Combined Balancing and Control Valves
TA Series 7FC

08.52

Combined balancing and control valves with independent EQM (Equal Percentage Value) characteristics.

These innovative balancing and control valves for heating and cooling systems combine the key hydronic functions of balancing and control also known as FUS1ON C in one valve. Adjustable Cvs/Kvs and inherent independent EQM characteristics allow correct valve sizing and optimum system controllability. The measuring points enable accurate measurement of flow, differential pressure, temperature and available differential pressure.

- **Adjustable maximum flow**
  Allows correct Cv/Kv setting corresponding to system requirements.
- **Independent, inherent EQM characteristic**
  Proper EQM valve characteristic for all settings.
- **Self-sealing measuring points**
  Simple and accurate measurement for balancing, trouble shooting and power measurement.
- **Actuators**
  Valves and actuators may be supplied together ensuring optimum control performance and simplified selection.

Material Specifications:

1¼ – 2" / 32 – 50mm:

Valve Body: AMETAL®

Valve Plug: AMETAL®

Seat Seal: EPDM/Stainless steel UNS S30100

Spindle Seal: EPDM O-ring

O-rings: EPDM

Valve Insert: AMETAL®/EPS/PTFE

Springs: Stainless steel UNS S30100

Spindle: Stainless steel UNS S30100

2½ – 6" / 65 – 150mm:

Valve Body: Ductile iron EN-GJS-400 with electrophoretic coating

Valve Plug: Stainless Steel UNS S30300

Seat Seal: EPDM/Stainless Steel UNS S30300

O-rings: EPDM

Plug mechanisms: Stainless Steel and Brass

Screws and nuts: Stainless Steel

AMETAL® is the dezincification resistant alloy of TA Hydronics.

Job/Owner

System No.	
Location	

Contractor

Submitted By	
Date	

Engineer

Spec Section	
Paragraph	
Approved	
Date	

Technical description:

Application:
Heating and cooling systems

Functions:
Control (EQM)
Balancing
Pre-setting (Cv/Kv)
Measuring (ΔpV, ΔH, T, q)
Shut-off (for isolation during system maintenance)

Available Sizes:
1¼ – 6" / 32 – 150mm

Pressure class:
1¼ – 2" / 32 – 50mm: 230 psi / 1600 kPa / 16 Bar
2½ – 6" / 65 – 150mm: 365 psi / 2500 kPa / 25 Bar

Maximum differential pressure (ΔpV):
1¼ – 2" / 51 psi / 350 kPa / 3.5 Bar
2½ – 6" / 65 – 150mm: 58 psi / 400 kPa / 4 Bar

Recommended Setting Range:
Important: All values may be subject to change.

Cv_{max} = gpm at a pressure drop of 1 psi / Kv_{max} = m³/hr at a pressure drop of 1 bar at each setting and fully open valve plug.

Lift:
.79" / 20 mm

Leakage rate:
Tight sealing to maximum differential pressure

Characteristics:
Independent EQM

Temperature:
Maximum working temperature: +250°F / +120°C
Minimum working temperature: -4°F / -20°C

Media:
Water or neutral fluids, water-glycol mixtures

Surface treatment:
1¼ – 2" / 32 – 50mm: Non treated
2½ – 6" / 65 – 150mm: Electrophoretic painting

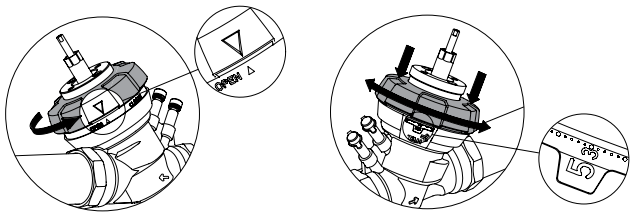
Marking:
1¼ – 2" / 32 – 50mm: TAH, IMI, DN, PN, DR, serial No and flow direction arrow

2½ – 6" / 65 – 150mm: TAH, IMI, DN, PN, Kvs, $T_{min}/_{max}$, serial number, valve body material and flow direction arrow, label

Connection:
1¼ – 2" / 32 – 50mm: Female NPT.
2½ – 6" / 65 – 150mm: ANSI Class 150 Flange faces

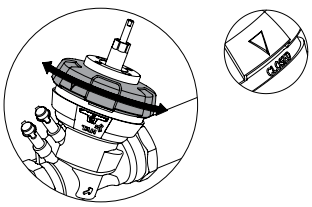
Operating function 1¼ – 2" / 32 – 50mm:

Setting 1¼ – 2" / 32 – 50mm



1. Open the valve fully with the handwheel.
2. Press the handwheel downwards and turn to desired value, e.g. 5.3.

Shut-off 1¼ – 2" / 32 – 50mm



1. Turn the handwheel to “Closed”.

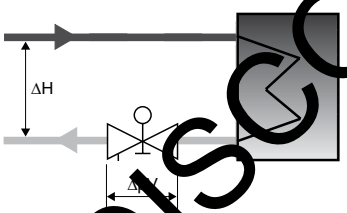
Turn the handwheel to “Open” when re-opening the valve.

Measuring ΔpV and q 1¼ – 2" / 32 – 50mm

Connect TA Hydronics balancing instrument to the measuring points. Input the valve type, size and setting and the actual flow is displayed.

Measuring ΔH 1¼ – 2" / 32 – 50mm

Connect TA Hydronics balancing instrument to the measuring points. Close the valve according to “Shut-off” and measure. **Important:** The valve must be re-opened fully after the measurement is completed.

