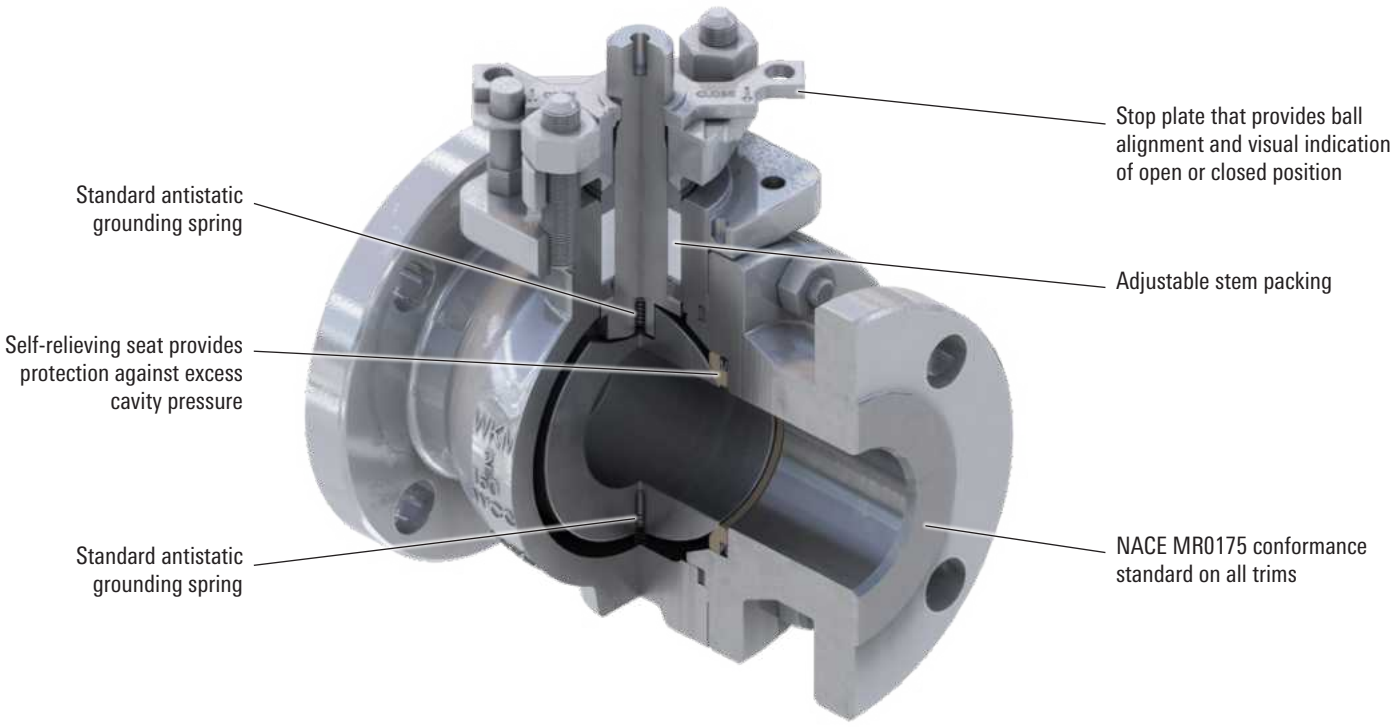
CAMERON
A Schlumberger Company

Flanged floating ball valves

The handle can be correctly installed only in alignment with the ball port. The valve is open when the handle is aligned with piping and is closed when the handle is perpendicular to piping.

ASME Class 150 through 600

1-in full port through 8-in reduced port
NACE MR0175/ISO 15156



WKM 320F* flanged floating ball valves satisfy a wide range of applications. Available in a variety of standard and optional materials, the valves are engineered for heavy-duty, maintenance-free performance and serve a variety of applications in virtually any industry.

Chemical and petrochemical plants
There is a wide range of chemical and petrochemical applications for WKM 320F ball valves. They serve in plastic plants, handling such slurries as 40% vinyl chloride in high-pressure catalyst lines, and in processes, handling dry lading such as polyethylene and polystyrene powders.

Refining
The WKM 320F ball valve is ideal for the refining industry. The many seats, seals, and trims available offer the versatility to handle the wide variety of products used in the refining process.

Low-temperature service
Standard trims accommodate temperatures to –20 degF [–29 degC], and temperature trims are available to –50 degF [–46 degC].

Maintenance-free performance
Under most conditions, the WKM 320F ball valve will provide years of trouble-free service with no maintenance required. In some severe applications, such as handling extremely abrasive slurries at high temperature, it may be necessary to replace the seats occasionally. Seat and seal kits are available, and replacement can be done easily with ordinary tools.

Sour oil and gas service
WKM* valves have served for years in gathering lines, manifolds, and field processing units in sour oil and gas fields. All trim combinations conform with NACE MR0175/ISO 15156.

Self-relieving seats
A patent-pending seat design provides for automatic cavity relief without requiring a vented ball or external relief valve. API Spec 6D monogram is available upon request.

Actuation friendly
A variety of actuator types, including pneumatic, hydraulic, diaphragm, vane, electromechanical, and electrohydraulic, can be easily installed.

