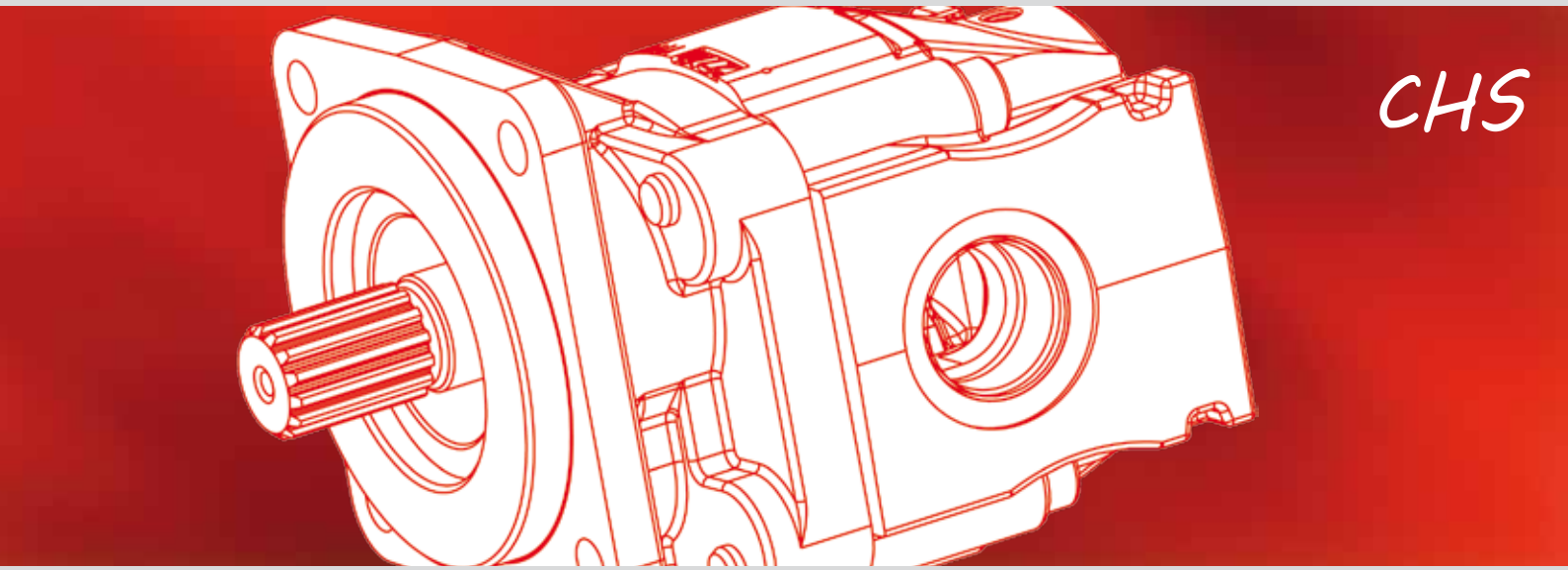
CASAPPA®
FLUID POWER DESIGN



CHS

HYDRAULIC GEAR PUMPS AND MOTORS

KAPPA®
Compact

INDEX

Replaces: 01/11.2012

o 02/04.2013

o Modification from former edition.

FEATURES

From the KAPPA series, we now introduce the KAPPA “Compact” line. The main feature of this new line is a solid compact 2-piece construction. The new Kappa “Compact” line allows you to include many functions in a reduced space.
The new KAPPA “Compact” line is a direct result of feedback received from Casappa customers. This feedback has given Casappa the opportunity to understand the needs of our customers and implement the hydraulic knowledge gained into new and improved products.
The “Compact” line provides exceptional quality and reliability thanks to tri-dimensional modeling, virtual simulation of the pump’s behavior in the hydraulic system and testing on the machines.
The reduced dimensions as well as a large variety of drive shafts, mounting flanges and ports ensure great flexibility in the “Compact” line.

DISPLACEMENTS

From 19,63 cm^3/rev
To 81,68 cm^3/rev)

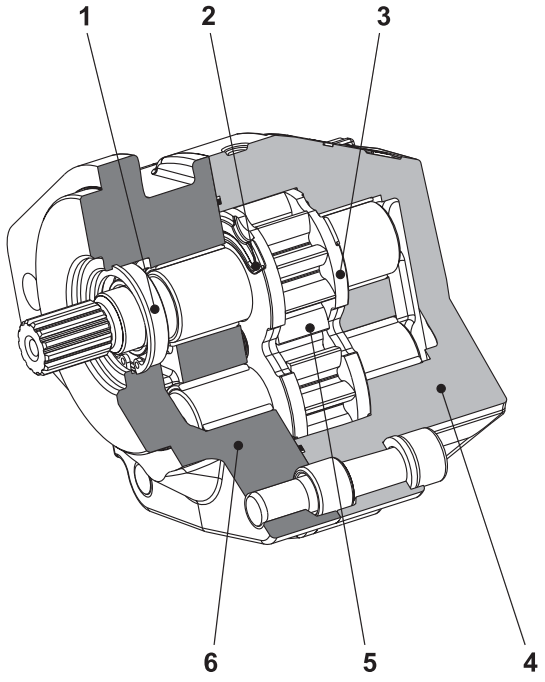
PRESSURE

Relief valve setting 300 bar
Relief valve max. peak pressure 320 bar

MAX. SPEED

Max. 3000 min^{-1}

- High operating pressures.
- Low noise emission.
- Available with built-in valves.
- Exceptional working life expectancy.



1	Shaft seal
2	Seal
3	Thrust plate
4	Body
5	Gear
6	Mounting flange

01/11.2012

FEATURES

Construction	External gear type pumps and motors
Mounting	SAE - standard flanges
Line connections	Screw and flange
Direction of rotation (looking at the drive shaft)	Anti-clock (S) - clockwise (D) - reversible external drain (R)
Inlet pressure range for pumps	0,7 ÷ 3 bar (abs.)
Max back pressure for single rotation motors	5 bar (continuous) @ min. speed (350 min^{-1})
	1 bar (continuous) @ max. speed (see page 6)
Max drain line pressure on reversible rotation motors	5 bar (continuous) @ min. speed (350 min^{-1})
	1 bar (continuous) @ max. speed (see page 6)
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 (◆)
				Min	Max continuous	Max peak	
ISO/DIN	Mineral oil based hydraulic fluid to ISO/DIN	See page 6	See page 6	-25	80	100	N
				-25	110	125	T-PV
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		N

(◆) **N**= Buna N (standard) - **T-PV**= Buna hydrogenated HNBR and viton shaft seal.

For Water-glycol fluid HFD or Phosphate ester fluid HFC please consult our technical sales department.

Tab. 2

Working pressure bar	Δp < (140)	140 < Δp < 210	Δp > 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 $ß_{10}$ (c) ≥ 200 according to ISO 16889	-	10 µm	10 µm
Achieved with filter $ß_{25}$ (c) ≥ 200 according to ISO 16889	25 µm	-	-

Casappa recommends to use its own production filters:

IKRON® Fluid Filtration

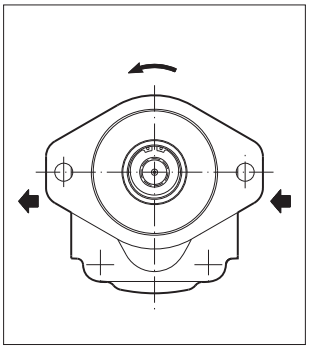
01/11.2012

General Notes

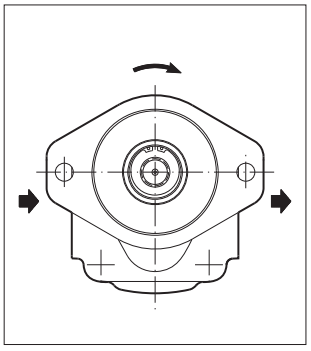
Available with different inlet and outlet ports.
If you use fire resistant fluids, specify the fluid type when ordering.
For more information please consult our technical sales department.

FEATURES

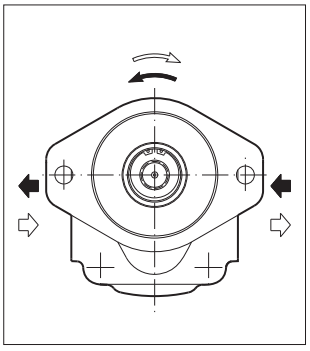
DEFINITION OF ROTATION DIRECTION LOOKING AT THE DRIVE SHAFT



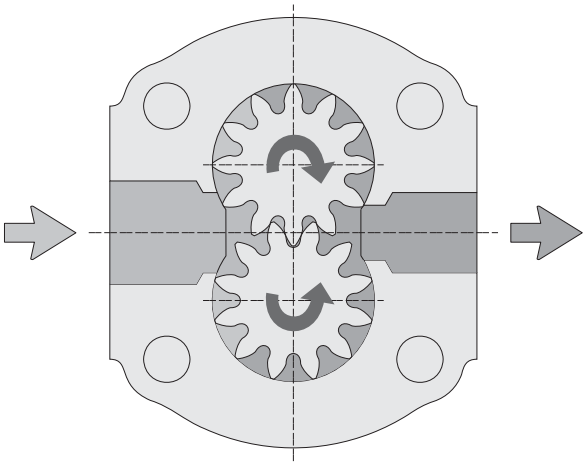
Anti-clock rotation



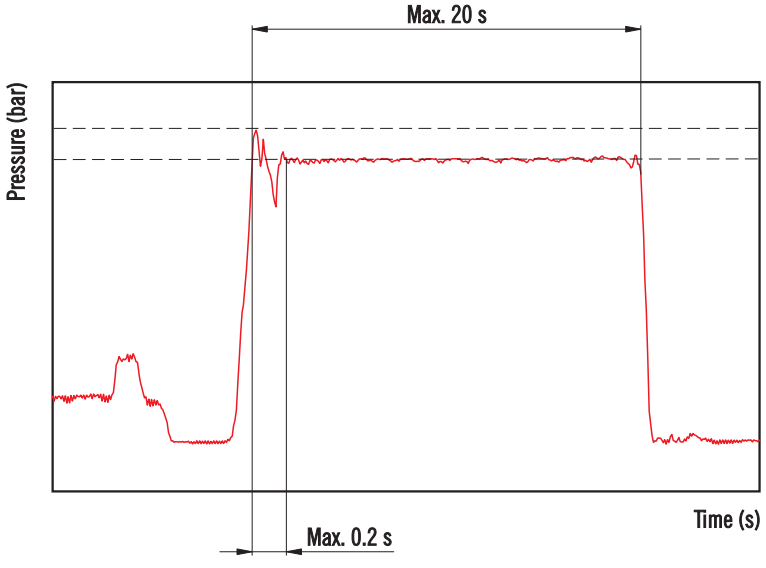
Clockwise rotation



Reversible rotation



PRESSURE DEFINITION



p_3 Relief valve max. peak pressure
p_2 Relief valve setting

To ensure proper operation, both p2 and p3 pressures must be kept within the limits stated on page 6.
If p2 is compliant, but p3 exceeds its limit, please decrease the relief setting p2 in order to keep the peak pressure p3 within the limit.

For high frequency applications please consult our technical sales department.

01/11.2012

GENERAL DATA

Pump type Motor type	Displacement	Body design	Performance	Max. pressure			Max. speed	Min. speed
				p_2		p_3		
	cm^3/rev			bar		bar	min^{-1}	min^{-1}
K. 30•19,5	19,63	HSC	Standard	290	O	310	3000	350
		KSL / HSC	High performance	300		320		
K. 30•22	21,99	HSC	Standard	290	O	310	3000	350
		KSL / HSC	High performance	300		320		
K. 30•24	24,03	HSC	Standard	280	O	300	3000	350
		KSL / HSC	High performance	300		320		
K. 30•27	26,7	HSC	Standard	270	O	290	3000	350
		KSL / HSC	High performance	300		320		
K. 30•29	29,06	HSC	Standard	270	O	290	3000	350
		KSL / HSC	High performance	300		320		
K. 30•31	30,63	HSC	Standard	250	O	270	3000	350
		KSL / HSC	High performance	300		320		
K. 30•34	34,56	HSC	Standard	240	O	260	3000	350
		KSL / HSC	High performance	300		320		
K. 30•38	39,27	HSC	Standard	240	O	260	3000	350
		KSL / HSC	High performance	300		320		
K. 30•41	41,62	CSC	Standard	250	O	270	3000	350
K. 30•43	43,98	CSC	Standard	250	O	270	3000	350
K. 30•46	46,34	CSC	Standard	240	O	260	3000	350
K. 30•51	51,83	CSC	Standard	240	O	260	2500	350
K. 30•56	56,54	CSC	Standard	220	O	240	2500	350
K. 30•61	61,26	HSC	High performance	260		280	2500	350
K. 30•73	73,82	HSC	High performance	250		270	2500	350
K. 30•82	81,68	HSC	High performance	230		250	2800	350

Replaces: 01/11.2012

O 02/04.2013

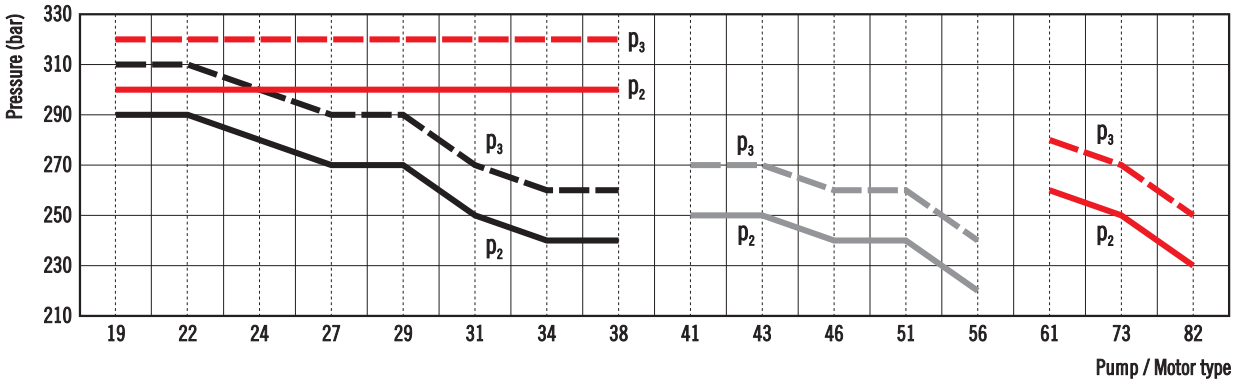
p_2= Relief valve setting

p_3= Relief valve max. peak pressure

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

GENERAL DATA

PUMP / MOTOR TYPE CHOICE



Body design: **KSL/HSC**
Performance: **High performance**

Body design: **HSC**
Performance: **Standard**

Body design: **CSC**
Performance: **Standard**

Q	l/min	Flow
M	Nm	Torque
P	kW	Power
V	cm^3/rev	Displacement
n	min^{-1}	Speed
Δp	bar	Pressure

Efficiencies		Pump	Motor
$\eta_v = \eta_v (V, \Delta p, n)$	Volumetric efficiency	(≈ 0,98)	(≈ 0,97)
$\eta_{hm} = \eta_{hm} (V, \Delta p, n)$	Hydro-mecha nical efficiency	(≈ 0,90)	(≈ 0,88)
$\eta_t = \eta_v \bullet \eta_{hm}$	Overall efficiency	(≈ 0,88)	(≈ 0,85)

Design calculations for pump

$$Q = Q_{theor.} \bullet \eta_v \quad [l/min]$$

$$Q_{theor.} = \frac{V \bullet n}{1000} \quad [l/min]$$

$$M = \frac{M_{theor.}}{\eta_{hm}} \quad [Nm]$$

$$M_{theor.} = \frac{\Delta p \bullet V}{62,83} \quad [Nm]$$

$$P_{IN} = \frac{P_{OUT}}{\eta_t} \quad [kW]$$

$$P_{OUT} = \frac{\Delta p \bullet Q}{600} \quad [kW]$$

Design calculations for motor

$$Q = \frac{Q_{theor.}}{\eta_v} \quad [l/min]$$

$$Q_{theor.} = \frac{V \bullet n}{1000} \quad [l/min]$$

$$M = M_{theor.} \bullet \eta_{hm} \quad [Nm]$$

$$M_{theor.} = \frac{\Delta p \bullet V}{62,83} \quad [Nm]$$

$$P_{IN} = \frac{\Delta p \bullet Q}{600} \quad [kW]$$

$$P_{OUT} = P_{IN} \bullet \eta_t \quad [kW]$$

01/11.2012

DOUBLE PUMPS

KAPPA series pumps can be coupled together in combination. In applications where the input power requirement of each section varies, the section with the greater requirement must be at the drive shaft end, and progressively smaller to the rear.
Features and performances are the same as the corresponding single pumps, but pressures must be limited by the transmissible torque of the drive and connecting shafts. To have appropriate data, use the formula above.
The maximum rotational speed is that of the lowest rated speed of the single units incorporated.

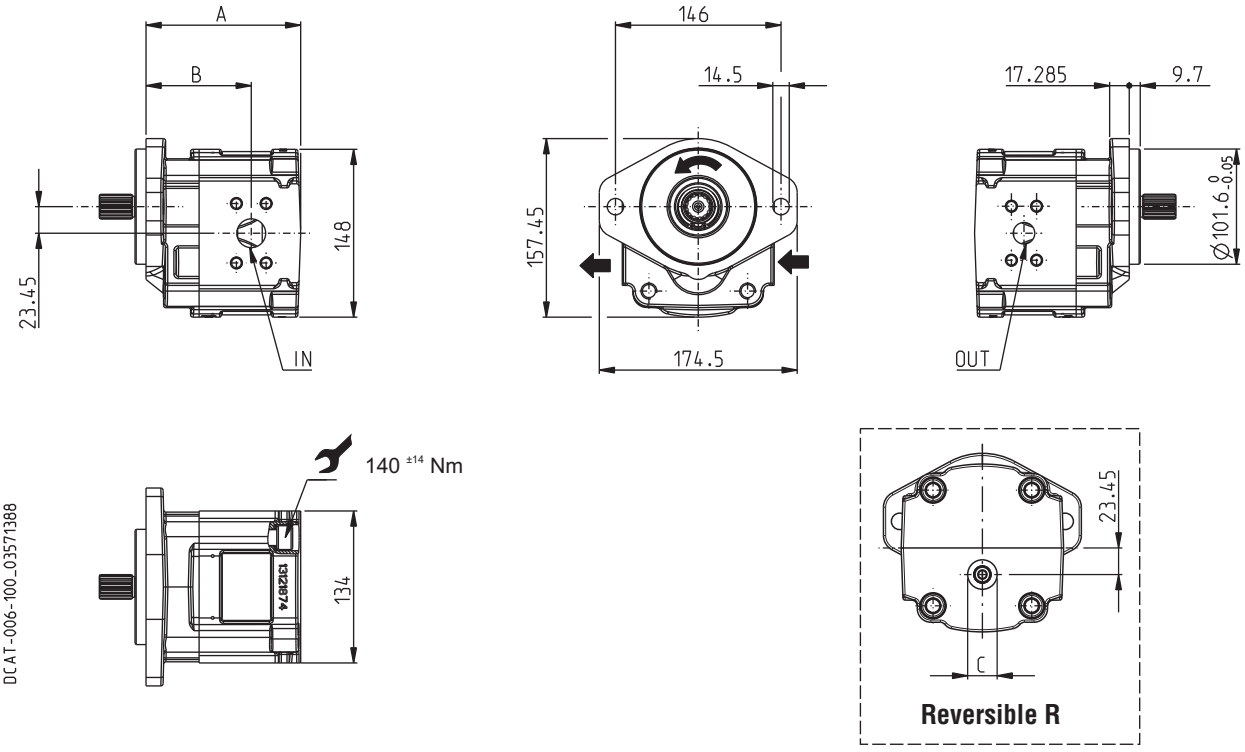
Note: The torque absorbed from the shaft of the first pump results from the sum of the torques due to all single stages.
The achieved value must not exceed the maximum torque limit given for the shaft of the first pump.

Available with common inlet. For more information please consult our technical sales department.

KAPPA 30 SINGLE UNITS SHORT BODY - SIDE PORTS CSC

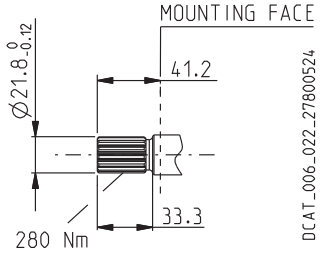
Mounting flange: **K9**
SAE "B" 2 HOLES
Conforms to SAE J744

Ports type: **SSM**
SAE FLANGED PORTS J518



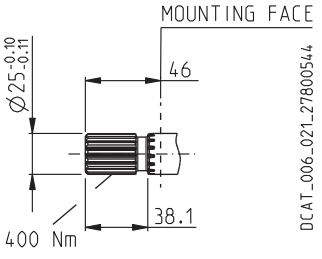
Drive shaft availability

A8 (SAE "B" Spline)



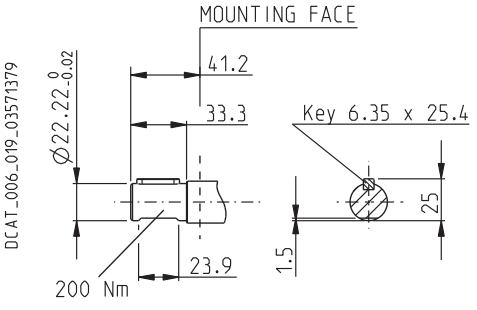
Ext. Involute Spline SAE J498B
with major diameter modified
13 teeth - 16/32 Pitch - 30 deg
Flat Root - Side fit - Class 1

A5 (SAE "BB" Spline)



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

32 (SAE "B" Straight)



Pump type	Motor type	Displacement	A	B	Ports code				C Drain port (◆)	
					Gear pumps		Gear motors			
		cm³/rev	mm	mm	IN	OUT	IN	OUT	Gas BSPP	SAE ODT
KP 30•41	**KM 30•41**	41,62	141,8	97,3	**MD**	**MC**	**MC**	**MD**	**GC**	**OA**
KP 30•43	**KM 30•43**	43,98	143,3	98,8	**MD**	**MC**	**MC**	**MD**	**GC**	**OA**
KP 30•46	**KM 30•46**	46,34	144,8	100,3	**MD**	**MC**	**MC**	**MD**	**GC**	**OA**
KP 30•51	**KM 30•51**	51,83	148,3	103,8	**MD**	**MC**	**MC**	**MD**	**GC**	**OA**
KP 30•56	**KM 30•56**	56,54	151,3	106,8	**ME**	**MD**	**MD**	**ME**	**GC**	**OA**

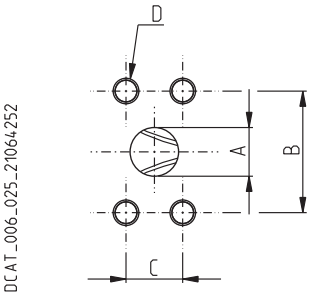
(◆) Dimension on page 11 and 13

01/11.2012

KAPPA 30 SINGLE UNITS SHORT BODY - SIDE PORTS CSC

SAE FLANGED PORTS J518 - Standard pressure series 3000 PSI SSM

Metric thread ISO 60° conforms to ISO/R 262



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CODE	A	B	C	D		
	mm	mm	mm	Thread Depth (mm)	Nm	Nm
MC	25,4	52,4	26,2	M 10 Depth 17	20 +1	30 +2,5
MD	30,5	58,7	30,2	M 10 Depth 17	20 +1	35 +2,5
ME	39,3	69,8	35,7	M 12 Depth 17	30 +2,5	60 +5

Tightening torque for low pressure side port

Tightening torque for high pressure side port (values obtained at 350 bar)

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

How to order

1	2		3		4		5		6	
		0 -		K9 - L	.. / ..	-		-		- CSC (ANF3) (CN) (VNR01)

1	Type	Code
Pump type		KP 30·…
Motor type		KM 30·…

2	Rotation	Code
Left		S
Right		D
Reversible		R

3	Drive shaft	Code
SAE “B” spline (13 teeth)		A8
SAE “BB” spline (15 teeth)		A5
SAE “B” straight		32

Code	Ports IN/OUT	4
../..	See codes on previous page	

Code	Seals (a)	5
N	Buna N (standard)	
T-PV	Buna hydrogenated HNBR and viton shaft seal	

Code	Drain ports	6
OA	SAE Straight thread ports (ODT)	
GC	GAS Straight thread ports (BSPP)	

(a) Choose the seals according to the temperature shown on page 4.

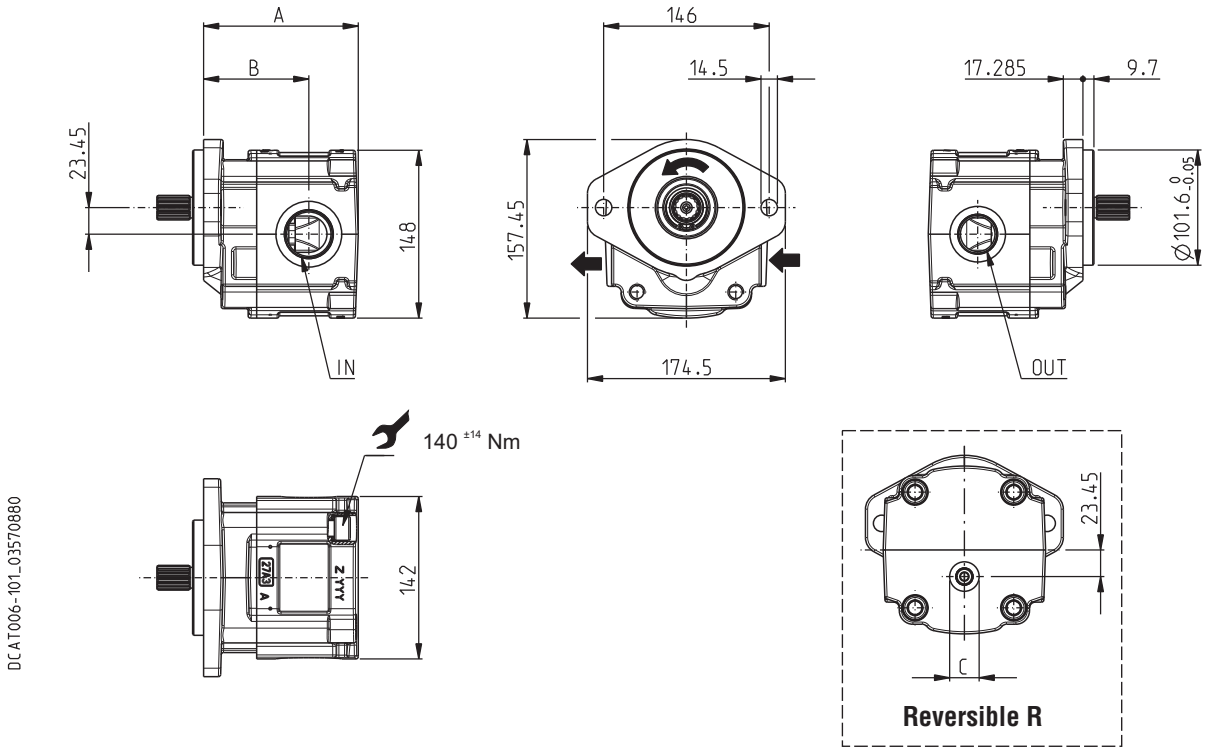
01/11.2012

Order example KP 30•41 R0-A8 K9-L MD/MC-T-PV-OA-CSC (ANF3) (CN) (VNR01)

KAPPA 30 SINGLE UNITS SHORT BODY - SIDE PORTS CSC

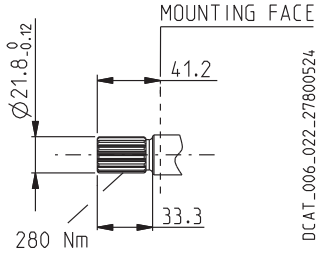
Mounting flange: **K9**
SAE "B" 2 HOLES
Conforms to SAE J744

Ports type: **ODT**
SAE STRAIGHT THREAD PORTS J514



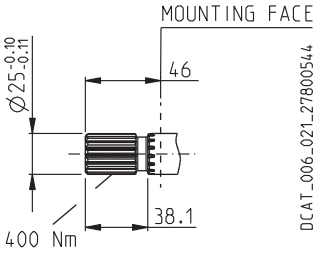
Drive shaft availability

A8 (SAE "B" Spline)



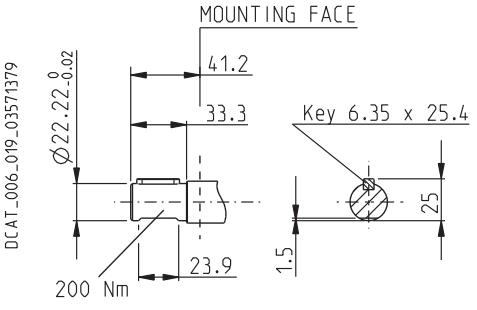
Ext. Involute Spline SAE J498B
with major diameter modified
13 teeth - 16/32 Pitch - 30 deg
Flat Root - Side fit - Class 1

A5 (SAE "BB" Spline)



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

32 (SAE "B" Straight)



Pump type	Motor type	Displacement	A	B	Ports cod				C Drain port (◆)	
					Gear pumps		Gear motors			
		cm³/rev	mm	mm	IN	OUT	IN	OUT	Gas BSPP	SAE ODT
KP 30•41	KM 30•41	41,62	141,8	97,3	OG	OF	OF	OG	GC	OA
KP 30•43	KM 30•43	43,98	143,3	98,8	OG	OF	OF	OG	GC	OA
KP 30•46	KM 30•46	46,34	144,8	100,3	OG	OF	OF	OG	GC	OA
KP 30•51	KM 30•51	51,83	148,3	103,8	OG	OF	OF	OG	GC	OA
KP 30•56	KM 30•56	56,54	151,3	106,8	OG	OF	OF	OG	GC	OA

(◆) Dimension on page 11 and 13

01/11.2012

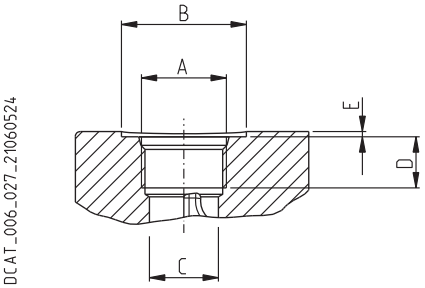
KAPPA 30 SINGLE UNITS SHORT BODY - SIDE PORTS CSC

SAE STRAIGHT THREAD PORTS J514 ODT

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

CODE	Nominal size	A	Ø B	Ø C	D	E		
			mm	mm	mm	mm	Nm	Nm
OA (◆)	3/8”	9/16” - 12 UNF - 2B	26	13	15	2	15 +1	—
OF	1”	1 5/16” - 12 UNF - 2B	49	30,5	20	2	60 +5	170 +10
OG	1” 1/4	1 5/8” - 12 UNF - 2B	58	39,1	20	2	70 +5	—

(◆) = Drain port



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Tightening torque for low pressure side port

Tightening torque for high pressure side port (values obtained at 350 bar)

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

How to order

1	2		3		4		5		6	
		0 -		K9 - L	.. / ..	-		-		- CSC (ANF3) (CN) (VNR01)

1	Type	Code
Pump type		KP 30·…
Motor type		KM 30·…

2	Rotation	Code
Left		S
Right		D
Reversible		R

3	Drive shaft	Code
SAE “B” spline (13 teeth)		A8
SAE “BB” spline (15 teeth)		A5
SAE “B” straight		32

Code	Ports IN/OUT	4
../..	See codes on previous page	

Code	Seals (a)	5
N	Buna N (standard)	
T-PV	Buna hydrogenated HNBR and viton shaft seal	

Code	Drain ports	6
OA	SAE Straight thread ports (ODT)	
GC	GAS Straight thread ports (BSPP)	

(a) Choose the seals according to the temperature shown on page 4.

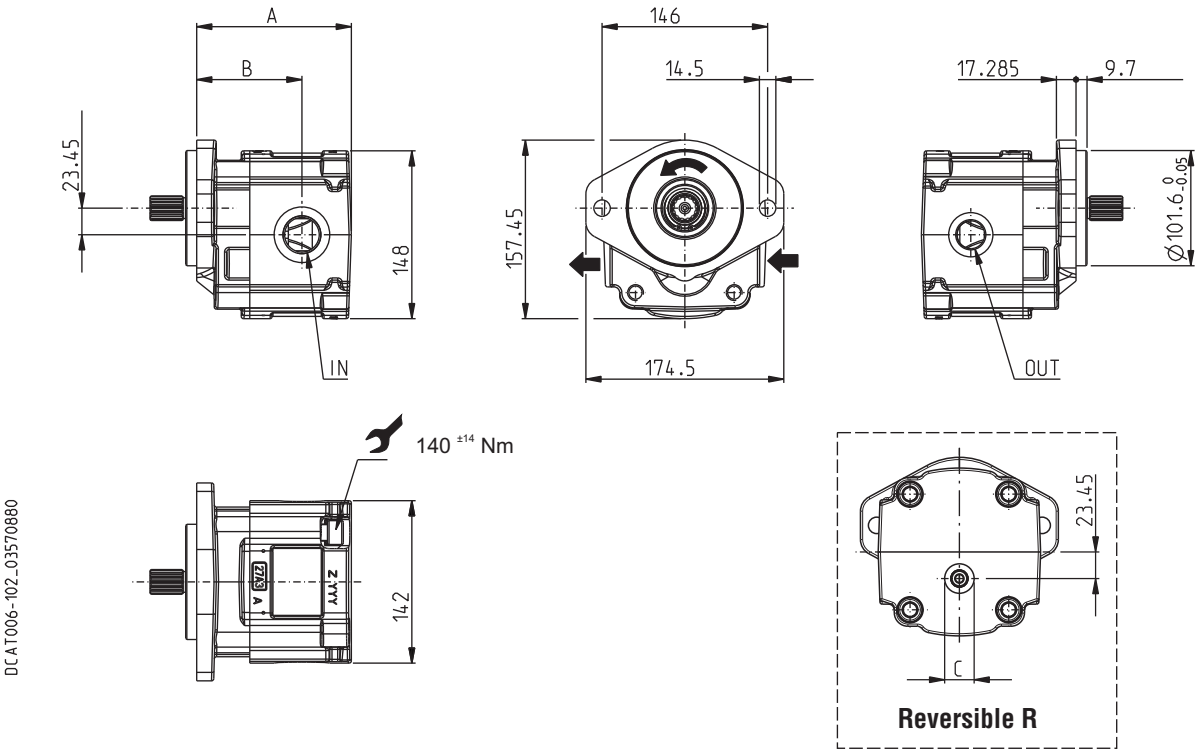
01/11.2012

Order example KP 30•41 R0-A8 K9-L OG/OF-T-PV-OA-CSC (ANF3) (CN) (VNR01)

KAPPA 30 SINGLE UNITS SHORT BODY - SIDE PORTS CSC

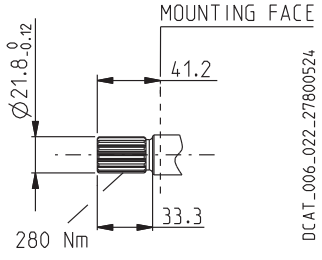
Mounting flange: **K9**
SAE "B" 2 HOLES
Conforms to SAE J744

Ports type: **BSPP**
GAS STRAIGHT THREAD PORTS



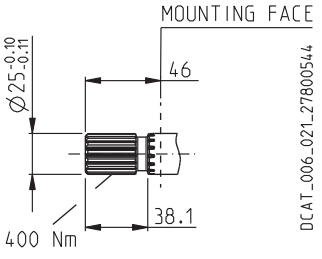
Drive shaft availability

A8 (SAE "B" Spline)



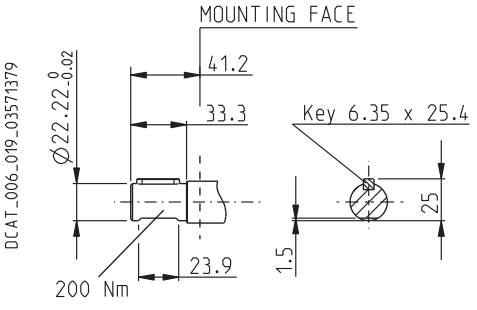
Ext. Involute Spline SAE J498B
with major diameter modified
13 teeth - 16/32 Pitch - 30 deg
Flat Root - Side fit - Class 1

A5 (SAE "BB" Spline)



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

32 (SAE "B" Straight)



Pump type	Motor type	Displacement	A	B	Ports code				C Drain port (◆)	
					Gear pumps		Gear motors			
		cm³/rev	mm	mm	IN	OUT	IN	OUT	Gas BSPP	SAE ODT
KP 30•41	**KM 30•41**	41,62	141,8	97,3	**GG**	**GF**	**GF**	**GG**	**GC**	**OA**
KP 30•43	**KM 30•43**	43,98	143,3	98,8	**GG**	**GF**	**GF**	**GG**	**GC**	**OA**
KP 30•46	**KM 30•46**	46,34	144,8	100,3	**GG**	**GF**	**GF**	**GG**	**GC**	**OA**
KP 30•51	**KM 30•51**	51,83	148,3	103,8	**GG**	**GF**	**GF**	**GG**	**GC**	**OA**
KP 30•56	**KM 30•56**	56,54	151,3	106,8	**GG**	**GF**	**GF**	**GG**	**GC**	**OA**

(◆) Dimension on page 11 and 13

01/11.2012

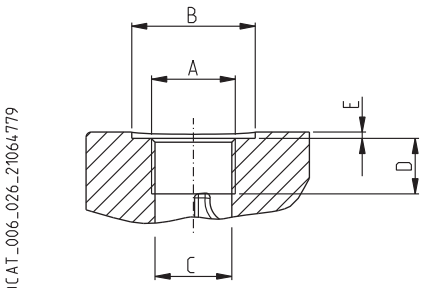
KAPPA 30 SINGLE UNITS SHORT BODY - SIDE PORTS CSC

GAS STRAIGHT THREAD PORTS BSPP

British standard pipe parallel (55°) conforms to UNI - ISO 228

CODE	Nominal size	A	Ø B	Ø C	D	E		
			mm	mm	mm	mm	Nm	Nm
GC (◆)	3/8"	G 3/8	25	15	14	2	15 $^{+1}$	—
GF	1"	G 1	49	30,5	22	2,5	50 $^{+2,5}$	130 $^{+10}$
GG	1" 1/4	G 1 1/4	56	39	24	2,5	60 $^{+5}$	170 $^{+15}$

(◆) Drain port



DCAT_006_026_21064779

Tightening torque for low pressure side port

Tightening torque for high pressure side port (values obtained at 350 bar)

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

How to order

1	2		3		4		5		6	
		0 -		K9 - L	.. / ..	-		-		- CSC (ANF3) (CN) (VNR01)

1	Type	Code
Pump type		KP 30·…
Motor type		KM 30·…

2	Rotation	Code
Left		S
Right		D
Reversible		R

3	Drive shaft	Code
SAE "B" spline (13 teeth)		A8
SAE "BB" spline (15 teeth)		A5
SAE "B" straight		32

Code	Ports IN/OUT	4
../..	See codes on previous page	

Code	Seals (a)	5
N	Buna N (standard)	
T-PV	Buna hydrogenated HNBR and viton shaft seal	

Code	Drain ports	6
OA	SAE Straight thread ports (ODT)	
GC	GAS Straight thread ports (BSPP)	

(a) Choose the seals according to the temperature shown on page 4.

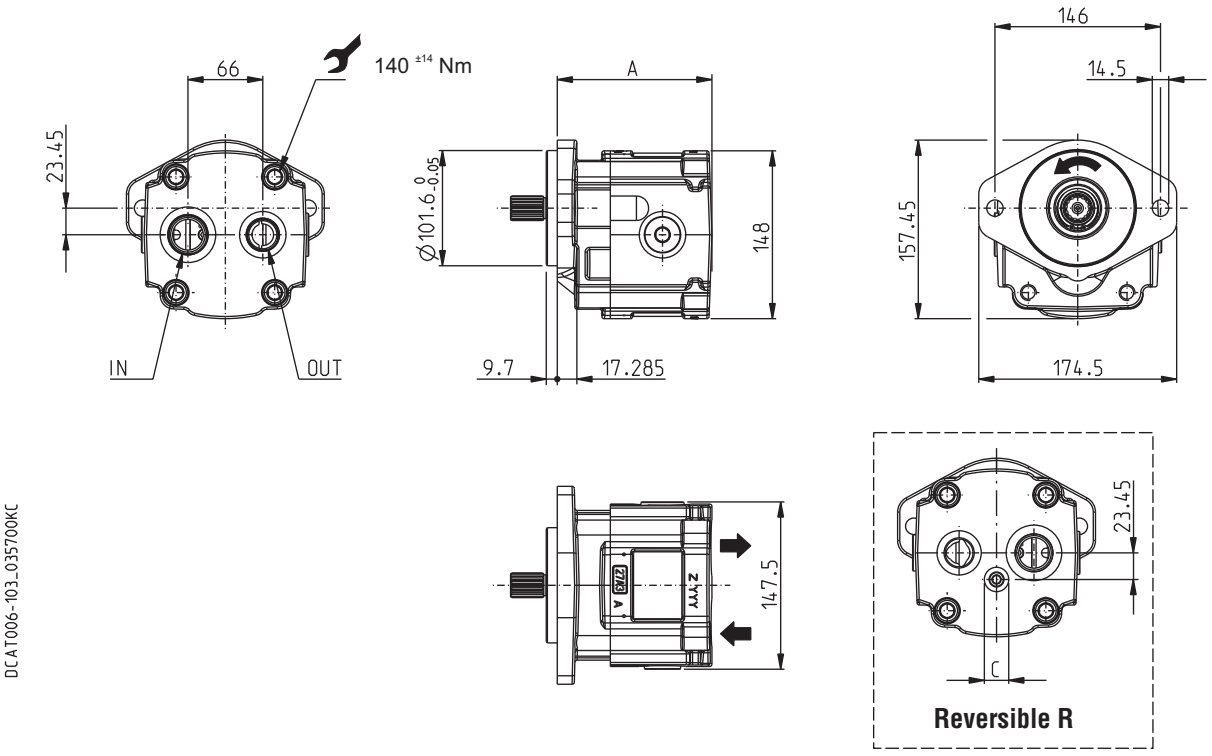
01/11.2012

Order example KP 30•41 R0-A8 K9-L GG/GF-T-PV-GC-CSC (ANF3) (CN) (VNR01)

KAPPA 30 SINGLE UNITS SHORT BODY - REAR PORTS CSC

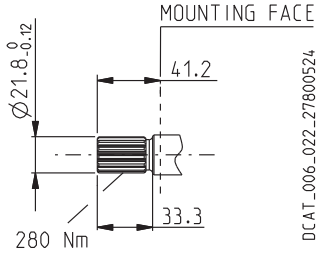
Mounting flange: **K9**
SAE "B" 2 HOLES
Conforms to SAE J744

Ports type: **ODT**
SAE STRAIGHT THREAD PORTS J514



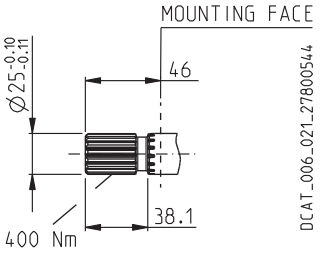
Drive shaft availability

A8 (SAE "B" Spline)



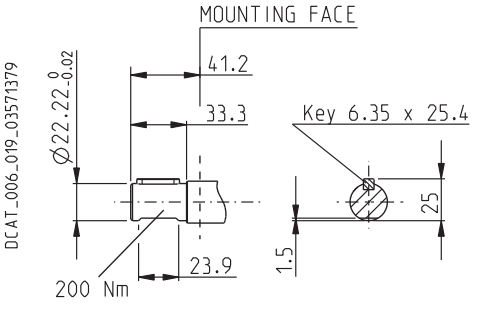
Ext. Involute Spline SAE J498B
with major diameter modified
13 teeth - 16/32 Pitch - 30 deg
Flat Root - Side fit - Class 1

A5 (SAE "BB" Spline)



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

32 (SAE "B" Straight)



Pump type	Motor type	Displacement	A	Ports code				C	
				Gear pumps		Gear motors		Drain port (◆)	
		cm³/rev	mm	IN	OUT	IN	OUT	Gas BSPP	SAE ODT
KP 30•41	**KM 30•41**	41,62	139,8	**OG**	**OF**	**OF**	**OG**	**GC**	**OA**
KP 30•43	**KM 30•43**	43,98	141,3	**OG**	**OF**	**OF**	**OG**	**GC**	**OA**
KP 30•46	**KM 30•46**	46,34	142,8	**OG**	**OF**	**OF**	**OG**	**GC**	**OA**
KP 30•51	**KM 30•51**	51,83	146,3	**OG**	**OF**	**OF**	**OG**	**GC**	**OA**
KP 30•56	**KM 30•56**	56,54	149,3	**OG**	**OF**	**OF**	**OG**	**GC**	**OA**

(◆) Dimension on page 15 and 17

01/11.2012

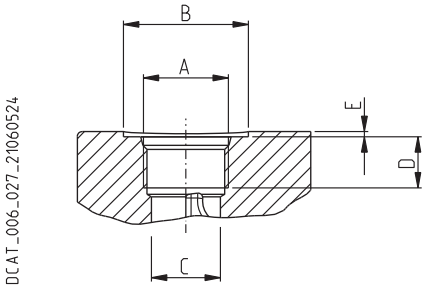
KAPPA 30 SINGLE UNITS SHORT BODY - REAR PORTS CSC

SAE STRAIGHT THREAD PORTS J514 ODT

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

CODE	Nominal size	A	Ø B	Ø C	D	E		
			mm	mm	mm	mm	Nm	Nm
OA (◆)	3/8”	9/16” - 12 UNF - 2B	26	13	15	2	15 +1	—
OF	1”	1 5/16” - 12 UNF - 2B	49	30,5	20	2	60 +5	170 +10
OG	1” 1/4	1 5/8” - 12 UNF - 2B	58	39,1	20	2	70 +5	—

(◆) = Drain port



DCAT_006_027_21060524

Tightening torque for low pressure side port

Tightening torque for high pressure side port (values obtained at 350 bar)

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

How to order

1 [ ] 2 [ ] 0 - 3 [ ] K9 - P 4 [.. / ..] - 5 [ ] - 6 [ ] - CSC (ANF3) (CN) (VNR01)

1	Type	Code
Pump type		KP 30·…
Motor type		KM 30·…

2	Rotation	Code
Left		S
Right		D
Reversible		R

3	Drive shaft	Code
SAE “B” spline (13 teeth)		A8
SAE “BB” spline (15 teeth)		A5
SAE “B” straight		32

Code	Ports IN/OUT	4
../..	See codes on previous page	

Code	Seals (a)	5
N	Buna N (standard)	
T-PV	Buna hydrogenated HNBR and viton shaft seal	

Code	Drain ports	6
OA	SAE Straight thread ports (ODT)	
GC	GAS Straight thread ports (BSPP)	

(a) Choose the seals according to the temperature shown on page 4.

