

“Apollo” PICV balancing valve



“Apollo” PICV

dynamic balancing valves

The revolutionary “Apollo” 1600 PICV (pressure independent control valve) comes complete with integrated Fast-Flush™ bypass technology. This industry-leading innovation provides significant time and cost savings, with the use of a full flow bypass making the installation, commissioning and maintenance process simple. The “Apollo” 1600 PICV incorporates innovative features to optimize control and accuracy.

advantages of the “Apollo” PICV valves

- DZR lead-free brass body rated to 250 psi CWP
- “Apollo” Fast-Flush™ bypass mode prevents debris contamination of cartridge prior to dynamic mode
- enhanced commissioning efficiency by avoiding disassembly and cartridge removal steps
- eliminates potential of cartridge mix-up issues
- ensures cartridge setting is retained after flushing or isolation
- integral isolation mode, no need for inline ball valves
- supports water treatment and flushing protocols
- suitable for heating, cooling & potable water applications
- double-union configuration is standard and comes with both NPT & solder tailpiece connections
- NSF/ANSI/CAN 61 water quality
- NSF/ANSI/CAN 372 lead free

actuation

The “Apollo” actuation range provides application solutions, including standard on/off thermal actuation to fast acting motoric actuators.

electro thermal actuation - on/off and modulating

Natural convection (passive) terminal units (i.e. passive chilled beams and underfloor heating) are designed to be less responsive to changes in room temperature than forced convection terminal units.

electro-motoric actuation - floating and proportional

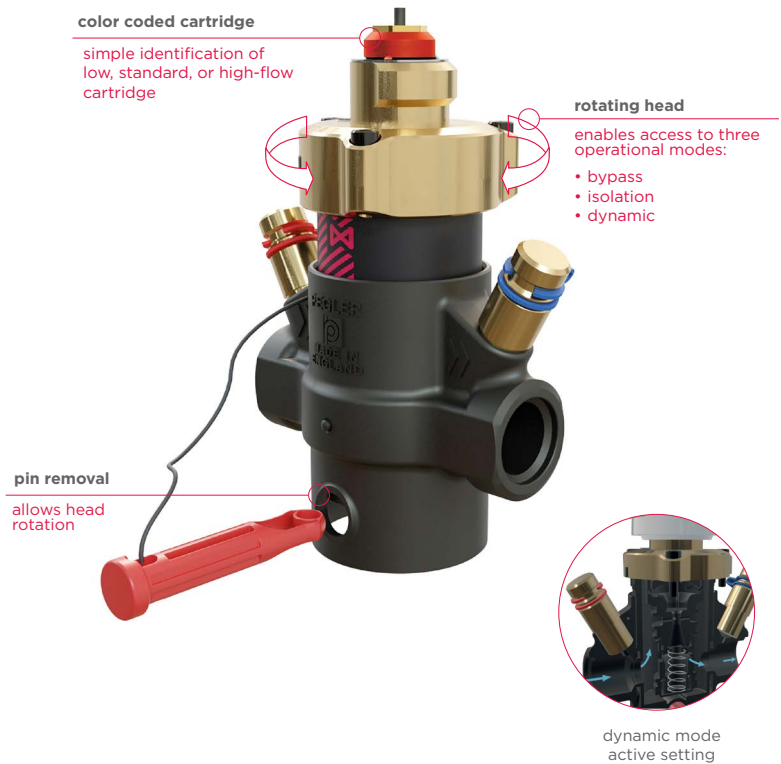
“Apollo” electro-motoric actuators can react to flow rate and heat output changes matching demand requirements rapidly, ensuring the perfect solution, suitable for convection terminal applications.



electro thermal actuator

electro motoric actuator

easier operation by design



operational modes

bypass mode



isolation mode



dynamic mode



“Apollo” PICV modes

- Fast-Flush™ bypass mode prevents debris contamination of cartridge during flushing
- isolation mode eliminates the requirement for inline ball valves
- dynamic mode engaged for valve balancing operation