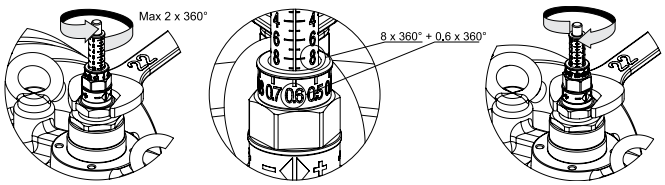


NOTE

Ensure that the actuator is disengaged from the valve spindle during all operating functions described above.

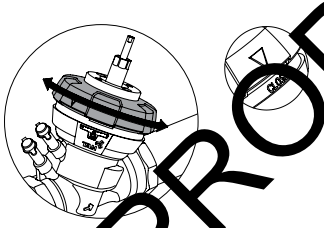
Operating function 2½ – 6" / 65 – 150mm:

Setting 2½ – 6" / 65 – 150mm



1. Release the fixing nut.
2. Turn the setting screw to desired value on the scale, e.g. 8.6.
3. Tighten the fixing nut.

Shut-off 2½ – 6" / 65 – 150mm



1. Release the fixing nut.
2. Turn the setting screw clockwise to stop (position 0 ±0,5). The presetting is visible on the setting scale.
3. Tighten the fixing nut.ble on the setting scale.

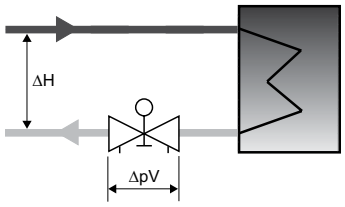
Open to previous setting when re-opening the valve.

Measuring ΔpV and q 2½ – 6" / 65 – 150mm

Connect TA Hydronics balancing instrument to the measuring points. Input the valve type, size and setting and the actual flow is displayed.

Measuring ΔH 2½ – 6" / 65 – 150mm

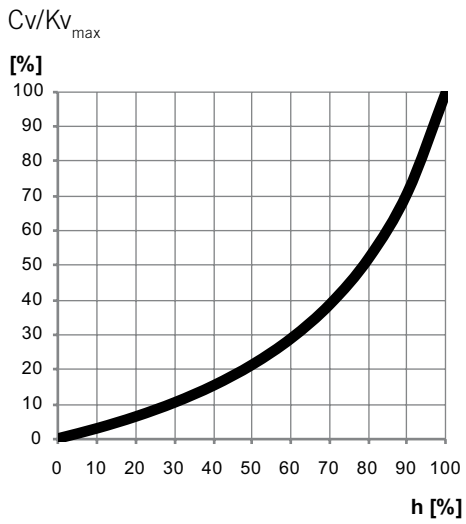
Connect TA Hydronics balancing instrument to the measuring points. Close the valve according to “Shut-off” and measure. **Important:** The valve must be re-opened to previous setting after the measurement is completed.

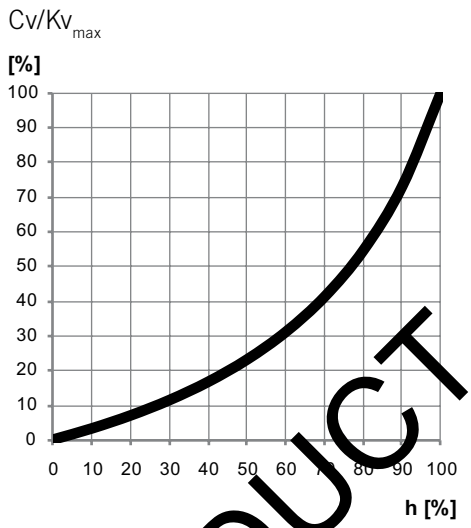


NOTE

Ensure that the actuator is disengaged from the valve spindle during all operating functions described above.

Valve characteristics:

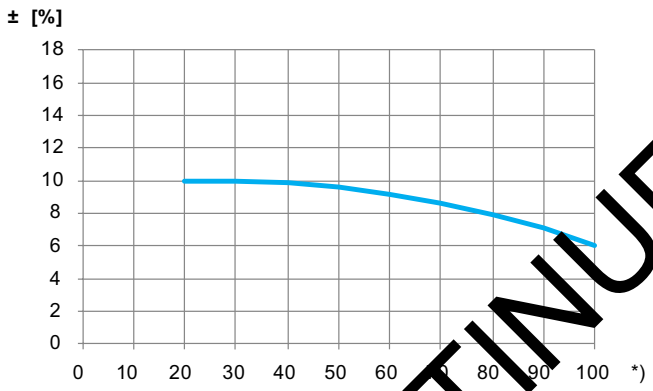


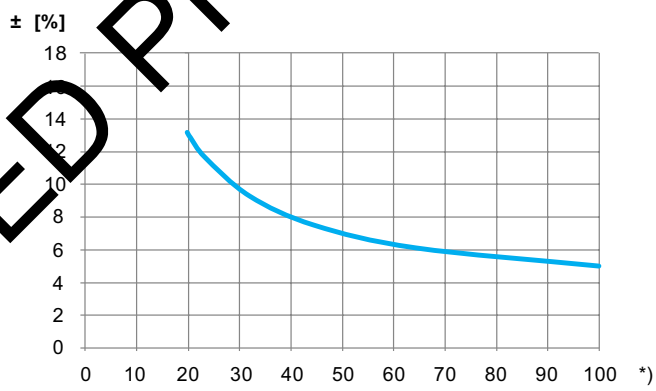


Nominal valve characteristic for all recommended settings.

Measuring accuracy:

Maximum flow deviation at different settings





*) Setting (%) of fully open valve.

Correction factors:

The flow calculations are valid for water (+68°F/+20°C). For other liquids with approximately the same viscosity as water (≤20 cSt – 3°E=100S.U.), it is only necessary to compensate for the specific density. However, at low temperatures, the viscosity increases and laminar flow may occur in the valves.