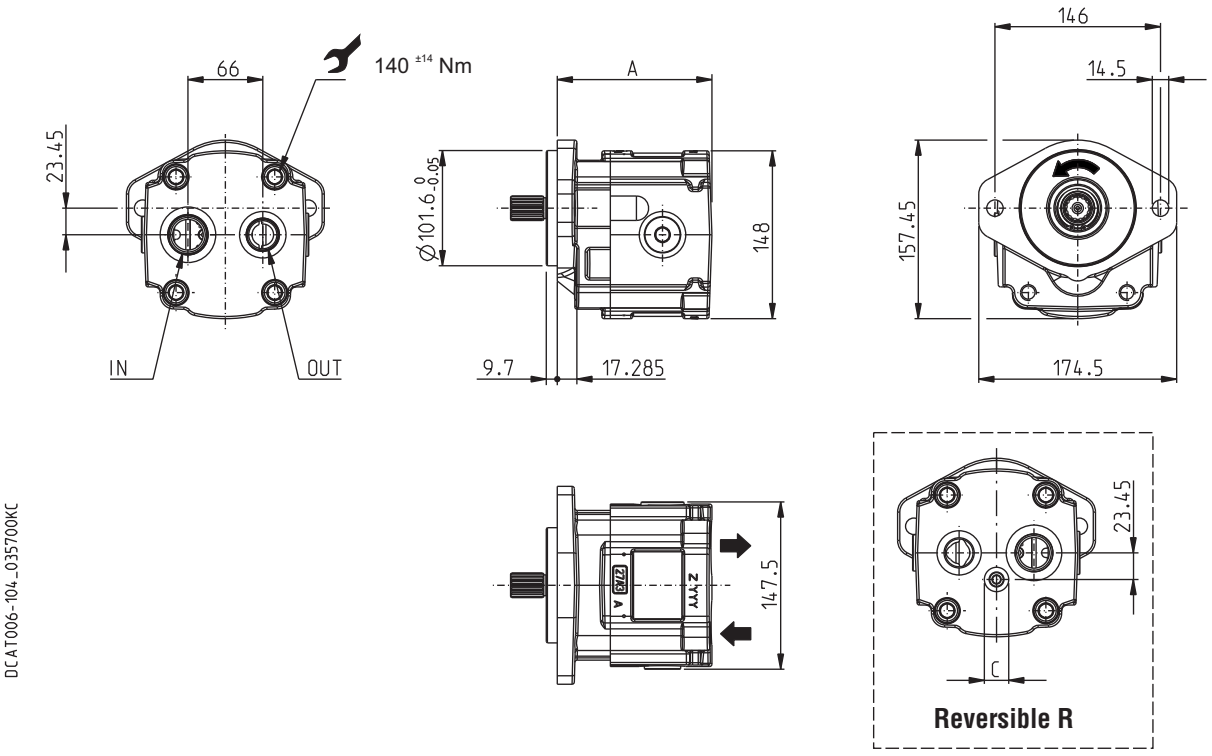
01/11.2012

Order example KP 30•41 R0-A8 K9-P OG/OF-T-PV-OA-CSC (ANF3) (CN) (VNR01)

KAPPA 30 SINGLE UNITS SHORT BODY - REAR PORTS CSC

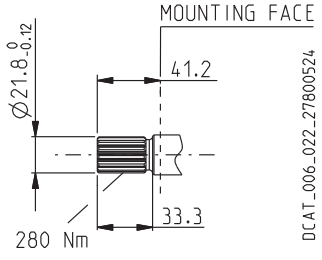
Mounting flange: **K9**
SAE "B" 2 HOLES
Conforms to SAE J744

Ports type: **BSPP**
GAS STRAIGHT THREAD PORTS



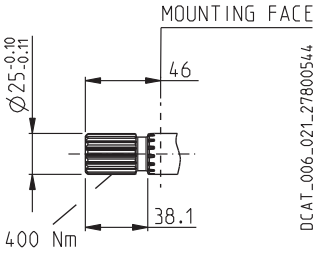
Drive shaft availability

A8 (SAE "B" Spline)



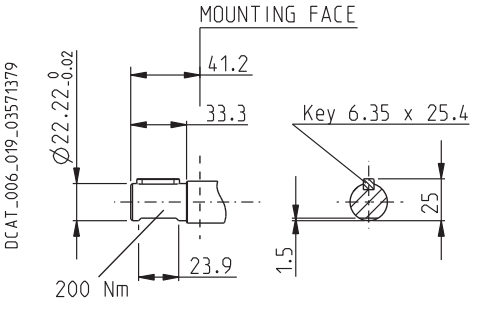
Ext. Involute Spline SAE J498B
with major diameter modified
13 teeth - 16/32 Pitch - 30 deg
Flat Root - Side fit - Class 1

A5 (SAE "BB" Spline)



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

32 (SAE "B" Straight)



Pump type	Motor type	Displacement	A	Ports code				C Drain port (◆)	
				Gear pumps		Gear motors			
		cm³/rev	mm	IN	OUT	IN	OUT	Gas BSPP	SAE ODT
KP 30•41	KM 30•41	41,62	139,8	GG	GF	GF	GG	GC	OA
KP 30•43	KM 30•43	43,98	141,3	GG	GF	GF	GG	GC	OA
KP 30•46	KM 30•46	46,34	142,8	GG	GF	GF	GG	GC	OA
KP 30•51	KM 30•51	51,83	146,3	GG	GF	GF	GG	GC	OA
KP 30•56	KM 30•56	56,54	149,3	GG	GF	GF	GG	GC	OA

(◆) Dimension on page 15 and 17

01/11.2012

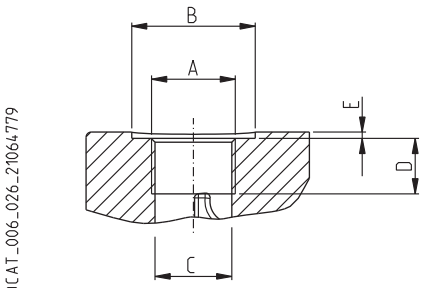
KAPPA 30 SINGLE UNITS SHORT BODY - REAR PORTS CSC

GAS STRAIGHT THREAD PORTS BSPP

British standard pipe parallel (55°) conforms to UNI - ISO 228

CODE	Nominal size	A	Ø B	Ø C	D	E		
			mm	mm	mm	mm	Nm	Nm
GC (◆)	3/8"	G 3/8	25	15	14	2	15 $^{+1}$	—
GF	1"	G 1	49	30,5	22	2,5	50 $^{+2,5}$	130 $^{+10}$
GG	1" 1/4	G 1 1/4	56	39	24	2,5	60 $^{+5}$	170 $^{+15}$

(◆) Drain port



DCAT_006_026_21064779

Tightening torque for low pressure side port

Tightening torque for high pressure side port (values obtained at 350 bar)

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

How to order

1	2		3		4		5		6	
		0 -		K9 - P	.. / ..	-		-		- CSC (ANF3) (CN) (VNR01)

1	Type	Code
Pump type		KP 30·…
Motor type		KM 30·…

2	Rotation	Code
Left		S
Right		D
Reversible		R

3	Drive shaft	Code
SAE "B" spline (13 teeth)		A8
SAE "BB" spline (15 teeth)		A5
SAE "B" straight		32

Code	Ports IN/OUT	4
../..	See codes on previous page	

Code	Seals (a)	5
N	Buna N (standard)	
T-PV	Buna hydrogenated HNBR and viton shaft seal	

Code	Drain ports	6
OA	SAE Straight thread ports (ODT)	
GC	GAS Straight thread ports (BSPP)	

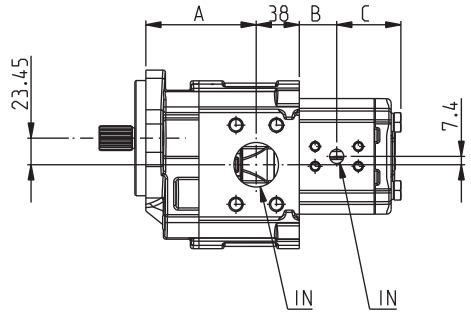
(a) Choose the seals according to the temperature shown on page 4.

01/11.2012

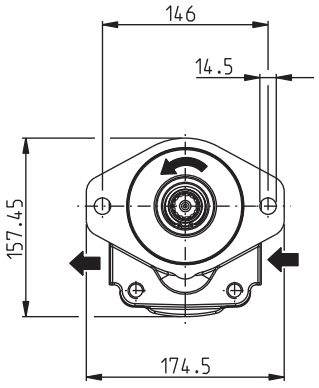
Order example KP 30•41 R0-A8 K9-P GG/GF-T-PV-GC-CSC (ANF3) (CN) (VNR01)

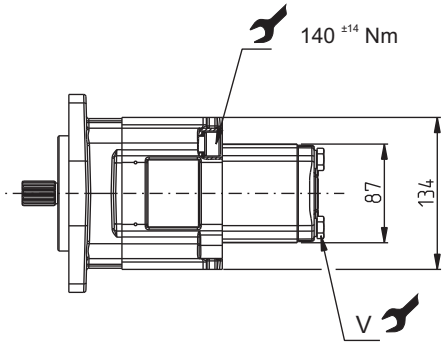
KAPPA 30 DOUBLE PUMPS KP30/PL20 SHORT BODY CSC

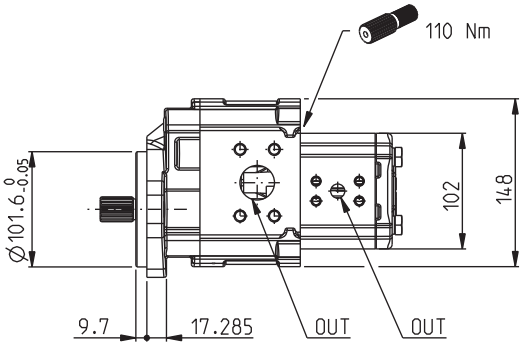
Mounting flange: **K9**
SAE "B" 2 HOLES
Conforms to SAE J744



Ports type: **SSM**
SAE FLANGED PORTS J518







DCAT006-105_79918725

Drive shaft availability (See page 8)

The torque absorbed from the shaft of the first pump results from the sum of the torques due to all single stages.
The achieved value must not exceed the maximum torque limit given for the shaft of the first pump.

Rear cover material	V Screws tightening torque Nm (lbf in)
Aluminium	45 ±4,5 (358 ÷ 438)
Cast iron	70 ±7 (558 ÷ 682)

Pump type	Displacement	A	Ports code	
	cm³/rev	mm	IN	OUT
KP 30•41	41,62	97,3	MD	MC
KP 30•43	43,98	98,8	MD	MC
KP 30•46	46,34	100,3	MD	MC
KP 30•51	51,83	103,8	MD	MC
KP 30•56	56,54	106,8	ME	MD

Pump type	Displa-cement	B	C	Ports code	
	cm³/rev	mm	mm	IN	OUT
PLP 20•4	4,95	25,8	49,3	MA	MA
PLP 20•6,3	6,61	27	50,5	MA	MA
PLP 20•8	8,26	28,3	51,8	MA	MA
PLP 20•10,5	10,9	30,3	53,8	MA	MA
PLP 20•11,2	11,23	30,5	54	MA	MA
PLP 20•14	14,53	33	56,5	MB	MA
PLP 20•16	16,85	34,8	58,3	MB	MA
PLP 20•20	21,14	38	61,5	MB	MA

Polaris 20: for features please consult the proper technical catalog.

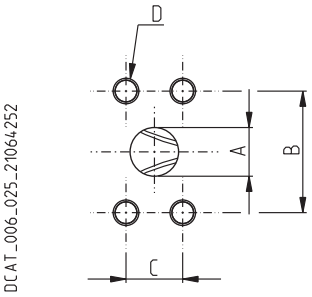
01/11.2012

KAPPA 30 DOUBLE PUMPS KP30/PL20 SHORT BODY CSC

SAE FLANGED PORTS J518 - Standard pressure series 3000 PSI SSM

Metric thread ISO 60° conforms to ISO/R 262

CODE	A	B	C	D		
	mm	mm	mm	Thread Depth (mm)	Nm	Nm
MA	12,5	17,5	38,1	M 8 Depth 14	15 +1	15 +1
MB	19	22,2	47,6	M 10 Depth 14	20 +1	20 +1
MC	25,4	52,4	26,2	M 10 Depth 17	20 +1	30 +2,5
MD	30,5	58,7	30,2	M 10 Depth 17	20 +1	35 +2,5
ME	39,3	69,8	35,7	M 12 Depth 17	30 +2,5	60 +5



Tightening torque for low pressure side port

Tightening torque for high pressure side port (values obtained at 350 bar)

How to order

1 [ ] 2 [ ] - [ ] K9 - L 3 [ ] - 45 - CSC /

Front pump

1 [ ] - L 3 [ ] - 4 [ ] 5 [ ] - 6 [ ] / FS - 7 [ ] - 8 [ ] (ANF3) (CN) (VNR01)

Rear pump

1 Type	Code
Front pump type	KP 30·…
Rear pump type	PLP 20·…

2 Drive shaft	Code
SAE “B” spline (13 teeth)	A8
SAE “BB” spline (15 teeth)	A5
SAE “B” straight	32

3 Ports IN/OUT (a)	Code
See codes on previous page	../..

4 Inlet combination	Code
Two inlet (standard) no code	…
Common inlet	N7

Code	5 Rotation
S	Left
D	Right

Code	6 Seals (b)
…	Buna N (standard) no code
T-PV	Buna hydrogenated HNBR and viton shaft seal

Code	7 Rear cover
…	Cast iron (standard) - no code
L	Aluminium

Code	8 Rear pump thrust plate
…	Standard - no code - from 4 to 14 type
AV	High speed - from 16 to 20 type

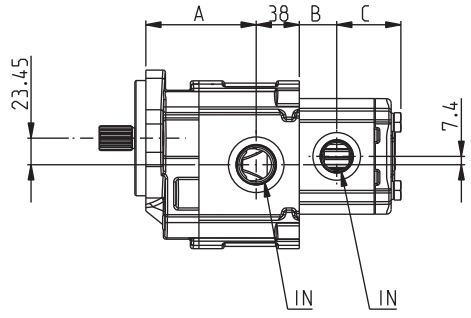
(a) For rear pump with common inlet, please write only /OUT code.
(b) Choose the seals according to the temperature shown on page 4.

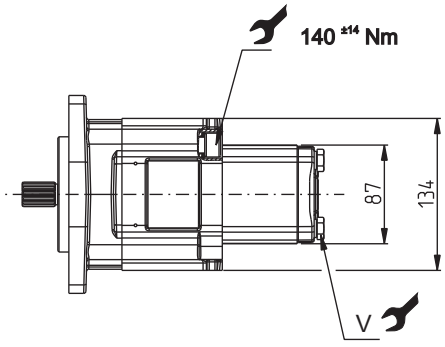
Order example KP 30•41-A8 K9-L MD/MC-45-CSC/PLP 20•16-L /MA-N7 S-T-PV/FS-L-AV (ANF3) (CN) (VNR01)

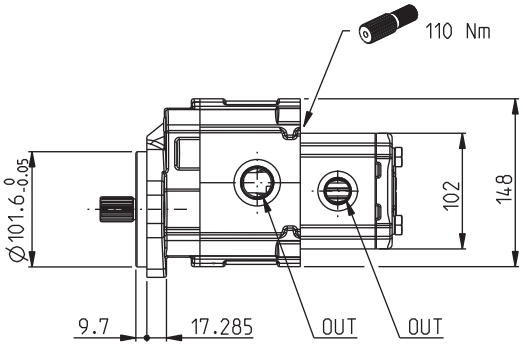
01/11.2012

KAPPA 30 DOUBLE PUMPS KP30/PL20 SHORT BODY CSC

Mounting flange: **K9**
SAE "B" 2 HOLES
Conforms to SAE J744

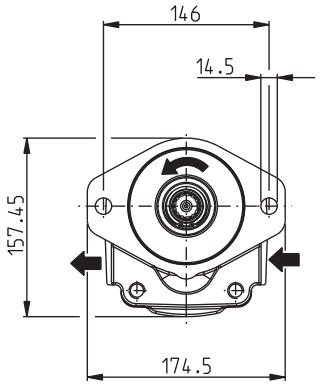






DCAT006-107_79918725

Ports type: **ODT**
SAE STRAIGHT THREAD PORTS J514



Drive shaft availability (See page 8)

The torque absorbed from the shaft of the first pump results from the sum of the torques due to all single stages.
The achieved value must not exceed the maximum torque limit given for the shaft of the first pump.

Rear cover material	V Screws tightening torque Nm (lbf in)
Aluminium	45 ±4,5 (358 ÷ 438)
Cast iron	70 ±7 (558 ÷ 682)

Pump type	Displacement	A	Ports code	
	cm³/rev	mm	IN	OUT
KP 30•41	41,62	97,3	OG	OF
KP 30•43	43,98	98,8	OG	OF
KP 30•46	46,34	100,3	OG	OF
KP 30•51	51,83	103,8	OG	OF
KP 30•56	56,54	106,8	OG	OF

Pump type	Displa-cement	B	C	Ports code	
	cm³/rev	mm	mm	IN	OUT
PLP 20•4	4,95	25,8	49,3	OC	OC
PLP 20•6,3	6,61	27	50,5	OC	OC
PLP 20•8	8,26	28,3	51,8	OC	OC
PLP 20•10,5	10,9	30,3	53,8	OC	OC
PLP 20•11,2	11,23	30,5	54	OC	OC
PLP 20•14	14,53	33	56,5	OD	OC
PLP 20•16	16,85	34,8	58,3	OD	OC
PLP 20•20	21,14	38	61,5	OD	OC

Polaris 20: for features please consult the proper technical catalog.

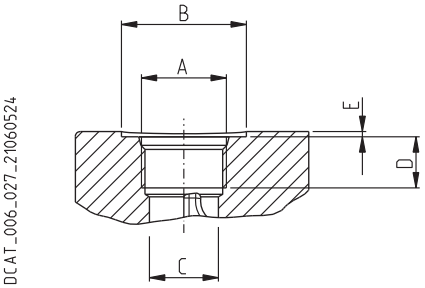
01/11.2012

KAPPA 30 DOUBLE PUMPS KP30/PL20 SHORT BODY CSC

SAE STRAIGHT THREAD PORTS J514 ODT

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

CODE	Nominal size	A	Ø B	Ø C	D	E		
			mm	mm	mm	mm	Nm	Nm
OC	5/8”	7/8” - 14 UNF - 2B	35	20,5	17	0,5	30 +2,5	70 +5
OD	3/4”	1 1/16” - 12 UNF - 2B	42	24,8	20	0,5	40 +2,5	120 +10
OF	1”	1 5/16” - 12 UNF - 2B	49	30,5	20	2	60 +5	170 +10
OG	1” 1/4	1 5/8” - 12 UNF - 2B	58	39,1	20	2	70 +5	—



DCAT_006_027_21060524

Tightening torque for low pressure side port

Tightening torque for high pressure side port (values obtained at 350 bar)

How to order

1 [ ] - 2 [ ] K9 - L 3 [ ] - 45 - CSC /

Front pump

1 [ ] - L 3 [ ] - 4 [ ] - 5 [ ] 6 [ ] - 7 [ ] / FS - 8 [ ] - 9 [ ] (ANF3) (CN) (VNR01)

Rear pump

1	Type	Code
Front pump type		KP 30·…
Rear pump type		PLP 20·…

2	Drive shaft	Code
SAE “B” spline (13 teeth)		A8
SAE “BB” spline (15 teeth)		A5
SAE “B” straight		32

3	Ports IN/OUT (a)	Code
See codes on previous page		../..

4	Inlet combination	Code
Two inlet (standard) no code		…
Common inlet		N7

5	Rear pump body	Code
PLP20 with standard body - no code		…
PLP20 with high strength body		L101

Code	Rotation	6
S	Left	
D	Right	

Code	Seals (b)	7
…	Buna N (standard) no code	
T-PV	Buna hydrogenated HNBR and viton shaft seal	

Code	Rear cover	8
…	Cast iron (standard) - no code	
L	Aluminium	

Code	Rear pump thrust plate	9
…	Standard - no code - from 4 to 14 type	
AV	High speed - from 16 to 20 type	

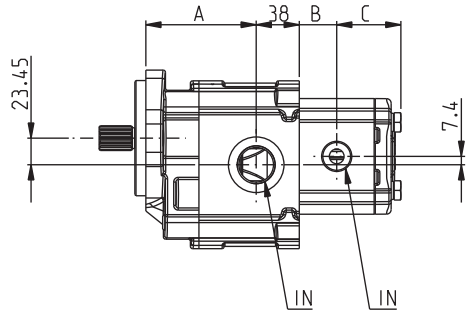
(a) For rear pump with common inlet, please write only /OUT code.
(b) Choose the seals according to the temperature shown on page 4.

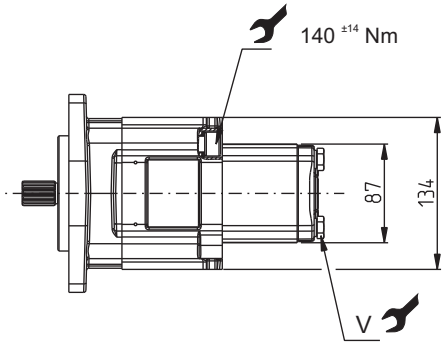
01/11.2012

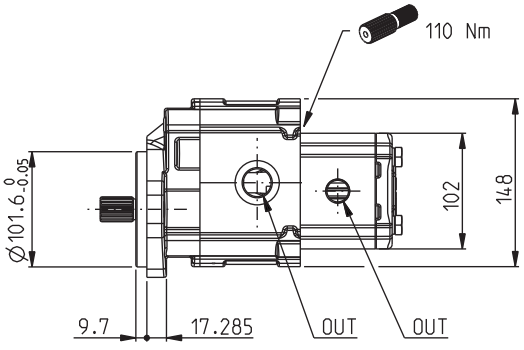
Order example KP 30•41-A8 K9-L OG/OF-45-CSC/PLP 20•16-L /OC-N7-L101 S-T-PV/FS-L-AV (ANF3) (CN) (VNR01)

KAPPA 30 DOUBLE PUMPS KP30/PL20 SHORT BODY CSC

Mounting flange: **K9**
SAE "B" 2 HOLES
Conforms to SAE J744







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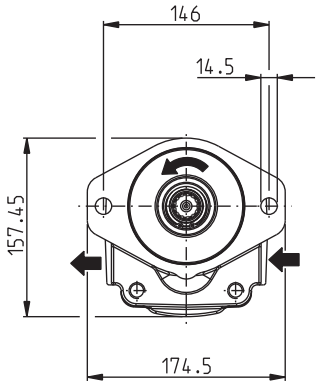
Ports type: **BSPP**
GAS STRAIGHT THREAD PORTS



Drive shaft availability (See page 8)

The torque absorbed from the shaft of the first pump results from the sum of the torques due to all single stages.
The achieved value must not exceed the maximum torque limit given for the shaft of the first pump.

Rear cover material	V Screws tightening torque Nm (lbf in)
Aluminium	45 ±4,5 (358 ÷ 438)
Cast iron	70 ±7 (558 ÷ 682)

Pump type	Displacement	A	Ports code	
	cm³/rev	mm	IN	OUT
KP 30•41	41,62	97,3	GG	GF
KP 30•43	43,98	98,8	GG	GF
KP 30•46	46,34	100,3	GG	GF
KP 30•51	51,83	103,8	GG	GF
KP 30•56	56,54	106,8	GG	GF

Pump type	Displa-cement	B	C	Ports code	
	cm³/rev	mm	mm	IN	OUT
PLP 20•4	4,95	25,8	49,3	GD	GD
PLP 20•6,3	6,61	27	50,5	GD	GD
PLP 20•8	8,26	28,3	51,8	GD	GD
PLP 20•10,5	10,9	30,3	53,8	GD	GD
PLP 20•11,2	11,23	30,5	54	GD	GD
PLP 20•14	14,53	33	56,5	GE	GD
PLP 20•16	16,85	34,8	58,3	GE	GD
PLP 20•20	21,14	38	61,5	GE	GD

Polaris 20: for features please consult the proper technical catalog.

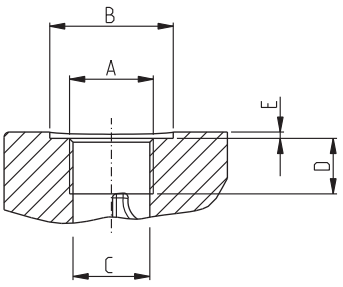
01/11.2012

KAPPA 30 DOUBLE PUMPS KP30/PL20 SHORT BODY CSC

GAS STRAIGHT THREAD PORTS BSPP

British standard pipe parallel (55°) conforms to UNI - ISO 228

CODE	Nominal size	A	Ø B	Ø C	D	E		
			mm	mm	mm	mm	Nm	Nm
GD	1/2”	G 1/2	—	19	17	—	20 +1	50 +2,5
GE	3/4”	G 3/4	—	24,5	18	—	30 +2,5	90 +5
GF	1”	G 1	49	30,5	22	2,5	50 +2,5	130 +10
GG	1” 1/4	G 1 1/4	56	39	24	2,5	60 +5	170 +15



DCAT_006_026_21064779

Tightening torque for low pressure side port

Tightening torque for high pressure side port (values obtained at 350 bar)

How to order

1 [ ] - 2 [ ] K9 - L 3 [ ] - 45 - CSC /

Front pump

1 [ ] - L 3 [ ] - 4 [ ] - 5 [ ] 6 [S] - 7 [ ] / FS - 8 [ ] - 9 [ ] (ANF3) (CN) (VNR01)

Rear pump

1 Type	Code
Front pump type	KP 30·…
Rear pump type	PLP 20·…

2 Drive shaft	Code
SAE “B” spline (13 teeth)	A8
SAE “BB” spline (15 teeth)	A5
SAE “B” straight	32

3 Ports IN/OUT (a)	Code
See codes on previous page	../..

4 Inlet combination	Code
Two inlet (standard) no code	…
Common inlet	N7

5 Rear pump body	Code
PLP20 with standard body - no code	…
PLP20 with high strength body	L101

Code	Rotation 6
S	Left
D	Right

Code	Seals (b) 7
…	Buna N (standard) no code
T-PV	Buna hydrogenated HNBR and viton shaft seal

Code	Rear cover 8
…	Cast iron (standard) - no code
L	Aluminium

Code	Rear pump thrust plate 9
…	Standard - no code - from 4 to 14 type
AV	High speed - from 16 to 20 type

(a) For rear pump with common inlet, please write only /OUT code.
(b) Choose the seals according to the temperature shown on page 4.

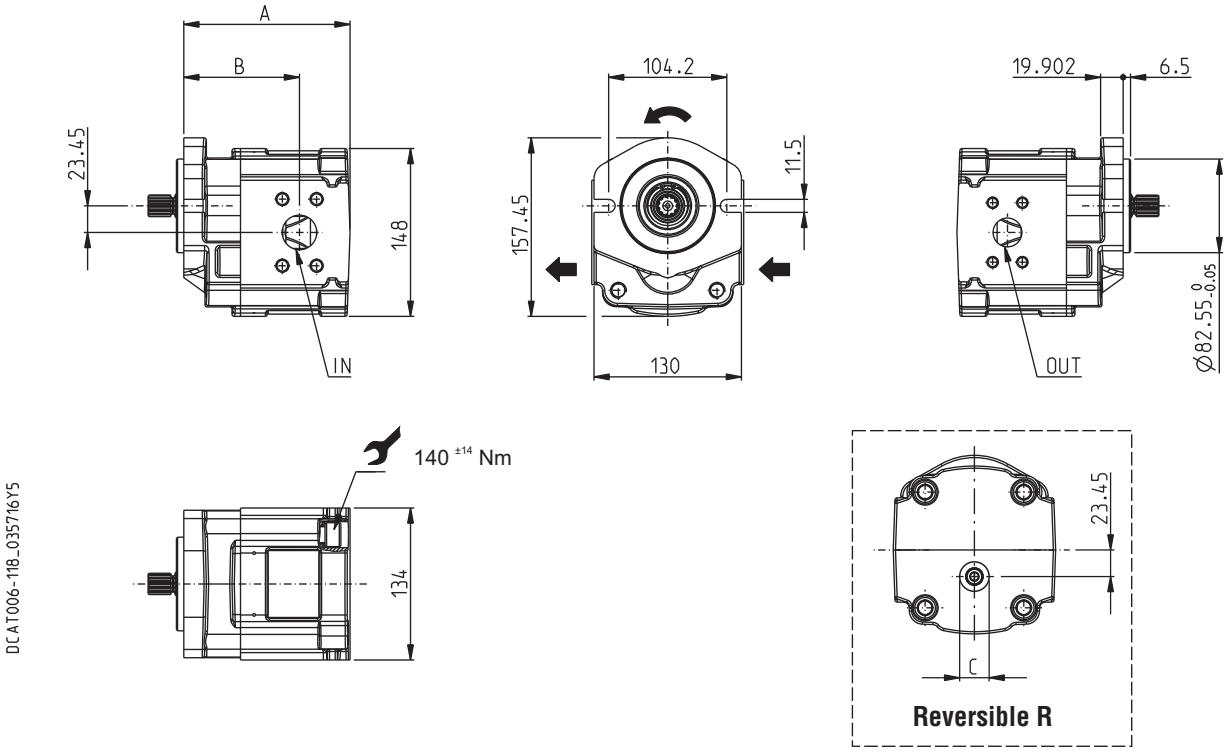
01/11.2012

Order example KP 30•41-A8 K9-L GG/GF-45-CSC/PLP 20•16-L /GD-N7-L101 S-T-PV/FS-L-AV (ANF3) (CN) (VNR01)

KAPPA 30 SINGLE UNITS SHORT BODY - SIDE PORTS CSC

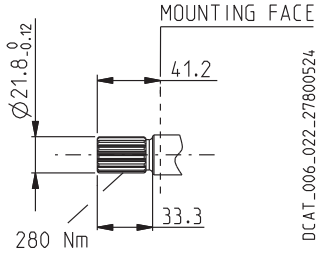
Mounting flange: **S9**
SAE "B" 2 HOLES
Conforms to SAE J744

Ports type: **SSM**
SAE FLANGED PORTS J518



Drive shaft availability

A8 (SAE "B" Spline)



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

Pump type	Motor type	Displacement	A	B	Ports code				C Drain port (◆)	
					Gear pumps		Gear motors			
		cm³/rev	mm	mm	IN	OUT	IN	OUT	Gas BSPP	SAE ODT
KP 30•41	KM 30•41	41,62	145	100,5	MD	MC	MC	MD	GC	OA
KP 30•43	KM 30•43	43,98	146,5	102	MD	MC	MC	MD	GC	OA
KP 30•46	KM 30•46	46,34	148	103,5	MD	MC	MC	MD	GC	OA
KP 30•51	KM 30•51	51,83	151,5	107	MD	MC	MC	MD	GC	OA
KP 30•56	KM 30•56	56,54	154,5	110	ME	MD	MD	ME	GC	OA

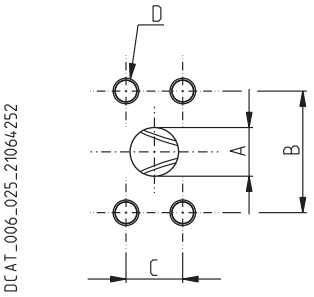
(◆) Dimension on page 27 and 29

01/11.2012

KAPPA 30 SINGLE UNITS SHORT BODY - SIDE PORTS CSC

SAE FLANGED PORTS J518 - Standard pressure series 3000 PSI SSM

Metric thread ISO 60° conforms to ISO/R 262



DCAT_006_025_21064252

CODE	A	B	C	D		
	mm	mm	mm	Thread Depth (mm)	Nm	Nm
MC	25,4	52,4	26,2	M 10 Depth 17	20 +1	30 +2,5
MD	30,5	58,7	30,2	M 10 Depth 17	20 +1	35 +2,5
ME	39,3	69,8	35,7	M 12 Depth 17	30 +2,5	60 +5

Tightening torque for low pressure side port

Tightening torque for high pressure side port (values obtained at 350 bar)

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

How to order

1	2		3	4	5	
		0 - A8 S9 - L	.. / ..	-		- CSC (ANF3) (CN) (VNR01)

1	Type	Code
Pump type		KP 30·...
Motor type		KM 30·...

2	Rotation	Code
Left		S
Right		D
Reversible		R

3	Ports IN/OUT	Code
See codes on previous page		../..

Code	Seals (a)	4
N	Buna N (standard)	
T-PV	Buna hydrogenated HNBR and viton shaft seal	

Code	Drain ports	5
OA	SAE Straight thread ports (ODT)	
GC	GAS Straight thread ports (BSPP)	

(a) Choose the seals according to the temperature shown on page 4.

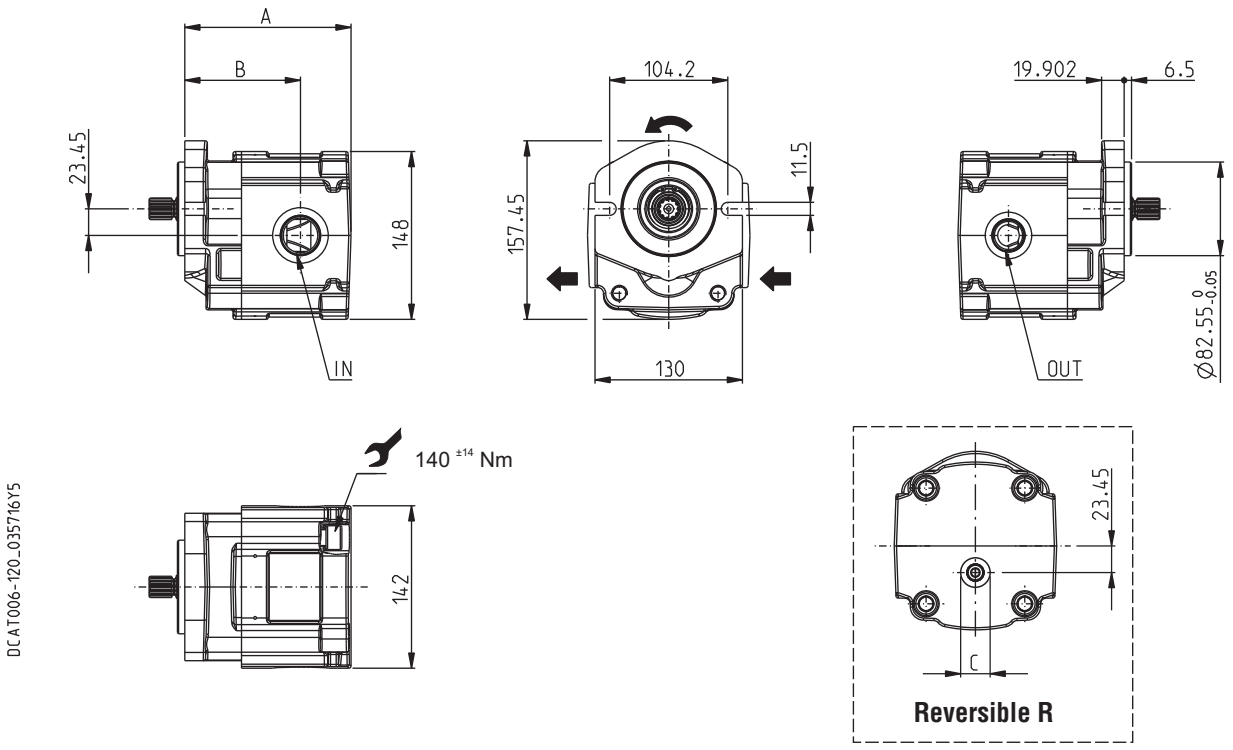
01/11.2012

Order example KP 30•41 R0-A8 S9-L MD/MC-T-PV-OA-CSC (ANF3) (CN) (VNR01)

KAPPA 30 SINGLE UNITS SHORT BODY - SIDE PORTS CSC

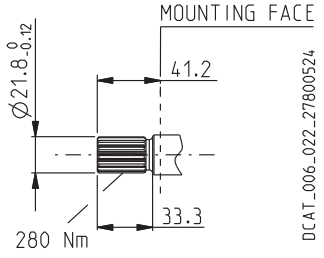
Mounting flange: **S9**
SAE "B" 2 HOLES
Conforms to SAE J744

Ports type: **ODT**
SAE STRAIGHT THREAD PORTS J514



Drive shaft availability

A8 (SAE "B" Spline)



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

Pump type	Motor type	Displacement	A	B	Ports code				C Drain port (◆)	
					Gear pumps		Gear motors			
		cm³/rev	mm	mm	IN	OUT	IN	OUT	Gas BSPP	SAE ODT
KP 30•41	KM 30•41	41,62	145	100,5	OG	OF	OF	OG	GC	OA
KP 30•43	KM 30•43	43,98	146,5	102	OG	OF	OF	OG	GC	OA
KP 30•46	KM 30•46	46,34	148	103,5	OG	OF	OF	OG	GC	OA
KP 30•51	KM 30•51	51,83	151,5	107	OG	OF	OF	OG	GC	OA
KP 30•56	KM 30•56	56,54	154,5	110	OG	OF	OF	OG	GC	OA

(◆) Dimension on page 27 and 29

01/11.2012

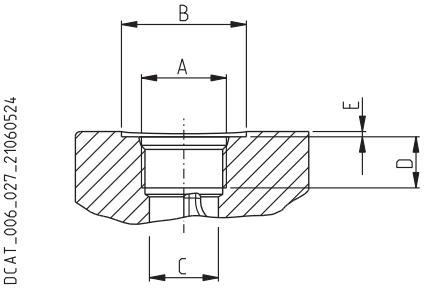
KAPPA 30 SINGLE UNITS SHORT BODY - SIDE PORTS CSC

SAE STRAIGHT THREAD PORTS J514 ODT

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

CODE	Nominal size	A	Ø B	Ø C	D	E		
			mm	mm	mm	mm	Nm	Nm
OA (◆)	3/8”	9/16” - 12 UNF - 2B	26	13	15	2	15 +1	—
OF	1”	1 5/16” - 12 UNF - 2B	49	30,5	20	2	60 +5	170 +10
OG	1” 1/4	1 5/8” - 12 UNF - 2B	58	39,1	20	2	70 +5	—

(◆) = Drain port



DCAT_006_027_21060524

Tightening torque for low pressure side port

Tightening torque for high pressure side port (values obtained at 350 bar)

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

How to order

1 [ ] 2 [ ] **0 - A8 S9 - L** 3 [ ] **.. / ..** **-** 4 [ ] **-** 5 [ ] **- CSC (ANF3) (CN) (VNR01)**

1	Type	Code
Pump type		KP 30·...
Motor type		KM 30·...

2	Rotation	Code
Left		S
Right		D
Reversible		R

3	Ports IN/OUT	Code
See codes on previous page		../..

Code	Seals (a)	4
N	Buna N (standard)	
T-PV	Buna hydrogenated HNBR and viton shaft seal	

Code	Drain ports	5
OA	SAE Straight thread ports (ODT)	
GC	GAS Straight thread ports (BSPP)	

(a) Choose the seals according to the temperature shown on page 4.

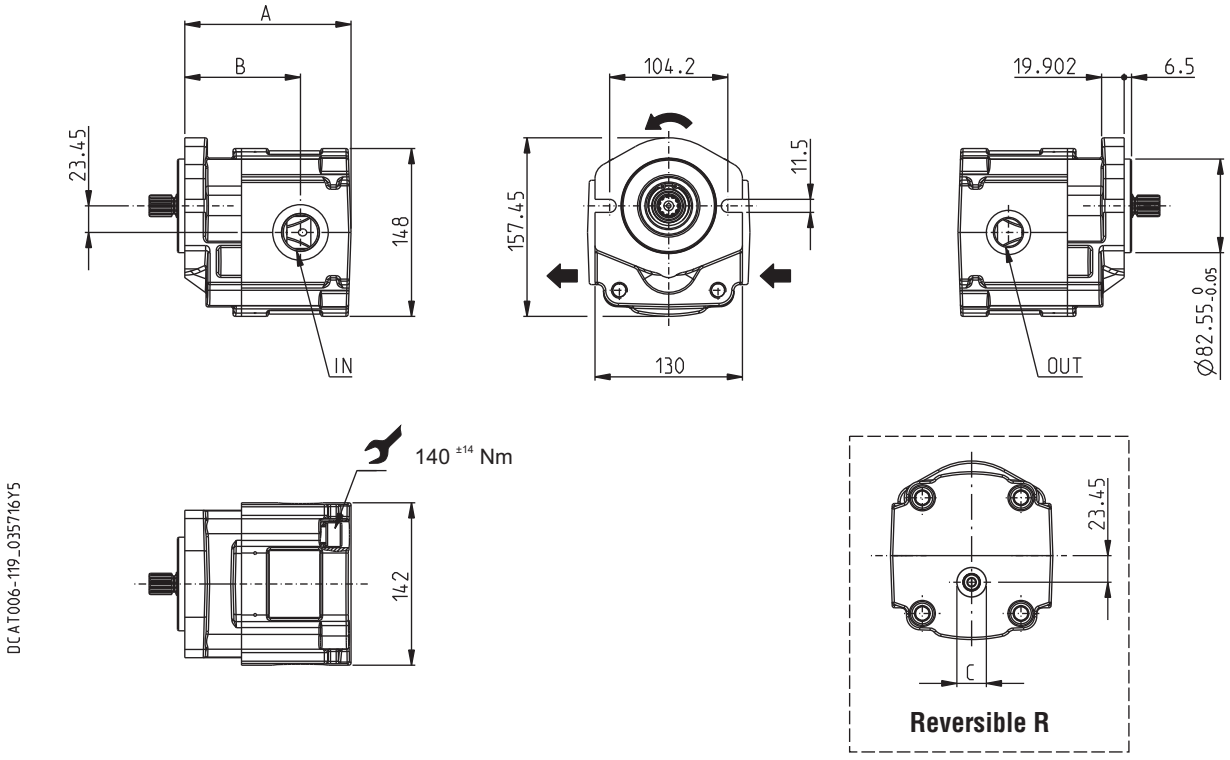
01/11.2012

Order example KP 30•41 R0-A8 S9-L OG/OF-T-PV-OA-CSC (ANF3) (CN) (VNR01)

KAPPA 30 SINGLE UNITS SHORT BODY - SIDE PORTS CSC

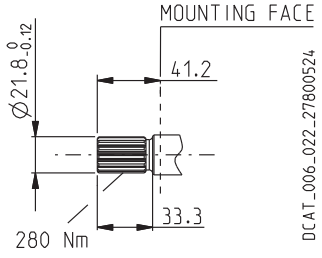
Mounting flange: **S9**
SAE "B" 2 HOLES
Conforms to SAE J744

Ports type: **BSPP**
GAS STRAIGHT THREAD PORTS



Drive shaft availability

A8 (SAE "B" Spline)



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

Pump type	Motor type	Displacement	A	B	Ports code				C Drain port (◆)	
					Gear pumps		Gear motors			
		cm³/rev	mm	mm	IN	OUT	IN	OUT	Gas BSPP	SAE ODT
KP 30•41	KM 30•41	41,62	145	100,5	GG	GF	GF	GG	GC	OA
KP 30•43	KM 30•43	43,98	146,5	102	GG	GF	GF	GG	GC	OA
KP 30•46	KM 30•46	46,34	148	103,5	GG	GF	GF	GG	GC	OA
KP 30•51	KM 30•51	51,83	151,5	107	GG	GF	GF	GG	GC	OA
KP 30•56	KM 30•56	56,54	154,5	110	GG	GF	GF	GG	GC	OA

(◆) Dimension on page 27 and 29

01/11.2012

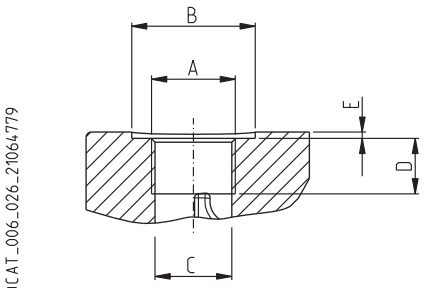
KAPPA 30 SINGLE UNITS SHORT BODY - SIDE PORTS CSC

GAS STRAIGHT THREAD PORTS BSPP

British standard pipe parallel (55°) conforms to UNI - ISO 228

CODE	Nominal size	A	Ø B	Ø C	D	E		
			mm	mm	mm	mm	Nm	Nm
GC (◆)	3/8"	G 3/8	25	15	14	2	15 $^{+1}$	—
GF	1"	G 1	49	30,5	22	2,5	50 $^{+2,5}$	130 $^{+10}$
GG	1" 1/4	G 1 1/4	56	39	24	2,5	60 $^{+5}$	170 $^{+15}$

(◆) Drain port



DCAT_006_026_21064779

Tightening torque for low pressure side port

Tightening torque for high pressure side port (values obtained at 350 bar)

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

How to order

1	2		3	4	5	
		0 - A8 S9 - L	.. / ..	-		- CSC (ANF3) (CN) (VNR01)

1	Type	Code
Pump type		KP 30·...
Motor type		KM 30·...

2	Rotation	Code
Left		S
Right		D
Reversible		R

3	Ports IN/OUT	Code
See codes on previous page		../..

Code	Seals (a)	4
N	Buna N (standard)	
T-PV	Buna hydrogenated HNBR and viton shaft seal	

Code	Drain ports	5
OA	SAE Straight thread ports (ODT)	
GC	GAS Straight thread ports (BSPP)	

(a) Choose the seals according to the temperature shown on page 4.

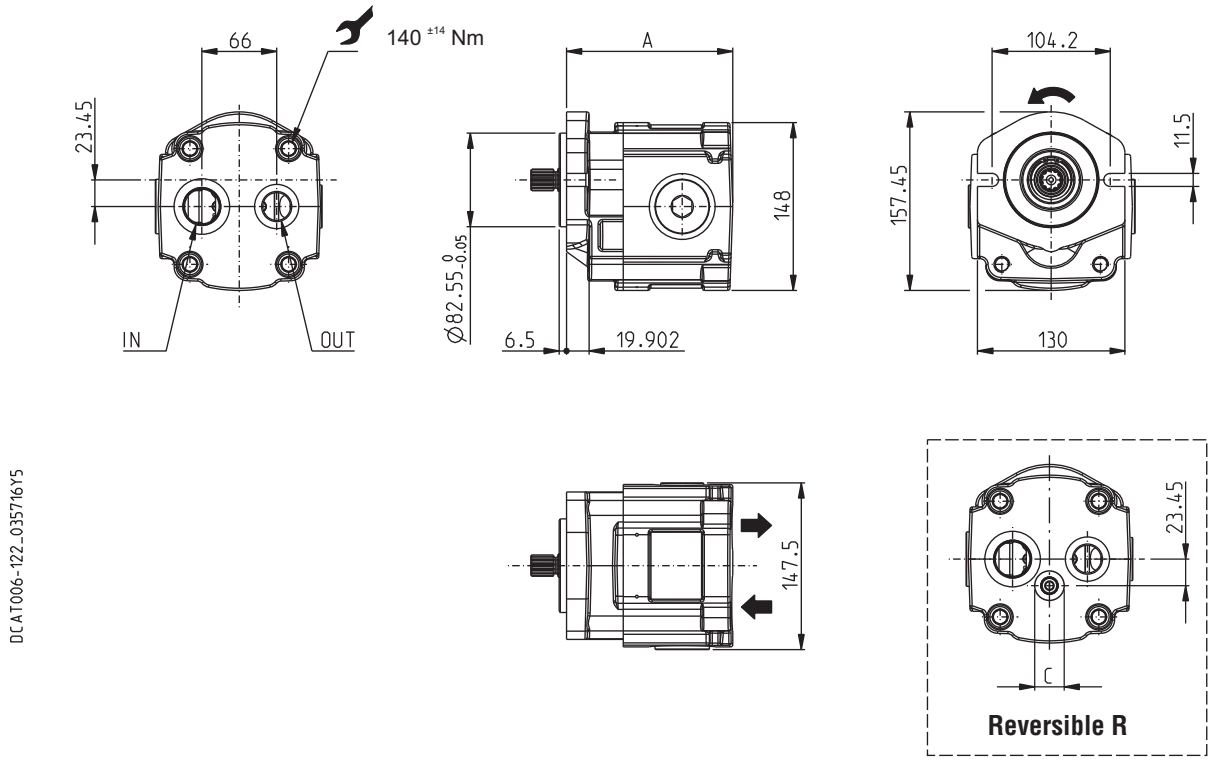
01/11.2012

Order example KP 30•41 R0-A8 S9-L GG/GF-T-PV-GC-CSC (ANF3) (CN) (VNR01)

KAPPA 30 SINGLE UNITS SHORT BODY - REAR PORTS CSC

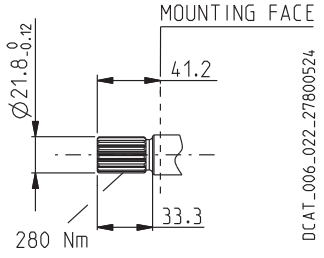
Mounting flange: **S9**
SAE "B" 2 HOLES
Conforms to SAE J744

Ports type: **ODT**
SAE STRAIGHT THREAD PORTS J514



Drive shaft availability

A8 (SAE "B" Spline)



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

Pump type	Motor type	Displacement	A	Ports code				C Drain port (◆)	
				Gear pumps		Gear motors			
		cm³/rev	mm	IN	OUT	IN	OUT	Gas BSPP	SAE ODT
KP 30•41	KM 30•41	41,62	143	OG	OF	OF	OG	GC	OA
KP 30•43	KM 30•43	43,98	144,5	OG	OF	OF	OG	GC	OA
KP 30•46	KM 30•46	46,34	146	OG	OF	OF	OG	GC	OA
KP 30•51	KM 30•51	51,83	149,5	OG	OF	OF	OG	GC	OA
KP 30•56	KM 30•56	56,54	152,5	OG	OF	OF	OG	GC	OA

(◆) Dimension on page 31 and 33

01/11.2012

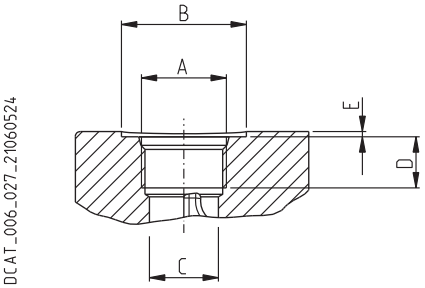
KAPPA 30 SINGLE UNITS SHORT BODY - REAR PORTS CSC

SAE STRAIGHT THREAD PORTS J514 ODT

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

CODE	Nominal size	A	Ø B	Ø C	D	E		
			mm	mm	mm	mm	Nm	Nm
OA (◆)	3/8”	9/16” - 12 UNF - 2B	26	13	15	2	15 +1	—
OF	1”	1 5/16” - 12 UNF - 2B	49	30,5	20	2	60 +5	170 +10
OG	1” 1/4	1 5/8” - 12 UNF - 2B	58	39,1	20	2	70 +5	—

(◆) = Drain port



DCAT_006_027_21060524

Tightening torque for low pressure side port

Tightening torque for high pressure side port (values obtained at 350 bar)

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

How to order

1 [ ] 2 [ ] **0 - A8 S9 - P** 3 [**.. / ..**] **-** 4 [ ] **-** 5 [ ] **- CSC (ANF3) (CN) (VNR01)**

1	Type	Code
Pump type		KP 30·...
Motor type		KM 30·...

2	Rotation	Code
Left		S
Right		D
Reversible		R

3	Ports IN/OUT	Code
See codes on previous page		../..

Code	Seals (a)	4
N	Buna N (standard)	
T-PV	Buna hydrogenated HNBR and viton shaft seal	

Code	Drain ports	5
OA	SAE Straight thread ports (ODT)	
GC	GAS Straight thread ports (BSPP)	

(a) Choose the seals according to the temperature shown on page 4.

