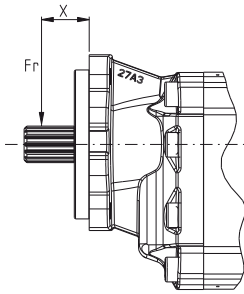


**FORMULA 30 PERMISSIBLE RADIAL LOADING**

**SAE**

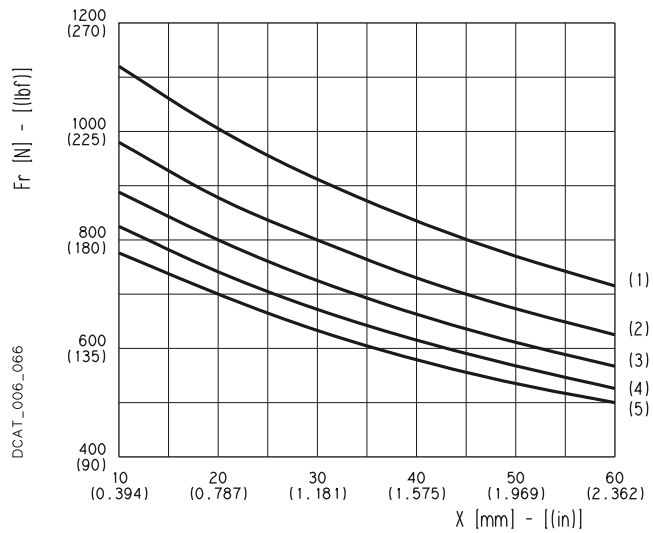


X= Distance of the radial load result from the mounting flange.

Fatigue life (hours)  $L_h = 1000$  [h]

Each curve has been obtained at:  
 (1)  $1000 \text{ min}^{-1}$       (4)  $2500 \text{ min}^{-1}$   
 (2)  $1500 \text{ min}^{-1}$       (5)  $3000 \text{ min}^{-1}$   
 (3)  $2000 \text{ min}^{-1}$

**VERSION**  
**1 - 2**



## HOW TO ORDER SINGLE PUMPS

<b>1</b>	<b>2</b>	<b>3</b>		<b>4</b>	<b>5</b>		<b>6</b>	<b>7</b>	<b>8</b>	
Pump type	Rotation	Version	–	Drive shaft	Mounting flange	–	Ports position	Ports IN/OUT	–	Seals
<b>FP30•17</b>	<b>S</b>	<b>0</b>	<b>–</b>	<b>04</b>	<b>S3</b>	<b>–</b>	<b>L</b>	<b>OD/OD</b>	<b>–</b>	<b>N</b>

1	Pump type	CODE
	cm <sup>3</sup> /rev	
	17,28	FP 30•17
	26,70	FP 30•27
	34,56	FP 30•34
	39,27	FP 30•38
	43,98	FP 30•43
	51,83	FP 30•51
	61,26	FP 30•61
	73,82	FP 30•73
	81,68	FP 30•82

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

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

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

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

CODE	Ports position	6
L	Side	

CODE	Ports IN/OUT	7
<b>SAE STRAIGHT THREAD PORTS (ODT)</b>		
	Side	Pump type
OB/OB		FP 30•17
OD/OD		FP 30•27
OD/OD		FP 30•34
OD/OD		FP 30•38
OF/OD		FP 30•43
OF/OE		FP 30•51
OF/OE		FP 30•61
OG/OF		FP 30•73
OG/OF		FP 30•82

CODE	Seals (a)	8
N	Buna (standard)	
V	Viton	
N Bz	Buna and Bronze thrust plates	
V Bz	Viton and Bronze thrust plates	