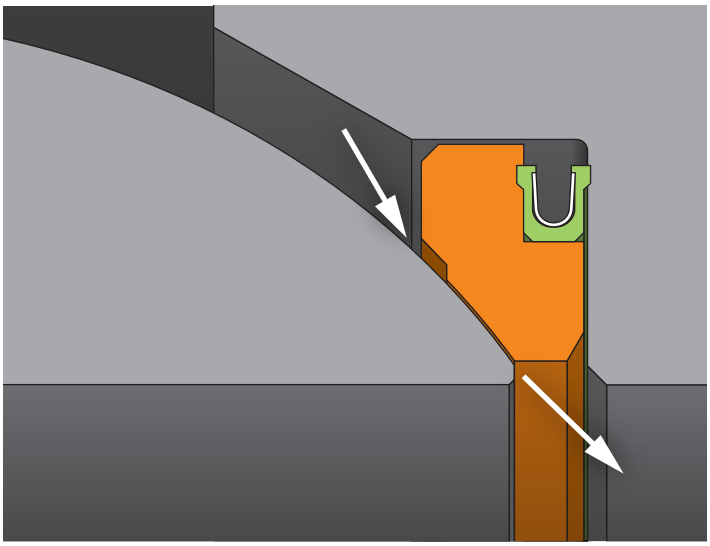
Fire tested for safety
All WKM 320F ball valves are qualified under API Standard 607 7th Ed. The seat and locked-in stem design contributes to its fire-tested characteristics. Should the soft seats be destroyed by fire, the ball floats downstream, providing a tight metal-to-metal seal against the lip of the seat pocket. If the tailpiece seals are destroyed, the metal-to-metal tailpiece-to-body connection retards external leakage.

Adjustable, replaceable packing
The inline valve stem packing options consist of PTFE and graphite. The packing is field adjustable and virtually never requires lubrication.

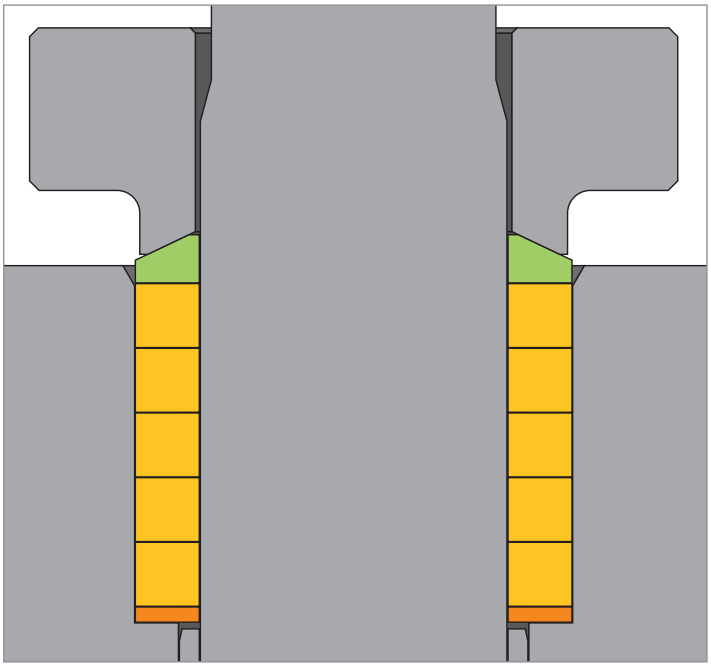
Fugitive emissions
WKM 320F ball valves can be supplied and certified to meet the requirements of fugitive emissions (FE) as regulated by ISO and API.

Positively retained stem
The stem is positively retained and cannot be removed with the valve in service.

Floating ball design that delivers tight seal
The ground, polished ball is free to float and mates perfectly with the conical seats for a positive, leak-proof seal. Self cleaning and self adjusting, the ball also is pressure activated—the higher the line pressure, the tighter the seal.



Seat that relieves excess cavity pressure to the upstream side of the valve.



Fugitive-emissions packing arrangement.

ASME Classes 150 through 600

Operating temperatures

From –50 to 400 degF [–46 to 204 degC]

Standard material

Body

- Carbon steel and stainless steel

Ball and stem

- Carbon steel and stainless steel

Industry compliance

American Society of Mechanical Engineers (ASME) Standards B16.5 and B16.34

Manufacturers Standardization Society Specifications MSS SP-25, 55, and 72

API Spec 607 7th Ed. fire-test specification

Canadian Registration Number (CRN)