This causes a flow deviation that increases with small valves, low settings and low differential pressures. Correction for this deviation can be made with the software TA Select or directly in TA Hydronics balancing instruments.

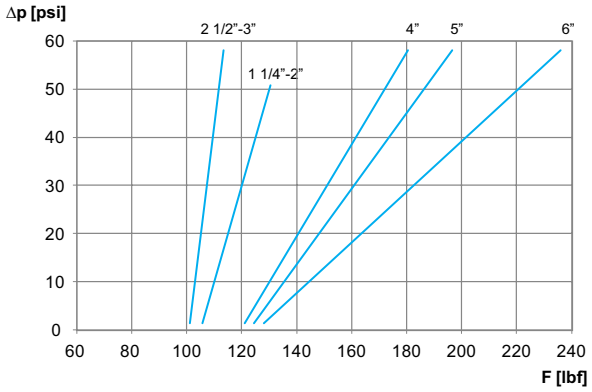
Noise:

In order to avoid noise in the installation the flows must be correctly balanced and the water de-aerated. Very high differential pressures can cause noise in the installations, and in that case, differential pressure controllers should be used.

The maximum recommended pressure drop in order to avoid excessive noise is 30 psi / 200 kPa.

Closing Force:

Necessary force (F) to close the valve versus the differential pressure (ΔpV), up to max. ΔpV.



Cv_{max} / Kv_{max} values:

Important: All values are provisional and may be subject to change. Please check the website for up-to-date information.

Sizing:

When ΔpV and flow are known, use the formula to calculate Cv_{max} / Kv_{max}.

$$Cv = 1{,}52 \frac{q}{\sqrt{\Delta p}}$$ q in GPM, Δp in Ft

$$Kv = 0{,}01 \frac{q}{\sqrt{\Delta p}}$$ m³/hr Δp, bar

$$Cv = \frac{q}{\sqrt{\Delta p}}$$ q in GPM, Δp in psi

$$Kv = 36 \frac{q}{\sqrt{\Delta p}}$$ m³/hr Δp, bar

Size inches mm	Positions - Cv / Kv									
	1	2	3	4	5	6	7	8	9	10
1¼ 32	3.1 2.7	3.7 3.1	4.4 3.2	5.2 4.5	6.3 5.4	7.5 6.5	9.1 7.9	11.1 9.6	12.9 11.1	15.1 13.0
1½ 40	3.5 3.0	4.3 3.7	[illegible] 4.4	6.3 5.4	7.6 6.6	9.6 8.3	12.0 10.4	14.2 12.3	17.1 14.8	20.6 17.8
2 50	9.3 8.0	10.9 9.4	13.2 11.4	16.2 14.0	18.9 16.3	22.0 19.0	26.4 22.8	31.2 27.0	35.2 30.4	38.2 33.0

1¼ – 2" / 32 – 50mm: Recommended setting range 2-10.

Size inches mm	Positions - Cv / Kv									
	5.5	6	6.5	7	7.5	8	8.5	9	9.5	10
2½ 65	14.8 12.8	17.4 15.0	20.4 17.6	23.9 20.7	28.2 24.4	33.4 28.9	39.9 34.5	48.4 41.8	59.5 51.4	75.2 65.0
3 80	22.7 19.6	26.7 23.1	31.4 27.1	36.8 31.8	43.4 37.5	51.4 44.4	61.4 53.1	74.4 64.3	91.6 79.2	115.7 100.0
4 100	33.7 29.1	39.9 34.5	47.2 40.8	56.0 48.4	66.4 57.4	79.4 68.6	95.6 82.6	116.8 101.0	144.6 125.0	185.1 160.0
5 125	57.3 49.5	67.8 58.6	80.3 69.4	94.9 82.1	112.7 97.4	134.2 116.0	161.9 140.0	196.7 170.0	245.3 212.0	312.4 270.0
6 150	86.2 74.5	101.9 88.1	120.3 104.0	142.3 123.0	160.9 146.0	200.1 173.0	240.6 208.0	292.7 253.0	363.3 314.0	462.8 400.0

2½ – 6" / 65 – 150mm: Recommended setting range 7.5–10 (≈40–100% of Cv/Kv).

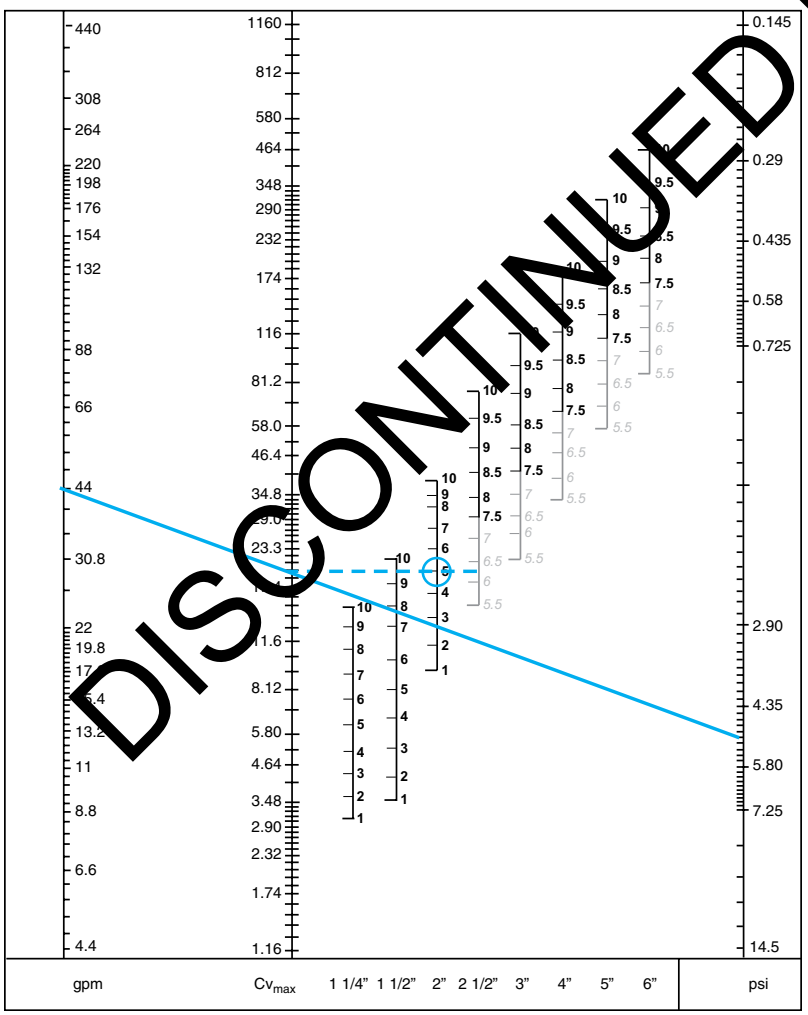
Sizing:

Example

Flow is 44 gpm / 10 m³/h, ΔpV is 5 psi / 35 kPa and control signal (input signal) 0-10 VDC.

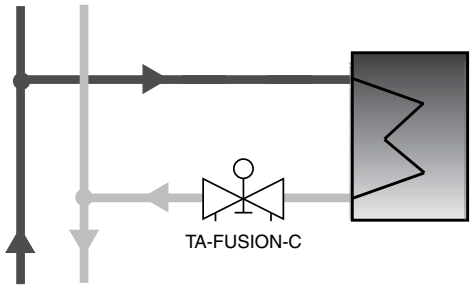
1. Go to sizing diagram. (When calculating the Cv_{max} / Kv_{max} by the formula go directly to step 4).
2. Draw a straight line between 44 gpm / 10 m³/h and 5 psi / 35 kPa.
3. Read the needed Cv_{max} / Kv_{max} value where the line crosses the Kvaxis. In this case Cv_{max} = 19.6.
4. Draw a horizontal line from Cv_{max} = 19.6 which will cross the setting bars for all valves which fit the application. In this case DN 40 setting 9,7, 2"/50mm setting 5,3.
5. Choose the smallest option (with some safety margin). In this case 2"/50mm is preferable.
6. Go to the selection tables to select the correct set. In this case article number V0207FC000.

Sizing Diagram

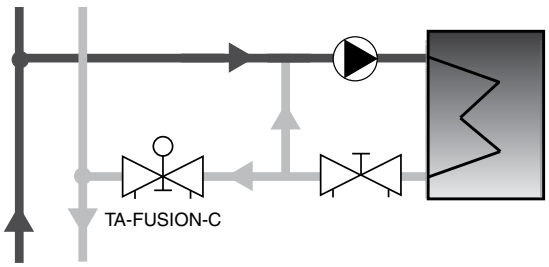


2½ – 6" / 65 – 150mm: Recommended setting range 7.5–10 (≈40–100% of Cv/Kv).

Application Examples:
2-way direct circuit

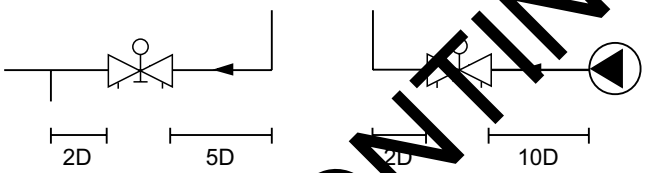


Injection circuit

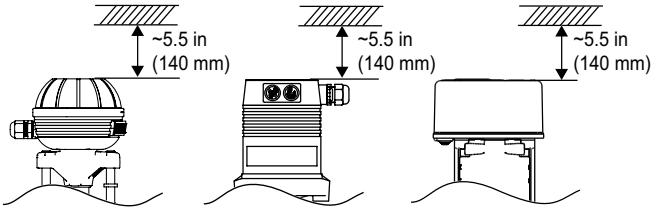


Normal Pipe Fittings:
Avoid mounting taps and pumps immediately before or after the valve.

Installation recommendation for accurate measurement due to distortion of fully developed turbulent flow profile.



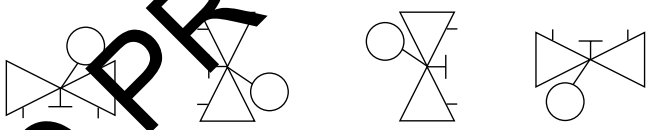
Installation of actuator:
Approx. 5.5" / 140mm of free space is required above the actuator.



Enclosure class:
Automatic operation: IP 54
(Manual operation TA-MC55: IP 30)

Note: Read carefully the installation instruction of the actuator. Intended for indoor installation applications. For outdoor installation applications please contact TA Hydronics. In cooling systems, the pipe and valve must be insulated.

1¼ – 2" / 32 – 50mm



2½ – 6" / 65 – 150mm

Actuators:
A wide range of high performance proportional actuators are available from TA Hydronics (e.g. 24V, 115V, fail safe) to provide accurate modulating or 3-point control, when used together with combined control and balancing valves. See “Selection tables”.

For more details on actuators, see related technical leaflet “TA-MC Actuators” or contact Victaulic.

Selection tables:
Valves and actuators are supplied together ensuring optimum control and simplified selection.

