

## Technical data

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Frame size		4,0	6,0	8,0	011	014	017	019	022	025
Displacement	cm <sup>3</sup> /rev	3.9	6.0	8.4	10.8	14.4	16.8	19.2	22.8	25.2
	[in <sup>3</sup> /rev]	[0.24]	[0.37]	[0.51]	[0.66]	[0.88]	[1.02]	[1.17]	[1.39]	[1.54]
<b>SNP2NN</b>										
Peak pressure	bar [psi]	280 [4060]	280 [4060]	280 [4060]	280 [4060]	280 [4060]	280 [4060]	230 [3335]	200 [2900]	175 [2638]
Rated pressure		250 [3625]	250 [3625]	250 [3625]	250 [3625]	250 [3625]	250 [3625]	250 [3625]	210 [3045]	180 [2610]
Minimum speed at 0-100 bar	min <sup>-1</sup> (rpm)	600	600	600	500	500	500	500	500	500
Minimum speed at 100-180 bar		1200	1200	1000	800	750	750	700	700	700
Min. speed at 180 bar to rated pressure		1400	1400	1400	1200	1000	1000	1000	800	–
Maximum speed		4000	4000	4000	4000	3500	3000	3000	3000	3000
<b>SKP2NN</b>										
Peak pressure	bar [psi]	280 [4060]	280 [4060]	280 [4060]	280 [4060]	280 [4060]	280 [4060]	260 [3770]	230 [3335]	200 [2900]
Rated pressure		250 [3625]	250 [3625]	250 [3625]	250 [3625]	250 [3625]	250 [3625]	250 [3625]	240 [3480]	210 [3045]
Minimum speed at 0-100 bar	min <sup>-1</sup> (rpm)	600	600	600	500	500	500	500	500	500
Minimum speed at 100-180 bar		1200	1200	1000	800	750	750	700	700	700
Min. speed at 180 bar to rated pressure		1400	1400	1400	1200	1000	1000	1000	800	800
Maximum speed		4000	4000	4000	4000	3500	3000	3000	3000	3000
<b>Both (SNP2NN, SKP2NN)</b>										
Weight	kg [lb]	2.3 [5.1]	2.4 [5.3]	2.5 [5.5]	2.7 [5.8]	2.9 [6.3]	3.0 [6.5]	3.1 [6.7]	3.2 [7.0]	3.3 [7.3]
Moment of inertia of rotating components	x 10 <sup>-6</sup> kg·m <sup>2</sup> [x 10 <sup>-6</sup> lb·ft <sup>2</sup> ]	21.3 [505]	26.5 [629]	32.4 [769]	38.4 [911]	47.3 [1122]	53.3 [1265]	59.2 [1405]	68.1 [1616]	74.1 [1758]
Theoretical flow at maximum speed	l/min [US gal/min]	15.6 [4.1]	24.0 [6.3]	33.6 [8.9]	43.2 [11.4]	50.4 [13.3]	50.4 [13.3]	57.6 [15.2]	68.4 [18.0]	75.6 [20.0]

1 kg·m<sup>2</sup> = 23.68 lb·ft<sup>2</sup>

### ⚠ Caution

The rated and peak pressure mentioned are for pumps with flanged ports only. When threaded ports are required a de-rated performance has to be considered. To verify the compliance of an high pressure application with a threaded ports pump apply to a Turola OCG representative.

# Group 2 Gear Pumps

## Technical Information

### Product Coding

#### Model code



#### A Type

<b>SNP2NN</b>	Standard gear pump
<b>SNP2IN</b>	Standard gear pump, internal drain, integrated relief valve
<b>SNP2EN</b>	Standard gear pump, external drain, integrated relief valve
<b>SNC2NN</b>	Standard gear pump, inlet/outlet in the cover
<b>SKP2NN</b>	High torque gear pump
<b>SKP2IN</b>	High torque gear pump, internal drain, integrated relief valve
<b>SKP2EN</b>	High torque gear pump, external drain, integrated relief valve
<b>SKC2NN</b>	High torque gear pump, inlet/outlet in the cover
<b>SHP2NN</b>	High pressure gear pump