API Spec 608

NACE MR0175

ANSI Standard B16.34

API Spec 6D upon request

ISO or API fugitive emissions upon request

European Pressure Equipment Directive (PED/CE) available upon request

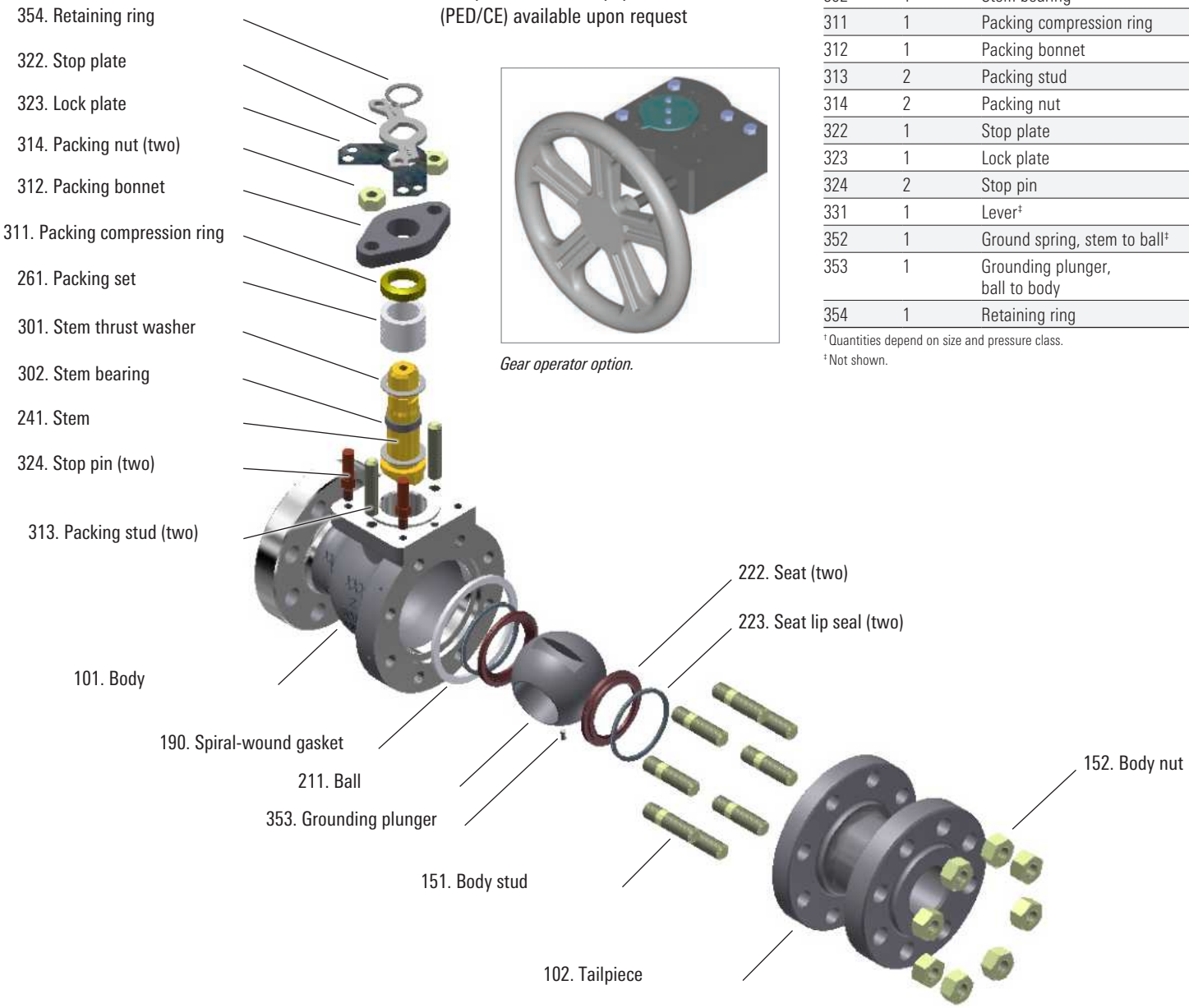
Bill of Materials

Part No.	Quantity	Description
101	1	Body
102	1	Tailpiece
151	–†	Body stud
152	–†	Body nut
190	1	Socket-weld (SW) gasket, body to tail
211	1	Ball
222	2	Seat
223	2	Seat lip seal
241	1	Stem
261	1	Packing set (PTFE or graphite)
301	2	Stem thrust washer
302	1	Stem bearing
311	1	Packing compression ring
312	1	Packing bonnet
313	2	Packing stud
314	2	Packing nut
322	1	Stop plate
323	1	Lock plate
324	2	Stop pin
331	1	Lever‡
352	1	Ground spring, stem to ball‡
353	1	Grounding plunger, ball to body
354	1	Retaining ring

† Quantities depend on size and pressure class.

‡ Not shown.

Gear operator option.



Body Group Trim Number				
Part	**Carbon Steel (NACE) 24**	**Carbon Steel for Low Temperature (NACE) 37**	**Stainless Steel (NACE) 23**	**Carbon Steel with Coating (NACE) 26**
Body	A216 Grade wrought carbon (WCC)	A352 Grade low-temperature wrought carbon (LCC)	A351 Grade CF8M	A216 Grade WCC, ZPEX® coating
Tailpiece	A216 Grade WCC	A352 Grade LCC	A351 Grade CF8M	A216 Grade WCC, ZPEX coating
Bonnet cap	Low alloy carbon steel (CS) zinc plated	Low alloy CS zinc plated	Low alloy CS zinc plated	Low alloy CS zinc plated
Studs	A320 Grade L7M zinc plated	A320 Grade L7M zinc plated	A320 Grade L7M zinc plated	A320 Grade L7M zinc plated†
Nuts	A194 Grade L7M zinc plated	A194 Grade L7M zinc plated	A194 Grade L7M zinc plated	A194 Grade L7M zinc plated†
Packing studs	A320 Grade L7M zinc plated	A320 Grade L7M zinc plated	A320 Grade L7M zinc plated	A320 Grade L7M zinc plated
Packing nuts	A194 Grade L7M zinc plated	A194 Grade L7M zinc plated	A194 Grade L7M zinc plated	A194 Grade L7M zinc plated

NACE indicates compliance with NACE MR0175/ISO 15156.