The codes in the selection tables are for different valve sizes and type of actuator. All fail safe and non-fail safe sets are able to close off (or fail safe open) against 0–maximum.

ΔpV (50-58 psi / 350-400 kPa).

For more details on actuators, see related technical leaflet “TA-MC Actuators” or contact Victaulic.

Victaulic Actuator Code:		M	N	P	Q/U	R/V
		TA-MC55/24	TA-MC55/115	TA-MC55/24	TA-MC100/24 [3] TA-MC160/24	TA-MC100/115 [3] TA-MC160/115
	Input signal: [1]	3-point or on/off	3-point	0(2)-10 VDC / 0(4)-20 mA	0(2)-10 VDC / 0(4)-20 mA and 3-point	0(2)-10 VDC / 0(4)-20 mA and 3-point
	Output signal: [1]	0-10 VDC	0-10 VDC	0-10 VDC	0-10 VDC [3] (0(4)-20 mA) [2]	0-10 VDC [3] (0(4)-20 mA) [2]
	Supply voltage:	24 V	115 V	24 V	24 V	115 V
	Fail safe:	No	No	No	No	No
inches mm	psi PN					
1¼ 32	230 16	V0127FC00M	V0127FC00N	V0127FC00P	V0127FC00Q	V0127FC00R
1½ 40	230 16	V0147FC00M	V0147FC00N	V0147FC00P	V0147FC00Q	V0147FC00R
2 50	230 16	V0207FC00M	V0207FC00N	V0207FC00P	V0207FC00Q	V0207FC00R
2½ 65	365 25	V0247FC00M	V0247FC00N	V0247FC00P	V0247FC00Q	V0247FC00R
3 80	365 25	V0307FC00M	V0307FC00N	V0307FC00P	V0307FC00Q	V0307FC00R
4 100	365 25	–	–	–	V0407FC00Q	V0407FC00R
5 125	365 25	–	–	–	V0507FC00Q	V0507FC00R
6 150	365 25	–	–	–	V0607FC00U	V0607FC00V

Important: All values may be subject to change.

1 Invertable input and output signal.

2 Output signal: 0(4)-20 mA on request (accessory), please contact Victaulic.

3 TA-MC160 required for sets with 6" /150mm only.

1¼ – 2" / 32 – 50mm: Female threaded

2½ – 6" / 65 – 150mm: Flanged

With fail safe actuators

Victaulic Actuator Code:		S*	T*
		TA-MC100 FSE/24	**TA-MC100 FSR/24**
	Input signal:	0(2)-10 VDC / 0(4)-20 mA and 3-point	0(2)-10 VDC / 0(4)-20 mA and 3-point
	Output signal:	0(2)-10 VDC 0(4)-20 mA	0(2)-10 VDC 0(4)-20 mA
	Supply voltage:	24 V	24 V
	Fail safe:	Extending (closing)	Retracting (opening)
inches mm	psi PN		
1¼ 32	230 16	V0127FC00S	V0127FC00T
1½ 40	230 16	V0147FC00S	V0147FC00T
2 50	230 16	V0207FC00S	V0207FC00T
2½ 65	365 25	V0247FC00S	V0247FC00T
3 80	365 25	V0307FC00S	V0307FC00T
4 100	365 25	V0407FC00S	V0407FC00T
5 125	365 25	V0507FC00S	V0507FC00T
6 150	365 25	–	–

Important: All values may be subject to change.

* "S" Actuator is a FSE Fail Close Valve (No Flow); "T" Actuator is a FSR Fail Open Valve (Full FLow)

6" / 150 mm with fail safe actuator, please contact Victaulic.

1¼ – 2" / 32 – 50mm: Female threaded

2½ – 6" / 65 – 150mm: Flanged

Selection tables – individual components

The valve and actuator sets detailed previously ensure optimum control and simplified selection and are therefore the recommended option. Under certain circumstances however, for example when delivery to site is required on different dates, the individual set components may be ordered using the following table:

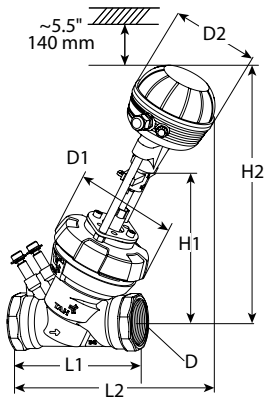
TA Series 7FC - Valve Only

Size inches mm	Victaulic Part Code
1¼ 32	V0127FC000
1½ 40	V0147FC000
2 50	V0207FC000
2½ 65	V0247FC000
3 80	V0307FC000
4 100	V0407FC000
5 125	V0507FC000
6 150	V0607FC000

