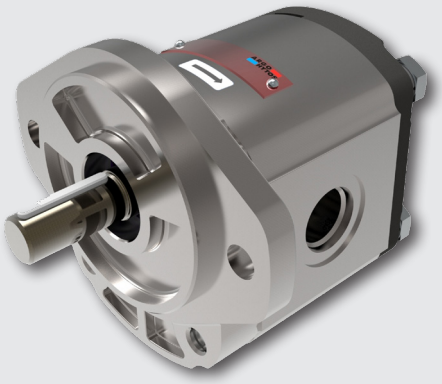
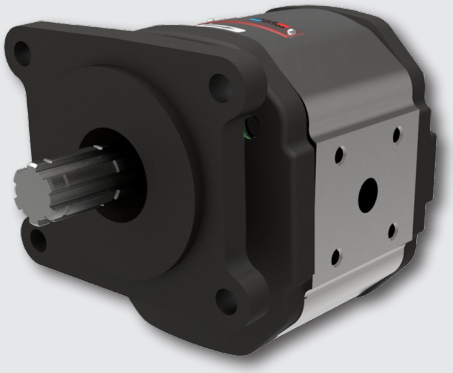
We produce fluid power **solutions**

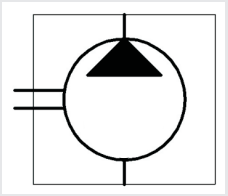
ARGO HYTOS
A Voith Company





Clockwise
Counterclockwise

R, L

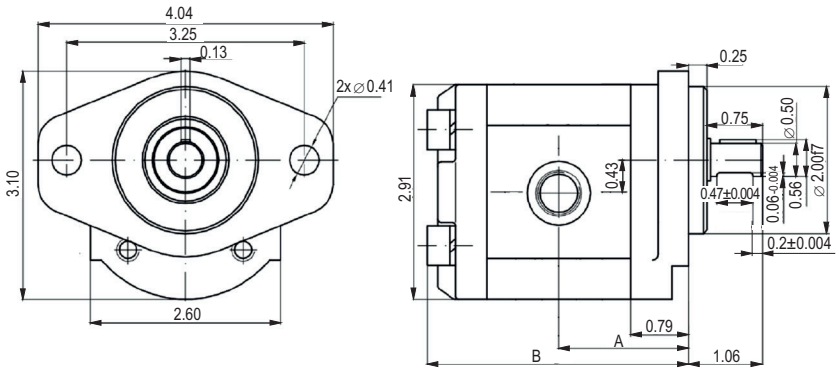


Hydraulic Gear Pumps

High Performance Version

GP1 Pumps - basic design dimensions in inches

GP1-*R-SAVE-SU*U*-N9
L



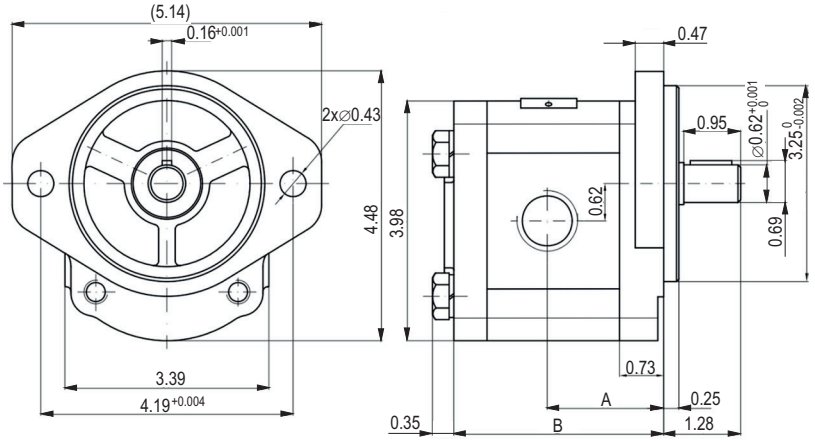
Displacement	code	Speed [rpm]		Dimensions [inch]	
		MIN	MAX	A	B
	1	750	3500	1.62	3.27
	1,25	750	3500	1.63	3.31
	1,6	750	3500	1.67	3.37
	2	750	3500	1.70	3.43
	2,5	750	3500	1.74	3.51