† ZPEX coating on studs and nuts available upon request.

Internal Group Trim Number				
Ball	A105 CS ENP	–†	A351 CF8M or 316 SS	A105 CS ENP
Stem	A105 CS ENP	–†	316 SS	A105 CS ENP
Ground spring	INCONEL® material	–†	INCONEL	INCONEL
Compression ring	316 stainless steel (SS)	–†	316 SS	316 SS
Thrust washer	CS or TFE	–†	SS or TFE	CS or TFE

† Low-temperature model requires 23 stainless internal group.

Seal Group Trim Code				
Part	**LTF**	**TTF**	**CGF**	**PGF**
Temperature limits	–20 to 220 degF [–29 to 104 degC]	–50 to 400 degF [–46 to 204 degC]	–50 to 400 degF [–46 to 204 degC]	–20 to 400 degF [–29 to 204 degC]
Seat	Delrin® material	Filled PTFE	High-performance PTFE	PEEK
Packing	PTFE	PTFE	Graphite	Graphite
Body seal	Spiral-wound gasket Grafoil® or SS	Spiral-wound gasket Grafoil or SS	Spiral-wound gasket Grafoil or SS	Spiral-wound gasket Grafoil or SS

Actuator Codes	
Part (Body)	**Worm Gear—For All Body Material Codes**
Mounting bracket	Carbon steel
Bolting	Carbon steel
Set screw	Carbon steel
Stem adapter	Carbon steel
Actuator	As selected
Handwheel	Carbon steel

Actuator Codes (Wrenches)	
Part (Body)	**Wrench—For All Body Material Codes**
Wrench head	Steel
Wrench handle	Carbon steel
Wrench handle pin	Carbon steel
Capscrew	Alloy steel
Stop plate	Carbon steel

Flanged (two-piece cast)

Example

2398031 1 1 2 1 1 2 3

Assembly base number
Pressure class
End connections
Seat insert material
Packing and gasket material
Trim material
Actuation

Assembly Base Number

Size, in	Port	Base Number
1	FP	2398031
1½	FP	2398032
2	RP	2398033
	FP	2398034
3	RP	2398035
	FP	2398036
4	RP	2398037
	FP	2398038
6	RP	2398039
	FP LP†	2398040
	FP SP‡	2397510
8	RP LP§	2398041
	RP SP††	2397511

†LP CL 150–600
‡SP CL 150 only
§LP CL 150 and 600 only
††SP 150 and 300 only

Pressure Class

1	Class 150—WKM
2	Class 300—WKM
3	Class 600—WKM

End Connection

1	RF flange
5	RTJ flange (Class 600 and above)

Body and Tailpiece Material

1	Carbon steel (24)
2	Stainless steel (23)
3	Low-temp carbon steel (37)
4	Carbon steel/ internal coating (26)

Seat Insert Material

1	Delrin (L)
2	Filled PTFE (T) (Class 150 and 300 only)
3	PEEK (P)
4	High-performance PTFE (C) (Class 600)

Packing and Gasket Material

1	PTFE (T)
2	Graphite (G)
3	FE packing (E)

Trim Material

1	Carbon steel/ 1-mm ENP (24)
2	Stainless steel (23)

Actuation

1	Bare stem, less gear bracket (BS)
2	Wrench (WR) to 4 in 150
3	Gear operated with lock device (WG)
4	Less gear, including WG mounting bracket (LG)
5	Wrench head (WH)
6	Wrench head with pipe (WHP)

See price sheet for wrench/wrench head options

Example

2 320F 600 RF × RF 24 L T F 24 LG

Size, in [mm]
Model
Pressure Class
End connections
Body group
Packing group
Fire-tested
Internal group
Actuation

Size, in [mm]

1 to 8 × 6 [50 to 200 × 150]

