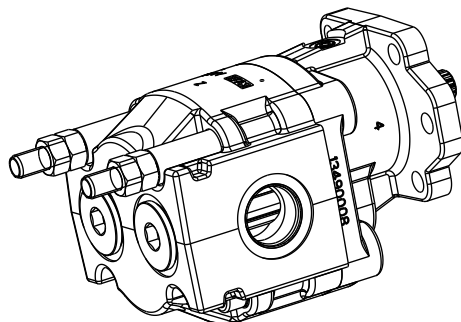
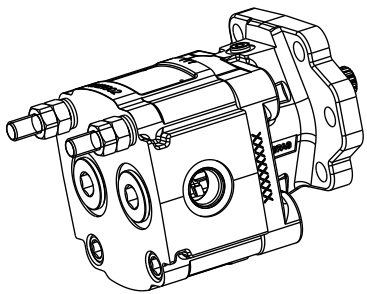


TRUCK PUMPS



HYDRAULIC GEAR
PUMPS

KAPPA[®]
Compact

FEATURES

KAPPA 30 and KAPPA 35 hydraulic gear pumps with high strength body for truck applications. SAE B mounting flange allows the pumps to be mounted directly on the truck PTO's.

DISPLACEMENTS

From 1.34 in³/rev (21,99 cm³/rev)

To 6.10 in³/rev (100,08 cm³/rev)

- Reversible rotation with external and internal drain
- Multiple port positions
- Long service life in heavy duty conditions
- Optimized weight
- Ideal for truck applications

Construction	External gear type pumps
Direction of rotation (looking at the drive shaft)	Reversible internal and external drain (G0)
Drive shaft	SAE "B" Spline 7/8" - 13 Teeth
Mounting flange	SAE "B" 2-4 Holes
Inlet pressure range for pumps	10 - 22 psi - [0,7 - 1,5 bar (abs.)]
Seal type	Buna N-NBR
Fluid temperature range	-13 - 176 °F (-25 - 80 °C) continuous 212 °F (100 °C) peak
Viscosity range	From 60 to 456 SSU [12 to 100 mm ² /s (cSt)] recommended Up to 3410 SSU [750 mm ² /s (cSt)] permitted
Recommended filtration	See table (1)

FILTRATION

Tab. 1

Working pressure psi (bar)	$\Delta p < 2030$ $\Delta p < (140)$	$2030 < \Delta p < 3045$ $(140) < \Delta p < (210)$	$\Delta p > 3045$ $\Delta p > (210)$
Contamination class NAS 1638	10	9	8
Contamination class ISO 4406:1999	21/19/16	20/18/15	19/17/14
Achieved with filter $\beta_{10}(c) \geq 75$ according to ISO 16889	-	10 μm	10 μm
Achieved with filter $\beta_{25}(c) \geq 200$ according to ISO 16889	25 μm	-	-

Casappa recommends to use its own production filters:

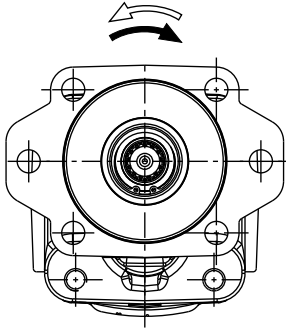


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DIRECTION OF ROTATION AND PORT POSITION