(a) Choose the seals according to the temperature shown on page 2

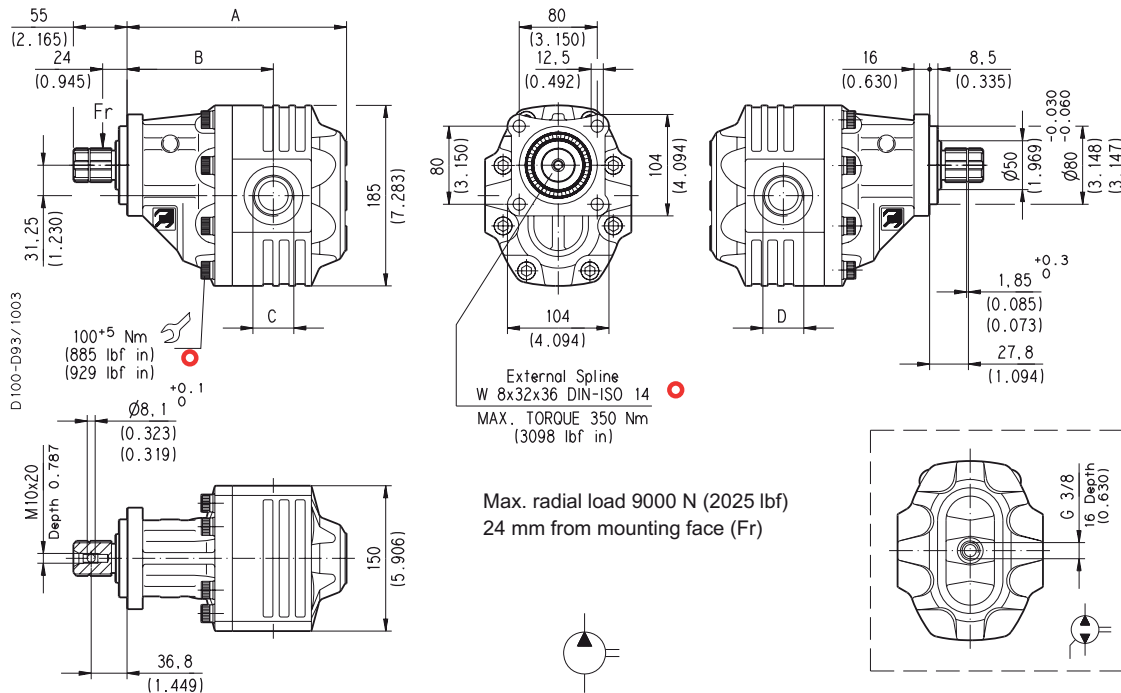
### ORDER EXAMPLE

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

Special version pump FP 30•17 S2 - 32 S3 - L OB/OB - V Bz

GAS STRAIGHT THREAD PORTS

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



Pump type			A	B	C	D	Mass
			mm (in)	mm (in)	IN	OUT	kg
<b>S D R B</b>	<b>0-16 Z0</b>	<b>L GF/GE-N</b>	199 (7.835)	131 (5.157)	G 1	G 3/4	18,65
			203 (7.992)	135 (5.315)			19,30
		<b>L GG/GF-N</b>	208 (8.189)	140 (5.512)	G 1 1/4	G 1	19,75
			216 (8.504)	141 (5.551)			21
		<b>L GH/GF-N</b>	225 (8.858)	150 (5.906)	G 1 1/2	G 1	22,10
			231 (9.094)	156 (6.142)			22,90

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

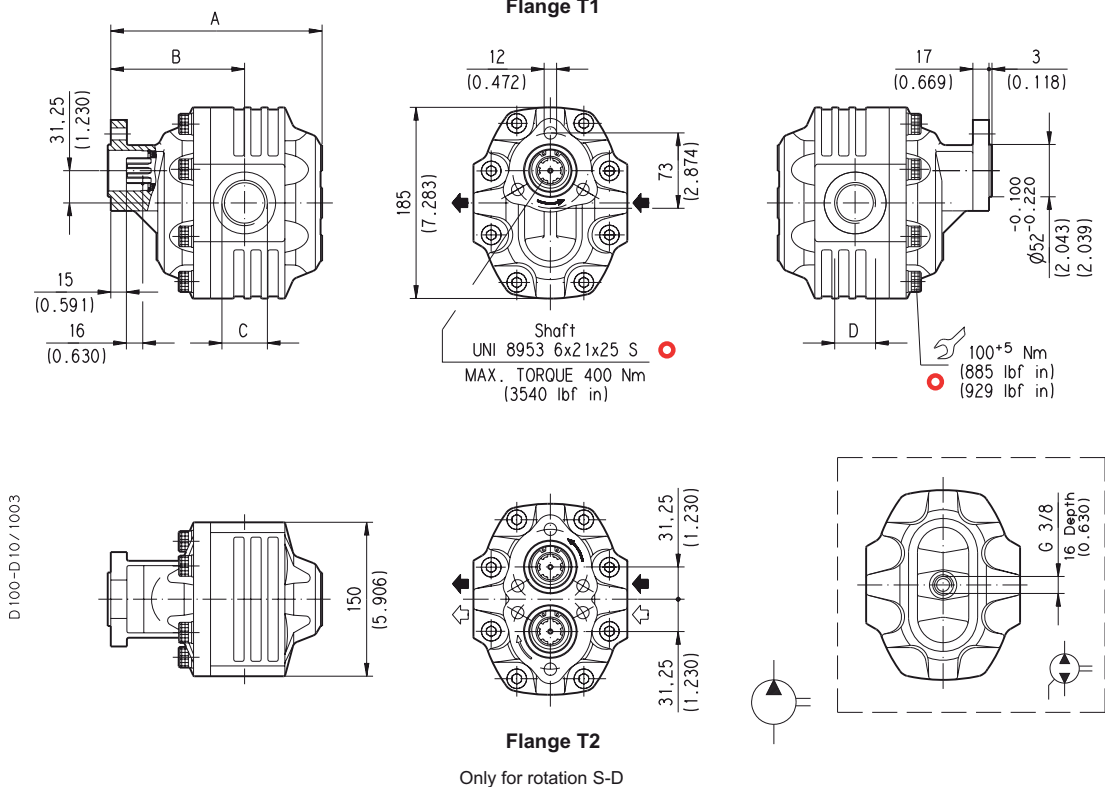
How to order:

**FP 40•63 S0 - 16 Z0 - L GF/GE - N**

**FORMULA 40**      **HYDRAULIC GEAR PUMPS ITALIAN STANDARD**      **19 T**

GAS STRAIGHT THREAD PORTS

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



D100-D10/1003

Pump type		A	B	C	D	Mass
<b>S D R B</b>	<b>0-19</b>	<b>T1</b>	<b>L GF/GE-N</b>	G 1	G 3/4	16,1
						16,5
		<b>T2</b>	<b>L GG/GF-N</b>	G 1 1/4	G 1	17
						18
		<b>L GH/GF-N</b>	G 1 1/2	G 1	119,5	
					20	

Rotation: S=left - D=right - R=reversible - B=reversible internal drain  
How to order:

**FP 40•63 S0 - 19 T1 - L GF/GE - N**

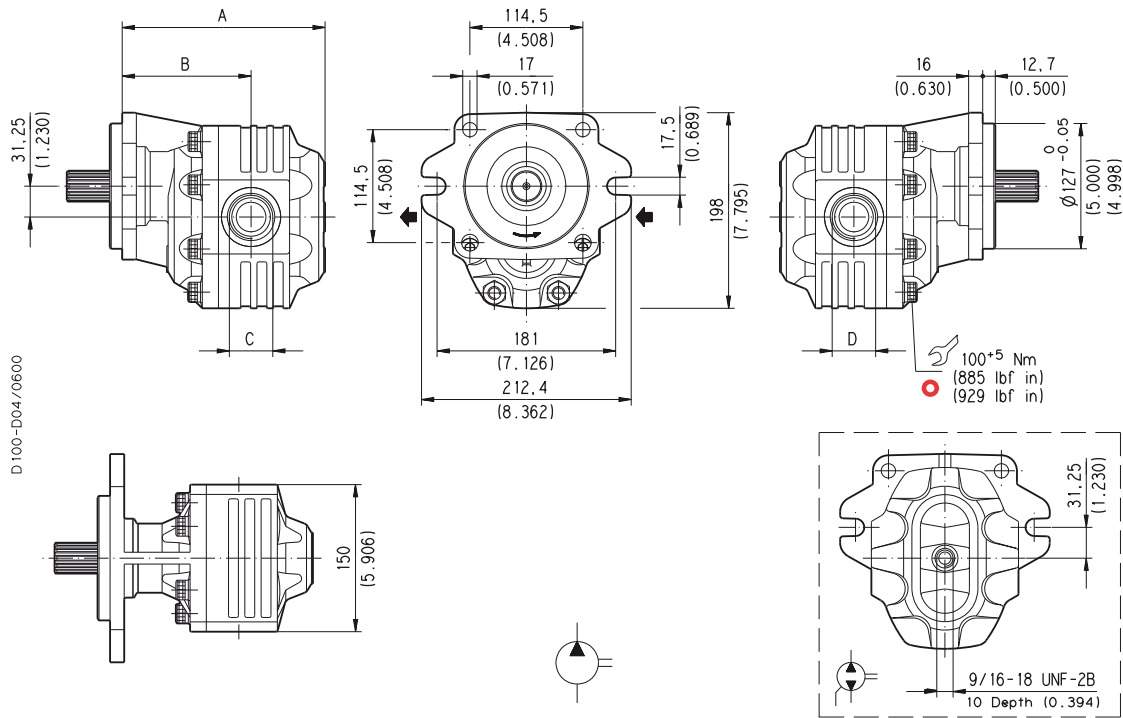
**FORMULA 40**

**HYDRAULIC GEAR PUMPS SAE STANDARD**

**SAE**

SAE STRAIGHT THREAD PORTS J514

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



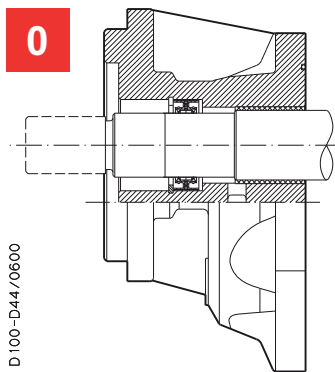
To order see page 32 ÷ 34.

