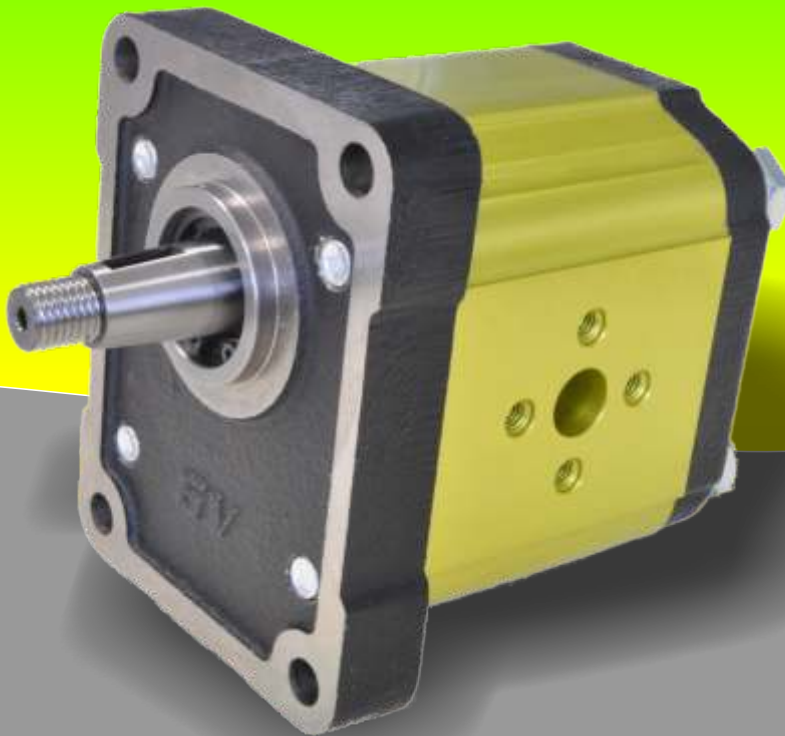


# Cast Iron

Durability. Reliability. Efficiency. Performance



## GV-2 series



To face with the current market requirement of higher performance products, Vivoil Oleodinamica Vivolo introduces the new GV-2. Cast iron flange and back cover, aluminium body with increased thickness are the main characteristics. This solution improves the reliability and life with cycling loads.



ENGLISH

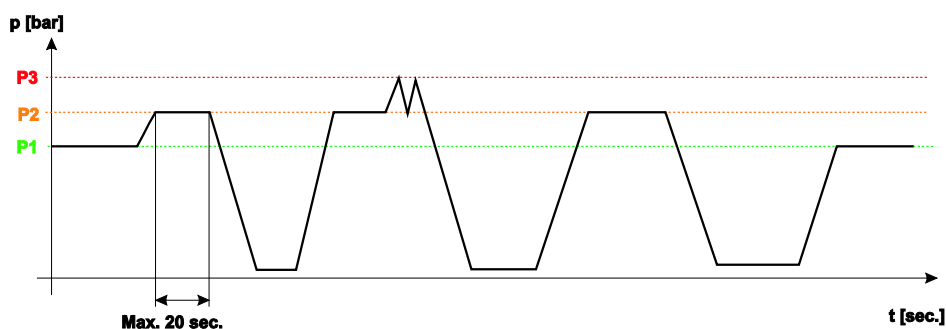


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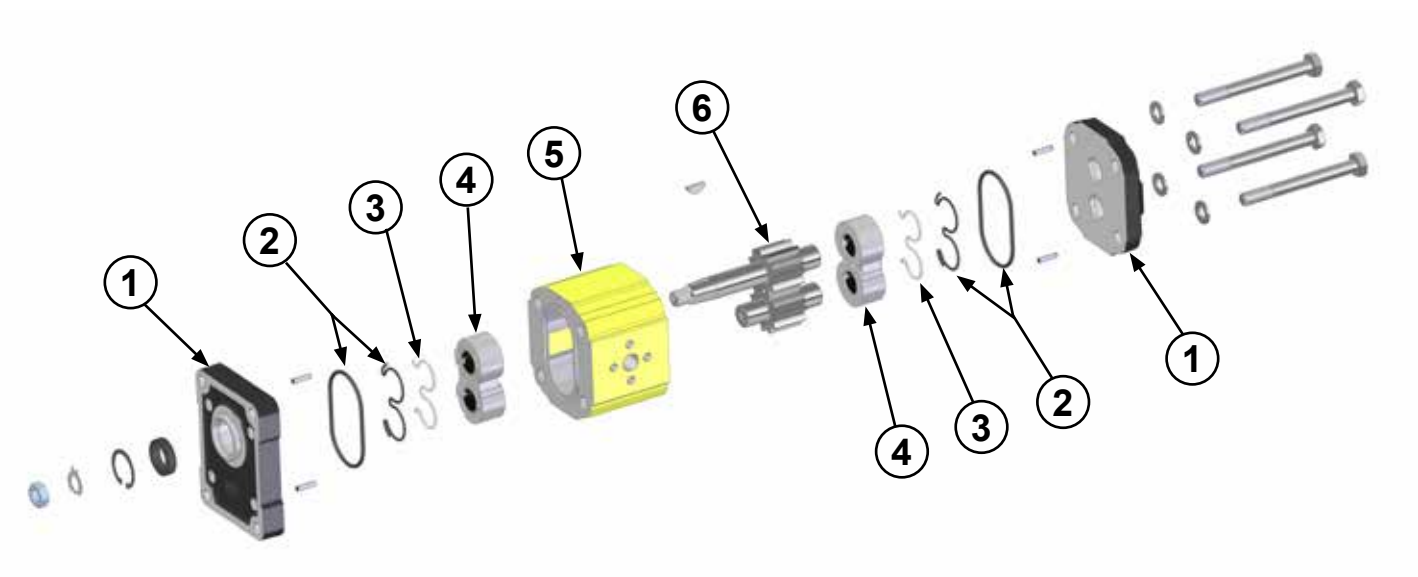
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TYPE	Displacement	P1 Max Workingg Pressure	P2 Max Intermittent Pressure	P3 Max Peak Pressure	Min Speed	Max Speed
	cm <sup>3</sup> /rev	bar	bar	bar	rpm	rpm
GV-2P/04	4,20	280	290	310	700	3500
GV-2P/06	6,00	280	290	310	700	3500
GV-2P/09	8,40	280	290	310	700	3500
GV-2P/11	10,80	280	290	310	700	3500
GV-2P/14	14,40	270	280	300	700	3500
GV-2P/17	16,80	250	260	280	700	3500
GV-2P/19	19,20	230	240	260	700	3000
GV-2P/22	22,80	220	230	250	700	3000
GV-2P/26	26,20	190	200	220	700	3000
GV-2P/30	30,00	180	190	210	700	2500
GV-2P/34	34,20	170	180	200	700	2500
GV-2P/40	39,60	160	180	190	700	2000



Type of fluid to be used	Mineral-based hydraulic oil HLP HV (D IN 51524)
Minimum operating viscosity	10 mm <sup>2</sup> /s
Maximum operating viscosity	100 mm <sup>2</sup> /s
Maximum admissible viscosity at start-up	1500 mm <sup>2</sup> /s
Recommended viscosity	20 mm <sup>2</sup> /s + 100 mm <sup>2</sup> /s
Ambient temperature	-20 °C + 60 °C
Fluid operating temperature	-15 °C + 80 °C
Recommended fluid operating temperature	30 °C + 50 °C
For temperatures above 120 °C	Request FKM seals ( Viton)
Max. inlet fluid suction pressure (IN)	0,02±0,08 bars
Max. inlet fluid pressure (IN)	0.3 - 0.5 bars (for higher pressures consult the manufacturer)
Inlet fluid filtering (IN)	30 ÷ 60 Microns
Outlet fluid filtering (OUT)	10 ÷ 25 Microns
Max. inlet fluid speed (IN)	0.5 ÷ 1.5 m/s
Max. outlet fluid speed (OUT)	3.0 ÷ 5.5m/s
Use of water-glycol (HF-C)	max n. of revolutions 1100 rpm; max pressure 170 bars



1	<b>FLANGE AND COVER</b>	IRON GRAY EN-GJL-300 UNI EN 1561	Rm = 300+400 N/mm <sup>2</sup> (Breaking strength)
2	<b>SEAL</b>	A 727 Standard Acrylonitrile F 975 Viton FKM	70 Shore, thermal resistance 120°C 80 Shore, thermal resistance 200°C
3	<b>BACK-UP RINGS</b>	Virgin PTFE Tecnil Q3	
4	<b>GEAR BUSH BEARINGS</b>	Special heat-treated tin alloy with excellent mechanical features and high anti-friction capacity. Self-lubricating bushes DU	Rp = 350 N/mm <sup>2</sup> (Yield strength) Rm = 390 N/mm <sup>2</sup> (Breaking strength)
5	<b>PUMP BODY</b>	Extruded alloy Series 7000, heat treated and anodised	Rp = 345 N/mm <sup>2</sup> (Yield strength) Rm = 382 N/mm <sup>2</sup> (Breaking strength)
6	<b>GEARS</b>	Steel UNI 7846	Rs = 980 N/mm <sup>2</sup> (Yield strength) Rm = 1270+1570 N/mm <sup>2</sup> (Breaking strength)

FORMULA FOR EVALUATING SHAFT	SHAFT [IDENTIFIER] - CODE - DESCRIPTION	T.2 [Nm]
$T.2 \leq \frac{v_i \times \Delta p}{20 \times \pi \times \eta m}$ T.2 = torque allowed by shaft [ Nm]	[A] - CI001 - Parallel $\varnothing 15$ - M6x1 - key thk 4	44.1
	[B] - CI002 - Parallel $\varnothing 15.875$ - 1/4"28-UNF key thk.4 (SAE A)	67.5
	[C] - CF001 - Milled shank $\varnothing 15$ - thk.8 ("BH" standard German)	60.5
	[E] - CO001 - Tappered 1:8 - $\varnothing 17,4$ - M12x1,5 - key thk 4	233.2
	[F] - CO002 - Tappered 1:5 - $\varnothing 17,4$ - M12x1,5 - key thk 3	233.2
	[G] - SCF02 - Splined $\varnothing 16,5$ - z=9, H=13, m=1.6 DIN 5482 17x14	86.1
	[H] - SCF03 - Splined $\varnothing 16.5$ - z=9, H=18,8, m=1,6 DIN 5482 17x14	86.1
	[ I ] - SCF04 - Splined $\varnothing 15.456$ z=9, H=22.5, SAE J498 9T 16/32DP	67.1
	[K] - SCF05 - Splined $\varnothing 16.5$ z=9 H=8,1 m=1.6 DIN 5482 17x14	86.2
	[L] - SCF01- Splined $\varnothing 16.5$ z=9 H=9,2 m=1.6 DIN 5482 17x14	86.2

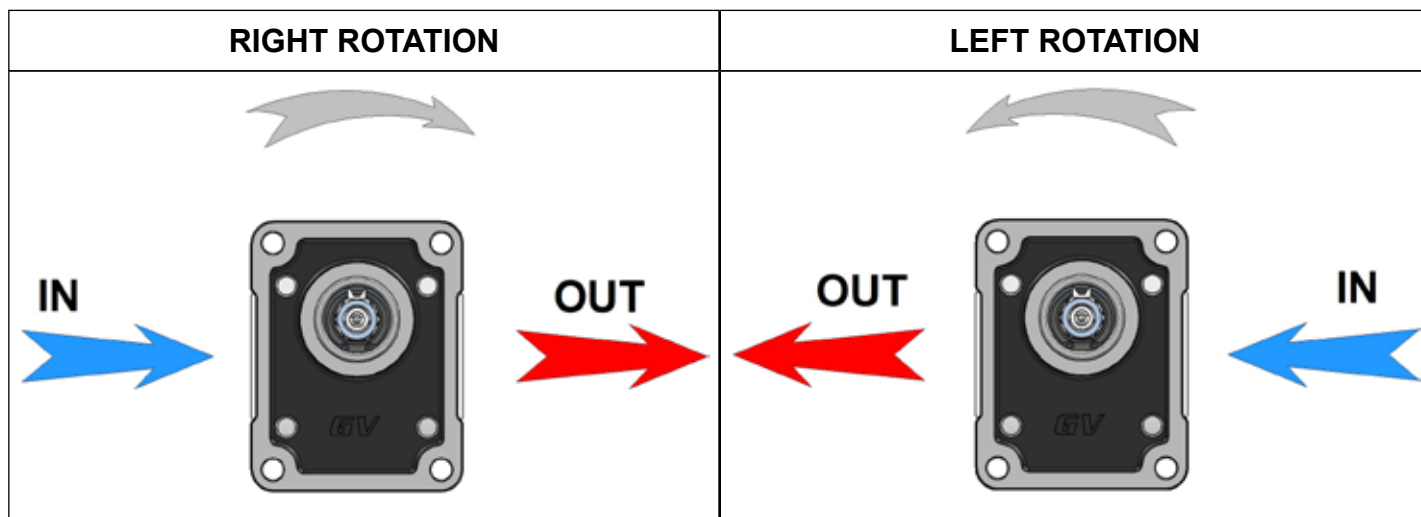
For assemblies with a coupling, you should choose one as balanced as possible in order to reduce the vibrations and dynamic stresses to which the pump shaft may be subject.

**Always make sure that the torque applied is less than or equal to the admissible torque of the shaft.**

Do not apply a direct axial or radial load on the pump shaft; if necessary, use suitable supports.

Always use well-filtered oils containing no water or other emulsifying substance.

Never run the pump with oil and air solutions.