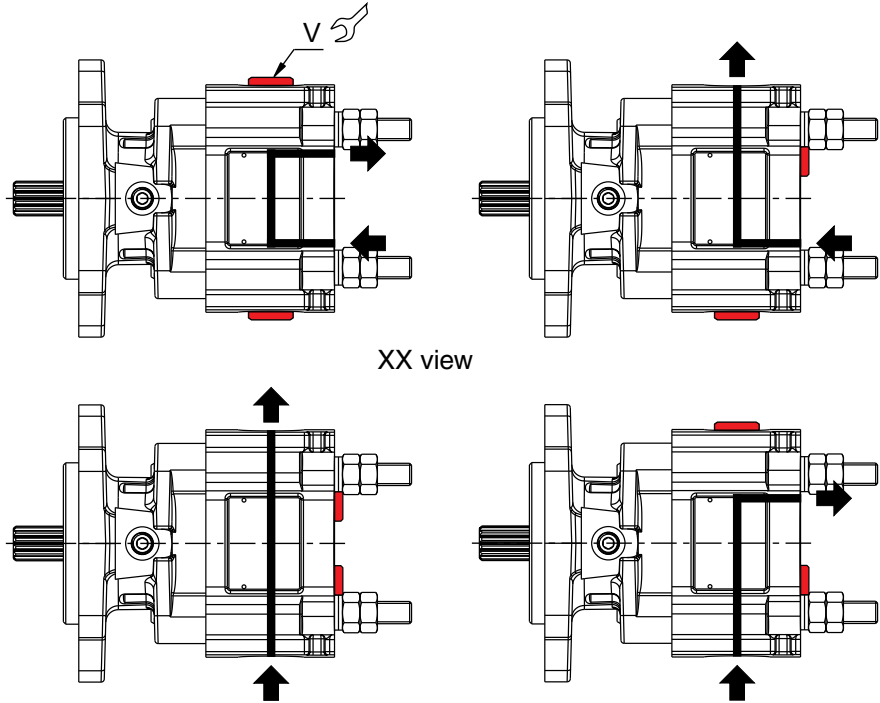
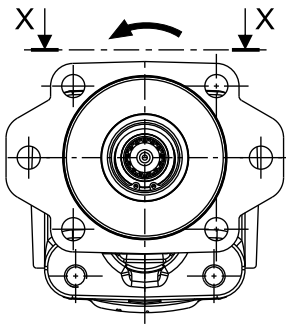
Reversible rotation (internal and external drain)

GO

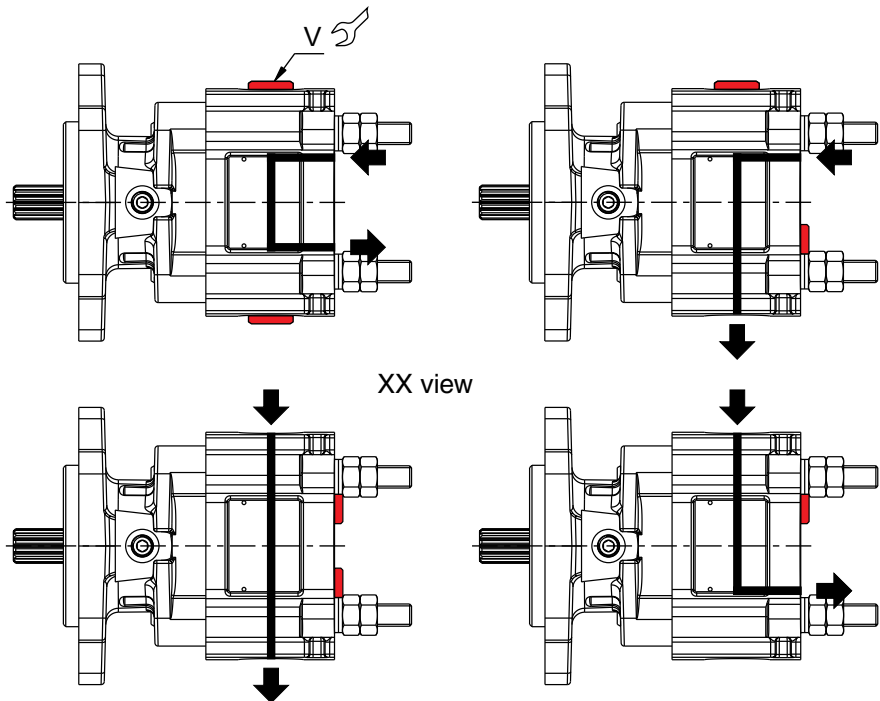
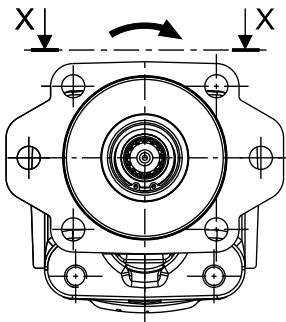


The direction of rotation is determined looking at the drive shaft. Reversible pumps with internal and external drain are available with four ports. They are supplied with the two rear ports plugged. All port combinations are allowed just switching one or both plugs. The drawing below shows the inlet and outlet tubing position according to the direction of rotation.