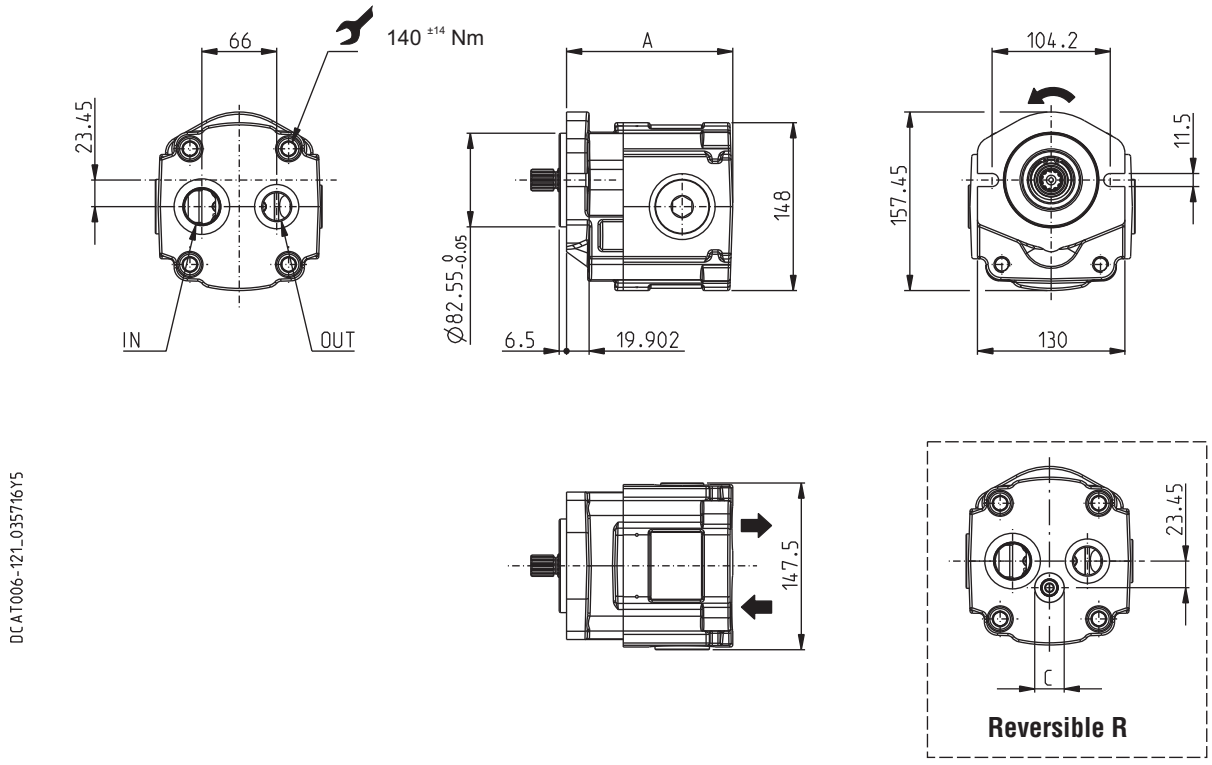
01/11.2012

Order example KP 30•41 R0-A8 S9-P OG/OF-T-PV-OA-CSC (ANF3) (CN) (VNR01)

KAPPA 30 SINGLE UNITS SHORT BODY - REAR PORTS CSC

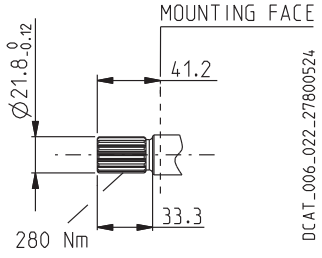
Mounting flange: **S9**
SAE "B" 2 HOLES
Conforms to SAE J744

Ports type: **BSPP**
GAS STRAIGHT THREAD PORTS



Drive shaft availability

A8 (SAE "B" Spline)



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

Pump type	Motor type	Displacement	A	Ports code				C Drain port (◆)	
				Gear pumps		Gear motors			
		cm³/rev	mm	IN	OUT	IN	OUT	Gas BSPP	SAE ODT
KP 30•41	KM 30•41	41,62	143	GG	GF	GF	GG	GC	OA
KP 30•43	KM 30•43	43,98	144,5	GG	GF	GF	GG	GC	OA
KP 30•46	KM 30•46	46,34	146	GG	GF	GF	GG	GC	OA
KP 30•51	KM 30•51	51,83	149,5	GG	GF	GF	GG	GC	OA
KP 30•56	KM 30•56	56,54	152,5	GG	GF	GF	GG	GC	OA

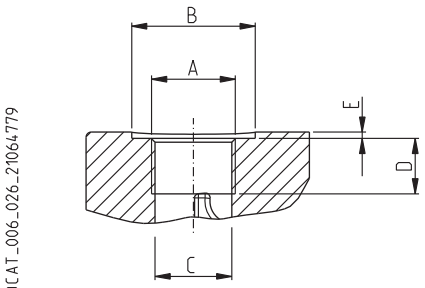
(◆) Dimension on page 31 and 33

01/11.2012

KAPPA 30 SINGLE UNITS SHORT BODY - REAR PORTS CSC

GAS STRAIGHT THREAD PORTS BSPP

British standard pipe parallel (55°) conforms to UNI - ISO 228



CODE	Nominal size	A	Ø B	Ø C	D	E		
			mm	mm	mm	mm	Nm	Nm
GC (◆)	3/8"	G 3/8	25	15	14	2	15 $^{+1}$	—
GF	1"	G 1	49	30,5	22	2,5	50 $^{+2,5}$	130 $^{+10}$
GG	1" 1/4	G 1 1/4	56	39	24	2,5	60 $^{+5}$	170 $^{+15}$

(◆) Drain port

Tightening torque for low pressure side port

Tightening torque for high pressure side port (values obtained at 350 bar)

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

How to order

1 [ ] 2 [ ] **0 - A8 S9 - P** 3 [**.. / ..**] **-** 4 [ ] **-** 5 [ ] **- CSC (ANF3) (CN) (VNR01)**

1	Type	Code
Pump type		KP 30·...
Motor type		KM 30·...

2	Rotation	Code
Left		S
Right		D
Reversible		R

3	Ports IN/OUT	Code
See codes on previous page		../..

Code	Seals (a)	4
N	Buna N (standard)	
T-PV	Buna hydrogenated HNBR and viton shaft seal	

Code	Drain ports	5
OA	SAE Straight thread ports (ODT)	
GC	GAS Straight thread ports (BSPP)	

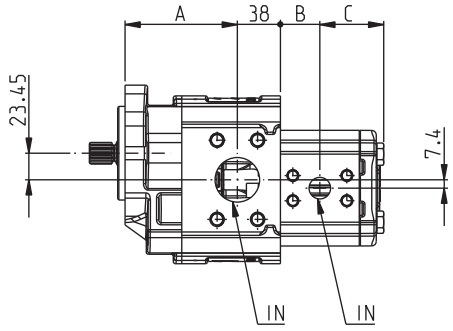
(a) Choose the seals according to the temperature shown on page 4.

01/11.2012

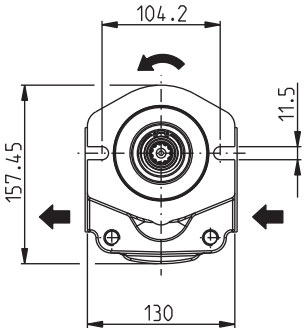
Order example KP 30•41 R0-A8 S9-P GG/GF-T-PV-GC-CSC (ANF3) (CN) (VNR01)

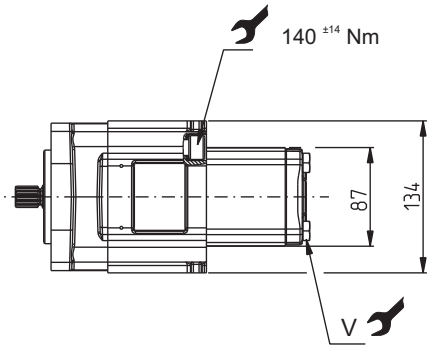
KAPPA 30 DOUBLE PUMPS KP30/PL20 SHORT BODY CSC

Mounting flange: **S9**
SAE "B" 2 HOLES
Conforms to SAE J744



Ports type: **SSM**
SAE FLANGED PORTS J518

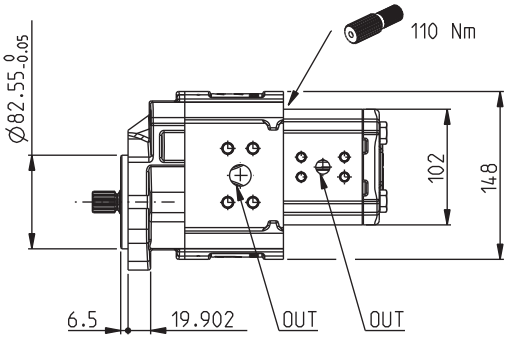




Drive shaft availability (See page 24)

The torque absorbed from the shaft of the first pump results from the sum of the torques due to all single stages.
The achieved value must not exceed the maximum torque limit given for the shaft of the first pump.

Rear cover material	V Screws tightening torque Nm (lbf in)
Aluminium	45 ±4,5 (358 ÷ 438)
Cast iron	70 ±7 (558 ÷ 682)



DCAT006-123_035716Y5

Pump type	Displacement	A	Ports code	
	cm³/rev	mm	IN	OUT
KP 30•41	41,62	100,5	MD	MC
KP 30•43	43,98	102	MD	MC
KP 30•46	46,34	103,5	MD	MC
KP 30•51	51,83	107	MD	MC
KP 30•56	56,54	110	ME	MD

Pump type	Displa-cement	B	C	Ports code	
	cm³/rev	mm	mm	IN	OUT
PLP 20•4	4,95	25,8	49,3	MA	MA
PLP 20•6,3	6,61	27	50,5	MA	MA
PLP 20•8	8,26	28,3	51,8	MA	MA
PLP 20•10,5	10,9	30,3	53,8	MA	MA
PLP 20•11,2	11,23	30,5	54	MA	MA
PLP 20•14	14,53	33	56,5	MB	MA
PLP 20•16	16,85	34,8	58,3	MB	MA
PLP 20•20	21,14	38	61,5	MB	MA

Polaris 20: for features please consult the proper technical catalog.

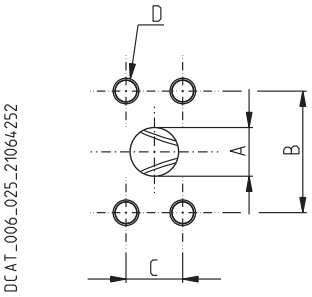
01/11.2012

KAPPA 30 DOUBLE PUMPS KP30/PL20 SHORT BODY CSC

SAE FLANGED PORTS J518 - Standard pressure series 3000 PSI SSM

Metric thread ISO 60° conforms to ISO/R 262

CODE	A	B	C	D		
	mm	mm	mm	Thread Depth (mm)	Nm	Nm
MA	12,5	17,5	38,1	M 8 Depth 14	15 +1	15 +1
MB	19	22,2	47,6	M 10 Depth 14	20 +1	20 +1
MC	25,4	52,4	26,2	M 10 Depth 17	20 +1	30 +2,5
MD	30,5	58,7	30,2	M 10 Depth 17	20 +1	35 +2,5
ME	39,3	69,8	35,7	M 12 Depth 17	30 +2,5	60 +5



Tightening torque for low pressure side port

Tightening torque for high pressure side port (values obtained at 350 bar)

How to order

1 [ ] 2 [ ] - A8 S9 - L - 45 - CSC /

Front pump

1 [ ] - L 2 [ ] - 3 [ ] 4 [ ] - 5 [ ] / FS - 6 [ ] - 7 [ ] (ANF3) (CN) (VNR01)

Rear pump

1	Type	Code
Front pump type		KP 30·…
Rear pump type		PLP 20·…

2	Ports IN/OUT (a)	Code
See codes on previous page		A8

3	Inlet combination	Code
Two inlet (standard)	no code	../..
Common inlet		N7

4	Rotation	Code
Left		S
Right		D

Code	Seals (b)	5
…	Buna N (standard)	no code
T-PV	Buna hydrogenated HNBR and viton shaft seal	

Code	Rear cover	6
…	Cast iron (standard) - no code	
L	Aluminium	

Code	Rear pump thrust plate	7
…	Standard - no code - from 4 to 14 type	
AV	High speed - from 16 to 20 type	

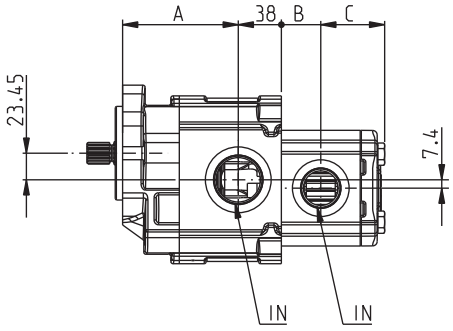
(a) For rear pump with common inlet, please write only /OUT code.
(b) Choose the seals according to the temperature shown on page 4.

01/11.2012

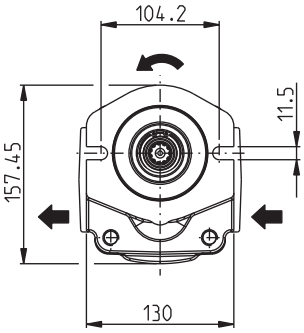
Order example KP 30•41-A8 S9-L MD/MC-45-CSC/PLP 20•16-L /MA-N7 S-T-PV/FS-L-AV (ANF3) (CN) (VNR01)

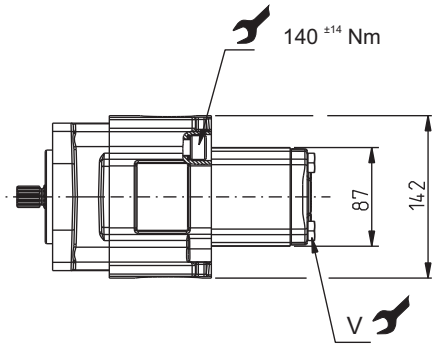
KAPPA 30 DOUBLE PUMPS KP30/PL20 SHORT BODY CSC

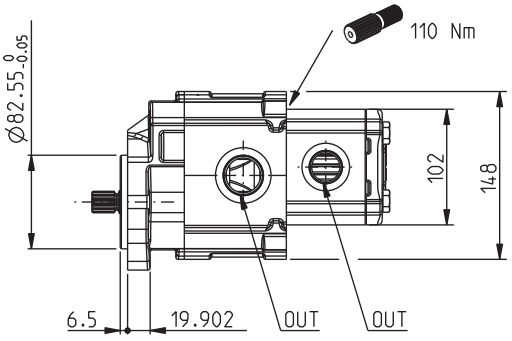
Mounting flange: **S9**
SAE "B" 2 HOLES
Conforms to SAE J744



Ports type: **ODT**
SAE STRAIGHT THREAD PORTS J514







DCAT006-125_035716Y5

Drive shaft availability (See page 24)

The torque absorbed from the shaft of the first pump results from the sum of the torques due to all single stages.
The achieved value must not exceed the maximum torque limit given for the shaft of the first pump.

Rear cover material	**V** Screws tightening torque Nm (lbf in)
Aluminium	45 ±4,5 (358 ÷ 438)
Cast iron	70 ±7 (558 ÷ 682)

Pump type	Displacement	A	Ports code	
	cm³/rev	mm	IN	OUT
KP 30•41	41,62	100,5	OG	OF
KP 30•43	43,98	102	OG	OF
KP 30•46	46,34	103,5	OG	OF
KP 30•51	51,83	107	OG	OF
KP 30•56	56,54	110	OG	OF

Pump type	Displa-cement	B	C	Ports code	
	cm³/rev	mm	mm	IN	OUT
PLP 20•4	4,95	25,8	49,3	OC	OC
PLP 20•6,3	6,61	27	50,5	OC	OC
PLP 20•8	8,26	28,3	51,8	OC	OC
PLP 20•10,5	10,9	30,3	53,8	OC	OC
PLP 20•11,2	11,23	30,5	54	OC	OC
PLP 20•14	14,53	33	56,5	OD	OC
PLP 20•16	16,85	34,8	58,3	OD	OC
PLP 20•20	21,14	38	61,5	OD	OC

Polaris 20: for features please consult the proper technical catalog.

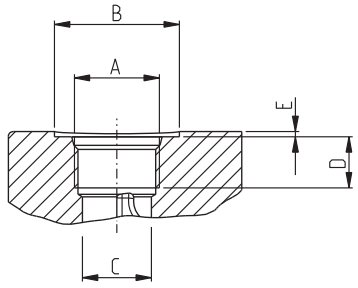
01/11.2012

KAPPA 30 DOUBLE PUMPS KP30/PL20 SHORT BODY CSC

SAE STRAIGHT THREAD PORTS J514 ODT

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

CODE	Nominal size	A	Ø B	Ø C	D	E		
			mm	mm	mm	mm	Nm	Nm
OC	5/8"	7/8" - 14 UNF - 2B	35	20,5	17	0,5	30 +2,5	70 +5
OD	3/4"	1 1/16" - 12 UNF - 2B	42	24,8	20	0,5	40 +2,5	120 +10
OF	1"	1 5/16" - 12 UNF - 2B	49	30,5	20	2	60 +5	170 +10
OG	1" 1/4	1 5/8" - 12 UNF - 2B	58	39,1	20	2	70 +5	—



DCAT_006_027_21060524

Tightening torque for low pressure side port

Tightening torque for high pressure side port (values obtained at 350 bar)

How to order

1 [ ] 2 [ ] - A8 S9 - L - 45 - CSC /

Front pump

1 [ ] - L 2 [ ] - 3 [ ] - 4 [ ] 5 [ ] - 6 [ ] / FS - 7 [ ] - 8 [ ] (ANF3) (CN) (VNR01)

Rear pump

1 Type	Code
Front pump type	KP 30·…
Rear pump type	PLP 20·…

2 Ports IN/OUT (a)	Code
See codes on previous page	../..

3 Inlet combination	Code
Two inlet (standard) no code	…
Common inlet	N7

4 Rear pump body	Code
PLP20 with standard body - no code	…
PLP20 with high strength body	L101

Code	Seals (b) 5
S	Left
D	Right

Code	Seals (b) 6
…	Buna N (standard) no code
T-PV	Buna hydrogenated HNBR and viton shaft seal

Code	Rear cover 7
…	Cast iron (standard) - no code
L	Aluminium

Code	Rear pump thrust plate 8
…	Standard - no code - from 4 to 14 type
AV	High speed - from 16 to 20 type

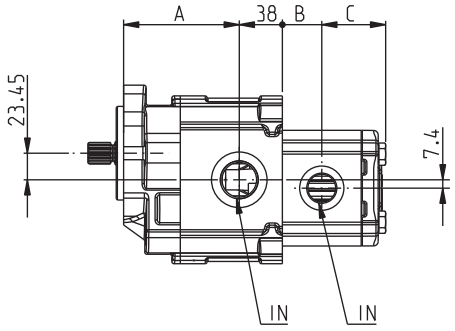
(a) For rear pump with common inlet, please write only /OUT code.
(b) Choose the seals according to the temperature shown on page 4.

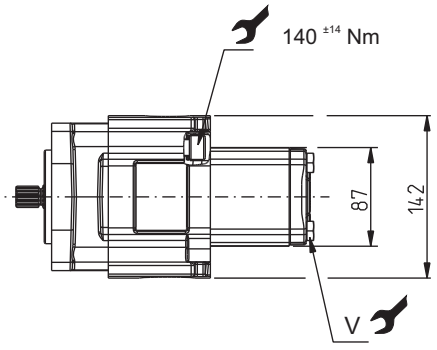
01/11.2012

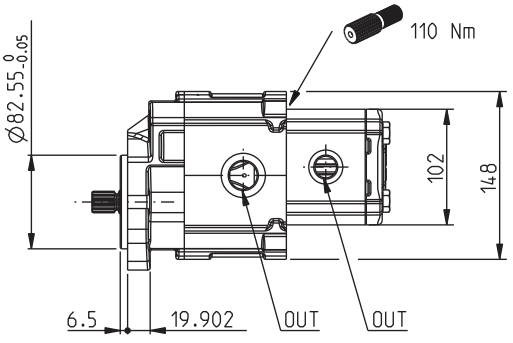
Order example KP 30•41-A8 S9-L OG/OF-45-CSC/PLP 20•16-L /OC-N7-L101 S-T-PV/FS-L-AV (ANF3) (CN) (VNR01)

KAPPA 30 DOUBLE PUMPS KP30/PL20 SHORT BODY CSC

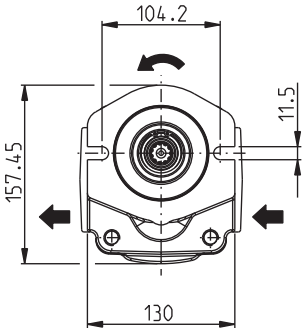
Mounting flange: **S9**
SAE "B" 2 HOLES
Conforms to SAE J744







Ports type: **BSPP**
GAS STRAIGHT THREAD PORTS



Drive shaft availability (See page 24)

The torque absorbed from the shaft of the first pump results from the sum of the torques due to all single stages.
The achieved value must not exceed the maximum torque limit given for the shaft of the first pump.

Rear cover material	V Screws tightening torque Nm (lbf in)
Aluminium	45 ±4,5 (358 ÷ 438)
Cast iron	70 ±7 (558 ÷ 682)

Pump type	Displacement	A	Ports code	
	cm³/rev	mm	IN	OUT
KP 30•41	41,62	100,5	GG	GF
KP 30•43	43,98	102	GG	GF
KP 30•46	46,34	103,5	GG	GF
KP 30•51	51,83	107	GG	GF
KP 30•56	56,54	110	GG	GF

Pump type	Displa-cement	B	C	Ports code	
	cm³/rev	mm	mm	IN	OUT
PLP 20•4	4,95	25,8	49,3	GD	GD
PLP 20•6,3	6,61	27	50,5	GD	GD
PLP 20•8	8,26	28,3	51,8	GD	GD
PLP 20•10,5	10,9	30,3	53,8	GD	GD
PLP 20•11,2	11,23	30,5	54	GD	GD
PLP 20•14	14,53	33	56,5	GE	GD
PLP 20•16	16,85	34,8	58,3	GE	GD
PLP 20•20	21,14	38	61,5	GE	GD

Polaris 20: for features please consult the proper technical catalog.

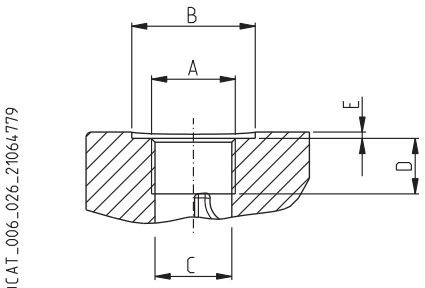
DCAT006-124_035716Y5
01/11.2012

KAPPA 30 DOUBLE PUMPS KP30/PL20 SHORT BODY CSC

GAS STRAIGHT THREAD PORTS BSPP

British standard pipe parallel (55°) conforms to UNI - ISO 228

CODE	Nominal size	A	Ø B	Ø C	D	E		
			mm	mm	mm	mm	Nm	Nm
GD	1/2"	G 1/2	—	19	17	—	20 +1	50 +2,5
GE	3/4"	G 3/4	—	24,5	18	—	30 +2,5	90 +5
GF	1"	G 1	49	30,5	22	2,5	50 +2,5	130 +10
GG	1" 1/4	G 1 1/4	56	39	24	2,5	60 +5	170 +15



DCAT_006_026_21064779

Tightening torque for low pressure side port

Tightening torque for high pressure side port (values obtained at 350 bar)

How to order

1 [ ] - A8 S9 - L 2 [ ] - 45 - CSC /

Front pump

1 [ ] - L 2 [ ] - 3 [ ] - 4 [ ] 5 [ ] - 6 [ ] / FS - 7 [ ] - 8 [ ] (ANF3) (CN) (VNR01)

Rear pump

1 Type	Code
Front pump type	KP 30·…
Rear pump type	PLP 20·…

2 Ports IN/OUT (a)	Code
See codes on previous page	../..

3 Inlet combination	Code
Two inlet (standard) no code	…
Common inlet	N7

4 Rear pump body	Code
PLP20 with standard body - no code	…
PLP20 with high strength body	L101

Code	Seals (b) 5
S	Left
D	Right

Code	Seals (b) 6
…	Buna N (standard) no code
T-PV	Buna hydrogenated HNBR and viton shaft seal

Code	Rear cover 7
…	Cast iron (standard) - no code
L	Aluminium

Code	Rear pump thrust plate 8
…	Standard - no code - from 4 to 14 type
AV	High speed - from 16 to 20 type

(a) For rear pump with common inlet, please write only /OUT code.
(b) Choose the seals according to the temperature shown on page 4.

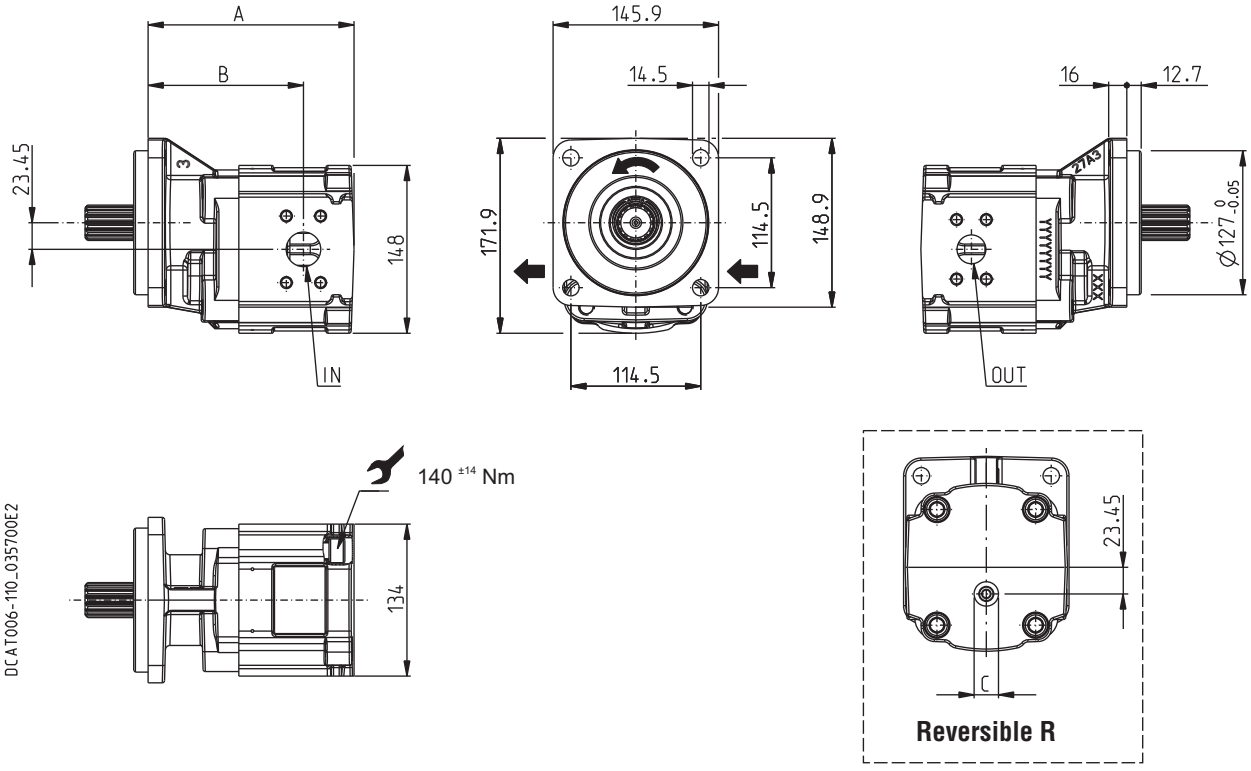
01/11.2012

Order example KP 30•41-A8 S9-L GG/GF-45-CSC/PLP 20•16-L /GD-N7-L101 S-T-PV/FS-L-AV (ANF3) (CN) (VNR01)

KAPPA 30 SINGLE UNITS SHORT BODY - SIDE PORTS CSC

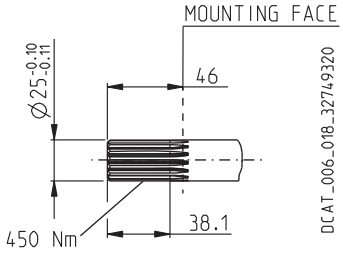
Mounting flange: **S6**
SAE "C" 4 HOLES
Conforms to SAE J744

Ports type: **SSM**
SAE FLANGED PORTS J518



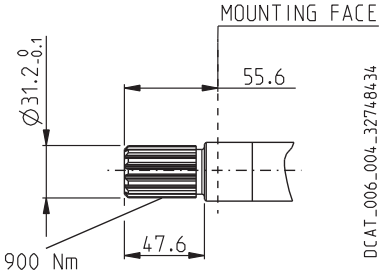
Drive shaft availability

05 (SAE "BB" Spline)



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

06 (SAE "C" Spline)



Ext. Involute Spline SAE J498B
with major diameter modified
14 teeth - 12/24 Pitch - 30 deg
Flat Root - Side fit - Class 1

Pump type	Motor type	Displacement	A	B	Ports code				C Drain port (◆)	
					Gear pumps		Gear motors			
		cm³/rev	mm	mm	IN	OUT	IN	OUT	Gas BSPP	SAE ODT
KP 30•41	KM 30•41	41,62	175	130,5	MD	MC	MC	MD	GC	OA
KP 30•43	KM 30•43	43,98	176,5	132	MD	MC	MC	MD	GC	OA
KP 30•46	KM 30•46	46,34	178	133,5	MD	MC	MC	MD	GC	OA
KP 30•51	KM 30•51	51,83	181,5	137	MD	MC	MC	MD	GC	OA
KP 30•56	KM 30•56	56,54	184,5	140	ME	MD	MD	ME	GC	OA

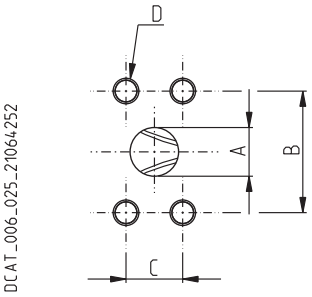
(◆) Dimension on page 43 and 45

01/11.2012

KAPPA 30 SINGLE UNITS SHORT BODY - SIDE PORTS CSC

SAE FLANGED PORTS J518 - Standard pressure series 3000 PSI SSM

Metric thread ISO 60° conforms to ISO/R 262



DCAT_006_025_210064252

CODE	A	B	C	D		
	mm	mm	mm	Thread Depth (mm)	Nm	Nm
MC	25,4	52,4	26,2	M 10 Depth 17	20 +1	30 +2,5
MD	30,5	58,7	30,2	M 10 Depth 17	20 +1	35 +2,5
ME	39,3	69,8	35,7	M 12 Depth 17	30 +2,5	60 +5

Tightening torque for low pressure side port

Tightening torque for high pressure side port (values obtained at 350 bar)

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

How to order

1	2		3		4		5		6	
		0 -		S6 - L	.. / ..	-		-		- CSC (ANF3) (CN) (VNR01)

1	Type	Code
Pump type		KP 30·…
Motor type		KM 30·…

2	Rotation	Code
Left		S
Right		D
Reversible		R

3	Drive shaft	Code
SAE “BB” spline (15 teeth)		05
SAE “C” spline (14 teeth)		06

Code	Ports IN/OUT	4
../..	See codes on previous page	

Code	Seals (a)	5
N	Buna N (standard)	
T-PV	Buna hydrogenated HNBR and viton shaft seal	

Code	Drain ports	6
OA	SAE Straight thread ports (ODT)	
GC	GAS Straight thread ports (BSPP)	

(a) Choose the seals according to the temperature shown on page 4.

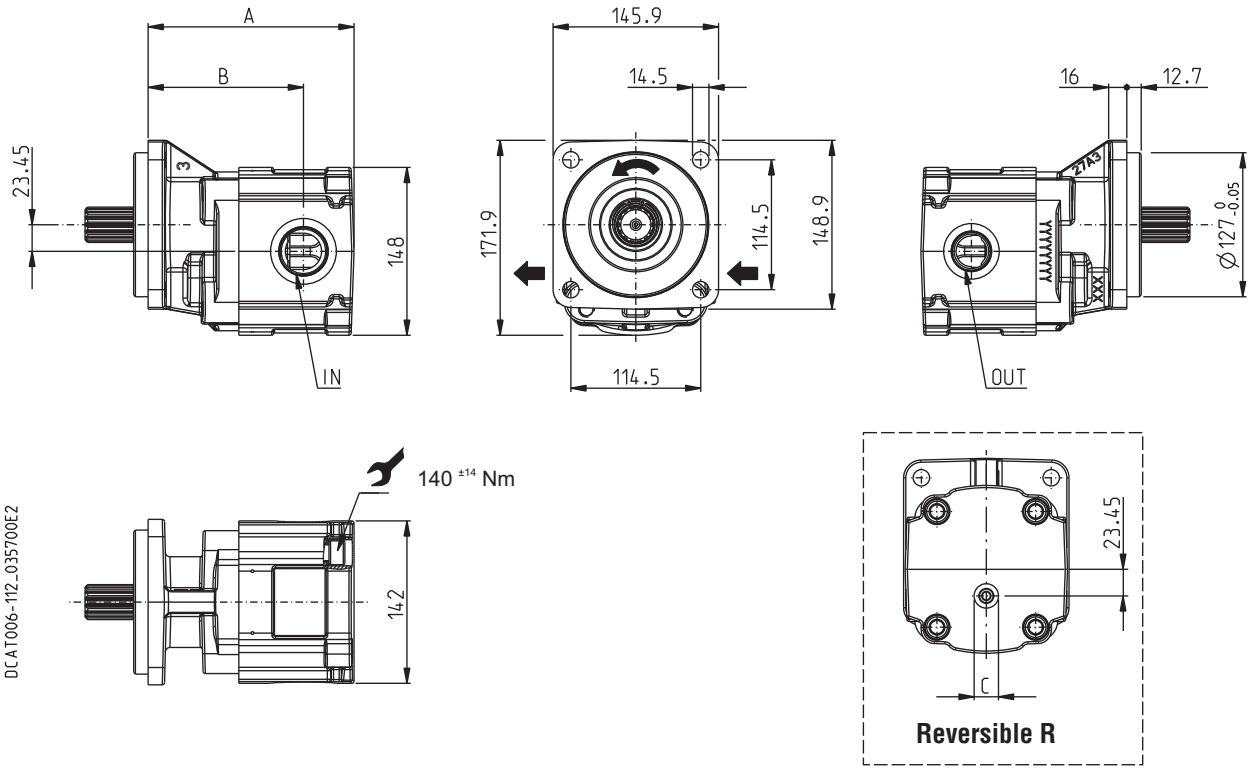
01/11.2012

Order example KP 30•41 R0-05 S6-L MD/MC-T-PV-OA-CSC (ANF3) (CN) (VNR01)

KAPPA 30 SINGLE UNITS SHORT BODY - SIDE PORTS CSC

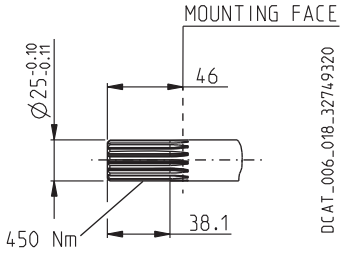
Mounting flange: **S6**
SAE "C" 4 HOLES
Conforms to SAE J744

Ports type: **ODT**
SAE STRAIGHT THREAD PORTS J514



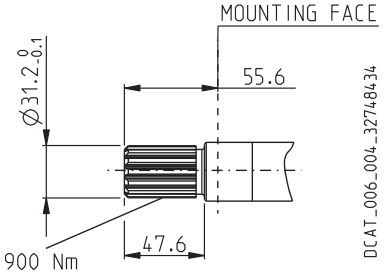
Drive shaft availability

05 (SAE "BB" Spline)



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

06 (SAE "C" Spline)



Ext. Involute Spline SAE J498B
with major diameter modified
14 teeth - 12/24 Pitch - 30 deg
Flat Root - Side fit - Class 1

Pump type	Motor type	Displacement	A	B	Ports code				C Drain port (◆)	
					Gear pumps		Gear motors			
		cm³/rev	mm	mm	IN	OUT	IN	OUT	Gas BSPP	SAE ODT
KP 30•41	KM 30•41	41,62	175	130,5	OG	OF	OF	OG	GC	OA
KP 30•43	KM 30•43	43,98	176,5	132	OG	OF	OF	OG	GC	OA
KP 30•46	KM 30•46	46,34	178	133,5	OG	OF	OF	OG	GC	OA
KP 30•51	KM 30•51	51,83	181,5	137	OG	OF	OF	OG	GC	OA
KP 30•56	KM 30•56	56,54	184,5	140	OG	OF	OF	OG	GC	OA

(◆) Dimension on page 43 and 45

01/11.2012

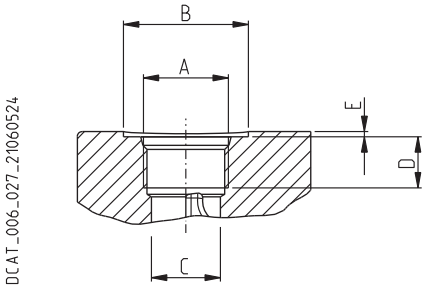
KAPPA 30 SINGLE UNITS SHORT BODY - SIDE PORTS CSC

SAE STRAIGHT THREAD PORTS J514 ODT

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

CODE	Nominal size	A	Ø B	Ø C	D	E		
			mm	mm	mm	mm	Nm	Nm
OA (◆)	3/8”	9/16” - 12 UNF - 2B	26	13	15	2	15 +1	—
OF	1”	1 5/16” - 12 UNF - 2B	49	30,5	20	2	60 +5	170 +10
OG	1” 1/4	1 5/8” - 12 UNF - 2B	58	39,1	20	2	70 +5	—

(◆) = Drain port



DCAT_006_027_21060524

Tightening torque for low pressure side port

Tightening torque for high pressure side port (values obtained at 350 bar)

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

How to order

1	2		3		4		5		6	
		0 -		S6 - L	.. / ..	-		-		- CSC (ANF3) (CN) (VNR01)

1	Type	Code
Pump type		KP 30·…
Motor type		KM 30·…

2	Rotation	Code
Left		S
Right		D
Reversible		R

3	Drive shaft	Code
SAE “BB” spline (15 teeth)		05
SAE “C” spline (14 teeth)		06

Code	Ports IN/OUT	4
../..	See codes on previous page	

Code	Seals (a)	5
N	Buna N (standard)	
T-PV	Buna hydrogenated HNBR and viton shaft seal	

Code	Drain ports	6
OA	SAE Straight thread ports (ODT)	
GC	GAS Straight thread ports (BSPP)	

(a) Choose the seals according to the temperature shown on page 4.

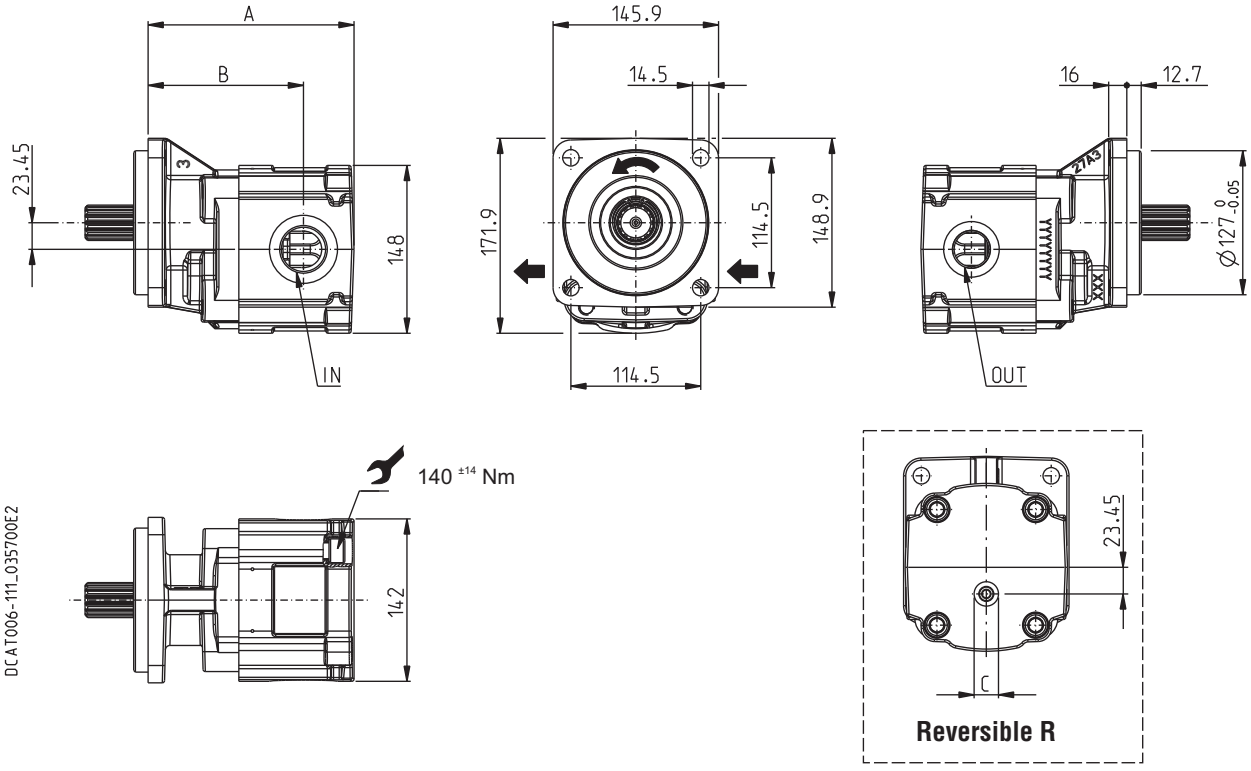
01/11.2012

Order example KP 30•41 R0-05 S6-L OG/OF-T-PV-OA-CSC (ANF3) (CN) (VNR01)

KAPPA 30 SINGLE UNITS SHORT BODY - SIDE PORTS CSC

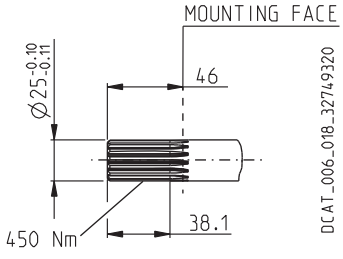
Mounting flange: **S6**
SAE "C" 4 HOLES
Conforms to SAE J744

Ports type: **BSPP**
GAS STRAIGHT THREAD PORTS



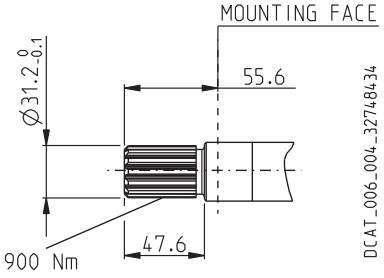
Drive shaft availability

05 (SAE "BB" Spline)



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

06 (SAE "C" Spline)



Ext. Involute Spline SAE J498B
with major diameter modified
14 teeth - 12/24 Pitch - 30 deg
Flat Root - Side fit - Class 1

Pump type	Motor type	Displacement	A	B	Ports code				C Drain port (◆)	
					Gear pumps		Gear motors			
		cm³/rev	mm	mm	IN	OUT	IN	OUT	Gas BSPP	SAE ODT
KP 30•41	KM 30•41	41,62	175	130,5	GG	GF	GF	GG	GC	OA
KP 30•43	KM 30•43	43,98	176,5	132	GG	GF	GF	GG	GC	OA
KP 30•46	KM 30•46	46,34	178	133,5	GG	GF	GF	GG	GC	OA
KP 30•51	KM 30•51	51,83	181,5	137	GG	GF	GF	GG	GC	OA
KP 30•56	KM 30•56	56,54	184,5	140	GG	GF	GF	GG	GC	OA

(◆) Dimension on page 43 and 45

01/11.2012

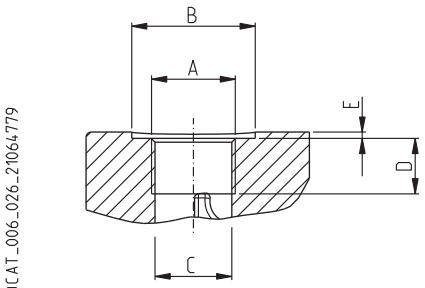
KAPPA 30 SINGLE UNITS SHORT BODY - SIDE PORTS CSC

GAS STRAIGHT THREAD PORTS BSPP

British standard pipe parallel (55°) conforms to UNI - ISO 228

CODE	Nominal size	A	Ø B	Ø C	D	E		
			mm	mm	mm	mm	Nm	Nm
GC (◆)	3/8"	G 3/8	25	15	14	2	15 $^{+1}$	—
GF	1"	G 1	49	30,5	22	2,5	50 $^{+2,5}$	130 $^{+10}$
GG	1" 1/4	G 1 1/4	56	39	24	2,5	60 $^{+5}$	170 $^{+15}$

(◆) Drain port



DCAT_006_026_21064779

Tightening torque for low pressure side port

Tightening torque for high pressure side port (values obtained at 350 bar)

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

How to order

1	2		3		4		5		6	
		0 -		S6 - L	.. / ..	-		-		- CSC (ANF3) (CN) (VNR01)

1	Type	Code
Pump type		KP 30·…
Motor type		KM 30·…

2	Rotation	Code
Left		S
Right		D
Reversible		R

3	Drive shaft	Code
SAE "BB" spline (15 teeth)		05
SAE "C" spline (14 teeth)		06

Code	Ports IN/OUT	4
../..	See codes on previous page	

Code	Seals (a)	5
N	Buna N (standard)	
T-PV	Buna hydrogenated HNBR and viton shaft seal	

Code	Drain ports	6
OA	SAE Straight thread ports (ODT)	
GC	GAS Straight thread ports (BSPP)	

(a) Choose the seals according to the temperature shown on page 4.

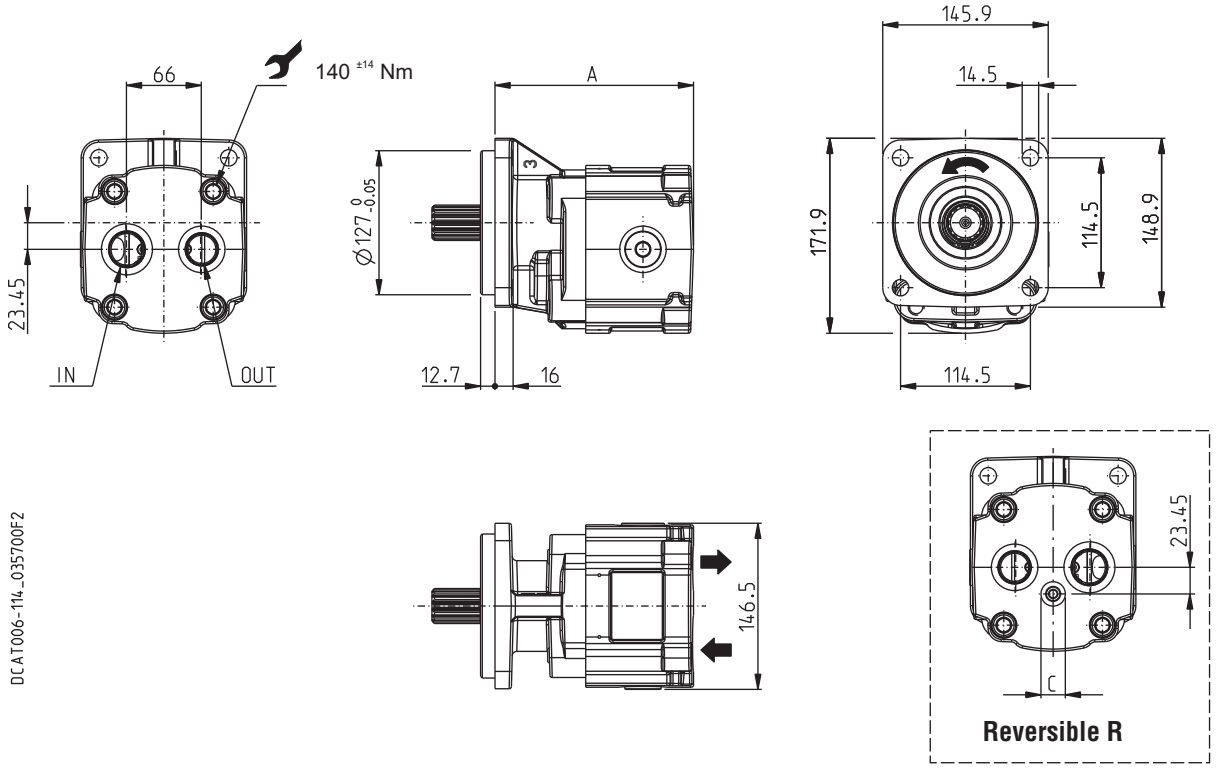
01/11.2012

Order example KP 30•41 R0-05 S6-L GG/GF-T-PV-GC-CSC (ANF3) (CN) (VNR01)

KAPPA 30 SINGLE UNITS SHORT BODY - REAR PORTS CSC

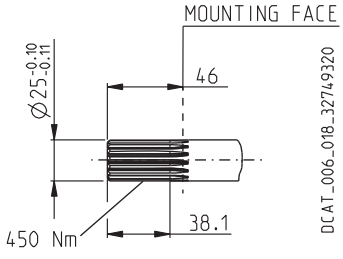
Mounting flange: **S6**
SAE "C" 4 HOLES
Conforms to SAE J744

Ports type: **ODT**
SAE STRAIGHT THREAD PORTS J514



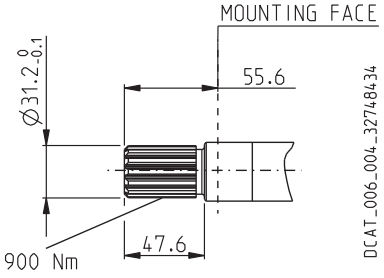
Drive shaft availability

05 (SAE "BB" Spline)



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

06 (SAE "C" Spline)



Ext. Involute Spline SAE J498B
with major diameter modified
14 teeth - 12/24 Pitch - 30 deg
Flat Root - Side fit - Class 1

Pump type	Motor type	Displacement	A	Ports code				C	
				Gear pumps		Gear motors		Drain port (◆)	
		cm³/rev	mm	IN	OUT	IN	OUT	Gas BSPP	SAE ODT
KP 30•41	KM 30•41	41,62	173	OG	OF	OF	OG	GC	OA
KP 30•43	KM 30•43	43,98	174,5	OG	OF	OF	OG	GC	OA
KP 30•46	KM 30•46	46,34	176	OG	OF	OF	OG	GC	OA
KP 30•51	KM 30•51	51,83	179,5	OG	OF	OF	OG	GC	OA
KP 30•56	KM 30•56	56,54	182,5	OG	OF	OF	OG	GC	OA

(◆) Dimension on page 47 and 49

01/11.2012

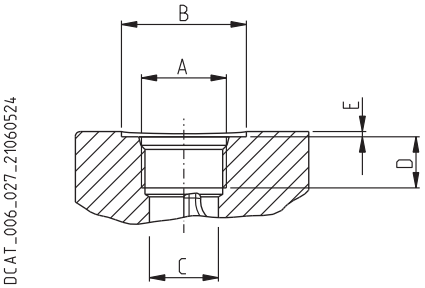
KAPPA 30 SINGLE UNITS SHORT BODY - REAR PORTS CSC

SAE STRAIGHT THREAD PORTS J514 ODT

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

CODE	Nominal size	A	Ø B	Ø C	D	E		
			mm	mm	mm	mm	Nm	Nm
OA (◆)	3/8”	9/16” - 12 UNF - 2B	26	13	15	2	15 +1	—
OF	1”	1 5/16” - 12 UNF - 2B	49	30,5	20	2	60 +5	170 +10
OG	1” 1/4	1 5/8” - 12 UNF - 2B	58	39,1	20	2	70 +5	—

(◆) = Drain port



DCAT_006_027_21060524

Tightening torque for low pressure side port

Tightening torque for high pressure side port (values obtained at 350 bar)

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

How to order

1 [ ] 2 [ ] 0 - 3 [ ] S6 - P 4 [.. / ..] - 5 [ ] - 6 [ ] - CSC (ANF3) (CN) (VNR01)

1	Type	Code
Pump type		KP 30·…
Motor type		KM 30·…

2	Rotation	Code
Left		S
Right		D
Reversible		R

3	Drive shaft	Code
SAE “BB” spline (15 teeth)		05
SAE “C” spline (14 teeth)		06

Code	Ports IN/OUT	4
../..	See codes on previous page	

Code	Seals (a)	5
N	Buna N (standard)	
T-PV	Buna hydrogenated HNBR and viton shaft seal	

Code	Drain ports	6
OA	SAE Straight thread ports (ODT)	
GC	GAS Straight thread ports (BSPP)	

(a) Choose the seals according to the temperature shown on page 4.

