

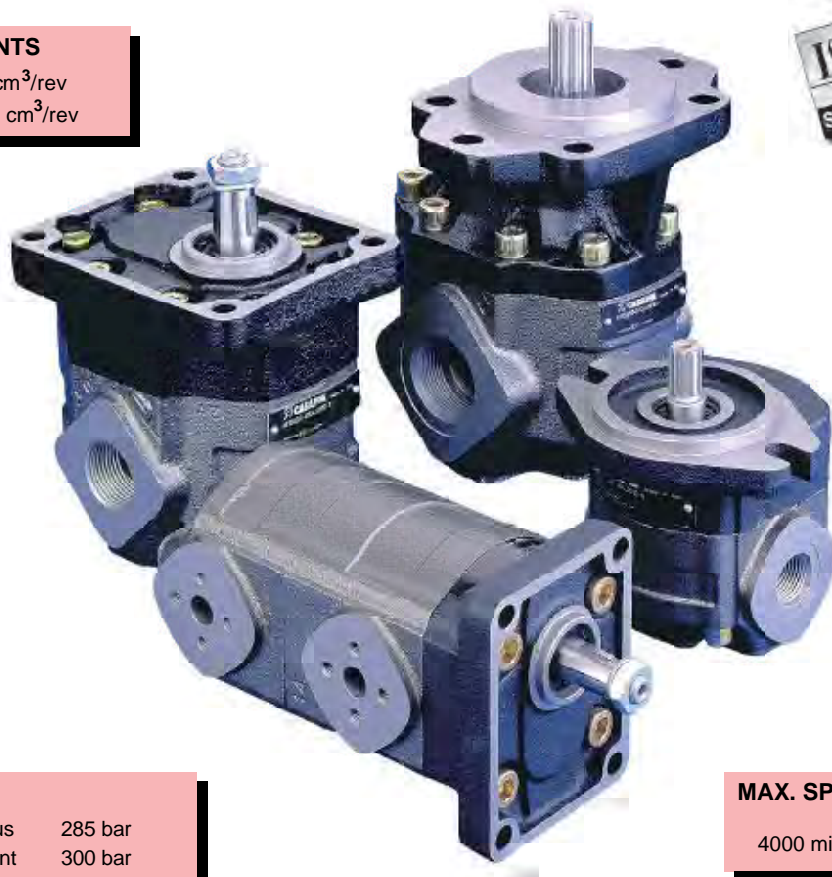


Hydraulic gear pumps

two pieces cast iron housing

DISPLACEMENTS

From 4,95 cm³/rev
To 73,82 cm³/rev



PRESSURE

Max. continuous 285 bar
Max. intermittent 300 bar
Max. peak 330 bar

MAX. SPEED

4000 min⁻¹

- High operating pressures
- High efficiency at high temperature
- Exceptional working life expectancy

KAPPA pump and motor units consist essentially of a housing and a mounting flange in cast iron of superior mechanical specifications. KAPPA is available with mounting flanges and side or rear ports according to SAE and European standard. The rigidity of assembly and the compact design of KAPPA pumps and motors ensure reliability and high volumetric efficiency also at high operating pressures. Infinite care and attention is taken over the design and construction of each single component, and with quality monitored unceasingly, the result is a consistent, perfectly balanced assembly that guarantees unbroken service under the most arduous operating conditions. KAPPA series is the right choice wherever noise, contamination, non inflammable fluids and size are critical factors. The wide choice of combinations of mounting flanges, shafts and ports ensure to KAPPA series to be applied in a vast range of application.



Replaces: 01/01.02

FEATURES

Construction	External gear type pumps and motors
Mounting	EUROPEAN - SAE - ISO standard flanges
Line connections	Screw and flange
Direction of rotation (looking on drive shaft)	Anti-clock (S) - clockwise (D) - reversible (L, R or B)
Inlet pressure range for pumps	0,7 ÷ 3 bar (abs.)
Max back pressure for single rotation motors	p ₁ (continuous) max 5 bar
	p ₂ (for 20 s) max 8 bar
	p ₃ (for 8 s) max 15 bar
Max drain line pressure on the reversible rotation motors	5 bar
Max back pressure on the series motors	150 bar
Fluid temperature range	See table (1)
Fluid	Mineral oil based hydraulic fluids to ISO/DIN and fire resistant fluids [see table (1)]. For other fluids please consult our technical sales department.
Viscosity range	From 12 to 100 mm ² /s (cSt) recommended
	Up to 750 mm ² /s (cSt) permitted
Filtering requirement	See table (2)

Tab. 1					
Type	Fluid composition	Max pressure [bar]	Max speed [min ⁻¹]	Temperature [°C]	Seals (◆)
ISO/DIN	Mineral oil based hydraulic fluid to ISO/DIN	See page 3 - 4	See page 3 - 4	-25 ÷ +80	N
				-25 ÷ +110	N-H
					V
HFA	Oil emulsion in water 5 ÷ 15% of oil	50	1500	2 ÷ 55	N
HFB	Water emulsion in oil 40 % of water	120	1500	2 ÷ 60	
HFC	Water - glycol	100	1500	-20 ÷ +60	N Bz
HFD	Phosphate ester	150	1500	-10 ÷ +80	V Bz

(◆) **N**= Buna N (standard) - **N-H**= Buna N and high back pressure shaft seals - **V**= Viton
N Bz= Buna N and Bronze thrust plates - **V Bz**= Viton and Bronze thrust plates