Counter-clockwise rotation



Clockwise rotation

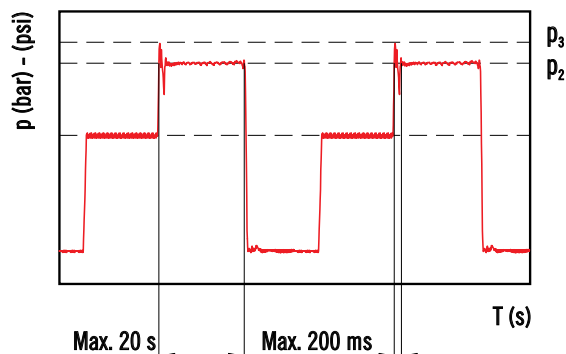


Pump type	V Plug tightening torque Nm (lbf in)
KP30	170 (1500)
KP35	200 (1770)

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GENERAL DATA

PRESSURE DEFINITION



p_2 Rated pressure (relief valve setting)
 p_3 Peak pressure (relief valve max. peak pressure)

To ensure proper operation, both p_2 and p_3 pressures must be kept within the limits stated on page 6. If p_2 is compliant, but p_3 exceeds its limit, please decrease the relief setting p_2 in order to keep the peak pressure p_3 within the limit.

Pump type	Displacement	Flow @ 1500 min ⁻¹	Max. pressure		Max. speed	Min. speed
			p_2 Rated pressure	p_3 Peak pressure		
			in ³ /rev (cm ³ /rev)	US gpm (l/min)		
KP30.22	1.34 (21,99)	8,70 (33)	3000 (207)	3300 (228)	3000	350
KP30.27	1.63 (26,7)	10,58 (40)	3000 (207)	3300 (228)	3000	350
KP30.31	1.87 (30,63)	12,14 (46)	3000 (207)	3300 (228)	3000	350
KP30.34	2.11 (34,56)	13,70 (52)	3000 (207)	3300 (228)	3000	350
KP30.38	2.40 (39,27)	15,58 (59)	3000 (207)	3300 (228)	3000	350
KP30.41	2.54 (41,62)	16,49 (62)	3000 (207)	3300 (228)	3000	350
KP30.46	2.83 (46,34)	18,38 (70)	2600 (179)	3000 (207)	3000	350
KP30.51	3.16 (51,83)	20,52 (78)	2600 (179)	3000 (207)	2500	350
KP30.56	3.45 (56,54)	22,40 (85)	2300 (159)	2600 (179)	2500	350
KP35.63	3.90 (63,88)	25,26 (96)	3000 (207)	3300 (228)	3000	300
KP35.71	4.42 (72,40)	28,64 (108)	3000 (207)	3300 (228)	3000	300
KP35.80	4.94 (80,91)	32,01 (121)	2900 (200)	3200 (221)	3000	300
KP35.90	5.59 (91,56)	36,23 (137)	2600 (179)	2900 (200)	2500	300
KP35.100	6.10 (100,8)	39,61 (150)	2500 (172)	2700 (186)	2500	300

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For different working conditions please consult our sales department.