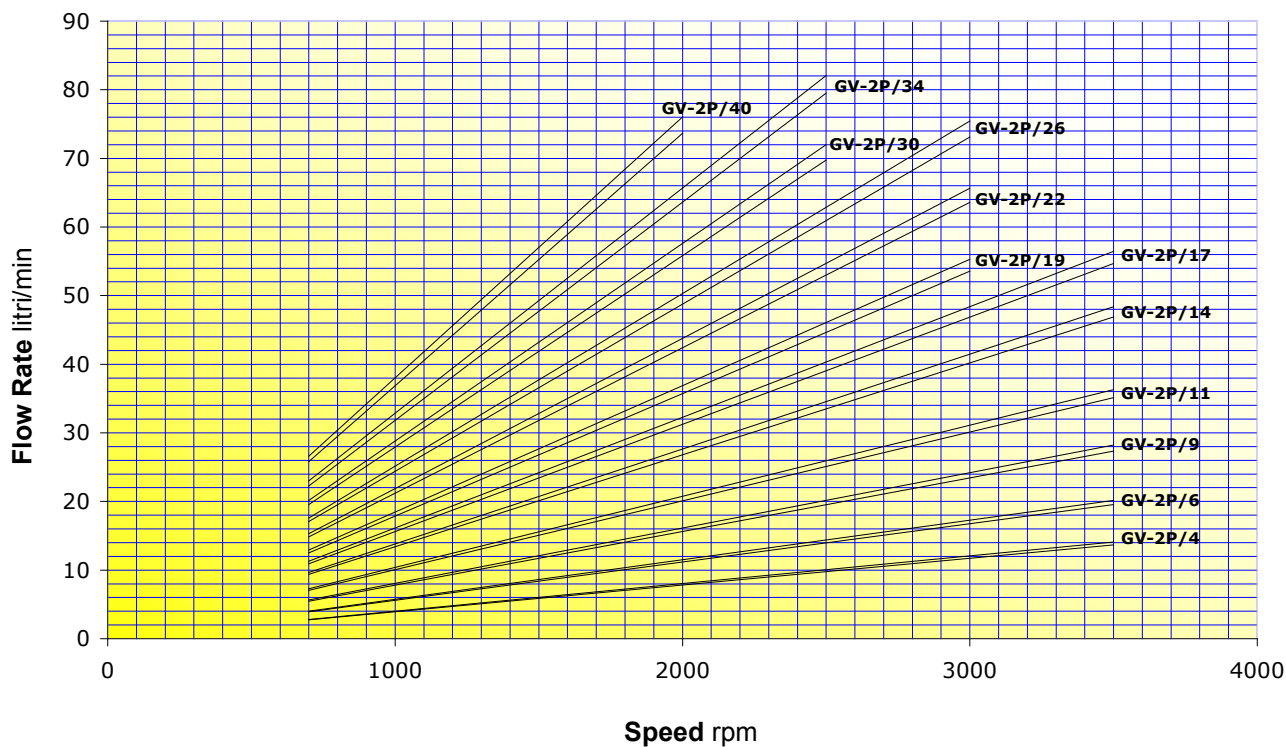
## SYMBOL, UNIT OF MEASUREMENT, DESCRIPTION

qv	l/min	Flow rate
vi	cm <sup>3</sup> /rev	Displacement (volume of oil displaced per complete revolution of the shaft)
n	rpm	Shaft rotation speed
p1	bar	inlet pressure (IN)
p2	bar	outlet pressure (OUT)
Δp	bar	Δp=p2 - p1 difference between outlet (OUT) and inlet (IN) pressure
Ph	kX	Hydraulic power delivered
Pm	kX	Mechanical power absorbed
T	Nm	Torque absorbed by shaft
ηv	-	00.91 – 0.96 volumetric efficiency (volumetric ratio between operation under load and loadless operation)
ηm	-	0.85 – 0.90 mechanical efficiency
ηt	-	ηt = ηv x ηm total efficiency

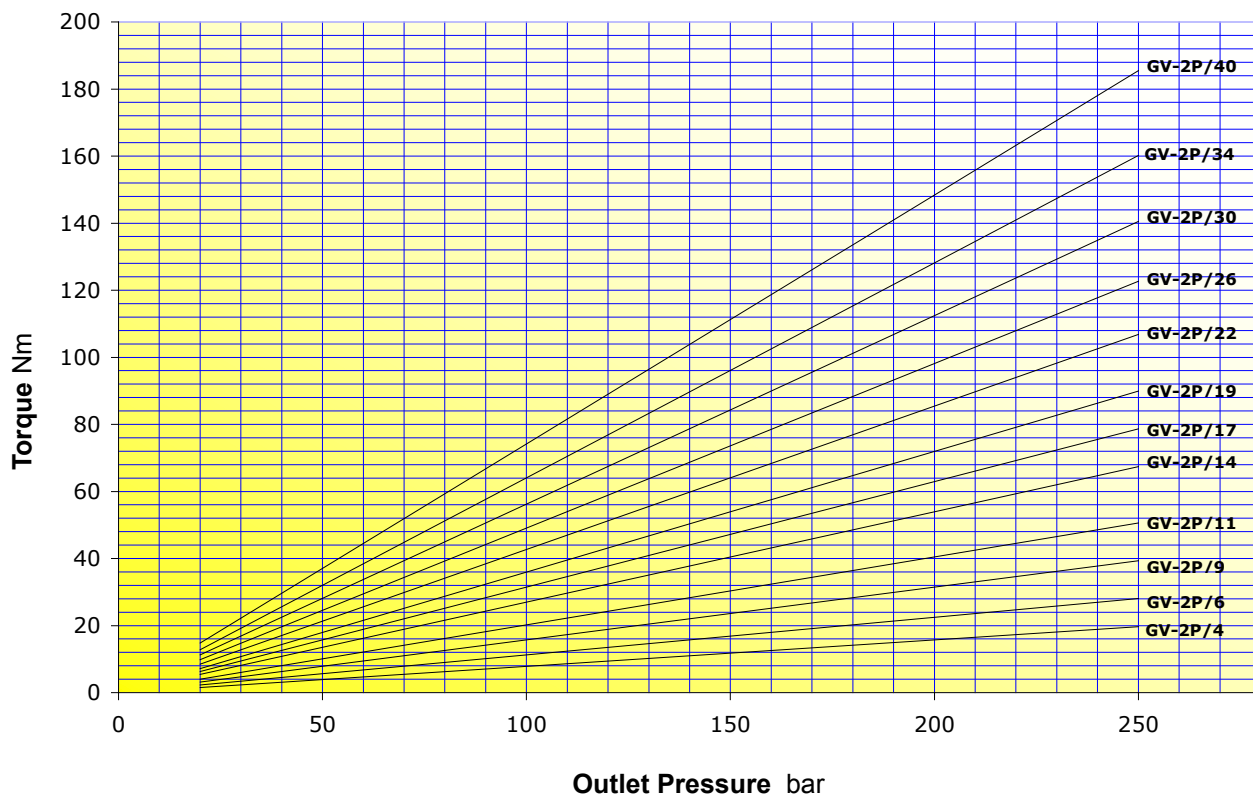
Basic Formulas	Derived Formulas	
$qv = \frac{vi \times n}{1000} \times \eta v$	$vi = \frac{qv \times 1000}{n \times \eta v}$	$n = \frac{qv \times 1000}{vi \times \eta v}$
$T = \frac{vi \times \Delta p}{20 \times \pi \times \eta m}$	$vi = \frac{T \times 20 \times \pi \times \eta m}{\Delta p}$	$\Delta p = \frac{T \times 20 \times \pi \times \eta m}{vi}$
$Ph = \frac{qv \times \Delta p}{600}$	$qv = \frac{Ph \times 600}{\Delta p}$	$\Delta p = \frac{Ph \times 600}{qv}$
$Pm = \frac{vi \times \Delta p \times n}{600000 \times \eta m}$	$vi = \frac{Pm \times 600000 \times \eta m}{\Delta p \times n}$	$\Delta p = \frac{600000 \times \eta m}{vi \times n}$

TYPE	cm <sup>3</sup> /rev		rpm							
			700	1000	1500	2000	2500	3000		3500
GV 2P/4	4,2	Flow Rate l/min	2,8	4	6	8	10	12	14	Flow Rate l/min
GV 2P/6	6		4,2	6	9	12	15	18	21	
GV 2P/9	8,4		6,3	9	13,5	18	22,5	27	31,5	
GV 2P/11	10,8		7,7	11	16,5	22	27,5	33	38,5	
GV 2P/14	14,4		9,8	14	21	28	35	42	29	
GV 2P/17	16,8		11,9	17	25,5	34	42,5	51	59,5	
GV 2P/19	19,2		13,3	19	28,5	38	47,5	57		
GV 2P/22	22,8		15,4	22	33	44	55	66		
GV 2P/26	26,2		18,2	26	39	52	65	78		
GV 2P/30	30		21	30	45	60	75			
GV 2P/34	34,2		23,8	34	51	68	85			
GV 2P/40	39,6		28	40	60	80				

**GV-2P Characteristic Flow Rate Curves**



**GV-2P Motor Torque**

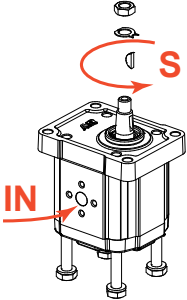
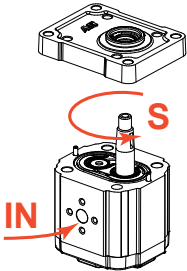
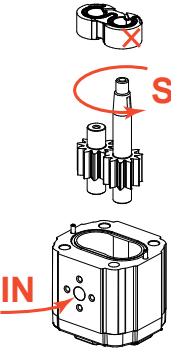
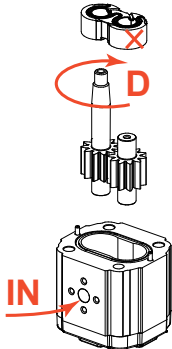
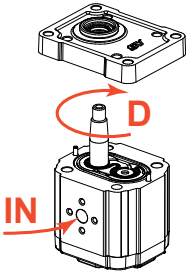
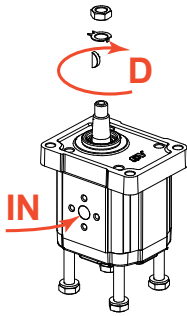




**GV2-P with FLANGE  $\varnothing 36,5$**  (ref. GP-201)

When changing the direction of rotation of the GV-2P pump, it is not necessary to change the flange, as the same one is used.

When disassembling and reassembling the pump, take special care to ensure that seals and back-up rings do not come out of place and that no foreign bodies, such as shavings or dirt in general, get inside the pump.

					
<p>Remove the key, nut and washer from the shaft. Loosen and remove the fastening screws</p>	<p>Take off the flange.</p>	<p>Take out the gears and upper bush.</p> <p>Warning!! <b><u>The bush must never be turned</u></b></p>	<p>Invert the positions of the driven and driving shafts.</p> <p>Warning! The body and cover must not be turned. Use the marking on the body as your reference.</p>	<p>Fit the previously removed flange back in place taking care to clean the body-base contact surfaces.</p>	<p>Replace the screws and tighten the nuts with a torque of 54 Nm to 58.9 Nm. Check that the shaft turns on completing the operation.</p>

Note: with this rotation change system, the **inlets** and **outlets** remain unchanged.



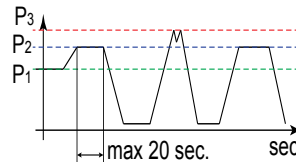
# Unidirectional Pump - GV serie "CAST IRON"

EUROPEAN STANDARD PUMP

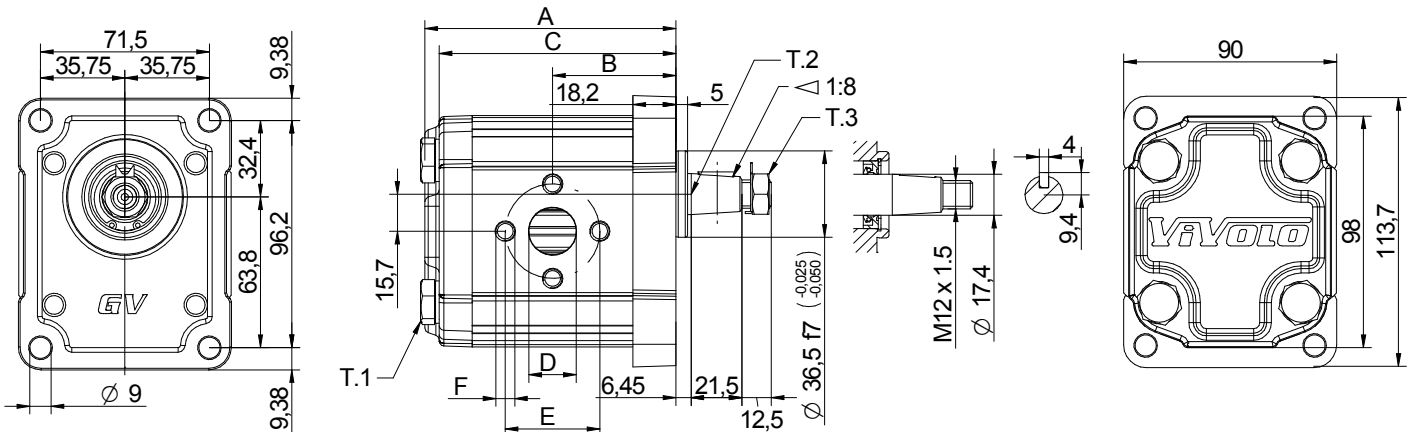
ø36,5 FLANGE - TAPPER SHAFT - STANDARD EUROPEAN PORT

**GV-2**

TYPE	Displacement cm <sup>3</sup> /rev	Max. Pressure			Min speed rpm	Max speed rpm
		P1 (bar)	P2 (bar)	P3 (bar)		
GV-2P/04	4,20	280	290	310	700	3500
GV-2P/06	6,00	280	290	310	700	3500
GV-2P/09	8,40	280	290	310	700	3500
GV-2P/11	10,80	280	290	310	700	3500
GV-2P/14	14,40	270	280	300	700	3500
GV-2P/17	16,80	250	260	280	700	3500
GV-2P/19	19,20	230	240	260	700	3000
GV-2P/22	22,80	220	230	250	700	3000
GV-2P/26	26,20	190	200	220	700	3000
GV-2P/30	30,00	180	190	210	700	2500
GV-2P/34	34,20	170	180	200	700	2500
GV-2P/40	39,60	160	180	190	700	2000



P1 = Max. working pressure  
 P2 = Max. intermittent pressure  
 P3 = Max. peak pressure



07/05/12 G2P5102EPOA.dft

T.1 = 54 ± 58,9 [Nm] - screw tightening torque M 10

T.3 = 40 [Nm] - torque wrench setting 19

T.2 = 233,2 [Nm] - admissible shaft torque (N.B. When choosing a shaft, always check the admissible torque).