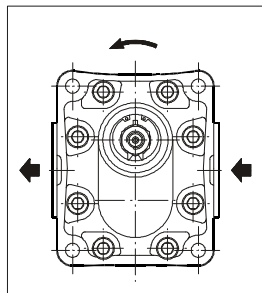
Tab. 2		
Working pressure	Δp > 200 bar	Δp < 200 bar
Contamination class NAS 1638	8	10
Contamination class ISO 4406	19/17/14	21/19/16
Achieved with filter β _x =75	10 μm	25 μm

02/09.02

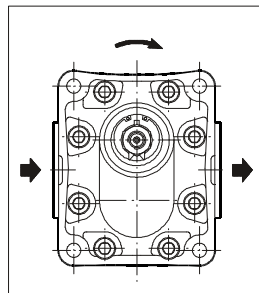
GENERAL NOTES

Available with different inlet and outlet ports. If you use fire resistant fluids specify the type of them at

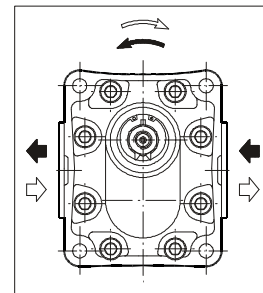
DEFINITION OF ROTATION DIRECTION LOOKING ON THE DRIVE SHAFT



Anti-clock rotation

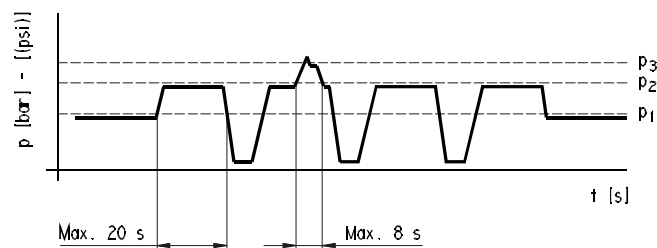


Clockwise rotation



Reversible rotation

PRESSURE DEFINITION



- p_1 Max. continuous pressure
- p_2 Max. intermittent pressure
- p_3 Max. peak pressure

KAPPA 30 GENERAL DATA PUMPS

KP 30

Pump type	Displacement	Max. pressure			Max. speed	Min. speed
		p ₁	p ₂	p ₃		
	cm ³ /rev	bar			min ⁻¹	
KP 30•27	26,7	280	300	310	3000	350
KP 30•34	34,56	260	280	300	3000	350
KP 30•38	39,27	260	280	300	3000	350
KP 30•43	43,98	250	270	290	3000	350
KP 30•51	51,83	230	250	270	2500	350
KP 30•56	56,54	215	235	255	2500	350
KP 30•61	61,26	200	220	240	2500	350
KP 30•73	73,82	180	200	220	2500	350

p₁= Max. continuous pressure p₂= Max. intermittent pressure p₃= Max. peak pressure

The values in the table refer to unidirectional pumps.
Reversible pump max pressures are 15% lower than those shown in table.
For different working conditions please consult our sales department.