"Apollo" 1600 PICV pressure independent control valve with Fast-Flush™



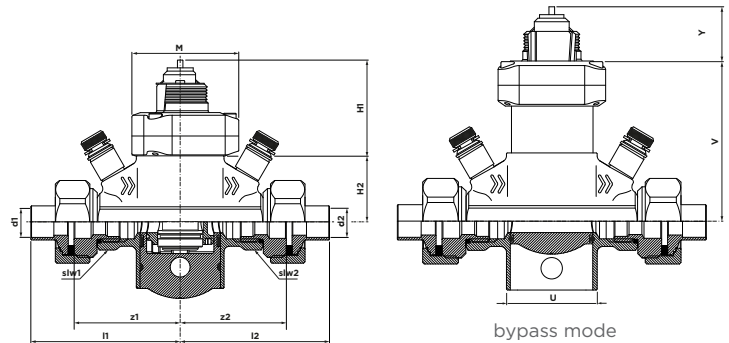
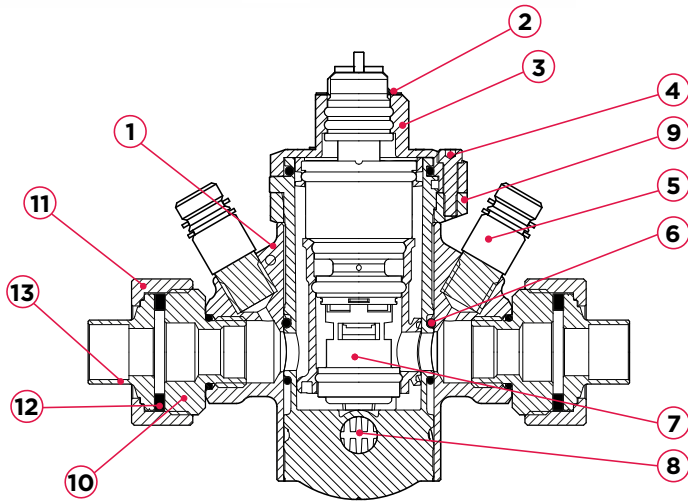
specifications

- max. operating pressure 250 psi CWP
- operating temperature +14°F to 194°F
- built-in bypass: full flow forward and backflush
- built in isolation mode

no.	component	material
1	body	DZR lead free brass (CW511L)
2	indicator	stainless steel (AISI 304)
3	cap	DZR lead free brass (CW511L)
4	socket screw	stainless steel (AISI 304)
5	test point	DZR brass (CW602N)
6	o-ring	EPDM
7	cartridge	polyphenylene sulphide (PPS)
8	locking peg	polyoxymethylene (POM)
9	clamp	DZR lead free brass (CW511L)
10	union adapter	DZR lead free brass (CW511L)
11	union nut	brass (C36000)
12	washer	nitrile
13	tailpiece	DZR lead free brass (CW511L)

maximum pressure [CWP]