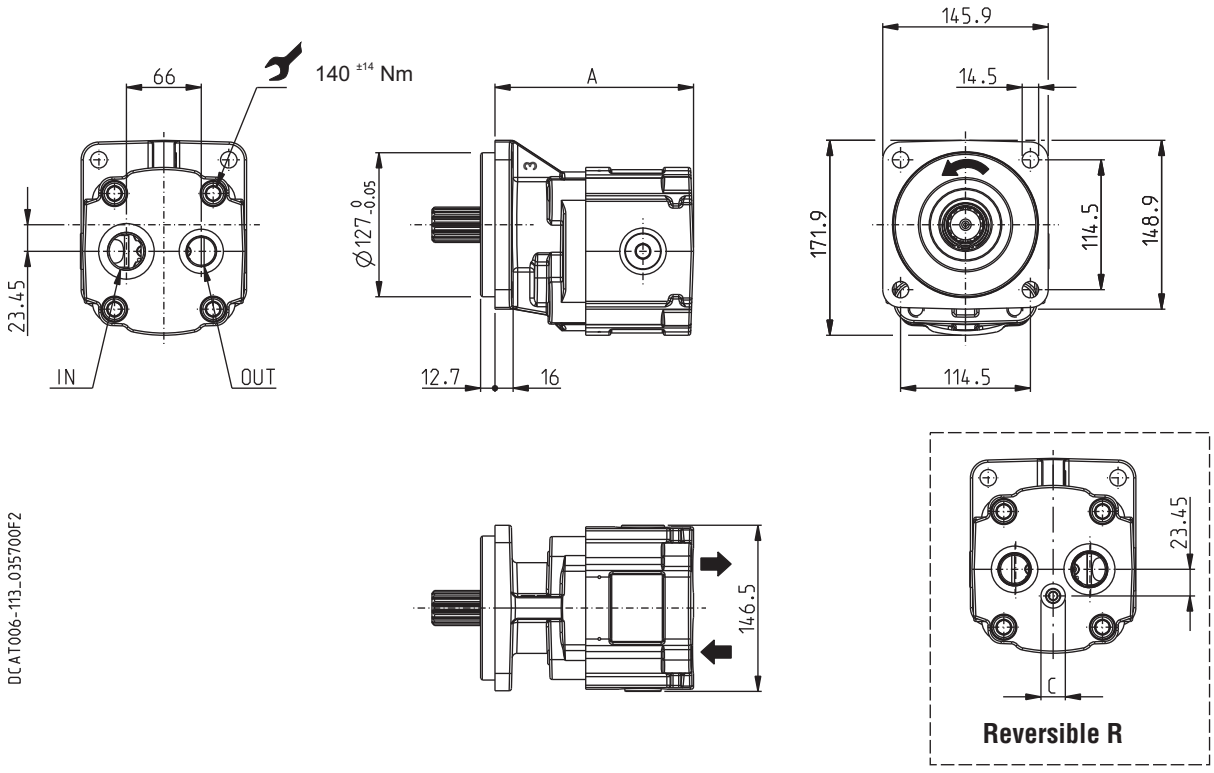
01/11.2012

Order example KP 30•41 R0-05 S6-P OG/OF-T-PV-OA-CSC (ANF3) (CN) (VNR01)

KAPPA 30 SINGLE UNITS SHORT BODY - REAR PORTS CSC

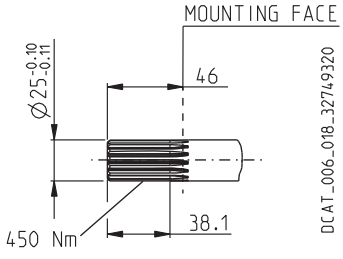
Mounting flange: **S6**
SAE "C" 4 HOLES
Conforms to SAE J744

Ports type: **BSPP**
GAS STRAIGHT THREAD PORTS



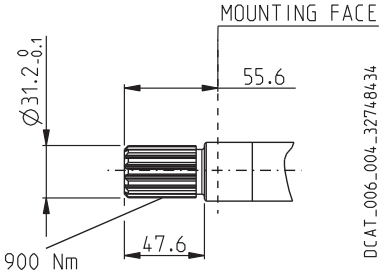
Drive shaft availability

05 (SAE "BB" Spline)



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

06 (SAE "C" Spline)



Ext. Involute Spline SAE J498B
with major diameter modified
14 teeth - 12/24 Pitch - 30 deg
Flat Root - Side fit - Class 1

Pump type	Motor type	Displacement	A	Ports code				C	
				Gear pumps		Gear motors		Drain port (◆)	
		cm³/rev	mm	IN	OUT	IN	OUT	Gas BSPP	SAE ODT
KP 30•41	KM 30•41	41,62	173	GG	GF	GF	GG	GC	OA
KP 30•43	KM 30•43	43,98	174,5	GG	GF	GF	GG	GC	OA
KP 30•46	KM 30•46	46,34	176	GG	GF	GF	GG	GC	OA
KP 30•51	KM 30•51	51,83	179,5	GG	GF	GF	GG	GC	OA
KP 30•56	KM 30•56	56,54	182,5	GG	GF	GF	GG	GC	OA

(◆) Dimension on page 47 and 49

01/11.2012

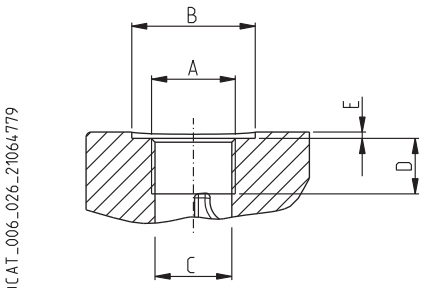
KAPPA 30 SINGLE UNITS SHORT BODY - REAR PORTS CSC

GAS STRAIGHT THREAD PORTS BSPP

British standard pipe parallel (55°) conforms to UNI - ISO 228

CODE	Nominal size	A	Ø B	Ø C	D	E		
			mm	mm	mm	mm	Nm	Nm
GC (◆)	3/8"	G 3/8	25	15	14	2	15 $^{+1}$	—
GF	1"	G 1	49	30,5	22	2,5	50 $^{+2,5}$	130 $^{+10}$
GG	1" 1/4	G 1 1/4	56	39	24	2,5	60 $^{+5}$	170 $^{+15}$

(◆) Drain port



DCAT_006_026_21064779

Tightening torque for low pressure side port

Tightening torque for high pressure side port (values obtained at 350 bar)

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

How to order

1	2		3		4	5	6	
		0 -		S6 - P	.. / ..	-		- CSC (ANF3) (CN) (VNR01)

1	Type	Code
Pump type		KP 30·...
Motor type		KM 30·...

2	Rotation	Code
Left		S
Right		D
Reversible		R

3	Drive shaft	Code
SAE "BB" spline (15 teeth)		05
SAE "C" spline (14 teeth)		06

Code	Ports IN/OUT	4
../..	See codes on previous page	

Code	Seals (a)	5
N	Buna N (standard)	
T-PV	Buna hydrogenated HNBR and viton shaft seal	

Code	Drain ports	6
OA	SAE Straight thread ports (ODT)	
GC	GAS Straight thread ports (BSPP)	

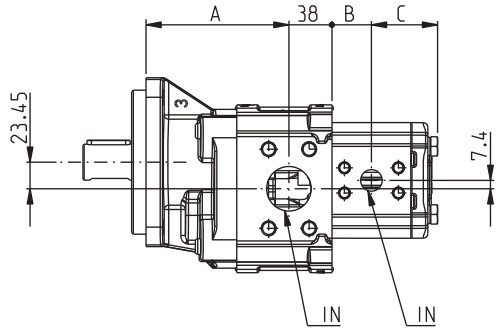
(a) Choose the seals according to the temperature shown on page 4.

01/11.2012

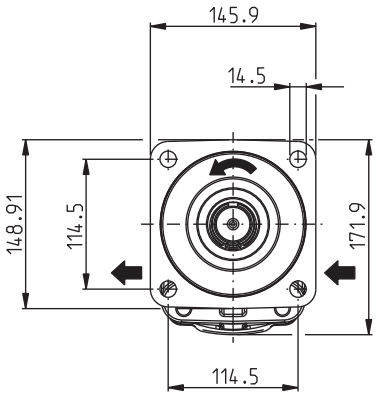
Order example KP 30•41 R0-05 S6-P GG/GF-T-PV-GC-CSC (ANF3) (CN) (VNR01)

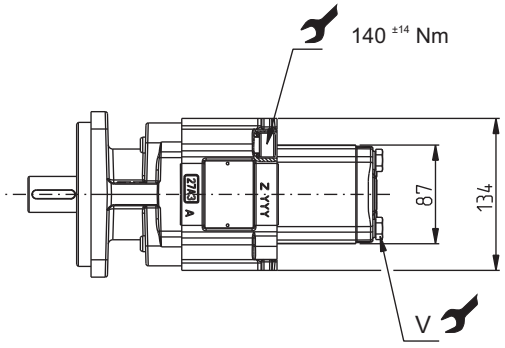
KAPPA 30 DOUBLE PUMPS KP30/PL20 SHORT BODY CSC

Mounting flange: **S6**
SAE "C" 4 HOLES
Conforms to SAE J744



Ports type: **SSM**
SAE FLANGED PORTS J518

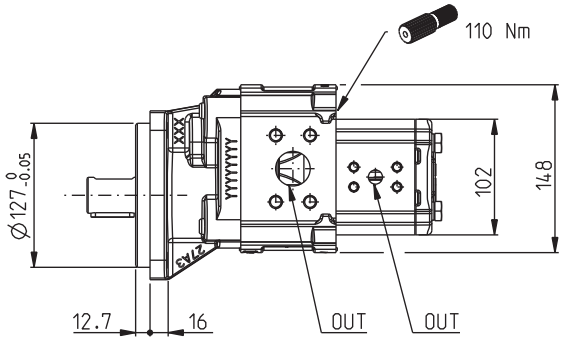




Drive shaft availability (See page 40)

The torque absorbed from the shaft of the first pump results from the sum of the torques due to all single stages.
The achieved value must not exceed the maximum torque limit given for the shaft of the first pump.

Rear cover material	V Screws tightening torque Nm (lbf in)
Aluminium	45 ±4,5 (358 ÷ 438)
Cast iron	70 ±7 (558 ÷ 682)



DCAT006-115_7991378A

Pump type	Displacement	A	Ports code	
	cm³/rev	mm	IN	OUT
KP 30•41	41,62	130,5	MD	MC
KP 30•43	43,98	132	MD	MC
KP 30•46	46,34	133,5	MD	MC
KP 30•51	51,83	137	MD	MC
KP 30•56	56,54	140	ME	MD

Pump type	Displa-cement	B	C	Ports code	
	cm³/rev	mm	mm	IN	OUT
PLP 20•4	4,95	25,8	49,3	MA	MA
PLP 20•6,3	6,61	27	50,5	MA	MA
PLP 20•8	8,26	28,3	51,8	MA	MA
PLP 20•10,5	10,9	30,3	53,8	MA	MA
PLP 20•11,2	11,23	30,5	54	MA	MA
PLP 20•14	14,53	33	56,5	MB	MA
PLP 20•16	16,85	34,8	58,3	MB	MA
PLP 20•20	21,14	38	61,5	MB	MA

Polaris 20: for features please consult the proper technical catalog.

01/11.2012

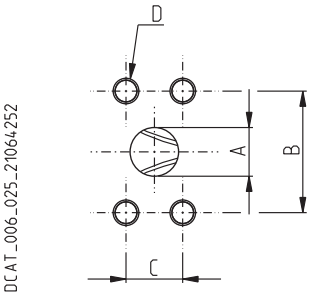
KAPPA 30 DOUBLE PUMPS KP30/PL20 SHORT BODY CSC

SAE FLANGED PORTS J518 - Standard pressure series 3000 PSI SSM

Metric thread ISO 60° conforms to ISO/R 262

CODE	A	B	C	D		
	mm	mm	mm	Thread Depth (mm)	Nm	Nm
MA	12,5	17,5	38,1	M 8 Depth 14	15 +1	15 +1
MB	19	22,2	47,6	M 10 Depth 14	20 +1	20 +1
MC	25,4	52,4	26,2	M 10 Depth 17	20 +1	30 +2,5
MD	30,5	58,7	30,2	M 10 Depth 17	20 +1	35 +2,5
ME	39,3	69,8	35,7	M 12 Depth 17	30 +2,5	60 +5

(◆) For Polaris 20



Tightening torque for low pressure side port

Tightening torque for high pressure side port (values obtained at 350 bar)

How to order

1 2 3

[ ] - [ ] S6 - L [ ] - 45 - CSC /

Front pump

1 3 4 5 6 7 8

[ ] - L [ ] - [ ] [ ] - [ ] / FS - [ ] - [ ] (ANF3) (CN) (VNR01)

Rear pump

1 Type	Code
Front pump type	KP 30·…
Rear pump type	PLP 20·…

2 Drive shaft	Code
SAE “BB” spline (15 teeth)	05
SAE “C” spline (14 teeth)	06

3 Ports IN/OUT (a)	Code
See codes on previous page	../..

4 Inlet combination	Code
Two inlet (standard) no code	…
Common inlet	N7

Code	5 Rotation
S	Left
D	Right

Code	6 Seals (b)
…	Buna N (standard) no code
T-PV	Buna hydrogenated HNBR and viton shaft seal

Code	7 Rear cover
…	Cast iron (standard) - no code
L	Aluminium

Code	8 Rear pump thrust plate
…	Standard - no code - from 4 to 14 type
AV	High speed - from 16 to 20 type

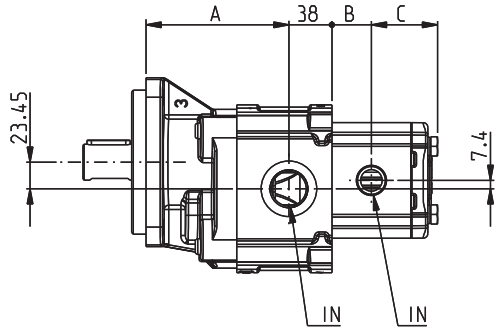
(a) For rear pump with common inlet, please write only /OUT code.
(b) Choose the seals according to the temperature shown on page 4.

Order example KP 30•41-05 S6-L MD/MC-45-CSC/PLP 20•16-L /MA-N7 S-T-PV/FS-L-AV (ANF3) (CN) (VNR01)

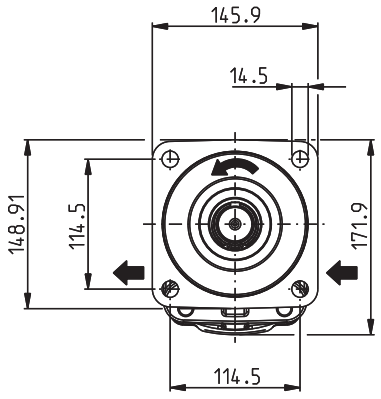
01/11.2012

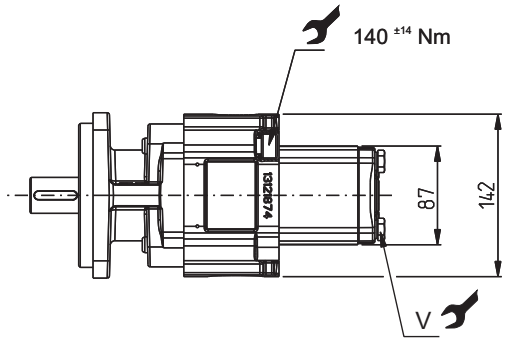
KAPPA 30 DOUBLE PUMPS KP30/PL20 SHORT BODY CSC

Mounting flange: **S6**
SAE "C" 4 HOLES
Conforms to SAE J744



Ports type: **ODT**
SAE STRAIGHT THREAD PORTS J514

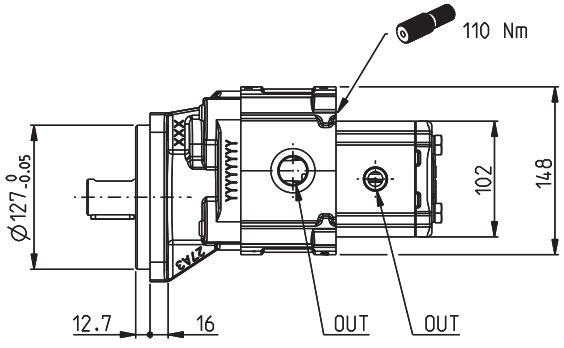




Drive shaft availability (See page 40)

The torque absorbed from the shaft of the first pump results from the sum of the torques due to all single stages.
The achieved value must not exceed the maximum torque limit given for the shaft of the first pump.

Rear cover material	V Screws tightening torque Nm (lbf in)
Aluminium	45 ±4,5 (358 ÷ 438)
Cast iron	70 ±7 (558 ÷ 682)



DCAT006-117_7991378A

Pump type	Displacement	A	Ports code	
	cm³/rev	mm	IN	OUT
KP 30•41	41,62	130,5	OG	OF
KP 30•43	43,98	132	OG	OF
KP 30•46	46,34	133,5	OG	OF
KP 30•51	51,83	137	OG	OF
KP 30•56	56,54	140	OG	OF

Pump type	Displa-cement	B	C	Ports code	
	cm³/rev	mm	mm	IN	OUT
PLP 20•4	4,95	25,8	49,3	OC	OC
PLP 20•6,3	6,61	27	50,5	OC	OC
PLP 20•8	8,26	28,3	51,8	OC	OC
PLP 20•10,5	10,9	30,3	53,8	OC	OC
PLP 20•11,2	11,23	30,5	54	OC	OC
PLP 20•14	14,53	33	56,5	OD	OC
PLP 20•16	16,85	34,8	58,3	OD	OC
PLP 20•20	21,14	38	61,5	OD	OC

Polaris 20: for features please consult the proper technical catalog.

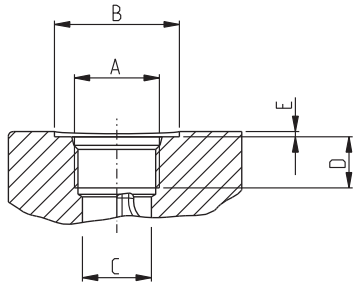
01/11.2012

KAPPA 30 DOUBLE PUMPS KP30/PL20 SHORT BODY CSC

SAE STRAIGHT THREAD PORTS J514 ODT

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

CODE	Nominal size	A	Ø B	Ø C	D	E		
			mm	mm	mm	mm	Nm	Nm
OC	5/8"	7/8" - 14 UNF - 2B	35	20,5	17	0,5	30 +2,5	70 +5
OD	3/4"	1 1/16" - 12 UNF - 2B	42	24,8	20	0,5	40 +2,5	120 +10
OF	1"	1 5/16" - 12 UNF - 2B	49	30,5	20	2	60 +5	170 +10
OG	1" 1/4	1 5/8" - 12 UNF - 2B	58	39,1	20	2	70 +5	—



DCAT_006_027_21060524

Tightening torque for low pressure side port

Tightening torque for high pressure side port (values obtained at 350 bar)

How to order

1 [ ] - 2 [ ] S6 - L 3 [ ] - 45 - CSC /

Front pump

1 [ ] - L 3 [ ] - 4 [ ] - 5 [ ] 6 [ ] - 7 [ ] / FS - 8 [ ] - 9 [ ] (ANF3) (CN) (VNR01)

Rear pump

1 Type	Code
Front pump type	KP 30·…
Rear pump type	PLP 20·…

2 Drive shaft	Code
SAE "BB" spline (15 teeth)	05
SAE "C" spline (14 teeth)	06

3 Ports IN/OUT (a)	Code
See codes on previous page	../..

4 Inlet combination	Code
Two inlet (standard) no code	…
Common inlet	N7

5 Rear pump body	Code
PLP20 with standard body - no code	…
PLP20 with high strength body	L101

Code	6 Rotation
S	Left
D	Right

Code	7 Seals (b)
…	Buna N (standard) no code
T-PV	Buna hydrogenated HNBR and viton shaft seal

Code	8 Rear cover
…	Cast iron (standard) - no code
L	Aluminium

Code	9 Rear pump thrust plate
…	Standard - no code - from 4 to 14 type
AV	High speed - from 16 to 20 type

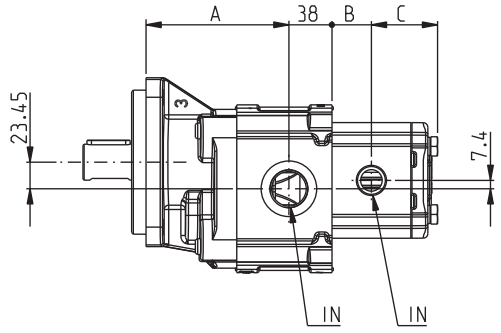
(a) For rear pump with common inlet, please write only /OUT code.
(b) Choose the seals according to the temperature shown on page 4.

01/11.2012

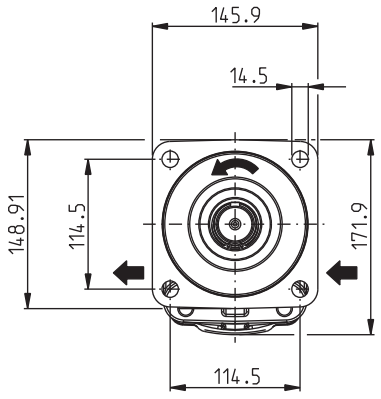
Order example KP 30•41-05 S6-L OG/OF-45-CSC/PLP 20•16-L /OC-N7-L101 S-T-PV/FS-L-AV (ANF3) (CN) (VNR01)

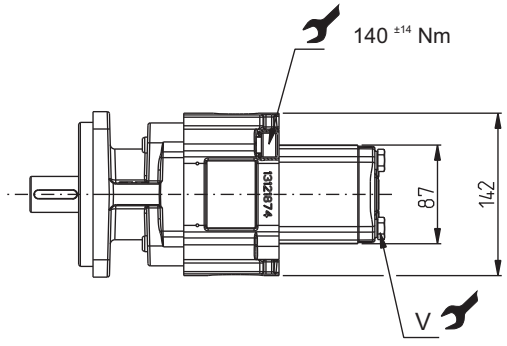
KAPPA 30 DOUBLE PUMPS KP30/PL20 SHORT BODY CSC

Mounting flange: **S6**
SAE "C" 4 HOLES
Conforms to SAE J744



Ports type: **BSPP**
GAS STRAIGHT THREAD PORTS

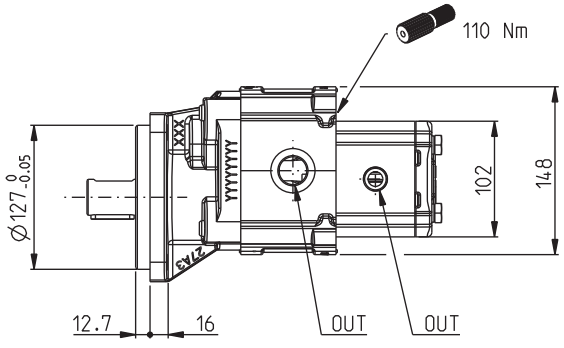




Drive shaft availability (See page 40)

The torque absorbed from the shaft of the first pump results from the sum of the torques due to all single stages.
The achieved value must not exceed the maximum torque limit given for the shaft of the first pump.

Rear cover material	V Screws tightening torque Nm (lbf in)
Aluminium	45 ±4,5 (358 ÷ 438)
Cast iron	70 ±7 (558 ÷ 682)



DCAT006-116_7991378A

Pump type	Displacement	A	Ports code	
	cm³/rev	mm	IN	OUT
KP 30•41	41,62	130,5	GG	GF
KP 30•43	43,98	132	GG	GF
KP 30•46	46,34	133,5	GG	GF
KP 30•51	51,83	137	GG	GF
KP 30•56	56,54	140	GG	GF

Pump type	Displa-cement	B	C	Ports code	
	cm³/rev	mm	mm	IN	OUT
PLP 20•4	4,95	25,8	49,3	GD	GD
PLP 20•6,3	6,61	27	50,5	GD	GD
PLP 20•8	8,26	28,3	51,8	GD	GD
PLP 20•10,5	10,9	30,3	53,8	GD	GD
PLP 20•11,2	11,23	30,5	54	GD	GD
PLP 20•14	14,53	33	56,5	GE	GD
PLP 20•16	16,85	34,8	58,3	GE	GD
PLP 20•20	21,14	38	61,5	GE	GD

Polaris 20: for features please consult the proper technical catalog.

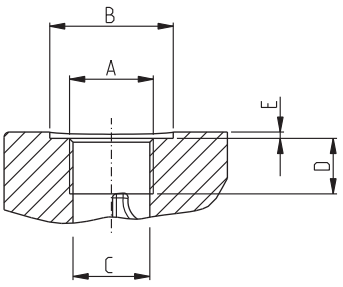
01/11.2012

KAPPA 30 DOUBLE PUMPS KP30/PL20 SHORT BODY CSC

GAS STRAIGHT THREAD PORTS BSPP

British standard pipe parallel (55°) conforms to UNI - ISO 228

CODE	Nominal size	A	Ø B	Ø C	D	E		
			mm	mm	mm	mm	Nm	Nm
GD	1/2"	G 1/2	—	19	17	—	20 +1	50 +2,5
GE	3/4"	G 3/4	—	24,5	18	—	30 +2,5	90 +5
GF	1"	G 1	49	30,5	22	2,5	50 +2,5	130 +10
GG	1" 1/4	G 1 1/4	56	39	24	2,5	60 +5	170 +15



DCAT_006_026_21064779

Tightening torque for low pressure side port

Tightening torque for high pressure side port (values obtained at 350 bar)

How to order

1 [ ] - 2 [ ] S6 - L 3 [ ] - 45 - CSC /

Front pump

1 [ ] - L 3 [ ] - 4 [ ] - 5 [ ] 6 [ ] - 7 [ ] / FS - 8 [ ] - 9 [ ] (ANF3) (CN) (VNR01)

Rear pump

1 Type	Code
Front pump type	KP 30·…
Rear pump type	PLP 20·…

2 Drive shaft	Code
SAE "BB" spline (15 teeth)	05
SAE "C" spline (14 teeth)	06

3 Ports IN/OUT (a)	Code
See codes on previous page	../..

4 Inlet combination	Code
Two inlet (standard) no code	…
Common inlet	N7

5 Rear pump body	Code
PLP20 with standard body - no code	…
PLP20 with high strength body	L101

Code	6 Rotation
S	Left
D	Right

Code	7 Seals (b)
…	Buna N (standard) no code
T-PV	Buna hydrogenated HNBR and viton shaft seal

Code	8 Rear cover
…	Cast iron (standard) - no code
L	Aluminium

Code	9 Rear pump thrust plate
…	Standard - no code - from 4 to 14 type
AV	High speed - from 16 to 20 type

(a) For rear pump with common inlet, please write only /OUT code.
(b) Choose the seals according to the temperature shown on page 4.

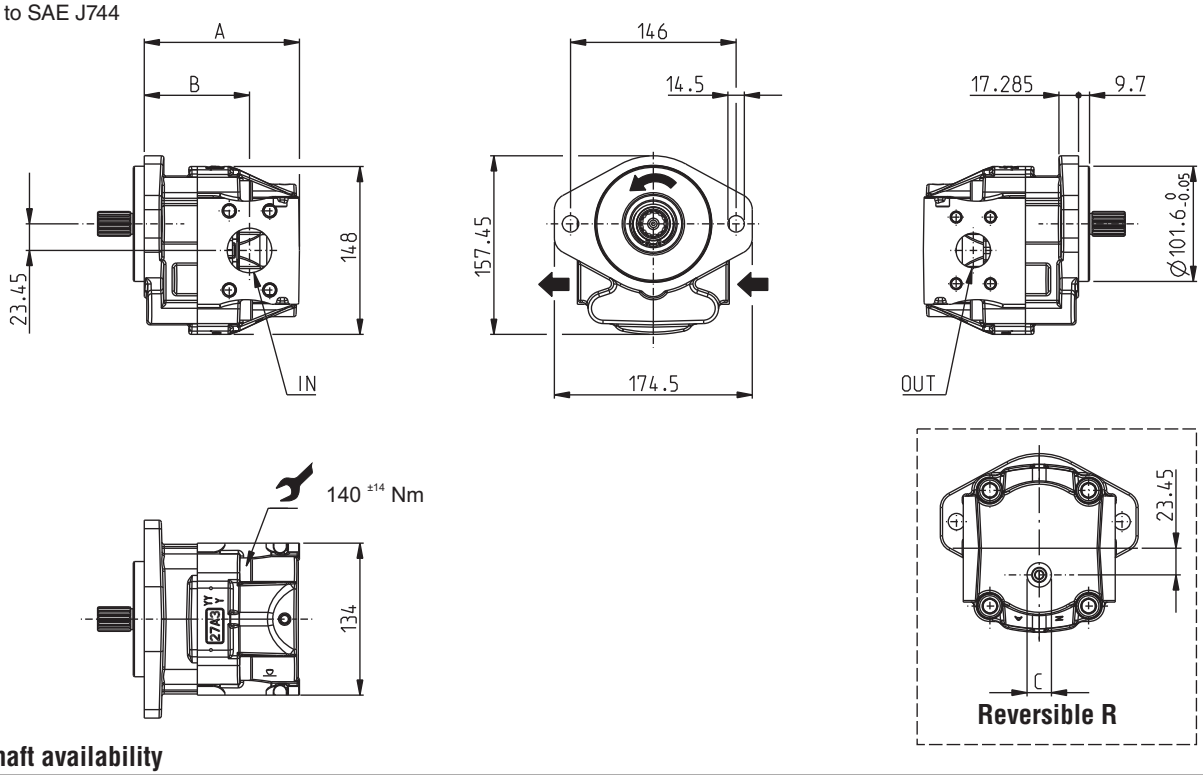
01/11.2012

Order example KP 30•41-05 S6-L GG/GF-45-CSC/PLP 20•16-L /GD-N7-L101 S-T-PV/FS-L-AV (ANF3) (CN) (VNR01)

KAPPA 30 SINGLE UNITS SHORT SHAPED BODY - SIDE PORTS HSC

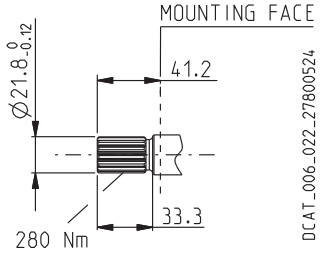
Mounting flange: **K9**
SAE "B" 2 HOLES
Conforms to SAE J744

Ports type: **SSM**
SAE FLANGED PORTS J518



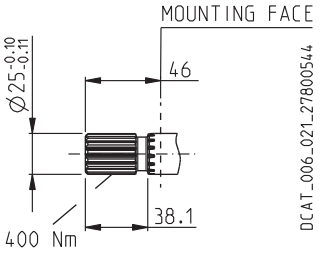
Drive shaft availability

A8 (SAE "B" Spline)



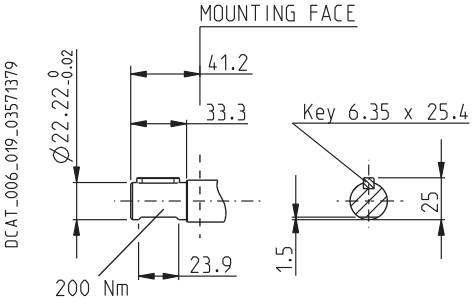
Ext. Involute Spline SAE J498B
with major diameter modified
13 teeth - 16/32 Pitch - 30 deg
Flat Root - Side fit - Class 1

A5 (SAE "BB" Spline)



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

32 (SAE "B" Straight)



(◆) Dimension on page 59 and 61

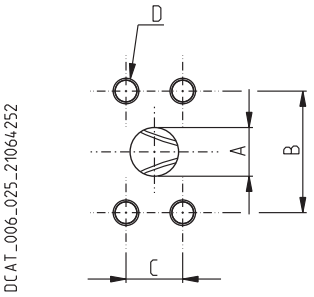
Pump type	Motor type	Displacement	A	B	Ports code				C Drain port (◆)	
					Gear pumps		Gear motors			
		cm³/rev	mm	mm	IN	OUT	IN	OUT	Gas BSPP	SAE ODT
KP 30•19,5	KM 30•19,5	19,63	127,3	83,3	MC	MB	MB	MC	GC	OA
KP 30•22	KM 30•22	21,99	128,8	84,8	MC	MB	MB	MC	GC	OA
KP 30•24	KM 30•24	24,03	127,3	83,3	MC	MB	MB	MC	GC	OA
KP 30•27	KM 30•27	26,7	131,8	87,8	MC	MB	MB	MC	GC	OA
KP 30•29	KM 30•29	29,06	133,3	89,3	MC	MB	MB	MC	GC	OA
KP 30•31	KM 30•31	30,63	134,3	90,3	MC	MB	MB	MC	GC	OA
KP 30•34	KM 30•34	34,56	136,8	92,8	MC	MB	MB	MC	GC	OA
KP 30•38	KM 30•38	39,27	136,8	92,8	MC	MB	MB	MC	GC	OA
KP 30•61	KM 30•61	61,26	160,8	90,8	ME	MD	MD	ME	GC	OA
KP 30•73	KM 30•73	73,82	168,8	98,8	ME	MD	MD	ME	GC	OA
KP 30•82	KM 30•82	81,68	170,8	103,8	ME	MD	MD	ME	GC	OA

01/11.2012

KAPPA 30 SINGLE UNITS SHORT SHAPED BODY - SIDE PORTS HSC

SAE FLANGED PORTS J518 - Standard pressure series 3000 PSI SSM

Metric thread ISO 60° conforms to ISO/R 262



DCAT_006_025_21064252

CODE	A	B	C	D		
	mm	mm	mm	Thread Depth (mm)	Nm	Nm
MB	19	47,6	22,2	M 10 Depth 17	20 +1	30 +2,5
MC	25,4	52,4	26,2	M 10 Depth 17	20 +1	30 +2,5
MD	30,5	58,7	30,2	M 10 Depth 17	20 +1	35 +2,5
ME	39,3	69,8	35,7	M 12 Depth 17	30 +2,5	60 +5

Tightening torque for low pressure side port

Tightening torque for high pressure side port (values obtained at 350 bar)

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

How to order

1	2		3		4		5		6		7	
		0 -		K9 - L	.. / ..	-		-		- HSC -		(ANF3) (CN) (VNR01)

1	Type	Code
Pump type		KP 30·…
Motor type		KM 30·…

2	Rotation	Code
Left		S
Right		D
Reversible		R

3	Drive shaft	Code
SAE “B” spline (13 teeth)		A8
SAE “BB” spline (15 teeth)		A5
SAE “B” straight		32

Code	Ports IN/OUT	4
../..	See codes on previous page	

Code	Seals (a)	5
N	Buna N (standard)	
T-PV	Buna hydrogenated HNBR and viton shaft seal	

Code	Drain ports	6
OA	SAE Straight thread ports (ODT)	
GC	GAS Straight thread ports (BSPP)	

Code	Performance	7
…	Standard - no code (b)	
GS	High performance	

(a) Choose the seals according to the temperature shown on page 4.
(b) Not available for type 61-73-82.

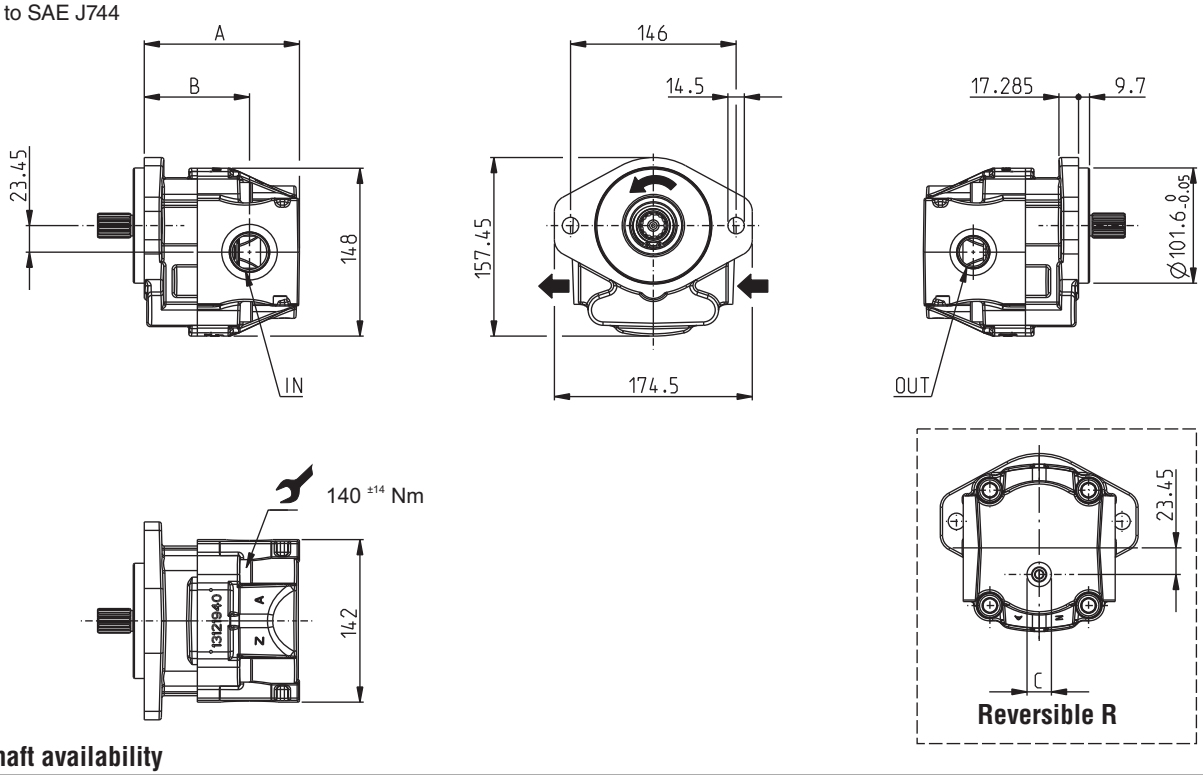
Order example KP 30•19,5 R0-A8 K9-L MC/MB-T-PV-OA-HSC-GS (ANF3) (CN) (VNR01)

01/11.2012

KAPPA 30 SINGLE UNITS SHORT SHAPED BODY - SIDE PORTS HSC

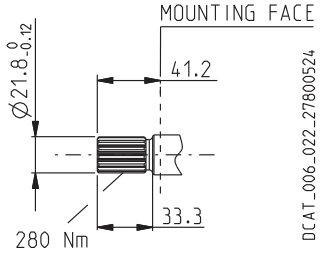
Mounting flange: **K9**
SAE "B" 2 HOLES
Conforms to SAE J744

Ports type: **ODT**
SAE STRAIGHT THREAD PORTS J514



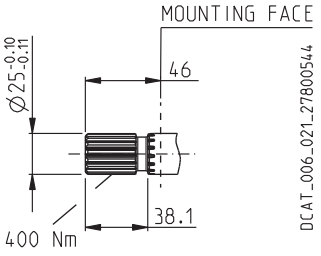
Drive shaft availability

A8 (SAE "B" Spline)



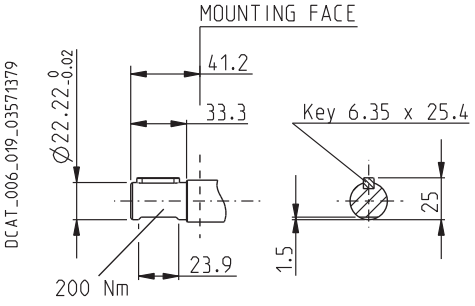
Ext. Involute Spline SAE J498B
with major diameter modified
13 teeth - 16/32 Pitch - 30 deg
Flat Root - Side fit - Class 1

A5 (SAE "BB" Spline)



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

32 (SAE "B" Straight)



(◆) Dimension on page 59 and 61

Pump type	Motor type	Displacement	A	B	Ports code				C Drain port (◆)	
					Gear pumps		Gear motors			
		cm³/rev	mm	mm	IN	OUT	IN	OUT	Gas BSPP	SAE ODT
KP 30•19,5	KM 30•19,5	19,63	127,3	83,3	OF	OD	OD	OF	GC	OA
KP 30•22	KM 30•22	21,99	128,8	84,8	OF	OD	OD	OF	GC	OA
KP 30•24	KM 30•24	24,03	127,3	83,3	OF	OD	OD	OF	GC	OA
KP 30•27	KM 30•27	26,7	131,8	87,8	OF	OD	OD	OF	GC	OA
KP 30•29	KM 30•29	29,06	133,3	89,3	OF	OD	OD	OF	GC	OA
KP 30•31	KM 30•31	30,63	134,3	90,3	OF	OD	OD	OF	GC	OA
KP 30•34	KM 30•34	34,56	136,8	92,8	OF	OD	OD	OF	GC	OA
KP 30•38	KM 30•38	39,27	136,8	92,8	OF	OD	OD	OF	GC	OA
KP 30•61	KM 30•61	61,26	160,8	90,8	OG	OF	OF	OG	GC	OA
KP 30•73	KM 30•73	73,82	168,8	98,8	OG	OF	OF	OG	GC	OA
KP 30•82	KM 30•82	81,68	170,8	103,8	OG	OF	OF	OG	GC	OA

01/11.2012

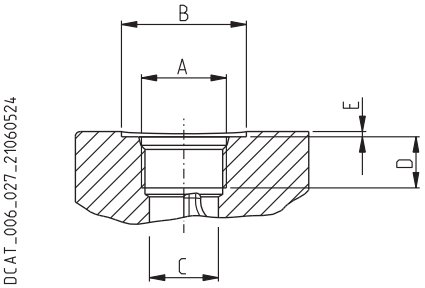
KAPPA 30 SINGLE UNITS SHORT SHAPED BODY - SIDE PORTS HSC

SAE STRAIGHT THREAD PORTS J514 ODT

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

CODE	Nominal size	A	Ø B	Ø C	D	E		
			mm	mm	mm	mm	Nm	Nm
OA (◆)	3/8”	9/16” - 12 UNF - 2B	26	13	15	2	15 +1	—
OD	3/4”	1 1/16” - 12 UNF - 2B	42	24,8	20	2	40 +2,5	120 +10
OF	1”	1 5/16” - 12 UNF - 2B	49	30,5	20	2	60 +5	170 +10
OG	1” 1/4	1 5/8” - 12 UNF - 2B	58	39,1	20	2	70 +5	—

(◆) = Drain port



DCAT_006_027_21060524

Tightening torque for low pressure side port

Tightening torque for high pressure side port (values obtained at 350 bar)

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

How to order

1 | 2 | 3 | 4 | 5 | 6 | 7

[ ] [ ] 0 - [ ] K9 - L [.. / ..] - [ ] - [ ] - HSC - [ ] (ANF3) (CN) (VNR01)

1 Type	Code
Pump type	KP 30·…
Motor type	KM 30·…

2 Rotation	Code
Left	S
Right	D
Reversible	R

3 Drive shaft	Code
SAE “B” spline (13 teeth)	A8
SAE “BB” spline (15 teeth)	A5
SAE “B” straight	32

Code	4 Ports IN/OUT
../..	See codes on previous page

Code	5 Seals (a)
N	Buna N (standard)
T-PV	Buna hydrogenated HNBR and viton shaft seal

Code	6 Drain ports
OA	SAE Straight thread ports (ODT)
GC	GAS Straight thread ports (BSPP)

Code	7 Performance
…	Standard - no code (b)
GS	High performance

(a) Choose the seals according to the temperature shown on page 4.
(b) Not available for type 61-73-82.

