

# **DISTRIBUTORS**



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# TECHNICAL CATALOGUE

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## INTRODUCTION TO THE CATALOGUE AND SYMBOLS USED

This catalogue consists of:

A topic index;

An introduction page;

Texts and warnings divided into chapters, paragraphs and subsections.

SYMBOLS INDICATING DANGEROUS SITUATIONS OR VERY IMPORTANT INFORMATION.



#### **WARNING!**

Indicates risky situations for people, refers to accident prevention and suggests behavioral procedures.



#### NOTE!

Indicates useful information for the consultation of the manual and the smooth operation of the machine



## GENERAL INFORMATION

#### Introduction

Read and store this technical catalogue carefully. The information in it contained will be needed to correctly select the product.

The components are manufactured in compliance with the directives of the European community concerning the free circulation of industrial goods in the E.U. and is therefore supplied with all the necessary documentation.

The manufacturer has designed the components in order to ensure safe usage conditions.



#### **Purpose of the catalogue**

This catalogue is aimed to present the products in it contained to aid in the selection of the most suitable component for the required application.

SAI hydraulic motors will not be held liable for damages, accidents or drawbacks resulting to the failure to comply to the instructions given in this manual. SAI will also not be held liable for the modification and/or installation of non-authorized accessories.



#### **Updating the catalogue**

It is recommended to constantly keep this catalogue updated by adding amendments, updates or modifications made by the manufacturer. New pages will be sent in the event of minor changes and it will be up to the user to integrate them within the catalogue, replacing the existing ones in the related chapters or paragraphs. A revised copy of the catalogue will be sent to replace the existing version in the event of substantial changes to the components. At which point the old version of the catalogue must be destroyed.







#### **COMMON DEFINITIONS**

In this catalogue and most of the SAI documents the following specific terminology is used to describe specific key points of the SAI products.

The peak values indicate the maximum working conditions that the product can withstand. This means that the component can in fact work at its peak working conditions for a period of time that does not exceed 1% per minute and not more than 10 times per hour.

The cont.us working condition values are the ones that can be applied cont.usly without harming the product. This means that it is the working conditions at which the component can run until the end of its calculated lifetime.



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## HYDRAULIC FLUIDS

#### **MINERAL OILS**

For the combined lubrication wheel motors it is possible to use the same oil stated in the SAI motor catalogues: ISO VG 46. For the separated oil applications the lubricant suggested is: ISO VG 220 SAE 90 EP. SAI suggests to use good quality hydraulic mineral oil, preferably with additives for high pressure, anti-corrosive, anti-wear and anti-foaming. The hydraulic fluid used has to be chosen in order for the viscosity is within the indicated range to the normal working temperature conditions.

#### Admissible temperature range:

Ideal:  $+30^{\circ}$ C to  $+50^{\circ}$ C Allowable:  $-20^{\circ}$ C to  $+80^{\circ}$ C

On request our motors can be manufactured to operate at lower (down to  $-40^{\circ}$ C) or higher (up to  $+120^{\circ}$ C) temperatures.

#### **Operating viscosity range:**

Ideal: 40 cSt to 60 cSt Allowable: 25 cSt to 150 cSt



After the initial start up please verify the level of the lubricant periodically and top up whenever necessary. The first oil change has to be made after 15-20 hours of operation.

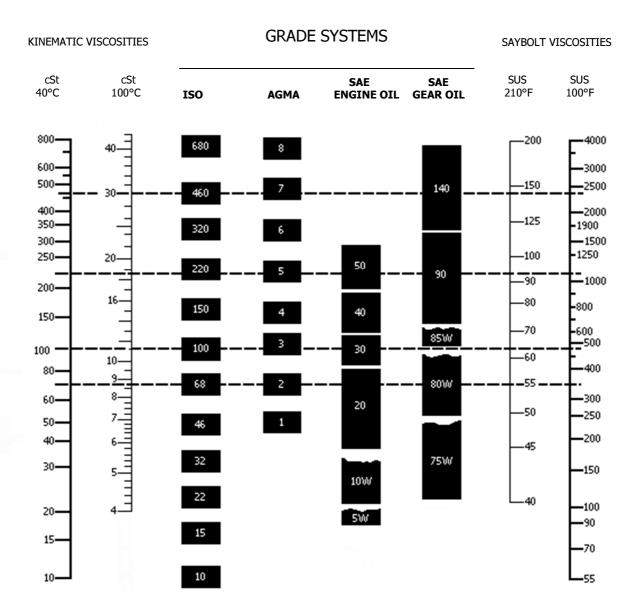
The following changes must be performed after 800-1000 hours, or one year of operation, whichever comes first.

#### **FIRE RESISTANT FLUIDS**

- (i) **Synthetic fluids**: (phosphate esters, polyesters, ...). These fluids have similar characteristics to mineral oils and the same temperature and viscosity ranges are applicable. These kinds of fluids may, however, require seals of suitable material (such as FKM seals) which are available on request.
- (ii) **Water based fluids**: (water-oil emulsions, water-glycol solutions, ...) due to the low viscosity of these fluids the lifetime of the components is reduced.













## START UP

Before connecting the pipes, make sure that they are clean and that there is no rust. On the first start up remove all air from the hydraulic circuit. Make sure that there are no oil leaks from the joints and from the body.

# In the case of separate oil between unit and motor:

Once the unit is secured to the motor fill it with hydraulic oil (see hydraulic fluids on p. 14) using a drainage hole.

The products are tested at the factory and do not need a testing period.



### **FIITRATION**

SAI recommends using filters with gradation up to 25  $\mu$ m, preferably 10  $\mu$ m.

SAI products have a good resistance to contaminated oil; however filter efficiency and therefore clean oil, are important for the correct functioning and reliability of all the components in the hydraulic system.

The efficiency of the filtering agents is greatly reduced with a progressive accumulation of filtered particles, therefore the filters have to be regularly checked. It is recommended to pay close attention at the first start up of the hydraulic system or in the event of a replacement of any component for damage or excessive usage. It is advisable to follow the filter manufacturer's recommendations for its life span and cleaning or substitution cycles.

## PIPES AND CONNECTIONS

SAI recommends the use of high quality piping and connections for high pressure hydraulic applications.

