

SUBMITTAL SHEET

JOB NAME	ITEM TAG
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ENGINEER APPROVAL	DATE



LEAD-FREE TANKLESS WATER HEATER VALVE KIT

with Hot & Cold Isolation Valves

Full port, positive-shutoff ball-type design permits trouble-free servicing operations and water heater performance.

Dual O-ring stem seals are maintenance-free and designed to seal under pressure and temperature fluctuations.

Captured-union nut and adapter tank connections permit unlimited valve positioning and ease-of-installation onto all tankless water heater types.

Integral drain valves feature quarter-turn lever-handle operation and tethered caps, allowing heater air-purging and flow-rate testing as well as de-scaling and other maintenance operations.*

150 PSI pressure relief valve included in some kits.

Available in 3/4" or 1" FNPT union tank, by 3/4" or 1" FNPT, Sweat, Copper Press, Pex (F1807) or Cold-expansion Pex (F1960) system connections.

*Please see the IOM for complete installation and maintenance instructions.

Working Pressure, Non Shock (PSI)

Cold Working Pressure (CWP):	600 psi
Working Steam Pressure (WSP):	Not suitable for steam service

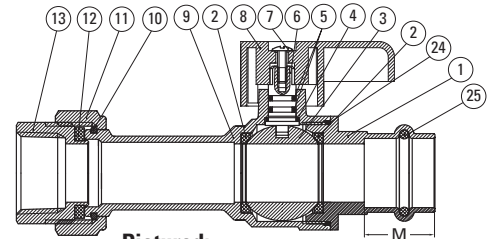
MATERIAL SPECIFICATION

PART	MATERIAL	SPECIFICATION
1 End adapter	Lead-free forged brass	UNS Alloy C46500
2 Seats (2)	PTFE	Commercial grade
3 Ball	Stainless steel	AISI Grade 304
4 Stem anti-friction thrust washer	PTFE	Commercial grade
5 Stem O-rings (2)	EPDM rubber	Commercial grade
6 Stem	Forged brass	UNS Alloy C37700
7 Handle screw	Plated steel	ASME SA 6
8 Handle	Aluminum alloy	Commercial grade
9 Body	Lead-free forged brass	UNS Alloy C46500
10 Union nut capture ring	Stainless steel	AISI Grade 304
11 Union nut	Forged brass	UNS Alloy C37700
12 Union gasket	EPDM rubber	Commercial grade
13 Female adapter	Lead-free forged brass	UNS Alloy C46500
14 Drain valve seats (2)	PTFE	Commercial grade
15 Drain valve ball	Stainless steel	AISI Grade 304
16 Drain valve handle	Aluminum alloy	Commercial grade
17 Drain valve stem	Forged brass	UNS Alloy C37700
18 Drain valve handle screw	Plated steel	ASME SA 6
19 Drain valve stem O-rings (2)	EPDM rubber	Commercial grade
20 Drain valve seat/ball retainer	Lead-free forged brass	UNS Alloy C46500
21 Drain valve cap (GHT)	Forged brass	UNS Alloy C37700
22 Drain valve cap gasket	EPDM rubber	Commercial grade
23 Drain valve cap tether	Flexible PVC	Commercial grade
24 End adapter O-ring**	Cu Press: NBR rubber Sweat: FKM rubber	Commercial grade
25 Press socket O-ring***	EPDM rubber	Commercial grade

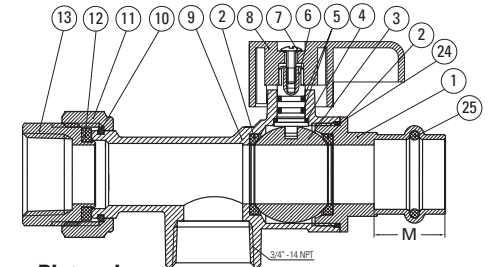
**Present only in the Cu Press and Sweat configurations.

***Present only in the Cu Press configuration.

**Pictured:
No Lead TWHV
F1960 PEX**



**Pictured:
No-lead TWHV - Cu Press / Cold
Cut-away view**



**Pictured:
No-lead TWHV - Cu Press / Hot
Cut-away view**

Certifications/Listings:

Third-party certified:
NSF/ANSI 61: Drinking water system components - Health effects.
NSF/ANSI 372: Drinking water system components - Lead content.
NSF/ANSI 14: Plastic piping system components and related materials.
ASTM F1807: Metal insert fittings utilizing a copper crimp ring or stainless steel clamps.
ASTM F1960: Cold expansion fittings with PEX reinforcing rings.
Uniform Plumbing Code.
National Plumbing Code of Canada.

Note: The pressure relief valve enclosed in some of the kits are ASME listed and ANSI Z21.22 / CSA 4.4 compliant:

ASME rated to 150 psi and 500,000 btu/hr.