#### B Displacement

<b>4,0</b>	3.9 cm <sup>3</sup> /rev [0.24 in <sup>3</sup> /rev]
<b>6,0</b>	6.0 cm <sup>3</sup> /rev [0.37 in <sup>3</sup> /rev]
<b>8,0</b>	8.4 cm <sup>3</sup> /rev [0.51 in <sup>3</sup> /rev]
<b>011</b>	10.8 cm <sup>3</sup> /rev [0.66 in <sup>3</sup> /rev]
<b>014</b>	14.4 cm <sup>3</sup> /rev [0.88 in <sup>3</sup> /rev]
<b>017</b>	16.8 cm <sup>3</sup> /rev [1.02 in <sup>3</sup> /rev]
<b>019</b>	19.2 cm <sup>3</sup> /rev [1.17 in <sup>3</sup> /rev]
<b>022</b>	22.8 cm <sup>3</sup> /rev [1.39 in <sup>3</sup> /rev]
<b>025</b>	25.2 cm <sup>3</sup> /rev [1.54 in <sup>3</sup> /rev]

#### C Direction of rotation

<b>R</b>	Right (Clockwise)
<b>L</b>	Left (Counterclockwise)

#### D Version

<b>N</b>	Standard gear pump
<b>2</b>	Standard gear pump, big shaft

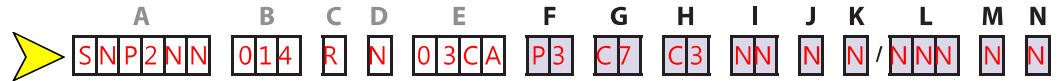
Legend:	
●	Standard
○	Optional
-	Not Available

#### E Mounting flange / drive gear

Code	Description (Type of flange • Type of drive gear • Preferred ports for configuration)	SNP2NN	SNP2IN	SNP2EN	SNC2NN	SKP2NN	SKP2IN	SKP2EN	SKC2NN	SHP2NN
<b>01FA</b>	European four bolts flange • Parallel shaft 15 mm [0.591 in] • European flanged ports	●	●	-	-	-	-	-	-	-
<b>01BA</b>	European four bolts flange • Tapered 1:8 shaft • European flanged ports	●	●	-	●	-	-	-	-	●
<b>01DA</b>	European four bolts flange • Splined 15T 12x10 shaft • European flanged ports	●	●	●	-	-	-	-	-	●
<b>02AA</b>	German four bolts PTO flange • Tapered 1:5 shaft • German flanged ports	●	●	-	-	-	-	-	-	●
<b>02DB</b>	German four bolts PTO flange • DIN splined shaft • German flanged ports	●	●	-	-	-	-	-	-	●
<b>03CA</b>	Turolla OCG Tang flange • Turolla OCG Tang shaft • German flanged ports	●	●	●	-	-	-	-	-	-
<b>91DB</b>	European four bolts flange Outrigger bearing • Tapered 1:8 shaft key 4 • European flanged ports	●	-	-	-	-	-	-	-	-
<b>9ADB</b>	European four bolts flange Outrigger bearing • Tapered 1:8 shaft key 3.2 • European flanged ports	●	-	-	-	-	-	-	-	-
<b>94DB</b>	German two bolts PTO flange (Deutz) Outrigger bearing • Tapered 1:5 shaft • German flanged ports	●	-	-	-	-	-	-	-	-
<b>9JDB</b>	SAE A flange Outrigger bearing • Parallel shaft 19.05mm [0.750 in] • SAE O-ring boss ports	●	-	-	-	-	-	-	-	-
<b>04AA</b>	German two bolts PTO flange (Deutz) • Tapered 1:5 shaft • German flanged ports	●	-	-	-	-	-	-	-	●
<b>04DB</b>	German two bolts PTO flange (Deutz) • DIN splined shaft • German flanged ports	●	-	-	-	-	-	-	-	●
<b>05AA</b>	German two bolts PTO flange (Deutz) • Tapered 1:5 shaft • German flanged ports	●	-	-	-	-	-	-	-	●
<b>05DB</b>	German two bolt PTO flange (Deutz) • DIN splined shaft • German flanged ports	●	-	-	-	-	-	-	-	●
<b>06GA</b>	SAE A flange • Parallel shaft 15.875 mm [0.625 in] • SAE O-ring boss ports	●	-	-	-	-	-	-	-	-
<b>06SA</b>	SAE A flange • SAE splined 9T shaft • SAE O-ring boss ports	●	●	●	-	-	-	-	-	-
<b>06SB</b>	SAE A flange • SAE splined 11T shaft • SAE O-ring boss ports	-	-	-	-	●	●	●	●	-
<b>09BJ</b>	Perkins 4.236 timing case flange • Tapered 1:8 shaft • German std port X pattern ports	●	-	-	-	-	-	-	-	-
<b>A9BJ</b>	Perkins 900 series flange • Tapered 1:8 shaft • German std port X pattern ports	●	-	-	-	-	-	-	-	-