01/01.02

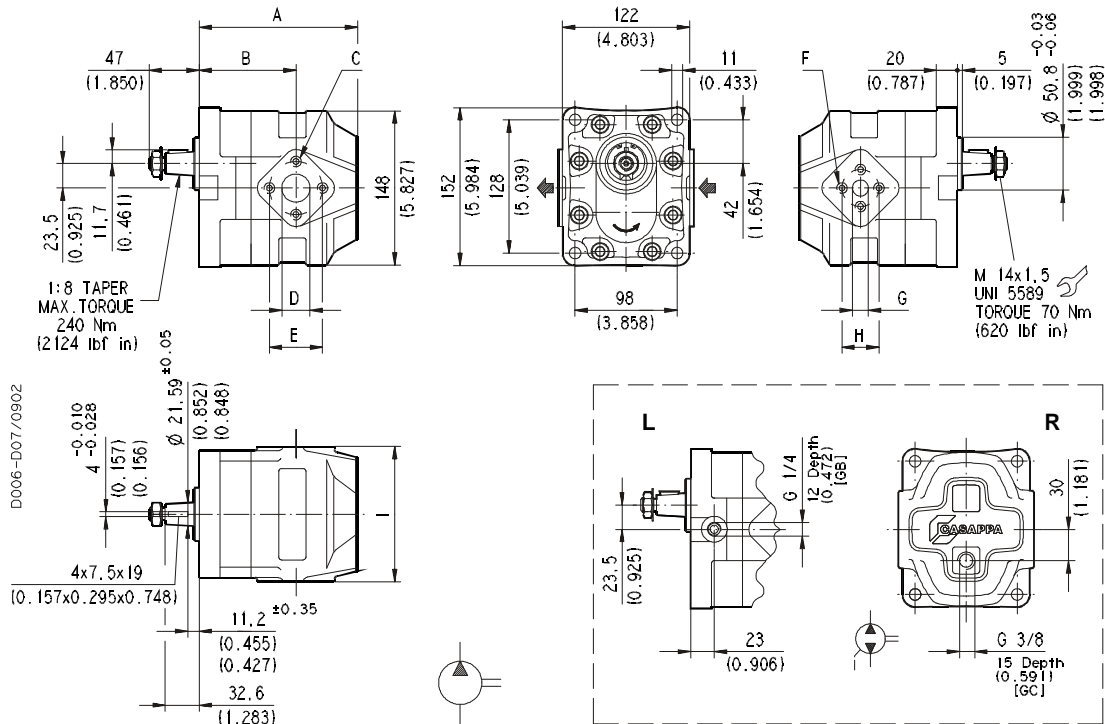
KAPPA 30

HYDRAULIC GEAR PUMPS EUROPEAN STANDARD

83 E3

EUROPEAN FLANGED PORTS - 4 Bolts
Metric thread ISO 60° conforms to ISO/R 262

Replaces: 01/01.02



02/09.02

Pump type	A	B	C	D	E	F	G	H	I
	mm (in)	mm (in)	mm (in)	mm (in)	mm (in)	mm (in)	mm (in)	mm (in)	mm (in)
KP 30•27	133 (5.236)	85 (3.346)	M 10 Depth 17 (0.669)	27 (1.063)	51 (2.008)	M 8 Depth 17 (0.669)	19 (0.748)	40 (1.575)	130 (5.118)
KP 30•34	138 (5.433)	90 (3.543)							
KP 30•38	141 (5.551)	93 (3.661)							
KP 30•43	144 (5.669)	96 (3.780)							
KP 30•51	149 (5.866)	93 (3.661)							
KP 30•56	152 (5.984)	97 (3.819)							
KP 30•61	155 (6.102)	100 (3.937)							
KP 30•73	163 (6.417)	108 (4.252)	M 12 Depth 17 (0.669)	33 (1.299)	62 (2.441)	M 10 Depth 17 (0.669)	27 (1.063)	51 (2.008)	135 (5.315)

Rotation: S=left - D=right - L=reversible side drain - R=reversible rear drain - B=reversible internal drain

How to order:

KP 30•27 S0-83 E3-L ED/EB-N

KAPPA 30 HYDRAULIC GEAR PUMPS EUROPEAN STANDARD 83 E3

GAS STRAIGHT THREAD PORTS
British standard pipe parallel (55°) conforms to UNI - ISO 228

1:8 TAPER
MAX. TORQUE
240 Nm
(2124 lbf in)

M 14x1.5
UNI 5589
TORQUE 70 Nm
(620 lbf in)

D006-D 10/0902

Replaces: 01/01.02

Pump type		A	B	C	D
		mm (in)	mm (in)	mm (in)	mm (in)
S D L R B	0-83 E3-L GF/GF-N	133 (5.236)	85 (3.346)	G 1 Depth 22 (0.866)	130 (5.118)
		138 (5.433)	90 (3.543)		
		141 (5.551)	93 (3.661)		
		144 (5.669)	96 (3.780)		
		149 (5.866)	93 (3.661)		
		152 (5.984)	97 (3.819)		
		155 (6.102)	100 (3.937)		
0-83 E3-L GG/GF-N	163 (6.417)	108 (4.252)	G 1 1/4 Depth 24 (0.945)	135 (5.315)	

Rotation: S=left - D=right - L=reversible side drain - R=reversible rear drain - B=reversible internal drain

How to order:

KP 30*27 S0-83 E3-L GF/GF-N

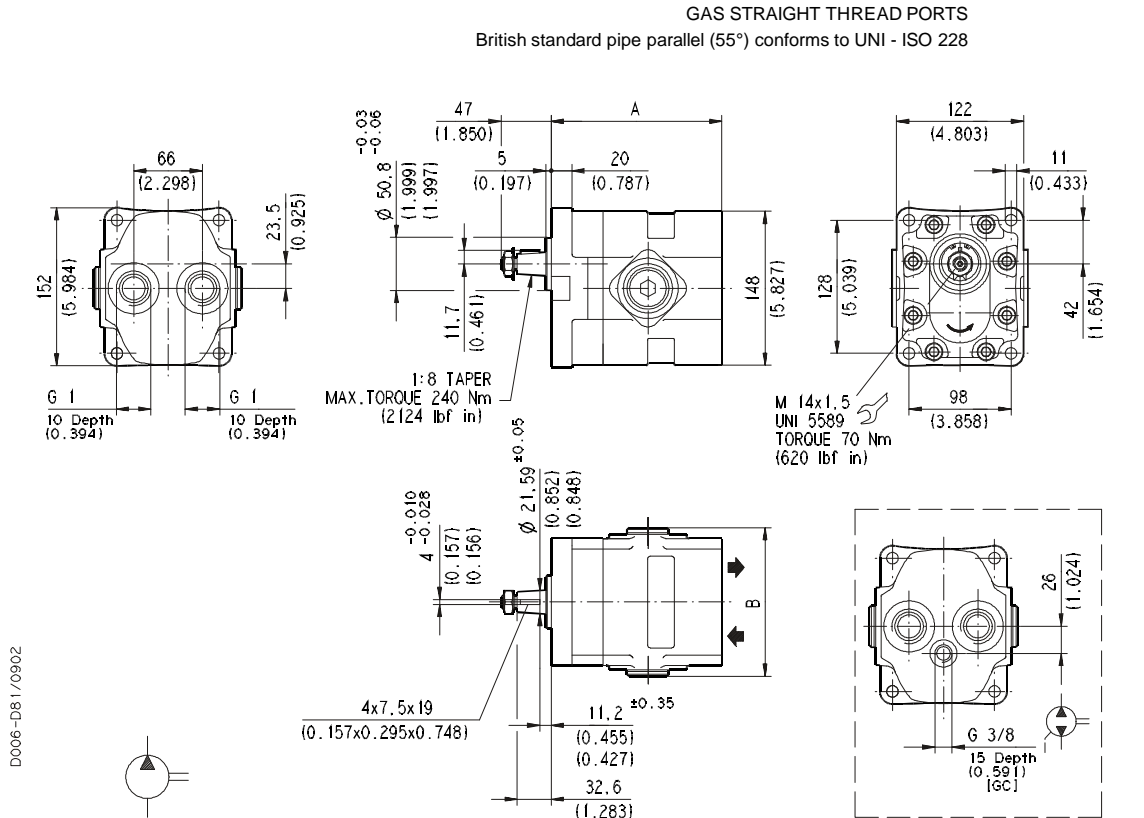
02/09.02

KAPPA 30

HYDRAULIC GEAR PUMPS EUROPEAN STANDARD

83 E3

Replaces: 01/01.02



D006-D81/0902

Rear ports version.