TYPE	Weight kg	A mm	B mm	C mm	D IN	E IN	F IN	D OUT	E OUT	F OUT	CODE													
											Left Rotation						Right Rotation							
GV-2P/04	3,500	85,2	41,7	79,2	ø13.5	30	M6	ø13.5	30	M6	G	2P	41	01	E	OO	A	G	2P	41	02	E	OO	A
GV-2P/06	3,600	88,2	43,2	82,2	ø13.5	30	M6	ø13.5	30	M6	G	2P	43	01	E	OO	A	G	2P	43	02	E	OO	A
GV-2P/09	3,700	92,2	45,2	86,2	ø13.5	30	M6	ø13.5	30	M6	G	2P	45	01	E	OO	A	G	2P	45	02	E	OO	A
GV-2P/11	3,800	96,2	47,2	90,2	ø13.5	30	M6	ø13.5	30	M6	G	2P	47	01	E	OO	A	G	2P	47	02	E	OO	A
GV-2P/14	4,000	102,2	50,2	96,2	ø20	40	M8	ø13.5	30	M6	G	2P	49	01	E	PO	A	G	2P	49	02	E	PO	A
GV-2P/17	4,100	106,2	52,2	100,2	ø20	40	M8	ø13.5	30	M6	G	2P	51	01	E	PO	A	G	2P	51	02	E	PO	A
GV-2P/19	4,200	110,2	54,2	104,2	ø20	40	M8	ø13.5	30	M6	G	2P	53	01	E	PO	A	G	2P	53	02	E	PO	A
GV-2P/22	4,350	116,2	57,2	110,2	ø20	40	M8	ø13.5	30	M6	G	2P	55	01	E	PO	A	G	2P	55	02	E	PO	A
GV-2P/26	4,450	120,2	59,2	114,2	ø23.5	40	M8	ø20	40	M8	G	2P	57	01	E	QP	A	G	2P	57	02	E	QP	A
GV-2P/30	4,700	128,2	63,2	122,2	ø23.5	40	M8	ø20	40	M8	G	2P	59	01	E	QP	A	G	2P	59	02	E	QP	A
GV-2P/34	4,900	135,2	66,7	129,2	ø23.5	40	M8	ø20	40	M8	G	2P	61	01	E	QP	A	G	2P	61	02	E	QP	A
GV-2P/40	5,100	144,2	71,2	138,2	ø23.5	40	M8	ø20	40	M8	G	2P	63	01	E	QP	A	G	2P	63	02	E	QP	A

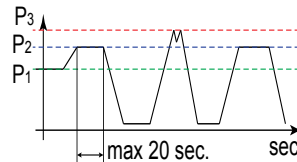
# Unidirectional Pump - GV serie "CAST IRON"

EUROPEAN STANDARD PUMP

ø36,5 FLANGE - TAPPER SHAFT - STANDARD GERMAN PORT

**GV-2**

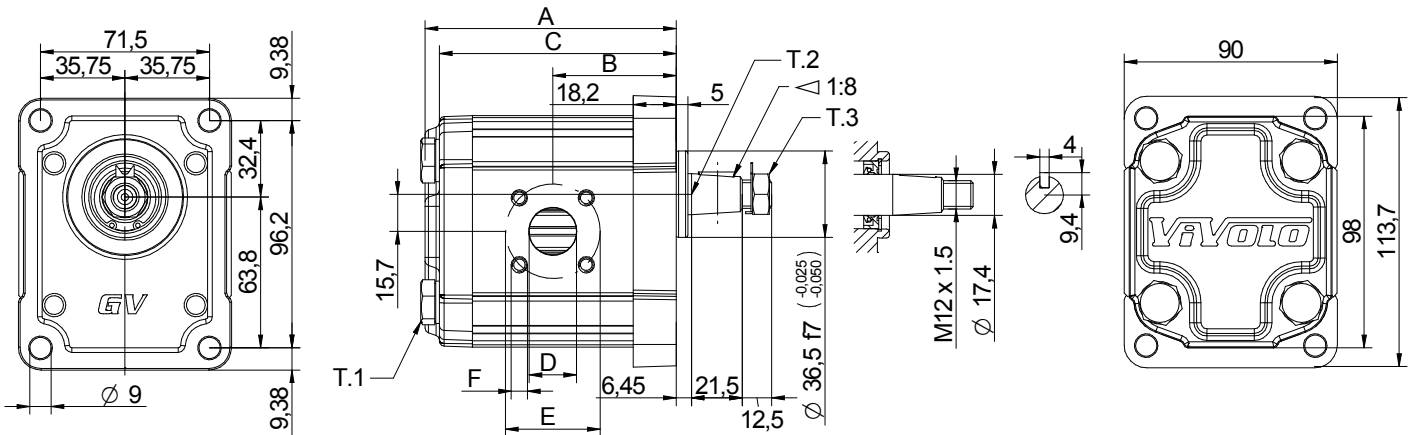
TYPE	Displacement cm <sup>3</sup> /rev	Max. Pressure			Min speed rpm	Max speed rpm
		P1 (bar)	P2 (bar)	P3 (bar)		
GV-2P/04	4,20	280	290	310	700	3500
GV-2P/06	6,00	280	290	310	700	3500
GV-2P/09	8,40	280	290	310	700	3500
GV-2P/11	10,80	280	290	310	700	3500
GV-2P/14	14,40	270	280	300	700	3500
GV-2P/17	16,80	250	260	280	700	3500
GV-2P/19	19,20	230	240	260	700	3000
GV-2P/22	22,80	220	230	250	700	3000
GV-2P/26	26,20	190	200	220	700	3000
GV-2P/30	30,00	180	190	210	700	2500
GV-2P/34	34,20	170	180	200	700	2500
GV-2P/40	39,60	160	180	190	700	2000



P1 = Max. working pressure  
P2 = Max. intermittent pressure  
P3 = Max. peak pressure



GP 204



11/05/12 G2P510ZESRA.dft

T.1 = 54 ± 58,9 [Nm] - screw tightening torque M 10

T.3 = 40 [Nm] - torque wrench setting 19

T.2 = 233,2 [Nm] - admissible shaft torque (N.B. When choosing a shaft, always check the admissible torque).

TYPE	Weight kg	A mm	B mm	C mm	D mm	E mm	F mm	D mm	E mm	F mm	CODE													
											Left Rotation						Right Rotation							
GV-2P/04	3,500	85,2	45,2	79,2	ø20	40	M6	ø15	35	M6	G	2P	41	01	E	SR	A	G	2P	41	02	E	SR	A
GV-2P/06	3,600	88,2	45,2	82,2	ø20	40	M6	ø15	35	M6	G	2P	43	01	E	SR	A	G	2P	43	02	E	SR	A
GV-2P/09	3,700	92,2	45,2	86,2	ø20	40	M6	ø15	35	M6	G	2P	45	01	E	SR	A	G	2P	45	02	E	SR	A
GV-2P/11	3,800	96,2	47,2	90,2	ø20	40	M6	ø15	35	M6	G	2P	47	01	E	SR	A	G	2P	47	02	E	SR	A
GV-2P/14	4,000	102,2	50,2	96,2	ø20	40	M6	ø15	35	M6	G	2P	49	01	E	SR	A	G	2P	49	02	E	SR	A
GV-2P/17	4,100	106,2	52,2	100,2	ø20	40	M6	ø15	35	M6	G	2P	51	01	E	SR	A	G	2P	51	02	E	SR	A
GV-2P/19	4,200	110,2	54,2	104,2	ø20	40	M6	ø15	35	M6	G	2P	53	01	E	SR	A	G	2P	53	02	E	SR	A
GV-2P/22	4,350	116,2	57,2	110,2	ø20	40	M6	ø15	35	M6	G	2P	55	01	E	SR	A	G	2P	55	02	E	SR	A
GV-2P/26	4,450	120,2	59,2	114,2	ø20	40	M6	ø15	35	M6	G	2P	57	01	E	SR	A	G	2P	57	02	E	SR	A
GV-2P/30	4,700	128,2	63,2	122,2	ø20	40	M6	ø20	40	M6	G	2P	59	01	E	SS	A	G	2P	59	02	E	SS	A
GV-2P/34	4,900	135,2	66,7	129,2	ø20	40	M6	ø20	40	M6	G	2P	61	01	E	SS	A	G	2P	61	02	E	SS	A
GV-2P/40	5,100	144,2	71,2	138,2	ø20	40	M6	ø20	40	M6	G	2P	63	01	E	SS	A	G	2P	63	02	E	SS	A

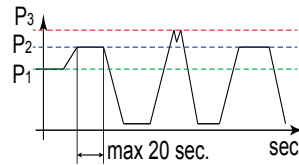
# Unidirectional Pump - GV serie "CAST IRON"

EUROPEAN STANDARD PUMP

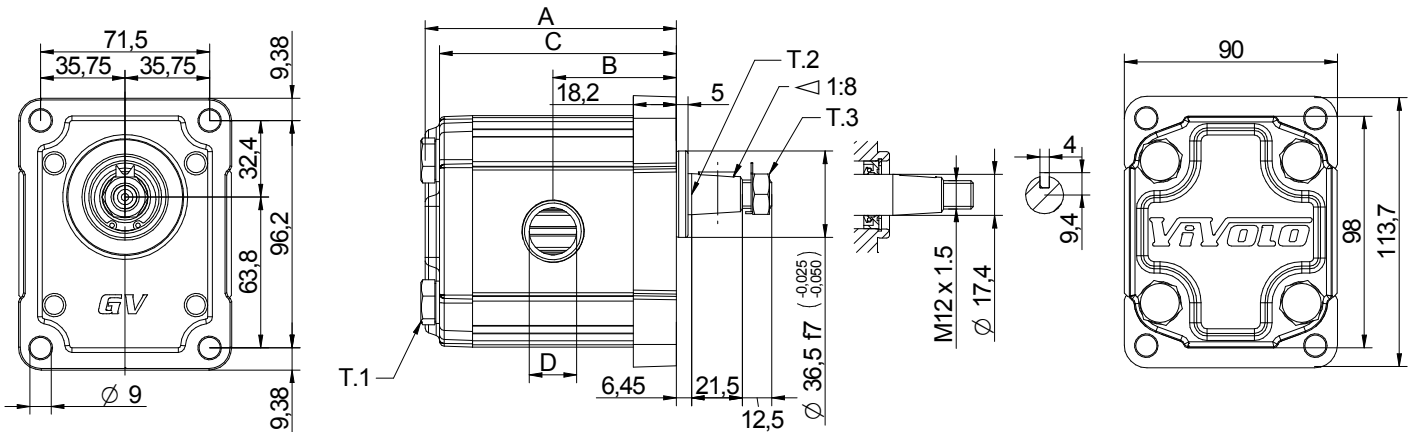
ø36,5 FLANGE - TAPPER SHAFT - BSP PORT

**GV-2**

TYPE	Displacement cm <sup>3</sup> /rev	Max. Pressure			Min speed rpm	Max speed rpm
		P1 (bar)	P2 (bar)	P3 (bar)		
GV-2P/04	4,20	280	290	310	700	3500
GV-2P/06	6,00	280	290	310	700	3500
GV-2P/09	8,40	280	290	310	700	3500
GV-2P/11	10,80	280	290	310	700	3500
GV-2P/14	14,40	270	280	300	700	3500
GV-2P/17	16,80	250	260	280	700	3500
GV-2P/19	19,20	230	240	260	700	3000
GV-2P/22	22,80	220	230	250	700	3000
GV-2P/26	26,20	190	200	220	700	3000
GV-2P/30	30,00	180	190	210	700	2500
GV-2P/34	34,20	170	180	200	700	2500
GV-2P/40	39,60	160	180	190	700	2000



P1 = Max. working pressure  
 P2 = Max. intermittent pressure  
 P3 = Max. peak pressure



T.1 = 54 ± 58,9 [Nm] - screw tightening torque M 10

T.3 = 40 [Nm] - torque wrench setting 19

T.2 = 233,2 [Nm] - admissible shaft torque (N.B. When choosing a shaft, always check the admissible torque).

07/05/12 G2P5102E CBA.dft

TYPE	Weight kg	A mm	B mm	C mm	D IN	D OUT	CODE													
							Left Rotation				Right Rotation									
GV-2P/04	3,500	85,2	41,7	79,2	1/2" BSPP	1/2" BSPP	G	2P	41	01	E	BB	A	G	2P	41	02	E	BB	A
GV-2P/06	3,600	88,2	43,2	82,2	1/2" BSPP	1/2" BSPP	G	2P	43	01	E	BB	A	G	2P	43	02	E	BB	A
GV-2P/09	3,700	92,2	45,2	86,2	1/2" BSPP	1/2" BSPP	G	2P	45	01	E	BB	A	G	2P	45	02	E	BB	A
GV-2P/11	3,800	96,2	47,2	90,2	1/2" BSPP	1/2" BSPP	G	2P	47	01	E	BB	A	G	2P	47	02	E	BB	A
GV-2P/14	4,000	102,2	50,2	96,2	3/4" BSPP	1/2" BSPP	G	2P	49	01	E	CB	A	G	2P	49	02	E	CB	A
GV-2P/17	4,100	106,2	52,2	100,2	3/4" BSPP	1/2" BSPP	G	2P	51	01	E	CB	A	G	2P	51	02	E	CB	A
GV-2P/19	4,200	110,2	54,2	104,2	3/4" BSPP	1/2" BSPP	G	2P	53	01	E	CB	A	G	2P	53	02	E	CB	A
GV-2P/22	4,350	116,2	57,2	110,2	3/4" BSPP	1/2" BSPP	G	2P	55	01	E	CB	A	G	2P	55	02	E	CB	A
GV-2P/26	4,450	120,2	59,2	114,2	1" BSPP	3/4" BSPP	G	2P	57	01	E	DC	A	G	2P	57	02	E	DC	A
GV-2P/30	4,700	128,2	63,2	122,2	1" BSPP	3/4" BSPP	G	2P	59	01	E	DC	A	G	2P	59	02	E	DC	A
GV-2P/34	4,900	135,2	66,7	129,2	1" BSPP	3/4" BSPP	G	2P	61	01	E	DC	A	G	2P	61	02	E	DC	A
GV-2P/40	5,100	144,2	71,2	138,2	1" BSPP	3/4" BSPP	G	2P	63	01	E	DC	A	G	2P	63	02	E	DC	A

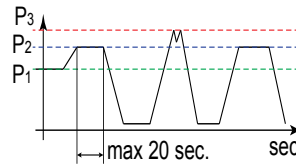
# Unidirectional Pump - GV serie "CAST IRON"

EUROPEAN STANDARD PUMP

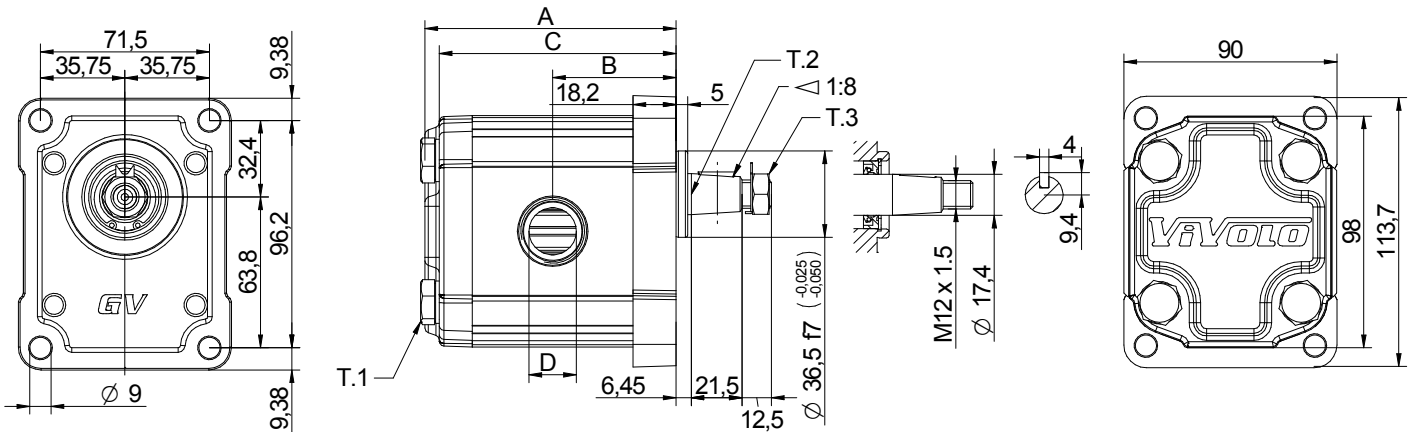
ø36,5 FLANGE - TAPPER SHAFT - UNF PORT

**GV-2**

TYPE	Displacement cm <sup>3</sup> /rev	Max. Pressure			Min speed rpm	Max speed rpm
		P1 (bar)	P2 (bar)	P3 (bar)		
GV-2P/04	4,20	280	290	310	700	3500
GV-2P/06	6,00	280	290	310	700	3500
GV-2P/09	8,40	280	290	310	700	3500
GV-2P/11	10,80	280	290	310	700	3500
GV-2P/14	14,40	270	280	300	700	3500
GV-2P/17	16,80	250	260	280	700	3500
GV-2P/19	19,20	230	240	260	700	3000
GV-2P/22	22,80	220	230	250	700	3000
GV-2P/26	26,20	190	200	220	700	3000
GV-2P/30	30,00	180	190	210	700	2500
GV-2P/34	34,20	170	180	200	700	2500
GV-2P/40	39,60	160	180	190	700	2000



P1 = Max. working pressure  
 P2 = Max. intermittent pressure  
 P3 = Max. peak pressure



T.1 = 54 +58,9 [Nm] - screw tightening torque M 10

T.3 = 40 [Nm] - torque wrench setting 19

T.2 = 233,2 [Nm] - admissible shaft torque (N.B. When choosing a shaft, always check the admissible torque).

