

03 Series Modular Valves

■ Type of Modular Valve

Class	Name and Model Numbers	Graphic Symbols	Page	Class	Name and Model Numbers	Graphic Symbols	Page
Solenoid Operated Directional Valves							
(S-) DSG-03-***-50 E-DSG-03-***-D-50 T-DSG-03-***-D24-50 G-DSG-03-***-51							
Pressure Control Valves	Relief Valves (for "P-Line") MBP-03-**-70		F-48	Flow Control Valves	Temperature Compensated Throttle and Check Valves (for "A&B-Lines", Meter-out) MSTW-03-X-20		F-58
	Relief Valves (for "A-Line") MBA-03-**-70		F-48		Throttle Valves (for "P-Line") MSP-03-30		F-60
	Relief Valves (for "B-Line") MBB-03-**-70		F-48		Check and Throttle Valves (for "P-Line") MSCP-03-20		F-61
	Relief Valves (for "A&B-Lines") MBW-03-**-70		F-48		Throttle and Check Valves (for "A-Line", Meter-out) MSA-03-X-70		F-62
	Reducing Valves (for "P-Line") MRP-03-**-70		F-50		Throttle and Check Valves (for "A-Line", Meter-in) MSA-03-Y-70		F-62
	Reducing Valves (for "A-Line") MRA-03-**-70		F-50		Throttle and Check Valves (for "B-Line", Meter-out) MSB-03-X-70		F-62
	Reducing Valves (for "B-Line") MRB-03-**-70		F-50		Throttle and Check Valves (for "B-Line", Meter-in) MSB-03-Y-70		F-62
	Reducing Valves for Low Pressure Setting (for "P-Line") MRLP-03-10		F-52		Throttle and Check Valves (for "A&B-Lines", Meter-out) MSW-03-X-70		F-62
	Reducing Valves for Low Pressure Setting (for "A-Line") MRLA-03-10		F-52	Directional Control Valves	Throttle and Check Valves (for "A&B-Lines", Meter-in) MSW-03-Y-70		F-62
	Reducing Valves for Low Pressure Setting (for "B-Line") MRLB-03-10		F-52		Check Valves (for "P-Line") MCP-03-**-70		F-64
	Sequence Valves (for "P-Line") MHP-03-**-20		F-54		Check Valves (for "A-Line") MCA-03-**-70		F-64
	Counterbalance Valves (for "A-Line") MHA-03-**-20		F-54		Check Valves (for "B-Line") MCB-03-**-70		F-64
	Counterbalance Valves (for "B-Line") MHB-03-**-20		F-54		Check Valves (for "T-Line") MCT-03-**-70		F-64
Flow Control Valves	Flow Control Valves (for "P-Line") MFP-03-11		F-56		Check Valves (for "A&B-Lines") MCW-03-**-70		F-64
	Flow Control and Check Valves (for "A-Line", Meter-in) MFA-03-X-11		F-56		Check Valves (for "P&T-Lines") MCPT-03-P-**-T-10		F-66
	Flow Control and Check Valves (for "A-Line", Meter-in) MFA-03-Y-11		F-56		Anti-Cavitation Valves MAC-03-10		F-67
	Flow Control and Check Valves (for "B-Line", Meter-out) MFB-03-X-11		F-56		Pilot Operated Check Valves (for "A-Line") MPA-03-**-70		F-68
	Flow Control and Check Valves (for "B-Line", Meter-in) MFB-03-Y-11		F-56		Pilot Operated Check Valves (for "B-Line") MPB-03-**-70		F-68
	Flow Control and Check Valves (for "A&B-Lines", Meter-out) MFW-03-X-11		F-56		Pilot Operated Check Valves (for "A&B-Lines") MPW-03-**-70		F-68
	Flow Control and Check Valves (for "A&B-Lines", Meter-in) MFW-03-Y-11		F-56	Modular Plates and Mounting Bolts	End Plates (Blocking Plates) MDC-03-A-10		F-70
	Temperature Compensated Throttle and Check Valves (for "A-Line", Meter-out) MSTA-03-X-20		F-58		End Plates (Bypass Plates) MDC-03-B-10		F-70
	Temperature Compensated Throttle and Check Valves (for "B-Line", Meter-out) MSTB-03-X-20		F-58		Connecting Plates MDS-03-10		F-70
					Base Plates MMC-03-T-**-21		F-71
					Bolt Kits MBK-03-**-10		F-73