TA Series 7FC - Actuator Only

Size inches	Actuator	TA Actuator Nomenclature	Supply Voltage	Input Signal Options	Victaulic Part Code
1¼ - 2 32 - 50	M	TA-MC55/24	24V AC/DC	3-point or on/off	P0127FC00M
2½ - 3 65 - 80				3-point or on/off with Adapter	P0247FC00M
1¼ - 2 32 - 50	N	TA-MC55/115	115V AC	3 point or on/off	P0127FC00N
2½ - 3 65 - 80				3 point or on/off with Adapter	P0247FC00N
1¼ - 2 32 - 50	P	TA-MC55/Y	24V AC/DC	0-10V; 4-20mA	P0127FC00P
2½ - 3 65 - 80				0-10V; 4-20mA with Adapter	P0247FC00P
1¼ - 2 32 - 50	Q	TA-MC100/24	24V AC/DC	0-10V; 4-20mA; 3 point or on/off	P0127FC00Q
2½ - 3 65 - 80				0-10V; 4-20mA; 3 point or on/off with Adapter	P0247FC00Q
1¼ - 2 32 - 50	R	TA-MC100/115	115V AC	0-10V; 4-20mA; 3 point or on/off	P0127FC00R
2½ - 5 65 - 125				0-10V; 4-20mA; 3 point or on/off with Adapter	P0247FC00R
1¼ - 2 32 - 50	S	TA-MC100FSE/24	24V AC/DC	0-10V; 4-20mA; 3 point or on/off	P0127FC00S
2½ - 5 65 - 125				0-10V; 4-20mA; 3 point or on/off with Adapter	P0247FC00S
1¼ - 2 32 - 50	T	TA-MC100FSR/24	24V AC/DC	0-10V; 4-20mA; 3 point or on/off	P0127FC00T
2½ - 5 65 - 125				0-10V; 4-20mA; 3 point or on/off with Adapter	P0247FC00T
6 150	U	TA-MC160/24	24V AC/DC	0-10V; 4-20mA; 3 point or on/off with Adapter	P0607FC00U
6 150	V	TA-MC160/115	115V AC	0-10V; 4-20mA; 3 point or on/off with Adapter	P0607FC00V

Articles



1¼ – 2" / 35 – 50mm Female threads

(TA-MC55/24) (M)

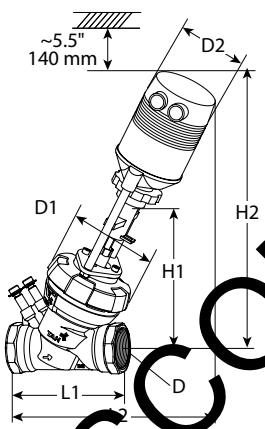
inches mm	D	D1	D2	L1	L2	H1*	H2	lbs. kg	Victaulic Part Code
PN 16 / 230psi									
1¼ 32	NPT 1¼	5.0 128	4.3 109	8.4 213	10.7 273	7.3 186	12.8	10.8 4.9	V0127FC00M
1½ 40	NPT 1½	5.0 128	4.3 109	8.6 218	10.7 273	7.3 186	12.8	11.0 5.0	V0147FC00M
2 50	NPT 2	5.0 128	4.3 109	9.0 229	11.1 281	7.5 190	12.9	12.1 5.5	V0207FC00M

(TA-MC55/115) (N)

inches mm	D	D1	D2	L1	L2	H1*	H2	lbs. kg	Victaulic Part Code
PN 16 / 230psi									
1¼ 32	NPT 1¼	5.0 128	4.3 109	8.4 213	10.7 273	7.3 186	12.8	10.8 4.9	V0127FC00N
1½ 40	NPT 1½	5.0 128	4.3 109	8.6 218	10.7 273	7.3 186	12.8	11.0 5.0	V0147FC00N
2 50	NPT 2	5.0 128	4.3 109	9.0 229	11.1 281	7.5 190	12.9	12.1 5.5	V0207FC00N

(TA-MC55/Y) (P)

inches mm	D	D1	D2	L1	L2	H1*	H2	lbs. kg	Victaulic Part Code
PN 16 / 230psi									
1¼ 32	NPT 1¼	5.0 128	4.3 109	8.4 213	10.7 273	7.3 186	12.8 326	10.8 4.9	V0127FC00P
1½ 40	NPT 1½	5.0 128	4.3 109	8.6 218	10.7 273	7.3 186	12.8 3.26	11.0 5.0	V0147FC00P
2 50	NPT 2	5.0 128	4.3 109	9.0 229	11.1 281	7.5 190	13.0 330	12.1 5.5	V0207FC00P



(TA-MC100FSR/24) [5] (S)

inches mm	D	D1	D2	L1	L2	H1*	H2	lbs. kg	Victaulic Part Code
PN 16 / 230psi									
1¼ 32	NPT 1¼	5.0 128	4.1 103	8.4 213	12.6 320	7.3 186	15.7 398	13.0 5.9	V0127FC00S
1½ 40	NPT 1½	5.0 128	4.1 103	8.6 218	12.6 321	7.3 186	15.7 398	13.2 6.0	V0147FC00S
2 50	NPT 2	5.0 128	4.1 103	9.0 229	12.8 325	7.5 190	15.8 402	14.3 6.5	V0207FC00S

(TA-MC100FSR/24) [5] (T)

inches mm	D	D1	D2	L1	L2	H1*	H2	lbs. kg	Victaulic Part Code
PN 16 / 230psi									
1¼ 32	NPT 1¼	5.0 128	4.1 103	8.4 213	12.6 320	7.3 186	15.7 398	13.0 5.9	V0127FC00T
1½ 40	NPT 1½	5.0 128	4.1 103	8.6 218	12.6 321	7.3 186	15.7 398	13.2 6.0	V0147FC00T
2 50	NPT 2	5.0 128	4.1 103	9.0 229	12.8 325	7.5 190	15.8 402	14.3 6.5	V0207FC00T

* Height to the spindle top (for threaded valves).

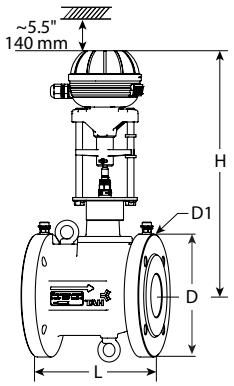
5 Actuators with additional functionalities, such as position switches, output signal 0(4)-20 mA, see related technical leaflet "TA-MC Actuators".

→ = Flow direction

Actuators in all sets are sized for actuation up to max. ΔpV.

Valve and actuator are individually packaged for easy handling on site.

