



# 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 [in <sup>3</sup> /rev]	3.9 [0.24]	6.0 [0.37]	8.4 [0.51]	10.8 [0.66]	14.4 [0.88]	16.8 [1.02]	19.2 [1.17]	22.8 [1.39]	25.2 [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]	210 [3045]	180 [2610]	160 [2320]
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]	240 [3480]	210 [3045]	190 [2755]
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 Turolla representative.



## Product code

### Model code

▶
A B C D E F G H I J K L M N O  
SNP2NN / 017 D N A6 SA P1 B7 B5 YY N A / NNN N N

### A Family

<b>SEP2NN</b>	Low-cost Gr2 Pump
<b>SNP2NN</b>	Std Group 2 Pump
<b>SNP2EN</b>	Std Group 2 Pump + External Drain RV
<b>SNP2IN</b>	Std Group 2 Pump + Internal Drain RV
<b>SNP2KS</b>	Std Group 2 Pump + Priority Flow Divider + Dynamic Load Sensing, Inlet on body-Outlet on cover + drain on cover driven side - special (project not 100% complete)
<b>SNC2NN</b>	Std Group 2 Pump Inlet & Outlet in the Cover
<b>SND2NN</b>	Std Group 2 Pump Inlet on body outlet on cover
<b>SKP2NN</b>	High Torque Group 2 Pump

<b>SKP2EN</b>	High Torque Group 2 Pump + Ext.Drain RV
<b>SKP2IN</b>	High Torque Group 2 Pump + Int.Drain RV
<b>SKC2NN</b>	High Torque Group 2 Pump Inlet & Outlet on Cover
<b>SHP2NN</b>	High Pressure Group 2 Pump
<b>SHP2EN</b>	High Pressure Group 2 Pump + Ext.Drain RV - never released, but feasible
<b>SHP2IN</b>	High Pressure Group 2 Pump + Int.Drain RV
<b>SNZ2NN</b>	Std Group 2 Pump inlet on body-outlet on cover+RV int.drain on cover - special
<b>XEP2NN</b>	Economic Spare Product Gr2 Pump

### B Displacement

<b>3,0</b>	Displacement 3,0cc - special
<b>4,0</b>	Displacement 4,0cc
<b>5,5</b>	Displacement 5,5cc - special
<b>6,0</b>	Displacement 6,0cc
<b>6,5</b>	Displacement 6,5cc - special
<b>7,0</b>	Displacement 7,0cc - special
<b>7,5</b>	Displacement 7,5cc - special
<b>8,0</b>	Displacement 8,0cc
<b>8,7</b>	Displacement 8,7cc - special

<b>9,0</b>	Displacement 9,0cc - special
<b>9,5</b>	Displacement 9,5cc - special
<b>011</b>	Displacement 11cc
<b>012</b>	Displacement 12cc - special
<b>014</b>	Displacement 14cc
<b>016</b>	Displacement 16cc - special
<b>017</b>	Displacement 17cc
<b>019</b>	Displacement 19cc
<b>021</b>	Displacement 21cc - special

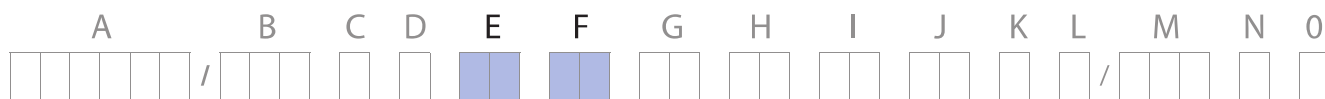
<b>022</b>	Displacement 22cc
<b>025</b>	Displacement 25cc
<b>028</b>	Displacement 28cc - special