★ Refer to the relevant pages of catalog "E: DIRECTIONAL CONTROLS"

Temperature Compensated Throttle and Check Modular Valves

Specifications

Model Numbers	Max. Operating Pressure MPa	Max. Differential Pressure MPa	Max. Metered Flow L/min	Min. Metered Flow L/min	Max. Free Flow L/min
MST *-03-X-20	25	25	70	2 (1)*	70

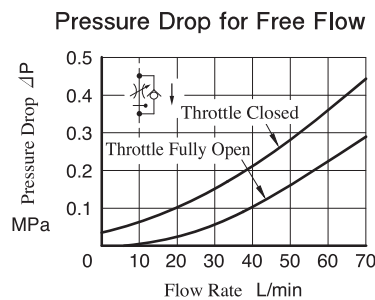
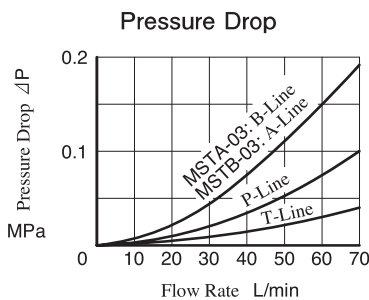
★The figures in parentheses are the values when the differential pressure is less than 3.5 MPa.

Model Number Designation

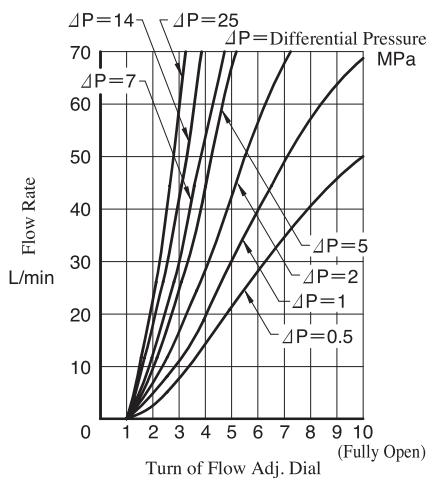
MSTA	-03	-X	-20
Series Number	Valve Size	Direction of Flow	Design Number
MSTA: for A-Line MSTB: for B-Line MSTW: for A&B-Lines	03	X: Meter-out	20

Typical Performance Characteristics

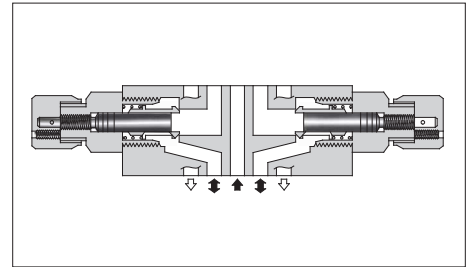
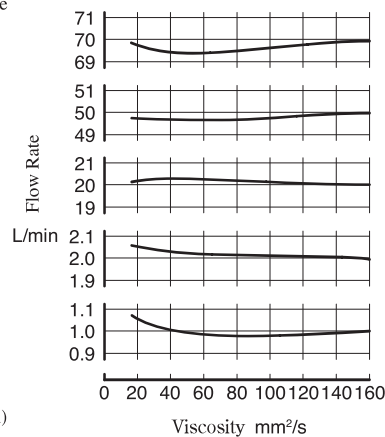
Hydraulic Fluid: Viscosity 35 mm²/s, Specific Gravity 0.850



Metered Flow vs. Dial Position



Metered Flow vs. Viscosity

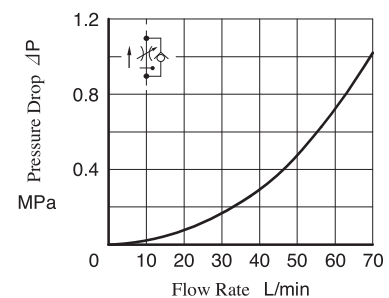


Model Numbers	Graphic Symbols	Detailed Graphic Symbols
	Meter-out	
MSTA -03-X		
MSTB -03-X		
MSTW -03-X		