KAPPA 30

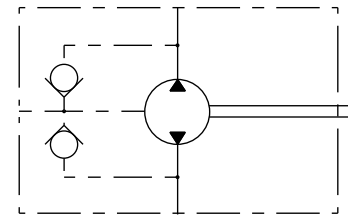
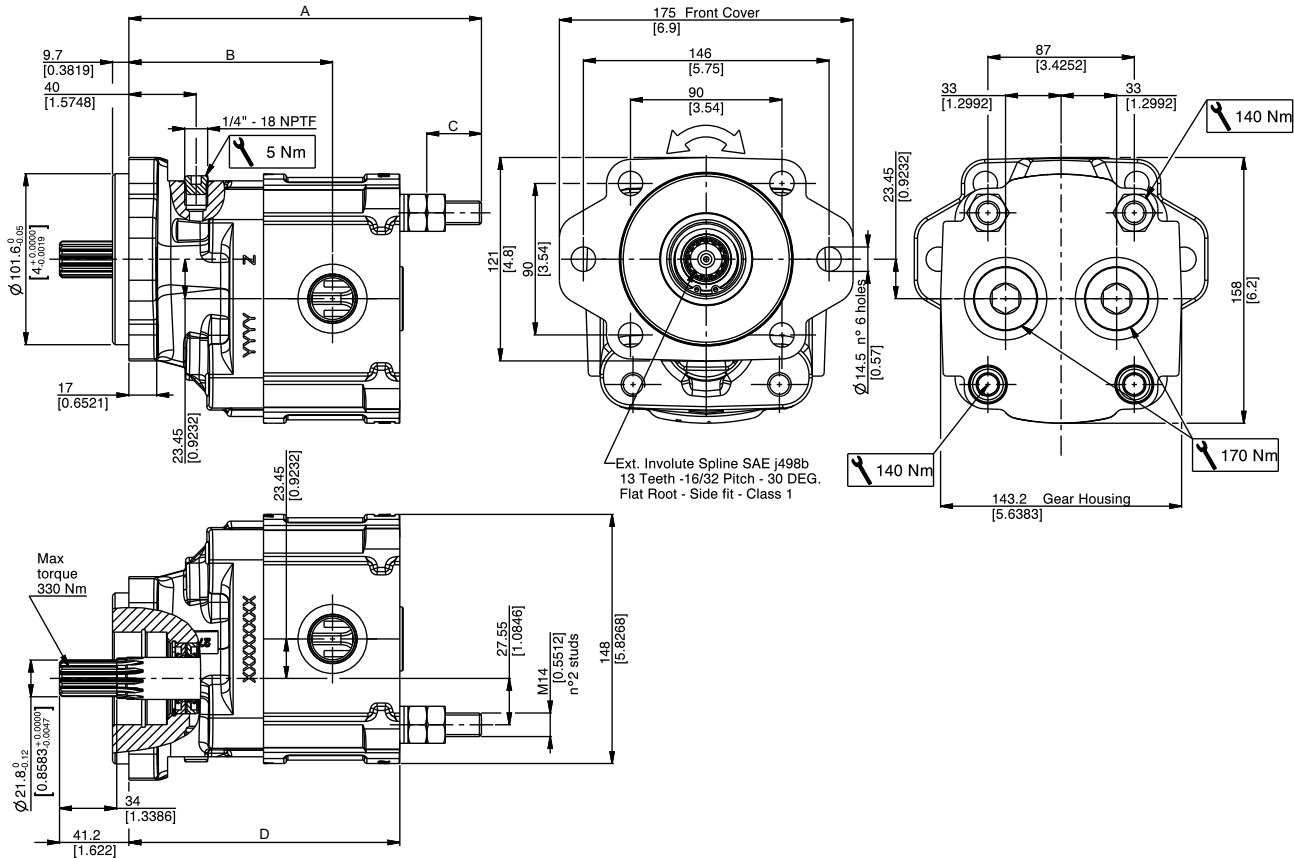
SINGLE UNITS - SAE STANDARD

CSC

Drive shaft: **04**
Ext. Involute Spline SAE J498B
with major diameter modified
13 teeth - 16/32 Pitch - 30 deg
Flat root - Side fit - Class 1

