carrier allow for easy disassembly of the valve.
* The handle has other colors. (blue, white, yellow)(Option)



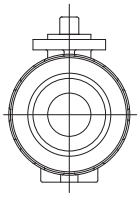
PARTS LIST MANUAL

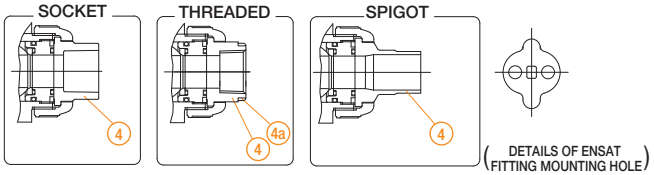
FLANGED



(DETAILS OF STEM)







PART NO. / NAME	QTY	MATERIAL
①BODY	1	U-PVC, C-PVC, PP, PVDF
②BALL	1	U-PVC, C-PVC, PP, PVDF
③UNION	1	U-PVC, C-PVC, PP, PVDF
④END CONNECTOR	2	U-PVC, C-PVC, PP, PVDF
④aRING	2	SUS304 (Made of C-PVC. Used for threaded type of 15 to 25 mm.)
⑤UNION NUT	2	U-PVC, C-PVC, PP, PVDF

PART NO. / NAME	QTY	MATERIAL
⑥STEM	1	U-PVC, C-PVC, PP, PVDF
⑦SEAT	2	PTFE
⑧O-RING (A)	2	EPDM, FKM, etc.
⑨O-RING (B)	1	EPDM, FKM, etc.
⑩O-RING (C)	2	EPDM, FKM, etc.
⑪O-RING (D)	1	EPDM, FKM, etc.

PART NO. / NAME	QTY	MATERIAL
⑫O-RING (E)	1	EPDM, FKM, etc.
⑬STOP RING	2	PVDF (Used for flanged type.)
⑭HANDLE	1	ABS
⑮TAPPING SCREW (A)	1	SUS304

COMPATIBLE ACTUATOR AUTOMATIC

PNEUMATIC TYPE TA — For detailed specifications, see P.124
PNEUMATIC TYPE AA — For detailed specifications, see P.123
ELECTRIC TYPE T — For detailed specifications, see P.139

TYPE CATEGORY MANUAL AUTOMATIC

The types are classified according to the size and material.

SIZE \ BODY MATERIAL	U-PVC	C-PVC	PP	PVDF
15mm – 50mm	TYPE 21α		TYPE 21	
65mm – 100mm	TYPE 21			

PRODUCT MODEL CODE LIST — MANUAL

ACTUATION	TYPE	OPERATING SYSTEM	BODY MATERIAL	SEAL MATERIAL	CONNECTION	STANDARD	SIZE	HIGH PURITY SERIES
V	**	LV	*	*	*	*	***	1
V MANUAL VALVE	21 TYPE 21 2A TYPE 21α	LV LEVER TYPE	U U-PVC C C-PVC P PP F PVDF	E EPDM V FKM	S SOCKET N THREADED P SPIGOT F FLANGED	J JIS D DIN A ANSI 1 JIS10K 5 5K	015 15mm ⌇ 100 100mm	1 LUBRICANT FREE

PRODUCT MODEL CODE LIST — AUTOMATIC

ACTUATION	TYPE	ACTUATOR TYPE	ACTION / POWER SOURCE	BODY MATERIAL	SEAL MATERIAL	CONNECTION	STANDARD	SIZE	SPACE HEATER	HIGH PURITY SERIES
A	**	*	*	*	*	*	*	***	OC※	1
A AUTO-MATIC VALVE	21 TYPE 21 2A TYPE 21α	PNEUMATIC K TYPE TA A TYPE AA ELECTRIC T TYPE T	PNEUMATIC F DOUBLE ACTING G AIR TO OPEN S AIR TO CLOSE ELECTRIC 1 Single-Phase 100V 2 Single-Phase 200V	U U-PVC C C-PVC P PP F PVDF	E EPDM V FKM	S SOCKET N THREADED P SPIGOT F FLANGED	J JIS D DIN A ANSI 1 JIS10K 5 JIS5K	015 15mm ⌇ 100 100mm	OC 0C * Indicate only for electric type only.	1 LUBRICANT FREE

NOTE (1) PP and PVDF socket types are weld type. Note, however, that JIS PP 32-mm socket type is not produced.
(2) PVDF socket type compatible with the JIS standard is not available.
(3) A handle set with a lock mechanism (for malfunction prevention) is available as an option.

Compatibility of face-to-face dimensions

Both valve face-to-face dimensions and body face-to-face dimensions are compatible between type 21α and conventional type 21. Also, a change to type 21α is available using the end connector and union nut for the existing piping (type 21).

Compatibility of parts

Some of the body component parts are not compatible between type 21α and type 21. Be careful when parts are changed on site. For details of parts compatibility, contact our sales office in your area.

Identification of product

[Difference between products] (See Fig. 1.) The body appearance of type 21α is different from that of type 21 to discriminate between them.

Related materials

Due to the modification and release of type 21α, some parts of related materials, such as outline drawing, instruction manual, and set parts list, have been revised.
Please obtain the latest version at our sales office in your area.

Performance and options

There is no change in the performance (relationship between the working pressure and temperature, Cv value, chemical resistance, etc.) and options between type 21 and 21α.

Fig. 1: Difference between products