## Group 2 Gear Pumps Technical Information Product Coding

Model code  
(continued)



### F Rear cover

<b>P1</b>	Standard cover for pump
<b>P3</b>	Cover for 03 flange only
<b>C1</b>	Front BSP ports: Inlet 3/4 GAS Outlet 1/2 GAS
<b>C6</b>	Front SAE thd ports: Inlet 1 1/16-12UN-2B Outlet 7/8-14UNF-2B
<b>E1</b>	Cover for RV external drain 3/8 GAS
<b>E3</b>	Cover for RV ext. drain 3/8 GAS holes M5
<b>E6</b>	Cover for RV ext. drain 3/4 -16UNF-2B
<b>I1</b>	Cover for RV internal drain
<b>I3</b>	Cover for RV int. drain for 03 flange only

### I Port position and variant body

<b>NN</b>	Standard from catalogue
<b>YY</b>	Port Bx-Bx for SAE flange off-set from center of body as per catalogue
<b>ZZ</b>	Port Bx-Bx in center of body

### J Sealing

<b>N</b>	Standard Buna seal
<b>A</b>	Without shaft seal
<b>B</b>	VITON seal
<b>L</b>	Std. shaft seal turned over assembled

### G Inlet port

### H Outlet port

<b>B5</b>	15x35xM6	Flanged port 4 threaded holes in X pattern, in center or off-set of body
<b>B6</b>	15x40xM6	
<b>B7</b>	20x40xM6	
<b>BB</b>	27x55xM8	
<b>C2</b>	12x26xM5	Flanged port 4 threaded holes in + pattern (European standard ports)
<b>C3</b>	13,5x30xM6	
<b>C5</b>	13,5x40xM8	
<b>C7</b>	20x40xM8	
<b>C8</b>	23,5x40xM8	Threaded metric port
<b>D4</b>	M16x1,5	
<b>D5</b>	M18x1,5	
<b>D7</b>	M22x1,5	
<b>D9</b>	M26x1,5	Threaded SAE O-Ring boss port
<b>E3</b>	1/16-18UNF	
<b>E4</b>	3/4-16UNF	
<b>E5</b>	7/8-14UNF	
<b>E6</b>	1 1/16-12UN	Threaded GAS (BSPP) port
<b>E8</b>	1 5/16-12UN	
<b>F3</b>	3/8 GAS	
<b>F4</b>	1/2 GAS	
<b>F5</b>	3/4 GAS	Threaded metric port ISO 6149
<b>F6</b>	1 GAS	
<b>H5</b>	M18x1,5	
<b>H7</b>	M22x1,5	
<b>H8</b>	M27x2	
<b>H9</b>	M33x2	

### K Screws

<b>N</b>	Standard screws
<b>A</b>	Galvanized screws + nut-washers
<b>B</b>	DACROMET/GEOMET screws

### L Set valve

<b>NNN</b>	No valve
<b>V**</b>	Integral relief valve pressure setting

### M Marking

<b>N</b>	Standard marking
<b>A</b>	Standard marking + Customer code
<b>Z</b>	Without marking