CSA rated to 200,000 btu/hr.

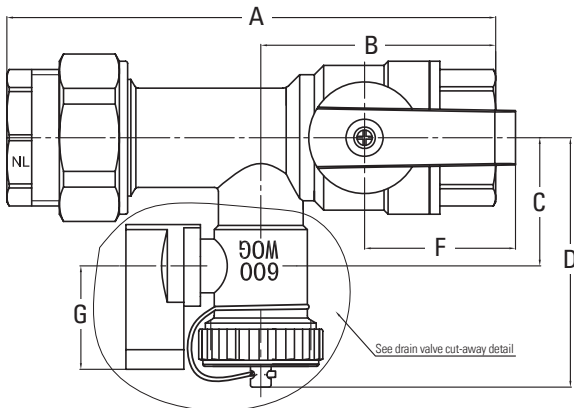
Standards:

ANSI / ASME B1.20.1: Pipe threads, general purpose, Inch.
ANSI / ASME B1.20.7: Hose coupling screw threads, Inch.
ANSI / ASME B16.18: Cast pressure alloy solder-joint pressure fitting.
ANSI / ASME B16.51: Copper and copper alloy press-connect pressure fittings.

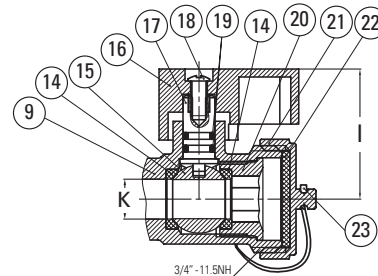
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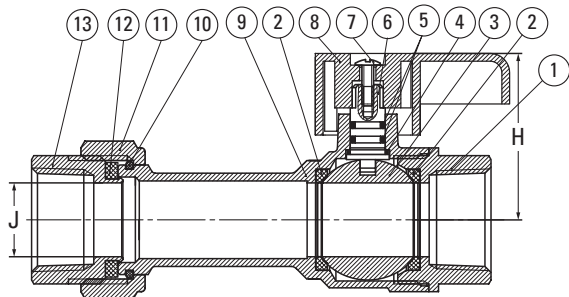
NOMINAL SIZE	A	B	C	D	E		G	H	I	J	K	L		M	
					(Hot Valve Only)	(Hot Valve Only)						(Hot Valve Only)	(Cu Press Only)		
3/4" FNPT Union x FNPT	4.65	2.24	1.22	2.36	1.18	1.44	0.98	1.69	1.28	0.75	0.39	0.75			
1" FNPT Union x FNPT	5.43	2.78	1.42	2.56	1.24	2.17	0.98	2.04	1.28	0.98	0.39	0.75			
3/4" FNPT Union x Sweat	4.82	2.41	1.22	2.36	1.18	1.44	0.98	1.69	1.28	0.75	0.39	0.75			
1" FNPT Union x Sweat	5.62	2.96	1.42	2.56	1.24	2.17	0.98	2.04	1.28	0.98	0.39	0.75			
3/4" FNPT Union x Cu Press	5.35	2.94	1.22	2.36	1.18	1.44	0.98	1.69	1.28	0.75	0.39	0.75	0.708		
1" FNPT Union x Cu Press	5.98	3.33	1.42	2.56	1.24	2.17	0.98	2.04	1.28	0.98	0.39	0.75	0.905		
3/4" FNPT Union x F1807 PEX	4.96	2.55	1.22	2.36	1.18	1.44	0.98	1.69	1.28	0.75	0.39	0.75			
1" FNPT Union x F1807 PEX	5.77	3.11	1.42	2.56	1.24	2.17	0.98	2.04	1.28	0.98	0.39	0.75			
3/4" FNPT Union x F1960 PEX	5.28	2.87	1.22	2.36	1.18	1.44	0.98	1.69	1.28	0.75	0.39	0.75			
1" FNPT Union x F1960 PEX	6.14	3.48	1.42	2.56	1.24	2.17	0.98	2.04	1.28	0.98	0.39	0.75			



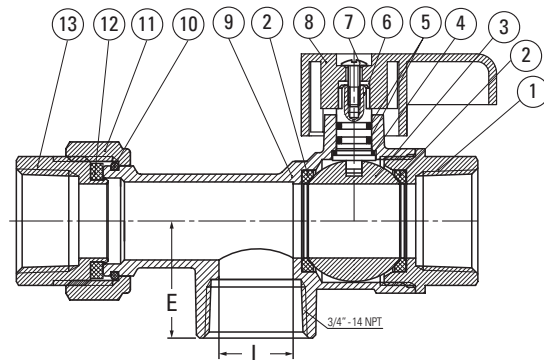
Pictured:
No-lead TWHV - FNPT / Cold
Dimensional Reference