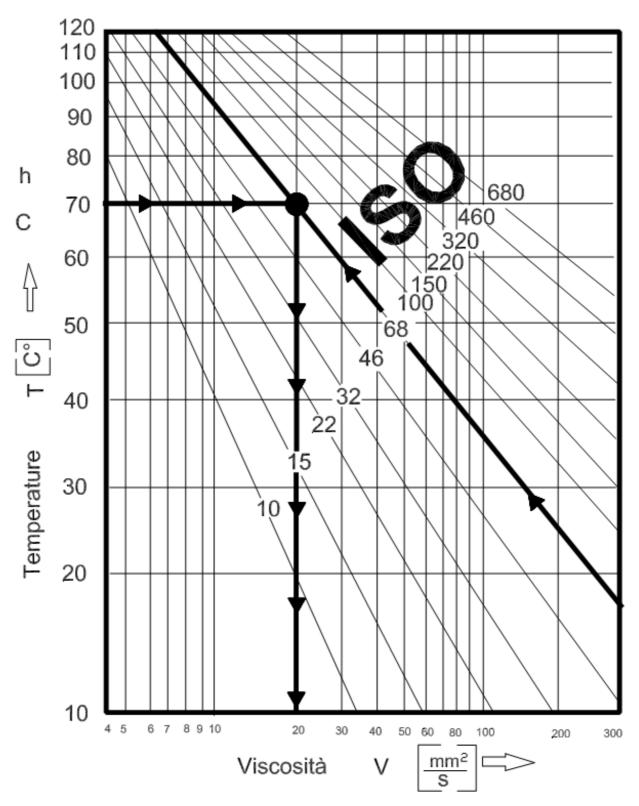
Follow manufacturer's recommendations for pipe sizes, in any case do not use pipes which are smaller than the port connections; to reduce the effects of oil compressibility, use pipes with minimum possible width and diameter and maximum rigidity; to reduce the effects of a load loss avoid sharp corners, restrictions and high flow speed.



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## ISO viscosity classification system.



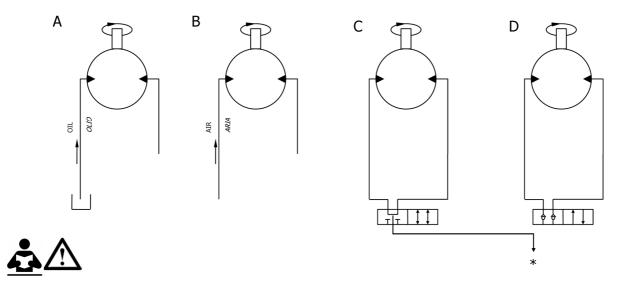




#### SPECIAL CONDITIONS OF USE: FREE WHEELING

All SAI motors can be disconnected from the hydraulic circuit and driven externally for applications where freewheeling, free fall or breakdowns may be present.

The diagrams below show some possible circuit configurations for motor disconnection and/or operation in freewheeling:



**A:** Freewheeling with oil in the circuit. This condition is suitable <u>only for low speeds.</u> With the speed increase it will be necessary to pressurize the inlet to prevent noise due to cavitation.

**B:** Freewheeling with air in the circuit. This condition is ideal for high speed freewheeling applications. The transition from or to normal operation must be done at low speed and low pressure while the pistons are emptying or filling with oil.

**C:** "Short circuit" freewheeling. The motor runs with the inlet and outlet ports connected. This condition is suitable to applications that require speed control with a throttle. WARNING!

Danger of overheating in unfavourable conditions, especially with throttle.

**D: "Vacuum freewheeling".** This is the favourable freewheeling condition for fixed displacement motors, especially for very high speeds. The check valves allow the oil to be expelled from the pistons which subsequently operate under vacuum conditions. The motors can operate in these conditions for several hours without being damaged or overheating. Torque absorption is constant with speed and equivalent to 2 - 3 bar of pressure.

The transition from or to normal operation must be done at low speed and low pressure while the pistons are emptying or filling with oil.

\* BOOST PRESSURE SHOULD BE PROVIDED TO AVOID CAVITATION







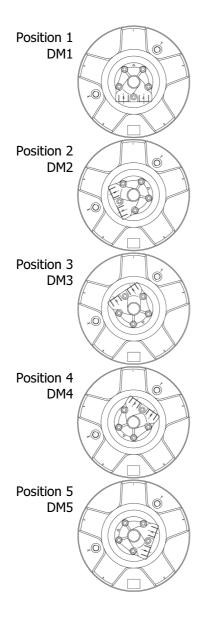
## DISTRIBUTOR COVER ORIENTATION

SAI motors can be provided with the distributor cover orientated in any of the following directions. These are selectable among the following positions:

DM1 for position 1, DM2 for position 2 etc.

This position has to be stated at the end of the full description of the motor.

If no specification is made the standard position is DM1.



Position 1
DM1

Position 2
DM4

Position 3
DM7

Five piston motor.

Seven piston motor.