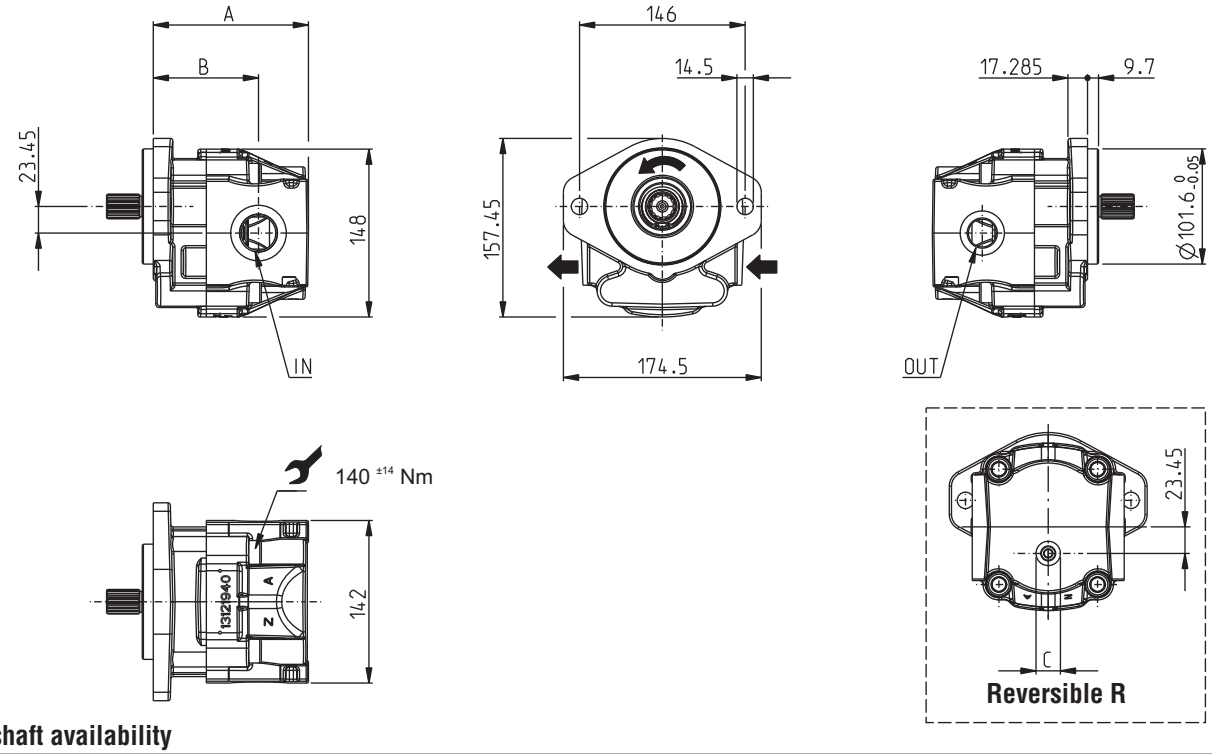
Order example KP 30•19,5 R0-A8 K9-L OF/OD-T-PV-OA-HSC-GS (ANF3) (CN) (VNR01)

01/11.2012

KAPPA 30 SINGLE UNITS SHORT SHAPED BODY - SIDE PORTS HSC

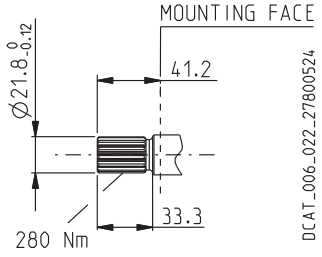
Mounting flange: **K9**
SAE "B" 2 HOLES
Conforms to SAE J744

Ports type: **BSPP**
GAS STRAIGHT THREAD PORTS



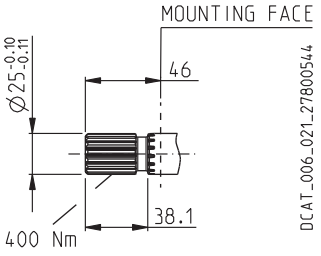
Drive shaft availability

A8 (SAE "B" Spline)



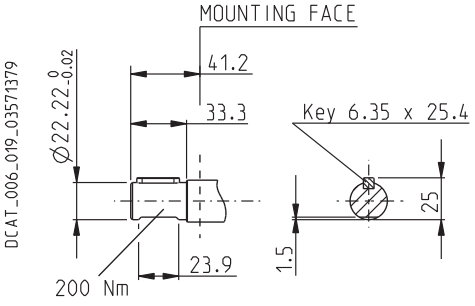
Ext. Involute Spline SAE J498B
with major diameter modified
13 teeth - 16/32 Pitch - 30 deg
Flat Root - Side fit - Class 1

A5 (SAE "BB" Spline)



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

32 (SAE "B" Straight)



(◆) Dimension on page 59 and 61

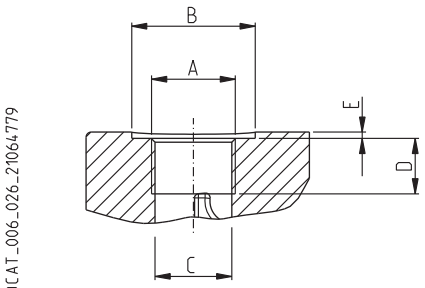
Pump type	Motor type	Displacement	A	B	Ports code				C Drain port (◆)	
					Gear pumps		Gear motors			
		cm³/rev	mm	mm	IN	OUT	IN	OUT	Gas BSPP	SAE ODT
KP 30•19,5	KM 30•19,5	19,63	127,3	83,3	GF	GE	GE	GF	GC	OA
KP 30•22	KM 30•22	21,99	128,8	84,8	GF	GE	GE	GF	GC	OA
KP 30•24	KM 30•24	24,03	127,3	83,3	GF	GE	GE	GF	GC	OA
KP 30•27	KM 30•27	26,7	131,8	87,8	GF	GE	GE	GF	GC	OA
KP 30•29	KM 30•29	29,06	133,3	89,3	GF	GE	GE	GF	GC	OA
KP 30•31	KM 30•31	30,63	134,3	90,3	GF	GE	GE	GF	GC	OA
KP 30•34	KM 30•34	34,56	136,8	92,8	GF	GE	GE	GF	GC	OA
KP 30•38	KM 30•38	39,27	136,8	92,8	GF	GE	GE	GF	GC	OA
KP 30•61	KM 30•61	61,26	160,8	90,8	GG	GF	GF	GG	GC	OA
KP 30•73	KM 30•73	73,82	168,8	98,8	GG	GF	GF	GG	GC	OA
KP 30•82	KM 30•82	81,68	170,8	103,8	GG	GF	GF	GG	GC	OA

01/11.2012

KAPPA 30 SINGLE UNITS SHORT SHAPED BODY - SIDE PORTS HSC

GAS STRAIGHT THREAD PORTS BSPP

British standard pipe parallel (55°) conforms to UNI - ISO 228



DCAT_006_026_21064779

CODE	Nominal size	A	Ø B	Ø C	D	E		
			mm	mm	mm	mm	Nm	Nm
GC (◆)	3/8"	G 3/8	25	15	14	2	15 $^{+1}$	—
GE	3/4"	G 3/4	39	24,5	18	2,5	30 $^{+2,5}$	90 $^{+5}$
GF	1"	G 1	49	30,5	22	2,5	50 $^{+2,5}$	130 $^{+10}$
GG	1" 1/4	G 1 1/4	56	39	24	2,5	60 $^{+5}$	170 $^{+15}$

(◆) Drain port

Tightening torque for low pressure side port

Tightening torque for high pressure side port (values obtained at 350 bar)

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

How to order

1	2		3		4		5		6		7	
		0 -		K9 - L	.. / ..	-		-		- HSC -		(ANF3) (CN) (VNR01)

1	Type	Code
Pump type		KP 30·…
Motor type		KM 30·…

2	Rotation	Code
Left		S
Right		D
Reversible		R

3	Drive shaft	Code
SAE "B" spline (13 teeth)		A8
SAE "BB" spline (15 teeth)		A5
SAE "B" straight		32

Code	Ports IN/OUT	4
../..	See codes on previous page	

Code	Seals (a)	5
N	Buna N (standard) no code	
T-PV	Buna hydrogenated HNBR and viton shaft seal	

Code	Drain ports	6
OA	SAE Straight thread ports (ODT)	
GC	GAS Straight thread ports (BSPP)	

Code	Performance	7
…	Standard - no code (b)	
GS	High performance	

(a) Choose the seals according to the temperature shown on page 4.
(b) Not available for type 61-73-82.

Order example KP 30•19,5 R0-A8 K9-L GF/GE-T-PV-GC-HSC-GS (ANF3) (CN) (VNR01)

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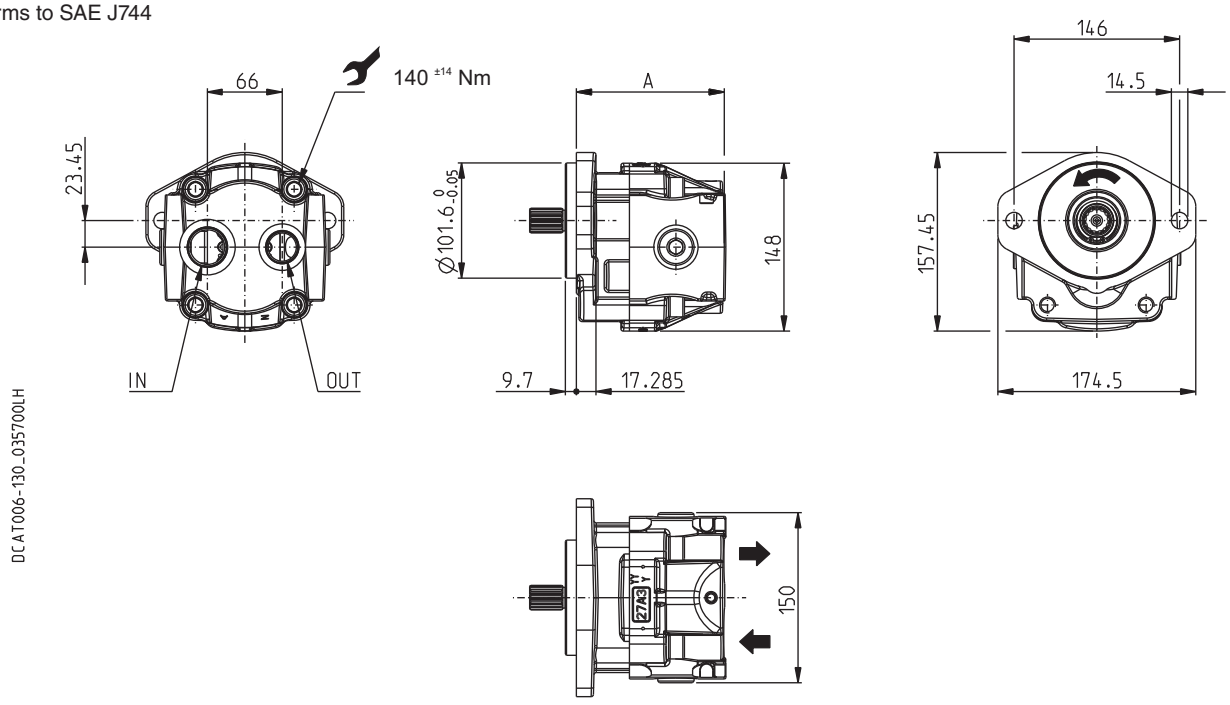
KAPPA 30 SINGLE UNITS SHORT SHAPED BODY - REAR PORTS HSC

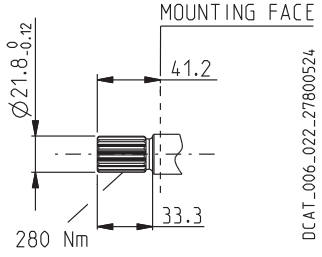
Mounting flange: **K9**
SAE "B" 2 HOLES
Conforms to SAE J744

Ports type: **ODT**
SAE STRAIGHT THREAD PORTS J514



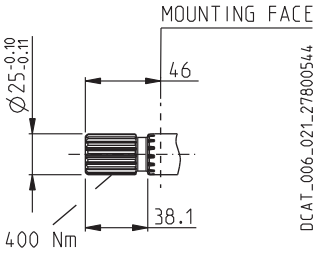
Drive shaft availability

A8 (SAE "B" Spline)



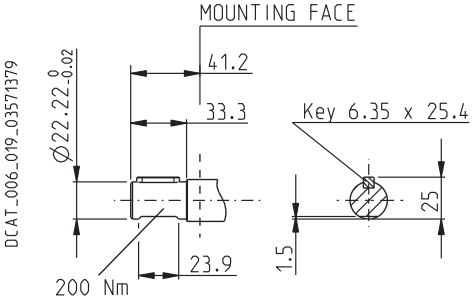
Ext. Involute Spline SAE J498B
with major diameter modified
13 teeth - 16/32 Pitch - 30 deg
Flat Root - Side fit - Class 1

A5 (SAE "BB" Spline)



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

32 (SAE "B" Straight)



Pump type	Motor type	Displacement	A	Ports code			
				Gear pumps		Gear motors	
		cm³/rev	mm	IN	OUT	IN	OUT
KP 30•19,5	KM 30•19,5	19,63	127,3	OF	OD	OD	OF
KP 30•22	KM 30•22	21,99	128,8	OF	OD	OD	OF
KP 30•24	KM 30•24	24,03	127,3	OF	OD	OD	OF
KP 30•27	KM 30•27	26,7	131,8	OF	OD	OD	OF
KP 30•29	KM 30•29	29,06	133,3	OF	OD	OD	OF
KP 30•31	KM 30•31	30,63	134,3	OF	OD	OD	OF
KP 30•34	KM 30•34	34,56	136,8	OF	OD	OD	OF
KP 30•38	KM 30•38	39,27	136,8	OF	OD	OD	OF
KP 30•61	KM 30•61	61,26	160,8	OG	OF	OF	OG
KP 30•73	KM 30•73	73,82	168,8	OG	OF	OF	OG
KP 30•82	KM 30•82	81,68	170,8	OG	OF	OF	OG

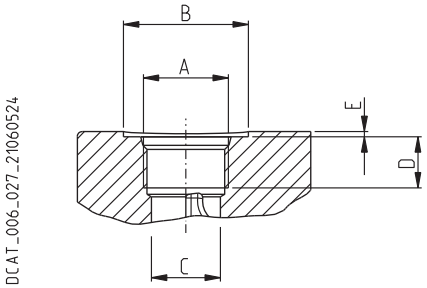
01/11.2012

KAPPA 30 SINGLE UNITS SHORT SHAPED BODY - REAR PORTS HSC

SAE STRAIGHT THREAD PORTS J514 ODT

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

CODE	Nominal size	A	Ø B	Ø C	D	E		
			mm	mm	mm	mm	Nm	Nm
OD	3/4”	1 1/16” - 12 UNF - 2B	42	24,8	20	2	40 $^{+2,5}$	120 $^{+10}$
OF	1”	1 5/16” - 12 UNF - 2B	49	30,5	20	2	60 $^{+5}$	170 $^{+10}$
OG	1” 1/4	1 5/8” - 12 UNF - 2B	58	39,1	20	2	70 $^{+5}$	—



DCAT_006_027_21060524

Tightening torque for low pressure side port

Tightening torque for high pressure side port (values obtained at 350 bar)

How to order

1	2	3	4	5	6
		0 -	K9 - P	-	- HSC -	(ANF3) (CN) (VNR01)

1	Type	Code
Pump type		KP 30·…
Motor type		KM 30·…

2	Rotation	Code
Left		S
Right		D

3	Drive shaft	Code
SAE “B” spline (13 teeth)		A8
SAE “BB” spline (15 teeth)		A5
SAE “B” straight		32

Code	Ports IN/OUT	4
../..	See codes on previous page	

Code	Seals (a)	5
N	Buna N (standard)	
T-PV	Buna hydrogenated HNBR and viton shaft seal	

Code	Performance	6
…	Standard - no code (b)	
GS	High performance	

(a) Choose the seals according to the temperature shown on page 4.
(b) Not available for type 61-73-82.

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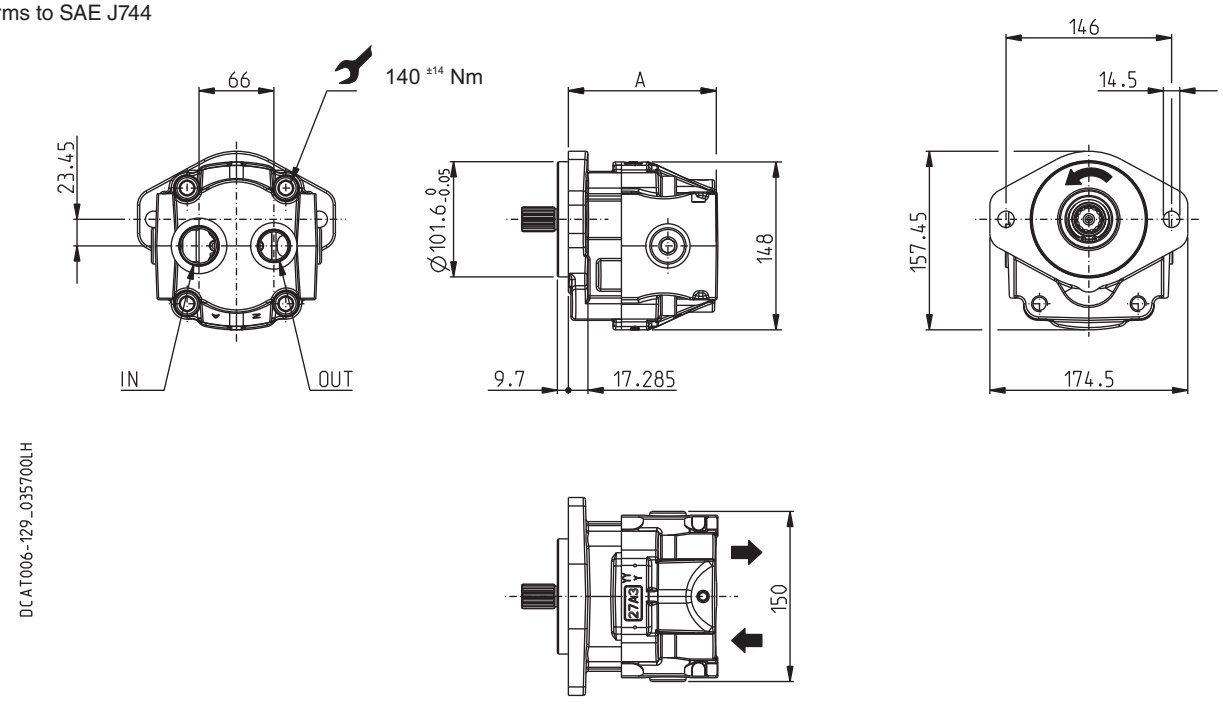
Order example KP 30•19,5 S0-A8 K9-P OF/OD-T-PV-HSC-GS (ANF3) (CN) (VNR01)

KAPPA 30 SINGLE UNITS SHORT SHAPED BODY - REAR PORTS HSC

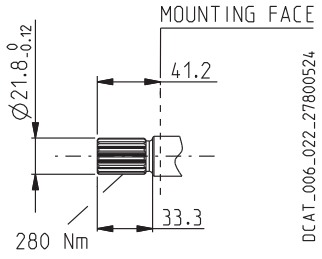
Mounting flange: **K9**
SAE "B" 2 HOLES
Conforms to SAE J744

Ports type: **BSPP**
GAS STRAIGHT THREAD PORTS



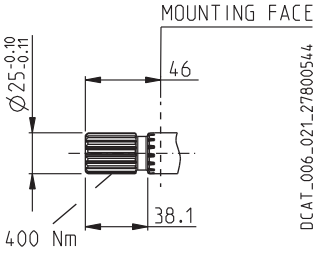
Drive shaft availability

A8 (SAE "B" Spline)



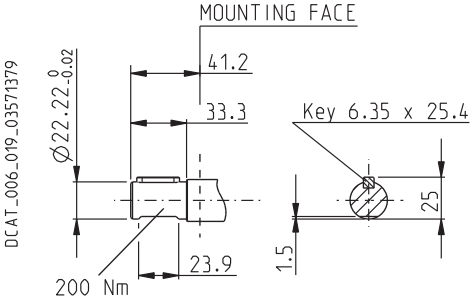
Ext. Involute Spline SAE J498B
with major diameter modified
13 teeth - 16/32 Pitch - 30 deg
Flat Root - Side fit - Class 1

A5 (SAE "BB" Spline)



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

32 (SAE "B" Straight)



Pump type	Motor type	Displacement	A	Ports code			
				Gear pumps		Gear motors	
		cm³/rev	mm	IN	OUT	IN	OUT
KP 30•19,5	KM 30•19,5	19,63	127,3	GF	GE	GE	GF
KP 30•22	KM 30•22	21,99	128,8	GF	GE	GE	GF
KP 30•24	KM 30•24	24,03	127,3	GF	GE	GE	GF
KP 30•27	KM 30•27	26,7	131,8	GF	GE	GE	GF
KP 30•29	KM 30•29	29,06	133,3	GF	GE	GE	GF
KP 30•31	KM 30•31	30,63	134,3	GF	GE	GE	GF
KP 30•34	KM 30•34	34,56	136,8	GF	GE	GE	GF
KP 30•38	KM 30•38	39,27	136,8	GF	GE	GE	GF
KP 30•61	KM 30•61	61,26	160,8	GG	GF	GF	GG
KP 30•73	KM 30•73	73,82	168,8	GG	GF	GF	GG
KP 30•82	KM 30•82	81,68	170,8	GG	GF	GF	GG

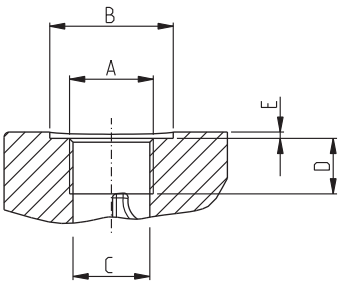
01/11.2012

KAPPA 30 SINGLE UNITS SHORT SHAPED BODY - REAR PORTS HSC

GAS STRAIGHT THREAD PORTS BSPP

British standard pipe parallel (55°) conforms to UNI - ISO 228

CODE	Nominal size	A	Ø B	Ø C	D	E		
			mm	mm	mm	mm	Nm	Nm
GE	3/4"	G 3/4	39	24,5	18	2,5	30 +2,5	90 +5
GF	1"	G 1	49	30,5	22	2,5	50 +2,5	130 +10
GG	1" 1/4	G 1 1/4	56	39	24	2,5	60 +5	170 +15



DCAT_006_026_21064779

Tightening torque for low pressure side port

Tightening torque for high pressure side port (values obtained at 350 bar)

How to order

1 [ ] 2 [ ] 0 - 3 [ ] K9 - P 4 [.. / ..] - 5 [ ] - HSC - 6 [ ] (ANF3) (CN) (VNR01)

1	Type	Code
Pump type		KP 30·...
Motor type		KM 30·...

2	Rotation	Code
Left		S
Right		D

3	Drive shaft	Code
SAE "B" spline (13 teeth)		A8
SAE "BB" spline (15 teeth)		A5
SAE "B" straight		32

Code	Ports IN/OUT	4
../..	See codes on previous page	

Code	Seals (a)	5
N	Buna N (standard)	
T-PV	Buna hydrogenated HNBR and viton shaft seal	

Code	Performance	6
...	Standard - no code (b)	
GS	High performance	

(a) Choose the seals according to the temperature shown on page 4.
(b) Not available for type 61-73-82.

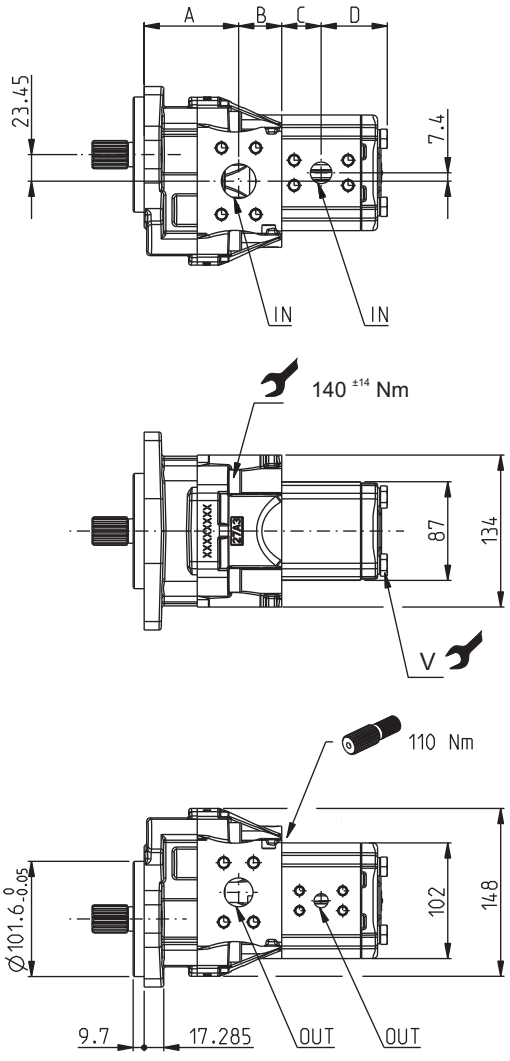
01/11.2012

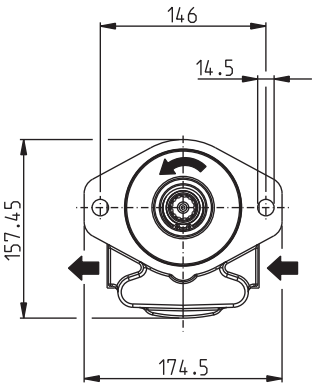
Order example KP 30•19,5 S0-A8 K9-P GF/GF-T-PV-HSC-GS (ANF3) (CN) (VNR01)

KAPPA 30 DOUBLE PUMPS KP30/PL20 SHORT SHAPED BODY HSC

Mounting flange: **K9**
SAE "B" 2 HOLES
Conforms to SAE J744

Ports type: **SSM**
SAE FLANGED PORTS J518





Drive shaft availability (See page 56)

The torque absorbed from the shaft of the first pump results from the sum of the torques due to all single stages.
The achieved value must not exceed the maximum torque limit given for the shaft of the first pump.

Rear cover material	V Screws tightening torque Nm (lbf in)
Aluminium	45 ±4,5 (358 ÷ 438)
Cast iron	70 ±7 (558 ÷ 682)

Pump type	Displace-ment	A	B	Ports code	
	cm³/rev	mm	mm	IN	OUT
KP 30•19,5	19,63	83,3	38	MC	MB
KP 30•22	21,99	84,8	38	MC	MB
KP 30•24	24,03	83,3	38	MC	MB
KP 30•27	26,7	87,8	38	MC	MB
KP 30•29	29,06	89,3	38	MC	MB
KP 30•31	30,63	90,3	38	MC	MB
KP 30•34	34,56	92,8	38	MC	MB
KP 30•38	39,27	92,8	38	MC	MB
KP 30•61	61,26	90,8	64	ME	MD
KP 30•73	73,82	98,8	64	ME	MD
KP 30•82	81,68	103,8	64	ME	MD

Pump type	Displa-cement	C	D	Ports code	
	cm³/rev	mm	mm	IN	OUT
PLP 20•4	4,95	25,8	49,3	MA	MA
PLP 20•6,3	6,61	27	50,5	MA	MA
PLP 20•8	8,26	28,3	51,8	MA	MA
PLP 20•10,5	10,9	30,3	53,8	MA	MA
PLP 20•11,2	11,23	30,5	54	MA	MA
PLP 20•14	14,53	33	56,5	MB	MA
PLP 20•16	16,85	34,8	58,3	MB	MA
PLP 20•20	21,14	38	61,5	MB	MA

Polaris 20: for features please consult the proper technical catalog.

DCAT006-131_7991898R

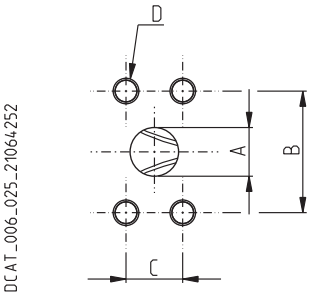
01/11.2012

KAPPA 30 DOUBLE PUMPS KP30/PL20 SHORT SHAPED BODY HSC

SAE FLANGED PORTS J518 - Standard pressure series 3000 PSI SSM

Metric thread ISO 60° conforms to ISO/R 262

CODE	A	B	C	D		
	mm	mm	mm	Thread Depth (mm)	Nm	Nm
MA	12,5	17,5	38,1	M 8 Depth 14	15 +1	15 +1
MB	19	22,2	47,6	M 10 Depth 14	20 +1	20 +1
MC	25,4	52,4	26,2	M 10 Depth 17	20 +1	30 +2,5
MD	30,5	58,7	30,2	M 10 Depth 17	20 +1	35 +2,5
ME	39,3	69,8	35,7	M 12 Depth 17	30 +2,5	60 +5



Tightening torque for low pressure side port

Tightening torque for high pressure side port (values obtained at 350 bar)

How to order

1 [ ] - 2 [ ] K9 - L 3 [ ] - 45 - HSC / 4 [ ] /

Front pump

1 [ ] - L 3 [ ] - 5 [ ] 6 [ ] - 7 [ ] / FS - 8 [ ] - 9 [ ] (ANF3) (CN) (VNR01)

Rear pump

1 Type	Code
Front pump type	KP 30·…
Rear pump type	PLP 20·…

2 Drive shaft	Code
SAE “B” spline (13 teeth)	A8
SAE “BB” spline (15 teeth)	A5
SAE “B” straight	32

3 Ports IN/OUT (a)	Code
See codes on previous page	../..

4 Performance	Code
Standard - no code (b)	…
High performance	GS

5 Inlet combination	Code
Two inlet (standard) no code	…
Common inlet	N7

Code	6 Rotation
S	Left
D	Right

Code	7 Seals (c)
…	Buna N (standard) no code
T-PV	Buna hydrogenated HNBR and viton shaft seal

Code	8 Rear cover
…	Cast iron (standard) - no code
L	Aluminium

Code	9 Rear pump thrust plate
…	Standard - no code - from 4 to 14 type
AV	High speed - from 16 to 20 type

(a) For rear pump with common inlet, please write only /OUT code.
(b) Not available for type 61-73-82.
(c) Choose the seals according to the temperature shown on page 4.

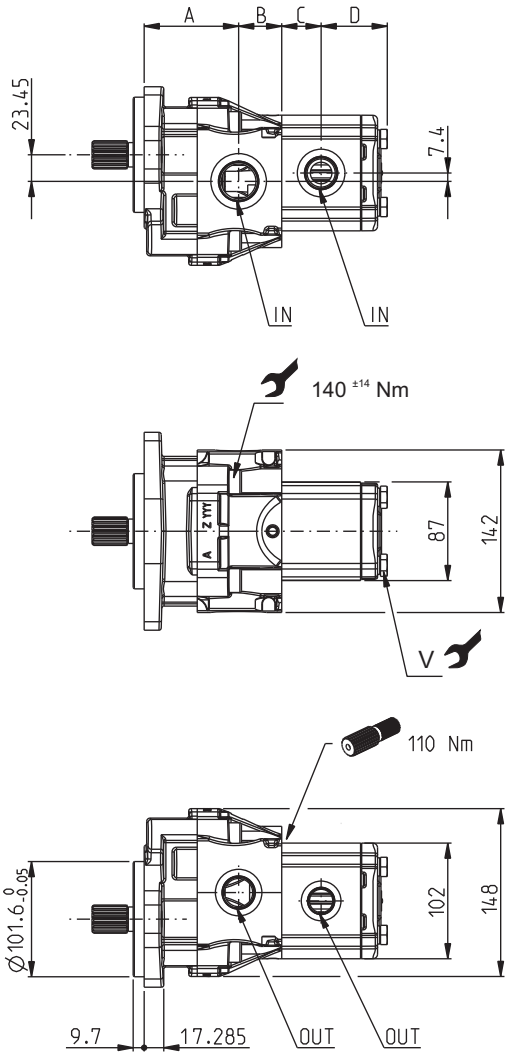
Order example KP 30•19,5-A8 K9-L MC/MB-45-HSC/GS/PLP 20•16-L /MA-N7 S-T-PV/FS-L-AV (ANF3) (CN) (VNR01)

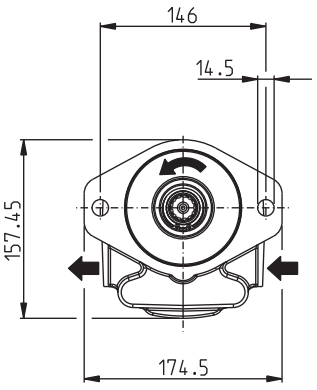
01/11.2012

KAPPA 30 DOUBLE PUMPS KP30/PL20 SHORT SHAPED BODY HSC

Mounting flange: **K9**
SAE "B" 2 HOLES
Conforms to SAE J744

Ports type: **ODT**
SAE STRAIGHT THREAD PORTS J514





Drive shaft availability (See page 56)

The torque absorbed from the shaft of the first pump results from the sum of the torques due to all single stages.
The achieved value must not exceed the maximum torque limit given for the shaft of the first pump.

Rear cover material	V Screws tightening torque Nm (lbf in)
Aluminium	45 ±4,5 (358 ÷ 438)
Cast iron	70 ±7 (558 ÷ 682)

Pump type	Displace-ment	A	B	Ports code	
	cm³/rev	mm	mm	IN	OUT
KP 30•19,5	19,63	83,3	38	OF	OD
KP 30•22	21,99	84,8	38	OF	OD
KP 30•24	24,03	83,3	38	OF	OD
KP 30•27	26,7	87,8	38	OF	OD
KP 30•29	29,06	89,3	38	OF	OD
KP 30•31	30,63	90,3	38	OF	OD
KP 30•34	34,56	92,8	38	OF	OD
KP 30•38	39,27	92,8	38	OF	OD
KP 30•61	61,26	90,8	64	OG	OF
KP 30•73	73,82	98,8	64	OG	OF
KP 30•82	81,68	103,8	64	OG	OF

Pump type	Displa-cement	C	D	Ports code	
	cm³/rev	mm	mm	IN	OUT
PLP 20•4	4,95	25,8	49,3	OC	OC
PLP 20•6,3	6,61	27	50,5	OC	OC
PLP 20•8	8,26	28,3	51,8	OC	OC
PLP 20•10,5	10,9	30,3	53,8	OC	OC
PLP 20•11,2	11,23	30,5	54	OC	OC
PLP 20•14	14,53	33	56,5	OD	OC
PLP 20•16	16,85	34,8	58,3	OD	OC
PLP 20•20	21,14	38	61,5	OD	OC

Polaris 20: for features please consult the proper technical catalog.

DCAT006-133_7991898R

01/11.2012

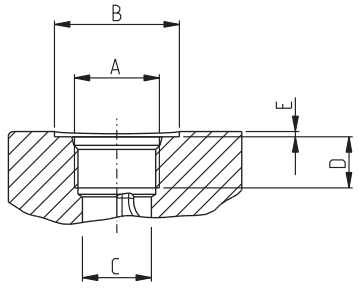
KAPPA 30 DOUBLE PUMPS KP30/PL20 SHORT SHAPED BODY HSC

SAE STRAIGHT THREAD PORTS J514 ODT

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

CODE	Nominal size	A	Ø B	Ø C	D	E		
			mm	mm	mm	mm	Nm	Nm
OC	5/8"	7/8" - 14 UNF - 2B	35	20,5	17	0,5	30 +2,5	70 +5
OD	3/4"	1 1/16" - 12 UNF - 2B	42	24,8	20	(◆) 0,5 2	40 +2,5	120 +10
OF	1"	1 5/16" - 12 UNF - 2B	49	30,5	20	2	60 +5	170 +10
OG	1" 1/4	1 5/8" - 12 UNF - 2B	58	39,1	20	2	70 +5	—

(◆) For Polaris 20



DCAT_006_027_21060524

Tightening torque for low pressure side port

Tightening torque for high pressure side port (values obtained at 350 bar)

How to order

1 [ ] - 2 [ ] K9 - L 3 [ ] - 45 - HSC / 4 [ ] /

Front pump

1 [ ] - L 3 [ ] - 5 [ ] - 6 [ ] 7 [ ] - 8 [ ] / FS - 9 [ ] - 10 [ ] (ANF3) (CN) (VNR01)

Rear pump

1 Type	Code
Front pump type	KP 30·…
Rear pump type	PLP 20·…

2 Drive shaft	Code
SAE "B" spline (13 teeth)	A8
SAE "BB" spline (15 teeth)	A5
SAE "B" straight	32

3 Ports IN/OUT (a)	Code
See codes on previous page	../..

4 Performance	Code
Standard - no code (b)	…
High performance	GS

5 Inlet combination	Code
Two inlet (standard) no code	…
Common inlet	N7

Code	Rear pump body 6
…	PLP20 with standard body - no code
L101	PLP20 with high strength body

Code	Rotation 7
S	Left
D	Right

Code	Seals (c) 8
…	Buna N (standard) no code
T-PV	Buna hydrogenated HNBR and viton shaft seal

Code	Rear cover 9
…	Cast iron (standard) - no code
L	Aluminium

Code	Rear pump thrust plate 10
…	Standard - no code - from 4 to 14 type
AV	High speed - from 16 to 20 type

(a) For rear pump with common inlet, please write only /OUT code.
(b) Not available for type 61-73-82.

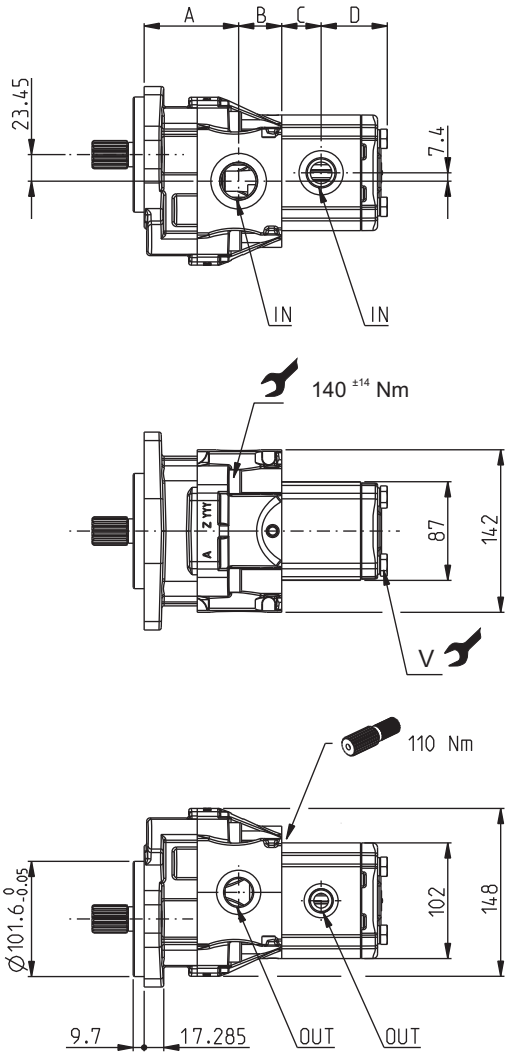
(c) Choose the seals according to the temperature shown on page 4.

Order example KP 30•19,5-A8 K9-L OF/OD-45-HSC/GS/PLP 20•16-L /OC-N7-L101 S-T-PV/FS-L-AV (ANF3) (CN) (VNR01)

01/11.2012

KAPPA 30 DOUBLE PUMPS KP30/PL20 SHORT SHAPED BODY HSC

Mounting flange: **K9**
SAE "B" 2 HOLES
Conforms to SAE J744



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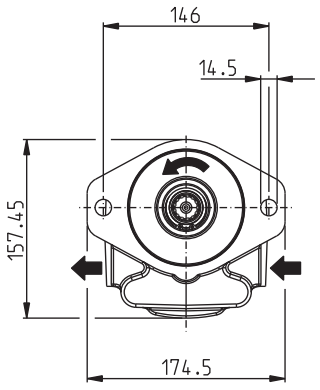
Ports type: **BSPP**
GAS STRAIGHT THREAD PORTS



Drive shaft availability (See page 56)

The torque absorbed from the shaft of the first pump results from the sum of the torques due to all single stages.
The achieved value must not exceed the maximum torque limit given for the shaft of the first pump.

Rear cover material	V Screws tightening torque Nm (lbf in)
Aluminium	45 ±4,5 (358 ÷ 438)
Cast iron	70 ±7 (558 ÷ 682)

Pump type	Displace-ment	A	B	Ports code	
	cm³/rev	mm	mm	IN	OUT
KP 30•19,5	19,63	83,3	38	GF	GE
KP 30•22	21,99	84,8	38	GF	GE
KP 30•24	24,03	83,3	38	GF	GE
KP 30•27	26,7	87,8	38	GF	GE
KP 30•29	29,06	89,3	38	GF	GE
KP 30•31	30,63	90,3	38	GF	GE
KP 30•34	34,56	92,8	38	GF	GE
KP 30•38	39,27	92,8	38	GF	GE
KP 30•61	61,26	90,8	64	GG	GF
KP 30•73	73,82	98,8	64	GG	GF
KP 30•82	81,68	103,8	64	GG	GF

Pump type	Displa-cement	C	D	Ports code	
	cm³/rev	mm	mm	IN	OUT
PLP 20•4	4,95	25,8	49,3	GD	GD
PLP 20•6,3	6,61	27	50,5	GD	GD
PLP 20•8	8,26	28,3	51,8	GD	GD
PLP 20•10,5	10,9	30,3	53,8	GD	GD
PLP 20•11,2	11,23	30,5	54	GD	GD
PLP 20•14	14,53	33	56,5	GE	GD
PLP 20•16	16,85	34,8	58,3	GE	GD
PLP 20•20	21,14	38	61,5	GE	GD

Polaris 20: for features please consult the proper technical catalog.

01/11.2012

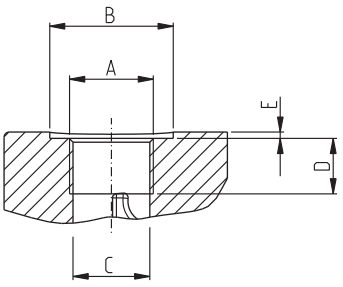
KAPPA 30 DOUBLE PUMPS KP30/PL20 SHORT SHAPED BODY HSC

GAS STRAIGHT THREAD PORTS BSPP

British standard pipe parallel (55°) conforms to UNI - ISO 228

CODE	Nominal size	A	Ø B	Ø C	D	E		
			mm	mm	mm	mm	Nm	Nm
GD	1/2"	G 1/2	—	19	17	—	20 +1	50 +2,5
GE	3/4"	G 3/4	(◆) — 39	24,5	18	(◆) — 2,5	30 +2,5	90 +5
GF	1"	G 1	49	30,5	22	2,5	50 +2,5	130 +10
GG	1" 1/4	G 1 1/4	56	39	24	2,5	60 +5	170 +15

(◆) For Polaris 20



DCAT_006_026_21064779

Tightening torque for low pressure side port

Tightening torque for high pressure side port (values obtained at 350 bar)

How to order

1 [ ] - 2 [ ] K9 - L 3 [ ] - 45 - HSC / 4 [ ] /

Front pump

1 [ ] - L 3 [ ] - 5 [ ] - 6 [ ] 7 [ ] - 8 [ ] / FS - 9 [ ] - 10 [ ] (ANF3) (CN) (VNR01)

Rear pump

1 Type	Code
Front pump type	KP 30·…
Rear pump type	PLP 20·…

2 Drive shaft	Code
SAE "B" spline (13 teeth)	A8
SAE "BB" spline (15 teeth)	A5
SAE "B" straight	32

3 Ports IN/OUT (a)	Code
See codes on previous page	../..

4 Performance	Code
Standard - no code (b)	…
High performance	GS

5 Inlet combination	Code
Two inlet (standard) no code	…
Common inlet	N7

Code	Rear pump body 6
…	PLP20 with standard body - no code
L101	PLP20 with high strength body

Code	Rotation 7
S	Left
D	Right

Code	Seals (c) 8
…	Buna N (standard) no code
T-PV	Buna hydrogenated HNBR and viton shaft seal

Code	Rear cover 9
…	Cast iron (standard) - no code
L	Aluminium

Code	Rear pump thrust plate 10
…	Standard - no code - from 4 to 14 type
AV	High speed - from 16 to 20 type

(a) For rear pump with common inlet, please write only /OUT code.
(b) Not available for type 61-73-82.

(c) Choose the seals according to the temperature shown on page 4.

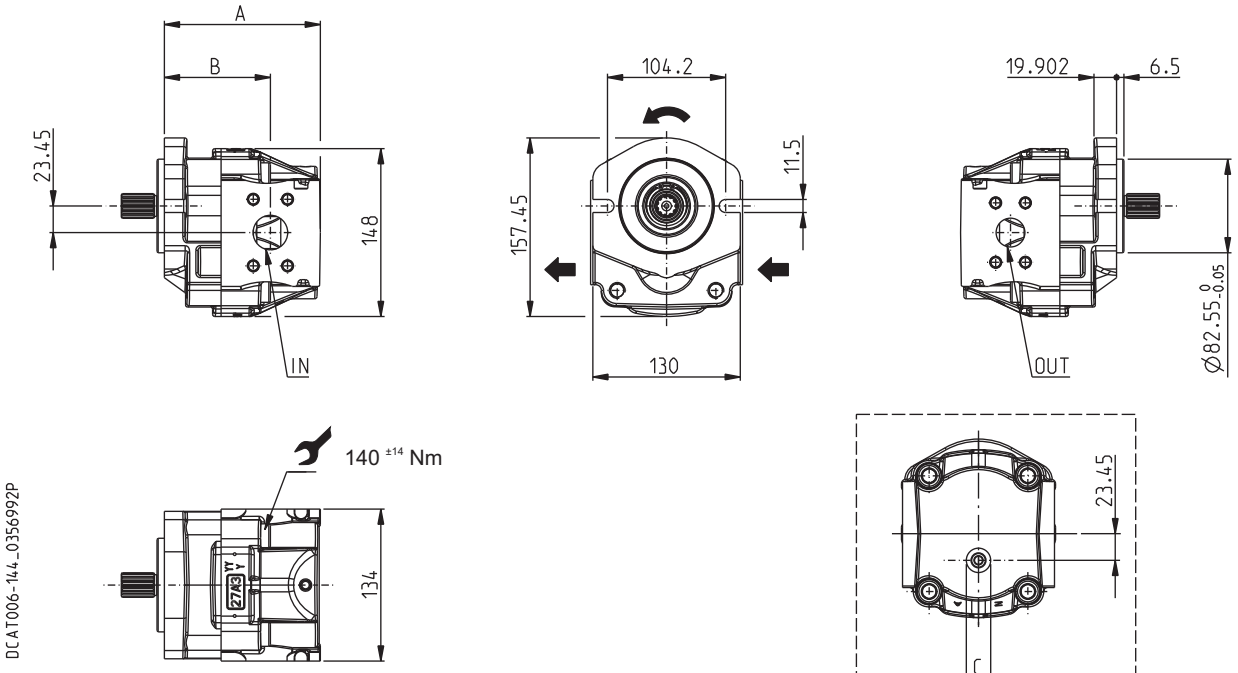
Order example KP 30•19,5-A8 K9-L GF/GE-45-HSC/GS/PLP 20•16-L /GD-N7-L101 S-T-PV/FS-L-AV (ANF3) (CN) (VNR01)

01/11.2012

KAPPA 30 SINGLE UNITS SHORT SHAPED BODY - SIDE PORTS HSC

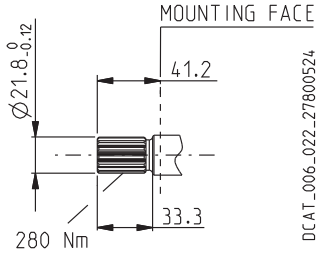
Mounting flange: **S9**
SAE "B" 2 HOLES
Conforms to SAE J744

Ports type: **SSM**
SAE FLANGED PORTS J518



Drive shaft availability

A8 (SAE "B" Spline)



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

Pump type	Motor type	Displacement	A	B	Ports code				C Drain port (◆)	
					Gear pumps		Gear motors			
		cm³/rev	mm	mm	IN	OUT	IN	OUT	Gas BSPP	SAE ODT
KP 30•19,5	KM 30•19,5	19,63	130,5	86,5	MC	MB	MB	MC	GC	OA
KP 30•22	KM 30•22	21,99	132	88	MC	MB	MB	MC	GC	OA
KP 30•24	KM 30•24	24,03	130,5	86,5	MC	MB	MB	MC	GC	OA
KP 30•27	KM 30•27	26,7	135	91	MC	MB	MB	MC	GC	OA
KP 30•29	KM 30•29	29,06	136,5	92,5	MC	MB	MB	MC	GC	OA
KP 30•31	KM 30•31	30,63	137,5	93,5	MC	MB	MB	MC	GC	OA
KP 30•34	KM 30•34	34,56	140	96	MC	MB	MB	MC	GC	OA
KP 30•38	KM 30•38	39,27	140	96	MC	MB	MB	MC	GC	OA
KP 30•61	KM 30•61	61,26	164	94	ME	MD	MD	ME	GC	OA
KP 30•73	KM 30•73	73,82	172	102	ME	MD	MD	ME	GC	OA
KP 30•82	KM 30•82	81,68	174	107	ME	MD	MD	ME	GC	OA

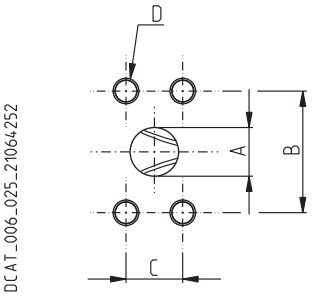
(◆) Dimension on page 75 and 77

01/11.2012

KAPPA 30 SINGLE UNITS SHORT SHAPED BODY - SIDE PORTS HSC

SAE FLANGED PORTS J518 - Standard pressure series 3000 PSI SSM

Metric thread ISO 60° conforms to ISO/R 262



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CODE	A	B	C	D		
	mm	mm	mm	Thread Depth (mm)	Nm	Nm
MB	19	47,6	22,2	M 10 Depth 17	20 +1	30 +2,5
MC	25,4	52,4	26,2	M 10 Depth 17	20 +1	30 +2,5
MD	30,5	58,7	30,2	M 10 Depth 17	20 +1	35 +2,5
ME	39,3	69,8	35,7	M 12 Depth 17	30 +2,5	60 +5

Tightening torque for low pressure side port

Tightening torque for high pressure side port (values obtained at 350 bar)

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

How to order

1	2		3	4	5		6	
		0 - A8 S9 - L	.. / ..	-		- HSC -		(ANF3) (CN) (VNR01)

1	Type	Code
Pump type		KP 30·…
Motor type		KM 30·…

2	Rotation	Code
Left		S
Right		D
Reversible		R

3	Ports IN/OUT	Code
See codes on previous page		../..

Code	Seals (a)	4
N	Buna N (standard)	
T-PV	Buna hydrogenated HNBR and viton shaft seal	

Code	Drain ports	5
OA	SAE Straight thread ports (ODT)	
GC	GAS Straight thread ports (BSPP)	

Code	Performance	6
…	Standard - no code (b)	
GS	High performance	

(a) Choose the seals according to the temperature shown on page 4.
(b) Not available for type 61-73-82.

