





WKN 320F Flanged floating ball valves

### Contents

### WKM 320F Flanged Floating Ball Valves

Features and benefits	3
Exploded views and specifications	5
Materials list	6
Assembly codes	7
Wrench dimensions	8
Dimensional data — 1-in full port through 8-in × 6-in reduced port	10
Weights	10
Stem torques and MAST	11

### **Features and Benefits**

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.

# **Specifications**

### 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

354. Retaining ring

Carbon steel and stainless steel

### Industry compliance

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

**Bill of Materials** 

Quantity

1

1

\_†

\_†

1

1

2

2

1

1

2

1

Description

Body

Tailpiece

Body stud

Body nut

body to tail

Seat lip seal

Stem bearing

Ball

Seat

Stem

Socket-weld (SW) gasket,

Packing set (PTFE or graphite)

Stem thrust washer

Part No.

101

102

151

152

190

211

222

223

241

261

301

302

- 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



# **Materials List**

#### **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 $^{\ensuremath{\text{ B}}}$ 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 <sup>†</sup>
Nuts	A194 Grade L7M zinc plated	A194 Grade L7M zinc plated	A194 Grade L7M zinc plated	A194 Grade L7M zinc plated <sup>†</sup>
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.

<sup>+</sup> ZPEX coating on studs and nuts available upon request.

				Internal Group Trim Number											
A 105 US ENP	_t	A351 CF8M or 316 SS	A105 CS ENP												
A105 CS ENP	_t	316 SS	A105 CS ENP												
INCONEL <sup>®</sup> material	_t	INCONEL	INCONEL												
316 stainless steel (SS)	_t	316 SS	316 SS												
CS or TFE	_t	SS or TFE	CS or TFE												
	A105 CS ENP INCONEL® material 316 stainless steel (SS) CS or TFE	A105 CS ENP         -†           INCONEL® material         -†           316 stainless steel (SS)         -†           CS or TFE         -†	A105 CS ENP         -t         316 SS           INCONEL® material         -t         INCONEL           316 stainless steel (SS)         -t         316 SS           CS or TFE         -t         SS or TFE	A105 CS ENP         -t         316 SS         A105 CS ENP           INCONEL® material         -t         INCONEL         INCONEL           316 stainless steel (SS)         -t         316 SS         316 SS           CS or TFE         -t         SS or TFE         CS or TFE											

<sup>+</sup> 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 <sup>®</sup> 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 Trim Codes**

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									

# How to Order

### Flanged (two-piece cast)

			Example				
			239803	11	12112	3	
			Assembly base number Pressure clas End co	s nnections	S Packi	Actuation Trim material ing and gasket material	
Assemi	blv Base I	Number	Pressure Class	Body	Seat insert	t material	Actuation
Size, in	Port	Base Number	1 Class 150—WKM	Mate	rial	Gasket Material	1 Bare stem, less gear bracket (BS)
1 1½ 2	FP FP RP	2398031 2398032 2398033	2 Class 300—WKM 3 Class 600—WKM	2 St 3 Lo	ainless steel (23) w-temp carbon	2 Graphite (G) 3 FE packing (E)	2 Wrench (WR) to 4 in 150     3 Gear operated with lock device (WG)     4 Less gear, including WG mounting
3	FP RP FP	2398034 2398035 2398036	End Connection           I         RF flange           5         RTJ flange (Class 600 and		eel (37) arbon steel/ ternal coating (26)	Trim Material 1 Carbon steel/	bracket (LG) 5 Wrench head (WH) 6 Wrench head with pipe (WHP)
4	RP FP	2398037 2398038	above)	- Seat I	nsert Material	1-mm ENP (24) 2 Stainless steel (23)	See price sheet for wrench/wrench head options
6	RP FP LP†	2398039 2398040		2 Fil	lled PTFE (T) lass 150 and 300 only)	_	
8	FP SP <sup>‡</sup> RP LP <sup>§</sup> RP SP <sup>††</sup>	2397510 2398041 2397511		3 PE 4 Hi	EK (P) gh-performance PTFE ) (Class 600)	_	
		200/011				_	

† LP CL 150-600

<sup>‡</sup>SP CL 150 only

<sup>§</sup>LP CL 150 and 600 only

 $^{\rm tr}\,{\rm SP}$  150 and 300 only

### Trim Codes



# Dimensional Data — 1-in Full Port Through 8 in $\times$ 6 in Reduced Port

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



Valve with wrench (lever).