						Toe	hniaal	Datack				Tab	.05
		7				rec	nnicai	Datash	eet			REV.	2
				١.	METRIC SYSTEM BOLT TORQUE SETTINGS					DA	TE		
Ну	/drauli	ic Moto	ors		AL I KT	231311	ти вог	.i iok	QUE SE	IIINGS	•	28/06	/2012
	NO	RM					CLAS	S OF R	ESIST	ANCE			
	DIN	267		5.	.8	6.	.8	8.	.8	10	.9	12	2.9
	DIN	267		5	S	6	S	8	G	10	K	12	2K
	Hoyagan	Pitch	Pitch	Pitch	Pitch	Pitch	Pitch	Pitch	Pitch	Pitch	Pitch	Pitch	Pitch
Ø Bolt	Hexagon mm	coarse	fine	coarse	fine	coarse	fine	coarse	fine	coarse	fine	coarse	fine
		mm	Mm	Nm	Nm	Nm	Nm	Nm	Nm	Nm	Nm	Nm	Nm
M2	4	0.4	-	0.2	-	0.2	-	0.3	-	0.4	-	0.5	-
		2.4-		0.2	-	0.3	-	0.4 0.6	-	0.5 0.9	-	0.6 1.1	-
M2.5	5	0.45	ı	0.5	1	0.6	-	0.8	1	1.1	1	1.3	-
МЗ	5.5	0.5	-	0.7 0.8	-	0.8 1.0	-	1.1 1.3		1.5 1.9	-	1.8 2.3	-
140 =	_	0.6		1.1	-	1.3	-	1.7	-	2.4	-	2.8	-
M3.5	6	0.6	-	1.3	-	1.5	-	2.1	-	2.9	-	3.5	-
M4	7	0.7	-	1.6 1.9	-	1.9 2.3	-	2.5 3.1	-	3.5 4.3	-	4.2 52	-
245		0.0		3.1	-	3.7	-	4.9	-	6.9	-	8.3	-
M5	8	0.8	1	3.8	-	4.5	-	6.0	-	8.5	-	10.0	-
М6	10	1,0	-	5.3 6.5		6.4 7.8	-	8.5 10.0	-	12.0 15.0	-	14.0 18.0	-
147		1.0		8.7	-	10.0	-	14.0	-	20.0	-	24.0	-
M7	11	1.0	-	11.0	-	13.0	-	17.0	-	24.0	-	29.0	-
М8	13	1.25	1.0	13.0 16.0	14.0 17.0	15.0 19.0	16.0 20.0	20.0 25.0	22.0 27.0	29.0 35.0	31.0 38.0	34.0 42.0	37.0 46.0
M10	17	1.5	1.25	25.0	26.0	30.0	32.0	40.0	42.0	57.0	59.0	68.0	71.0
1110		1.5	1.25	31.0	33.0 45.0	37.0 52.0	39.0	50.0 69.0	53.0 72.0	70.0 97.0	74.0 101.0	84.0 116.0	89.0 121.0
M12	19	1.75	1.5	43.0 53.0	56.0	64.0	54.0 67.0	85.0	72.0 89.0	119.0	125.0	143.0	150.0
M14	22	2.0	1.5	68.0	74.0	82.0	89.0	110.0	118.0	154.0	166.0	185.0	199.0
1417	22	2.0	1.5	84.0	92.0	101.0	111.0	135.0	148.0	190.0	208.0	228.0	250.0
M16	24	2.0	1.5	106.0 132.0	112.0 141.0	128.0 159.0	135.0 170.0	128.0 212.0	180.0 226.0	240.0 298.0	253.0 318.0	287.0 357.0	303.0 382.0
M18	27	2.5	2.0	147.0	155.0	176.0	186.0	235.0	248.0	330.0	349.0	397.0	419.0
IAITO	21	2.5	۷.0	182.0	194.0	218.0	233.0	290.0	310.0	402.0	436.0	490.0	523.0
M20	30	2.5	2.0	208.0 258.0	217.0 273.0	249.0 310.0	261.0 327.0	332.0 413.0	347.0 436.0	467.0 580.0	489.0 614.0	561.0 697.0	586.0 736.0
M22	34	2.5	2.0	284.0	296.0	341.0	355.0	454.0	474.0	639.0	666.0	767.0	799.0
				355.0	373.0	426.0	448.0	568.0	597.0	798.0	840.0	958.0	1008.0 1041.0
M24	36	3.0	2.0	359.0 446.0	386.0 488.0	431.0 535.0	463.0 586.0	574.0 714.0	617.0 781.0	808.0 1004.0	868.0 1098.0	969.0 1204.0	1317.0
M27	41	3.0	2.0	525.0	561.0	630.0	673.0	840.0	897.0	1181.0	1261.0	1418.0	1513.0
				656.0 716.0	712.0 780.0	788.0 859.0	855.0 936.0	1050.0 1146.0	1139.0 1248.0	1477.0 1611.0	1602.0 1754.0	1772.0 1933.0	1923.0 2105.0
M30	46	3.5	2.0	893.0	994.0	1072.0	1193.0	1429.0	1590.0	2009.0	2236.0	2411.0	2648.0
M33	50	3.5	2.0	968.0	1045.0	1162.0	1254.0	1549.0	1673.0	2179.0	2351.0	2614.0	2821.0
				1213.0 1248.0	1335.0 1310.0	1456.0 1498.0	1602.0 1572.0	1941.0 1997.0	2136.0 2096.0	2792.0 2809.0	3004.0 2948.0	3275.0 3370.0	3605.0 3537.0
M36	55	4.0	3.0	1561.0	1658.0	1873.0	1989.0	2497.0	2652.0	3511.0	3730.0	4213.0	4476.0
M39	60	4.0	3.0	1615.0	1690.0	1938.0	2028.0	2584.0	2703.0	3633.0	3802.0	4360.0	4562.0
1-139	50	7.0	5.	2026.0	2144.0	2431.0	2573.0	3242.0	3430.0	4559.0	4824.0	5471.0	5789.0

The torque values are to be considered as reference only as they can vary depending on the kind of coupling (rigid, semi-rigid, elastic, etc.), on the material on which the bolts have to be fixed on, on the length of the bolt, on the kind of wrench used (impact wrench, friction wrench, cont.us torque wrench, etc.), on the finishing condition of the thread, etc. Therefore it is advised to test the couplings to identify the most correct way to tighen them. In the event that the coupling is done with locknuts or self-locking nuts the value of the torque has to be increased by approximately 15%.





3/4" BSP	With axial ports
3/4" BSP	
1" 1/16"UNF	
1"SAE 3000psi	
1"BSP	
1"BSP	With purge valve 20 lit 20 bar
3/4" BSP	With purge valve 20 lit 20 bar
1"BSP	With shuttle valve for high pressure pilot
1"BSP	With anti-cavitation valve
1" 5/16"UNF	
1"BSP	
3/4" BSP	With anti-cavitation valve
1"BSP	
1"SAE 3000psi	
1"SAE 6000psi	
1"SAE 6000psi	With the hydraulic valve for the pilot of the dual displacement
1"SAE 6000psi	With electrical proportional valve for pilot the displacement
1"BSP	With double sliding spool pressure relief valves, 240 bar, 150 l/min
1"BSP	With double sliding spool pressure relief valves, 210 bar, 80 l/min
1" 5/16" UNF	
1"BSP	With double sliding spool pressure relief valves, 240 bar, 150 l/min. with purge valve, 20 l/min, 20 bar
1"BSP	With double sliding spool pressure relief valves, 210 bar, 150 l/min. with purge valve, 20 l/min, 20 bar
1"BSP	With double overcentre valve10:1, 120 l/min, 270 bar and shuttle valve for high pressure pilot
1"BSP	With overcentre valve and shuttle valve for high pressure pilot
1"BSP	For free-wheeling in "short-circuit"
1"BSP	With double overcentre valve and shuttle valve for high pressure pilot
1 1/2"SAE 6000psi	
1 1/2"SAE 6000psi	
1 1/2"SAE 6000psi	With the hydraulic valve for the pilot of the dual displacement
1 1/2" SAE 6000psi	With electrical proportional valve for pilot the displacement
2"SAE 6000psi	
	3/4" BSP  1" 1/16" UNF  1" SAE 3000psi  1" BSP  1" BSP  3/4" BSP  1" BSP  1" BSP  1" BSP  1" BSP  3/4" BSP  1" BSP  1" BSP  1" SAE 3000psi  1" SAE 6000psi  1" SAE 6000psi  1" SAE 6000psi  1" SAE 6000psi  1" BSP  1" BSP