Model

320F

Pressure Class

150 to 600

End Connections

RF × RF

Body Group

23	Stainless steel NACE
24	Carbon steel NACE
37	Carbon low-temp. NACE

Seat Group

L	Delrin
T	Filled PTFE
C	High-performance PTFE
P	PEEK

Packing Group

T	PTFE
G	Graphite
E	FE packing

Fire tested

F

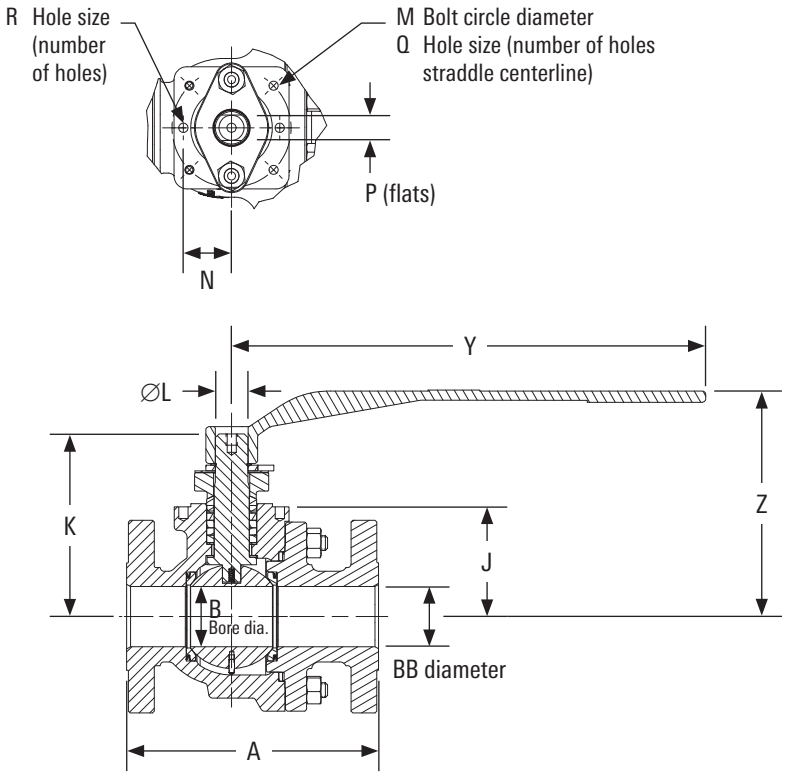
Internal Group

23	Stainless steel NACE
24	Carbon steel NACE

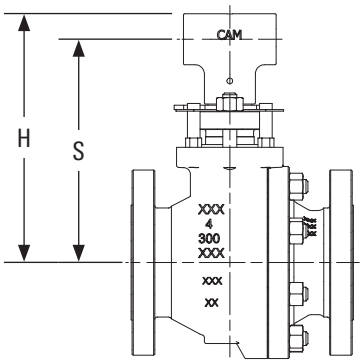
Actuation

LG	Less gear
WG	Worm gear
WH	Wrench head
BS	Bare stem
WHP	Wrench head with pipe

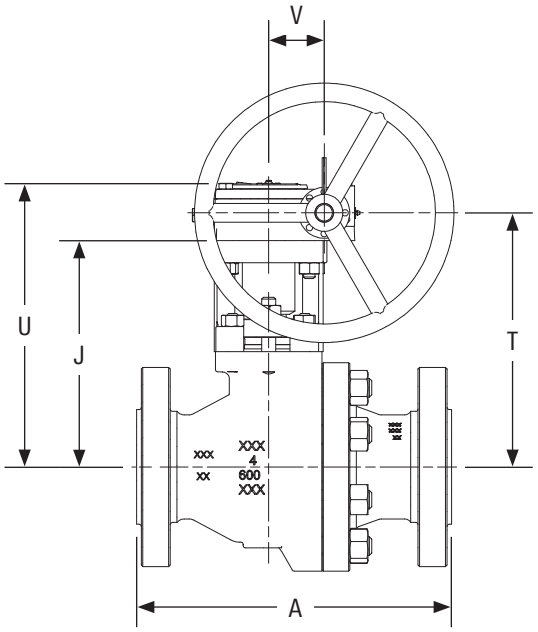
1 -in full port through 8-in reduced port.
ASME Classes 150, 300, and 600



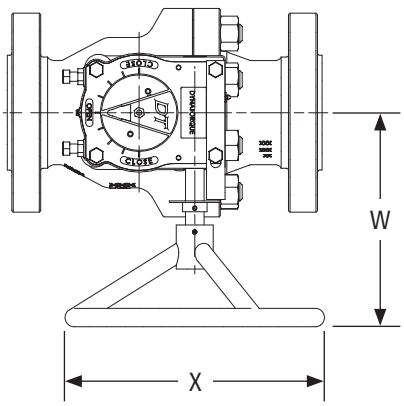
Valve with wrench (lever).



Valve with wrench hand.



Valve with gear.