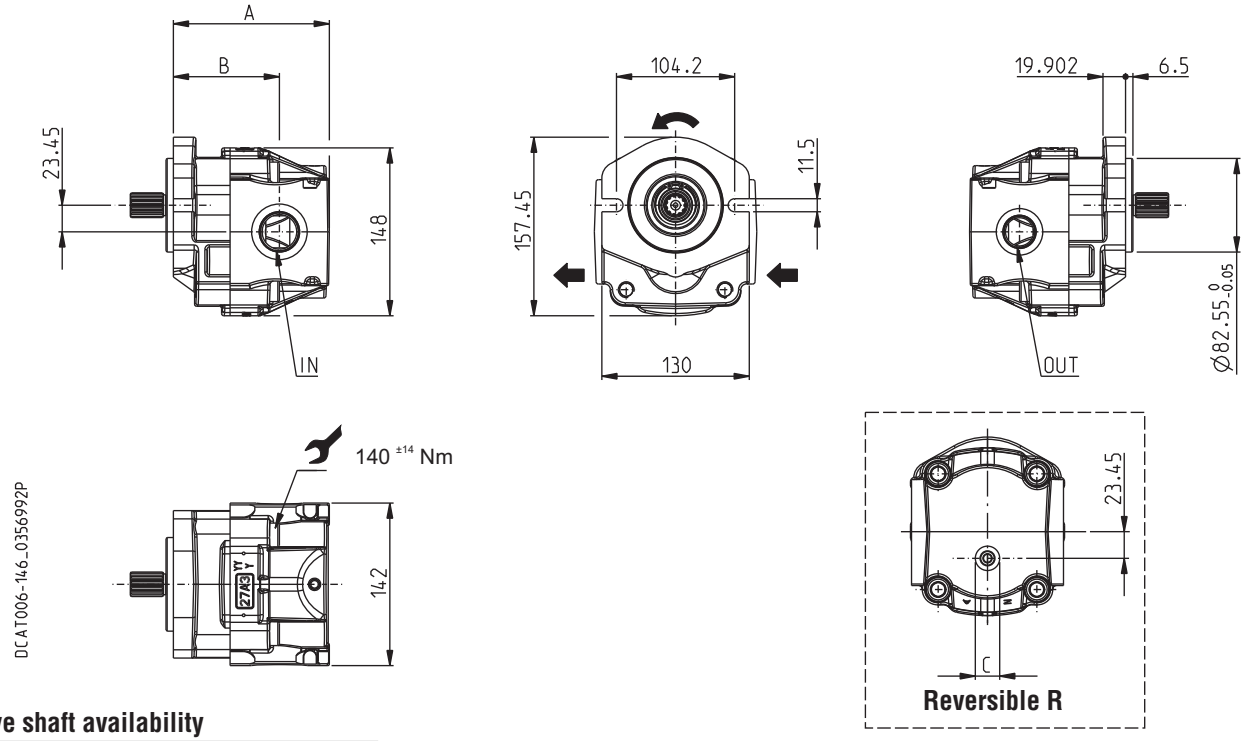
01/11.2012

Order example KP 30•19,5 R0-A8 S9-L MC/MB-T-PV-OA-HSC-GS (ANF3) (CN) (VNR01)

KAPPA 30 SINGLE UNITS SHORT SHAPED BODY - SIDE PORTS HSC

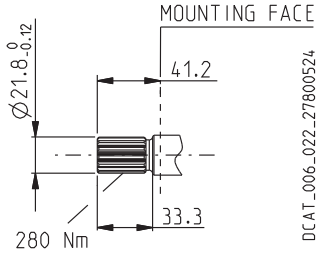
Mounting flange: **S9**
SAE "B" 2 HOLES
Conforms to SAE J744

Ports type: **ODT**
SAE STRAIGHT THREAD PORTS J514



Drive shaft availability

A8 (SAE "B" Spline)



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

Pump type	Motor type	Displacement	A	B	Ports code				C Drain port (◆)	
					Gear pumps		Gear motors			
		cm³/rev	mm	mm	IN	OUT	IN	OUT	Gas BSPP	SAE ODT
KP 30•19,5	KM 30•19,5	19,63	130,5	86,5	OF	OD	OD	OF	GC	OA
KP 30•22	KM 30•22	21,99	132	88	OF	OD	OD	OF	GC	OA
KP 30•24	KM 30•24	24,03	130,5	86,5	OF	OD	OD	OF	GC	OA
KP 30•27	KM 30•27	26,7	135	91	OF	OD	OD	OF	GC	OA
KP 30•29	KM 30•29	29,06	136,5	92,5	OF	OD	OD	OF	GC	OA
KP 30•31	KM 30•31	30,63	137,5	93,5	OF	OD	OD	OF	GC	OA
KP 30•34	KM 30•34	34,56	140	96	OF	OD	OD	OF	GC	OA
KP 30•38	KM 30•38	39,27	140	96	OF	OD	OD	OF	GC	OA
KP 30•61	KM 30•61	61,26	164	94	OG	OF	OF	OG	GC	OA
KP 30•73	KM 30•73	73,82	172	102	OG	OF	OF	OG	GC	OA
KP 30•82	KM 30•82	81,68	174	107	OG	OF	OF	OG	GC	OA

(◆) Dimension on page 75 and 77

01/11.2012

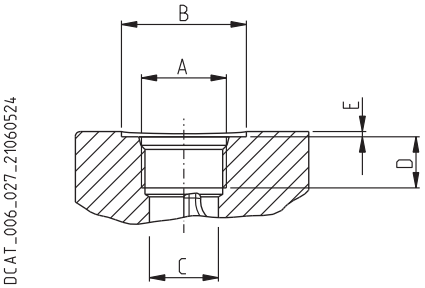
KAPPA 30 SINGLE UNITS SHORT SHAPED BODY - SIDE PORTS HSC

SAE STRAIGHT THREAD PORTS J514 ODT

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

CODE	Nominal size	A	Ø B	Ø C	D	E		
			mm	mm	mm	mm	Nm	Nm
OA (◆)	3/8”	9/16” - 12 UNF - 2B	26	13	15	2	15 +1	—
OD	3/4”	1 1/16” - 12 UNF - 2B	42	24,8	20	2	40 +2,5	120 +10
OF	1”	1 5/16” - 12 UNF - 2B	49	30,5	20	2	60 +5	170 +10
OG	1” 1/4	1 5/8” - 12 UNF - 2B	58	39,1	20	2	70 +5	—

(◆) = Drain port



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Tightening torque for low pressure side port

Tightening torque for high pressure side port (values obtained at 350 bar)

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

How to order

1	2		3	4	5		6	
		0 - A8 S9 - L	.. / ..	-		- HSC -		(ANF3) (CN) (VNR01)

1 Type	Code
Pump type	KP 30·…
Motor type	KM 30·…

2 Rotation	Code
Left	S
Right	D
Reversible	R

3 Ports IN/OUT	Code
See codes on previous page	../..

Code	Seals (a) 4
N	Buna N (standard)
T-PV	Buna hydrogenated HNBR and viton shaft seal

Code	Drain ports 5
OA	SAE Straight thread ports (ODT)
GC	GAS Straight thread ports (BSPP)

Code	Performance 6
…	Standard - no code (b)
GS	High performance

(a) Choose the seals according to the temperature shown on page 4.
(b) Not available for type 61-73-82.

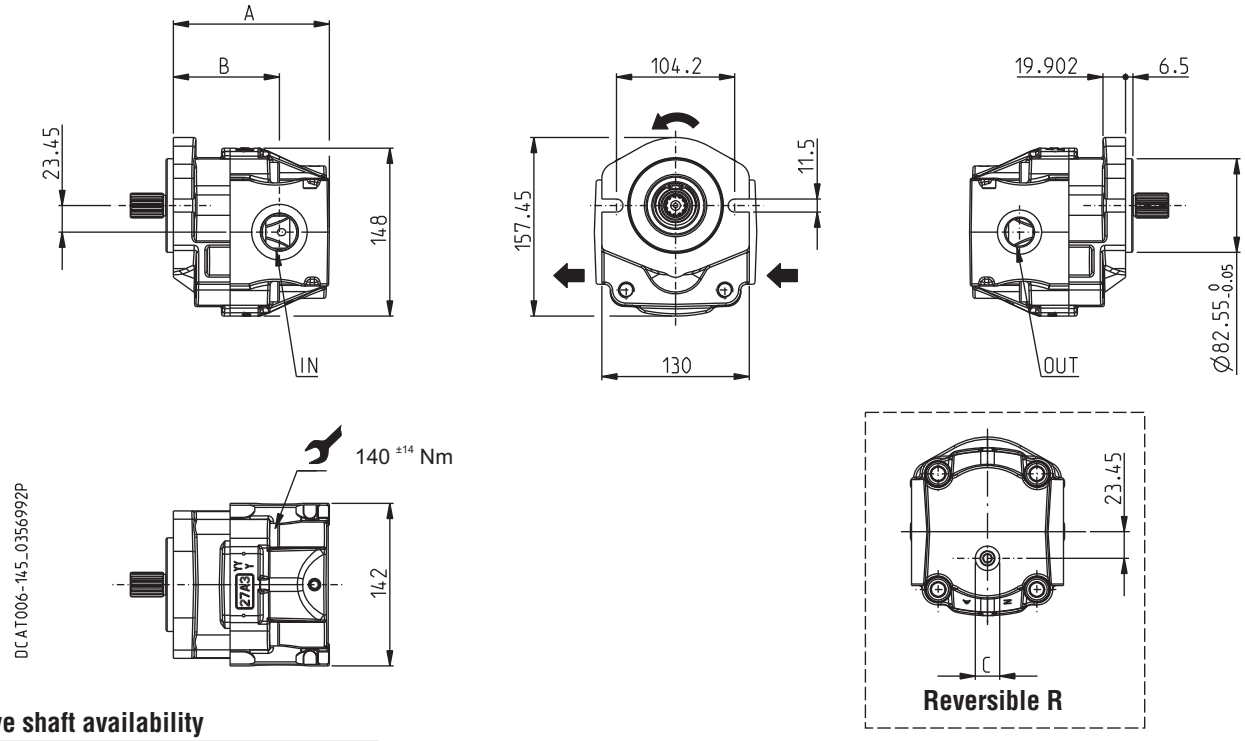
01/11.2012

Order example KP 30•19,5 R0-A8 S9-L OF/OD-T-PV-OA-HSC-GS (ANF3) (CN) (VNR01)

KAPPA 30 SINGLE UNITS SHORT SHAPED BODY - SIDE PORTS HSC

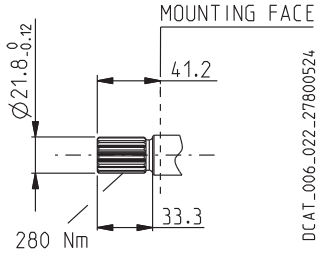
Mounting flange: **S9**
SAE "B" 2 HOLES
Conforms to SAE J744

Ports type: **BSPP**
GAS STRAIGHT THREAD PORTS



Drive shaft availability

A8 (SAE "B" Spline)



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

Pump type	Motor type	Displacement	A	B	Ports code				C Drain port (◆)	
					Gear pumps		Gear motors			
		cm³/rev	mm	mm	IN	OUT	IN	OUT	Gas BSPP	SAE ODT
KP 30•19,5	KM 30•19,5	19,63	130,5	86,5	GF	GE	GE	GF	GC	OA
KP 30•22	KM 30•22	21,99	132	88	GF	GE	GE	GF	GC	OA
KP 30•24	KM 30•24	24,03	130,5	86,5	GF	GE	GE	GF	GC	OA
KP 30•27	KM 30•27	26,7	135	91	GF	GE	GE	GF	GC	OA
KP 30•29	KM 30•29	29,06	136,5	92,5	GF	GE	GE	GF	GC	OA
KP 30•31	KM 30•31	30,63	137,5	93,5	GF	GE	GE	GF	GC	OA
KP 30•34	KM 30•34	34,56	140	96	GF	GE	GE	GF	GC	OA
KP 30•38	KM 30•38	39,27	140	96	GF	GE	GE	GF	GC	OA
KP 30•61	KM 30•61	61,26	164	94	GG	GF	GF	GG	GC	OA
KP 30•73	KM 30•73	73,82	172	102	GG	GF	GF	GG	GC	OA
KP 30•82	KM 30•82	81,68	174	107	GG	GF	GF	GG	GC	OA

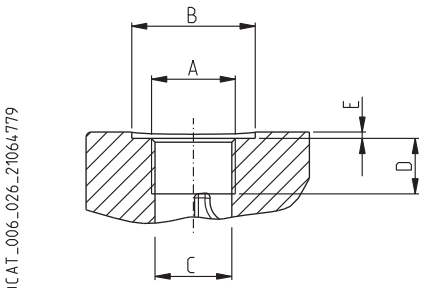
(◆) Dimension on page 75 and 77

01/11.2012

KAPPA 30 SINGLE UNITS SHORT SHAPED BODY - SIDE PORTS HSC

GAS STRAIGHT THREAD PORTS BSPP

British standard pipe parallel (55°) conforms to UNI - ISO 228



DCAT_006_026_21064779

CODE	Nominal size	A	Ø B	Ø C	D	E		
			mm	mm	mm	mm	Nm	Nm
GC (◆)	3/8"	G 3/8	25	15	14	2	15 $^{+1}$	—
GE	3/4"	G 3/4	39	24,5	18	2,5	30 $^{+2,5}$	90 $^{+5}$
GF	1"	G 1	49	30,5	22	2,5	50 $^{+2,5}$	130 $^{+10}$
GG	1" 1/4	G 1 1/4	56	39	24	2,5	60 $^{+5}$	170 $^{+15}$

(◆) Drain port

Tightening torque for low pressure side port

Tightening torque for high pressure side port (values obtained at 350 bar)

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

How to order

1	2		3	4	5		6	
		0 - A8 S9 - L	.. / ..	-		- HSC -		(ANF3) (CN) (VNR01)

1	Type	Code
Pump type		KP 30·…
Motor type		KM 30·…

2	Rotation	Code
Left		S
Right		D
Reversible		R

3	Ports IN/OUT	Code
See codes on previous page		../..

Code	Seals (a)	4
N	Buna N (standard)	
T-PV	Buna hydrogenated HNBR and viton shaft seal	

Code	Drain ports	5
OA	SAE Straight thread ports (ODT)	
GC	GAS Straight thread ports (BSPP)	

Code	Performance	6
…	Standard - no code (b)	
GS	High performance	

(a) Choose the seals according to the temperature shown on page 4.
(b) Not available for type 61-73-82.

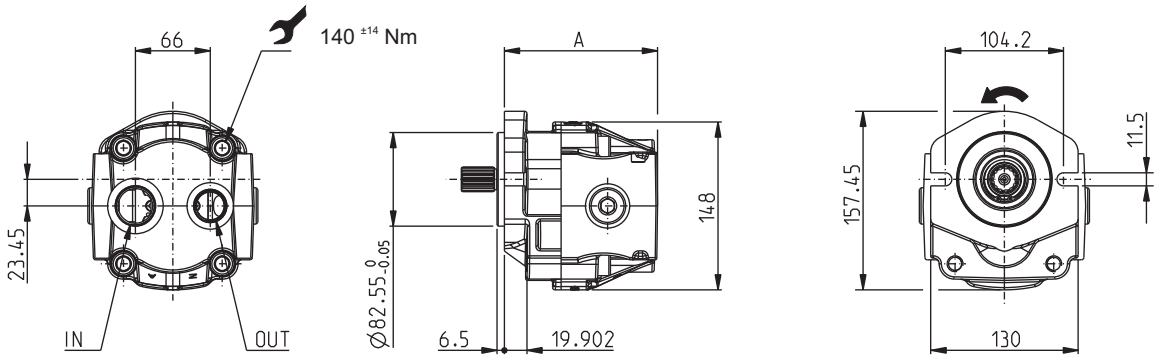
01/11.2012

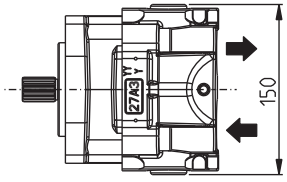
Order example KP 30•19,5 R0-A8 S9-L GF/GE-T-PV-GC-HSC-GS (ANF3) (CN) (VNR01)

KAPPA 30 SINGLE UNITS SHORT SHAPED BODY - REAR PORTS HSC

Mounting flange: **S9**
SAE "B" 2 HOLES
Conforms to SAE J744

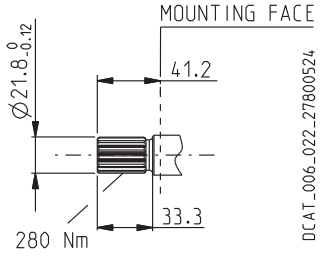
Ports type: **ODT**
SAE STRAIGHT THREAD PORTS J514





Drive shaft availability

A8 (SAE "B" Spline)



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

Pump type	Motor type	Displacement	A	Ports code			
				Gear pumps		Gear motors	
		cm³/rev	mm	IN	OUT	IN	OUT
KP 30•19,5	KM 30•19,5	19,63	130,5	OF	OD	OD	OF
KP 30•22	KM 30•22	21,99	132	OF	OD	OD	OF
KP 30•24	KM 30•24	24,03	130,5	OF	OD	OD	OF
KP 30•27	KM 30•27	26,7	135	OF	OD	OD	OF
KP 30•29	KM 30•29	29,06	136,5	OF	OD	OD	OF
KP 30•31	KM 30•31	30,63	137,5	OF	OD	OD	OF
KP 30•34	KM 30•34	34,56	140	OF	OD	OD	OF
KP 30•38	KM 30•38	39,27	140	OF	OD	OD	OF
KP 30•61	KM 30•61	61,26	164	OG	OF	OF	OG
KP 30•73	KM 30•73	73,82	172	OG	OF	OF	OG
KP 30•82	KM 30•82	81,68	174	OG	OF	OF	OG

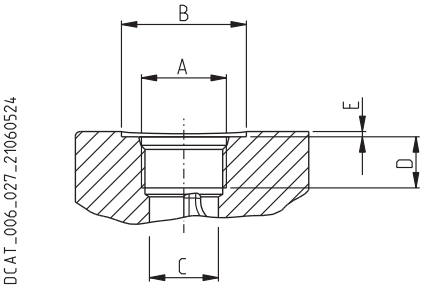
01/11.2012

KAPPA 30 SINGLE UNITS SHORT SHAPED BODY - REAR PORTS HSC

SAE STRAIGHT THREAD PORTS J514 ODT

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

CODE	Nominal size	A	Ø B	Ø C	D	E		
			mm	mm	mm	mm	Nm	Nm
OD	3/4"	1 1/16" - 12 UNF - 2B	42	24,8	20	2	40 $^{+2,5}$	120 $^{+10}$
OF	1"	1 5/16" - 12 UNF - 2B	49	30,5	20	2	60 $^{+5}$	170 $^{+10}$
OG	1" 1/4	1 5/8" - 12 UNF - 2B	58	39,1	20	2	70 $^{+5}$	—



DCAT_006_027_21060524

Tightening torque for low pressure side port

Tightening torque for high pressure side port (values obtained at 350 bar)

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

How to order

1	2		3		4		5	
		0 - A8 S9 - P	.. / ..	-		- HSC -		(ANF3) (CN) (VNR01)

1	Type	Code
Pump type		KP 30·…
Motor type		KM 30·…

2	Rotation	Code
Left		S
Right		D

3	Ports IN/OUT	Code
See codes on previous page		../..

Code	Seals (a)	4
N	Buna N (standard)	
T-PV	Buna hydrogenated HNBR and viton shaft seal	

Code	Performance	5
…	Standard - no code (b)	
GS	High performance	

(a) Choose the seals according to the temperature shown on page 4.
(b) Not available for type 61-73-82.

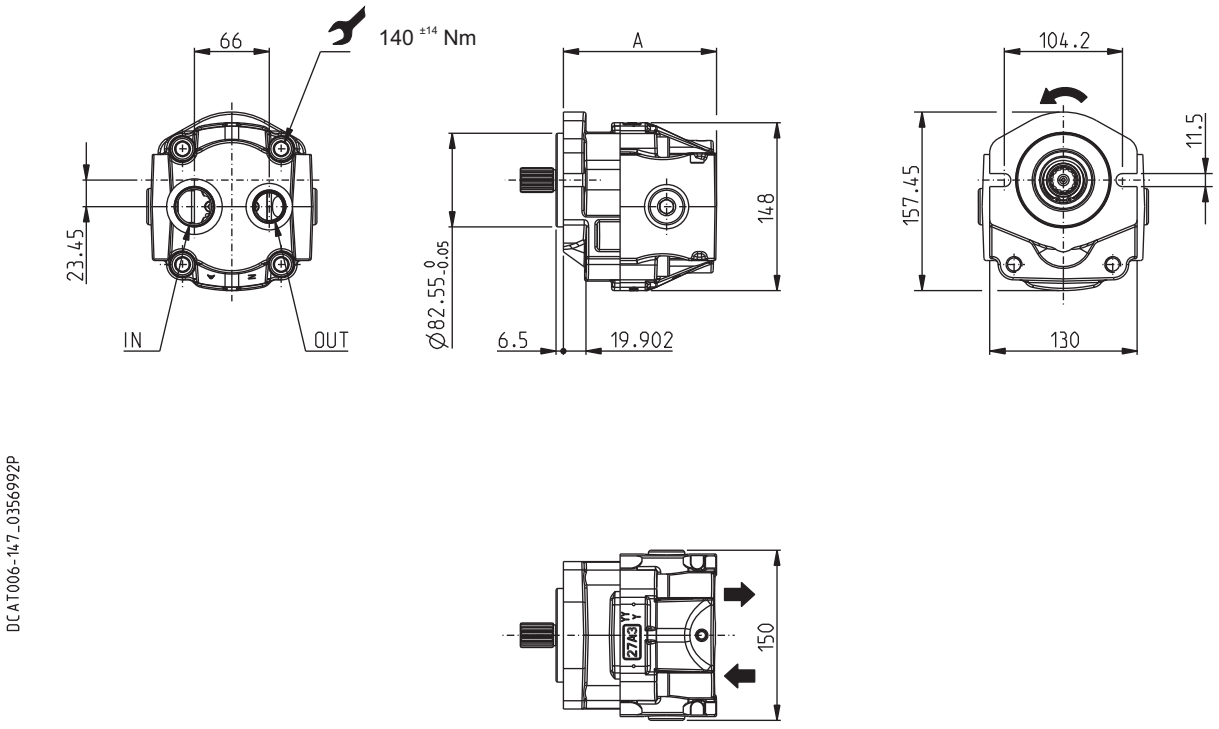
01/11.2012

Order example KP 30•19,5 S0-A8 S9-P OF/OD-T-PV-HSC-GS (ANF3) (CN) (VNR01)

KAPPA 30 SINGLE UNITS SHORT SHAPED BODY - REAR PORTS HSC

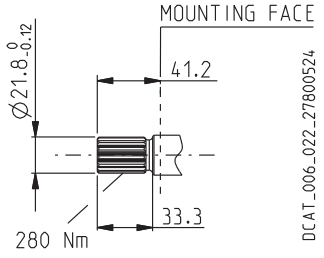
Mounting flange: **S9**
SAE "B" 2 HOLES
Conforms to SAE J744

Ports type: **BSPP**
GAS STRAIGHT THREAD PORTS



Drive shaft availability

A8 (SAE "B" Spline)



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

Pump type	Motor type	Displacement	A	Ports code			
				Gear pumps		Gear motors	
		cm³/rev	mm	IN	OUT	IN	OUT
KP 30•19,5	KM 30•19,5	19,63	130,5	GF	GE	GE	GF
KP 30•22	KM 30•22	21,99	132	GF	GE	GE	GF
KP 30•24	KM 30•24	24,03	130,5	GF	GE	GE	GF
KP 30•27	KM 30•27	26,7	135	GF	GE	GE	GF
KP 30•29	KM 30•29	29,06	136,5	GF	GE	GE	GF
KP 30•31	KM 30•31	30,63	137,5	GF	GE	GE	GF
KP 30•34	KM 30•34	34,56	140	GF	GE	GE	GF
KP 30•38	KM 30•38	39,27	140	GF	GE	GE	GF
KP 30•61	KM 30•61	61,26	164	GG	GF	GF	GG
KP 30•73	KM 30•73	73,82	172	GG	GF	GF	GG
KP 30•82	KM 30•82	81,68	174	GG	GF	GF	GG

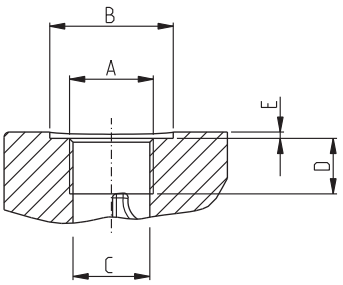
01/11.2012

KAPPA 30 SINGLE UNITS SHORT SHAPED BODY - REAR PORTS HSC

GAS STRAIGHT THREAD PORTS BSPP

British standard pipe parallel (55°) conforms to UNI - ISO 228

CODE	Nominal size	A	Ø B	Ø C	D	E		
			mm	mm	mm	mm	Nm	Nm
GE	3/4"	G 3/4	39	24,5	18	2,5	30 +2,5	90 +5
GF	1"	G 1	49	30,5	22	2,5	50 +2,5	130 +10
GG	1" 1/4	G 1 1/4	56	39	24	2,5	60 +5	170 +15



DCAT_006_026_21064779

Tightening torque for low pressure side port

Tightening torque for high pressure side port (values obtained at 350 bar)

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

1	2		3	4		5	
		0 - A8 S9 - P	.. / ..	-	- HSC -		(ANF3) (CN) (VNR01)

1	Type	Code
Pump type		KP 30·...
Motor type		KM 30·...

2	Rotation	Code
Left		S
Right		D

3	Ports IN/OUT	Code
See codes on previous page		../..

Code	Seals (a)	4
N	Buna N (standard)	
T-PV	Buna hydrogenated HNBR and viton shaft seal	

Code	Performance	5
...	Standard - no code (b)	
GS	High performance	

(a) Choose the seals according to the temperature shown on page 4.
(b) Not available for type 61-73-82.

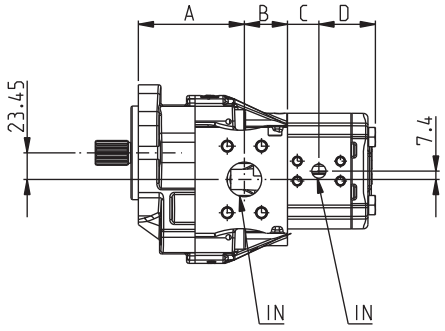
01/11.2012

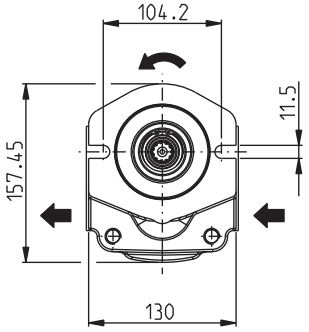
Order example KP 30•19,5 S0-A8 S9-P GF/GE-T-PV-HSC-GS (ANF3) (CN) (VNR01)

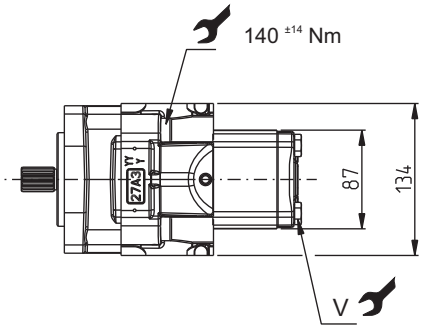
KAPPA 30 DOUBLE PUMPS KP30/PL20 SHORT SHAPED BODY HSC

Mounting flange: **S9**
SAE "B" 2 HOLES
Conforms to SAE J744

Ports type: **SSM**
SAE FLANGED PORTS J518

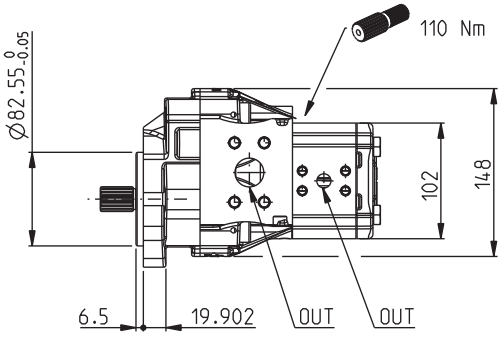






Drive shaft availability (See page 72)

The torque absorbed from the shaft of the first pump results from the sum of the torques due to all single stages.
The achieved value must not exceed the maximum torque limit given for the shaft of the first pump.



Rear cover material	V Screws tightening torque Nm (lbf in)
Aluminium	45 ±4,5 (358 ÷ 438)
Cast iron	70 ±7 (558 ÷ 682)

DCAT006-149_79933324

Pump type	Displace-ment	A	B	Ports code	
	cm³/rev	mm	mm	IN	OUT
KP 30•19,5	19,63	86,5	38	MC	MB
KP 30•22	21,99	88	38	MC	MB
KP 30•24	24,03	86,5	38	MC	MB
KP 30•27	26,7	91	38	MC	MB
KP 30•29	29,06	92,5	38	MC	MB
KP 30•31	30,63	93,5	38	MC	MB
KP 30•34	34,56	96	38	MC	MB
KP 30•38	39,27	96	38	MC	MB
KP 30•61	61,26	94	64	ME	MD
KP 30•73	73,82	102	64	ME	MD
KP 30•82	81,68	107	64	ME	MD

Pump type	Displa-cement	C	D	Ports code	
	cm³/rev	mm	mm	IN	OUT
PLP 20•4	4,95	25,8	49,3	MA	MA
PLP 20•6,3	6,61	27	50,5	MA	MA
PLP 20•8	8,26	28,3	51,8	MA	MA
PLP 20•10,5	10,9	30,3	53,8	MA	MA
PLP 20•11,2	11,23	30,5	54	MA	MA
PLP 20•14	14,53	33	56,5	MB	MA
PLP 20•16	16,85	34,8	58,3	MB	MA
PLP 20•20	21,14	38	61,5	MB	MA

Polaris 20: for features please consult the proper technical catalog.

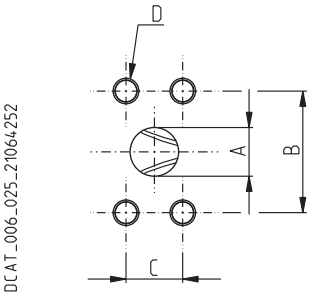
01/11.2012

KAPPA 30 DOUBLE PUMPS KP30/PL20 SHORT SHAPED BODY HSC

SAE FLANGED PORTS J518 - Standard pressure series 3000 PSI SSM

Metric thread ISO 60° conforms to ISO/R 262

CODE	A	B	C	D		
	mm	mm	mm	Thread Depth (mm)	Nm	Nm
MA	12,5	17,5	38,1	M 8 Depth 14	15 +1	15 +1
MB	19	22,2	47,6	M 10 Depth 14	20 +1	20 +1
MC	25,4	52,4	26,2	M 10 Depth 17	20 +1	30 +2,5
MD	30,5	58,7	30,2	M 10 Depth 17	20 +1	35 +2,5
ME	39,3	69,8	35,7	M 12 Depth 17	30 +2,5	60 +5



Tightening torque for low pressure side port

Tightening torque for high pressure side port (values obtained at 350 bar)

How to order

1 [ ] - A8 S9 - L 2 [ ] - 45 - HSC / 3 [ ] /

Front pump

1 [ ] - L 2 [ ] - 4 [ ] 5 [ ] - 6 [ ] / FS - 7 [ ] - 8 [ ] (ANF3) (CN) (VNR01)

Rear pump

1 Type	Code
Front pump type	KP 30·…
Rear pump type	PLP 20·…

2 Ports IN/OUT (a)	Code
See codes on previous page	../..

3 Performance	Code
Standard - no code (b)	…
High performance	GS

4 Inlet combination	Code
Two inlet (standard) no code	…
Common inlet	N7

Code	Rotation 5
S	Left
D	Right

Code	Seals (c) 6
…	Buna N (standard) no code
T-PV	Buna hydrogenated HNBR and viton shaft seal

Code	Rear cover 7
…	Cast iron (standard) - no code
L	Aluminium

Code	Rear pump thrust plate 8
…	Standard - no code - from 4 to 14 type
AV	High speed - from 16 to 20 type

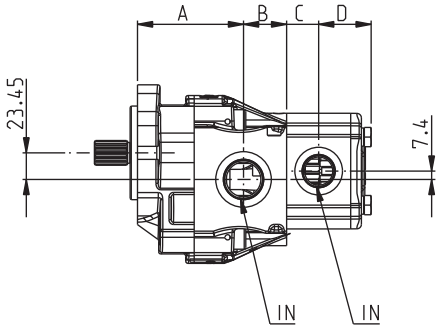
(a) For rear pump with common inlet, please write only /OUT code.
(b) Not available for type 61-73-82.
(c) Choose the seals according to the temperature shown on page 4.

Order example KP 30•19,5-A8 S9-L MC/MB-45-HSC/GS/PLP 20•16-L /MA-N7 S-T-PV/FS-L-AV (ANF3) (CN) (VNR01)

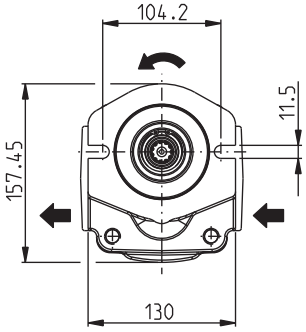
01/11.2012

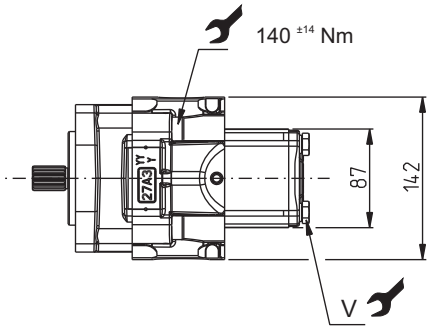
KAPPA 30 DOUBLE PUMPS KP30/PL20 SHORT SHAPED BODY HSC

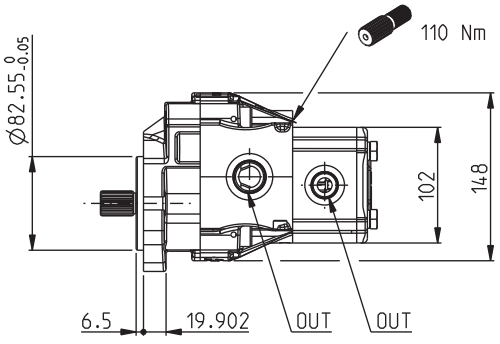
Mounting flange: **S9**
SAE "B" 2 HOLES
Conforms to SAE J744



Ports type: **ODT**
SAE STRAIGHT THREAD PORTS J514







Drive shaft availability (See page 72)

The torque absorbed from the shaft of the first pump results from the sum of the torques due to all single stages.
The achieved value must not exceed the maximum torque limit given for the shaft of the first pump.

Rear cover material	V Screws tightening torque Nm (lbf in)
Aluminium	45 ±4,5 (358 ÷ 438)
Cast iron	70 ±7 (558 ÷ 682)

Pump type	Displace-ment	A	B	Ports code	
	cm³/rev	mm	mm	IN	OUT
KP 30•19,5	19,63	86,5	38	OF	OD
KP 30•22	21,99	88	38	OF	OD
KP 30•24	24,03	86,5	38	OF	OD
KP 30•27	26,7	91	38	OF	OD
KP 30•29	29,06	92,5	38	OF	OD
KP 30•31	30,63	93,5	38	OF	OD
KP 30•34	34,56	96	38	OF	OD
KP 30•38	39,27	96	38	OF	OD
KP 30•61	61,26	94	64	OG	OF
KP 30•73	73,82	102	64	OG	OF
KP 30•82	81,68	107	64	OG	OF

Pump type	Displa-cement	C	D	Ports code	
	cm³/rev	mm	mm	IN	OUT
PLP 20•4	4,95	25,8	49,3	OC	OC
PLP 20•6,3	6,61	27	50,5	OC	OC
PLP 20•8	8,26	28,3	51,8	OC	OC
PLP 20•10,5	10,9	30,3	53,8	OC	OC
PLP 20•11,2	11,23	30,5	54	OC	OC
PLP 20•14	14,53	33	56,5	OD	OC
PLP 20•16	16,85	34,8	58,3	OD	OC
PLP 20•20	21,14	38	61,5	OD	OC

Polaris 20: for features please consult the proper technical catalog.

DCAT006-151_79933324

01/11.2012

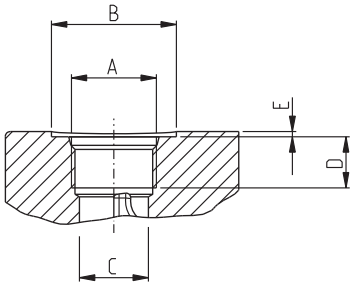
KAPPA 30 DOUBLE PUMPS KP30/PL20 SHORT SHAPED BODY HSC

SAE STRAIGHT THREAD PORTS J514 ODT

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

CODE	Nominal size	A	Ø B	Ø C	D	E		
			mm	mm	mm	mm	Nm	Nm
OC	5/8"	7/8" - 14 UNF - 2B	35	20,5	17	0,5	30 +2,5	70 +5
OD	3/4"	1 1/16" - 12 UNF - 2B	42	24,8	20	(◆) 0,5 2	40 +2,5	120 +10
OF	1"	1 5/16" - 12 UNF - 2B	49	30,5	20	2	60 +5	170 +10
OG	1" 1/4	1 5/8" - 12 UNF - 2B	58	39,1	20	2	70 +5	—

(◆) For Polaris 20



DCAT_006_027_21060524

Tightening torque for low pressure side port

Tightening torque for high pressure side port (values obtained at 350 bar)

How to order

1 [ ] - A8 S9 - L 2 [ ] - 45 - HSC / 3 [ ] /

Front pump

1 [ ] - L 2 [ ] - 4 [ ] - 5 [ ] 6 [ ] - 7 [ ] / FS - 8 [ ] - 9 [ ] (ANF3) (CN) (VNR01)

Rear pump

1 Type	Code
Front pump type	KP 30·…
Rear pump type	PLP 20·…

2 Ports IN/OUT (a)	Code
See codes on previous page	../..

3 Performance	Code
Standard - no code (b)	../..
High performance	GS

4 Inlet combination	Code
Two inlet (standard) no code	…
Common inlet	N7

5 Rear pump body	Code
PLP20 with standard body - no code	…
PLP20 with high strength body	L101

Code	6 Rotation
S	Left
D	Right

Code	7 Seals (c)
…	Buna N (standard) no code
T-PV	Buna hydrogenated HNBR and viton shaft seal

Code	8 Rear cover
…	Cast iron (standard) - no code
L	Aluminium

Code	9 Rear pump thrust plate
…	Standard - no code - from 4 to 14 type
AV	High speed - from 16 to 20 type

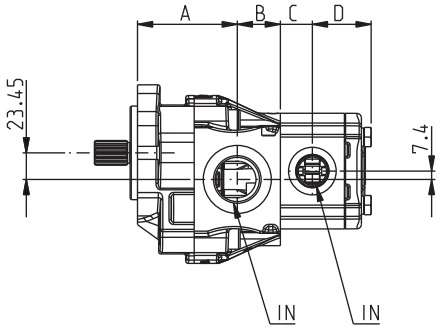
(a) For rear pump with common inlet, please write only /OUT code.
(b) Not available for type 61-73-82.
(c) Choose the seals according to the temperature shown on page 4.

Order example KP 30•19,5-A8 S9-L OF/OD-45-HSC/GS/PLP 20•16-L /OC-N7-L101 S-T-PV/FS-L-AV (ANF3) (CN) (VNR01)

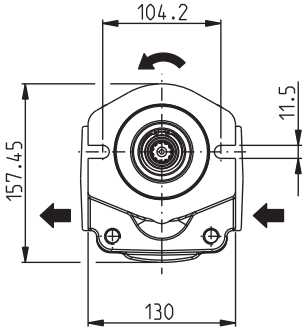
01/11.2012

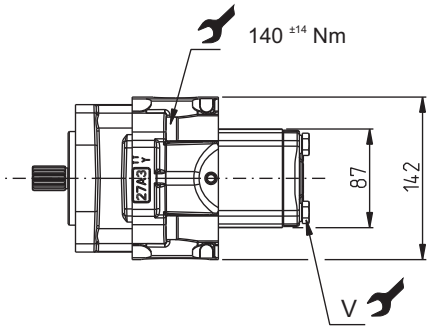
KAPPA 30 DOUBLE PUMPS KP30/PL20 SHORT SHAPED BODY HSC

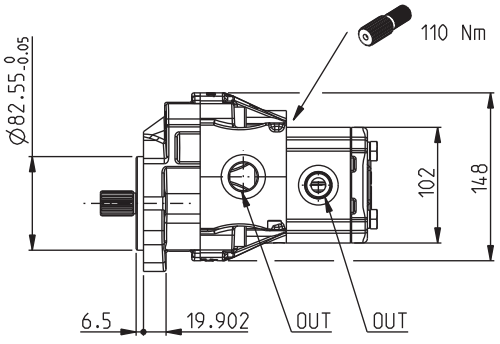
Mounting flange: **S9**
SAE "B" 2 HOLES
Conforms to SAE J744



Ports type: **BSPP**
GAS STRAIGHT THREAD PORTS







DCAT006-150_79933324

Drive shaft availability (See page 72)

The torque absorbed from the shaft of the first pump results from the sum of the torques due to all single stages.
The achieved value must not exceed the maximum torque limit given for the shaft of the first pump.

Rear cover material	V Screws tightening torque Nm (lbf in)
Aluminium	45 ±4,5 (358 ÷ 438)
Cast iron	70 ±7 (558 ÷ 682)

Pump type	Displace-ment	A	B	Ports code	
	cm³/rev	mm	mm	IN	OUT
KP 30•19,5	19,63	86,5	38	GF	GE
KP 30•22	21,99	88	38	GF	GE
KP 30•24	24,03	86,5	38	GF	GE
KP 30•27	26,7	91	38	GF	GE
KP 30•29	29,06	92,5	38	GF	GE
KP 30•31	30,63	93,5	38	GF	GE
KP 30•34	34,56	96	38	GF	GE
KP 30•38	39,27	96	38	GF	GE
KP 30•61	61,26	94	64	GG	GF
KP 30•73	73,82	102	64	GG	GF
KP 30•82	81,68	107	64	GG	GF

Pump type	Displa-cement	C	D	Ports code	
	cm³/rev	mm	mm	IN	OUT
PLP 20•4	4,95	25,8	49,3	GD	GD
PLP 20•6,3	6,61	27	50,5	GD	GD
PLP 20•8	8,26	28,3	51,8	GD	GD
PLP 20•10,5	10,9	30,3	53,8	GD	GD
PLP 20•11,2	11,23	30,5	54	GD	GD
PLP 20•14	14,53	33	56,5	GE	GD
PLP 20•16	16,85	34,8	58,3	GE	GD
PLP 20•20	21,14	38	61,5	GE	GD

Polaris 20: for features please consult the proper technical catalog.

01/11.2012

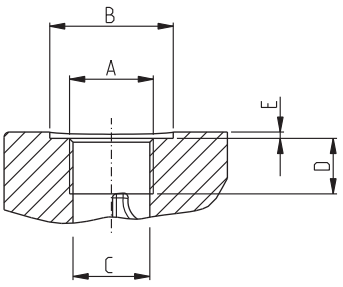
KAPPA 30 DOUBLE PUMPS KP30/PL20 SHORT SHAPED BODY HSC

GAS STRAIGHT THREAD PORTS BSPP

British standard pipe parallel (55°) conforms to UNI - ISO 228

CODE	Nominal size	A	Ø B	Ø C	D	E		
			mm	mm	mm	mm	Nm	Nm
GD	1/2"	G 1/2	—	19	17	—	20 +1	50 +2,5
GE	3/4"	G 3/4	(◆) — 39	24,5	18	(◆) — 2,5	30 +2,5	90 +5
GF	1"	G 1	49	30,5	22	2,5	50 +2,5	130 +10
GG	1" 1/4	G 1 1/4	56	39	24	2,5	60 +5	170 +15

(◆) For Polaris 20



DCAT_006_026_21064779

Tightening torque for low pressure side port

Tightening torque for high pressure side port (values obtained at 350 bar)

How to order

1 [ ] - A8 S9 - L 2 [ ] - 45 - HSC / 3 [ ] /

Front pump

1 [ ] - L 2 [ ] - 4 [ ] - 5 [ ] 6 [ ] - 7 [ ] / FS - 8 [ ] - 9 [ ] (ANF3) (CN) (VNR01)

Rear pump

1 Type	Code
Front pump type	KP 30·…
Rear pump type	PLP 20·…

2 Ports IN/OUT (a)	Code
See codes on previous page	../..

3 Performance	Code
Standard - no code (b)	../..
High performance	GS

4 Inlet combination	Code
Two inlet (standard) no code	…
Common inlet	N7

5 Rear pump body	Code
PLP20 with standard body - no code	…
PLP20 with high strength body	L101

Code	6 Rotation
S	Left
D	Right

Code	7 Seals (c)
…	Buna N (standard) no code
T-PV	Buna hydrogenated HNBR and viton shaft seal

Code	8 Rear cover
…	Cast iron (standard) - no code
L	Aluminium

Code	9 Rear pump thrust plate
…	Standard - no code - from 4 to 14 type
AV	High speed - from 16 to 20 type

(a) For rear pump with common inlet, please write only /OUT code.
(b) Not available for type 61-73-82.
(c) Choose the seals according to the temperature shown on page 4.

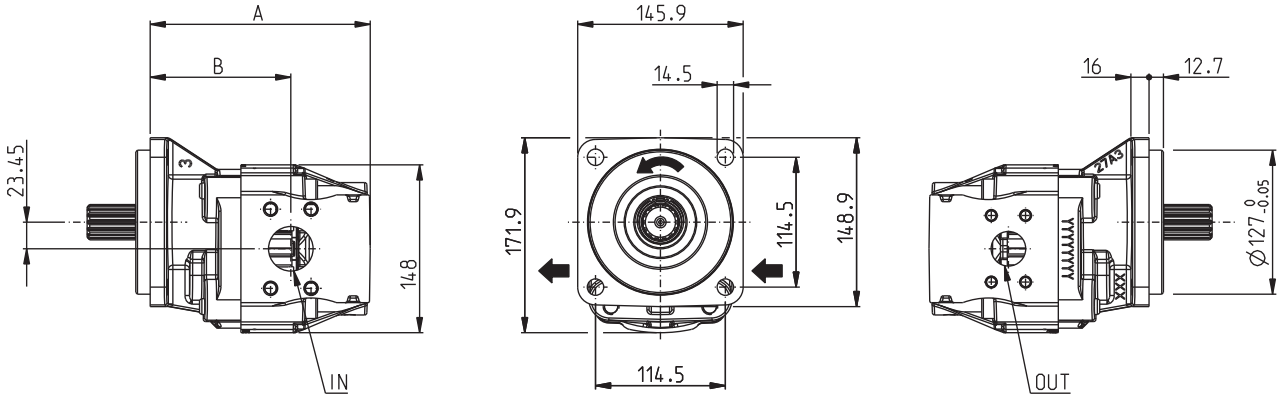
Order example KP 30•19,5-A8 S9-L GF/GE-45-HSC/GS/PLP 20•16-L /GD-N7-L101 S-T-PV/FS-L-AV (ANF3) (CN) (VNR01)

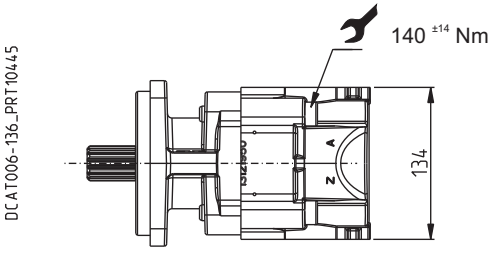
01/11.2012

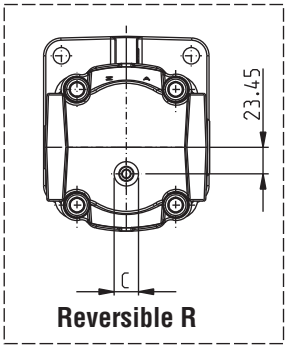
KAPPA 30 SINGLE UNITS SHORT SHAPED BODY - SIDE PORTS HSC

Mounting flange: **S6**
SAE "C" 4 HOLES
Conforms to SAE J744

Ports type: **SSM**
SAE FLANGED PORTS J518

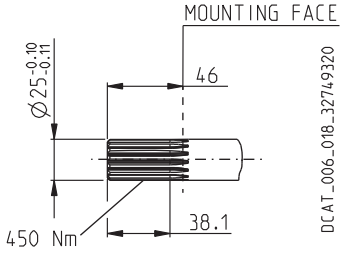






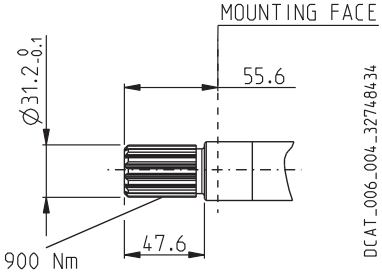
Drive shaft availability

05 (SAE "BB" Spline)



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

06 (SAE "C" Spline)



Ext. Involute Spline SAE J498B
with major diameter modified
14 teeth - 12/24 Pitch - 30 deg
Flat Root - Side fit - Class 1

(◆) Dimension on page 91 and 93

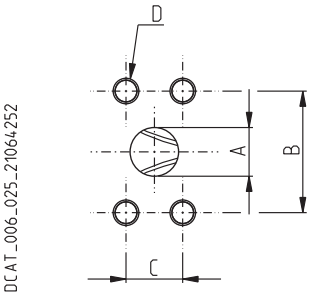
Pump type	Motor type	Displacement	A	B	Ports code				C Drain port (◆)	
					Gear pumps		Gear motors			
		cm³/rev	mm	mm	IN	OUT	IN	OUT	Gas BSPP	SAE ODT
KP 30•19,5	KM 30•19,5	19,63	160,5	116,5	MC	MB	MB	MC	GC	OA
KP 30•22	KM 30•22	21,99	162	118	MC	MB	MB	MC	GC	OA
KP 30•24	KM 30•24	24,03	160,5	116,5	MC	MB	MB	MC	GC	OA
KP 30•27	KM 30•27	26,7	165	121	MC	MB	MB	MC	GC	OA
KP 30•29	KM 30•29	29,06	166,5	122,5	MC	MB	MB	MC	GC	OA
KP 30•31	KM 30•31	30,63	167,5	123,5	MC	MB	MB	MC	GC	OA
KP 30•34	KM 30•34	34,56	170	126	MC	MB	MB	MC	GC	OA
KP 30•38	KM 30•38	39,27	170	126	MC	MB	MB	MC	GC	OA
KP 30•61	KM 30•61	61,26	194	124	ME	MD	MD	ME	GC	OA
KP 30•73	KM 30•73	73,82	202	132	ME	MD	MD	ME	GC	OA
KP 30•82	KM 30•82	81,68	204	137	ME	MD	MD	ME	GC	OA

01/11.2012

KAPPA 30 SINGLE UNITS SHORT SHAPED BODY - SIDE PORTS HSC

SAE FLANGED PORTS J518 - Standard pressure series 3000 PSI SSM

Metric thread ISO 60° conforms to ISO/R 262



DCAT_006_025_21064252

CODE	A	B	C	D		
	mm	mm	mm	Thread Depth (mm)	Nm	Nm
MB	19	47,6	22,2	M 10 Depth 17	20 +1	30 +2,5
MC	25,4	52,4	26,2	M 10 Depth 17	20 +1	30 +2,5
MD	30,5	58,7	30,2	M 10 Depth 17	20 +1	35 +2,5
ME	39,3	69,8	35,7	M 12 Depth 17	30 +2,5	60 +5

Tightening torque for low pressure side port

Tightening torque for high pressure side port (values obtained at 350 bar)

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

How to order

1	2	3	4	5	6	7
		0 -	S6 - L	-	-	- HSC -	(ANF3) (CN) (VNR01)
			.. / ..				