operating pressure	test pressure shell
250	348

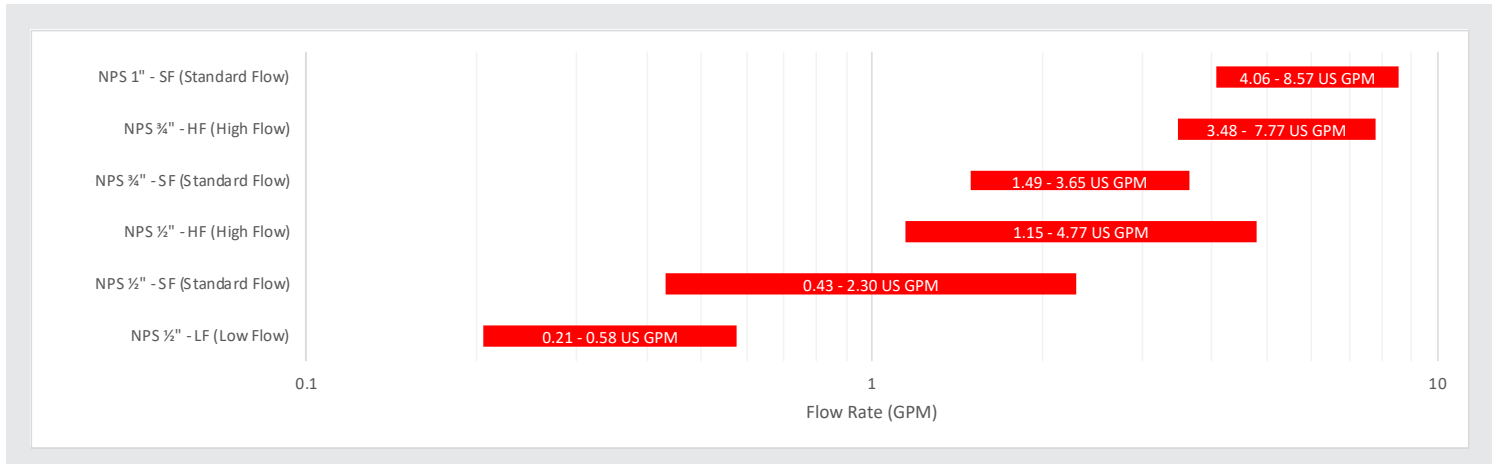


operational mode

dimensions	item no.	weight lb	I1/I2	z1/z2	U [Ø]	V	Y	M	H1	H2	slw1/sl2
NPS ½" - LF (low flow)	1603LDDB	2.81 (1.27 kg)	3.10" (48 mm)	2.30" (29 mm)	1.93" (49 mm)	3.31" (84 mm)	1.22" (31 mm)	2.56" (65 mm)	3.54" (90 mm)	1.73" (44 mm)	1.06" (27 mm)
NPS ½" - SF (standard flow)	1603SDDB	2.81 (1.27 kg)	3.10" (48 mm)	2.30" (29 mm)	1.93" (49 mm)	3.31" (84 mm)	1.22" (31 mm)	2.56" (65 mm)	3.54" (90 mm)	1.73" (44 mm)	1.06" (27 mm)
NPS ½" - HF (high flow)	1603HDDB	2.81 (1.27 kg)	3.10" (48 mm)	2.30" (29 mm)	1.93" (49 mm)	3.31" (84 mm)	1.22" (31 mm)	2.56" (65 mm)	3.54" (90 mm)	1.73" (44 mm)	1.06" (27 mm)
NPS ¾" - SF (standard flow)	1604SDDB	4.00 (1.82 kg)	3.60" (52 mm)	2.50" (33 mm)	2.36" (60 mm)	4.21" (107 mm)	1.22" (31 mm)	2.99" (76 mm)	4.13" (105 mm)	2.28" (58 mm)	1.26" (32 mm)
NPS ¾" - HF (high flow)	1604HDDB	4.00 (1.82 kg)	3.60" (52 mm)	2.50" (33 mm)	2.36" (60 mm)	4.21" (107 mm)	1.22" (31 mm)	2.99" (76 mm)	4.13" (105 mm)	2.28" (58 mm)	1.26" (32 mm)
NPS 1" - SF (standard flow)	1605SDDB	5.00 (2.27 kg)	4.10" (52 mm)	2.50" (42 mm)	2.36" (60 mm)	4.21" (107 mm)	1.22" (31 mm)	2.99" (76 mm)	4.13" (105 mm)	2.28" (58 mm)	1.57" (40 mm)