11/05/12 G2P510ZELMA.dft

TYPE	Weight kg	A mm	B mm	C mm	D IN	D OUT	CODE													
							Left Rotation						Right Rotation							
GV-2P/04	3,500	85,2	41,7	79,2	1-1/16" - 12UNF	7/8" - 14UNF	G	2P	41	01	E	LM	A	G	2P	41	02	E	LM	A
GV-2P/06	3,600	88,2	43,2	82,2	1-1/16" - 12UNF	7/8" - 14UNF	G	2P	43	01	E	LM	A	G	2P	43	02	E	LM	A
GV-2P/09	3,700	92,2	45,2	86,2	1-1/16" - 12UNF	7/8" - 14UNF	G	2P	45	01	E	LM	A	G	2P	45	02	E	LM	A
GV-2P/11	3,800	96,2	47,2	90,2	1-1/16" - 12UNF	7/8" - 14UNF	G	2P	47	01	E	LM	A	G	2P	47	02	E	LM	A
GV-2P/14	4,000	102,2	50,2	96,2	1-1/16" - 12UNF	7/8" - 14UNF	G	2P	49	01	E	LM	A	G	2P	49	02	E	LM	A
GV-2P/17	4,100	106,2	52,2	100,2	1-1/16" - 12UNF	7/8" - 14UNF	G	2P	51	01	E	LM	A	G	2P	51	02	E	LM	A
GV-2P/19	4,200	110,2	54,2	104,2	1-1/16" - 12UNF	7/8" - 14UNF	G	2P	53	01	E	LM	A	G	2P	53	02	E	LM	A
GV-2P/22	4,350	116,2	57,2	110,2	1-1/16" - 12UNF	7/8" - 14UNF	G	2P	55	01	E	LM	A	G	2P	55	02	E	LM	A
GV-2P/26	4,450	120,2	59,2	114,2	1-1/16" - 12UNF	7/8" - 14UNF	G	2P	57	01	E	LM	A	G	2P	57	02	E	LM	A
GV-2P/30	4,700	128,2	63,2	122,2	1-1/16" - 12UNF	7/8" - 14UNF	G	2P	59	01	E	LM	A	G	2P	59	02	E	LM	A
GV-2P/34	4,900	135,2	66,7	129,2	1-1/16" - 12UNF	7/8" - 14UNF	G	2P	61	01	E	LM	A	G	2P	61	02	E	LM	A
GV-2P/40	5,100	144,2	71,2	138,2	1-1/16" - 12UNF	7/8" - 14UNF	G	2P	63	01	E	LM	A	G	2P	63	02	E	LM	A



## MULTIPLE PUMPS – Introduction

Multiple pumps may be provided in two modes

- **Assembled pumps**

*Dimensions, characteristics and codes of assembled pumps.*

- **Single elements**

*Dimensions, characteristics and codification of the single elements composing the multiple pumps.*

The variety of variants allows a high number of possible alternatives. Both the sections try to give an instrument to consult easily to create the ideal solution.

## DIMENSIONAL VERIFICATION

The correct dimensioning of a multiple pump requires an opportune verification on the mechanical resistance considering the specific working conditions. Therefore **IT IS RECOMMENDED** to do a dimensional check during the engineering phase in order to have a coherent choice with the real system capabilities.

The required data for the verification are mainly the displacements and the working pressures of each element. Starting from these basic data it is possible to find out the torque that is created on each driving shaft..

To calculate analytically the transmitted torque, we assume that:

$v_i$  = element displacement expressed in cc/rev.

$D_p$  = pressure difference between inlet and outlet expressed in bar

$\eta_m$  = mechanical efficiency that we can assume as 0.9

The transmitted torque is obtained by this simple equation..

$$T = \frac{v_i \times \Delta p}{20 \times \pi \times \eta_m}$$

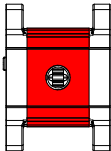
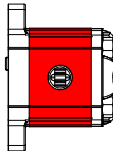
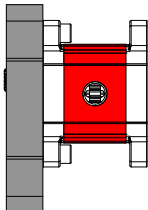
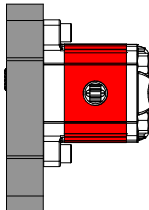
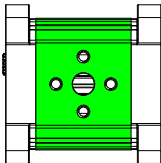
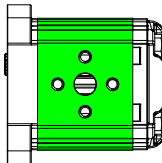
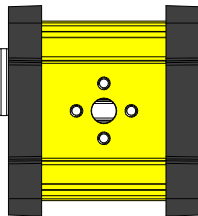
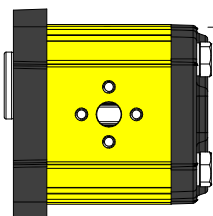
The verification require to compare the obtained torque value with the one recommended for each typology of connection or connecting shaft.

To each element, starting from the final one, the torque coming from the previous ones must be added, using the following scheme:

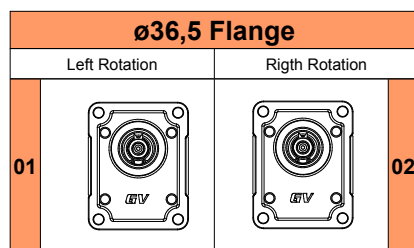
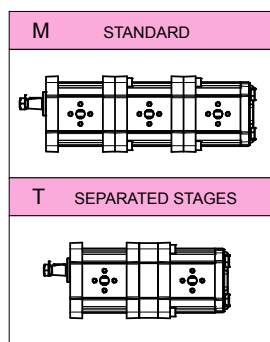
FINAL ELEMENT VERIFICATION	$T_{\text{elem\_fin}} \leq T_{\text{fin}}$
INTERMEDIATE ELEMENT VERIFICATION	$T_{\text{elem\_int}} + T_{\text{elem\_int\_preced}} + T_{\text{elem\_fin}} \leq T_{\text{fin}}$
DRIVING ELEMENT VERIFICATION	$T_{\text{elem\_prim}} + \dots + T_{\text{elem\_int}} + \dots + T_{\text{elem\_fin}} \leq T_{\text{fin}}$



SHAFT [IDENTIFIER]- Code - Description	T.2 [Nm]
[A] - CIP01 - Parallel $\varnothing 15$ - M6x1 - key thk.4	44.1
[B] - CIP02 - Parallel $\varnothing 15.875$ - 1/4"28-UNF key thk.4 (SAE A)	67.5
[C] - CFP01 - Milled shank $\varnothing 15$ - sp.8 ("BH" standard german)	60.5
[E] - COP01 - Tapered 1:8 - $\varnothing 17,4$ - M12x1,5 - key thk.4	233.2
[F] - COP02 - Tapered 1:5 - $\varnothing 17,4$ - M12x1,5 - key thk.3	233.2
[G] - SCP02 - Splined $\varnothing 16,5$ - z=9, H=13, m=1.6 DIN 5482 17x14	86.1
[H] - SCP03 - Splined $\varnothing 16.5$ - z=9, H=18,8, m=1,6 DIN 5482 17x14	86.1
[ I ] - SCP04 - Splined $\varnothing 15.456$ z=9, H=22.5, SAE J498 9T 16/32DP	67.1
[K] - SCF05 - Splined $\varnothing 16.5$ z=9 H=8,1 m=1.6 DIN 5482 17x14	86.2
[L] - SCF01- Splined $\varnothing 16.5$ z=9 H=9,2 m=1.6 DIN 5482 17x14	86.2

COMPOSITION	INTERMEDIATE PUMP TORQUE	FINAL PUMP TORQUE
<b>0P+0P</b>	 <b>3,7 Nm</b>	 <b>3,7 Nm</b>
<b>1P+0P 2P+0P</b>	 <b>2,1 Nm</b>	 <b>2,1 Nm</b>
<b>1P+1P 2P+1P</b>	 <b>42,8 Nm</b>	 <b>42,8 Nm</b>
<b>2P+2P</b>	 <b>86,2 Nm</b>	 <b>86,2 Nm</b>

ø 36,5 FLANGE

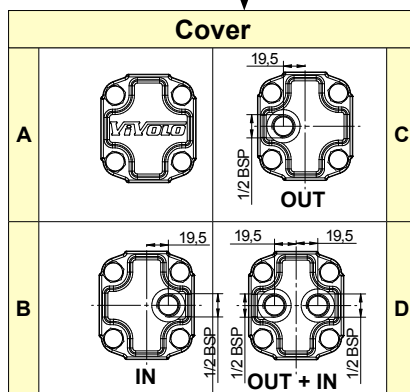


Shaft			
<b>A</b>	<table border="1"> <tr> <td>C1001-Parallel T.2 = 44,1 Nm</td> <td>C1002-Parallel T.2 = 67,5 Nm</td> </tr> </table>	C1001-Parallel T.2 = 44,1 Nm	C1002-Parallel T.2 = 67,5 Nm
C1001-Parallel T.2 = 44,1 Nm	C1002-Parallel T.2 = 67,5 Nm		
<b>E</b>	<table border="1"> <tr> <td>C0001-Tapered T.2 = 233,2 Nm</td> <td>C0002-Tapered T.2 = 233,2 Nm</td> </tr> </table>	C0001-Tapered T.2 = 233,2 Nm	C0002-Tapered T.2 = 233,2 Nm
C0001-Tapered T.2 = 233,2 Nm	C0002-Tapered T.2 = 233,2 Nm		
<b>G</b>	<table border="1"> <tr> <td>SCF02-Splined T.2 = 86,1 Nm</td> <td>SCF03-Splined T.2 = 86,1 Nm</td> </tr> </table>	SCF02-Splined T.2 = 86,1 Nm	SCF03-Splined T.2 = 86,1 Nm
SCF02-Splined T.2 = 86,1 Nm	SCF03-Splined T.2 = 86,1 Nm		
<b>I</b>	<table border="1"> <tr> <td>SCF04-Splined T.2 = 67,1 Nm</td> <td>SCF01-Splined T.2 = 86,2 Nm</td> </tr> </table>	SCF04-Splined T.2 = 67,1 Nm	SCF01-Splined T.2 = 86,2 Nm
SCF04-Splined T.2 = 67,1 Nm	SCF01-Splined T.2 = 86,2 Nm		

**G M 3 02 E C A G51 G51 ..... X23**

NUMBER OF ELEMENTS

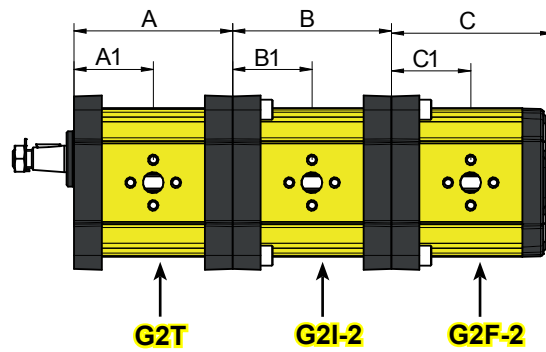
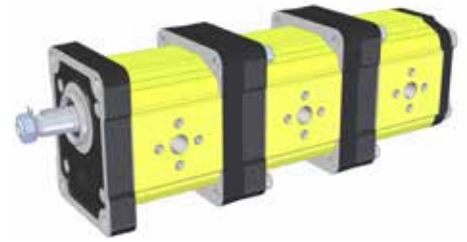
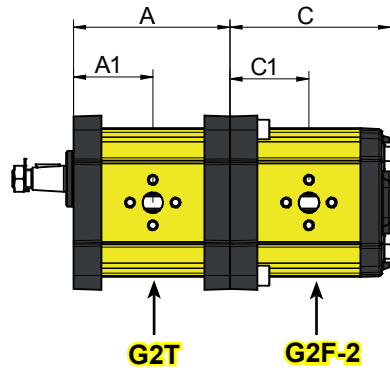
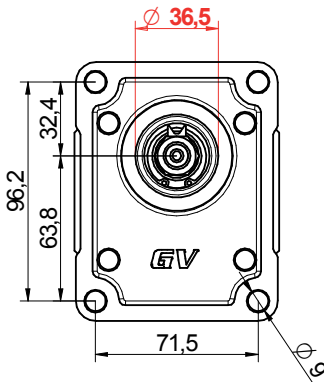
Body	
C	
Q	
G	 BSP
M	 METRICS
A	 UNF



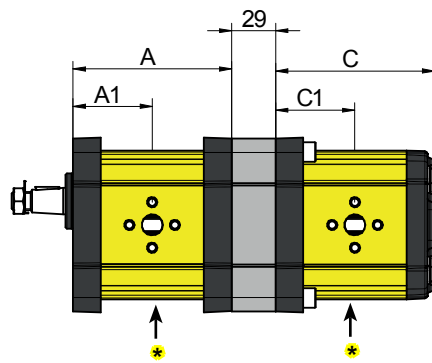
DISPLACEMENT	
G41	GV-2P/ 4
G43	GV-2P/ 6
G45	GV-2P/ 9
G47	GV-2P/ 11
G49	GV-2P/14
G51	GV-2P/17
G53	GV-2P/19
G55	GV-2P/22
G57	GV-2P/26
G59	GV-2P/30
G61	GV-2P/34
G63	GV-2P/40
X41	XV-2P/ 4
X43	XV-2P/ 6
X45	XV-2P/ 9
X47	XV-2P/ 11
X49	XV-2P/14
X51	XV-2P/17
X53	XV-2P/19
X55	XV-2P/22
X57	XV-2P/26
X59	XV-2P/30
X61	XV-2P/34
X63	XV-2P/40