Pictured:
No-lead TWHV - Drain Valve
Detail - All Configurations
Cut-away view



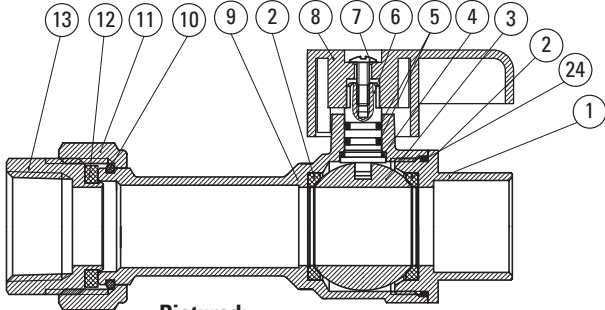
Pictured:
No-lead TWHV - FNPT / Cold
Cut-away view



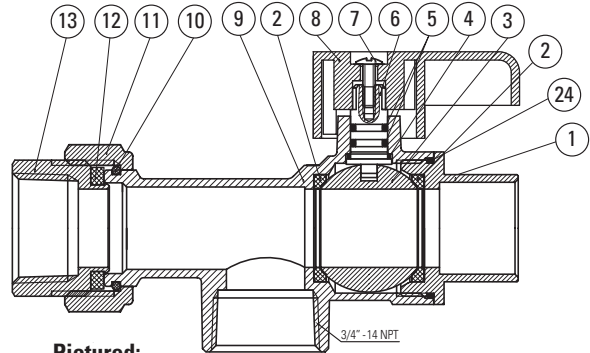
Pictured:
No-lead TWHV - FNPT / Hot
Cut-away view

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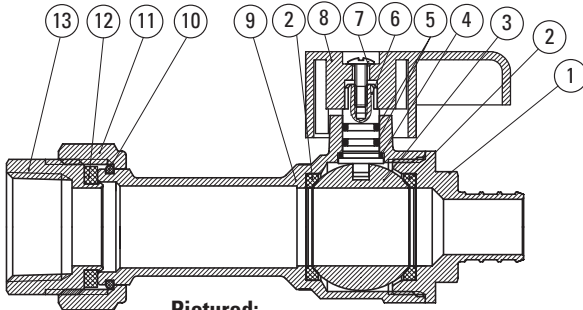
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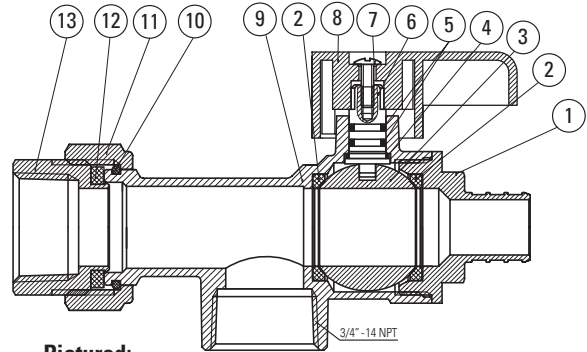
Pictured:
No-lead TWHV - Sweat / Cold
Cut-away view



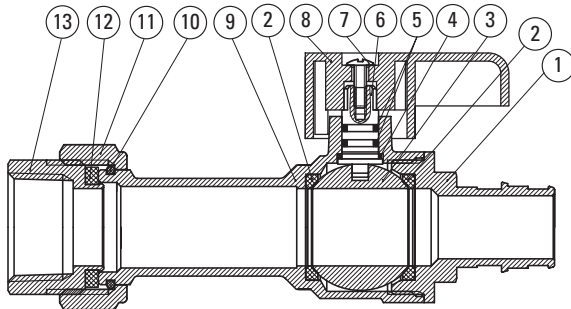
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Cut-away view



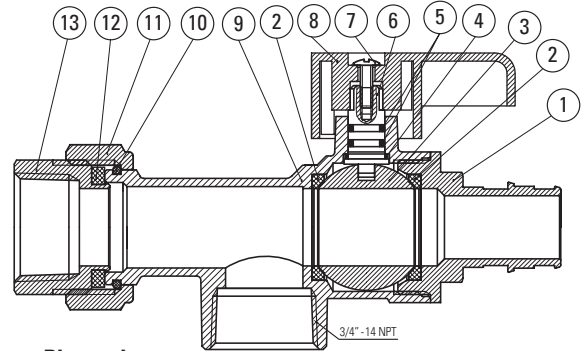
Pictured:
No-lead TWHV - F1807 PEX / Cold
Cut-away view



Pictured:
No-lead TWHV - F1807 PEX / Hot
Cut-away view



Pictured:
No-lead TWHV - F1960 PEX / Cold
Cut-away view



Pictured:
No-lead TWHV - F1960 PEX / Hot
Cut-away view