WKM 320F 150 Valve Dimensions

Size, in [mm]	A		B	BB	H	J	K	L	M	N	P	Q	R	S	T	U	V	W	X	Y	Z
	RF	JF																			
1 [25]	5 [127]	–	1.01 [26]	1.01 [26]	–	1.99 [51]	3.54 [90]	0.55 [14]	2.13 [54]	0.81 [21]	0.43 [11]	0.25-20 (4) 0.38 dp	0.19-(2) 0.31 dp	–	–	–	–	–	–	8 [203]	4.65 [118]
1.5 [38]	6.50 [165]	–	1.51 [38]	1.51 [38]	–	2.76 [70]	4.50 [114]	0.71 [18]	2.76 [70]	1.21 [31]	0.55 [14]	0.25-20 (4) 0.44 dp	0.19-(2) 0.31 dp	–	–	–	–	–	–	10 [254]	5.85 [149]
2 × 1 ½ [50 × 38]	7 [178]	–	1.51 [38]	2.03 [52]	–	2.76 [70]	4.50 [114]	0.71 [18]	2.76 [70]	1.21 [31]	0.55 [14]	0.25-20 (4) 0.44 dp	0.19-(2) 0.31 dp	–	–	–	–	–	–	10 [254]	5.85 [149]
2 [50]	7 [178]	–	2.03 [52]	2.03 [52]	–	3.46 [88]	5.65 [143]	0.86 [22]	3.38 [86]	1.38 [35]	0.67 [17]	0.38-16 (4) 0.41 dp	0.25-(2) 0.38 dp	–	–	–	–	–	–	12 [305]	7.27 [185]
3 × 2 [80 × 50]	8 [203]	–	2.03 [52]	3.03 [77]	–	3.46 [88]	5.65 [143]	0.86 [22]	3.38 [86]	1.38 [35]	0.67 [17]	0.38-16 (4) 0.41 dp	0.25-(2) 0.38 dp	–	–	–	–	–	–	12 [305]	7.27 [185]
3 [80]	8 [203]	–	3.03 [77]	3.03 [77]	8.69 [221]	4.51 [115]	7 [178]	1.10 [28]	4.02 [102]	1.63 [41]	0.86 [22]	0.38-16 (4) 0.63 dp	0.31-(2) 0.38 dp	7.91 [201]	–	–	–	–	–	–	–
4 × 3 [100 × 80]	9 [229]	–	3.03 [77]	4.03 [102]	8.69 [221]	4.51 [115]	7 [178]	1.10 [28]	4.02 [102]	1.63 [41]	0.86 [22]	0.38-16 (4) 0.63 dp	0.31-(2) 0.38 dp	7.91 [201]	–	–	–	–	–	–	–
4 [100]	9 [229]	–	4.03 [102]	4.03 [102]	11.38 [289]	5.89 [150]	9.32 [237]	1.41 [36]	4.92 [125]	1.94 [49]	1.06 [27]	0.50-13 (4) 0.75 dp	0.44-(2) 0.63 dp	10.31 [217]	–	–	–	–	–	–	–
6 × 4 [150 × 100]	10.50 [267]	–	4.03 [102]	6 [152]	11.38 [289]	5.89 [150]	9.32 [237]	1.41 [36]	4.92 [125]	1.94 [49]	1.06 [27]	0.50-13 (4) 0.75 dp	0.44-(2) 0.63 dp	10.31 [217]	–	–	–	–	–	–	–
6 [150]	15.50 [394]	–	6 [152]	6 [152]	14.93 [379]	13.72 [349]	12.31 [313]	1.89 [48]	6.47 [165]	2.38 [60]	1.41 [36]	0.81-(4) thru	0.63-(2) 0.81 dp	13.56 [344]	15.17 [385]	16.97 [431]	3 [76]	13.31 [294]	20 [356]	–	–
8 × 6 [200 × 150]	18 [457]	–	6 [152]	8 [203]	14.93 [379]	13.72 [349]	12.31 [313]	1.89 [48]	6.47 [165]	2.38 [60]	1.41 [36]	0.81-(4) thru	0.63-(2) 0.81 dp	13.56 [344]	15.22 [387]	16.98 [431]	3 [76]	13.31 [294]	20 [356]	–	–