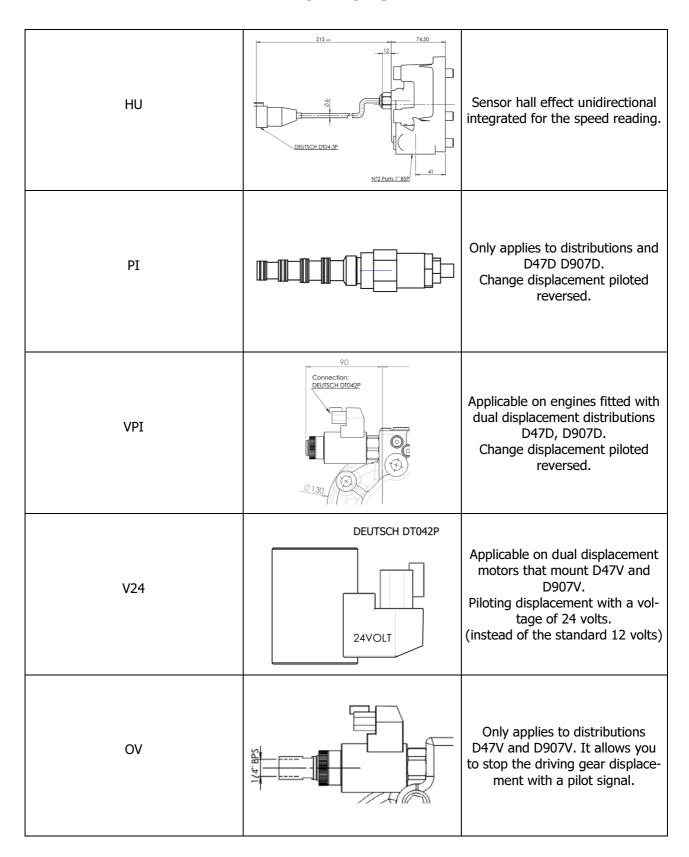
## **OPTIONS**

		T
DBM/DGM	ø130	DBM: Kit for high speed distributions D3 D3 Distributors with DBM option reach the speed limit distributors D4 DGM: Kit for high pressure distributions D3
С		Rotary valve for low noise.
K	7.5 KEY 34 –	Threaded hole 1/2 "BSP for installation support on the distributor tacho drive.
J	M18x1 39 20 M18x1 17 22	Tacho drive support.





## **OPTIONS**

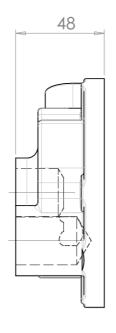


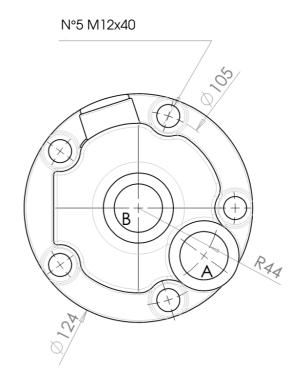




Distributor with axial ports 3/4" BSP.

	Speed	Pressure	Flow	
	[rpm]	[bar]	[l/min]	
Cont.	300	140	200	
Peak	500	280	400	
Mass 2.5 kg				





0.405 0.44 0.40
GM05, GM1, GM2
P05, P1
1

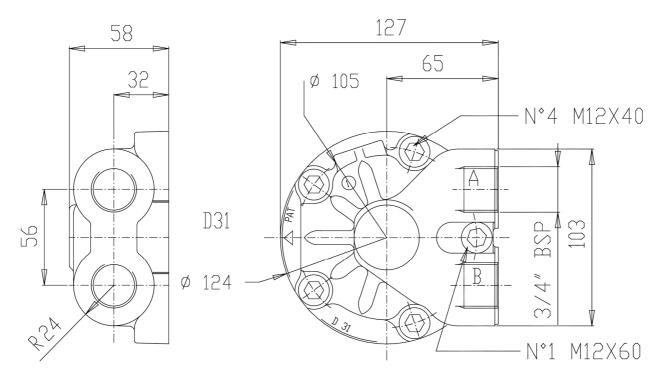


D31 Details

Distributor with ports 3/4" BSP.

	Speed	Pressure	Flow
	[rpm]	[bar]	[l/min]
Cont.	300	250	200
Peak	500	500	400

Mass 4 kg



OPTIONS	MOUNTABLE ON
DBM	GM05, GM1, GM2, GM3, GM4,
DGM	GM5A P05, P1, P2
С	Only with DBM:
К	GS05, GS1, GS2, GS3, GS4, GS5A BD1, BD2
J	GK3(A), GFK3(A), GK4, GFK4

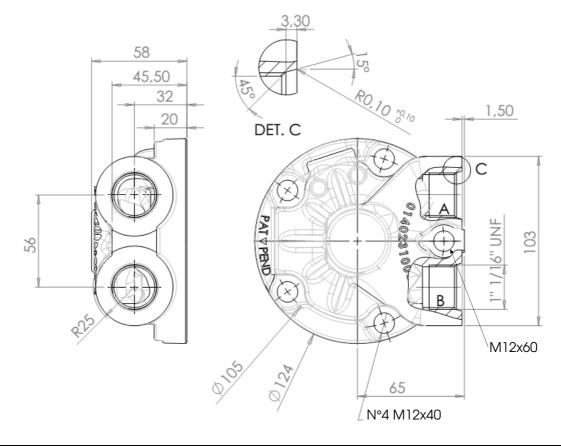




Distributor with ports 1" 1/16" UNF.

	Speed	Pressure	Flow
	[rpm]	[bar]	[l/min]
Cont.	300	250	200
Peak	500	500	400

Mass 4 kg



OPTIONS	MOUNTABLE ON
DBM	GM05, GM1, GM2, GM3, GM4,
DGM	GM5A P05, P1, P2
С	Only with DBM:
К	GS05, GS1, GS2, GS3, GS4, GS5A BD1, BD2
J	GK3(A), GFK3(A), GK4, GFK4

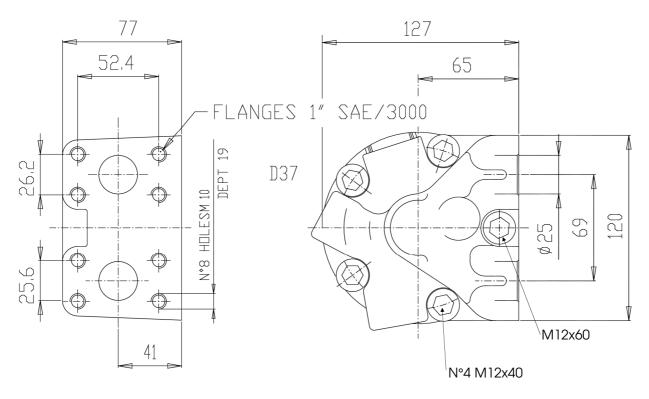




Distributor with ports 1" SAE 3000 psi .