Articles



2½ – 5" / 65 – 150mm With flanges

(TA-MC55Y/24) (M)

inches mm	D	L	H	lbs. kg	Victaulic Part Code
PN 25 / 365psi					
2½ 65	7.3 185	7.5 190	14.4 365	41.9 19.0	V0247FC00M
3 80	7.9 200	8.0 203	14.4 365	50.7 23.0	V0307FC00M

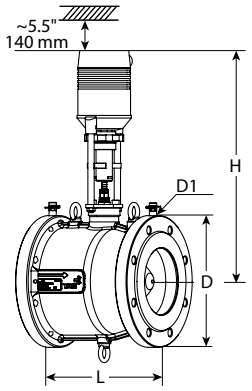
(TA-MC55/115) (N)

inches mm	D	L	H	lbs. kg	Victaulic Part Code
PN 25 / 365psi					
2½ 65	7.3 185	7.5 190	14.4 365	41.9 19.0	V0247FC00N
3 80	7.9 200	8.0 203	14.4 365	50.7 23.0	V0307FC00N

(TA-MC55/Y) (P)

inches mm	D	L	H	lbs. kg	Victaulic Part Code
PN 25 / 365psi					
2½ 65	7.3 185	7.5 190	14.4 365	41.9 19.0	V0247FC00P
3 80	7.9 200	8.0 203	14.4 365	50.7 23.0	V0307FC00P

Articles



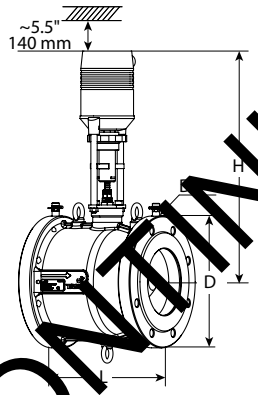
2½ – 5" / 65 – 150mm

(TA-MC100/24) (Q)

inches mm	D	L	H	lbs. kg	Victaulic Part Code
PN 25 / 365psi					
2½ 65	7.3 185	11.4 290	17.2 438	44.1 20.0	V0247FC00Q
3 80	7.9 200	12.2 310	17.2 438	52.9 24	V0307FC00Q
4 100	9.3 235	13.8 350	17.2 438	66.1 30.0	V0407FC00Q
5 125	10.6 270	15.7 400	17.2 438	88.2 40.0	V0507FC00Q

(TA-MC100/115) (R)

inches mm	D	L	H	lbs. kg	Victaulic Part Code
PN 25 / 365psi					
2½ 65	7.3 185	7.5 190	18.2 463	44.1 20.0	V0247FC00R
3 80	7.9 200	8.0 203	18.2 463	52.9 24	V0307FC00R
4 100	9.3 235	9.0 229	18.2 463	66.1 30.0	V0407FC00R
5 125	10.6 270	10.0 254	18.2 463	88.2 40.0	V0507FC00R



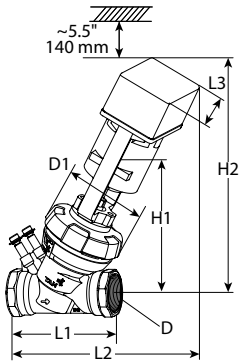
(TA-MC100/24) (U)

inches mm	D	L	H	lbs. kg	Victaulic Part Code
PN 25 / 365psi					
6 150	11.8 300	10.5 267	21.0 533	116.8 53.0	V0607FC00U

(TA-MC160/115) (V)

inches mm	D	L	H	lbs. kg	Victaulic Part Code
PN 25 / 365psi					
6 150	11.8 300	10.5 267	22.0 558	116.8 53.0	V0607FC00V

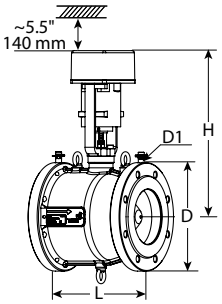
Articles – Fail-safe, extending (closing)



1¼ – 2"/32 – 50mm Female threads

(TA-MC100FSE/24) (S)

inches mm	D	D1	L1	L2	L3	H1*	H2	lbs. kg	Victaulic Part Code
PN 16 / 230psi									
1¼ 32	NPT1 1/4	5.0 128	8.4 213	12.6 319	5.6 141	7.3 186	14.0 356	13.6 6.2	V0127FC00S
1½ 40	NPT1 1/2	5.0 128	8.6 218	12.6 319	5.6 141	7.3 186	14.0 356	13.9 6.3	V0147FC00S
2 50	NPT2	5.0 128	9.0 229	12.8 324	5.6 141	7.5 190	14.2 360	15.0 6.8	V0207FC00S



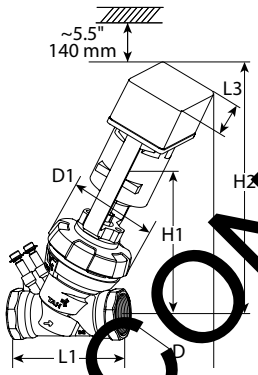
2½ – 5" / 65 – 125mm With flanges

(TA-MC100FSE/24) (S)

inches mm	D	L	H	lbs. kg	Victaulic Part Code
PN 25 / 365psi					
2½ 65	7.3 185	7.5 190	15.0 382	44.1 20	V0247FC00S
3 80	7.9 200	8.0 203	15.0 382	52.9 24	V0307FC00S
4 100	9.3 235	9.0 229	15.0 382	66.1 30	V0407FC00S
5 125	10.6 270	10.0 254	15.0 382	88.2 40	V0507FC00S

5"/150mm with fail safe actuator, please contact Victaulic.
→ = Flow direction
Actuators in all sets are sized for actuation up to max. ΔpV.
Valve and actuator are individually packaged for easy handling on site.