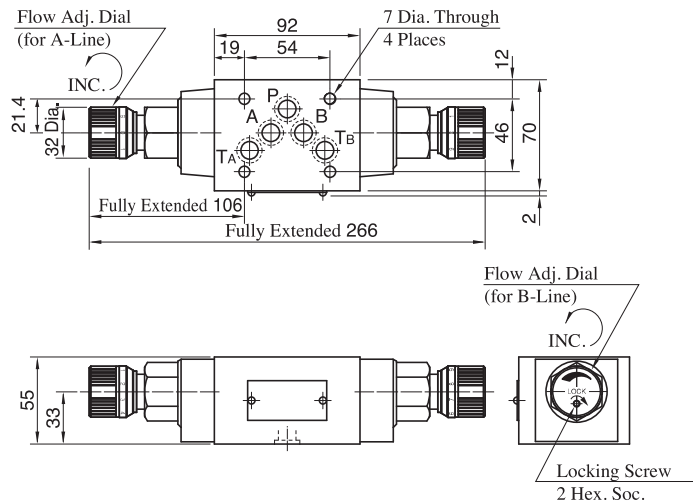
Instructions

- To make flow rate adjustment, loosen locking screw for the dial and turn the flow adjustment dial clockwise or anti-clockwise. For a decrease of flow, turn the dial clockwise. Be sure to re-tighten the locking screw firmly after the adjustment of the flow rate.

Pressure Drop at Throttle Fully Open

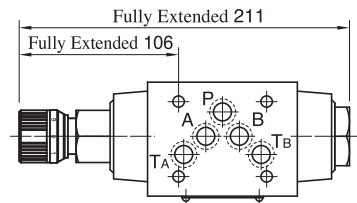


MSTW-03-X



Approx. Mass.....3.7 kg

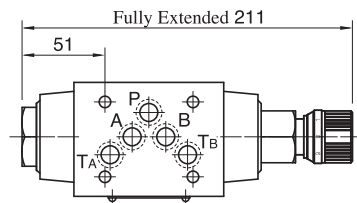
MSTA-03-X



Approx. Mass.....3.5 kg

For other dimensions, refer to "MSTW-03" in the drawing left.

MSTB-03-X



Approx. Mass.....3.5 kg

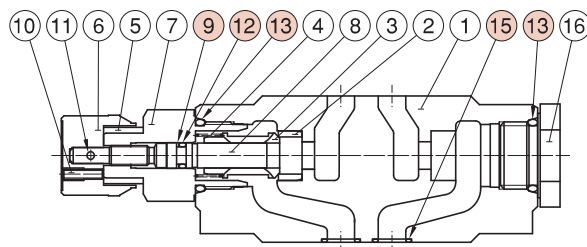
For other dimensions, refer to "MSTW-03" in the drawing left.

List of Seals

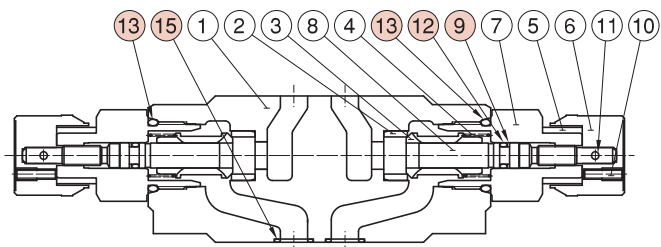
MSTA-03-X

MSTB-03-X

MSTW-03-X



MSTA-03-X



MSTW-03-X

● MSTB-03-X : The pressure adjustment part is built in the right side.

Item	Name of Parts	Part Numbers	Qty.		
			MSTA-03	MSTB-03	MSTW-03
9	Back-up Ring	900-VK411915-2	1	1	2
12	O-Ring	OR NBR-70-1 P7-N	1	1	2
13	O-Ring	OR NBR-90 P24-N	2	2	2
15	O-Ring	AS568-014 (NBR-90)	5	5	5