1 Type	Code
Pump type	KP 30·…
Motor type	KM 30·…

2 Rotation	Code
Left	S
Right	D
Reversible	R

3 Drive shaft	Code
SAE “B” spline (15 teeth)	05
SAE “C” spline (14 teeth)	06

Code	Ports IN/OUT 4
../..	See codes on previous page

Code	Seals (a) 5
N	Buna N (standard)
T-PV	Buna hydrogenated HNBR and viton shaft seal

Code	Drain ports 6
OA	SAE Straight thread ports (ODT)
GC	GAS Straight thread ports (BSPP)

Code	Performance 7
…	Standard - no code (b)
GS	High performance

(a) Choose the seals according to the temperature shown on page 4.
(b) Not available for type 61-73-82.

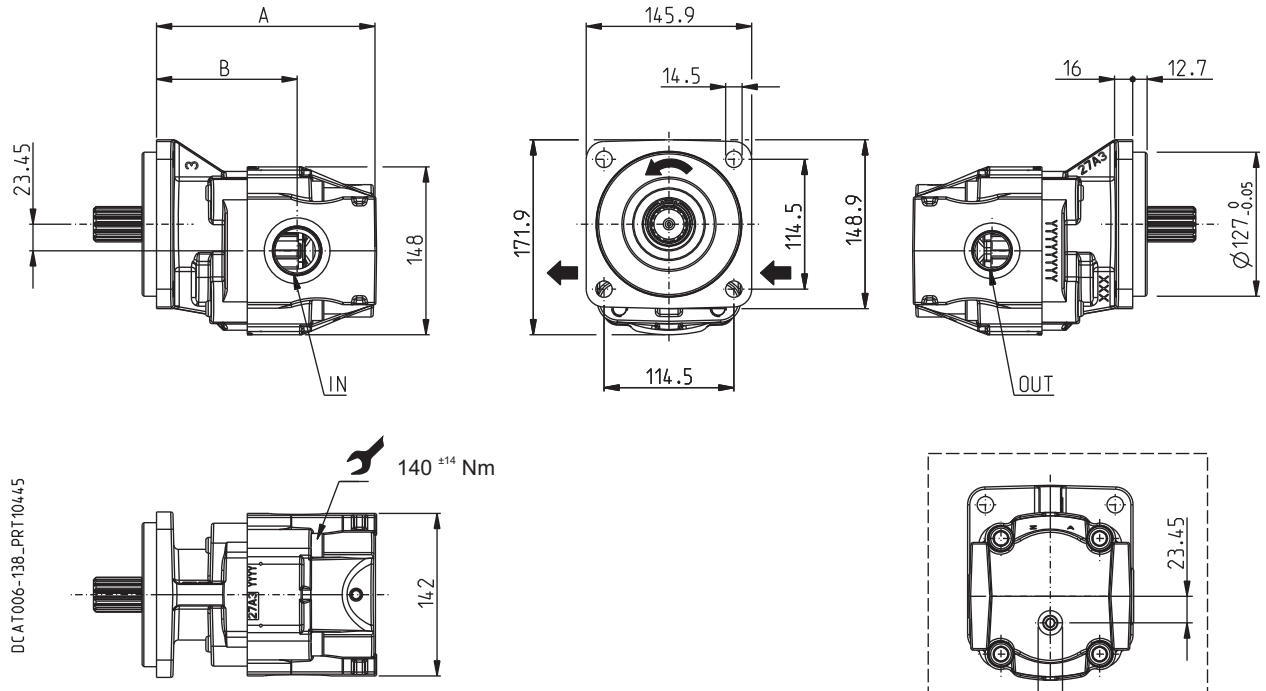
Order example KP 30•19,5 R0-05 S6-L MC/MB-T-PV-OA-HSC-GS (ANF3) (CN) (VNR01)

01/11.2012

KAPPA 30 SINGLE UNITS SHORT SHAPED BODY - SIDE PORTS HSC

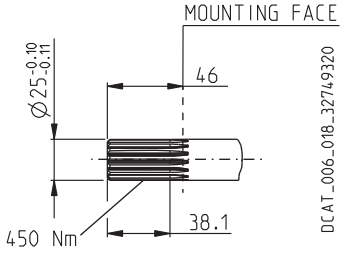
Mounting flange: **S6**
SAE "C" 4 HOLES
Conforms to SAE J744

Ports type: **ODT**
SAE STRAIGHT THREAD PORTS J514



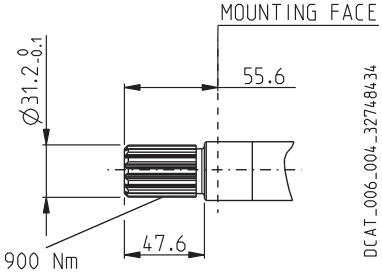
Drive shaft availability

05 (SAE "BB" Spline)



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

06 (SAE "C" Spline)



Ext. Involute Spline SAE J498B
with major diameter modified
14 teeth - 12/24 Pitch - 30 deg
Flat Root - Side fit - Class 1

(◆) Dimension on page 91 and 93

Pump type	Motor type	Displacement	A	B	Ports code				C Drain port (◆)	
					Gear pumps		Gear motors			
		cm³/rev	mm	mm	IN	OUT	IN	OUT	Gas BSPP	SAE ODT
KP 30•19,5	KM 30•19,5	19,63	160,5	116,5	OF	OD	OD	OF	GC	OA
KP 30•22	KM 30•22	21,99	162	118	OF	OD	OD	OF	GC	OA
KP 30•24	KM 30•24	24,03	160,5	116,5	OF	OD	OD	OF	GC	OA
KP 30•27	KM 30•27	26,7	165	121	OF	OD	OD	OF	GC	OA
KP 30•29	KM 30•29	29,06	166,5	122,5	OF	OD	OD	OF	GC	OA
KP 30•31	KM 30•31	30,63	167,5	123,5	OF	OD	OD	OF	GC	OA
KP 30•34	KM 30•34	34,56	170	126	OF	OD	OD	OF	GC	OA
KP 30•38	KM 30•38	39,27	170	126	OF	OD	OD	OF	GC	OA
KP 30•61	KM 30•61	61,26	194	124	OG	OF	OF	OG	GC	OA
KP 30•73	KM 30•73	73,82	202	132	OG	OF	OF	OG	GC	OA
KP 30•82	KM 30•82	81,68	204	137	OG	OF	OF	OG	GC	OA

01/11.2012

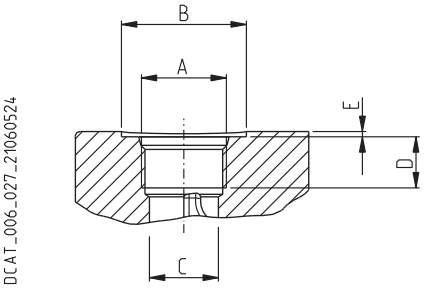
KAPPA 30 SINGLE UNITS SHORT SHAPED BODY - SIDE PORTS HSC

SAE STRAIGHT THREAD PORTS J514 ODT

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

CODE	Nominal size	A	Ø B	Ø C	D	E		
			mm	mm	mm	mm	Nm	Nm
OA (◆)	3/8”	9/16” - 12 UNF - 2B	26	13	15	2	15 +1	—
OD	3/4”	1 1/16” - 12 UNF - 2B	42	24,8	20	2	40 +2,5	120 +10
OF	1”	1 5/16” - 12 UNF - 2B	49	30,5	20	2	60 +5	170 +10
OG	1” 1/4	1 5/8” - 12 UNF - 2B	58	39,1	20	2	70 +5	—

(◆) = Drain port



DCAT_006_027_21060524

Tightening torque for low pressure side port

Tightening torque for high pressure side port (values obtained at 350 bar)

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

How to order

1	2		3		4		5		6		7
		0 -		S6 - L	.. / ..	-		-		- HSC -		(ANF3) (CN) (VNR01)

1	Type	Code
Pump type		KP 30·…
Motor type		KM 30·…

2	Rotation	Code
Left		S
Right		D
Reversible		R

3	Drive shaft	Code
SAE “B” spline (15 teeth)		05
SAE “C” spline (14 teeth)		06

Code	Ports IN/OUT	4
../..	See codes on previous page	

Code	Seals (a)	5
N	Buna N (standard)	
T-PV	Buna hydrogenated HNBR and viton shaft seal	

Code	Drain ports	6
OA	SAE Straight thread ports (ODT)	
GC	GAS Straight thread ports (BSPP)	

Code	Performance	7
…	Standard - no code (b)	
GS	High performance	

(a) Choose the seals according to the temperature shown on page 4.
(b) Not available for type 61-73-82.

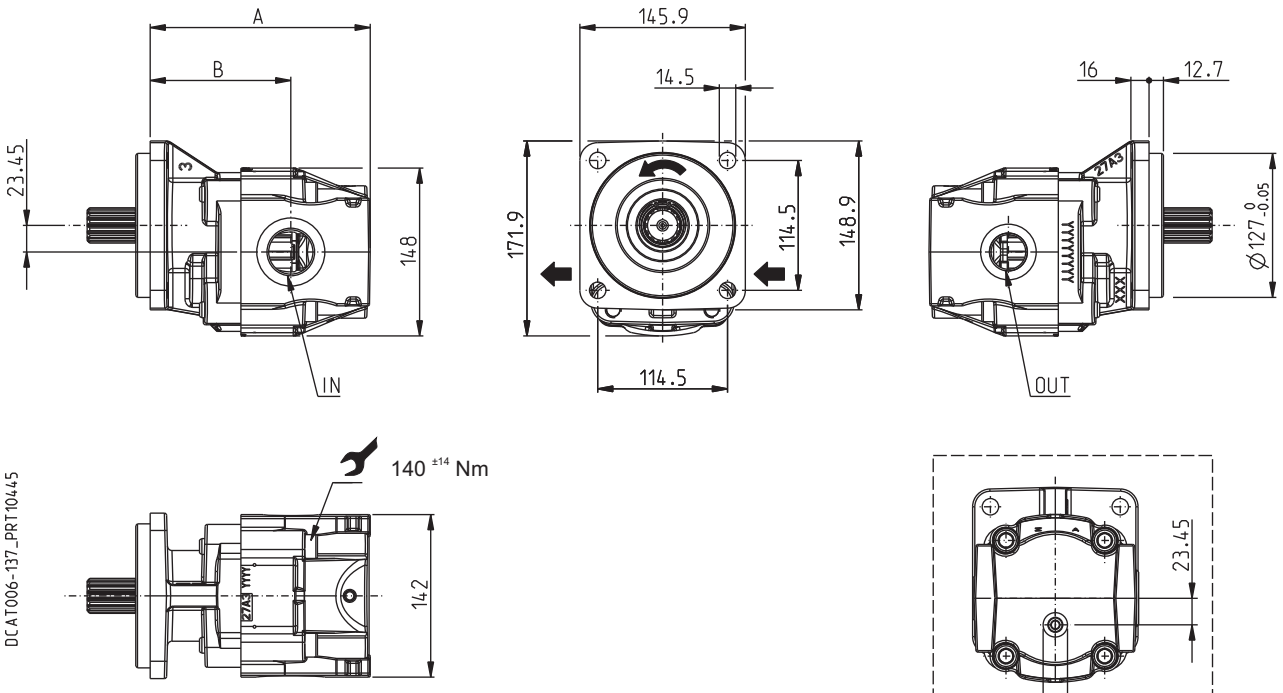
Order example KP 30•19,5 R0-05 S6-L OF/OD-T-PV-OA-HSC-GS (ANF3) (CN) (VNR01)

01/11.2012

KAPPA 30 SINGLE UNITS SHORT SHAPED BODY - SIDE PORTS HSC

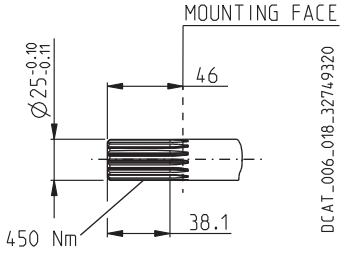
Mounting flange: **S6**
SAE "C" 4 HOLES
Conforms to SAE J744

Ports type: **BSPP**
GAS STRAIGHT THREAD PORTS



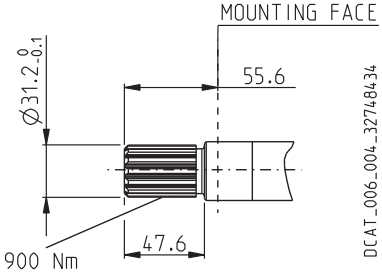
Drive shaft availability

05 (SAE "BB" Spline)



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

06 (SAE "C" Spline)



Ext. Involute Spline SAE J498B
with major diameter modified
14 teeth - 12/24 Pitch - 30 deg
Flat Root - Side fit - Class 1

(◆) Dimension on page 91 and 93

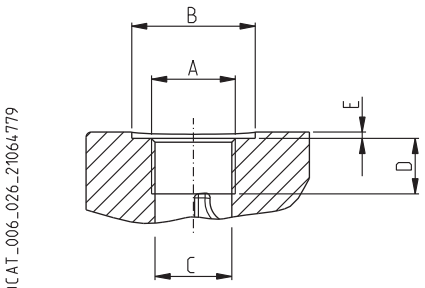
Pump type	Motor type	Displacement	A	B	Ports code				C Drain port (◆)	
					Gear pumps		Gear motors			
		cm³/rev	mm	mm	IN	OUT	IN	OUT	Gas BSPP	SAE ODT
KP 30•19,5	KM 30•19,5	19,63	160,5	116,5	GF	GE	GE	GF	GC	OA
KP 30•22	KM 30•22	21,99	162	118	GF	GE	GE	GF	GC	OA
KP 30•24	KM 30•24	24,03	160,5	116,5	GF	GE	GE	GF	GC	OA
KP 30•27	KM 30•27	26,7	165	121	GF	GE	GE	GF	GC	OA
KP 30•29	KM 30•29	29,06	166,5	122,5	GF	GE	GE	GF	GC	OA
KP 30•31	KM 30•31	30,63	167,5	123,5	GF	GE	GE	GF	GC	OA
KP 30•34	KM 30•34	34,56	170	126	GF	GE	GE	GF	GC	OA
KP 30•38	KM 30•38	39,27	170	126	GF	GE	GE	GF	GC	OA
KP 30•61	KM 30•61	61,26	194	124	GG	GF	GF	GG	GC	OA
KP 30•73	KM 30•73	73,82	202	132	GG	GF	GF	GG	GC	OA
KP 30•82	KM 30•82	81,68	204	137	GG	GF	GF	GG	GC	OA

01/11.2012

KAPPA 30 SINGLE UNITS SHORT SHAPED BODY - SIDE PORTS HSC

GAS STRAIGHT THREAD PORTS BSPP

British standard pipe parallel (55°) conforms to UNI - ISO 228



DCAT_006_026_21064779

CODE	Nominal size	A	Ø B	Ø C	D	E		
			mm	mm	mm	mm	Nm	Nm
GC (◆)	3/8"	G 3/8	25	15	14	2	15 $^{+1}$	—
GE	3/4"	G 3/4	39	24,5	18	2,5	30 $^{+2,5}$	90 $^{+5}$
GF	1"	G 1	49	30,5	22	2,5	50 $^{+2,5}$	130 $^{+10}$
GG	1" 1/4	G 1 1/4	56	39	24	2,5	60 $^{+5}$	170 $^{+15}$

(◆) Drain port

Tightening torque for low pressure side port

Tightening torque for high pressure side port (values obtained at 350 bar)

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

How to order

1	2		3		4		5		6		7	
		0 -		S6 - L	.. / ..	-		-		- HSC -		(ANF3) (CN) (VNR01)

1	Type	Code
Pump type		KP 30·…
Motor type		KM 30·…

2	Rotation	Code
Left		S
Right		D
Reversible		R

3	Drive shaft	Code
SAE "B" spline (15 teeth)		05
SAE "C" spline (14 teeth)		06

Code	Ports IN/OUT	4
../..	See codes on previous page	

Code	Seals (a)	5
N	Buna N (standard)	
T-PV	Buna hydrogenated HNBR and viton shaft seal	

Code	Drain ports	6
OA	SAE Straight thread ports (ODT)	
GC	GAS Straight thread ports (BSPP)	

Code	Performance	7
…	Standard - no code (b)	
GS	High performance	

(a) Choose the seals according to the temperature shown on page 4.
(b) Not available for type 61-73-82.

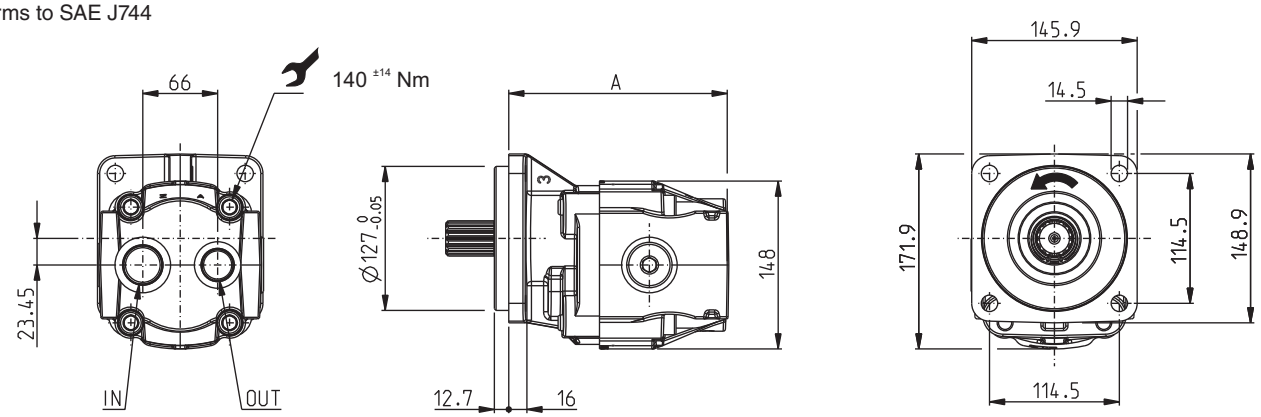
Order example KP 30•19,5 R0-05 S6-L GF/GE-T-PV-GC-HSC-GS (ANF3) (CN) (VNR01)

01/11.2012

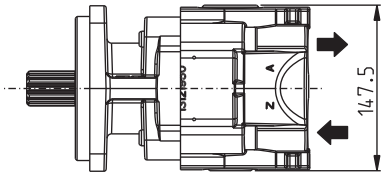
KAPPA 30 SINGLE UNITS SHORT SHAPED BODY - REAR PORTS HSC

Mounting flange: **S6**
SAE "C" 4 HOLES
Conforms to SAE J744

Ports type: **ODT**
SAE STRAIGHT THREAD PORTS J514

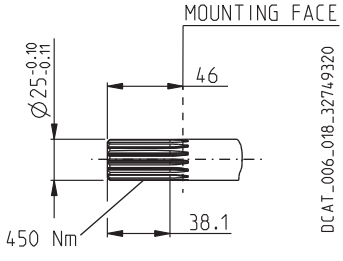


DCAT006-140_PRT10445



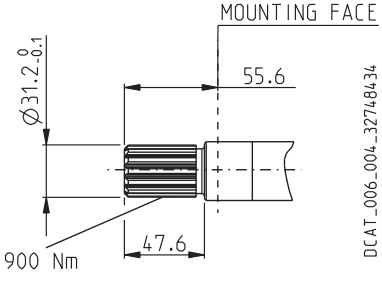
Drive shaft availability

05 (SAE "BB" Spline)



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

06 (SAE "C" Spline)



Ext. Involute Spline SAE J498B
with major diameter modified
14 teeth - 12/24 Pitch - 30 deg
Flat Root - Side fit - Class 1

Pump type	Motor type	Displacement	A	Ports code			
				Gear pumps		Gear motors	
		cm³/rev	mm	IN	OUT	IN	OUT
KP 30•19,5	KM 30•19,5	19,63	160,5	OF	OD	OD	OF
KP 30•22	KM 30•22	21,99	162	OF	OD	OD	OF
KP 30•24	KM 30•24	24,03	160,5	OF	OD	OD	OF
KP 30•27	KM 30•27	26,7	165	OF	OD	OD	OF
KP 30•29	KM 30•29	29,06	166,5	OF	OD	OD	OF
KP 30•31	KM 30•31	30,63	167,5	OF	OD	OD	OF
KP 30•34	KM 30•34	34,56	170	OF	OD	OD	OF
KP 30•38	KM 30•38	39,27	170	OF	OD	OD	OF
KP 30•61	KM 30•61	61,26	194	OG	OF	OF	OG
KP 30•73	KM 30•73	73,82	202	OG	OF	OF	OG
KP 30•82	KM 30•82	81,68	204	OG	OF	OF	OG

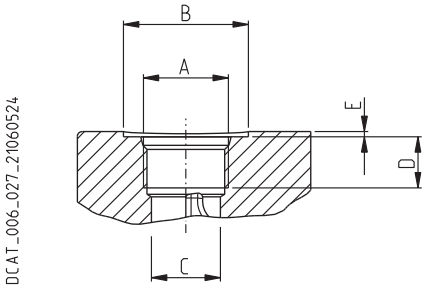
01/11.2012

KAPPA 30 SINGLE UNITS SHORT SHAPED BODY - REAR PORTS HSC

SAE STRAIGHT THREAD PORTS J514 ODT

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

CODE	Nominal size	A	Ø B	Ø C	D	E		
			mm	mm	mm	mm	Nm	Nm
OD	3/4”	1 1/16” - 12 UNF - 2B	42	24,8	20	2	40 $^{+2,5}$	120 $^{+10}$
OF	1”	1 5/16” - 12 UNF - 2B	49	30,5	20	2	60 $^{+5}$	170 $^{+10}$
OG	1” 1/4	1 5/8” - 12 UNF - 2B	58	39,1	20	2	70 $^{+5}$	—



DCAT_006_027_21060524

Tightening torque for low pressure side port

Tightening torque for high pressure side port (values obtained at 350 bar)

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

How to order

1 [ ] 2 [ ] 0 - 3 [ ] S6 - P 4 [.. / ..] - 5 [ ] - HSC - 6 [ ] (ANF3) (CN) (VNR01)

1	Type	Code
Pump type		KP 30·…
Motor type		KM 30·…

2	Rotation	Code
Left		S
Right		D

3	Drive shaft	Code
SAE “B” spline (15 teeth)		05
SAE “C” spline (14 teeth)		06

Code	Ports IN/OUT	4
../..	See codes on previous page	

Code	Seals (a)	5
N	Buna N (standard)	
T-PV	Buna hydrogenated HNBR and viton shaft seal	

Code	Performance	6
…	Standard - no code (b)	
GS	High performance	

(a) Choose the seals according to the temperature shown on page 4.
(b) Not available for type 61-73-82.

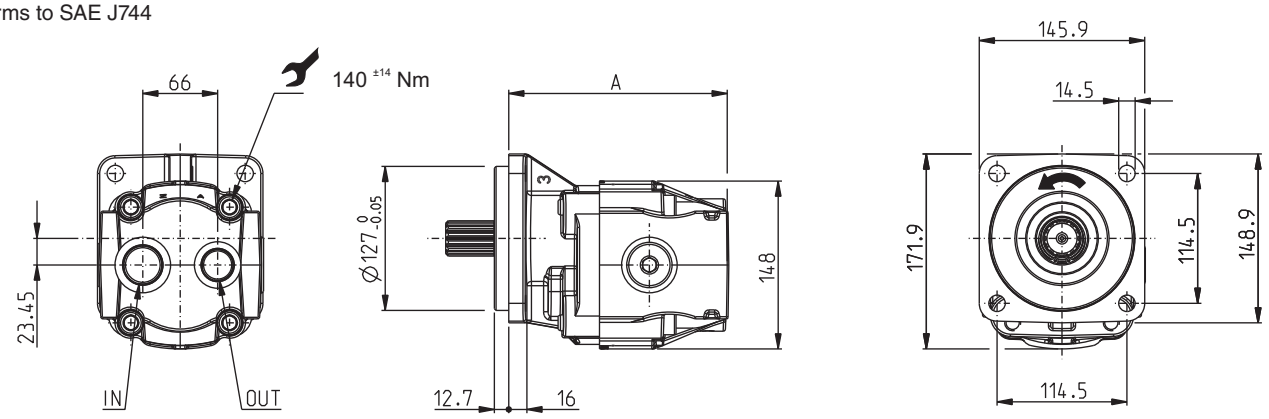
01/11.2012

Order example KP 30•19,5 S0-05 S6-P OF/OD-T-PV-HSC-GS (ANF3) (CN) (VNR01)

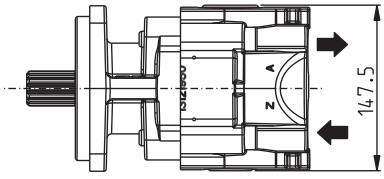
KAPPA 30 SINGLE UNITS SHORT SHAPED BODY - REAR PORTS HSC

Mounting flange: **S6**
SAE "C" 4 HOLES
Conforms to SAE J744

Ports type: **BSPP**
GAS STRAIGHT THREAD PORTS

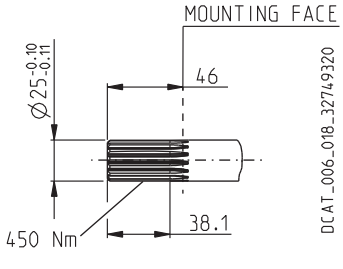


DCAT006-139_PRT10445



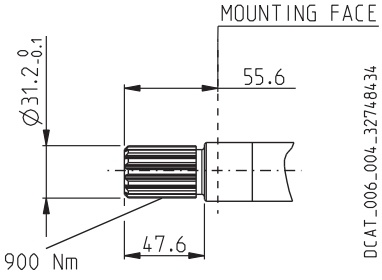
Drive shaft availability

05 (SAE "BB" Spline)



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

06 (SAE "C" Spline)



Ext. Involute Spline SAE J498B
with major diameter modified
14 teeth - 12/24 Pitch - 30 deg
Flat Root - Side fit - Class 1

Pump type	Motor type	Displacement	A	Ports code			
				Gear pumps		Gear motors	
		cm³/rev	mm	IN	OUT	IN	OUT
KP 30•19,5	KM 30•19,5	19,63	160,5	GF	GE	GE	GF
KP 30•22	KM 30•22	21,99	162	GF	GE	GE	GF
KP 30•24	KM 30•24	24,03	160,5	GF	GE	GE	GF
KP 30•27	KM 30•27	26,7	165	GF	GE	GE	GF
KP 30•29	KM 30•29	29,06	166,5	GF	GE	GE	GF
KP 30•31	KM 30•31	30,63	167,5	GF	GE	GE	GF
KP 30•34	KM 30•34	34,56	170	GF	GE	GE	GF
KP 30•38	KM 30•38	39,27	170	GF	GE	GE	GF
KP 30•61	KM 30•61	61,26	194	GG	GF	GF	GG
KP 30•73	KM 30•73	73,82	202	GG	GF	GF	GG
KP 30•82	KM 30•82	81,68	204	GG	GF	GF	GG

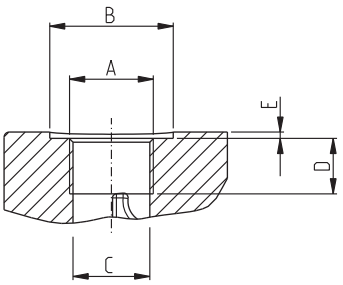
01/11.2012

KAPPA 30 SINGLE UNITS SHORT SHAPED BODY - REAR PORTS HSC

GAS STRAIGHT THREAD PORTS BSPP

British standard pipe parallel (55°) conforms to UNI - ISO 228

CODE	Nominal size	A	Ø B	Ø C	D	E		
			mm	mm	mm	mm	Nm	Nm
GE	3/4"	G 3/4	39	24,5	18	2,5	30 +2,5	90 +5
GF	1"	G 1	49	30,5	22	2,5	50 +2,5	130 +10
GG	1" 1/4	G 1 1/4	56	39	24	2,5	60 +5	170 +15



DCAT_006_026_21064779

Tightening torque for low pressure side port

Tightening torque for high pressure side port (values obtained at 350 bar)

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

How to order

1	2		3		4		5		6	
		0 -		S6 - P	.. / ..	-		- HSC -		(ANF3) (CN) (VNR01)

1 Type	Code
Pump type	KP 30·...
Motor type	KM 30·...

2 Rotation	Code
Left	S
Right	D

3 Drive shaft	Code
SAE "B" spline (15 teeth)	05
SAE "C" spline (14 teeth)	06

Code	Ports IN/OUT 4
../..	See codes on previous page

Code	Seals (a) 5
N	Buna N (standard)
T-PV	Buna hydrogenated HNBR and viton shaft seal

Code	Performance 6
...	Standard - no code (b)
GS	High performance

(a) Choose the seals according to the temperature shown on page 4.
(b) Not available for type 61-73-82.

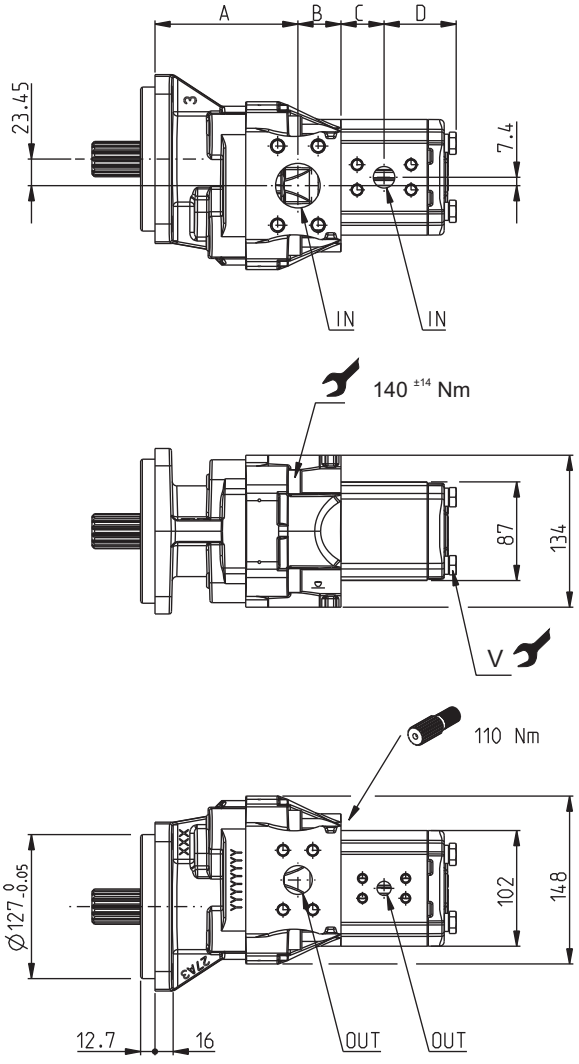
01/11.2012

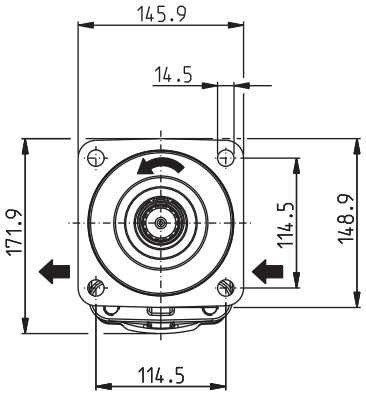
Order example KP 30•19,5 S0-05 S6-P GF/GE-T-PV-HSC-GS (ANF3) (CN) (VNR01)

KAPPA 30 DOUBLE PUMPS KP30/PL20 SHORT SHAPED BODY HSC

Mounting flange: **S6**
SAE "C" 4 HOLES
Conforms to SAE J744

Ports type: **SSM**
SAE FLANGED PORTS J518





Drive shaft availability (See page 88)

The torque absorbed from the shaft of the first pump results from the sum of the torques due to all single stages.
The achieved value must not exceed the maximum torque limit given for the shaft of the first pump.

Rear cover material	V Screws tightening torque Nm (lbf in)
Aluminium	45 ±4,5 (358 ÷ 438)
Cast iron	70 ±7 (558 ÷ 682)

DCAT006-141_PRT11257

Pump type	Displace-ment	A	B	Ports code	
	cm³/rev	mm	mm	IN	OUT
KP 30•19,5	19,63	116,5	38	MC	MB
KP 30•22	21,99	118	38	MC	MB
KP 30•24	24,03	116,5	38	MC	MB
KP 30•27	26,7	121	38	MC	MB
KP 30•29	29,06	122,5	38	MC	MB
KP 30•31	30,63	123,5	38	MC	MB
KP 30•34	34,56	126	38	MC	MB
KP 30•38	39,27	126	38	MC	MB
KP 30•61	61,26	124	64	ME	MD
KP 30•73	73,82	132	64	ME	MD
KP 30•82	81,68	137	64	ME	MD

Pump type	Displa-cement	C	D	Ports code	
	cm³/rev	mm	mm	IN	OUT
PLP 20•4	4,95	25,8	49,3	MA	MA
PLP 20•6,3	6,61	27	50,5	MA	MA
PLP 20•8	8,26	28,3	51,8	MA	MA
PLP 20•10,5	10,9	30,3	53,8	MA	MA
PLP 20•11,2	11,23	30,5	54	MA	MA
PLP 20•14	14,53	33	56,5	MB	MA
PLP 20•16	16,85	34,8	58,3	MB	MA
PLP 20•20	21,14	38	61,5	MB	MA

Polaris 20: for features please consult the proper technical catalog.

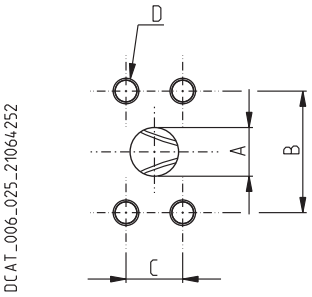
01/11.2012

KAPPA 30 DOUBLE PUMPS KP30/PL20 SHORT SHAPED BODY HSC

SAE FLANGED PORTS J518 - Standard pressure series 3000 PSI SSM

Metric thread ISO 60° conforms to ISO/R 262

CODE	A	B	C	D		
	mm	mm	mm	Thread Depth (mm)	Nm	Nm
MA	12,5	17,5	38,1	M 8 Depth 14	15 +1	15 +1
MB	19	22,2	47,6	M 10 Depth 14	20 +1	20 +1
MC	25,4	52,4	26,2	M 10 Depth 17	20 +1	30 +2,5
MD	30,5	58,7	30,2	M 10 Depth 17	20 +1	35 +2,5
ME	39,3	69,8	35,7	M 12 Depth 17	30 +2,5	60 +5



Tightening torque for low pressure side port

Tightening torque for high pressure side port (values obtained at 350 bar)

How to order

1 [ ] - 2 [ ] S6 - L 3 [ ] - 45 - HSC / 4 [ ] /

Front pump

1 [ ] - L 3 [ ] - 5 [ ] 6 [ ] - 7 [ ] / FS - 8 [ ] - 9 [ ] (ANF3) (CN) (VNR01)

Rear pump

1 Type	Code
Front pump type	KP 30·…
Rear pump type	PLP 20·…

2 Drive shaft	Code
SAE “B” spline (15 teeth)	05
SAE “C” spline (14 teeth)	06

3 Ports IN/OUT (a)	Code
See codes on previous page	../..

4 Performance	Code
Standard - no code (b)	…
High performance	GS

5 Inlet combination	Code
Two inlet (standard) no code	…
Common inlet	N7

Code	6 Rotation
S	Left
D	Right

Code	7 Seals (c)
…	Buna N (standard) no code
T-PV	Buna hydrogenated HNBR and viton shaft seal

Code	8 Rear cover
…	Cast iron (standard) - no code
L	Aluminium

Code	9 Rear pump thrust plate
…	Standard - no code - from 4 to 14 type
AV	High speed - from 16 to 20 type

(a) For rear pump with common inlet, please write only /OUT code.
(b) Not available for type 61-73-82.
(c) Choose the seals according to the temperature shown on page 4.

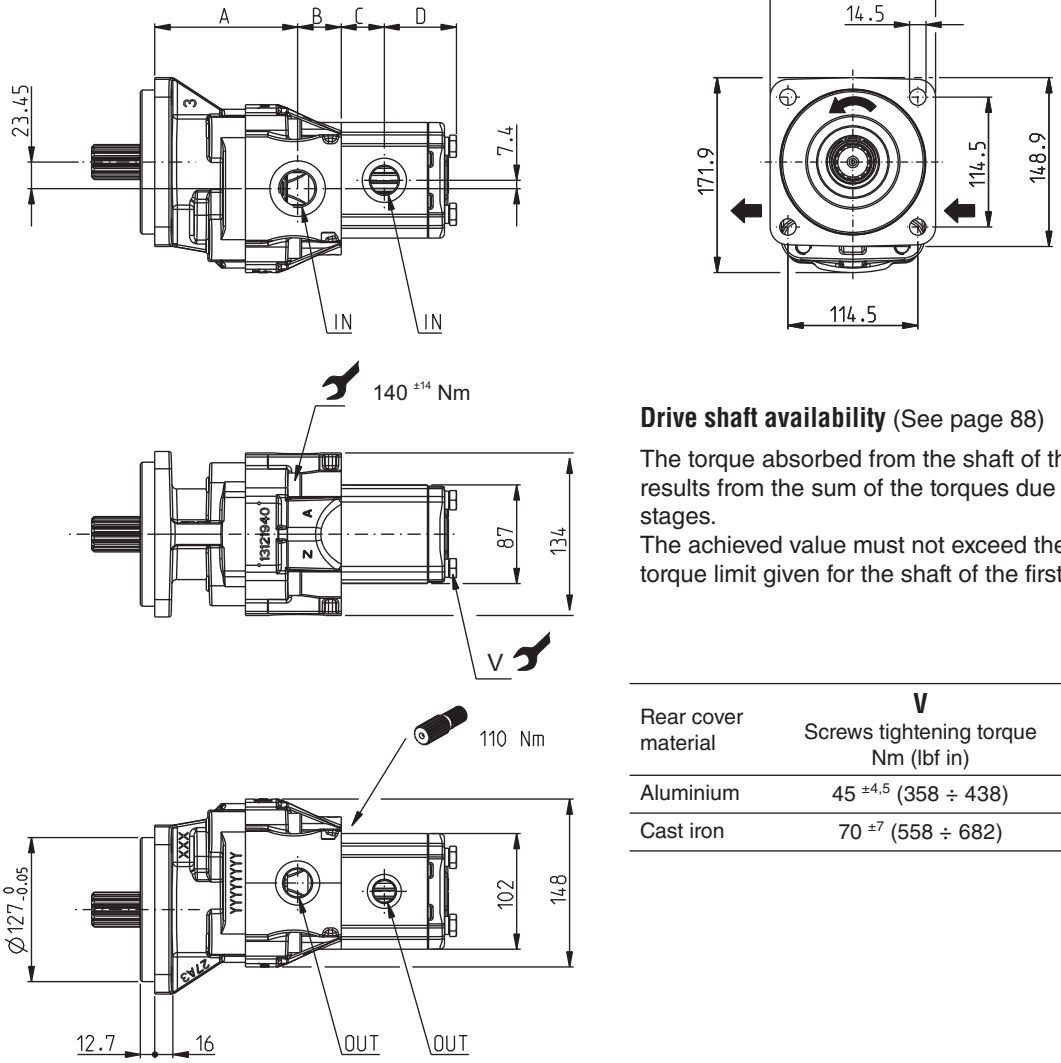
Order example KP 30•19,5-05 S6-L MC/MB-45-HSC/GS/PLP 20•16-L /MA-N7 S-T-PV/FS-L-AV (ANF3) (CN) (VNR01)

01/11.2012

KAPPA 30 DOUBLE PUMPS KP30/PL20 SHORT SHAPED BODY HSC

Mounting flange: **S6**
SAE "C" 4 HOLES
Conforms to SAE J744

Ports type: **ODT**
SAE STRAIGHT THREAD PORTS J514



DCAT006-143_PRT11257

Drive shaft availability (See page 88)

The torque absorbed from the shaft of the first pump results from the sum of the torques due to all single stages.
The achieved value must not exceed the maximum torque limit given for the shaft of the first pump.

Rear cover material	V Screws tightening torque Nm (lbf in)
Aluminium	45 ±4,5 (358 ÷ 438)
Cast iron	70 ±7 (558 ÷ 682)

Pump type	Displace-ment	A	B	Ports code	
	cm³/rev	mm	mm	IN	OUT
KP 30•19,5	19,63	116,5	38	OF	OD
KP 30•22	21,99	118	38	OF	OD
KP 30•24	24,03	116,5	38	OF	OD
KP 30•27	26,7	121	38	OF	OD
KP 30•29	29,06	122,5	38	OF	OD
KP 30•31	30,63	123,5	38	OF	OD
KP 30•34	34,56	126	38	OF	OD
KP 30•38	39,27	126	38	OF	OD
KP 30•61	61,26	124	64	OG	OF
KP 30•73	73,82	132	64	OG	OF
KP 30•82	81,68	137	64	OG	OF

Pump type	Displa-cement	C	D	Ports code	
	cm³/rev	mm	mm	IN	OUT
PLP 20•4	4,95	25,8	49,3	OC	OC
PLP 20•6,3	6,61	27	50,5	OC	OC
PLP 20•8	8,26	28,3	51,8	OC	OC
PLP 20•10,5	10,9	30,3	53,8	OC	OC
PLP 20•11,2	11,23	30,5	54	OC	OC
PLP 20•14	14,53	33	56,5	OD	OC
PLP 20•16	16,85	34,8	58,3	OD	OC
PLP 20•20	21,14	38	61,5	OD	OC

Polaris 20: for features please consult the proper technical catalog.

01/11.2012

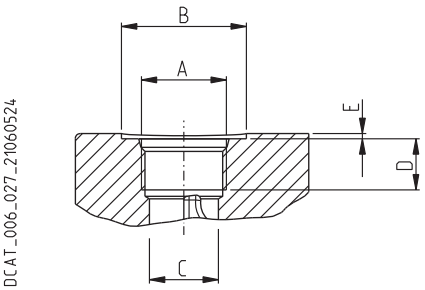
KAPPA 30 DOUBLE PUMPS KP30/PL20 SHORT SHAPED BODY HSC

SAE STRAIGHT THREAD PORTS J514 ODT

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

CODE	Nominal size	A	Ø B	Ø C	D	E		
			mm	mm	mm	mm	Nm	Nm
OC	5/8"	7/8" - 14 UNF - 2B	35	20,5	17	0,5	30 +2,5	70 +5
OD	3/4"	1 1/16" - 12 UNF - 2B	42	24,8	20	(◆) 0,5 2	40 +2,5	120 +10
OF	1"	1 5/16" - 12 UNF - 2B	49	30,5	20	2	60 +5	170 +10
OG	1" 1/4	1 5/8" - 12 UNF - 2B	58	39,1	20	2	70 +5	—

(◆) For Polaris 20



DCAT_006_027_21060524

Tightening torque for low pressure side port

Tightening torque for high pressure side port (values obtained at 350 bar)

How to order

1 [ ] - 2 [ ] S6 - L 3 [ ] - 45 - HSC / 4 [ ] /

Front pump

1 [ ] - L 3 [ ] - 5 [ ] - 6 [ ] 7 [ ] - 8 [ ] / FS - 9 [ ] - 10 [ ] (ANF3) (CN) (VNR01)

Rear pump

1 Type	Code
Front pump type	KP 30·…
Rear pump type	PLP 20·…

2 Drive shaft	Code
SAE "B" spline (15 teeth)	05
SAE "C" spline (14 teeth)	06

3 Ports IN/OUT (a)	Code
See codes on previous page	../..

4 Performance	Code
Standard - no code (b)	…
High performance	GS

5 Inlet combination	Code
Two inlet (standard) no code	…
Common inlet	N7

Code	6 Rear pump body
…	PLP20 with standard body - no code
L101	PLP20 with high strength body

Code	7 Rotation
S	Left
D	Right

Code	8 Seals (c)
…	Buna N (standard) no code
T-PV	Buna hydrogenated HNBR and viton shaft seal

Code	9 Rear cover
…	Cast iron (standard) - no code
L	Aluminium

Code	10 Rear pump thrust plate
…	Standard - no code - from 4 to 14 type
AV	High speed - from 16 to 20 type

(a) For rear pump with common inlet, please write only /OUT code.
(b) Not available for type 61-73-82.
(c) Choose the seals according to the temperature shown on page 4.

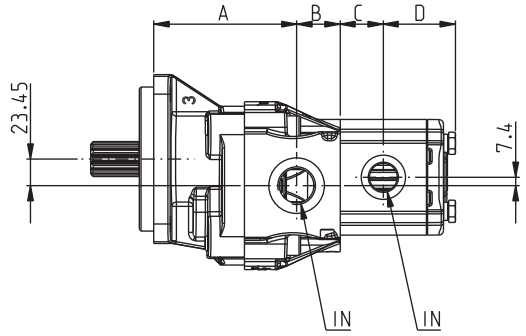
Order example KP 30•19,5-05 S6-L OF/OD-45-HSC/GS/PLP 20•16-L /OC-N7-L101 S-T-PV/FS-L-AV (ANF3) (CN) (VNR01)

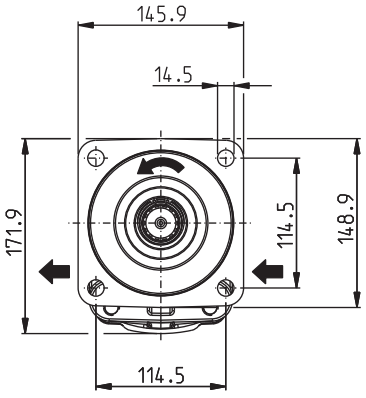
01/11.2012

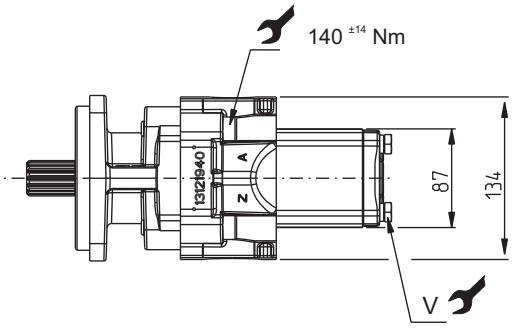
KAPPA 30 DOUBLE PUMPS KP30/PL20 SHORT SHAPED BODY HSC

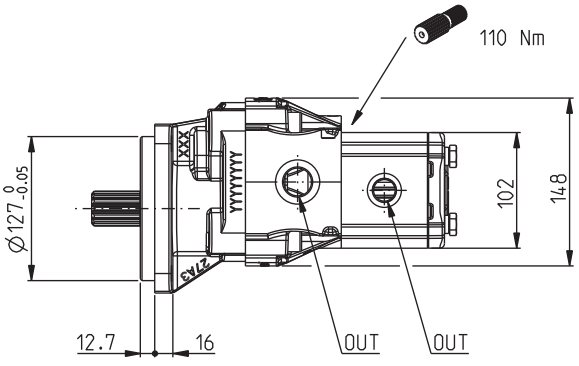
Mounting flange: **S6**
SAE "C" 4 HOLES
Conforms to SAE J744

Ports type: **BSPP**
GAS STRAIGHT THREAD PORTS









DCAT006-142_PRT11257

Drive shaft availability (See page 88)

The torque absorbed from the shaft of the first pump results from the sum of the torques due to all single stages.
The achieved value must not exceed the maximum torque limit given for the shaft of the first pump.

Rear cover material	V Screws tightening torque Nm (lbf in)
Aluminium	45 ±4,5 (358 ÷ 438)
Cast iron	70 ±7 (558 ÷ 682)

Pump type	Displace-ment	A	B	Ports code	
	cm³/rev	mm	mm	IN	OUT
KP 30•19,5	19,63	116,5	38	GF	GE
KP 30•22	21,99	118	38	GF	GE
KP 30•24	24,03	116,5	38	GF	GE
KP 30•27	26,7	121	38	GF	GE
KP 30•29	29,06	122,5	38	GF	GE
KP 30•31	30,63	123,5	38	GF	GE
KP 30•34	34,56	126	38	GF	GE
KP 30•38	39,27	126	38	GF	GE
KP 30•61	61,26	124	64	GG	GF
KP 30•73	73,82	132	64	GG	GF
KP 30•82	81,68	137	64	GG	GF

Pump type	Displa-cement	C	D	Ports code	
	cm³/rev	mm	mm	IN	OUT
PLP 20•4	4,95	25,8	49,3	GD	GD
PLP 20•6,3	6,61	27	50,5	GD	GD
PLP 20•8	8,26	28,3	51,8	GD	GD
PLP 20•10,5	10,9	30,3	53,8	GD	GD
PLP 20•11,2	11,23	30,5	54	GD	GD
PLP 20•14	14,53	33	56,5	GE	GD
PLP 20•16	16,85	34,8	58,3	GE	GD
PLP 20•20	21,14	38	61,5	GE	GD

Polaris 20: for features please consult the proper technical catalog.