Displacement	code	Speed [rpm]		Dimensions [inch]	
		MIN	MAX	A	B
	3,15	750	3500	1.79	3.61
	3,65	750	3500	1.83	3.70
	4,2	750	3500	1.87	3.78
	5	750	3000	1.93	3.91
	5,7	750	3000	1.99	4.02

Displacement	code	Speed [rpm]		Dimensions [inch]	
		MIN	MAX	A	B
	6,1	750	2500	2.02	4.09
	7,4	750	2500	2.13	4.30
	8	750	2000	2.18	4.40

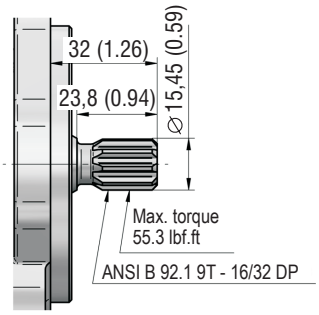
GP2 Pumps - basic design dimensions in inches

GP2-*R-SBVJ-SU*U*-N9



GP2-*R-SBDD-SU*U*-N9

DD



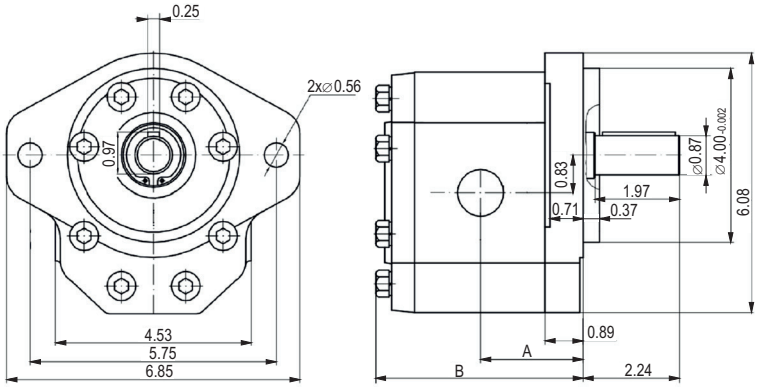
Displacement	code	Speed [rpm]		Dimensions [inch]	
		MIN	MAX	A	B
	4,5	650	3500	1.62	3.13
	6,3	650	3500	1.68	3.25
	8,2	650	3500	1.76	3.37

Displacement	code	Speed [rpm]		Dimensions [inch]	
		MIN	MAX	A	B
	12	650	3500	1.93	3.62
	16	650	3000	1.93	3.87
	19	650	3000	1.93	4.06

Displacement	code	Speed [rpm]		Dimensions [inch]	
		MIN	MAX	A	B
	25	650	2500	2.32	4.45
	32	650	2000	2.74	5.29

GP3 Pumps - basic design dimensions in inches

GP3-*R-SCVO-SU*U*-N9



Displacement	code	Speed [rpm]		Dimensions [inch]	
		MIN	MAX	A	B
	22,5	650	3000	2.27	4.63
	28	650	3000	2.37	4.83
	32	650	2500	2.62	5.33

Displacement	code	Speed [rpm]		Dimensions [inch]	
		MIN	MAX	A	B
	42	650	2300	2.79	5.67
	50	650	2100	2.93	5.96
	60	650	1750	3.10	6.32

GEAR PUMPS - Ordering Code

Example:

GP2 - 12 R - SBVJ - S UE UD - N9

Gear pump
Frame Size

GP1
GP2
GP3

Displacement

GP1		GP2		GP3	
in³/rev	code	in³/rev	code	in³/rev	code
0.061	**1**	0.275	**4,5**	1.37	**22,5**
0.076	**1,25**	0.384	**6,3**	1.71	**28**
0.098	**1,6**	0.500	**8,2**	1.95	**32**
0.122	**2**	0.732	**12**	2.56	**42**
0.153	**2,5**	0.976	**16**	3.05	**50**
0.192	**3,15**	1.159	**19**	3.66	**60**
0.223	**3,65**	1.526	**25**		
0.256	**4,2**	1.953	**32**		
0.305	**5**				
0.348	**5,7**				
0.372	**6,1**				
0.452	**7,4**				
0.488	**8**				