Mounting flange: **S3**
SAE "B" 2-4 HOLES
Conforms to SAE J744

Port type: see availability on page 6



Pump type	A	B	C	D
	mm (in)	mm (in)	mm (in)	mm (in)
KP30.22	204,5 (8.0512)	118 (4.6457)	35 (1.3780)	156 (6.1417)
KP30.27	209,5 (8.2480)	121 (4.7638)	34,5 (1.3583)	159 (6.2598)
KP30.31	209,5 (8.2480)	123,5 (4.8622)	34,5 (1.3583)	161,5 (6.3583)
KP30.34	214,5 (8.4449)	126 (4.9606)	34,5 (1.3583)	164 (6.4567)
KP30.38	214,5 (8.4449)	126 (4.9606)	34,5 (1.3583)	164 (6.4567)
KP30.41	219,5 (8.6417)	130,5 (5.1378)	35 (1.3780)	168,5 (6.6339)
KP30.46	219,5 (8.6417)	133,5 (5.2559)	34,5 (1.3583)	171,5 (6.7520)
KP30.51	224,5 (8.8386)	137 (5.3937)	33,5 (1.3189)	175 (6.8898)
KP30.56	224,5 (8.8386)	140 (5.5118)	33 (1.2992)	178 (7.0079)

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KAPPA 35

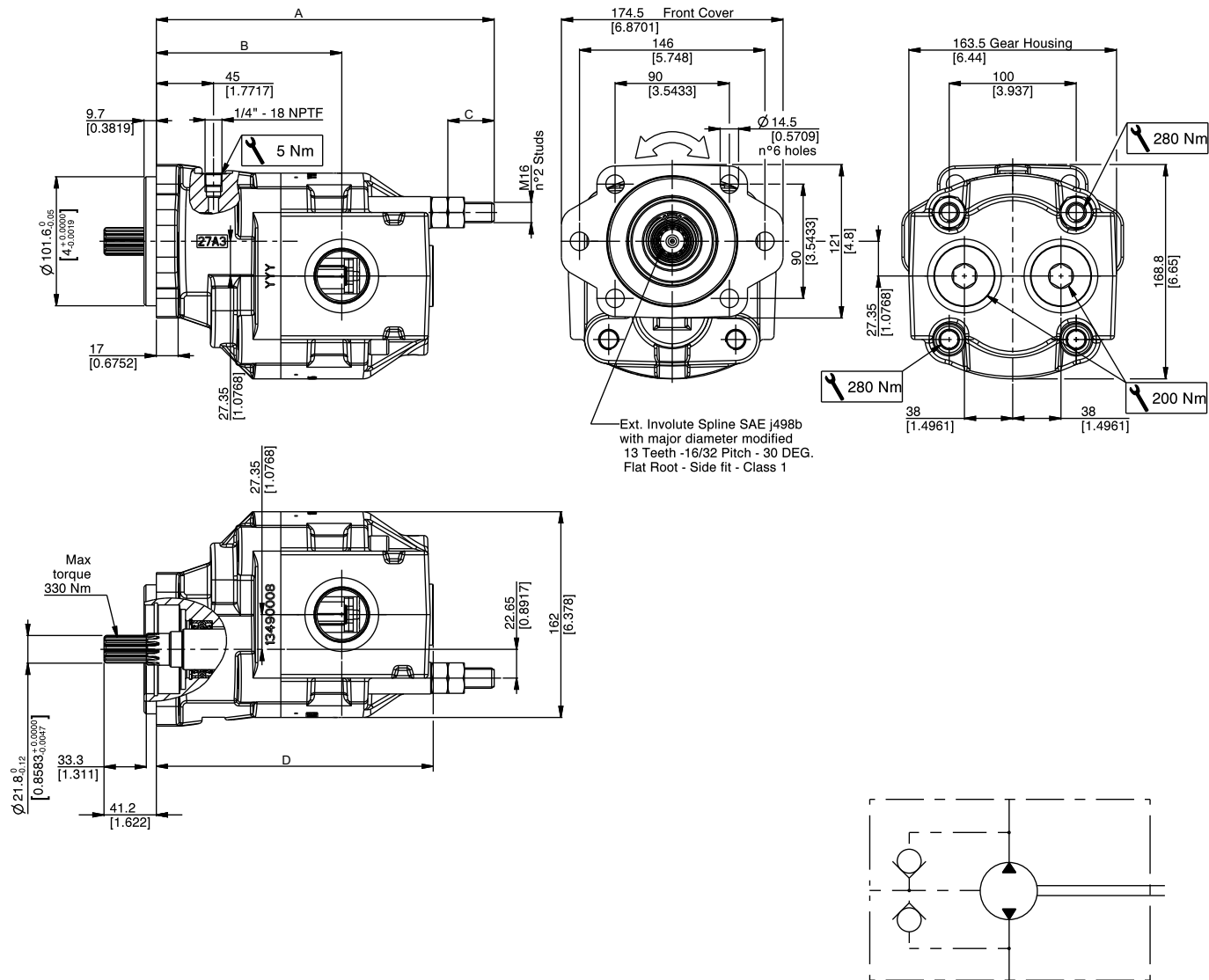
SINGLE UNITS - SAE STANDARD

HSC

Drive shaft: **04**
Ext. Involute Spline SAE J498B
with major diameter modified
13 teeth - 16/32 Pitch - 30 deg
Flat root - Side fit - Class 1

Mounting flange: **S3**
SAE "B" 2-4 HOLES
Conforms to SAE J744

Port type: see availability on page 6



01/11.2016

Pump type	A	B	C	D
	mm (in)	mm (in)	mm (in)	mm (in)
KP35.63	251 (9.8819)	133 (5.2362)	34,5 (1.3583)	205 (8.0709)
KP35.71	256 (10.0787)	137 (5.3937)	35,5 (1.3976)	209 (8.2283)