	Speed	Pressure	Flow
	[rpm]	[bar]	[l/min]
Cont.	300	250	200
Peak	500	348	400

Mass 4.5 kg



OPTIONS	MOUNTABLE ON
DBM	GM05, GM1, GM2, GM3, GM4,
DGM	GM5A P05, P1, P2
С	Only with DBM:
К	GS05, GS1, GS2, GS3, GS4, GS5A BD1, BD2
J	GK3(A), GFK3(A), GK4, GFK4

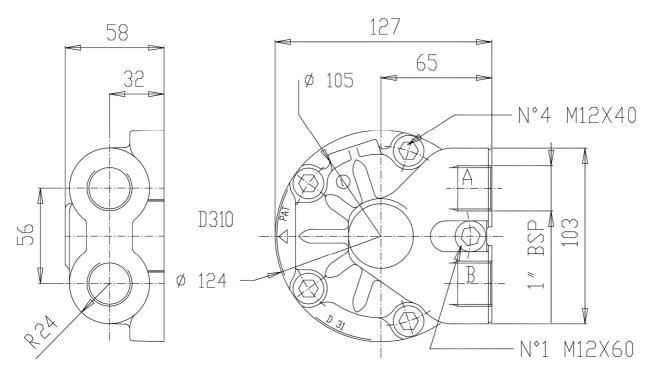




Distributor with ports 1" BSP.

	Speed	Pressure	Flow
	[rpm]	[bar]	[l/min]
Cont.	300	250	200
Peak	500	500	400

Mass 4 kg



OPTIONS	MOUNTABLE ON
DBM	GM05, GM1, GM2, GM3, GM4,
DGM	GM5A P05, P1, P2
С	Only with DBM:
К	GS05, GS1, GS2, GS3, GS4, GS5A BD1, BD2
J	GK3(A), GFK3(A), GK4, GFK4



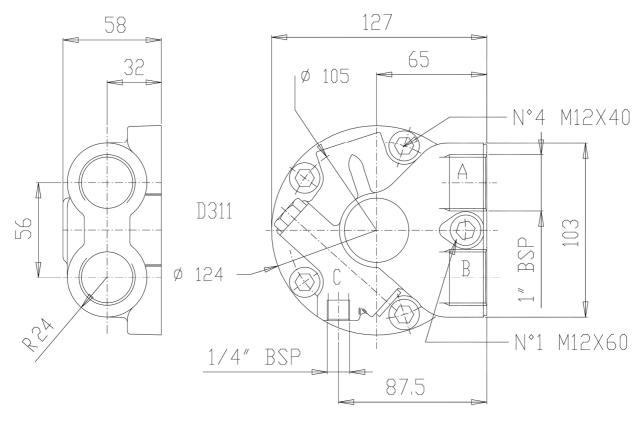


**D311** Details

Distributor with ports 1" BSP, with purge valve 20 lit. 20 bar.

	Speed	Pressure	Flow
	[rpm]	[bar]	[l/min]
Cont.	300	250	200
Peak	500	500	400

Mass 4.5 kg



OPTIONS	A C B	MOUNTABLE ON
DBM		GM05, GM1, GM2, GM3, GM4,
DGM	<b>^</b>	GM5A P05, P1, P2
С		Only with DBM:
К		GS05, GS1, GS2, GS3, GS4, GS5A BD1, BD2
J		GK3(A), GFK3(A), GK4, GFK4

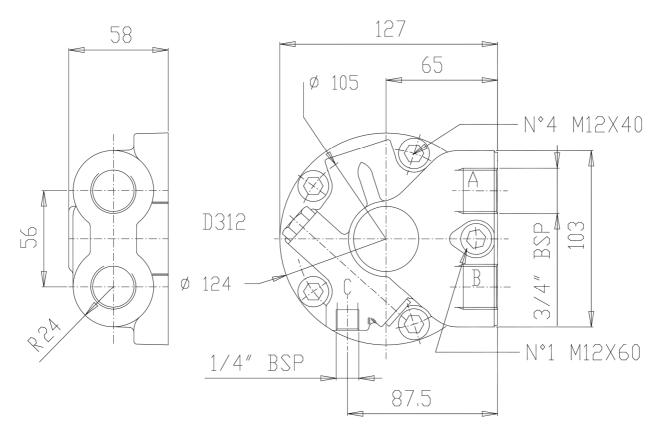




Distributor with ports 3/4" BSP, with purge valve 20 lit. 20 bar.

	Speed	Pressure	Flow
	[rpm]	[bar]	[l/min]
Cont.	300	250	200
Peak	500	500	400

Mass 4.5 kg



OPTIONS	АСВ	MOUNTABLE ON
DBM		GM05, GM1, GM2, GM3, GM4,
DGM		GM5A P05, P1, P2
С		Only with DBM:
К		GS05, GS1, GS2, GS3, GS4, GS5A BD1, BD2
J		GK3(A), GFK3(A), GK4, GFK4



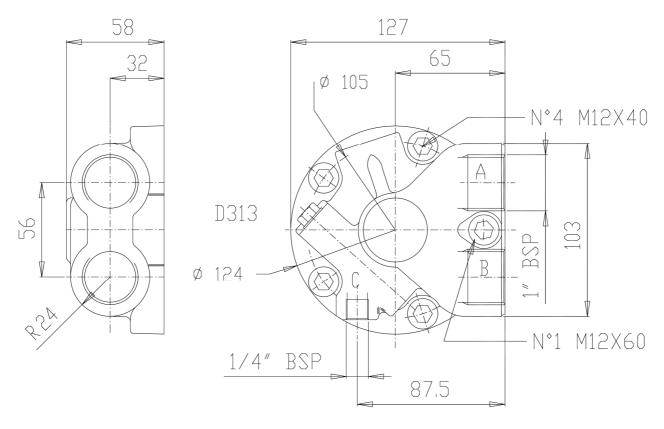


D313 Details

Distributor with ports 1" BSP, with shuttle valve for high pressure pilot.

	Speed	Pressure	Flow
	[rpm]	[bar]	[l/min]
Cont.	300	250	200
Peak	500	500	400

Mass 4.5 kg



OPTIONS	A C D	MOUNTABLE ON
DBM	ACB	GM05, GM1, GM2, GM3, GM4,
DGM		GM5A P05, P1, P2
С		Only with DBM:
К		GS05, GS1, GS2, GS3, GS4, GS5A BD1, BD2
J		GK3(A), GFK3(A), GK4, GFK4



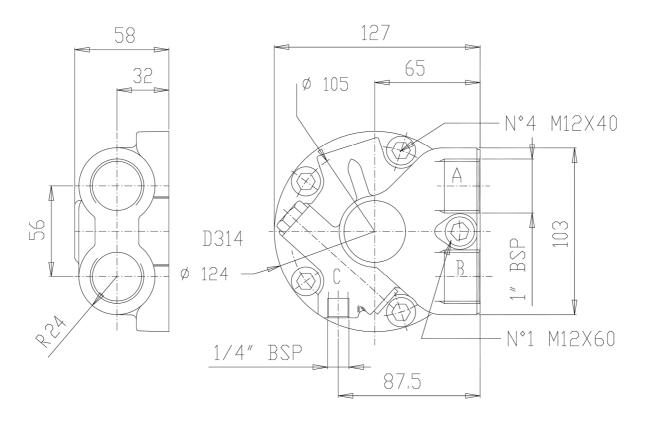


D314 Details

Distributor with ports 3/4" BSP, with anti-cavitation valve.