WKM 320F 300 Valve Dimensions

Size, in [mm]	A		B	BB	H	J	K	L	M	N	P	Q	R	S	T	U	V	W	X	Y	Z
	RF	JF																			
1 [25]	6.50 [165]	6.50 [165]	1.01 [26]	1.01 [26]	–	2.39 [61]	4.12 [105]	0.71 [18]	2.76 [70]	1.21 [31]	0.55 [14]	0.25-20 (4) 0.38 dp	0.19-(2) 0.31 dp	–	–	–	–	–	–	10 [254]	5.48 [139]
1.5 [38]	7.50 [191]	7.50 [191]	1.51 [38]	1.51 [38]	–	3.08 [78]	5.27 [134]	0.86 [22]	3.38 [86]	1.38 [35]	0.67 [17]	0.38-16 (4) 0.63 dp	0.25-(2) 0.38 dp	–	–	–	–	–	–	12 [305]	6.89 [175]
2 × 1 ½ [50 × 38]	11.50 [292]	11.63 [295]	1.51 [38]	2.03 [52]	–	3.08 [78]	5.27 [134]	0.86 [22]	3.38 [86]	1.38 [35]	0.67 [17]	0.38-16 (4) 0.63 dp	0.25-(2) 0.38 dp	–	–	–	–	–	–	12 [305]	6.89 [175]
2 [50]	8.50 [216]	–	2.03 [52]	2.03 [52]	–	3.70 [94]	6.16 [156]	1.10 [28]	4.02 [102]	1.63 [41]	0.86 [22]	0.38-16 (4) 0.63 dp	0.31-(2) 0.38 dp	–	–	–	–	–	–	16 [406]	7.61 [193]
3 × 2 [80 × 50]	11.12 [282]	–	2.03 [52]	3.03 [77]	–	3.70 [94]	6.19 [157]	1.10 [28]	4.02 [102]	1.63 [41]	0.86 [22]	0.38-16 (4) 0.63 dp	0.31-(2) 0.38 dp	–	–	–	–	–	–	16 [406]	7.61 [193]
3 [80]	11.13 [283]	–	3.03 [77]	3.03 [77]	10.63 [270]	5.14 [131]	8.57 [218]	1.41 [36]	4.92 [125]	1.94 [49]	1.06 [27]	0.50-13 (4) 0.75 dp	0.44-(2) 0.63 dp	9.56 [243]	–	–	–	–	–	–	–
4 × 3 [100 × 80]	12 [305]	–	3.03 [77]	4.08 [104]	10.63 [270]	5.14 [131]	8.57 [218]	1.41 [36]	4.92 [125]	1.94 [49]	1.06 [27]	0.50-13 (4) 0.75 dp	0.44-(2) 0.63 dp	9.56 [243]	–	–	–	–	–	–	–
4 [100]	12 [305]	–	4.03 [102]	4.08 [104]	13.43 [341]	6.22 [158]	10.81 [275]	1.89 [48]	6.47 [165]	2.38 [60]	1.41 [36]	0.81-(4) thru	0.63-(2) 0.81 dp	12.06 [306]	–	–	–	–	–	–	–
6 × 4 [150 × 100]	15.88 [403]	–	4.03 [102]	6 [152]	13.43 [341]	12.22 [310]	10.81 [275]	1.89 [48]	6.47 [165]	2.38 [60]	1.41 [36]	0.81-(4) thru	0.63-(2) 0.81 dp	12.06 [306]	–	–	–	–	–	–	–
6 [150]	15.88 [403]	–	6 [152]	–	–	15.43 [392]	14.09 [358]	2.63 [60]	6.47 [165]	3 [76]	–	0.81-(4) thru	0.75-(2) 1.06 dp	–	17.05 [433]	18.98 [482]	3.62 [92]	14.71 [336]	20 [356]	–	–
8 × 6 [200 × 150]	–	–	6 [152]	–	–	15.43 [392]	14.09 [358]	2.63 [60]	6.47 [165]	3 [76]	–	0.81-(4) thru	0.75-(2) 1.06 dp	–	17.05 [433]	18.98 [482]	3.62 [92]	14.71 [336]	20 [356]	–	–

WKM 320F 600 Valve Dimensions

Size, in [mm]	A		B	BB	H	J	K	L	M	N	P	Q	R	S	T	U	V	W	X	Y	Z
	RF	JF																			
1 [25]	8.50 [216]	8.50 [216]	1.01 [26]	1.01 [25.7]	–	2.39 [61]	4.12 [105]	0.71 [18]	2.76 [70]	1.21 [31]	0.55 [14]	0.25-(4) 0.38 dp	0.19-(2) 0.31 dp		–	–	–	–	–	10 [254]	5.48 [139]
1.5 [38]	9.50 [241]	9.50 [241]	1.51 [38]	1.51 [38.4]	–	3.08 [78]	5.27 [134]	0.86 [22]	3.38 [86]	1.38 [35]	0.67 [17]	0.38-(4) 0.63 dp	0.25-(2) 0.38 dp		–	–	–	–	–	12 [305]	6.89 [175]
2 × 1 ½ [50 × 38]	8.50 [216]	–	1.51 [38]	2.03 [51.6]	–	3.08 [78]	5.27 [134]	0.86 [22]	3.38 [86]	1.38 [35]	0.67 [17]	0.38-(4) 0.63 dp	0.25-(2) 0.38 dp		–	–	–	–	–	12 [305]	6.89 [175]
2 [50]	11.50 [292]	11.63 [295]	2.03 [51.6]	2.03 [51.6]	–	3.70 [94]	6.19 [157]	1.10 [28]	4.02 [102]	1.63 [41]	0.86 [22]	0.38-(4) 0.63 dp	0.31-(2) 0.38 dp		–	–	–	–	–	16 [406]	7.61 [193]
3 × 2 [80 × 50]	14 [356]	14.12 [359]	2.03 [51.6]	3.03 [77]	–	3.70 [94]	6.19 [157]	1.10 [28]	4.02 [102]	1.63 [41]	0.86 [22]	0.38-(4) 0.63 dp	0.31-(2) 0.38 dp		–	–	–	–	–	16 [406]	7.61 [193]
3 [80]	14 [283]	14.13 [359]	3.03 [77]	3.03 [77]	10.63 [270]	5.14 [131]	8.57 [217]	1.41 [36]	4.92 [125]	1.94 [49]	1.06 [27]	0.50-(4) 0.75 dp	0.45-(2) 0.63 dp	9.56 [243]	–	–	–	–	–	–	–
4 × 3 [100 × 80]	17 [432]	17.12 [435]	3.03 [77]	4.08 [104]	10.63 [270]	5.14 [131]	8.57 [217]	1.41 [36]	4.92 [125]	1.94 [49]	1.06 [27]	0.50-(4) 0.75 dp	0.45-(2) 0.63 dp	9.56 [243]	–	–	–	–	–	–	–
4 [100]	17 [432]	17.13 [435]	4.03 [102.4]	4.03 [102]	13.43 [306]	12.22 [310]	10.81 [275]	1.89 [48]	6.47 [165]	2.38 [60]	1.41 [36]	0.81-(4) thru	0.63-(2) 0.81 dp	12.06 [306]	13.72 [345]	15.47 [393]	3 [76.2]	13.31 [338]	20 [508]	–	–
6 × 4 [150 × 100]	21.99 [558]	–	4.03 [102.4]	6.00 [152]	13.43 [306]	12.22 [310]	10.81 [275]	1.89 [48]	6.469 [165]	2.38 [60]	1.41 [36]	0.81-(4) thru	0.63-(2) 0.81 dp	12.06 [306]	13.72 [348]	15.47 [393]	3 [76.2]	13.31 [338]	20 [508]	–	–
6 [150]	22 [559]	22.13 [562]	6.00 [152.4]	6.00 [152]	–	15.43 [392]	14.09 [358]	2.36 [60]	6.496 [165]	3 [76]	–	0.81-(4) thru	0.75-(2) 1.06 dp		17.05 [433]	18.98 [482]	3.63 [92.1]	16.34 [415]	30 [762]	–	–
8 × 6 [200 × 150]	26 [660]	–	8.06 [204.8]	10.06 [256]	–	16.46 [418]	15.13 [384]	2.36 [60]	6.496 [165]	3 [76]	–	0.81-(4) thru	0.75-(2) 1.06 dp		17.05 [433]	18.98 [482]	3.63 [92.1]	16.34 [415]	30 [762]	–	–