KP35.80	261 (10.2756)	141 (5.5512)	36,5 (1.4370)	213 (8.3858)
KP35.90	266 (10.4724)	146 (5.7480)	36,5 (1.4370)	218 (8.5827)
KP35.100	266 (10.4724)	150 (5.9055)	32,5 (1.2795)	222 (8.7402)

PORT TYPE

Nominal size	NPT NATIONAL PIPE TAPERED THREAD PORTS				ODT SAE STRAIGHT THREAD PORTS J514 (O-Ring Boss)			
	SIDE		REAR		SIDE		REAR	
	IN	OUT	IN	OUT	IN	OUT	IN	OUT
KP30.22	1"	1"	1"	1"	1"	1"	1"	1"
KP30.27	1"	1"	1"	1"	1"	1"	1"	1"
KP30.31	1"	1"	1"	1"	1"	1"	1"	1"
KP30.34	1"	1"	1"	1"	1"	1"	1"	1"
KP30.38	1"	1"	1"	1"	1"	1"	1"	1"
KP30.41	1"	1"	1"	1"	1"	1"	1"	1"
KP30.46	1" 1/4	1" 1/4	1"	1"	1" 1/4	1" 1/4	1"	1"
KP30.51	1" 1/4	1" 1/4	1"	1"	1" 1/4	1" 1/4	1"	1"
KP30.56	1" 1/4	1" 1/4	1"	1"	1" 1/4	1" 1/4	1"	1"
KP35.63	1" 1/4	1" 1/4	1" 1/2	1" 1/2	1" 1/4	1" 1/4	1" 1/4	1" 1/4
KP35.71	1" 1/4	1" 1/4	1" 1/2	1" 1/2	1" 1/4	1" 1/4	1" 1/4	1" 1/4
KP35.80	1" 1/4	1" 1/4	1" 1/2	1" 1/2	1" 1/4	1" 1/4	1" 1/4	1" 1/4
KP35.90	1" 1/2	1" 1/2	1" 1/2	1" 1/2	1" 1/4	1" 1/4	1" 1/4	1" 1/4
KP35.100	1" 1/2	1" 1/2	1" 1/2	1" 1/2	1" 1/4	1" 1/4	1" 1/4	1" 1/4

EXTERNAL DRAIN PORTS

NPTF	
Nominal size	
Pump type	
KP30	1/4"
KP35	1/4"

01/11.2016

PORT SIZE



Tightening torque for low pressure side port



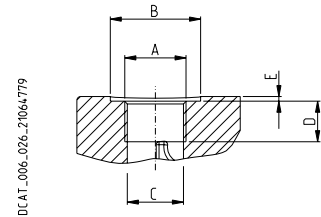
Tightening torque for high pressure side port [values obtained at 5075 psi (350 bar)]