	Speed	Pressure	Flow
	[rpm]	[bar]	[l/min]
Cont.	300	250	200
Peak	500	500	400

Mass 4.5 kg



OPTIONS	A C B	MOUNTABLE ON
DBM		GM05, GM1, GM2, GM3, GM4,
DGM		GM5A P05, P1, P2
С		Only with DBM:
К		GS05, GS1, GS2, GS3, GS4, GS5A BD1, BD2
J		GK3(A), GFK3(A), GK4, GFK4

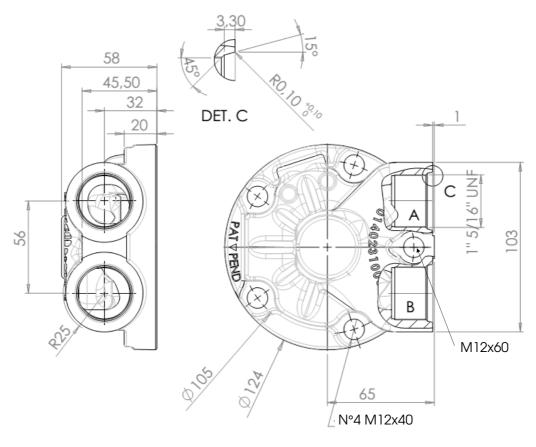




D316 Details

Distributor with ports 1"  $5/16\mbox{{\sc f}}$  UNF .

Speed	Pressure	Flow
[rpm]	[bar]	[l/min]
300	250	200
500	500	400
	[rpm] 300	[rpm] [bar] 300 250



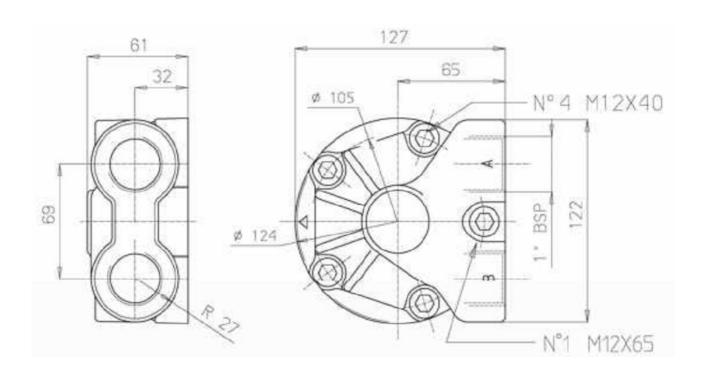
OPTIONS	MOUNTABLE ON
DBM	GM05, GM1, GM2, GM3, GM4,
DGM	GM5A P05, P1, P2
С	Only with DBM:
К	GS05, GS1, GS2, GS3, GS4, GS5A BD1, BD2
J	GK3(A), GFK3(A), GK4, GFK4





Distributor with ports 1" BSP .

	Speed Pressure		Flow
	[rpm]	[bar]	[l/min]
Cont.	300	250	200
Peak	500	500	400
Mass 4.5 kg			



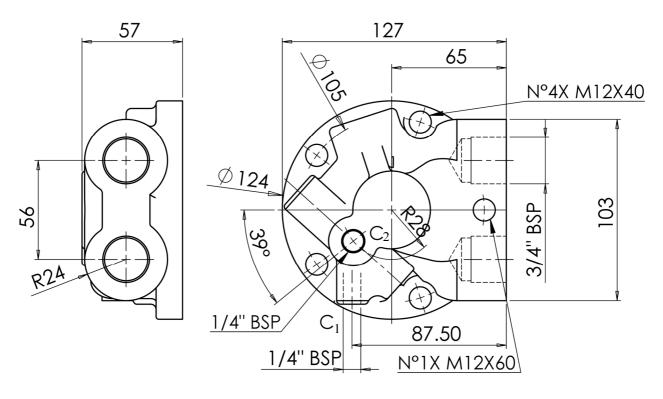
OPTIONS	MOUNTABLE ON
DBM	GM05, GM1, GM2, GM3, GM4,
DGM	GM5A P05, P1, P2
С	Only with DBM:
	GS05, GS1, GS2, GS3, GS4, GS5A BD1, BD2
	GK3(A), GFK3(A), GK4, GFK4





Distributor with ports 3/4" BSP, with anti-cavitation valve and double pilot port C1 radial and C2 axial.

	Speed	Pressure	Flow
	[rpm]	[bar]	[l/min]
Cont.	300	250	200
Peak	500	500	400



OPTIONS		MOUNTABLE ON
DBM	A C B	GM05, GM1, GM2, GM3, GM4,
DGM		GM5A P05, P1, P2
С		Only with DBM:
		GS05, GS1, GS2, GS3, GS4, GS5A BD1, BD2
		GK3(A), GFK3(A), GK4, GFK4



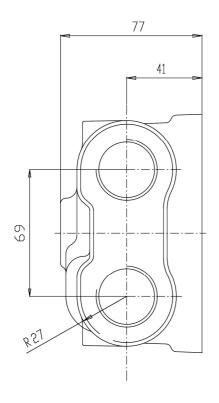


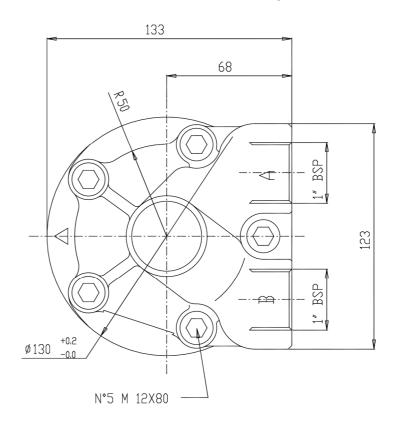
**D40** Details

Distributor with ports 1" BSP.

STANDARD ON: GM05, GM1, GM2, GM3, GM4, GM5A,P1, P2, BD1, BD2, BD3, TF1.5, TF2.5, GK3(A), GFK3(A), GK4, GFK4, BDK3(A), BDFK3(A), BDFK4, BDFK4

	Speed	Pressure	Flow
	[rpm]	[bar]	[l/min]
Cont.	1600	250	200
Peak	2400	500	400





OPTIONS		MOUNTABLE ON
DGM (not available on the T Series)		
С		GM05, GM1, GM2, GM3, GM4, GM5A
К	Oi GS05, GS1,	P05, P1, P2
J		Only with DBM: GS05, GS1, GS2, GS3, GS4, GS5A
HU		BD1, BD2 GK3(A), GFK3(A), GK4, GFK4

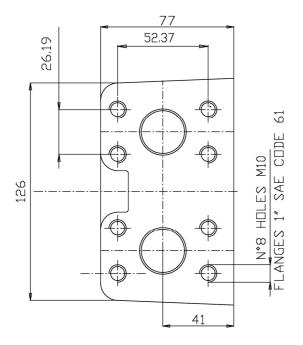


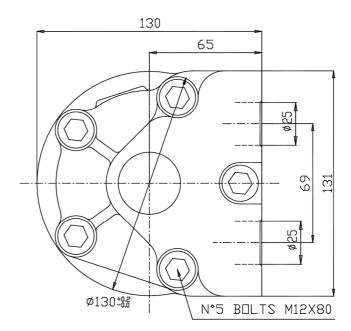


**D47** Details

Distributor with ports 1" SAE 3000 psi.