### C Rotation

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

### D Project version

<b>N</b>	Standard gear pump
<b>6</b>	Short version - special

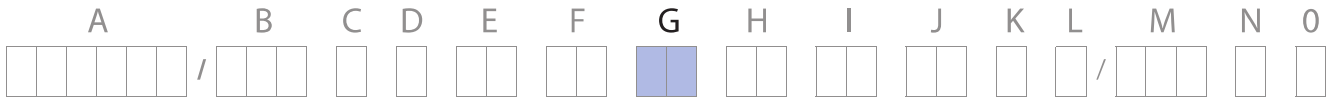


## E Mounting flange

Code	Description (Type of flange • Type of drive gear • Preferred ports for configuration)
01	pilot Ø36,5+4 holes
02	pilot Ø80+4 holes
03	pilot Ø52+0-ring+4 holes through body
04	pilot Ø50+2 holes through body
A4	pilot Ø50+2 holes through body+seal on pilot
05	pilot Ø50+2 holes through body
06	SAE A pilot Ø82,55+2 holes
A6	SAE A pilot Ø82,55+2 holes+seal on pilot
09	pilot Ø52,34+2 threaded holes
91	Outrig. Type 01+taper shaft 1:8-M12x1,25-Key4 - Outrigger bearing
94	Outrig. Type 04+taper shaft 1:5-M12x1,25-Key3 - Outrigger bearing
9A	Outrig. Type 01+taper shaft 1:8-M12x1,25-Key3.2 - Outrigger bearing
9B	Outrig. Type 01+taper shaft 1:8-M12x1,25-Key4+pilot Ø50,8 - Outrigger bearing
9C	Outrig. Type 01+taper shaft 1:8-M12x1,25-Key3.2+ radial roller bearing - Outrigger bearing
9F	Outrig. Type 02+taper shaft 1:5-M14x1,5-Key4+special shaft seal - Outrigger bearing
9J	Outrig. Type 06 with parallel shaft Ø3/4 (Ø19.05 mm) - Outrigger bearing
9L	Outrig. Type 01 parallel shaft Ø22 pilot Ø50,8 - Outrigger bearing
9M	Outrig. Type 01 parallel shaft Ø18 pilot Ø36,5 - Outrigger bearing

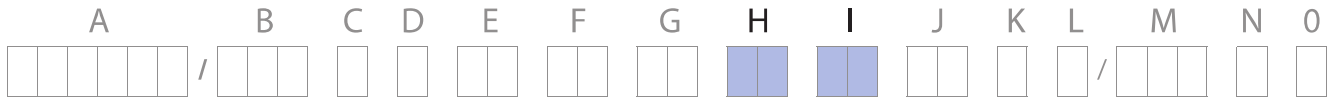
## F Drive gear

AA	Taper 1:5-M12x1,25-Key 3
AB	Taper 1:5-M12x1,5-Key 3
AC	Taper 1:5-M14x1,5-Key 4
AD	Taper 1:5-M12X1,25-Key 3-Special
AM	Taper 1:5-M12X1,25-Key 3-without nut and washer
B1	Taper 1:8-M12x1,25-Key 4/6 lowered
B2	Taper 1:8-M12x1,5-Key 4/ 3,2-w/o nut and washer
BA	Taper 1:8-M12x1,25-Key 4
BB	Taper 1:8-M12x1,25-Key 4/3,2
BC	Taper 1:8-M12x1,5-Key 4/3,2
BJ	Taper 1:8-M12x1,25-Key 4/3 black steel
CA	Tang 8x17,8xL6,5 FR03
CD	Tang 8x Ø17,8xL6,5 Short - Special
CF	Tang 8x Ø17,46xL9,6-Special
DA	Spline DIN 5482 B17x14-L10
DB	Spline DIN 5482 B17x14-L14
DF	Spline DIN 5482 B17x14 - Special
FA	Parallel Ø15-L30+Key 4x25
GA	Parallel SAE Ø15,875-L23,8-Key 4x18
GB	Parallel SAE Ø15,875-L50,8-Key 4x40
SA	Spline SAE J498-9T-16/32
SB	Spline SAE J498-11T-16/32
SF	Spline SAE J498-9T-16/32-reinforced fillet
SG	Spline SAE J498-11T-16/32-Special



**G Rear cover**

<b>C1</b>	Cover pump front BSP ports : Inlet 3/4 Gas ; Outlet 1/2 Gas
<b>C6</b>	Cover pump front SAE Thred ports:In.1-1/16-12UN;Out.7/8-14UNF
<b>C7</b>	Cover pump front SAE Thred ports:In.3/4-16UNF-2B;Out.3/4-16UNF-2B
<b>D1</b>	Cover pump with Outlet port 1/2 Gas
<b>D6</b>	Cover pump with Outlet port 7/8-14UNF-2B
<b>E1</b>	Cover pump with relief valve with external drain 3/8 Gas
<b>E2</b>	Cover pump for RV with ext. drain M12x1.5-CCW rot.idle side;CW rot. drive side
<b>E3</b>	Cover pump for RV with ext. drain 3/8 Gas with M5 Holes
<b>E4</b>	Cover pump for RV with ext. drain 3/4-16UNF-2B with M5 Holes
<b>E6</b>	Cover pump for RV with ext. drain 3/4-16UNF-2B
<b>I1</b>	Cover pump for RV with int. drain
<b>I3</b>	Cover pump for RV with int. drain with M5 Holes
<b>K1</b>	Cover pump for Priority divisor flow with Dynamic Load Sensing - Special for PFD only
<b>P1</b>	Standard cover for pump
<b>P3</b>	Standard cover for pump with M5 Holes
<b>Z1</b>	Cover pump per RV with Outlet port M18x1,5 - Special