Valve with gear.



Valve with wrench hand.



### Dimensions

WKM 32	OF 150	Valve	e Dime	nsions	;																			
Size, in [mm]	A RF	JE	В	BB	H		J	К	L	М	Ν	Р	٥		R	S	Т	U	V	V	V	Х	Y	Z
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 0.38 dp	(4)	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 0.44 dp	(4)	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 0.44 dp	(4)	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	3.38 [86]	1.38 [35]	0.67	0.38-16 0.41 dp	(4)	0.25-(2 0.38 dc	_	-	-	-	-		_	12 [305]	7.27
3 × 2 [80 × 50]	8	-	2.03	3.03	-		3.46	5.65	0.86	3.38	1.38	0.67	0.38-16 0.41 dp	(4)	0.25-(2 0.38 dr	_	-	-	_	_		_	12	7.27
3	8 [203]	-	3.03	3.03	8.69	1	4.51	7 [178]	1.10	4.02	1.63	0.86	0.38-16 0.63 dp	(4)	0.31-(2 0.38 dr	7.91	-	-	-	-		_	-	-
4 × 3 (100 × 80)	9	-	3.03	4.03	8.69	1 i	4.51	7	1.10	4.02	1.63	0.86	0.38-16	(4)	0.31-(2	7.91	-	-	-	_		_	-	-
4	9	-	4.03	4.03	11.3	8	5.89	9.32	1.41	4.92	1.94	1.06	0.50-13	(4)	0.44-(2	10.3	-	-	-	-		-	-	-
6 × 4	10.50	-	4.03	6	11.3	8	5.89 [150]	9.32	1.41	4.92	1.94	1.06	0.75 dp 0.50-13	(4)	0.03 up 0.44-(2	10.3	-	-	-	_		_	-	-
6 (150)	15.50	-	6	6	14.9	3	13.72	12.31	1.89	6.47	2.38	1.41	0.75 up 0.81-(4)		0.63-(2	13.50	5 15.17	16.97	3	1:	3.31	20	-	-
8×6 (200150)	18	-	6	[152] 8 [202]	14.9	3	13.72	12.31	1.89	6.47	2.38	1.41	0.81-(4)		0.63-(2	13.50	[305] 3 15.22	16.98	3	1:	3.31	20	-	-
[200 × 150]	[437]	_	[102]	[203]	[3/3		[349]	[313]	[40]	[100]	[00]	[30]			U.O I UL	[344]	[307]	[431]	[70]	[2	.94]	[330]		
WKM 32	OF 300	Valve	e Dime	nsions	;	-					_													
Size,	Α		В	B	B	H	J	К		L	М	N	Р	0	I	1	S	T	U	V	W	Х	Y	Z
1	RF	JF	1.0	1 1	01		2.20	) /1	n	0.71	2.76	1.01	0.55	0.25 (	20 (	10 /2)							10	E 40
[25]	[165]	[165	5] [26	i] [2	26]	_	[61]	[10	z 5]	[18]	[70]	[31]	[14]	(4) 0.3	20 ( 38 dp (	).19-(2) ).31 dp	_	_	_	_	_	_	[254]	[139]
1.5 [38]	7.50 [191]	7.50 [191	) 1.5 1] [38	1 1.  ] [3	.51 88]	-	3.08 [78]	3 5.2 [13	7 4]	0.86 [22]	3.38 [86]	1.38 [35]	0.67 [17]	0.38-7 (4) 0.6	16 ( 63 dp (	).25-(2) ).38 dp	-	-	-	-	-	-	12 [305]	6.89 [175]
2 × 1 ½ [50 × 38]	11.50 [292]	11.6 [295	63 1.5 6] [38	1 2 ] [5	.03 52]	-	3.08 [78]	3 5.2 [13	7 4]	0.86 [22]	3.38 [86]	1.38 [35]	0.67 [17]	0.38-7 (4) 0.6	16 ( 63 dp (	).25-(2) ).38 dp	-	-	-	-	-	-	12 [305]	6.89 [175]
2 [50]	8.50 [216]	-	2.0 [52	13 2 [] [5	.03 52]	-	3.70 [94]	) 6.1 [15	6 6]	1.10 [28]	4.02 [102]	1.63 [41]	0.86 [22]	0.38-1 0.63 d	16(4)( dp (	).31-(2) ).38 dp	-	_	-	-	-	-	16 [406]	7.61 [193]
3 × 2 [80 × 50]	11.12	-	2.0 [52	3 3 ] [7	.03 77]	-	3.70 [94]	) 6.1 [15	9 7]	1.10 [28]	4.02 [102]	1.63 [41]	0.86	0.38-7	16 ( 63 dp (	).31-(2) ).38 dp	-	_	_	-	-	-	16 [406]	7.61 [193]
3 [80]	11.13	-	3.0 [77	33	.03 77]	10.63 [270]	5.14	4 8.5  ] [21	7 81	1.41 [36]	4.92 [125]	1.94 [49]	1.06	0.50-1	13 ( 75 dp (	).44-(2) ).63 dp	9.56 [243]	-	-	-	-	-	-	-
4 × 3 [100 × 80]	12	-	3.0	13 4 11 [1	.08	10.63	5.14	4 8.5	7 81	1.41	4.92	1.94	1.06	0.50-	13 ( 75 dp (	).44-(2) ).63 dp	9.56	-	-	-	-	-	-	-
4	12	-	4.0	I3 4 I21 [1	.08	13.43	6.22	<u>10.</u> 10. 10.	81 51	1.89	6.47	2.38	1.41	0.81-(	4) (	).63-(2)	12.06	-	-	-	-	-	-	-
$6 \times 4$	15.88	_	4.0	13 6 121	[152]	13.43	12.2	22 10.	81 51	1.89	6.47	2.38	1.41	0.81-(	(4) (	).63-(2)	12.06	-	-	-	-	-	-	-
6 [150]	15.88	-	6	-		-	15.4	13 14.	09 09	2.63	6.47	3	-	0.81-(	4) (	0.75-(2)	-	17.05	18.98	3.62	14.71	20	-	-
8 × 6 [200 × 150]	-	-	6 [15			-	15.4 [392	13 14. 2] [35	09 8]	2.63 [60]	6.47 [165]	3 [76]	-	0.81-( thru	4) (	.75-(2) .06 dp	-	17.05 [433]	18.98 [482]	3.62 [92]	14.71 [336]	20 [356]	-	-