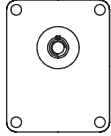
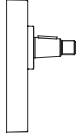
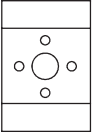
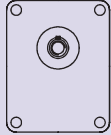
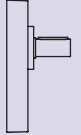
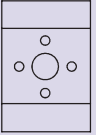
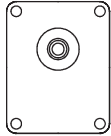
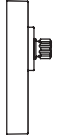
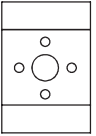
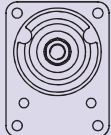
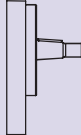
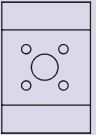
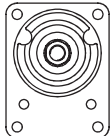
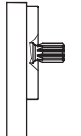
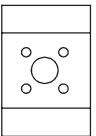
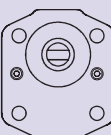
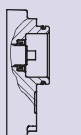
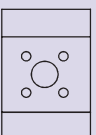

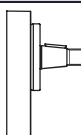
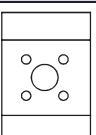
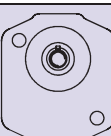
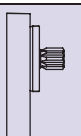
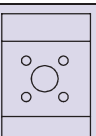
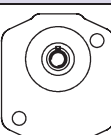
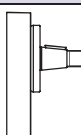
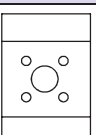
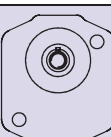
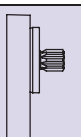
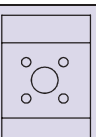
### N Mark position

<b>N</b>	Standard marking position
<b>A</b>	Mark on the bottom ref. to drive gear

## Group 2 Gear Pumps Technical Information Product Options

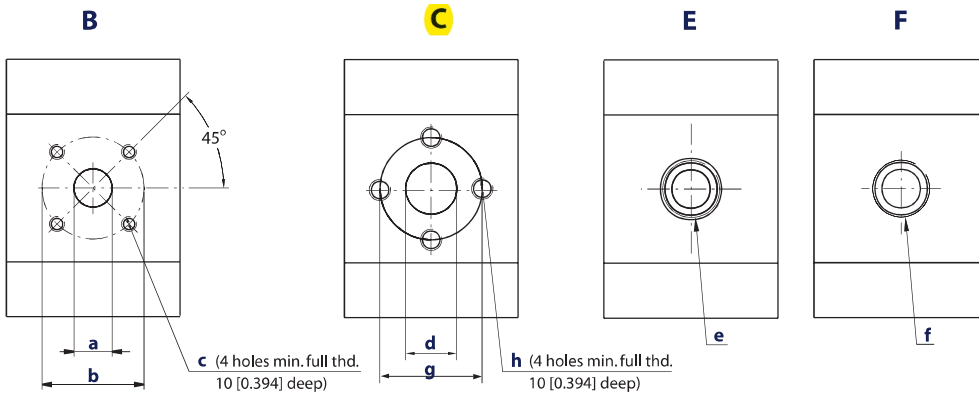
### Flange, shaft and ports configurations

Available flange, shaft and ports configurations

Code	Flange	Shaft	Ports
<b>01BA</b>	pilot Ø 36.5 mm [1.438 in] European 01, 4-bolt 	1:8 tapered 	European flanged, + pattern 
<b>01FA</b>	pilot Ø 36.5 mm [1.438 in] European 01, 4-bolt 	Ø 15 mm [0.59 in] parallel 	European flanged, + pattern 
<b>01DA</b>	pilot Ø 36.5 mm [1.438 in] European 01, 4-bolt 	Splined 9T - m 1.60 DIN 5482-B17x14 	European flanged, + pattern 
<b>02AA</b>	pilot Ø 80 mm [3.15 in] German PTO, 4-bolt 	1:5 tapered 	German std, X pattern 
<b>02DB</b>	pilot Ø 80 mm [3.15 in] German PTO, 4-bolt 	Splined 9T - m 1.60 DIN 5482-B17x14 	German std, X pattern 
<b>03CA</b>	Turolia OCG 03 	Turolia OCG tang 	German std, X pattern 
<b>04AA</b>	pilot Ø 50 mm [1.969 in] German PTO, 2-bolt 	1:5 tapered 	German std, X pattern 
<b>04DB</b>	pilot Ø 50 mm [1.969 in] German PTO, 2-bolt 	Splined 9T - m 1.60 DIN 5482-B17x14 	German std, X pattern 
<b>05AA</b>	pilot Ø 50 mm [1.969 in] German PTO, 2-bolt 	1:5 tapered 	German std, X pattern 
<b>05DB</b>	pilot Ø 50 mm [1.969 in] German PTO, 2-bolt 	Splined 9T - m 1.60 DIN 5482-B17x14 	German std, X pattern 