Serie XV Serie with aluminium cover and flange	
DISPLACEMENT	
X01	XV-0P/0.17
X02	XV-0P/0.25
X04	XV-0P/0.45
X05	XV-0P/0.57
X06	XV-0P/0.76
X07	XV-0P/0.98
X09	XV-0P/1.27
X11	XV-0P/1.52
X13	XV-0P/2.30
X16	XV-1P/0.9
X17	XV-1P/1.2
X18	XV-1P/1.7
X20	XV-1P/2.2
X21	XV-1P/2.6
X23	XV-1P/3.2
X25	XV-1P/3.8
X27	XV-1P/4.3
X29	XV-1P/4.9
X31	XV-1P/5.9
X32	XV-1P/6.5
X34	XV-1P/7.8
X36	XV-1P/9.8

ø 36,5 FLANGE



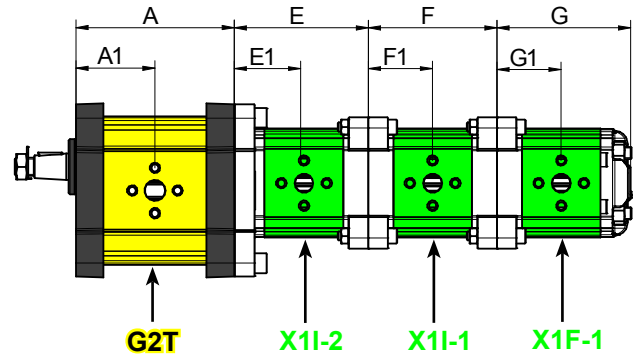
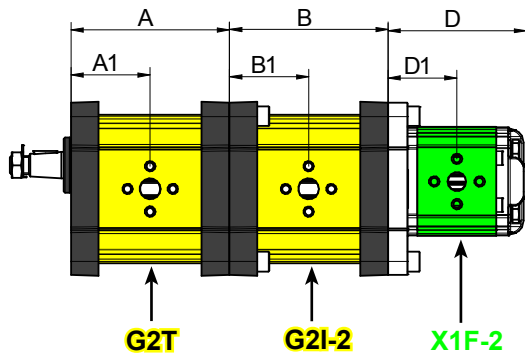
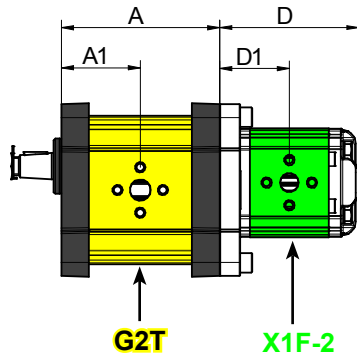
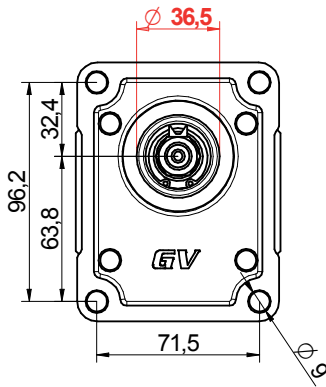
SEPARATED STAGES



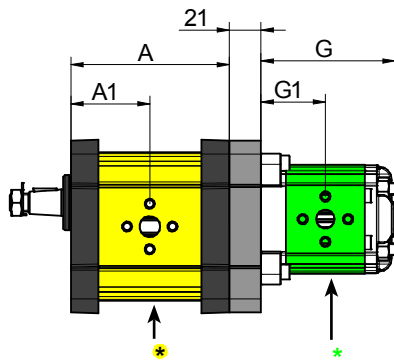
\* = SPECIAL ELEMENT, please contact our customer service for details.

TYPE	Displacement Cm3/rev	A mm	A1 mm	B mm	B1 mm	C mm	C1 mm	P1 bar	P3 bar	Min Speed rpm	Max Speed rpm
GV-2 / 4	4,20	83,4	41,7	83,4	41,7	85,2	41,7	260	300	700	4000
GV-2 / 6	6,00	86,4	43,2	86,4	43,2	88,2	43,2	260	300	700	3500
GV-2 / 9	8,40	90,4	45,2	90,4	45,2	92,2	45,2	260	300	700	3500
GV-2 / 11	10,80	94,4	47,2	94,4	47,2	96,2	47,2	260	300	700	3500
GV-2 / 14	14,40	100,4	50,2	100,4	50,2	102,2	50,2	250	290	700	3500
GV-2 / 17	16,80	104,4	52,2	104,4	52,2	106,2	52,2	230	270	700	3500
GV-2 / 19	19,20	108,4	54,2	108,4	54,2	110,2	54,2	210	250	700	3000
GV-2 / 22	22,80	114,4	57,2	114,4	57,2	116,2	57,2	200	240	700	3000
GV-2 / 26	26,20	118,4	59,2	118,4	59,2	120,2	59,2	170	210	700	3000
GV-2 / 30	30,00	126,4	63,2	126,4	63,2	128,2	63,2	160	200	700	2500
GV-2 / 34	34,20	133,4	66,7	133,4	66,7	135,2	66,7	150	190	700	2500
GV-2 / 40	39,60	142,4	71,2	142,4	71,2	144,2	71,2	140	180	700	2000

ø 36,5 FLANGE



SEPARATED STAGES



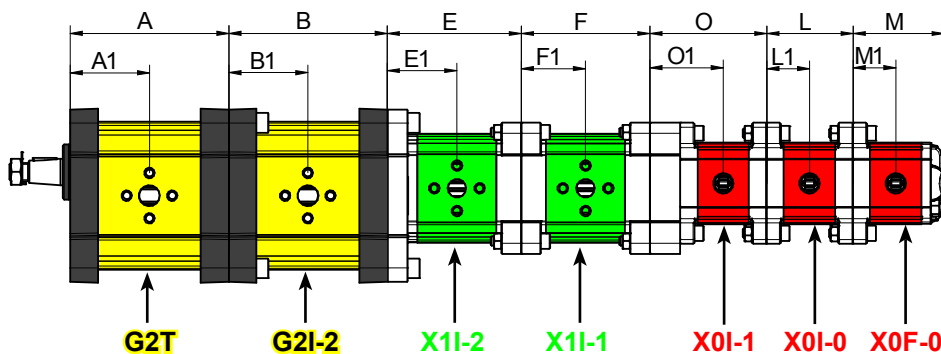
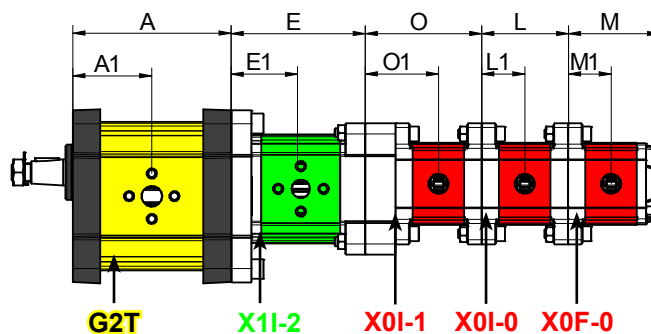
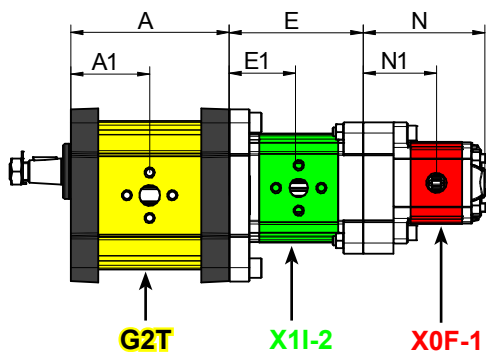
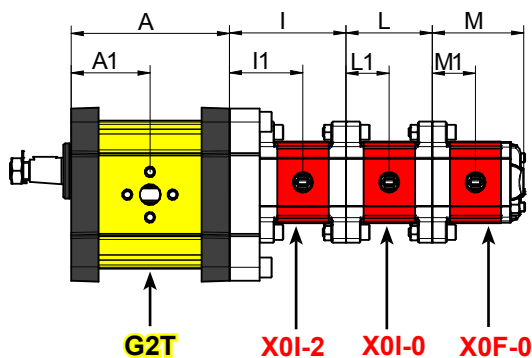
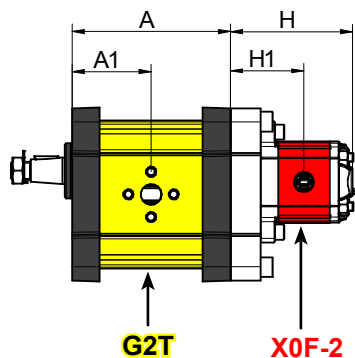
\* = SPECIAL ELEMENT, please contact our customer service for details.

TYPE	Displacement Cm3/rev	A mm	A1 mm	B mm	B1 mm	C mm	C1 mm	P1 bar	P3 bar	Min Speed rpm	Max Speed rpm
GV-2 / 4	4,20	83,4	41,7	83,4	41,7	87,2	41,7	260	300	700	4000
GV-2 / 6	6,00	86,4	43,2	86,4	43,2	90,2	43,2	260	300	700	3500
GV-2 / 9	8,40	90,4	45,2	90,4	45,2	94,2	45,2	260	300	700	3500
GV-2 / 11	10,80	94,4	47,2	94,4	47,2	98,2	47,2	260	300	700	3500
GV-2 / 14	14,40	100,4	50,2	100,4	50,2	104,2	50,2	250	290	700	3500
GV-2 / 17	16,80	104,4	52,2	104,4	52,2	108,2	52,2	230	270	700	3500
GV-2 / 19	19,20	108,4	54,2	108,4	54,2	112,2	54,2	210	250	700	3000
GV-2 / 22	22,80	114,4	57,2	114,4	57,2	118,2	57,2	200	240	700	3000
GV-2 / 26	26,20	118,4	59,2	118,4	59,2	122,2	59,2	170	210	700	3000
GV-2 / 30	30,00	126,4	63,2	126,4	63,2	130,2	63,2	160	200	700	2500
GV-2 / 34	34,20	133,4	66,7	133,4	66,7	137,2	66,7	150	190	700	2500
GV-2 / 40	39,60	142,4	71,2	142,4	71,2	146,2	71,2	140	180	700	2000

# Assembled Multiple Pumps - GV serie "CAST IRON"

**GV-2**

ø 36,5 FLANGE

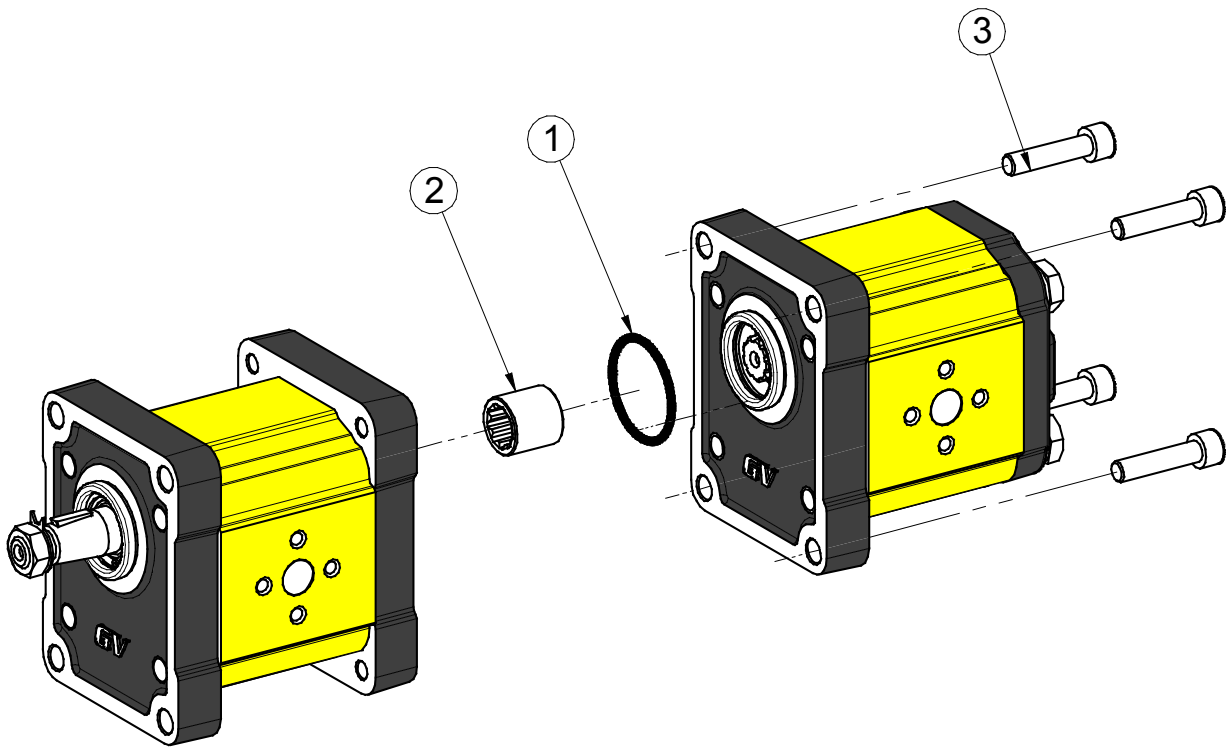


TYPE	Displacement Cm3/rev	D mm	D1 mm	E mm	E1 mm	F mm	F1 mm	G mm	G1 mm	P1 bar	P3 bar	Min Speed rpm	Max Speed rpm
XV-1 / 0,9	0,91	81,5	40,8	78	40,8	74,5	37,3	78	37,3	240	280	700	6000
XV-1 / 1,2	1,17	82,5	41,3	79	41,3	75,5	37,8	79	37,8	250	290	700	6000
XV-1 / 1,7	1,56	84	42	80,5	42	77	38,5	80,5	38,5	250	290	700	6000
XV-1 / 2,2	2,08	86	43	82,5	43	79	39,5	82,5	39,5	250	290	700	6000
XV-1 / 2,6	2,60	88	44	84,5	44	81	40,5	84,5	40,5	250	300	700	6000
XV-1 / 3,2	3,12	90	45	86	45	83	41,5	86	41,5	250	300	700	6000
XV-1 / 3,8	3,64	92	46	88,5	46	85	42,5	88,5	42,5	250	300	700	6000
XV-1 / 4,3	4,26	94	47	90,5	47	87	43,5	90,5	43,5	250	300	700	6000
XV-1 / 4,9	4,94	97	48,5	93,5	48,5	90	45	93,5	45	250	300	700	6000
XV-1 / 5,9	5,85	100,5	50,3	97	50,3	93,5	46,8	97	46,8	250	300	700	5000
XV-1 / 6,5	6,50	103	51,5	99,5	51,5	96	48	99,5	48	250	300	700	5000
XV-1 / 7,8	7,54	107	53,5	103,5	53,5	100	50	103,5	50	220	260	700	5000
XV-1 / 9,8	9,88	116	58	112,5	58	109	54,5	112,5	54,5	190	230	700	4000