WKM 320	WKM 320F 600 Valve Dimensions																				
Size,	Α		В	BB	Н	J	К	L	Μ	N	Р	0	R	S	Т	U	V	W	Х	Y	Z
in [mm]	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]	-	-

# **Torque Estimation and MAST**

Delrin or To	eflon® Seat	with Teflon Ste	em Packing	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	Valve Port Size, in	Pressure Class	Gauge Pressure (P), psi	Break Torque at Max. P, in.lbf		
1	150	80-290	97	40	401	1	150	80-285	162		
	300	286-750	162	64	881		300	286-740	313		
	600	741-1,500	232	85	881		600	741-1,480	396		
11/2	150	80-290	263	95	881	11/2	150	80-285	402		
	300	286-750	439	147	1,549		300	286-740	754		
	600	741-1,500	632	196	1,549		600	741-1,480	973		
2	150	80-290	548	191	1,549	2	150	80-285	838		
	300	286-750	894	275	3,290		300	286-740	1,398		
	600	741-1,500	1,289	365	3,290		600	741-1,480	1,834		
3	150	80-290	1,491	440	3,290	3	150	80-285	1,953		
	300	286-750	2,472	652	6,578		300	286-740	3,473		
	600	741-1,500	3,580	864	6,578		600	741-1,480	4,663		
4	150	80-290	3,079	890	6,578	4	150	80-285	3,999		
	300	286-750	5,094	1,305	15,866		300	286-740	6,874		
	600	741-1,500	7,382	1,727	15,866		600	741-1,480	9,309		
6	150	80-290	8,446	2,002	15,866	6	150	80-285	10,082		
	300	286-750	13,897	3,249	40,040		300	286-740	17,242		
	600	741-1,500	20,132	4,241	40,040		600	741-1,480	23,753		

<sup>†</sup>Maximum allowable stem torque (MAST).

### Weights

Valve Size, in [mm]	Weight, Ibm [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]							

MAST,

in.lbf

401

881

881

881

1,549

1,549

1,549

3,290

3,290

3,290

6,578

6,578

6,578

15,866

15,866

15,866

40,040

40,040

Run Torque at Max. P,

**in.lbf** 101

195

209

226

421

455

465

712

778

877

1,521

1,683

1,759

2,850

3,185

3,841

6,153

6,980





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