## H Inlet size    I Outlet size

<b>B5</b>	15x35xM6	
<b>B6</b>	15x40xM6	
<b>C3</b>	13,5x30xM6	
<b>C5</b>	13,5x40xM8	
<b>C7</b>	20x40xM8	
<b>D5</b>	M18x1,5	
<b>D7</b>	M22x1,5	
<b>E4</b>	3/4-16UNF	
<b>E5</b>	7/8-14UNF	
<b>E6</b>	1-1/16-12UN	
<b>F3</b>	3/8 GAS	
<b>F4</b>	1/2 GAS	
<b>F5</b>	3/4 GAS	
<b>H5</b>	M18x1,5-ISO6149	
<b>H7</b>	M22x1,5-ISO6149	
<b>H8</b>	M27x2-ISO6149	
<b>H9</b>	M33x2-ISO6149	

<b>M1</b>	12x17,48x38,1xM6	
<b>M2</b>	12x17,48x38,1xM8	
<b>M3</b>	18,5x17,48x38,1xM8	
<b>MB</b>	12x38,1x17,48xM8(=)	
<b>MC</b>	18,5x47,63x22,23xM6(=)	
<b>MD</b>	18,5x47,63x22,23xM8(=)	
<b>ME</b>	18,5x47,63x22,23xM10(=)	
<b>MG</b>	25/20x52,37x26,19xM10(=)	
<b>MH</b>	31/25x58,72x30,18xM10(=)	
<b>NN</b>	Without outlet port	

**B7 20x40xM6**  
siehe angehängtes Datenblatt Baugröße 3



A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input checked="" type="text"/>	<input checked="" type="text"/>	<input checked="" type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>

## J Ports positions & Special body

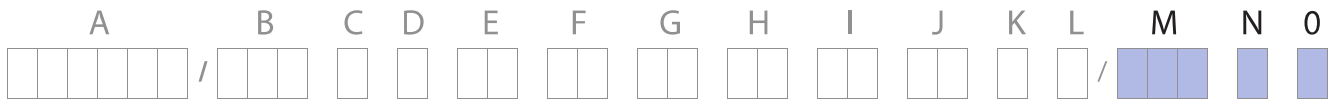
<b>NN</b>	Std from catalogue
<b>YY</b>	Port Bx-Bx with flange SAE-A; off-set to rear cover to install fitting screws
<b>EU</b>	Dist. from front flange=58,5 - Special
<b>F9</b>	Dist. from front flange=69 - Special
<b>TD</b>	Nr.4 milling D.27 tigh.16 flange side - Special
<b>TE</b>	Nr.4 milling D.27 tigh.20 flange side - Special
<b>ZZ</b>	Port Bx-Bx in the center of the body - Option

## K Seals

<b>N</b>	Standard NBR seals
<b>B</b>	VITON seals
<b>D</b>	VITON shaft seal with dust lip

## L Screws

<b>N</b>	Std burnished screws
<b>A</b>	Zinc plated screws
<b>B</b>	Geomet screws



## M Set valve

**NNN** No valve

**V\*\*** Integral relief valve pressure setting

\*\*For details go to page 31

## N Type mark

**N** Standard Turolla Marking

**A** Standard Turolla Marking+Customer Code

**Z** Without Marking

## O Mark position

**N** Std Marking position (on top)

**A** Special Marking position on the bottom



A B C D E F G H I J K L M N O  
 SN P 2N N / 017 L N A 6 SA P1 B7 B5 YY N A / NNN N N

zur Info für Inlet size B7 20x40xM6

## G Rear cover

P1 Standard cover for pump

## H Inlet size I Outlet size

A1	18,5x22,23x47,63x3/8-16UNC		H8	M27x2-ISO6149	
A3	25x26,19x52,37x3/8-16UNC		H9	M33x2-ISO6149	
A4	31x30,18x58,72x7/16-14UNC		F5	BSP 3/4 GAS	
A5	37,5/27x35,71x69,85x1/2-13UNC		F6	BSP 1 GAS	
B7	20x40xM6	F7	BSP 1-1/4 GAS		
BA	18x55xM8		M5	25x52,37x26,19xM10	
BB	27x55xM8		M6	31x30,18x58,72xM10	
BC	36/27x55xM8		M7	37,5x35,71x69,85xM12	
C7	20x40xM8	MF	25x52,37x26,19xM8 deep12 Horiz		
CA	27x51xM10	MG	25/20x52,37x26,19xM10(=) - Special		
CD	36x62xM10		MH	31x30,18x58,72xM10 deep18(=)	
CZ	27x51xM10(2 Vert.Holes)		MN	31x30,18x58,72xM10 deep12(=)	
G7	20x40x5/16-18UNC - Special		MR	37,5x35,71x69,85xM12 deep20(=)	
GA	27x51x3/8-16UNC - Special				
E5	7/8-14UNF				
E6	1-1/16-12UN				
E8	1-5/16-12UN				
E9	1-5/8-12UN				
EA	1-7/8-12UN				