Delrin or Teflon® Seat with Teflon Stem Packing					
Valve Port Size, in	**Pressure Class**	**Gauge Pressure (P), psi**	**Break Torque at Max. P, in.lbf**	**Run Torque at Max. P, in.lbf**	**MAST†, in.lbf**
1	150	80–290	97	40	401
	300	286–750	162	64	881
	600	741–1,500	232	85	881
1½	150	80–290	263	95	881
	300	286–750	439	147	1,549
	600	741–1,500	632	196	1,549
2	150	80–290	548	191	1,549
	300	286–750	894	275	3,290
	600	741–1,500	1,289	365	3,290
3	150	80–290	1,491	440	3,290
	300	286–750	2,472	652	6,578
	600	741–1,500	3,580	864	6,578
4	150	80–290	3,079	890	6,578
	300	286–750	5,094	1,305	15,866
	600	741–1,500	7,382	1,727	15,866
6	150	80–290	8,446	2,002	15,866
	300	286–750	13,897	3,249	40,040
	600	741–1,500	20,132	4,241	40,040

† Maximum allowable stem torque (MAST).

Delrin or Teflon Seat with Graphite Stem Packing					
Valve Port Size, in	**Pressure Class**	**Gauge Pressure (P), psi**	**Break Torque at Max. P, in.lbf**	**Run Torque at Max. P, in.lbf**	**MAST, in.lbf**
1	150	80–285	162	101	401
	300	286–740	313	195	881
	600	741–1,480	396	209	881
1½	150	80–285	402	226	881
	300	286–740	754	421	1,549
	600	741–1,480	973	455	1,549
2	150	80–285	838	465	1,549
	300	286–740	1,398	712	3,290
	600	741–1,480	1,834	778	3,290
3	150	80–285	1,953	877	3,290
	300	286–740	3,473	1,521	6,578
	600	741–1,480	4,663	1,683	6,578
4	150	80–285	3,999	1,759	6,578
	300	286–740	6,874	2,850	15,866
	600	741–1,480	9,309	3,185	15,866
6	150	80–285	10,082	3,841	15,866
	300	286–740	17,242	6,153	40,040
	600	741–1,480	23,753	6,980	40,040

Valve Size, in [mm]	**Weight, lbm [kg]**		
	150	**300**	**600**
1 [25]	10.5 [4.8]	18.2 [8.3]	24 [10.9]
1.5 [38]	21.9 [9.9]	34.1 [15.5]	42.9 [19.5]
2 × 1½ [50 × 38]	26.1 [11.8]	38.9 [17.7]	48.7 [22.1]
2 [50]	35.4 [16.1]	47.3 [21.4]	60.1 [27.2]
3 × 2 [80 × 50]	46.1 [20.9]	66 [29.9]	83 [37.6]
3 [80]	65.2 [29.6]	103.1 [46.7]	124.8 [56.6]
4 × 3 [100 × 80]	75.7 [34.4]	124.8 [56.6]	171.7 [77.9]
4 [100]	116.8 [53]	170.3 [77.3]	245 [111.1]
6 × 4 [150 × 100]	139.3 [63.2]	222 [100.7]	344.3 [156.2]
6 [150]	269.5 [122.2]	367.9 [166.9]	547.5 [248.3]
8 × 6 [200 × 150]	356 [161.5]	452.6 [205.3]	661.8 [300.2]

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