**Pump ports**

Available pump ports



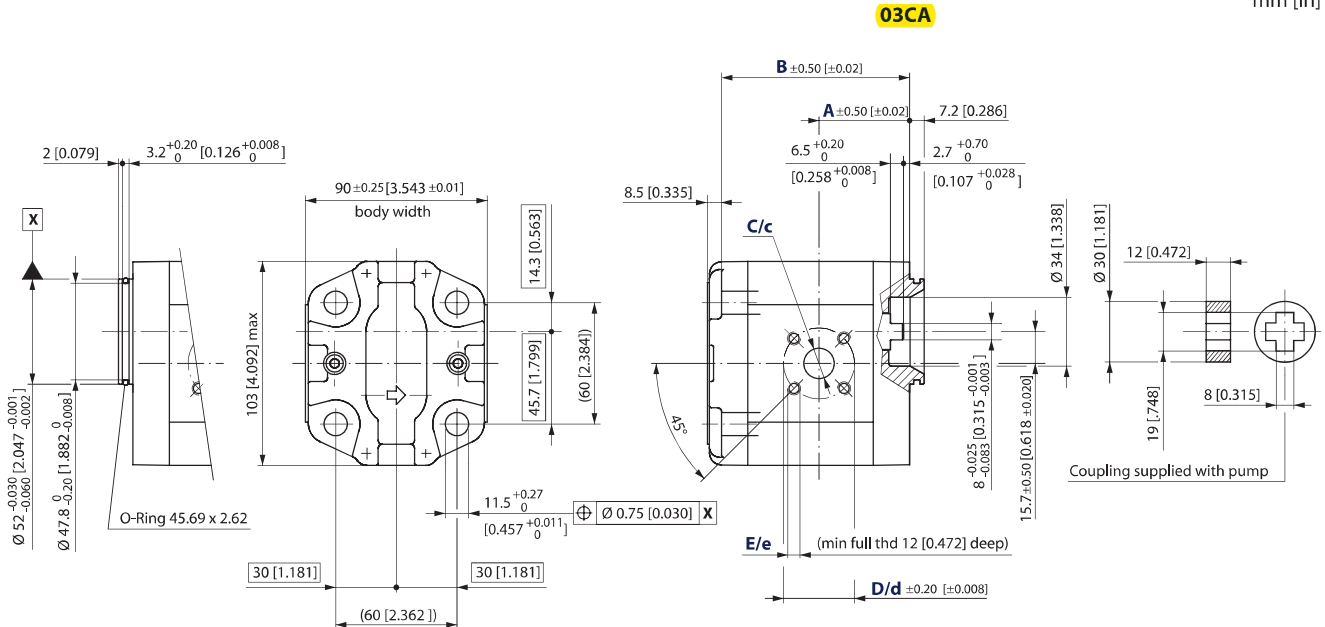
Dimensions of pumps ports

Port type		B			C			E	F	
Port dimensions		a	b	c	d	g	h	e	f	
Frame size	4,0	Inlet	15 [0.591]	40 [1.575]	M6	13.5 [0.531]	30 [1.181]	M6	1 1/16-12UNF-2B	1/2 Gas (BSPP)
		Outlet	15 [0.591]	35 [1.378]	M6	13.5 [0.531]	30 [1.181]	M6	7/8-14UNF-2B	1/2 Gas (BSPP)
	6,0	Inlet	15 [0.591]	40 [1.575]	M6	13.5 [0.531]	30 [1.181]	M6	1 1/16-12UNF-2B	1/2 Gas (BSPP)
		Outlet	15 [0.591]	35 [1.378]	M6	13.5 [0.531]	30 [1.181]	M6	7/8-14UNF-2B	1/2 Gas (BSPP)
	8,0	Inlet	20 [0.787]	40 [1.575]	M6	13.5 [0.531]	30 [1.181]	M6	1 1/16-12UNF-2B	1/2 Gas (BSPP)
		Outlet	15 [0.591]	35 [1.378]	M6	13.5 [0.531]	30 [1.181]	M6	7/8-14UNF-2B	1/2 Gas (BSPP)
	011	Inlet	20 [0.787]	40 [1.575]	M6	13.5 [0.531]	30 [1.181]	M6	1 1/16-12UNF-2B	3/4 Gas (BSPP)
		Outlet	15 [0.591]	35 [1.378]	M6	13.5 [0.531]	30 [1.181]	M6	7/8-14UNF-2B	1/2 Gas (BSPP)
	014	Inlet	20 [0.787]	40 [1.575]	M6	20.0 [0.787]	40 [1.575]	M8	1 1/16-12UNF-2B	3/4 Gas (BSPP)
		Outlet	15 [0.591]	35 [1.378]	M6	13.5 [0.531]	30 [1.181]	M6	7/8-14UNF-2B	1/2 Gas (BSPP)
	017	Inlet	20 [0.787]	40 [1.575]	M6	20.0 [0.787]	40 [1.575]	M8	1 1/16-12UNF-2B	3/4 Gas (BSPP)
		Outlet	15 [0.591]	35 [1.378]	M6	13.5 [0.531]	30 [1.181]	M6	7/8-14UNF-2B	1/2 Gas (BSPP)