For reversible rotation, please consult only the tightening torque for high pressure side port

NATIONAL PIPE TAPERED THREAD PORTS (1:16 L/D))

NPT

American standard taper pipe thread (60°) conforms to ANSI - ASME B1.20.1



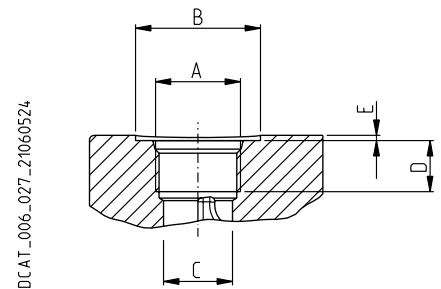
CODE	Nominal size	A	Ø B	Ø C	D	E		
			mm (in)	mm (in)	mm (in)	mm (in)	Nm (lbf in)	Nm (lbf in)
NB (◆)	1/4"	1/4" - 18 NPTF	21 (0.8268)	8 (0.3150)	14 (0.5512)	0,5 (0.0197)	5 ⁺¹ (44 ÷ 53)	—
NF	1"	1" - 11.5 NPT	—	29 (1.1417)	22 (0.8661)	—	30 ^{+2,5} (266 ÷ 288)	130 ⁺¹⁰ (1062 ÷ 1151)
NG	1" 1/4	1 1/4" - 11.5 NPT	56 (2.2047)	39 (1.5354)	24 (0.9449)	2,5 (0.0984)	50 ^{+2,5} (443 ÷ 465)	250 ⁺²⁰ (2213 ÷ 2390)
NH	1" 1/2	1 1/2" - 11.5 NPT	72 (2.8346)	30,5 (1.2008)	26 (1.0236)	3 (0.1181)	70 ⁺⁵ (620 ÷ 664)	350 ⁺²⁰ (3098 ÷ 3275)

(◆) = Drain port

SAE STRAIGHT THREAD PORTS J514 (O-Ring Boss)

ODT

American straight thread UNC-UNF 60° conforms to ANSI B 1.1



CODE	Nominal size	A	Ø B	Ø C	D	E		
			mm (in)	mm (in)	mm (in)	mm (in)	Nm (lbf in)	Nm (lbf in)
OA (◆)	3/8"	9/16" - 12 UNF - 2B	49	30,5	20	2	60 ⁺⁵	170 ⁺¹⁰
OF	1"	1 5/16" - 12 UNF - 2B	(1.9291)	(1.2008)	(0.7874)	(0.0787)	(531 ÷ 575)	(1505 ÷ 1593)
OG	1" 1/4	1 5/8" - 12 UNF - 2B	58 (2.2835)	39,1 (1.5394)	20 (0.7874)	0,5 (0.0197)	70 ⁺⁵ (620 ÷ 664)	200 ⁺¹⁰ (1770 ÷ 1859)
OH	1" 1/2	1 7/8" - 12 UNF - 2B	65 (2.5591)	45 (1.7717)	20 (0.7874)	0,5 (0.0197)	100 ⁺⁵ (885 ÷ 929)	—