Pump type		A	B
		mm (in)	mm (in)
S D R B 0-83 E3-P GF/GF-N	KP 30•27	148 (5.827)	143 (5.630)
	KP 30•34	153 (6.024)	
	KP 30•38	156 (6.142)	
	KP 30•43	159 (6.260)	
	KP 30•51	164 (6.457)	148 (5.827)
	KP 30•56	167 (6.575)	
	KP 30•61	170 (6.693)	
	KP 30•73	178 (7.008)	

Rotation: S=Left - D=Right - R=reversible rear drain - B=reversible internal drain

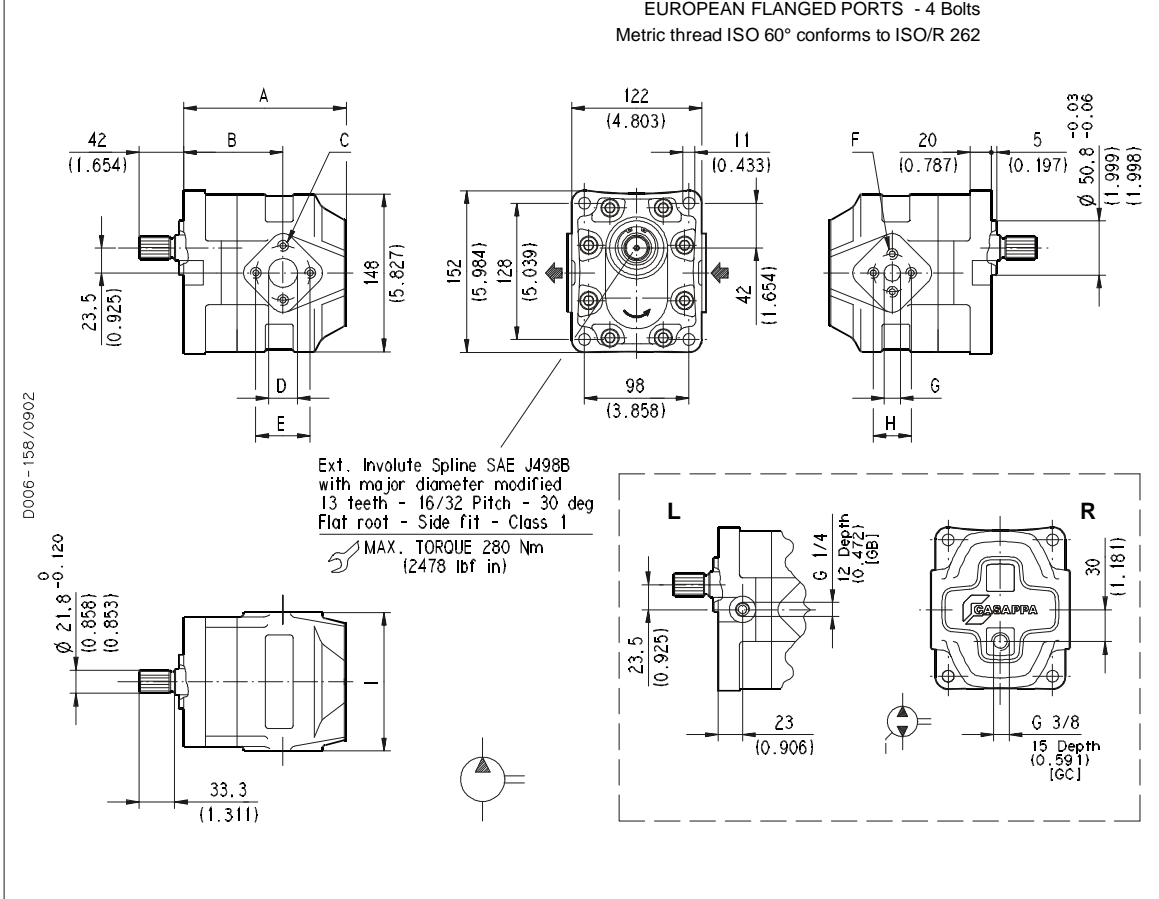
How to order:

KP 30•27 S0-83 E3-P GF/GF-N

02/09.02

KAPPA 30 HYDRAULIC GEAR PUMPS EUROPEAN STANDARD A8 E3

EUROPEAN FLANGED PORTS - 4 Bolts
Metric thread ISO 60° conforms to ISO/R 262



Pump type		A	B	C	D	E	F	G	H	I
		mm (in)	mm (in)	mm (in)	mm (in)	mm (in)	mm (in)	mm (in)	mm (in)	mm (in)
S D L R B	0-A8 E3-L ED/EB-N	133 (5.236)	85 (3.346)	M 10 Depth 17 (0.669)	27 (1.063)	51 (2.008)	M 8 Depth 17 (0.669)	19 (0.748)	40 (1.575)	130 (5.118)
		138 (5.433)	90 (3.543)							
		141 (5.551)	93 (3.661)							
		144 (5.669)	96 (3.780)							
		149 (5.866)	93 (3.661)							
		152 (5.984)	97 (3.819)							
		155 (6.102)	100 (3.937)							
0-A8 E3-L EF/ED-N	163 (6.417)	108 (4.252)	M 12 Depth 17 (0.669)	33 (1.299)	62 (2.441)	M 10 Depth 17 (0.669)	27 (1.063)	51 (2.008)	135 (5.315)	

Rotation: S=left - D=right - L=reversible side drain - R=reversible rear drain - B=reversible internal drain

How to order:

KP 30*27 S0-A8 E3-L ED/EB-N

Replaces: 01/01.02

02/09.02

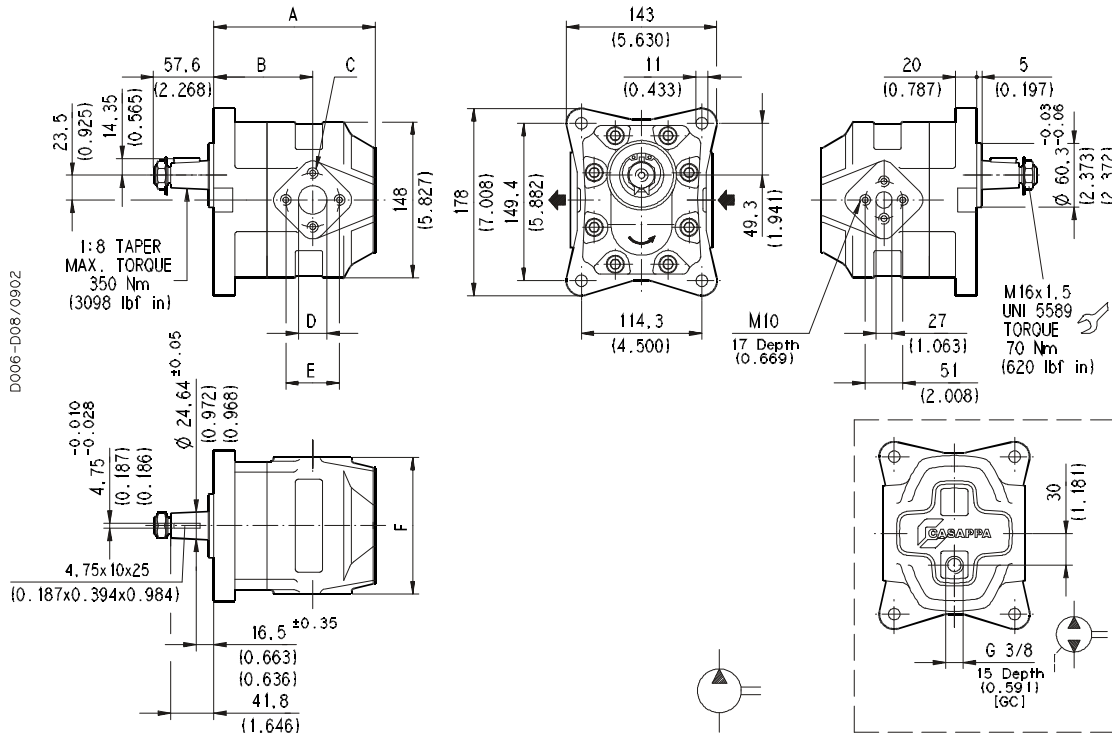
KAPPA 30

HYDRAULIC GEAR PUMPS EUROPEAN STANDARD

84 E4

EUROPEAN FLANGED PORTS - 4 Bolts
Metric thread ISO 60° conforms to ISO/R 262

Replaces: 01/01.02



02/09.02

Pump type		A	B	C	D	E	F
		mm (in)	mm (in)	mm (in)	mm (in)	mm (in)	mm (in)
KP 30•51	S	150 (5.906)	94 (3.701)	M 10 Depth 17 (0.669)	27 (1.063)	51 (2.008)	130 (5.118)
	D						
KP 30•61	R	156 (6.142)	101 (3.976)	M 12 Depth 17 (0.669)	33 (1.299)	62 (2.441)	135 (5.315)
	B						
KP 30•73		164 (6.457)	109 (4.291)				

Rotation: S=left - D=right - R=reversible rear drain - B=reversible internal drain

How to order:

KP 30•51 S0-84 E4-L ED/ED-N

KAPPA 30

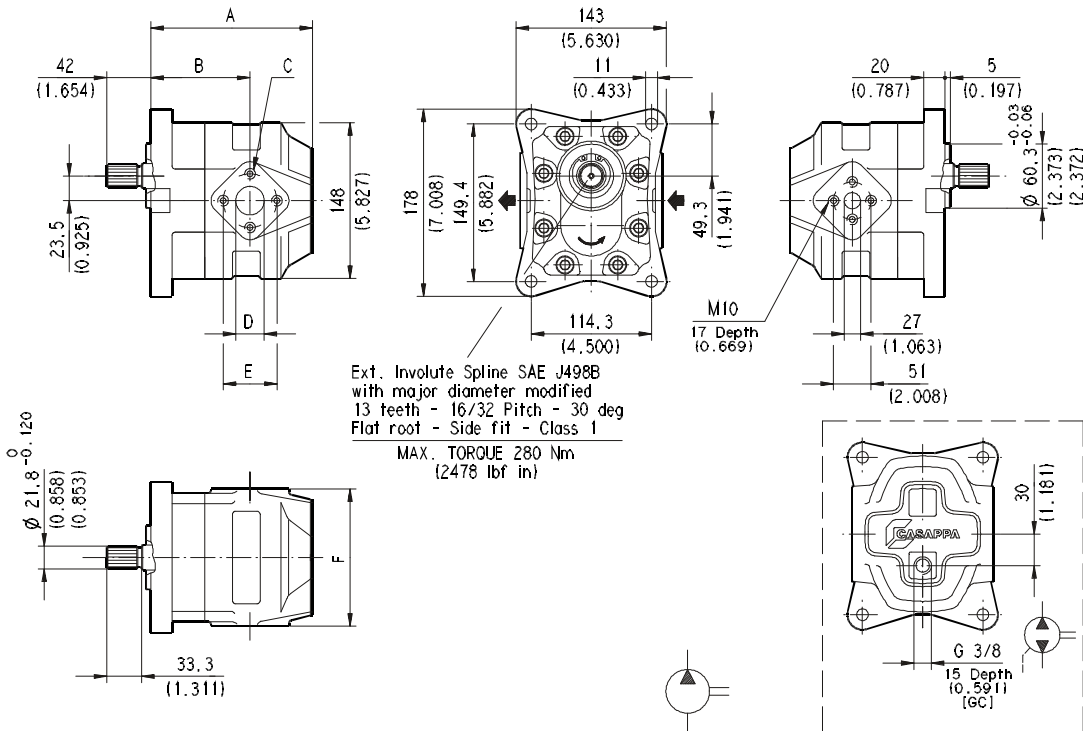
HYDRAULIC GEAR PUMPS EUROPEAN STANDARD

A8 E4

EUROPEAN FLANGED PORTS - 4 Bolts
Metric thread ISO 60° conforms to ISO/R 262

Replaces: 01/01.02

D006-156/0902



02/09.02

Pump type		A	B	C	D	E	F
		mm (in)	mm (in)	mm (in)	mm (in)	mm (in)	mm (in)
KP 30•51	S	150 (5.906)	94 (3.701)	M 10 Depth 17 (0.669)	27 (1.063)	51 (2.008)	130 (5.118)
	D						
KP 30•61	R	156 (6.142)	101 (3.976)	M 12 Depth 17 (0.669)	33 (1.299)	62 (2.441)	135 (5.315)
KP 30•73	B	164 (6.457)	109 (4.291)				

Rotation: S=left - D=right - R=reversible rear drain - B=reversible internal drain

How to order:

KP 30•51 S0-A8 E4-L ED/ED-N

KAPPA 30	HYDRAULIC GEAR PUMPS EUROPEAN STANDARD	A5 E4
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EUROPEAN FLANGED PORTS - 4 Bolts
Metric thread ISO 60° conforms to ISO/R 262

Ext. Involute Spline SAE J498B
with major diameter modified
15 teeth - 16/32 Pitch - 30 deg
Flat root - Side fit - Class 1
MAX. TORQUE 400 Nm
(3540 lbf in)

M10
17 Depth (0.669)
45 ±5 Nm

15 Depth (0.591) [GC]

Pump type		A	B	C	D	E	F	
		mm (in)	mm (in)	mm (in)	mm (in)	mm (in)	mm (in)	
KP 30•51	S	0-A5 E4-L ED/ED-N	150 (5.906)	94 (3.701)	M 10 Depth 17 (0.669)	27 (1.063)	51 (2.008)	130 (5.118)
	D		156 (6.142)	101 (3.976)	M 12 Depth 17 (0.669)	33 (1.299)	62 (2.441)	135 (5.315)
	B		164 (6.457)	109 (4.291)		33 (1.299)	62 (2.441)	

Rotation: S=left - D=right - R=reversible rear drain - B=reversible internal drain

How to order:

KP 30•51 S0-A5 E4-L ED/ED-N

Replaces: 01/01.02

02/09.02

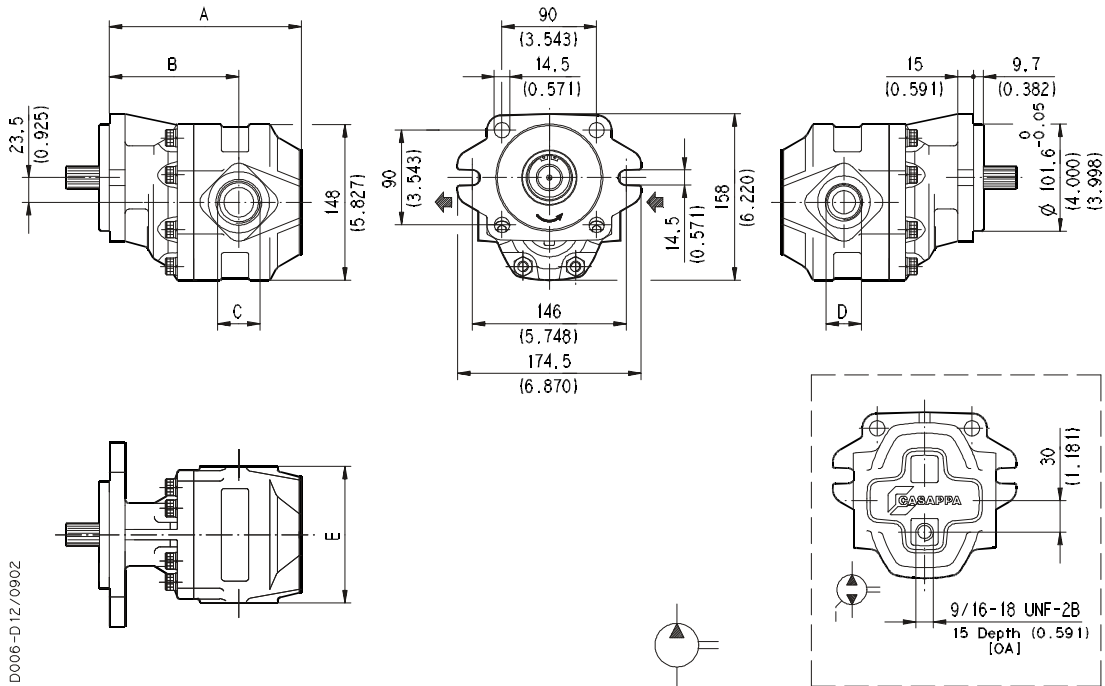
KAPPA 30

HYDRAULIC GEAR PUMPS SAE STANDARD

... S3

SAE STRAIGHT THREAD PORTS J514
American straight thread UNC-UNF 60° conforms to ANSI B 1.1

Replaces: 01/01.02



D006-D12/0902

02/09.02

To order see page 33 - 34.