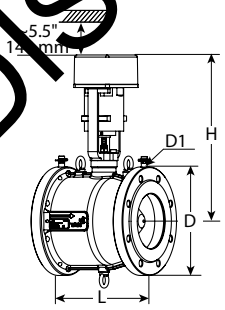
Articles – Fail-safe, retracting (opening)



1¼ – 2"/32 – 50mm Female threads

(TA-MC100FSR/24) (T)

inches mm	D	D1	L1	L2	L3	H1*	H2	lbs. kg	Victaulic Part Code
PN 16 / 230psi									
1¼ 32	NPT1 1/4	5.0 128	8.4 213	12.6 319	5.6 141	7.3 186	14.0 356	13.7 6.2	V0127FC00T
1½ 40	NPT1 1/2	5.0 128	8.6 218	12.6 319	5.6 141	7.3 186	14.0 356	13.9 6.3	V0147FC00T
2 50	NPT2	5.0 128	9.0 229	12.8 324	5.6 141	7.5 190	14.2 360	15.0 6.8	V0207FC00T



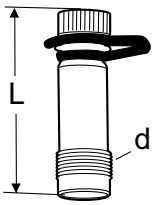
2½ – 5" / 65 – 125mm With flanges

(TA-MC100FSR/24) (T)

inches mm	D	L	H	lbs. kg	Victaulic Part Code
PN 25 / 365psi					
2½ 65	7.3 185	7.5 190	15.0 382	44.1 20	V0247FC00T
3 80	7.9 200	8.0 203	15.0 382	52.9 24	V0307FC00T
4 100	9.3 235	9.0 229	15.0 382	66.1 30	V0407FC00T
5 125	10.6 270	10.0 254	15.0 382	88.2 40	V0507FC00T

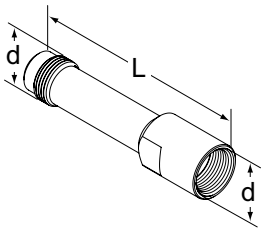
→ = Flow direction
Actuators in all sets are sized for actuation up to max. ΔpV.
Valve and actuator are individually packaged for easy handling on site.

Accessories:



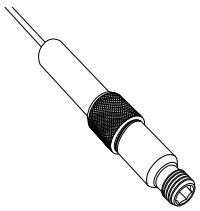
Measuring Points
For 2½ – 6" / 65 – 150mm sizes

d mm	L inches mm	Victaulic Part Code
1¼ – 2" / 32 – 50mm		
M14x1	1.7 44	K000740011
M14x1	4.1 103	K000740010
2½ – 6" / 65 – 150mm		
3/8	1.9 47	K000740013
3/8	4.3 108	K000740014



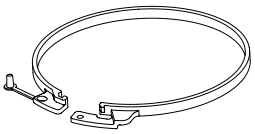
Extension for measuring point M14x1
Suitable when insulation is used for
2½ – 6" / 65 – 150mm sizes

d	L1	Victaulic Part Code
M14x1	2.8 71	K000740008



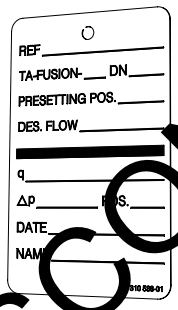
Measuring Point
2.4" / 60mm extensions can be installed without draining of the system for all dimensions

L	Victaulic Part Code
2.4 60	K000740012



Tamper proof ring
For locking offset

For DN inches mm	Victaulic Part Code
1¼-2 32-50	P0007FCRNG



Identification tag

Victaulic Part Code
P0007FCTAG

Insulation
See related insulation instruction under "Products & Solutions" on www.tahydronics.com.

Actuators accessories
See related technical leaflet "TA-MC Actuators".

Adapter
Actuator to body mounting adapter

Victaulic Part Code
P0247FCADP

Typical Specifications

COMBINATION BALANCING AND CONTROL VALVES:

TA-Series 7FC - FUS1ON C 1¼ – 6" / 32 – 150mm

Designed for simple and accurate measurement for balancing, control, trouble shooting, and power measurement in heating and cooling systems. Valve shall allow for adjustable flow settings, with valve and actuators supplied together ensuring optimum control performance. 1¼-2" / 32-50mm valves shall be suitable for working pressures to 230 psi / PN 16 and water temperature range of -4°F through +250°F / -20°C through +120°C. 2½ - 6" / 65-150mm valves shall be suitable for working pressures to 365 psi (PN 25) and water temperature range of -4°F through +250°F / -20°C through +120°C.

1. **1¼ – 2" / 32 – 50mm:** Valve shall consist of an Ametal® (dezincification resistant alloy) body and valve plug, EPDM spindle seal and O-rings, with seat seal of EPDM/stainless steel. The valve shall include stainless steel springs and spindles, with an Ametal® / PPS / PTFE valve insert.
2. **2½ – 6" / 65 – 150mm:** Valve shall consist of a ductile iron body, stainless steel valve plug, EPDM O-rings, with seat seal of EPDM/stainless steel. The valve shall include stainless steel and brass plug mechanisms, with stainless steel screws and nuts.

Installation
Reference should always be made to the current TA Hydronics installation/assembly instructions for the product you are installing.

Warranty
Refer to the Warranty section of the current Price List or contact Victaulic for details.

Note
This product shall be manufactured by Victaulic or to Victaulic specifications. Victaulic recommends all products to be installed in accordance with current TA Hydronics installation/assembly instructions. Victaulic and TA Hydronics reserve the right to change product specifications, designs and standard equipment without notice and without incurring obligations.

Trademarks
Victaulic is a registered trademark of Victaulic Company. AMETAL is a dezincification resistant brass allot and a registered trademark of TA Hydronics.