(◆) = Drain port - (●) = For KAPPA 35 with rear ports

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HOW TO ORDER

PN	Pump type	Port type	Model code
0357006E	KP30.22	ODT	KP30.22G0-04S3-L(P)OF/OF-*NB-N-D-CSC (VNR01) (STUDS) (CN)
0357006F	KP30.22	NPT	KP30.22G0-04S3-L(P)NF/NF-*NB-N-D-CSC (VNR01) (STUDS) (CN)
03570064	KP30.27	ODT	KP30.27G0-04S3-L(P)OF/OF-*NB-N-D-CSC (VNR01) (STUDS) (CN)
0357006G	KP30.27	NPT	KP30.27G0-04S3-L(P)NF/NF-*NB-N-D-CSC (VNR01) (STUDS) (CN)
0357005S	KP30.31	ODT	KP30.31G0-04S3-L(P)OF/OF-*NB-N-D-CSC (VNR01) (STUDS) (CN)
0357005T	KP30.31	NPT	KP30.31G0-04S3-L(P)NF/NF-*NB-N-D-CSC (VNR01) (STUDS) (CN)
03570065	KP30.34	ODT	KP30.34G0-04S3-L(P)OF/OF-*NB-N-D-CSC (VNR01) (STUDS) (CN)
0357006H	KP30.34	NPT	KP30.34G0-04S3-L(P)NF/NF-*NB-N-D-CSC (VNR01) (STUDS) (CN)
0357005U	KP30.38	ODT	KP30.38G0-04S3-L(P)OF/OF-*NB-N-D-CSC (VNR01) (STUDS) (CN)
0357005V	KP30.38	NPT	KP30.38G0-04S3-L(P)NF/NF-*NB-N-D-CSC (VNR01) (STUDS) (CN)
0357006J	KP30.41	ODT	KP30.41G0-04S3-L(P)OF/OF-*NB-N-D-CSC (VNR01) (STUDS) (CN)
0357006K	KP30.41	NPT	KP30.41G0-04S3-L(P)NF/NF-*NB-N-D-CSC (VNR01) (STUDS) (CN)
0357005W	KP30.46	ODT	KP30.46G0-04S3-LOG/OG-(POF/OF)-*NB-N-D-CSC (VNR01) (STUDS) (CN)
0357005X	KP30.46	NPT	KP30.46G0-04S3-LNG/NG-(PNF/NF)-*NB-N-D-CSC (VNR01) (STUDS) (CN)
0357006L	KP30.51	ODT	KP30.51G0-04S3-LOG/OG-(POF/OF)-*NB-N-D-CSC (VNR01) (STUDS) (CN)
0357006M	KP30.51	NPT	KP30.51G0-04S3-LNG/NG-(PNF/NF)-*NB-N-D-CSC (VNR01) (STUDS) (CN)
0357005Y	KP30.56	ODT	KP30.56G0-04S3-LOG/OG-(POF/OF)-*NB-N-D-CSC (VNR01) (STUDS) (CN)
0357005Z	KP30.56	NPT	KP30.56G0-04S3-LNG/NG-(PNF/NF)-*NB-N-D-CSC (VNR01) (STUDS) (CN)
035710D1	KP35.63	ODT	KP35.63G0-04S3-L(P)OG/OG-*NB-N-D-HSC (VNR01) (STUDS) (CN)
035710D2	KP35.63	NPT	KP35.63G0-04S3-LNG/NG-(PNH/NH)-*NB-N-D-HSC (VNR01) (STUDS) (CN)
035710D3	KP35.71	ODT	KP35.71G0-04S3-L(P)OG/OG-*NB-N-D-HSC (VNR01) (STUDS) (CN)
035710D4	KP35.71	NPT	KP35.71G0-04S3-LNG/NG-(PNH/NH)-*NB-N-D-HSC (VNR01) (STUDS) (CN)
035710D5	KP35.80	ODT	KP35.80G0-04S3-L(P)OG/OG-*NB-N-D-HSC (VNR01) (STUDS) (CN)
035710D6	KP35.80	NPT	KP35.80G0-04S3-LNG/NG-(PNH/NH)-*NB-N-D-HSC (VNR01) (STUDS) (CN)
0357109W	KP35.90	ODT	KP35.90G0-04S3-L(P)OG/OG-*NB-N-D-HSC (VNR01) (STUDS) (CN)
035710D7	KP35.90	NPT	KP35.90G0-04S3-L(P)NH/NH-*NB-N-D-HSC (VNR01) (STUDS) (CN)
0357109X	KP35.100	ODT	KP35.100G0-04S3-L(P)OG/OG-*NB-N-D-HSC (VNR01) (STUDS) (CN)
0357109V	KP35.100	NPT	KP35.100G0-04S3-L(P)NH/NH-*NB-N-D-HSC (VNR01) (STUDS) (CN)

01/11.2016

Our policy is one of continuous improvement in product. Specification of items may, therefore, be changed without notice.

TMKP 02 T A

Edition: 02/12.2019

Replaces: TMKP 01 T A



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