Pump type	A	B	C	D	E	Ports code	
	mm (in)	mm (in)			mm (in)	IN	OUT
KP 30•27	164 (6.457)	115 (4.528)	1-5/16-12 UN-2B	1-1/16-12 UN-2B	130 (5.118)	OF	OD
KP 30•34	169 (6.654)	120 (4.724)					
KP 30•38	172 (6.772)	123 (4.843)	1-5/8-12 UN-2B	1-5/16-12 UN-2B		OG	OF
KP 30•43	175 (6.890)	126 (4.961)					
KP 30•51	180 (7.087)	123 (4.843)					
KP 30•56 *	182 (7.165)	127 (5.000)	1-7/8-12 UN-2B	1-5/8-12 UN-2B	135 (5.433)	OH	OG
KP 30•61	186 (7.323)	130 (5.118)					
KP 30•73	194 (7.638)	138 (5.433)					

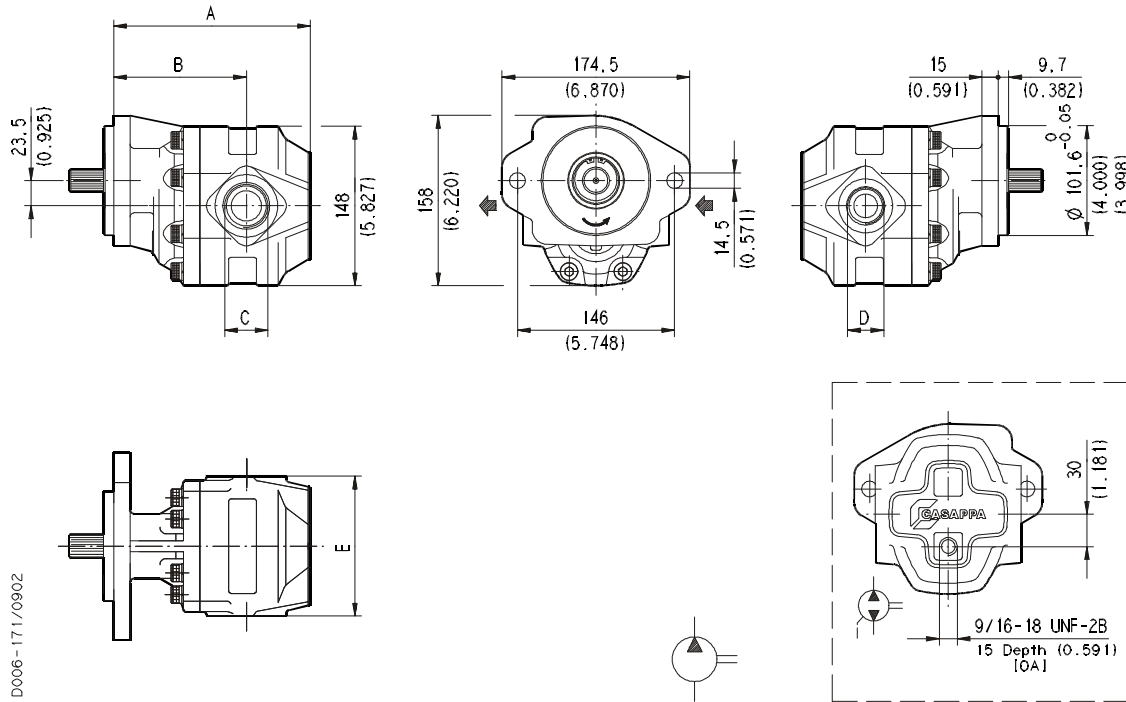
* Available only with 04 and 32 shaft for 0 and 1 version.

KAPPA 30

HYDRAULIC GEAR PUMPS SAE STANDARD

... S5

SAE STRAIGHT THREAD PORTS J514
American straight thread UNC-UNF 60° conforms to ANSI B 1.1



D006-171/0902

Replaces: 01/01.02

To order see page 33 - 34.

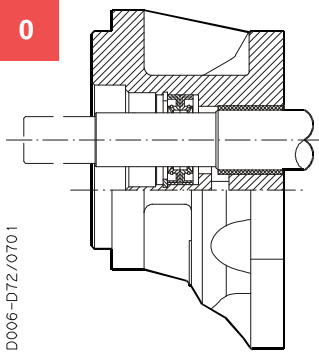
Pump type	A	B	C	D	E	Ports code	
	mm (in)	mm (in)			mm (in)	IN	OUT
KP 30•27	164 (6.457)	115 (4.528)	1-5/16-12 UN-2B	1-1/16-12 UN-2B	130 (5.118)	OF	OD
KP 30•34	169 (6.654)	120 (4.724)				OG	OF
KP 30•38	172 (6.772)	123 (4.843)	1-5/8-12 UN-2B	1-5/16-12 UN-2B	130 (5.118)	OG	OF
KP 30•43	175 (6.890)	126 (4.961)				OH	OG
KP 30•51	180 (7.087)	123 (4.843)	1-7/8-12 UN-2B	1-5/8-12 UN-2B	135 (5.433)	OH	OG
KP 30•56 *	182 (7.165)	127 (5.000)				OH	OG
KP 30•61	186 (7.323)	130 (5.118)				OH	OG
KP 30•73	194 (7.638)	138 (5.433)					

* Available only with 04 and 32 shaft for 0 and 1 version.