	019	Inlet	20 [0.787]	40 [1.575]	M6	20.0 [0.787]	40 [1.575]	M8	1 1/16-12UNF-2B	3/4 Gas (BSPP)
		Outlet	15 [0.591]	35 [1.378]	M6	13.5 [0.531]	30 [1.181]	M6	7/8-14UNF-2B	1/2 Gas (BSPP)
	022	Inlet	20 [0.787]	40 [1.575]	M6	20.0 [0.787]	40 [1.575]	M8	1 1/16-12UNF-2B	3/4 Gas (BSPP)
		Outlet	15 [0.591]	35 [1.378]	M6	13.5 [0.531]	30 [1.181]	M6	7/8-14UNF-2B	1/2 Gas (BSPP)
025	Inlet	20 [0.787]	40 [1.575]	M6	23.5 [0.925]	40 [1.575]	M8	1 1/16-12UNF-2B	1 Gas (BSPP)	
	Outlet	15 [0.591]	35 [1.378]	M6	20.0 [0.787]	40 [1.575]	M8	7/8-14UNF-2B	3/4 Gas (BSPP)	

**SNP2NN – 03CA**

Standard porting for 03CA

mm [in]



SNP2NN – 03CA dimensions

Frame size		4,0	6,0	8,0	011	014	017	019	022	025
Dimension	A	37.3 [1.469]	38.6 [1.520]	40.6 [1.598]	45 [1.772]	45 [1.772]	45 [1.772]	45 [1.772]	52.5 [2.067]	62 [2.441]
	B	81.5 [3.209]	85 [3.346]	89 [3.504]	93 [3.661]	99 [3.897]	103 [4.055]	107 [4.212]	113 [4.448]	117 [4.606]
Inlet	C	15 [0.591]	15 [0.591]	20 [0.787]	20 [0.787]	20 [0.787]	20 [0.787]	20 [0.787]	20 [0.787]	20 [0.787]
	D	40 [1.575]								
	E	M6								
Outlet	c	15 [0.591]								
	d	35 [1.378]								
	e	M6								

Model code example and maximum shaft torque

Flange/drive gear	Model code example	Maximum shaft torque
<b>03CA</b>	SNP2NN/014RN03CAP3B7B5NNNN/NNNN	70 N·m [620 lbf·in]

For further details on ordering, see *Model Code*, pages 8÷9.