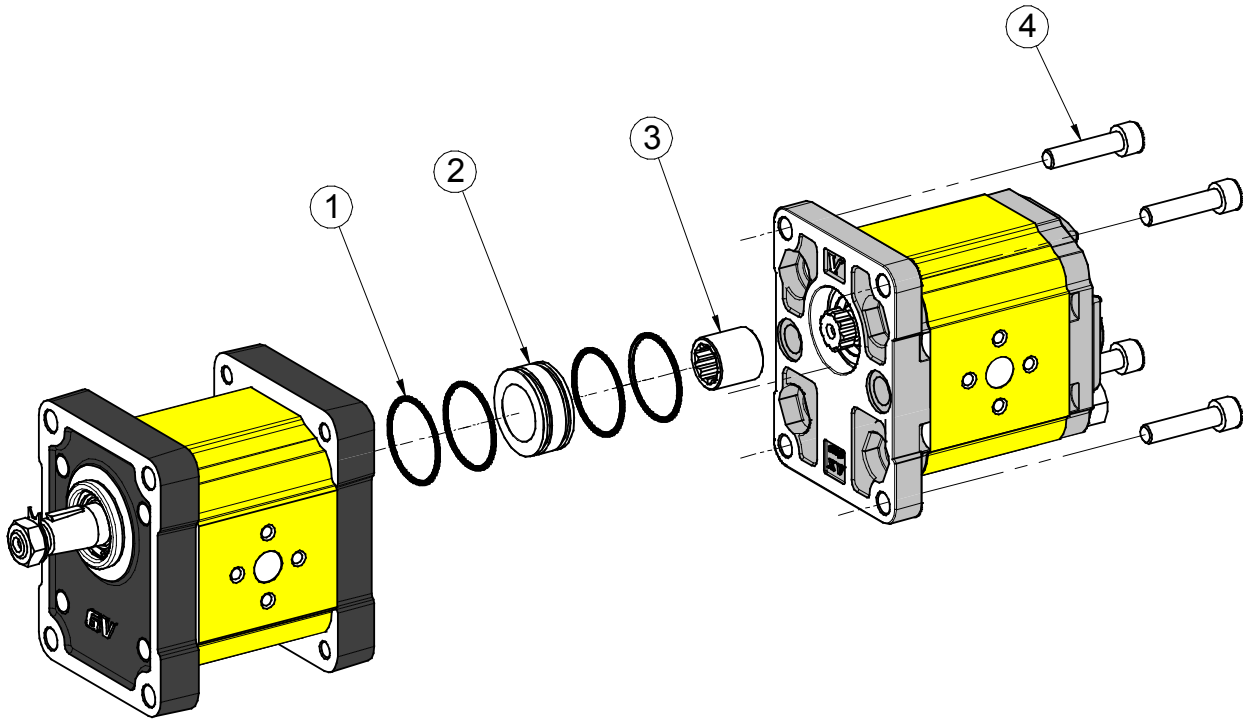
TYPE	Displacement Cm3/rev	H mm	H1 mm	I mm	I1 mm	L mm	L1 mm	M mm	M1 mm	N mm	N1 mm	O mm	O1 mm	P1 bar	P3 bar	Min Speed rpm	Max Speed rpm
XV-0 / 0,17	0,16	75,8	46,2	72,3	46,2	52,3	26,2	55,8	26,2	75,8	46,2	72,3	46,2	220	260	700	9000
XV-0 / 0,25	0,24	76,4	46,5	72,9	46,5	52,9	26,5	56,4	26,5	76,4	46,5	72,9	46,5	220	260	700	9000
XV-0 / 0,45	0,45	78	47,3	74,5	47,3	54,5	27,3	58	27,3	78	47,3	74,5	47,3	220	280	700	9000
XV-0 / 0,57	0,56	79	47,8	75,5	47,8	55,5	27,8	59	27,8	79	47,8	75,5	47,8	220	280	700	9000
XV-0 / 0,76	0,75	80,5	48,5	77	48,5	57	28,5	60,5	28,5	80,5	48,5	77	48,5	220	280	700	9000
XV-0 / 0,98	0,92	82	49,3	78,5	49,3	58,5	29,3	62	29,3	82	49,3	78,5	49,3	220	280	700	6000
XV-0 / 1,27	1,26	84,5	50,5	81	50,5	61	30,5	64,5	30,5	84,5	50,5	81	50,5	220	280	700	6000
XV-0 / 1,52	1,48	86,5	51,5	83	51,5	63	31,5	66,5	31,5	86,5	51,5	83	51,5	220	280	700	6000
XV-0 / 2,30	2,28	92,5	54,5	89	54,5	69	34,5	72,5	34,5	92,5	54,5	89	54,5	220	210	700	5000

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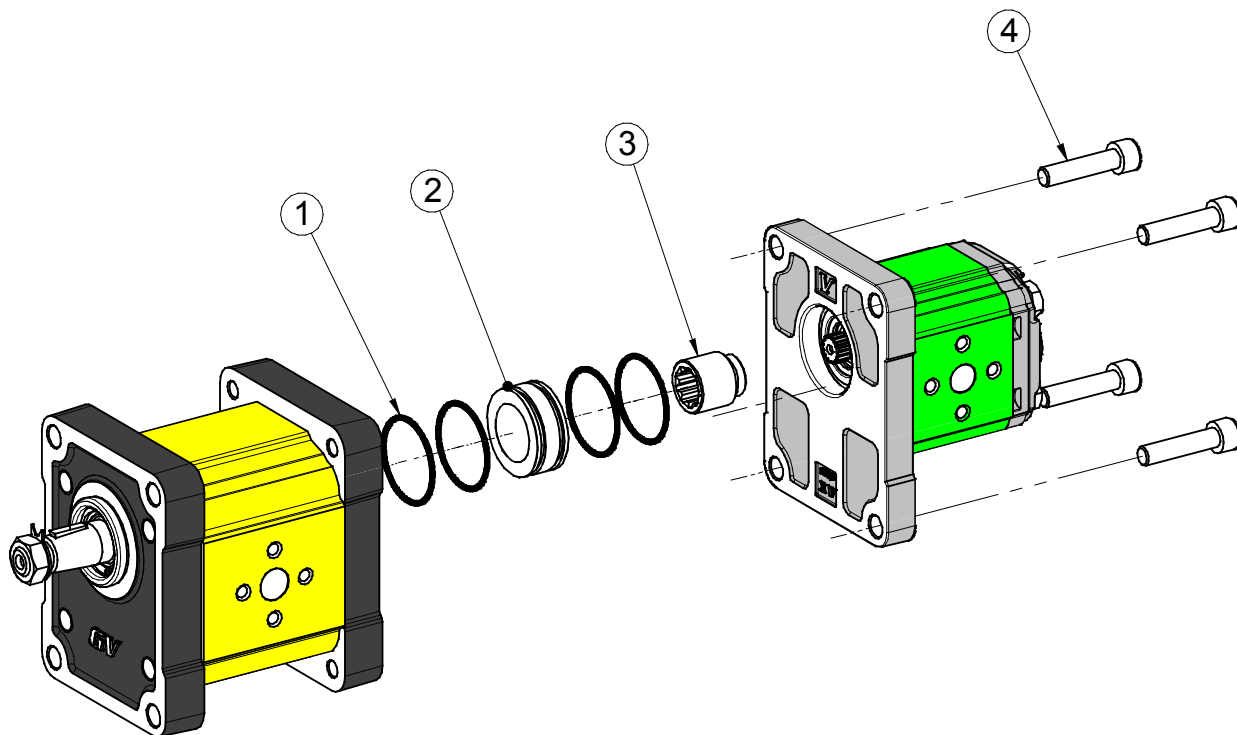


CODE : 8KITR016			LINKING KIT GV2 + GV2
POS	CODE	QUANTITY	DESCRIPTION
1	650.0050.A	1	OR 36.17 x 2.62
2	200.0019.B	1	GROOVED SLEEVE 2P+2P - 2DF+2DF - L=21 Øe=22 Z=9
3	521.0008.AL035	4	SCREW TCCE M8x35 UNI 5931 8.8



CODE : 8KITR004			LINKING KIT GV2 + XV2
POS	CODE	QUANTITY	DESCRIPTION
1	640.0045.A	4	OR 33.05 x 1.78
2	200.0065.A	1	CENTERING RING KV 2P + 2P
3	200.0019.B	1	GROOVED SLEEVE 2P+2P - 2DF+2DF - L=21 Øe=22 Z=9
4	521.0008.AL035	4	SCREW TCCE M8x35 UNI 5931 8.8

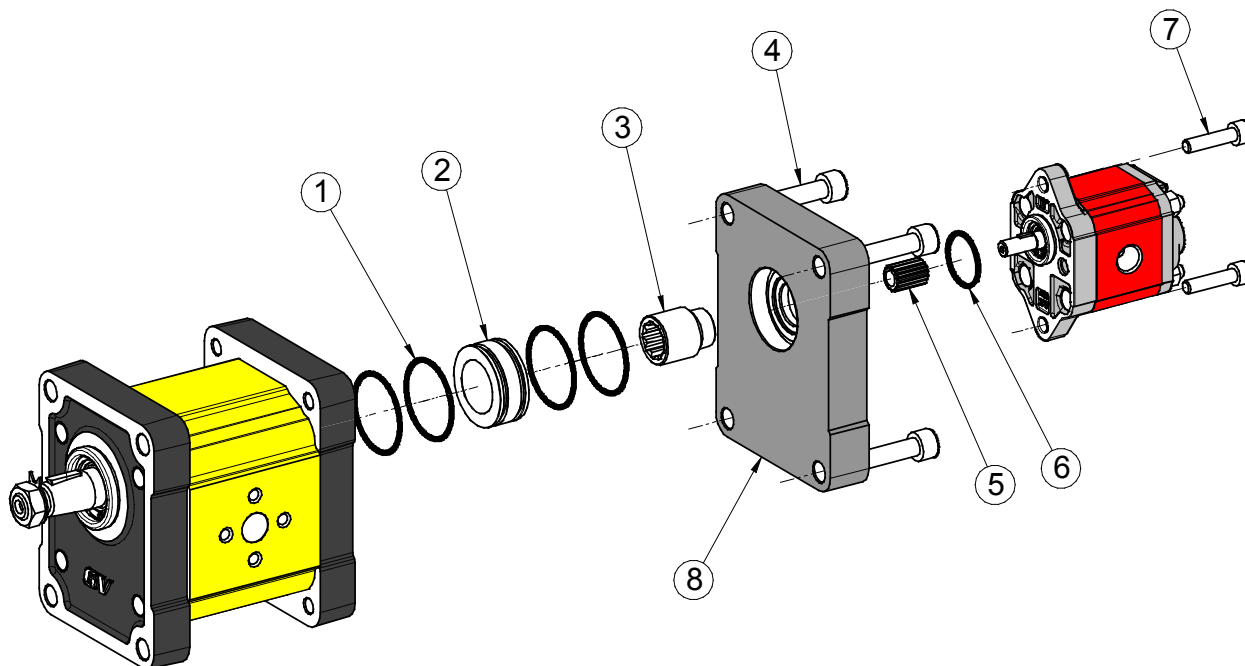
NOTE: THIS KIT IS THE SAME OF XV SERIE



CODE : 8KITR005			LINKING KIT GV2 + XV1
POS	CODE	QUANTITY	DESCRIPTION
1	640.0045.A	4	OR 33.05 x 1.78
2	200.0065.A	1	CENTERING RING KV 2P + 2P
3	200.0046.A	1	GROOVED SLEEVE 2P+1P - L=23 Øe=22 Z=9 + Øe=17 Z=15
4	521.0008.AL035	4	SCREW TCCE M8x35 UNI 5931 8.8

NOTE: THIS KIT IS THE SAME OF XV SERIE





CODE : 8KITR006			LINKING KIT GV2 + XV0
POS	CODE	QUANTITY	DESCRIPTION
1	640.0045.A	4	OR 33.05 x 1.78
2	200.0065.A	1	CENTERING RING KV 2P + 2P
3	200.0162.A	1	GROOVED SLEEVE 2P+0P - 2P+1P(2 ALB e TEN.SEP) L=27 Z=9+Z=15
4	521.0008.AL040	4	SCREW TCCE M8x40 UNI 5931 8.8
5	050.0040.A	1	GROOVED SLEEVE. 0P+1P MASCHIO L=24 Z=15 12x10
6	640.0030.A	1	OR 21.95 x 1.78
7	521.0006.AL025	2	SCREW TCCE M6x25 UNI 5931 8.8

CODE : 8KITR008			LINKING KIT GV2 + XV0 with Flange
POS	CODE	QUANTITY	DESCRIPTION
	8KITR006	2	KIT 2P+0P
8	200.0170.A	1	MOUNTING FLANGE KV 2P+0P

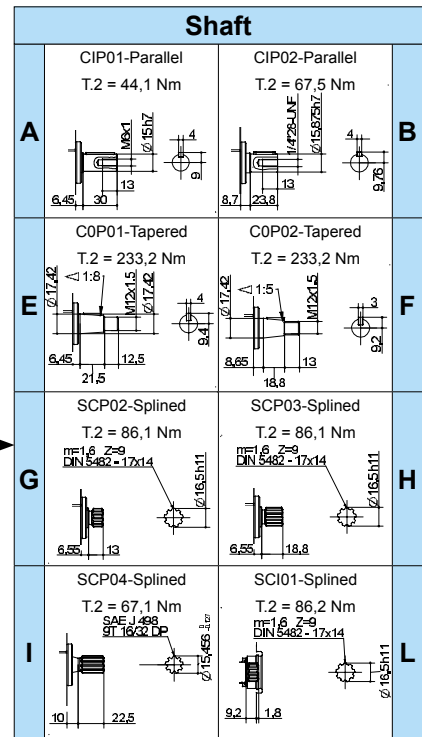
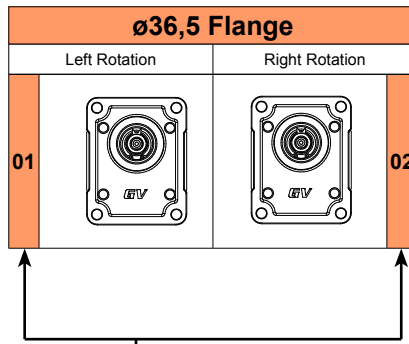
NOTE: THIS KIT IS THE SAME OF XV SERIE

# Primary Pump - GV serie "CAST IRON"

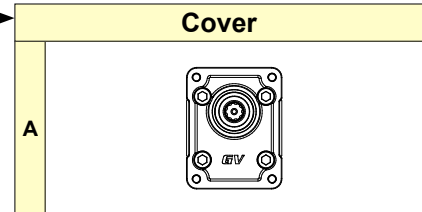
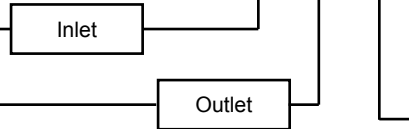
ENCODE  
ø 36,5 FLANGE

GV-2

Displacement	
TYPE	CODE
GV-2T/ 4	41
GV-2T/ 6	43
GV-2T/ 9	45
GV-2T/ 11	47
GV-2T/14	49
GV-2T/17	51
GV-2T/19	53
GV-2T/22	55
GV-2T/26	57
GV-2T/30	59
GV-2T/34	61
GV-2T/40	63