	Speed	Pressure	Flow
	[rpm]	[bar]	[l/min]
Cont.	1600	250	200
Peak	2400	348	400





OPTIONS	MOUNTABLE ON
DGM	
С	GM05, GM1, GM2, GM3, GM4, GM5A
К	P05, P1, P2
J	Only with DBM: GS05, GS1, GS2, GS3, GS4, GS5A
HU	BD1, BD2 GK3(A), GFK3(A), GK4, GFK4



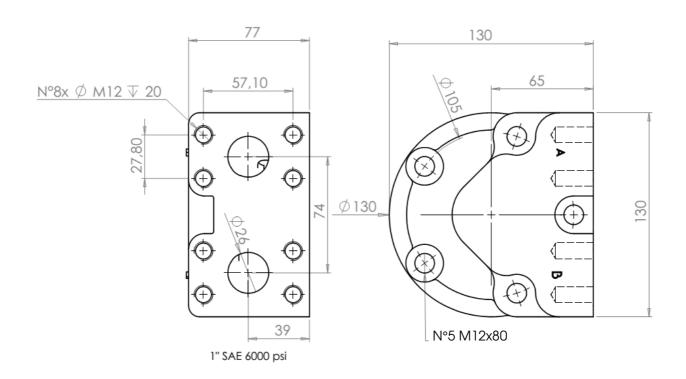


D47R Details

Distributor with ports 1" SAE 6000 psi.

STANDARD ON: GS05, GS1, GS2

	Speed Pressure		Flow
	[rpm]	[bar]	[l/min]
Cont.	1600	250	200
Peak	2400	420	400
	Mass	5 ka	



OPTIONS	MOUNTABLE ON
DGM (not available on the T Series)	
С	GM05, GM1, GM2, GM3, GM4, GM5A
K	P05, P1, P2
J	Only with DBM: GS05, GS1, GS2, GS3, GS4, GS5.
HU	BD1, BD2 GK3(A), GFK3(A), GK4, GFK4





**D47D** Details

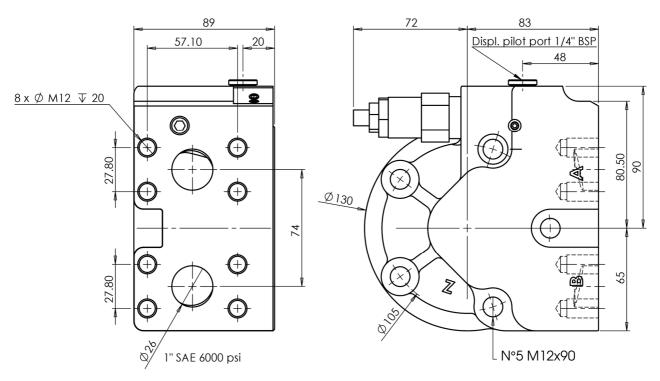
Distributor with ports 1" SAE 6000 psi, with the hydraulic valve for the pilot of the dual displacement:

Standard setting: 20 bar Minimum setting: 5 bar

STANDARD ON: BD1A, TD1.5, TD2.5, BDK4, BDFK4

	Speed	Pressure	Flow
	[rpm]	[bar]	[l/min]
Cont.	1600	250	200
Peak	2400	420	400

Mass 7.5 kg



OPTIONS		A B	MOUNTABLE ON
DGM (not available on the T Series)			
К			
J	Pilot 1/4" BSP	4"	BD1(A), BD2
HU		min dajal   max dajal	TD1.5, TD2.5 BDK3(A),BDFK3(A), BDK4, BDFK4
PI			
VPI			



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Details **D47V** 

Distributor with ports 1" SAE 6000 psi, with electrical proportional valve for pilot the displacement:

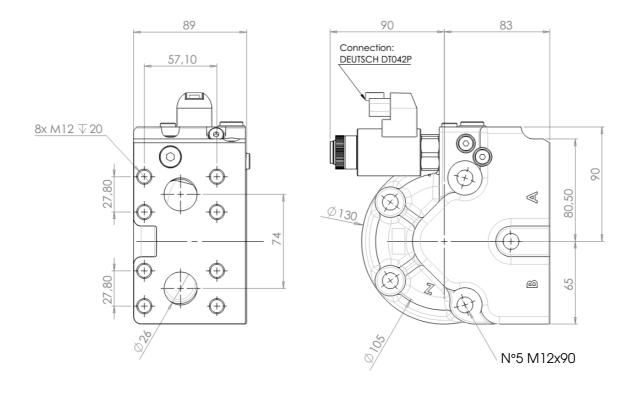
Voltage: 12 Volt

STANDARD ON: BV1(A), BV2, TV1.5, TV2.5, BVK3(A),

BVFK3(A), BVK4, BVFK4

	Speed	Pressure	Flow
	[rpm]	[bar]	[l/min]
Cont.	1600	250	200
Peak	2400	420	400

Mass 7.5 kg



OPTIONS	A B	MOUNTABLE ON
DGM (not available on the T Series)		
К		
J		21444
HU		BV1(A), BV2 TV1.5, TV2.5
V24	mox displ	BVK3(A), BVFK3(A), BVK4, BVFK4
OV		
	*	





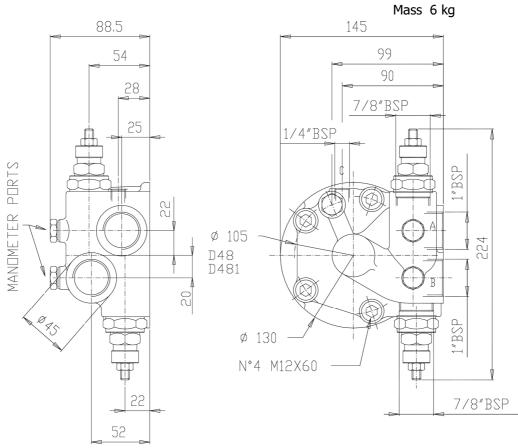
D48 Details

Distributor with ports 1" BSP, with double sliding spool pressure relief valves,  $% \left( 1\right) =\left( 1\right) \left( 1\right)$ 

Maximum setting pressure: 420 bar.

Standard setting: 350 bar.