Seal
NBR

Pressure port*
- see Table Ports

Suction port*
- see Table Ports

Ports orientation*
S Ports in the hausing

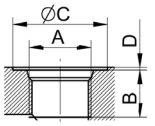
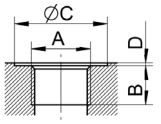
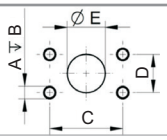
Flange - Shaft*
SAVE GP1
SBVJ **SBDD** GP2
SCVO GP3

Direction of rotation
L Counterclockwise
R Clockwise

*Other options in the complete catalogue

Ports

Relationship: pump displacement (codes range) / connection type

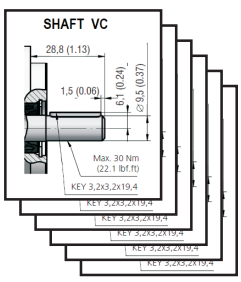
PORTS of the pumps **S** ⇒ suction port **P** ⇒ pressure port								A	B	C	D	E	Dimensions A, B, C, D, E [in]
GP3 S	GP3 P	GP2 S	GP2 P	GP1 S	GP1 P								
					1-6,1	Ports type U*	**UB**	9/16-18UNF	0.51	0.97	0.04		 UNF thread according to SAE
				1-6,1	7,4-8		**UC**	3/4-16 UNF	0.51	0.97	0.04		
				7,4-8			**UD**	7/8-14 UNF	0.67	1.34	0.04		
		4,5-25	4,5-32				**UE**	1-1/16-12 UNF	0.75	1.61	0.04		
		32					**UH**	1-5/16-12 UNF	0,91	1.93	0.04		
22,5-28	22,5-60					Ports type G*	**GD**	BSPP G3/4	0.63	1.54	0.04		 BSPP pipe thread accord. to 228-1
32-60							**GE**	BSPP G1	0.71	1.77	0.04		
22,5-28	22,5-60					Ports type A*	**AB**	3/8-16 UNC	0.87	1.87	0.87	0.75	 UNC thread according to SAE
32-60							**AC**	3/8-16 UNC	0.87	2.06	1.03	1.00	

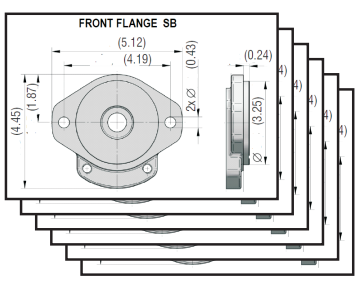
Complete Catalogue

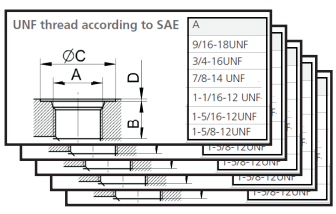
Many different Shafts - Flanges - Ports options are available - see complete catalogue.

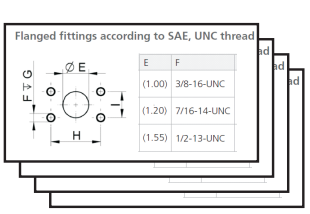
Find there also other technical details as temperature range, suitable viscosity, ...