**G 2 T 51 02 E P O A**



Standard Bodies					
TYPE	Standard Threads/Flanges				
	European	German	Bsp	UNF	Close
GV-2T/ 4	O-O	S-R	B-B	L-M	Z-Z
GV-2T/ 6	O-O	S-R	B-B	L-M	Z-Z
GV-2T/ 9	O-O	S-R	B-B	L-M	Z-Z
GV-2T/ 11	O-O	S-R	B-B	L-M	Z-Z
GV-2T/14	P-O	S-R	C-B	L-M	Z-Z
GV-2T/17	P-O	S-R	C-B	L-M	Z-Z
GV-2T/19	P-O	S-R	C-B	L-M	Z-Z
GV-2T/22	P-O	S-R	C-B	L-M	Z-Z
GV-2T/26	Q-P	S-R	D-C	L-M	Z-Z
GV-2T/30	Q-P	S-S	D-C	L-M	Z-Z
GV-2T/34	Q-P	S-S	D-C	L-M	Z-Z
GV-2T/40	Q-P	S-S	D-C	L-M	Z-Z

EUROPEAN				
TYPE	D	E	F	
<b>O</b>	ø13,5	ø30	M6	
<b>P</b>	ø20	ø40	M8	
<b>Q</b>	ø23,5	ø40	M8	

UNF		
TYPE	D	
<b>L</b>	1"-1/16-12 UNF	
<b>M</b>	7/8"-14 UNF	
<b>N</b>	1"-5/16-12 UNF	

GERMAN				
TYPE	D	E	F	
<b>S</b>	ø15	ø35	M6	
<b>R</b>	ø20	ø40	M6	

BSP		
TYPE	D	
<b>A</b>	3/8" BSP	
<b>B</b>	1/2" BSP	
<b>C</b>	3/4" BSP	
<b>D</b>	1" BSP	

SAE				
TYPE	A	B	D	F
<b>T</b>	22	48	20	M6
<b>U</b>	17,5	38	15	M8
<b>V</b>	17,5	38	15	M6
<b>Z</b>	BODY CLOSED			

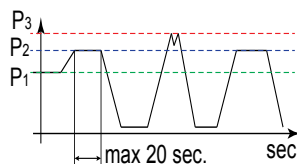
METRICS		
TYPE	D	
<b>E</b>	M14 x 1,5	
<b>F</b>	M16 x 1,5	
<b>G</b>	M18 x 1,5	
<b>H</b>	M20 x 1,5	
<b>I</b>	M22 x 1,5	

# Primary Pump - GV serie "CAST IRON"

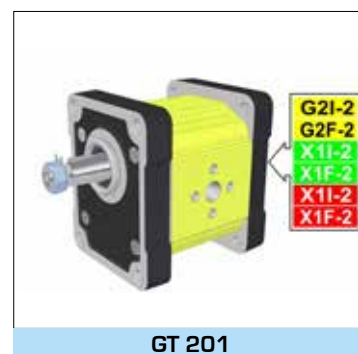
# GV-2

Ø 36,5 FLANGE - TAPER SHAFT

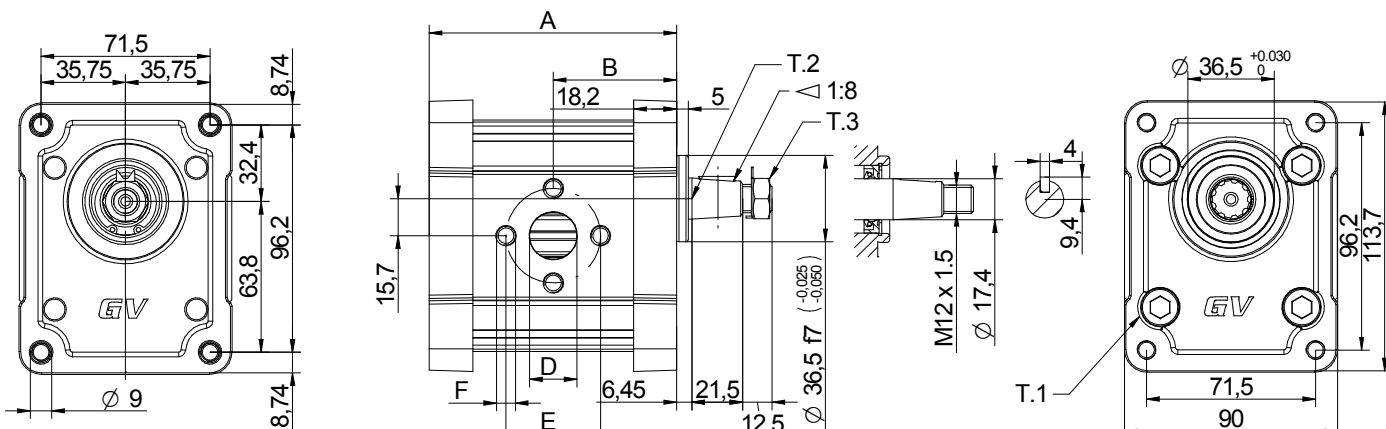
TYPE	Displacement cm <sup>3</sup> /rev	Max. Pressure			Min speed rpm	Max speed rpm
		P1 (bar)	P2 (bar)	P3 (bar)		
GV-2T/04	4,20	280	290	310	700	3500
GV-2T/06	6,00	280	290	310	700	3500
GV-2T/09	8,40	280	290	310	700	3500
GV-2T/11	10,80	280	290	310	700	3500
GV-2T/14	14,40	270	280	300	700	3500
GV-2T/17	16,80	250	260	280	700	3500
GV-2T/19	19,20	230	240	260	700	3000
GV-2T/22	22,80	220	230	250	700	3000
GV-2T/26	26,20	190	200	220	700	3000
GV-2T/30	30,00	180	190	210	700	2500
GV-2T/34	34,20	170	180	200	700	2500
GV-2T/40	39,60	160	180	190	700	2000



P1 = Max. working pressure  
 P2 = Max. intermittent pressure  
 P3 = Max. peak pressure



GT 201



29/05/12 G2T510ZEP0A.dft

T.1 = 54 ± 58,9 [Nm] - screw tightening torque M 10

T.3 = 40 [Nm] - torque wrench setting 19

T.2 = 233,2 [Nm] - admissible shaft torque (N.B. When choosing a shaft, always check the admissible torque).

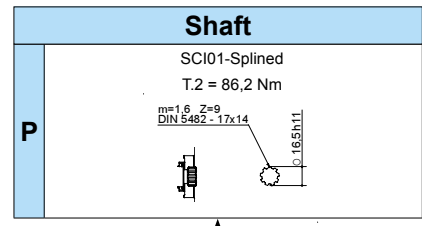
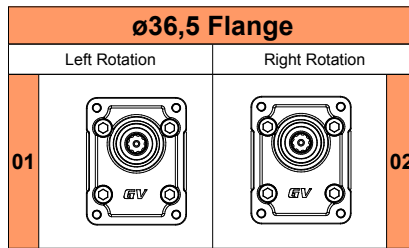
TYPE	Weight kg	A mm	B mm	C mm	D IN	E IN	F IN	D OUT	E OUT	F OUT	CODE												
											Left Rotation						Right Rotation						
GV-2T/04	3,500	83,4	41,7	Ø13.5	30	M6	Ø13.5	30	M6	G	2T	41	01	E	OO	A	G	2T	41	02	E	OO	A
GV-2T/06	3,600	86,4	43,2	Ø13.5	30	M6	Ø13.5	30	M6	G	2T	43	01	E	OO	A	G	2T	43	02	E	OO	A
GV-2T/09	3,700	90,4	45,2	Ø13.5	30	M6	Ø13.5	30	M6	G	2T	45	01	E	OO	A	G	2T	45	02	E	OO	A
GV-2T/11	3,800	94,4	47,2	Ø13.5	30	M6	Ø13.5	30	M6	G	2T	47	01	E	OO	A	G	2T	47	02	E	OO	A
GV-2T/14	4,000	100,4	50,2	Ø20	40	M8	Ø13.5	30	M6	G	2T	49	01	E	PO	A	G	2T	49	02	E	PO	A
GV-2T/17	4,100	104,4	52,2	Ø20	40	M8	Ø13.5	30	M6	G	2T	51	01	E	PO	A	G	2T	51	02	E	PO	A
GV-2T/19	4,200	108,4	54,2	Ø20	40	M8	Ø13.5	30	M6	G	2T	53	01	E	PO	A	G	2T	53	02	E	PO	A
GV-2T/22	4,350	114,4	57,2	Ø20	40	M8	Ø13.5	30	M6	G	2T	55	01	E	PO	A	G	2T	55	02	E	PO	A
GV-2T/26	4,450	118,4	59,2	Ø23.5	40	M8	Ø20	40	M8	G	2T	57	01	E	QP	A	G	2T	57	02	E	QP	A
GV-2T/30	4,700	126,4	63,2	Ø23.5	40	M8	Ø20	40	M8	G	2T	59	01	E	QP	A	G	2T	59	02	E	QP	A
GV-2T/34	4,900	133,4	66,7	Ø23.5	40	M8	Ø20	40	M8	G	2T	61	01	E	QP	A	G	2T	61	02	E	QP	A
GV-2T/40	5,100	142,4	71,2	Ø23.5	40	M8	Ø20	40	M8	G	2T	63	01	E	QP	A	G	2T	63	02	E	QP	A

# Intermediate Pump - GV serie "CAST IRON"

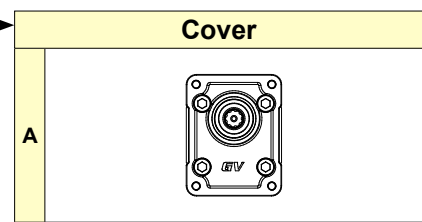
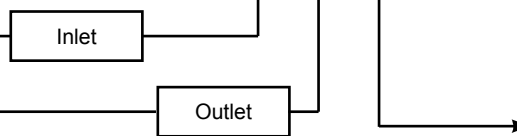
# GV-2

ENCODE  
ø 36,5 FLANGE

Displacement	
TYPE	CODE
GV-2I/ 4	41
GV-2I/ 6	43
GV-2I/ 9	45
GV-2I/ 11	47
GV-2I/14	49
GV-2I/17	51
GV-2I/19	53
GV-2I/22	55
GV-2I/26	57
GV-2I/30	59
GV-2I/34	61
GV-2I/40	63



**G 2 I 51 02 P P O A**



Standard Bodies					
TYPE	Standard Threads/Flanges				
	European	German	Bsp	UNF	Close
GV-2I/ 4	O-O	S-R	B-B	L-M	Z-Z
GV-2I/ 6	O-O	S-R	B-B	L-M	Z-Z
GV-2I/ 9	O-O	S-R	B-B	L-M	Z-Z
GV-2I/ 11	O-O	S-R	B-B	L-M	Z-Z
GV-2I/14	P-O	S-R	C-B	L-M	Z-Z
GV-2I/17	P-O	S-R	C-B	L-M	Z-Z
GV-2I/19	P-O	S-R	C-B	L-M	Z-Z
GV-2I/22	P-O	S-R	C-B	L-M	Z-Z
GV-2I/26	Q-P	S-R	D-C	L-M	Z-Z
GV-2I/30	Q-P	S-S	D-C	L-M	Z-Z
GV-2I/34	Q-P	S-S	D-C	L-M	Z-Z
GV-2I/40	Q-P	S-S	D-C	L-M	Z-Z

EUROPEAN			
TYPE	D	E	F
O	ø13,5	ø30	M6
P	ø20	ø40	M8
Q	ø23,5	ø40	M8

UNF	
TYPE	D
L	1"-1/16-12 UNF
M	7/8"-14 UNF
N	1"-5/16-12 UNF

GERMAN			
TYPE	D	E	F
S	ø15	ø35	M6
R	ø20	ø40	M6

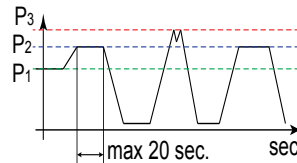
BSP	
TYPE	D
A	3/8" BSP
B	1/2" BSP
C	3/4" BSP
D	1" BSP

SAE				
TYPE	A	B	D	F
T	22	48	20	M6
U	17,5	38	15	M8
V	17,5	38	15	M6
Z	BODY CLOSED			

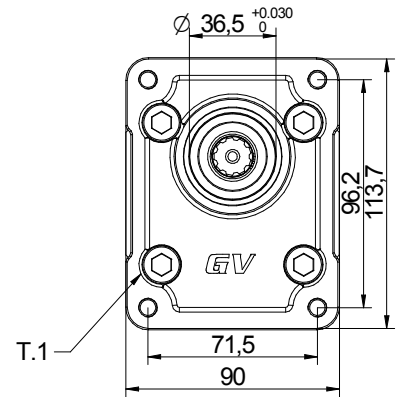
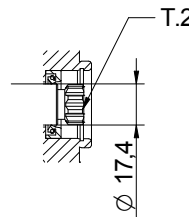
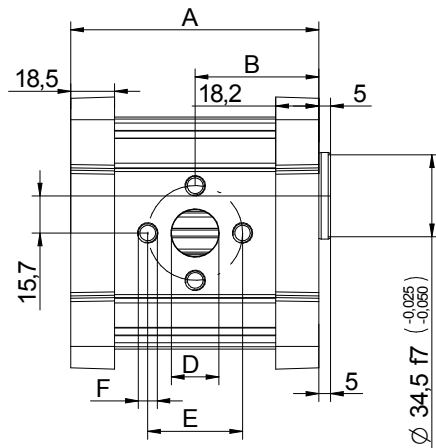
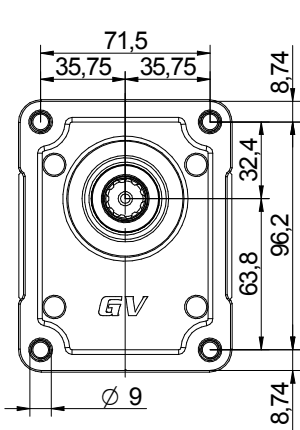
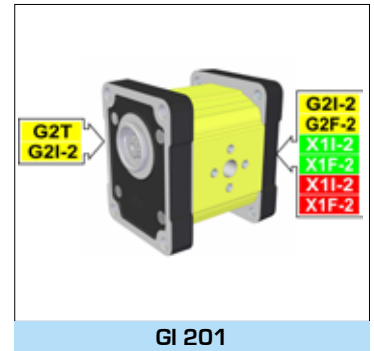
METRICS	
TYPE	D
E	M14 x 1.5
F	M16 x 1.5
G	M18 x 1.5
H	M20 x 1.5
I	M22 x 1.5

ø 36,5 FLANGE

TYPE	Displacement cm <sup>3</sup> /rev	Max. Pressure			Min speed rpm	Max speed rpm
		P1 (bar)	P2 (bar)	P3 (bar)		
GV-2I/04	4,20	280	290	310	700	3500
GV-2I/06	6,00	280	290	310	700	3500
GV-2I/09	8,40	280	290	310	700	3500
GV-2I/11	10,80	280	290	310	700	3500
GV-2I/14	14,40	270	280	300	700	3500
GV-2I/17	16,80	250	260	280	700	3500
GV-2I/19	19,20	230	240	260	700	3000
GV-2I/22	22,80	220	230	250	700	3000
GV-2I/26	26,20	190	200	220	700	3000
GV-2I/30	30,00	180	190	210	700	2500
GV-2I/34	34,20	170	180	200	700	2500
GV-2I/40	39,60	160	180	190	700	2000



P1 = Max. working pressure  
 P2 = Max. intermittent pressure  
 P3 = Max. peak pressure



29/05/12 G2I5102PPOA.dft

T.1 = 54 ±58,9 [Nm] - screw tightening torque M 10

T.2 = 86,2 [Nm] - admissible shaft torque (N.B. When choosing a shaft, always check the admissible torque).