Pump type	A	B	C	D	Ports code		Mass
	mm (in)	mm (in)	IN	OUT	IN	OUT	kg
<b>FP 40•63</b>	188,5 (7.421)	120,5 (4.744)	1-5/16-12 UN-2B	1-1/16-12 UN-2B	<b>OF</b>	<b>OD</b>	19,5
<b>FP 40•73</b>	192,5 (7.579)	124,5 (4.902)					20
<b>FP 40•87</b>	197,5 (7.776)	129,5 (5.098)	1-5/8-12 UN-2B	1-5/16-12 UN-2B	<b>OG</b>	<b>OF</b>	20,5
<b>FP 40•109</b>	205,5 (8.091)	130,5 (5.138)					21
<b>FP 40•133</b>	214,5 (8.445)	139,5 (5.492)	1-7/8-12 UN-2B		<b>OH</b>		23
<b>FP 40•151</b>	220,5 (8.681)	145,5 (5.728)		25			

034-040

### FORMULA 40 SAE VERSION SAE

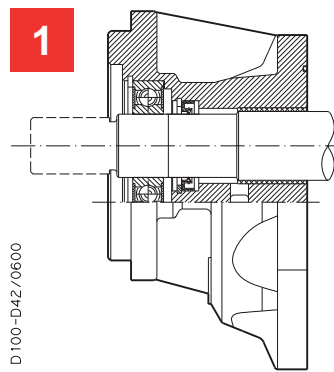
**0**



D 100-D44 /0600

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

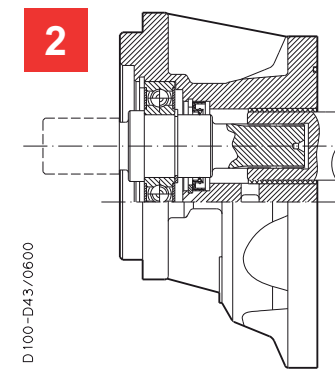
**1**



D 100-D42 /0600

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

**2**

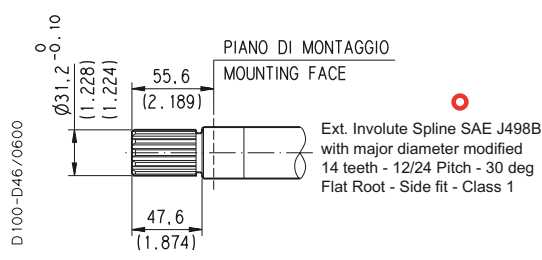


D 100-D43 /0600

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

### FORMULA 40 SAE END DRIVE SHAFTS SAE

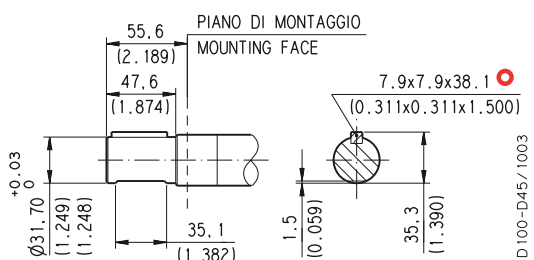
**SAE "C" SPLINE 06**



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

**MAX 900 Nm (7966 lbf in) ◆**

**SAE "C" STRAIGHT 34**



**MAX 600 Nm (5311 lbf in) ◆**

◆ For "2" version whichever end shaft, the max. torque applicable is M= 600 Nm (5311 lbf in)

### PUMP - VERSION - SHAFT AVAILABILITY TABLE SAE

Pump type	VERSION			SHAFT
	0	1	2	
FP 40•63	06	06	06 - 34	SHAFT
FP 40•73	06 - 34	06 - 34	06 - 34	
FP 40•87	06 - 34	06 - 34	06 - 34	
FP 40•109	06	06	06 - 34	
FP 40•133	06 - 34	06 - 34	06 - 34	
FP 40•151	06 - 34	06 - 34	06 - 34	