01/11.2012

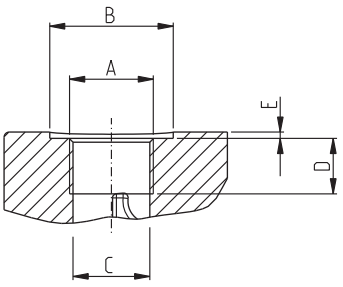
KAPPA 30 DOUBLE PUMPS KP30/PL20 SHORT SHAPED BODY HSC

GAS STRAIGHT THREAD PORTS BSPP

British standard pipe parallel (55°) conforms to UNI - ISO 228

CODE	Nominal size	A	Ø B	Ø C	D	E		
			mm	mm	mm	mm	Nm	Nm
GD	1/2"	G 1/2	—	19	17	—	20 +1	50 +2,5
GE	3/4"	G 3/4	(◆) — 39	24,5	18	(◆) — 2,5	30 +2,5	90 +5
GF	1"	G 1	49	30,5	22	2,5	50 +2,5	130 +10
GG	1" 1/4	G 1 1/4	56	39	24	2,5	60 +5	170 +15

(◆) For Polaris 20



DCAT_006_026_21064779

Tightening torque for low pressure side port

Tightening torque for high pressure side port (values obtained at 350 bar)

How to order

1 [ ] - 2 [ ] S6 - L 3 [ ] - 45 - HSC / 4 [ ] /

Front pump

1 [ ] - L 3 [ ] - 5 [ ] - 6 [ ] 7 [ ] - 8 [ ] / FS - 9 [ ] - 10 [ ] (ANF3) (CN) (VNR01)

Rear pump

1 Type	Code
Front pump type	KP 30·…
Rear pump type	PLP 20·…

2 Drive shaft	Code
SAE "B" spline (15 teeth)	05
SAE "C" spline (14 teeth)	06

3 Ports IN/OUT (a)	Code
See codes on previous page	../..

4 Performance	Code
Standard - no code (b)	…
High performance	GS

5 Inlet combination	Code
Two inlet (standard) no code	…
Common inlet	N7

Code	Rear pump body 6
…	PLP20 with standard body - no code
L101	PLP20 with high strength body

Code	Rotation 7
S	Left
D	Right

Code	Seals (c) 8
…	Buna N (standard) no code
T-PV	Buna hydrogenated HNBR and viton shaft seal

Code	Rear cover 9
…	Cast iron (standard) - no code
L	Aluminium

Code	Rear pump thrust plate 10
…	Standard - no code - from 4 to 14 type
AV	High speed - from 16 to 20 type

(a) For rear pump with common inlet, please write only /OUT code.
(b) Not available for type 61-73-82.
(c) Choose the seals according to the temperature shown on page 4.

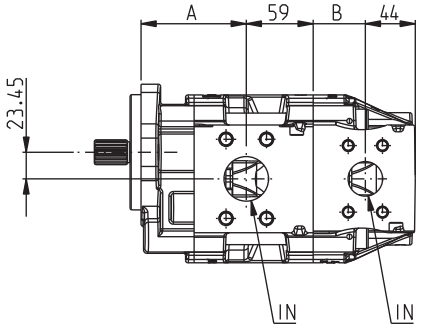
01/11.2012

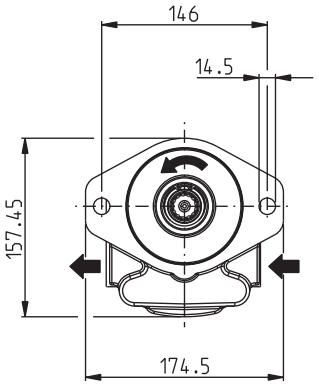
Order example KP 30•19,5-05 S6-L GF/GE-45-HSC/GS/PLP 20•16-L /GD-N7-L101 S-T-PV/FS-L-AV (ANF3) (CN) (VNR01)

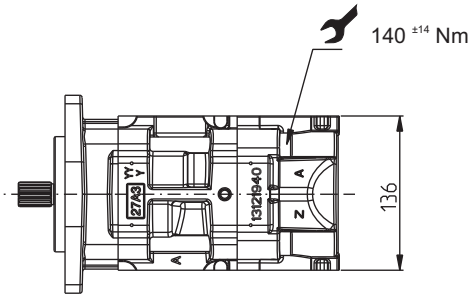
KAPPA 30 DOUBLE PUMPS KP30/30 COMBINED BODY KSL/HSC

Mounting flange: **K9**
SAE "B" 2 HOLES
Conforms to SAE J744

Ports type: **SSM**
SAE FLANGED PORTS J518

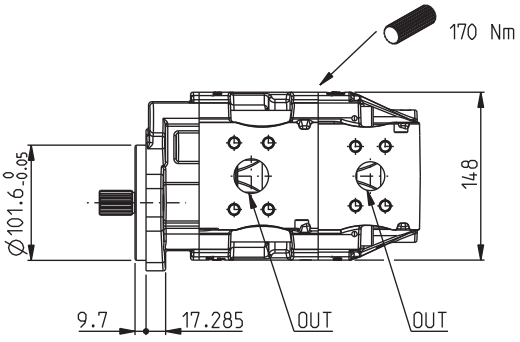






Drive shaft availability (See page 56)

The torque absorbed from the shaft of the first pump results from the sum of the torques due to all single stages.
The achieved value must not exceed the maximum torque limit given for the shaft of the first pump.



DCAT006-152_799193NM

Pump type	Displacement	A	B	Ports code	
	cm³/rev	mm	mm	IN	OUT
KP 30•19,5	19,63	83,3	36,5	**MC**	**MB**
KP 30•22	21,99	84,8	38	**MC**	**MB**
KP 30•24	24,03	83,3	36,5	**MC**	**MB**
KP 30•27	26,7	87,8	41	**MC**	**MB**
KP 30•29	29,06	89,3	42,5	**MC**	**MB**
KP 30•31	30,63	90,3	43,5	**MC**	**MB**
KP 30•34	34,56	92,8	46	**MC**	**MB**
KP 30•38	39,27	92,8	46	**MC**	**MB**

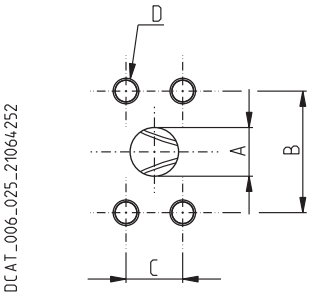
01/11.2012

KAPPA 30 DOUBLE PUMPS KP30/30 COMBINED BODY KSL/HSC

SAE FLANGED PORTS J518 - Standard pressure series 3000 PSI SSM

Metric thread ISO 60° conforms to ISO/R 262

CODE	A	B	C	D		
	mm	mm	mm	Thread Depth (mm)	Nm	Nm
MB	19	47,6	22,2	M 10 Depth 17	20 +1	30 +2,5
MC	25,4	52,4	26,2	M 10 Depth 17	20 +1	30 +2,5



DCAT_006_025_21064252

Tightening torque for low pressure side port

Tightening torque for high pressure side port (values obtained at 350 bar)

How to order

1 [ ] - 2 [ ] K9 - L 3 [ ] - KSL / 4 [ ] /

Front pump

1 [ ] - L 3 [ ] - 5 [ ] - HSC - 4 [ ] 6 [ ] - 7 [ ] / FS (ANF3) (CN) (VNR01)

Rear pump

1 Type	Code
Front pump type	KP 30·…
Rear pump type	30·…

2 Drive shaft	Code
SAE “B” spline (13 teeth)	A8
SAE “BB” spline (15 teeth)	A5
SAE “B” straight	32

3 Ports IN/OUT (a)	Code
See codes on previous page	../..

4 Performance	Code
Standard - no code (b)	…
High performance	GS

Code	5 Inlet combination
…	Two inlet (standard) no code
M5	Common inlet

Code	6 Rotation
S	Left
D	Right

Code	7 Seals (b)
…	Buna N (standard) no code
T-PV	Buna hydrogenated HNBR and viton shaft seal

(a) For rear pump with common inlet, please write only /OUT code.
(b) Choose the seals according to the temperature shown on page 4.

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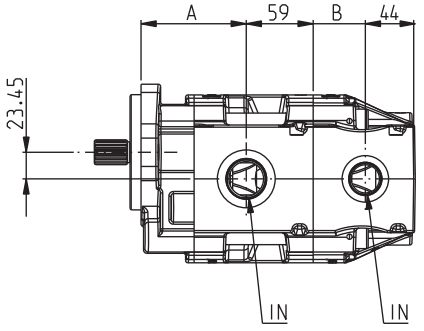
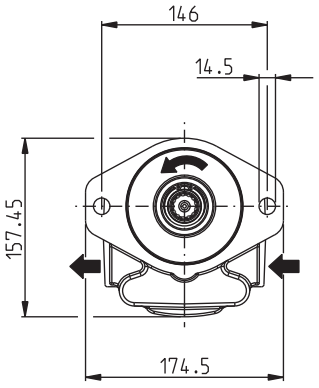
Order example KP 30•19,5-A8 K9-L MC/MB-KSL/GS/30•19,5-L /MB-M5-HSC-GS S-T-PV/FS (ANF3) (CN) (VNR01)

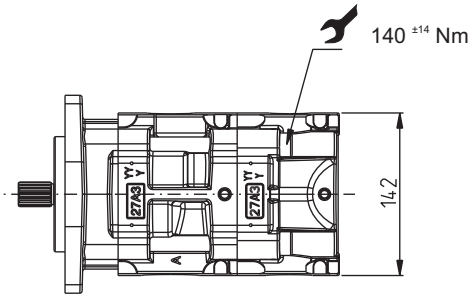
KAPPA 30 DOUBLE PUMPS KP30/30 COMBINED BODY KSL/HSC

Mounting flange: **K9**
SAE "B" 2 HOLES
Conforms to SAE J744

Ports type: **ODT**
SAE STRAIGHT THREAD PORTS J514

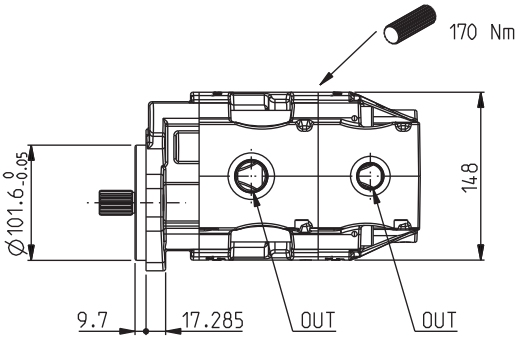






Drive shaft availability (See page 56)

The torque absorbed from the shaft of the first pump results from the sum of the torques due to all single stages.
The achieved value must not exceed the maximum torque limit given for the shaft of the first pump.



DCAT006-154_799193NM

Pump type	Displacement	A	B	Ports code	
	cm³/rev	mm	mm	IN	OUT
KP 30•19,5	19,63	83,3	36,5	OF	OD
KP 30•22	21,99	84,8	38	OF	OD
KP 30•24	24,03	83,3	36,5	OF	OD
KP 30•27	26,7	87,8	41	OF	OD
KP 30•29	29,06	89,3	42,5	OF	OD
KP 30•31	30,63	90,3	43,5	OF	OD
KP 30•34	34,56	92,8	46	OF	OD
KP 30•38	39,27	92,8	46	OF	OD

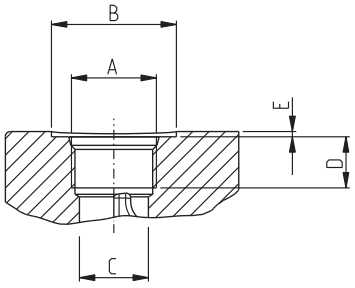
01/11.2012

KAPPA 30 DOUBLE PUMPS KP30/30 COMBINED BODY KSL/HSC

SAE STRAIGHT THREAD PORTS J514 — ODT

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

CODE	Nominal size	A	Ø B	Ø C	D	E		
			mm	mm	mm	mm	Nm	Nm
OD	3/4"	1 1/16" - 12 UNF - 2B	42	24,8	20	2	40 +2,5	120 +10
OF	1"	1 5/16" - 12 UNF - 2B	49	30,5	20	2	60 +5	170 +10



DCAT_006_027_21060524

Tightening torque for low pressure side port

Tightening torque for high pressure side port (values obtained at 350 bar)

How to order

1 [ ] - 2 [ ] K9 - L 3 [ ] - KSL / 4 [ ] /

Front pump

1 [ ] - L 3 [ ] - 5 [ ] - HSC - 4 [ ] 6 [ ] - 7 [ ] / FS (ANF3) (CN) (VNR01)

Rear pump

1 Type	Code
Front pump type	KP 30·…
Rear pump type	30·…

2 Drive shaft	Code
SAE "B" spline (13 teeth)	A8
SAE "BB" spline (15 teeth)	A5
SAE "B" straight	32

3 Ports IN/OUT (a)	Code
See codes on previous page	../..

4 Performance	Code
Standard - no code (b)	…
High performance	GS

Code	5 Inlet combination
…	Two inlet (standard) no code
M5	Common inlet

Code	6 Rotation
S	Left
D	Right

Code	7 Seals (b)
…	Buna N (standard) no code
T-PV	Buna hydrogenated HNBR and viton shaft seal

(a) For rear pump with common inlet, please write only /OUT code.
(b) Choose the seals according to the temperature shown on page 4.

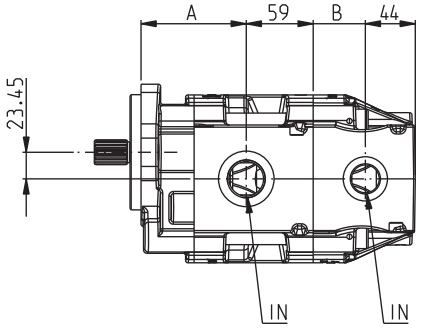
01/11.2012

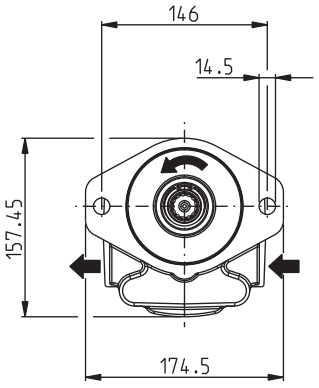
Order example KP 30•19,5-A8 K9-L OF/OD-KSL/GS/30•19,5-L /OD-M5-HSC-GS S-T-PV/FS (ANF3) (CN) (VNR01)

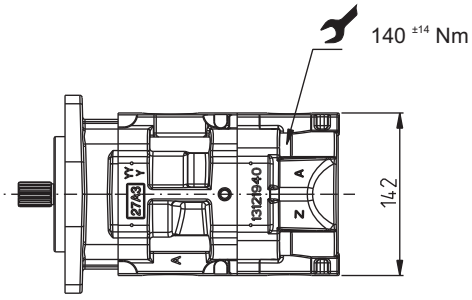
KAPPA 30 DOUBLE PUMPS KP30/30 COMBINED BODY KSL/HSC

Mounting flange: **K9**
SAE "B" 2 HOLES
Conforms to SAE J744

Ports type: **BSPP**
GAS STRAIGHT THREAD PORTS

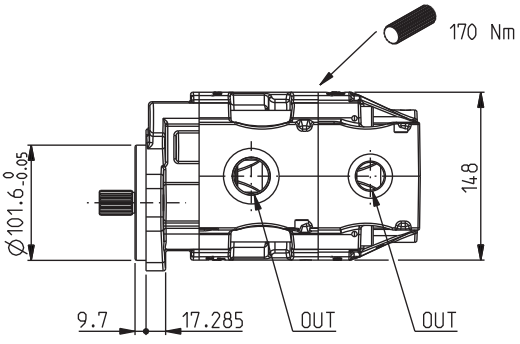






Drive shaft availability (See page 56)

The torque absorbed from the shaft of the first pump results from the sum of the torques due to all single stages.
The achieved value must not exceed the maximum torque limit given for the shaft of the first pump.



DCAT006-153_799193NM

Pump type	Displacement	A	B	Ports code	
	cm³/rev	mm	mm	IN	OUT
KP 30•19,5	19,63	83,3	36,5	GF	GE
KP 30•22	21,99	84,8	38	GF	GE
KP 30•24	24,03	83,3	36,5	GF	GE
KP 30•27	26,7	87,8	41	GF	GE
KP 30•29	29,06	89,3	42,5	GF	GE
KP 30•31	30,63	90,3	43,5	GF	GE
KP 30•34	34,56	92,8	46	GF	GE
KP 30•38	39,27	92,8	46	GF	GE

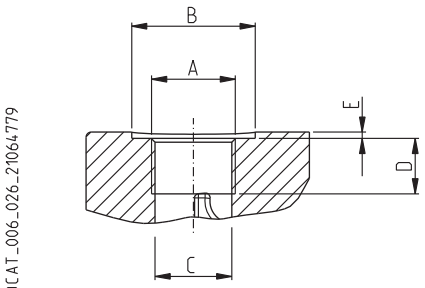
01/11.2012

KAPPA 30 DOUBLE PUMPS KP30/30 COMBINED BODY KSL/HSC

GAS STRAIGHT THREAD PORTS BSPP

British standard pipe parallel (55°) conforms to UNI - ISO 228

CODE	Nominal size	A	Ø B	Ø C	D	E		
			mm	mm	mm	mm	Nm	Nm
GE	3/4"	G 3/4	39	24,5	18	2,5	30 +2,5	90 +5
GF	1"	G 1	49	30,5	22	2,5	50 +2,5	130 +10



DCAT_006_026_21064779

Tightening torque for low pressure side port

Tightening torque for high pressure side port (values obtained at 350 bar)

How to order

1 [ ] - 2 [ ] K9 - L 3 [ ] - KSL / 4 [ ] /

Front pump

1 [ ] - L 3 [ ] - 5 [ ] - HSC - 4 [ ] 6 [ ] - 7 [ ] / FS (ANF3) (CN) (VNR01)

Rear pump

1 Type	Code
Front pump type	KP 30·…
Rear pump type	30·…

2 Drive shaft	Code
SAE "B" spline (13 teeth)	A8
SAE "BB" spline (15 teeth)	A5
SAE "B" straight	32

3 Ports IN/OUT (a)	Code
See codes on previous page	../..

4 Performance	Code
Standard - no code (b)	…
High performance	GS

Code	5 Inlet combination
…	Two inlet (standard) no code
M5	Common inlet

Code	6 Rotation
S	Left
D	Right

Code	7 Seals (b)
…	Buna N (standard) no code
T-PV	Buna hydrogenated HNBR and viton shaft seal

(a) For rear pump with common inlet, please write only /OUT code.
(b) Choose the seals according to the temperature shown on page 4.

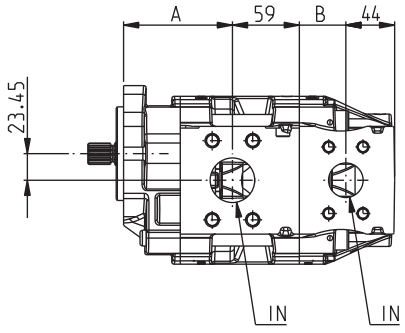
01/11.2012

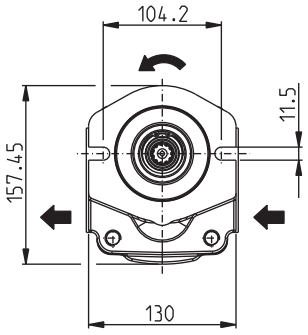
Order example KP 30•19,5-A8 K9-L GF/GE-KSL/GS/30•19,5-L /GE-M5-HSC-GS S-T-PV/FS (ANF3) (CN) (VNR01)

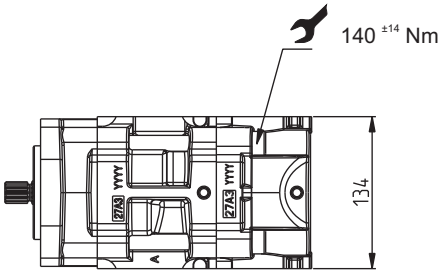
KAPPA 30 DOUBLE PUMPS KP30/30 COMBINED BODY KSL/HSC

Mounting flange: **S9**
SAE "B" 2 HOLES
Conforms to SAE J744

Ports type: **SSM**
SAE FLANGED PORTS J518

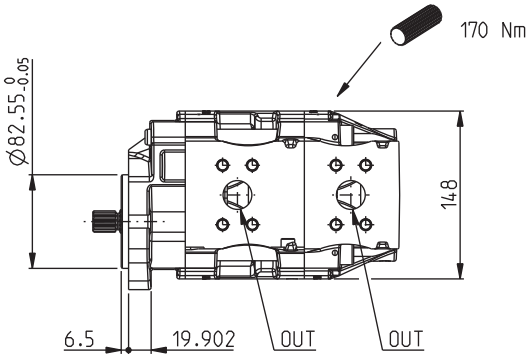






Drive shaft availability (See page 72)

The torque absorbed from the shaft of the first pump results from the sum of the torques due to all single stages.
The achieved value must not exceed the maximum torque limit given for the shaft of the first pump.



DCAT006-158_79933041

Pump type	Displacement	A	B	Ports code	
	cm³/rev	mm	mm	IN	OUT
KP 30•19,5	19,63	86,5	36,5	MC	MB
KP 30•22	21,99	88	38	MC	MB
KP 30•24	24,03	86,5	36,5	MC	MB
KP 30•27	26,7	91	41	MC	MB
KP 30•29	29,06	92,5	42,5	MC	MB
KP 30•31	30,63	93,5	43,5	MC	MB
KP 30•34	34,56	96	46	MC	MB
KP 30•38	39,27	96	46	MC	MB

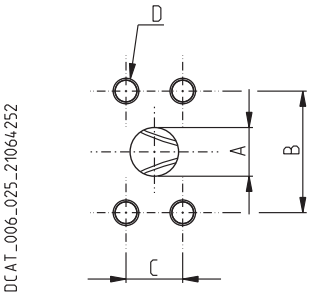
01/11.2012

KAPPA 30 DOUBLE PUMPS KP30/30 COMBINED BODY KSL/HSC

SAE FLANGED PORTS J518 - Standard pressure series 3000 PSI SSM

Metric thread ISO 60° conforms to ISO/R 262

CODE	A	B	C	D		
	mm	mm	mm	Thread Depth (mm)	Nm	Nm
MB	19	47,6	22,2	M 10 Depth 17	20 +1	30 +2,5
MC	25,4	52,4	26,2	M 10 Depth 17	20 +1	30 +2,5



DCAT_006_025_21064252

Tightening torque for low pressure side port

Tightening torque for high pressure side port (values obtained at 350 bar)

How to order

1 [ ] - A8 S9 - L 2 [ ] - KSL / 3 [ ] /

Front pump

1 [ ] - L 2 [ ] - 4 [ ] - HSC - 3 [ ] 5 [ ] - 6 [ ] / FS (ANF3) (CN) (VNR01)

Rear pump

1 Type	Code
Front pump type	KP 30·…
Rear pump type	30·…

2 Ports IN/OUT (a)	Code
See codes on previous page	../..

3 Performance	Code
Standard - no code (b)	…
High performance	GS

Code	Inlet combination 4
…	Two inlet (standard) no code
M5	Common inlet

Code	Rotation 5
S	Left
D	Right

Code	Seals (b) 6
…	Buna N (standard) no code
T-PV	Buna hydrogenated HNBR and viton shaft seal

(a) For rear pump with common inlet, please write only /OUT code.
(b) Choose the seals according to the temperature shown on page 4.

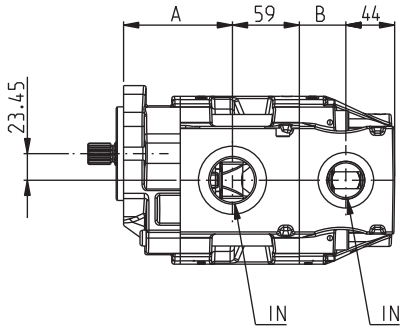
01/11.2012

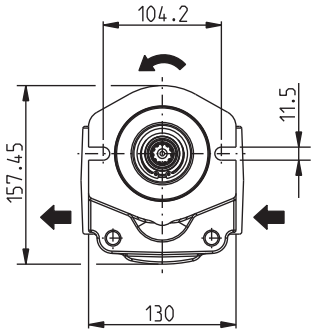
Order example KP 30•19,5-A8 S9-L MC/MB-KSL/GS/30•19,5-L /MB-M5-HSC-GS S-T-PV/FS (ANF3) (CN) (VNR01)

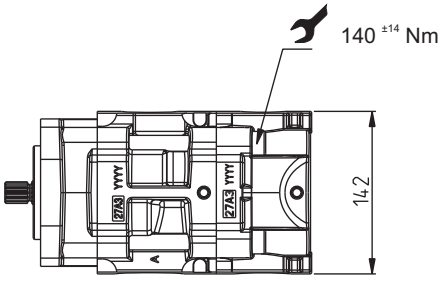
KAPPA 30 DOUBLE PUMPS KP30/30 COMBINED BODY KSL/HSC

Mounting flange: **S9**
SAE "B" 2 HOLES
Conforms to SAE J744

Ports type: **ODT**
SAE STRAIGHT THREAD PORTS J514

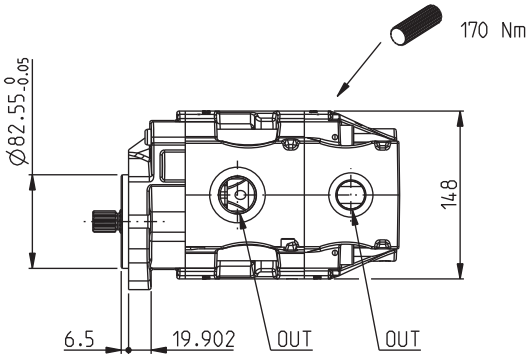






Drive shaft availability (See page 72)

The torque absorbed from the shaft of the first pump results from the sum of the torques due to all single stages.
The achieved value must not exceed the maximum torque limit given for the shaft of the first pump.



DCAT006-160_79933041

Pump type	Displacement	A	B	Ports code	
	cm³/rev	mm	mm	IN	OUT
KP 30•19,5	19,63	86,5	36,5	OF	OD
KP 30•22	21,99	88	38	OF	OD
KP 30•24	24,03	86,5	36,5	OF	OD
KP 30•27	26,7	91	41	OF	OD
KP 30•29	29,06	92,5	42,5	OF	OD
KP 30•31	30,63	93,5	43,5	OF	OD
KP 30•34	34,56	96	46	OF	OD
KP 30•38	39,27	96	46	OF	OD

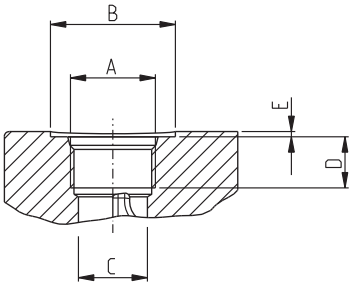
01/11.2012

KAPPA 30 DOUBLE PUMPS KP30/30 COMBINED BODY KSL/HSC

SAE STRAIGHT THREAD PORTS J514 — ODT

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

CODE	Nominal size	A	Ø B	Ø C	D	E		
			mm	mm	mm	mm	Nm	Nm
OD	3/4"	1 1/16" - 12 UNF - 2B	42	24,8	20	2	40 $^{+2,5}$	120 $^{+10}$
OF	1"	1 5/16" - 12 UNF - 2B	49	30,5	20	2	60 $^{+5}$	170 $^{+10}$



DCAT_006_027_21060524

Tightening torque for low pressure side port

Tightening torque for high pressure side port (values obtained at 350 bar)

How to order

1 [ ] - A8 S9 - L 2 [ ] - KSL / 3 [ ] /

Front pump

1 [ ] - L 2 [ ] - 4 [ ] - HSC - 3 [ ] 5 [ ] - 6 [ ] / FS (ANF3) (CN) (VNR01)

Rear pump

1 Type	Code
Front pump type	KP 30·…
Rear pump type	30·…

2 Ports IN/OUT (a)	Code
See codes on previous page	../..

3 Performance	Code
Standard - no code (b)	…
High performance	GS

Code	Inlet combination 4
…	Two inlet (standard) no code
M5	Common inlet

Code	Rotation 5
S	Left
D	Right

Code	Seals (b) 6
…	Buna N (standard) no code
T-PV	Buna hydrogenated HNBR and viton shaft seal

(a) For rear pump with common inlet, please write only /OUT code.
(b) Choose the seals according to the temperature shown on page 4.

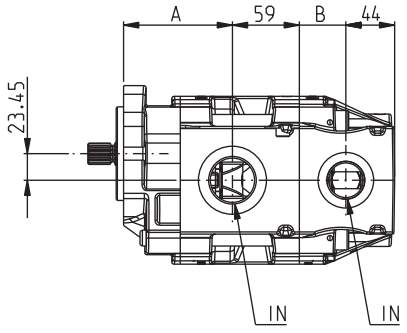
01/11.2012

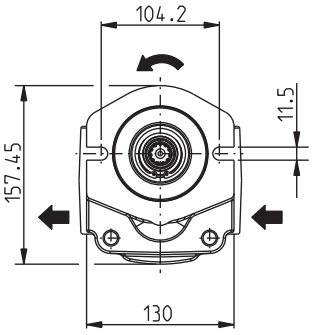
Order example KP 30•19,5-A8 S9-L OF/OD-KSL/GS/30•19,5-L /OD-M5-HSC-GS S-T-PV/FS (ANF3) (CN) (VNR01)

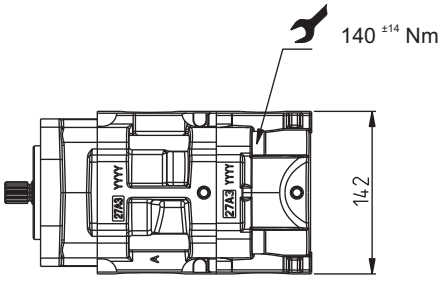
KAPPA 30 — DOUBLE PUMPS KP30/30 COMBINED BODY — KSL/HSC

Mounting flange: **S9**
SAE "B" 2 HOLES
Conforms to SAE J744

Ports type: **BSPP**
GAS STRAIGHT THREAD PORTS

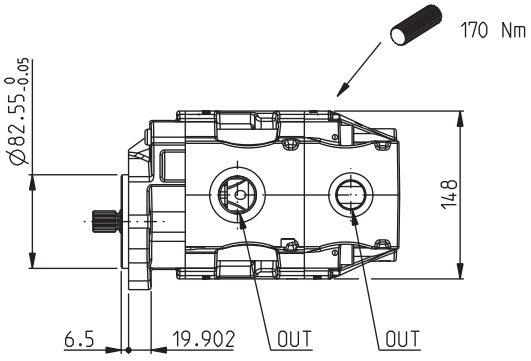






Drive shaft availability (See page 72)

The torque absorbed from the shaft of the first pump results from the sum of the torques due to all single stages.
The achieved value must not exceed the maximum torque limit given for the shaft of the first pump.



DCAT006-159_79933041

Pump type	Displacement	A	B	Ports code	
	cm³/rev	mm	mm	IN	OUT
KP 30•19,5	19,63	86,5	36,5	GF	GE
KP 30•22	21,99	88	38	GF	GE
KP 30•24	24,03	86,5	36,5	GF	GE
KP 30•27	26,7	91	41	GF	GE
KP 30•29	29,06	92,5	42,5	GF	GE
KP 30•31	30,63	93,5	43,5	GF	GE
KP 30•34	34,56	96	46	GF	GE
KP 30•38	39,27	96	46	GF	GE

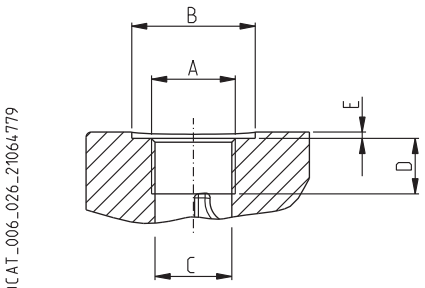
01/11.2012

KAPPA 30 DOUBLE PUMPS KP30/30 COMBINED BODY KSL/HSC

GAS STRAIGHT THREAD PORTS BSPP

British standard pipe parallel (55°) conforms to UNI - ISO 228

CODE	Nominal size	A	Ø B	Ø C	D	E		
			mm	mm	mm	mm	Nm	Nm
GE	3/4"	G 3/4	39	24,5	18	2,5	30 +2,5	90 +5
GF	1"	G 1	49	30,5	22	2,5	50 +2,5	130 +10



DCAT_006_026_21064779

Tightening torque for low pressure side port

Tightening torque for high pressure side port (values obtained at 350 bar)

How to order

1 [ ] - A8 K9 - L 2 [ ] - KSL / 3 [ ] /

Front pump

1 [ ] - L 2 [ ] - 4 [ ] - HSC - 3 [ ] 5 [ ] - 6 [ ] / FS (ANF3) (CN) (VNR01)

Rear pump

1 Type	Code
Front pump type	KP 30·…
Rear pump type	30·…

2 Ports IN/OUT (a)	Code
See codes on previous page	../..

3 Performance	Code
Standard - no code (b)	…
High performance	GS

Code	Inlet combination 4
…	Two inlet (standard) no code
M5	Common inlet

Code	Rotation 5
S	Left
D	Right

Code	Seals (b) 6
…	Buna N (standard) no code
T-PV	Buna hydrogenated HNBR and viton shaft seal

(a) For rear pump with common inlet, please write only /OUT code.
(b) Choose the seals according to the temperature shown on page 4.

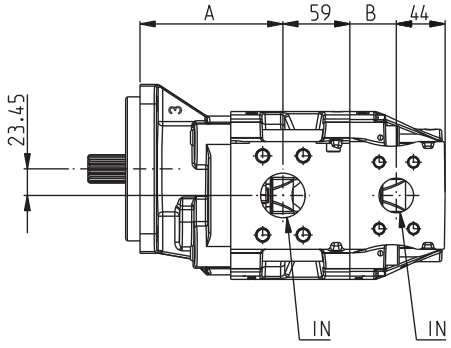
01/11.2012

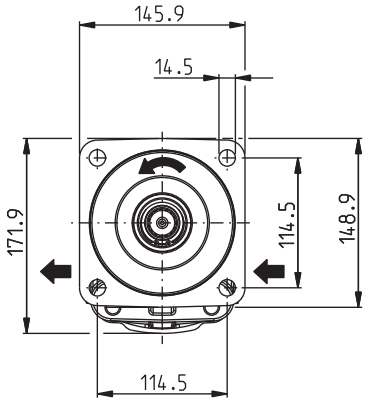
Order example KP 30•19,5-A8 S9-L GF/GE-KSL/GS/30•19,5-L /GE-M5-HSC-GS S-T-PV/FS (ANF3) (CN) (VNR01)

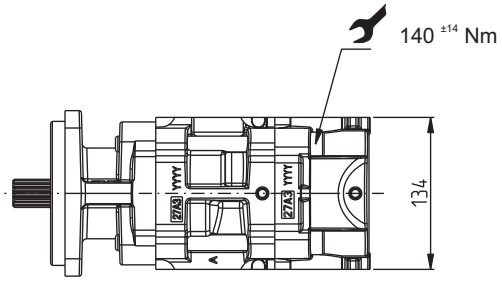
KAPPA 30 DOUBLE PUMPS KP30/30 COMBINED BODY KSL/HSC

Mounting flange: **S6**
SAE "C" 4 HOLES
Conforms to SAE J744

Ports type: **SSM**
SAE FLANGED PORTS J518

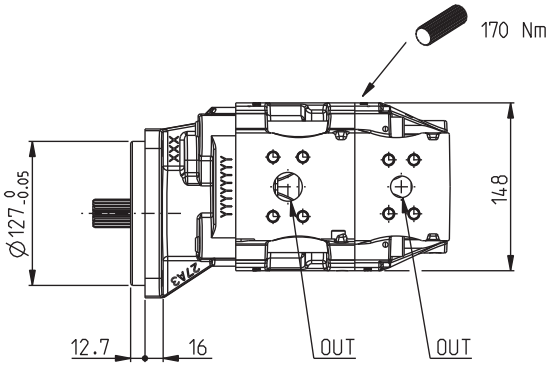






Drive shaft availability (See page 88)

The torque absorbed from the shaft of the first pump results from the sum of the torques due to all single stages.
The achieved value must not exceed the maximum torque limit given for the shaft of the first pump.



DCAT006-155_79933041

Pump type	Displacement	A	B	Ports code	
	cm³/rev	mm	mm	IN	OUT
KP 30•19,5	19,63	116,5	36,5	**MC**	**MB**
KP 30•22	21,99	118	38	**MC**	**MB**
KP 30•24	24,03	116,5	36,5	**MC**	**MB**
KP 30•27	26,7	121	41	**MC**	**MB**
KP 30•29	29,06	122,5	42,5	**MC**	**MB**
KP 30•31	30,63	123,5	43,5	**MC**	**MB**
KP 30•34	34,56	126	46	**MC**	**MB**
KP 30•38	39,27	126	46	**MC**	**MB**

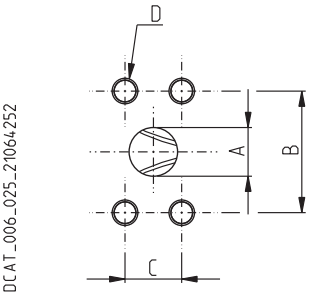
01/11.2012

KAPPA 30 DOUBLE PUMPS KP30/30 COMBINED BODY KSL/HSC

SAE FLANGED PORTS J518 - Standard pressure series 3000 PSI **SSM**

Metric thread ISO 60° conforms to ISO/R 262

CODE	A	B	C	D		
	mm	mm	mm	Thread Depth (mm)	Nm	Nm
MB	19	47,6	22,2	M 10 Depth 17	20 +1	30 +2,5
MC	25,4	52,4	26,2	M 10 Depth 17	20 +1	30 +2,5



DCAT_006_025_21064252

Tightening torque for low pressure side port

Tightening torque for high pressure side port (values obtained at 350 bar)

How to order

1 [ ] - 2 [ ] S6 - L 3 [ ] - KSL / 4 [ ] /

Front pump

1 [ ] - L 3 [ ] - 5 [ ] - HSC - 4 [ ] 6 [ ] - 7 [ ] / FS (ANF3) (CN) (VNR01)

Rear pump

1 Type	Code
Front pump type	KP 30·…
Rear pump type	30·…

2 Drive shaft	Code
SAE "B" spline (15 teeth)	05
SAE "C" spline (14 teeth)	06

3 Ports IN/OUT (a)	Code
See codes on previous page	../..

4 Performance	Code
Standard - no code (b)	…
High performance	GS

Code	Inlet combination 5
…	Two inlet (standard) no code
M5	Common inlet

Code	Rotation 6
S	Left
D	Right

Code	Seals (b) 7
…	Buna N (standard) no code
T-PV	Buna hydrogenated HNBR and viton shaft seal

(a) For rear pump with common inlet, please write only /OUT code.
(b) Choose the seals according to the temperature shown on page 4.

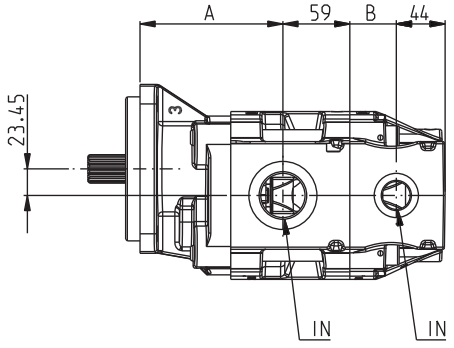
01/11.2012

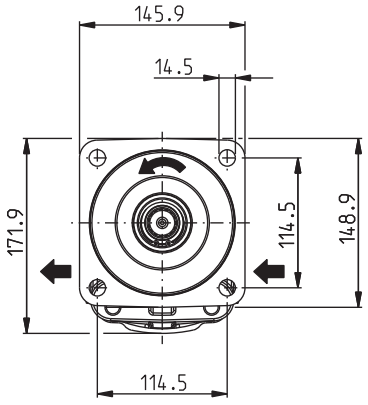
Order example KP 30•19,5-05 S6-L MC/MB-KSL/GS/30•19,5-L /MB-M5-HSC-GS S-T-PV/FS (ANF3) (CN) (VNR01)

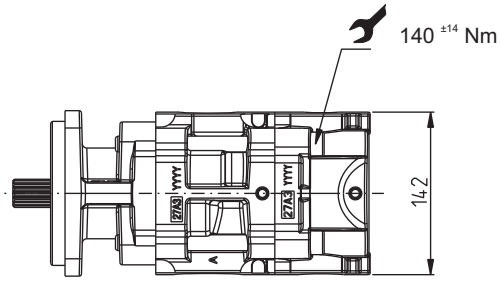
KAPPA 30 DOUBLE PUMPS KP30/30 COMBINED BODY KSL/HSC

Mounting flange: **S6**
SAE "C" 4 HOLES
Conforms to SAE J744

Ports type: **ODT**
SAE STRAIGHT THREAD PORTS J514

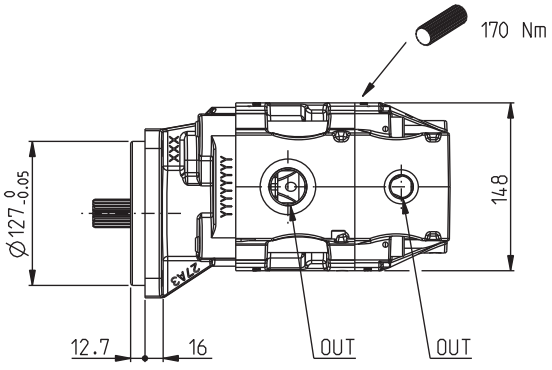






Drive shaft availability (See page 88)

The torque absorbed from the shaft of the first pump results from the sum of the torques due to all single stages.
The achieved value must not exceed the maximum torque limit given for the shaft of the first pump.



DCAT006-157_79933041

Pump type	Displacement	A	B	Ports code	
	cm³/rev	mm	mm	IN	OUT
KP 30•19,5	19,63	116,5	36,5	**OF**	**OD**
KP 30•22	21,99	118	38	**OF**	**OD**
KP 30•24	24,03	116,5	36,5	**OF**	**OD**
KP 30•27	26,7	121	41	**OF**	**OD**
KP 30•29	29,06	122,5	42,5	**OF**	**OD**
KP 30•31	30,63	123,5	43,5	**OF**	**OD**
KP 30•34	34,56	126	46	**OF**	**OD**
KP 30•38	39,27	126	46	**OF**	**OD**

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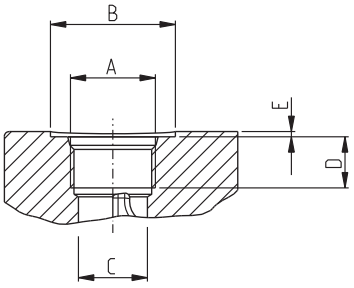
KAPPA 30 DOUBLE PUMPS KP30/30 COMBINED BODY KSL/HSC

SAE STRAIGHT THREAD PORTS J514 — ODT

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

CODE	Nominal size	A	Ø B	Ø C	D	E		
			mm	mm	mm	mm	Nm	Nm
OD	3/4"	1 1/16" - 12 UNF - 2B	42	24,8	20	2	40 +2,5	120 +10
OF	1"	1 5/16" - 12 UNF - 2B	49	30,5	20	2	60 +5	170 +10



DCAT_006_027_21060524

Tightening torque for low pressure side port

Tightening torque for high pressure side port (values obtained at 350 bar)

How to order

1 [ ] - 2 [ ] S6 - L 3 [ ] - KSL / 4 [ ] /

Front pump

1 [ ] - L 3 [ ] - 5 [ ] - HSC - 4 [ ] 6 [ ] - 7 [ ] / FS (ANF3) (CN) (VNR01)

Rear pump

1 Type	Code
Front pump type	KP 30·…
Rear pump type	30·…

2 Drive shaft	Code
SAE "B" spline (15 teeth)	05
SAE "C" spline (14 teeth)	06

3 Ports IN/OUT (a)	Code
See codes on previous page	../..

4 Performance	Code
Standard - no code (b)	…
High performance	GS

Code	5 Inlet combination
…	Two inlet (standard) no code
M5	Common inlet

Code	6 Rotation
S	Left
D	Right

Code	7 Seals (b)
…	Buna N (standard) no code
T-PV	Buna hydrogenated HNBR and viton shaft seal

(a) For rear pump with common inlet, please write only /OUT code.
(b) Choose the seals according to the temperature shown on page 4.

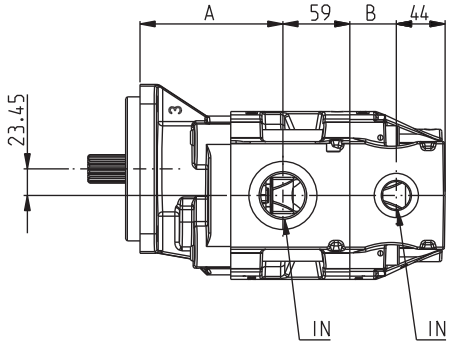
01/11.2012

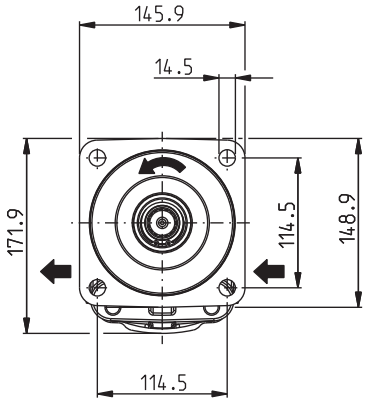
Order example KP 30•19,5-05 S6-L OF/OD-KSL/GS/30•19,5-L /OD-M5-HSC-GS S-T-PV/FS (ANF3) (CN) (VNR01)

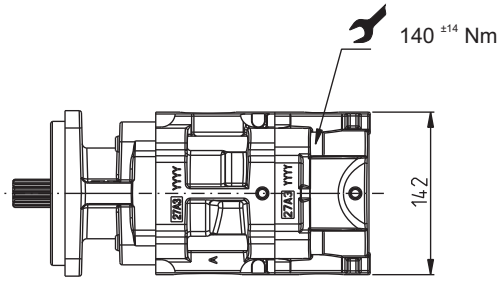
KAPPA 30 DOUBLE PUMPS KP30/30 COMBINED BODY KSL/HSC

Mounting flange: **S6**
SAE "C" 4 HOLES
Conforms to SAE J744

Ports type: **BSPP**
GAS STRAIGHT THREAD PORTS

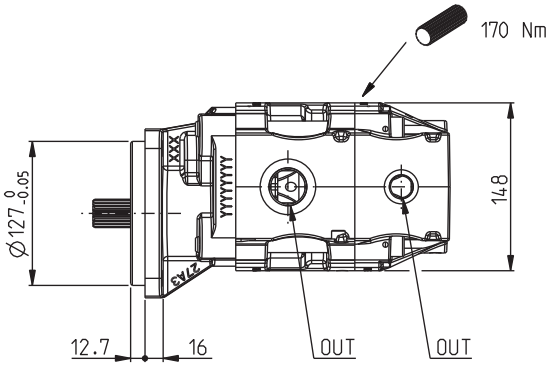






Drive shaft availability (See page 88)

The torque absorbed from the shaft of the first pump results from the sum of the torques due to all single stages.
The achieved value must not exceed the maximum torque limit given for the shaft of the first pump.



DCAT006-156_79933041

Pump type	Displacement	A	B	Ports code	
	cm³/rev	mm	mm	IN	OUT
KP 30•19,5	19,63	116,5	36,5	GF	GE
KP 30•22	21,99	118	38	GF	GE
KP 30•24	24,03	116,5	36,5	GF	GE
KP 30•27	26,7	121	41	GF	GE
KP 30•29	29,06	122,5	42,5	GF	GE
KP 30•31	30,63	123,5	43,5	GF	GE
KP 30•34	34,56	126	46	GF	GE
KP 30•38	39,27	126	46	GF	GE

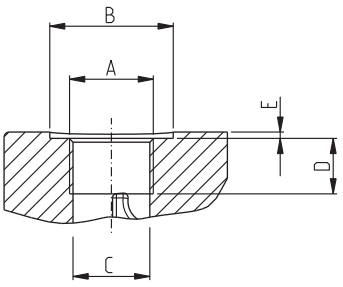
01/11.2012

KAPPA 30 DOUBLE PUMPS KP30/30 COMBINED BODY KSL/HSC

GAS STRAIGHT THREAD PORTS BSPP

British standard pipe parallel (55°) conforms to UNI - ISO 228

CODE	Nominal size	A	Ø B	Ø C	D	E		
			mm	mm	mm	mm	Nm	Nm
GE	3/4"	G 3/4	39	24,5	18	2,5	30 +2,5	90 +5
GF	1"	G 1	49	30,5	22	2,5	50 +2,5	130 +10



DCAT_006_026_21064779

Tightening torque for low pressure side port

Tightening torque for high pressure side port (values obtained at 350 bar)

How to order

1 [ ] - 2 [ ] S6 - L 3 [ ] - KSL / 4 [ ] /

Front pump

1 [ ] - L 3 [ ] - 5 [ ] - HSC - 4 [ ] 6 [ ] - 7 [ ] / FS (ANF3) (CN) (VNR01)

Rear pump

1 Type	Code
Front pump type	KP 30·…
Rear pump type	30·…

2 Drive shaft	Code
SAE "B" spline (15 teeth)	05
SAE "C" spline (14 teeth)	06

3 Ports IN/OUT (a)	Code
See codes on previous page	../..

4 Performance	Code
Standard - no code (b)	…
High performance	GS

Code	5 Inlet combination
…	Two inlet (standard) no code
M5	Common inlet

Code	6 Rotation
S	Left
D	Right

Code	7 Seals (b)
…	Buna N (standard) no code
T-PV	Buna hydrogenated HNBR and viton shaft seal

(a) For rear pump with common inlet, please write only /OUT code.
(b) Choose the seals according to the temperature shown on page 4.

01/11.2012

Order example KP 30•19,5-05 S6-L GF/GE-KSL/GS/30•19,5-L /GE-M5-HSC-GS S-T-PV/FS (ANF3) (CN) (VNR01)

NOTES

01/11.2012

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

K30CHS 02 T E Edition: 02/04.2013 Replaces: K30CHS 01 T E

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