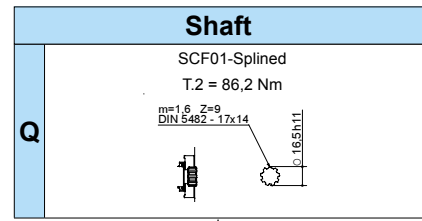
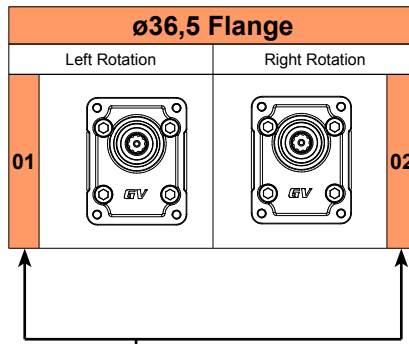
TYPE	Weight kg	A mm	B mm	C mm	D IN	E IN	F IN	D IN	E IN	F IN	CODE												
											Left Rotation						Right Rotation						
GV-2I/04	3,500	83,4	41,7	ø13.5	30	M6	ø13.5	30	M6	G	2I	41	01	P	OO	A	G	2I	41	02	P	OO	A
GV-2I/06	3,600	86,4	43,2	ø13.5	30	M6	ø13.5	30	M6	G	2I	43	01	P	OO	A	G	2I	43	02	P	OO	A
GV-2I/09	3,700	90,4	45,2	ø13.5	30	M6	ø13.5	30	M6	G	2I	45	01	P	OO	A	G	2I	45	02	P	OO	A
GV-2I/11	3,800	94,4	47,2	ø13.5	30	M6	ø13.5	30	M6	G	2I	47	01	P	OO	A	G	2I	47	02	P	OO	A
GV-2I/14	4,000	100,4	50,2	ø20	40	M8	ø13.5	30	M6	G	2I	49	01	P	PO	A	G	2I	49	02	P	PO	A
GV-2I/17	4,100	104,4	52,2	ø20	40	M8	ø13.5	30	M6	G	2I	51	01	P	PO	A	G	2I	51	02	P	PO	A
GV-2I/19	4,200	108,4	54,2	ø20	40	M8	ø13.5	30	M6	G	2I	53	01	P	PO	A	G	2I	53	02	P	PO	A
GV-2I/22	4,350	114,4	57,2	ø20	40	M8	ø13.5	30	M6	G	2I	55	01	P	PO	A	G	2I	55	02	P	PO	A
GV-2I/26	4,450	118,4	59,2	ø23.5	40	M8	ø20	40	M8	G	2I	57	01	P	QP	A	G	2I	57	02	P	QP	A
GV-2I/30	4,700	126,4	63,2	ø23.5	40	M8	ø20	40	M8	G	2I	59	01	P	QP	A	G	2I	59	02	P	QP	A
GV-2I/34	4,900	133,4	66,7	ø23.5	40	M8	ø20	40	M8	G	2I	61	01	P	QP	A	G	2I	61	02	P	QP	A
GV-2I/40	5,100	142,4	71,2	ø23.5	40	M8	ø20	40	M8	G	2I	63	01	P	QP	A	G	2I	63	02	P	QP	A

# Final Pump - GV serie "CAST IRON"

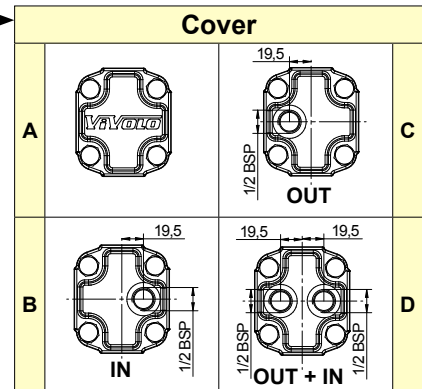
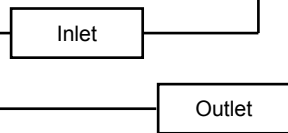
ENCODE  
 ø 36,5 FLANGE

**GV-2**

Displacement	
TYPE	CODE
GV-2F/ 4	41
GV-2F/ 6	43
GV-2F/ 9	45
GV-2F/ 11	47
GV-2F/14	49
GV-2F/17	51
GV-2F/19	53
GV-2F/22	55
GV-2F/26	57
GV-2F/30	59
GV-2F/34	61
GV-2F/40	63



**G 2 F 51 02 Q P O A**



Standard Bodies					
TYPE	Standard Threads/Flanges				
	European	German	Bsp	UNF	Chiuso
GV-2F/ 4	O-O	S-R	B-B	L-M	Z-Z
GV-2F/ 6	O-O	S-R	B-B	L-M	Z-Z
GV-2F/ 9	O-O	S-R	B-B	L-M	Z-Z
GV-2F/ 11	O-O	S-R	B-B	L-M	Z-Z
GV-2F/14	P-O	S-R	C-B	L-M	Z-Z
GV-2F/17	P-O	S-R	C-B	L-M	Z-Z
GV-2F/19	P-O	S-R	C-B	L-M	Z-Z
GV-2F/22	P-O	S-R	C-B	L-M	Z-Z
GV-2F/26	Q-P	S-R	D-C	L-M	Z-Z
GV-2F/30	Q-P	S-S	D-C	L-M	Z-Z
GV-2F/34	Q-P	S-S	D-C	L-M	Z-Z
GV-2F/40	Q-P	S-S	D-C	L-M	Z-Z

EUROPEA			
TYPE	D	E	F
O	ø13,5	ø30	M6
P	ø20	ø40	M8
Q	ø23,5	ø40	M8

UNF	
TYPE	D
L	1"-1/16-12 UNF
M	7/8"-14 UNF
N	1"-5/16-12 UNF

GERMAN			
TYPE	D	E	F
S	ø15	ø35	M6
R	ø20	ø40	M6

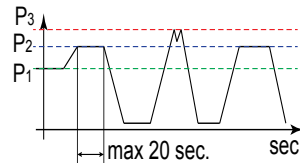
BSP	
TYPE	D
A	3/8" BSP
B	1/2" BSP
C	3/4" BSP
D	1" BSP

SAE				
TYPE	A	B	D	F
T	22	48	20	M6
U	17,5	38	15	M8
V	17,5	38	15	M6
Z	BODY CLOSED			

METRICS	
TYPE	D
E	M14 x 1,5
F	M16 x 1,5
G	M18 x 1,5
H	M20 x 1,5
I	M22 x 1,5

ø 36,5 FLANGE

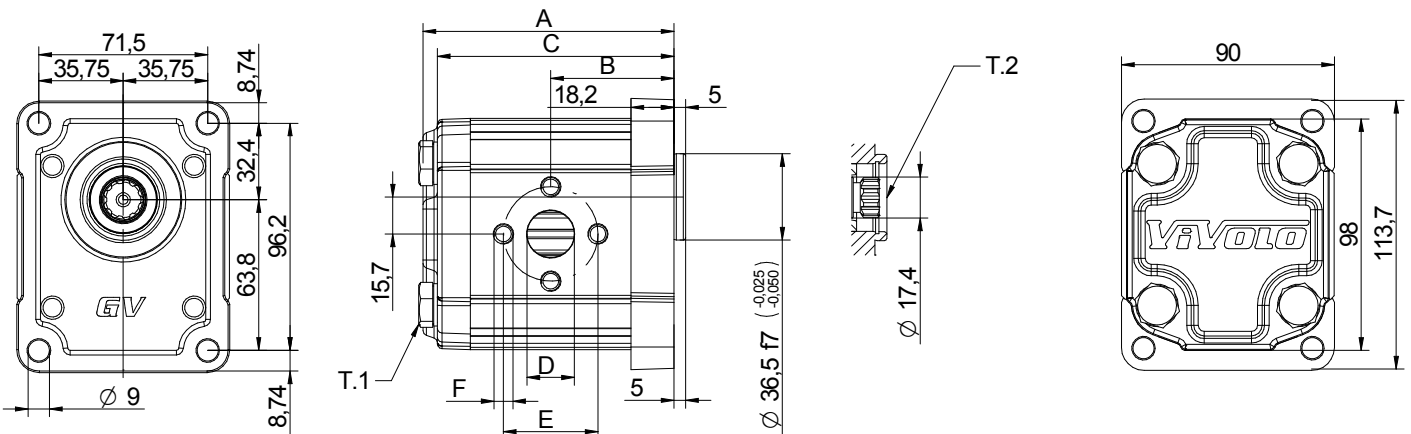
TYPE	Displacement cm <sup>3</sup> /rev	Max. Pressure			Min speed rpm	Max speed rpm
		P1 (bar)	P2 (bar)	P3 (bar)		
GV-2F/04	4,20	280	290	310	700	3500
GV-2F/06	6,00	280	290	310	700	3500
GV-2F/09	8,40	280	290	310	700	3500
GV-2F/11	10,80	280	290	310	700	3500
GV-2F/14	14,40	270	280	300	700	3500
GV-2F/17	16,80	250	260	280	700	3500
GV-2F/19	19,20	230	240	260	700	3000
GV-2F/22	22,80	220	230	250	700	3000
GV-2F/26	26,20	190	200	220	700	3000
GV-2F/30	30,00	180	190	210	700	2500
GV-2F/34	34,20	170	180	200	700	2500
GV-2F/40	39,60	160	180	190	700	2000



P1 = Max. working pressure  
 P2 = Max. intermittent pressure  
 P3 = Max. peak pressure



GF 201



29/05/12 G2F51020POA.dft

T.1 = 54 ±58,9 [Nm] - screw tightening torque M 10

T.2 = 86,2 [Nm] - admissible shaft torque (N.B. When choosing a shaft, always check the admissible torque).

TYPE	Weight kg	A mm	B mm	C mm	D IN	E IN	F IN	D OUT	E OUT	F OUT	CODE													
											Left Rotation						Right Rotation							
GV-2F/04	3,500	85,2	41,7	79,2	ø13.5	30	M6	ø13.5	30	M6	G	2F	41	01	Q	OO	A	G	2F	41	02	Q	OO	A
GV-2F/06	3,600	88,2	43,2	82,2	ø13.5	30	M6	ø13.5	30	M6	G	2F	43	01	Q	OO	A	G	2F	43	02	Q	OO	A
GV-2F/09	3,700	92,2	45,2	86,2	ø13.5	30	M6	ø13.5	30	M6	G	2F	45	01	Q	OO	A	G	2F	45	02	Q	OO	A
GV-2F/11	3,800	96,2	47,2	90,2	ø13.5	30	M6	ø13.5	30	M6	G	2F	47	01	Q	OO	A	G	2F	47	02	Q	OO	A
GV-2F/14	4,000	102,2	50,2	96,2	ø20	40	M8	ø13.5	30	M6	G	2F	49	01	Q	PO	A	G	2F	49	02	Q	PO	A
GV-2F/17	4,100	106,2	52,2	100,2	ø20	40	M8	ø13.5	30	M6	G	2F	51	01	Q	PO	A	G	2F	51	02	Q	PO	A
GV-2F/19	4,200	110,2	54,2	104,2	ø20	40	M8	ø13.5	30	M6	G	2F	53	01	Q	PO	A	G	2F	53	02	Q	PO	A
GV-2F/22	4,350	116,2	57,2	110,2	ø20	40	M8	ø13.5	30	M6	G	2F	55	01	Q	PO	A	G	2F	55	02	Q	PO	A
GV-2F/26	4,450	120,2	59,2	114,2	ø23.5	40	M8	ø20	40	M8	G	2F	57	01	Q	QP	A	G	2F	57	02	Q	QP	A
GV-2F/30	4,700	128,2	63,2	122,2	ø23.5	40	M8	ø20	40	M8	G	2F	59	01	Q	QP	A	G	2F	59	02	Q	QP	A
GV-2F/34	4,900	135,2	66,7	129,2	ø23.5	40	M8	ø20	40	M8	G	2F	61	01	Q	QP	A	G	2F	61	02	Q	QP	A
GV-2F/40	5,100	144,2	71,2	138,2	ø23.5	40	M8	ø20	40	M8	G	2F	63	01	Q	QP	A	G	2F	63	02	Q	QP	A





### FKM (viton) SEALS variant VITON

All versions may be supplied with **FKM (viton)** seals

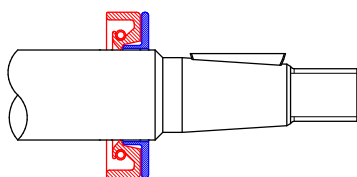
Example of order code:

**Standard**-----G2P5102EPOA

**With FKM (viton ) seals** -----G2P5102EPOA VITON

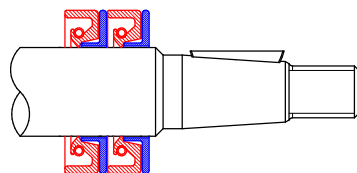
### SEALING RINGS

**Variant VDC**



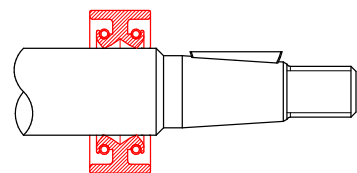
Oil seal with backup washer  
(standard for motors)

**Variant VDCX**



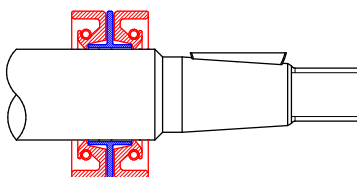
Double oil seal with double  
backup washer

**Variant VDB**



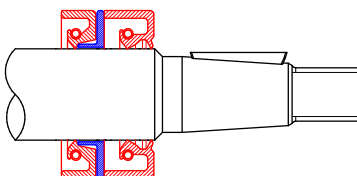
DUPLEX oil seal

**Variant VDBX**



Double opposed oil seal with  
backup washer

**Variant VDCO**



Motor Oil Seal with backup  
washer  
+  
Standard Oil Seal

Example of order code:

**Standard**-----G2P5102EPOA

**With oil seal and retaining washer** ----G2P5102EPOA VDC

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