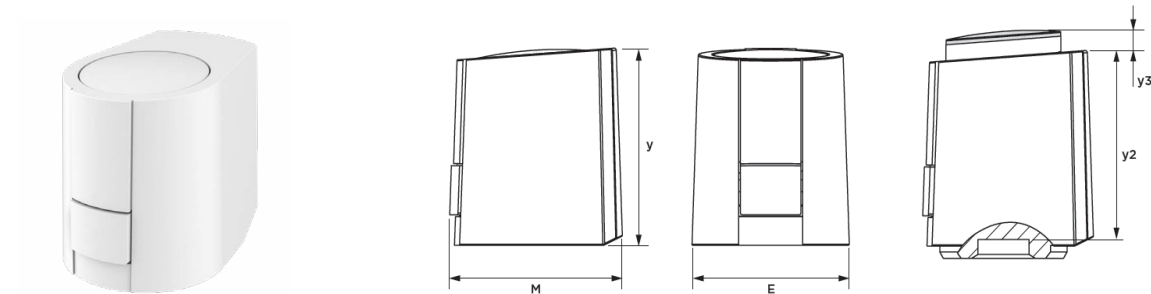
“Apollo” PICV

dimensions	item no.	US GPM		l/s	
		min.	max.	min.	max.
NPS ½" - LF (low flow)	1603LDDB	0.21	0.58	0.013	0.036
NPS ½" - SF (standard flow)	1603SDDB	0.43	2.30	0.027	0.145
NPS ½" - HF (high flow)	1603HDDDB	1.15	4.77	0.073	0.301
NPS ¾" - SF (standard flow)	1604SDDB	1.49	3.65	0.094	0.230
NPS ¾" - HF (high flow)	1604HDDDB	3.48	7.77	0.220	0.490
NPS 1" - SF (standard flow)	1605SDDB	4.06	8.57	0.256	0.541

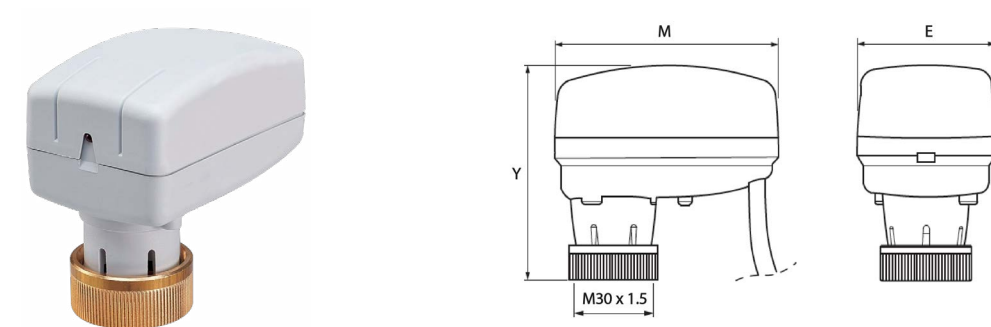


flow rate “Apollo” 1600 PICV

electro thermal actuation



electro motoric actuation



actuator type	item no.	voltage	weight (kg)	E	M	y	y ²	y ³
electro thermal, on off (normally closed - NC)	15202	24VAC/DC, 2.3V A 1W	0.31 (0.14 kg)	1.73" (44 mm)	1.89" (48 mm)	2.05" (52 mm)	1.97" (50 mm)	0.28" (7 mm)
electric thermal, proportional (normally closed - NC)	15281	24V AC (10V DC), 3.1V A	0.31 (0.14 kg)	1.73" (44 mm)	1.89" (44 mm)	2.05" (52 mm)	1.97" (50 mm)	0.28" (7 mm)
electric motoric, modulating (normally open - NO)	18275	24V AC (0-10V DC), 2.5V A	0.44 (0.20 kg)	1.93" (49 mm)	3.15" (80 mm)	2.91" (74 mm)	-	-

setting key

for adjusting the desired flow setting on the cartridge



dimension	item no.
½" - 1" NPS	16075

*see installation guidelines "Apollo" 1600 PICV

locking pin and tether

replacement part for "Apollo" 1600 PICV



dimension	item no.
½" NPS	16076
¾" - 1" NPS	16077

cap

protects actuator mounting threads and cartridge head when actuator is not installed



dimension	item no.
½" - 1" NPS	16078

*see installation guidelines "Apollo" 1600 PICV

operating tool

easily rotates the cap for selecting dynamic, isolation or Fast-Flush™ bypass modes



dimension	item no.
½" NPS	16079
¾" - 1" NPS	16080

*see installation guidelines "Apollo" 1600 PICV

cartridge

replacement cartridges for "Apollo" 1600 PICV



dimension		item no.	color
½" NPS	low flow	16070	white
½" NPS	standard flow	16071	red
½" NPS	high flow	16072	black
¾" NPS	standard flow	16073	white
¾" NPS	high flow / 1" NPS standard flow	16074	black

more information?

For a complete and up-to-date product range and our additional services, visit: www.aalberts-ips.us

Would you like to make an appointment to meet an account manager in your region or receive advice and support from one of our experts?

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