02/09.02

KAPPA 30 SAE VERSION
SAE

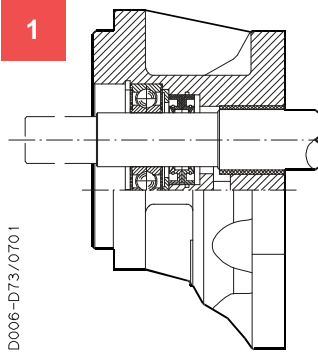
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D006-D72/0701

Version for applications without radial and axial load on the drive shaft.

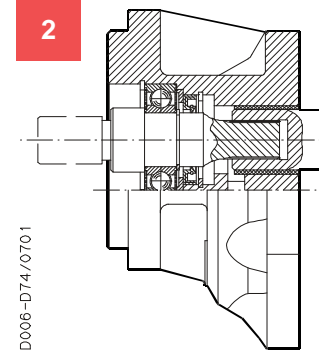
1



D006-D73/0701

Version for applications with low radial load and without axial load on the drive shaft.

2



D006-D74/0701

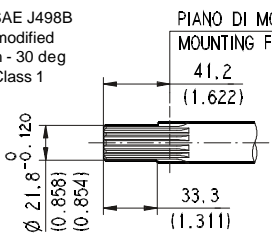
Special version with independent shaft for applications with low radial load and without axial load on the drive shaft.

KAPPA 30 END DRIVE SHAFTS
SAE

SAE "B" SPLINE

04

Ext. Involute Spline SAE J498B with major diameter modified
13 teeth - 16/32 Pitch - 30 deg
Flat Root - Side fit - Class 1



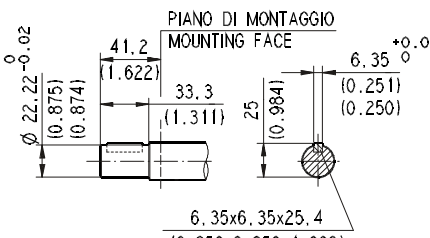
D006-D75/0601

MAX 300 Nm (2655 lbf in) ◆

SAE "B" STRAIGHT

32

PIANO DI MONTAGGIO MOUNTING FACE



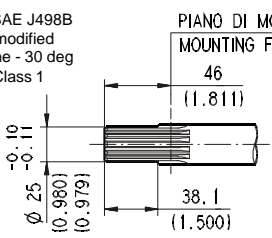
D006-D77/0601

MAX 200 Nm (1770 lbf in) ◆

SAE "BB" SPLINE

05

Ext. Involute Spline SAE J498B with major diameter modified
15 teeth - 16/32 Spline - 30 deg
Flat Root - Side fit - Class 1



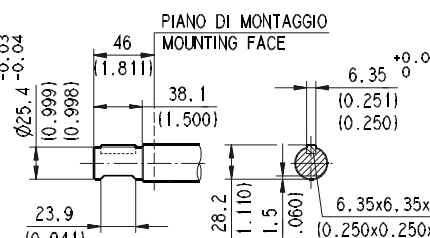
D006-D76/0701

MAX 450 Nm (3983 lbf in) ◆

SAE "BB" STRAIGHT

33

PIANO DI MONTAGGIO MOUNTING FACE



D006-D82/0701

MAX 280 Nm (2478 lbf in) ◆

◆ For "2" version whichever end shaft, the max. torque applicable is M= 170 Nm (1505 lbf in)

01/01.02

HYMATEC GMBH
HYDRAULIK MASCHINEN TECHNIK

Hymatec-GmbH – Hebelstraße 22 94315 Straubing
Tel.: 09421/1887797 – Fax: 09421/1887799 – Email: info@hymatec-gmbh.de – www.hymatec-gmbh.de

Die Inhalte unserer Seiten wurden mit größter Sorgfalt erstellt. Für die Richtigkeit, Vollständigkeit und Aktualität der Inhalte können wir jedoch keine Gewähr übernehmen.

HOW TO ORDER SAE SINGLE PUMPS

1	2	3	4	5	6	7	8			
Pump type	Rotation	Version	–	Drive shaft	Mounting flange	–	Ports position	Ports IN/OUT	–	Seals
KP30•27	S	0	–	04	S3	–	L	OF/OD	–	N

1	Pump type	CODE
	cm ³ /rev	
	26,7	KP 30•27
	34,56	KP 30•34
	39,27	KP 30•38
	43,98	KP 30•43
	51,83	KP 30•51
	56,54	KP 30•56
	61,26	KP 30•61
	73,82	KP 30•73

2	Rotation	CODE
	Left	S
	Right	D
	Reversible	R
	Reversible internal drain	B

3	Version	CODE
	Without outboard bearing	0
	With outboard bearing	1
	With outboard bearing and indep. shaft	2

4	Drive shaft	CODE
	SAE "B" spline (13 teeth)	04
	SAE "B" straight	32
	SAE "BB" spline (15 teeth)	05
	SAE "BB" straight	33

5	Mounting flange	CODE
	SAE "B" 2-4 holes	S3
	SAE "B" 2 holes	S5

CODE	Ports position	6
L	Side	
P	Rear	

CODE	Ports IN/OUT	7
SAE STRAIGHT THREAD PORTS (ODT)		
	Side	Pump type
OF/OD		KP 30•27
OF/OD		KP 30•34
OG/OF		KP 30•38
OG/OF		KP 30•43
OG/OF		KP 30•51
OH/OG		KP 30•56
OH/OG		KP 30•61
OH/OG		KP 30•73

CODE	Seals (a)	8
N	Buna (standard)	
N-H	Buna with high back pressure shaft seals	
V	Viton	
V Bz	Viton and Bronze thrust plates	

(a) Choose the seals according to the temperature shown on page 1

ORDER EXAMPLE

Standard pump KP 30•27 S0 - 04 S3 - L OF/OD - N

Special version pump KP 30•27 S2 - 32 S3 - L OF/OD - V Bz

01/01.02