http://www.argo-hytos.com/products/hydraulic-drives.html





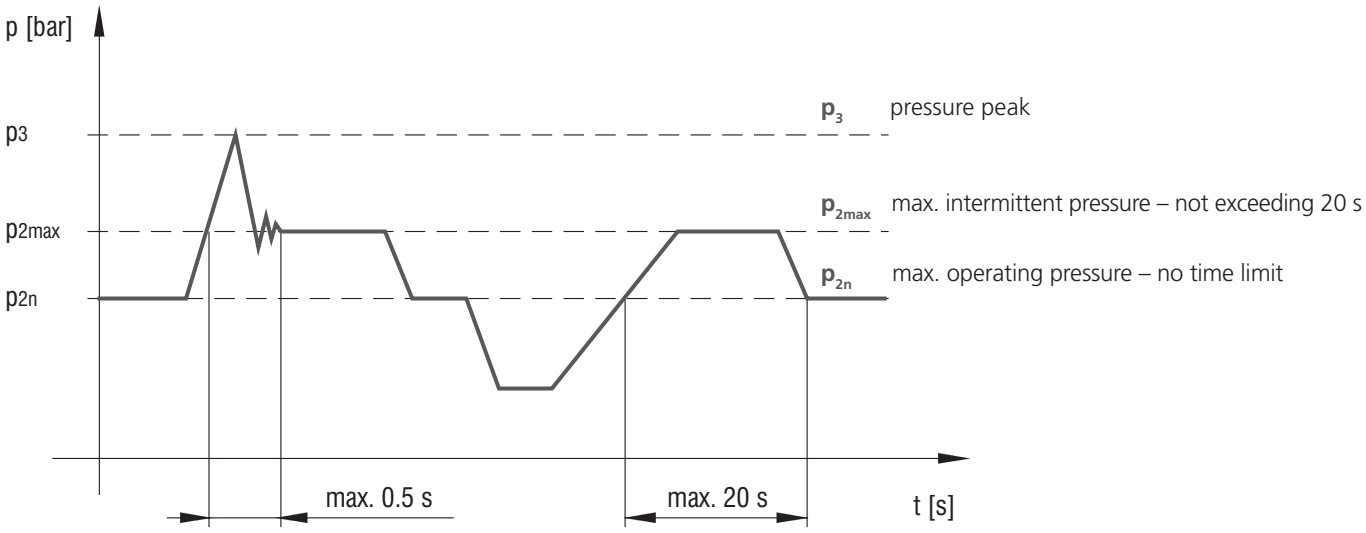




GEAR PUMPS - overview

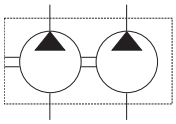
Maximal operating pressure p_{2n}														
GP1	Displacement [in³/rev]	0.061	0.076	0.098	0.122	0.153	0.192	0.223	0.256	0.305	0.348	0.372	0.452	0.488
	Pressure [PSI]	3625									2900		2610	2175
GP2	Displacement [in³/rev]	0.275	0.384	0.500	0.732	0.976	1.159	1.526	1.953					
	Pressure [PSI]	3625					2900	2320	1740					
GP3	Displacement [in³/rev]	1.37	1.71	1.95	2.56	3.05	3.66							
	Pressure [PSI]	3625			3335	2683	2175							

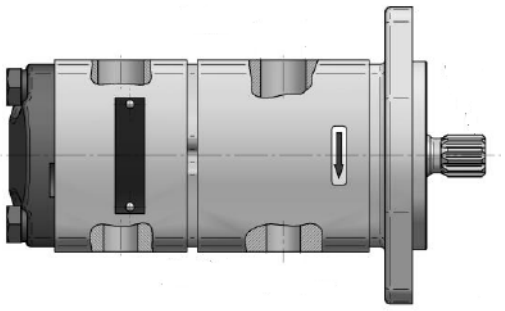
Pressure load



Multiple Pumps

Gear pumps are suitable for multiple setups, whereby the drive shaft for the 1st pump is extended to a second and even a 3rd pump. A coupling is fitted between each pair of pumps. In most cases each pump is isolated from its neighbor, i.e. the suction ports are separate from one another. A common suction port is also possible as an option.
Caution: Basically, the specifications for the single pumps apply, but with certain restrictions:
Max. / Min. speed
– the limit of any pump must not be exceeded.
Torque
– the shaft load of the first pump corresponds to the sum of the torques of all the pumps.





Examples of Multiple Pumps

Double pump	Triple pumps
GP1-1,2/1,2R-SAVC-SGBGB/GBGB-N9	GP2-12/4/4R-SBVJ-SGDGC/GCGC/GCGC-N9 GP2-12/4/GP1-2,5R-SBVJ-SGDGC/GCGC/GBGB-N9

Special Versions

Customized version	Low speed pumps GP1
Customized versions with special flanges, shafts and ports are handled individually.	The lowest speed of our special version „Low speed pumps GP1“ is 50 rpm.