	Speed	Pressure	Flow
	[rpm]	[bar]	[l/min]
Cont.	1600	250	150
Peak	2400	420	300



OPTIONS	A	В	MOUNTABLE ON
DGM (not available on the T Series)			
С			GM05, GM1, GM2, GM3, GM4, GM5A
К		3	P05, P1, P2
J			Only with DBM: GS05, GS1, GS2, GS3, GS4, GS5A
HU			BD1, BD2 GK3(A), GFK3(A), GK4, GFK4



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Flow



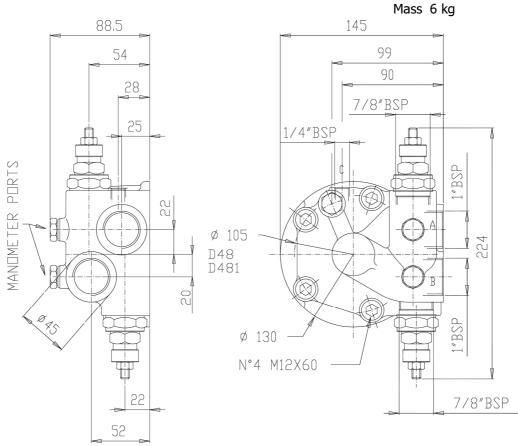
D481 Details

Distributor with ports 1" BSP , with double sliding spool pressure relief valves, 20 lit/min at 20 bar: Maximum setting pressure: 420 bar. Standard setting: 350 bar.

	·		
	[rpm]	[bar]	[l/min]
Cont.	1600	250	150
Peak	2400	420	300

Pressure

Speed



OPTIONS	а С В	MOUNTABLE ON
DGM (not available on the T Series)		
С		GM05, GM1, GM2, GM3, GM4, GM5A
К		P05, P1, P2
J		Only with DBM: GS05, GS1, GS2, GS3, GS4, GS5A
HU		BD1, BD2 GK3(A), GFK3(A), GK4, GFK4



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Details **D49** 

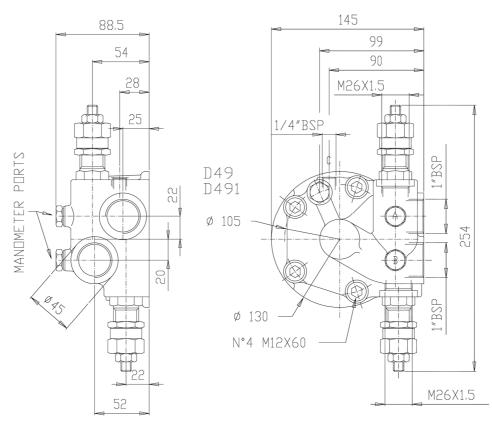
Distributor with ports 1" BSP with double sliding spool pressu-

re relief valves:

Maximum setting pressure: 250 bar. Standard setting: 200 bar.

	Speed	Pressure	Flow
	[rpm]	[bar]	[l/min]
Cont.	1600	250	80
Peak	2400	250	160

Mass 6 kg



OPTIONS	A	В	MOUNTABLE ON
DGM			
С			GM05, GM1, GM2, GM3, GM4, GM5A
К		3	P05, P1, P2
J			Only with DBM: GS05, GS1, GS2, GS3, GS4, GS5A
HU			BD1, BD2 GK3(A), GFK3(A), GK4, GFK4





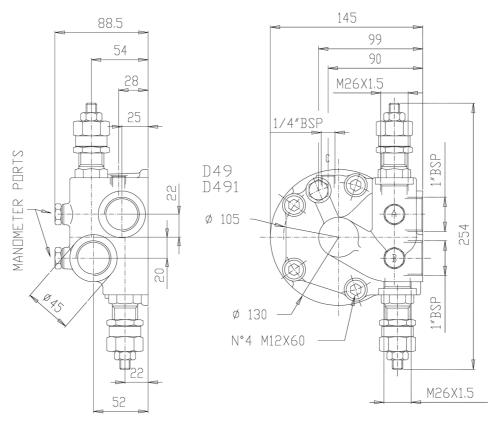
**D491** Details

Distributor with ports 1" BSP with double sliding spool pressure relief valves and shuttle valve, 20 lit/min at 20 bar: Maximum setting pressure: 250 bar.

Standard setting: 200 bar.

	Speed	Pressure	Flow
	[rpm]	[bar]	[l/min]
Cont.	1600	250	80
Peak	2400	250	160

Mass 6 kg



OPTIONS	А С В	MOUNTABLE ON
DGM		
С		GM05, GM1, GM2, GM3, GM4, GM5A
К		P05, P1, P2
J	_	Only with DBM: GS05, GS1, GS2, GS3, GS4, GS5A
HU		BD1, BD2 GK3(A), GFK3(A), GK4, GFK4



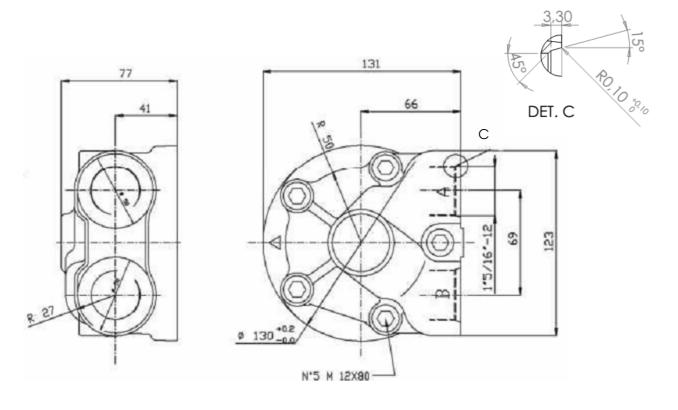


**D416** Details

Distributor with ports 1" BSP.

	Speea	Pressure	FIOW
	[rpm]	[bar]	[l/min]
Cont.	1600	250	200
Peak	2400	500	400

Mass 5 kg



OPTIONS	MOUNTABLE ON
DGM (not available on the T Series)	
С	GM05, GM1, GM2, GM3, GM4, GM5A
К	P05, P1, P2
J	Only with DBM: GS05, GS1, GS2, GS3, GS4, GS5A
HU	BD1, BD2 GK3(A), GFK3(A), GK4, GFK4



Flow



D504 Details

Distributor with ports 1'' BSP, with double overcentre valve and shuttle valve for high pressure pilot:

Pilot ratio: 10:1

Max. flow: 120 lit/min Setting: 100-350 bar

Reccomended setting pressure: 1.3 x work pressure

Standard setting: 210 bar

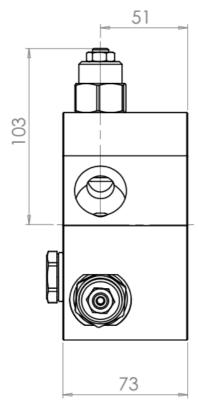
	[rpm]	[bar]	[l/min]
Cont.	1600	250	120
Peak	2400	350	240

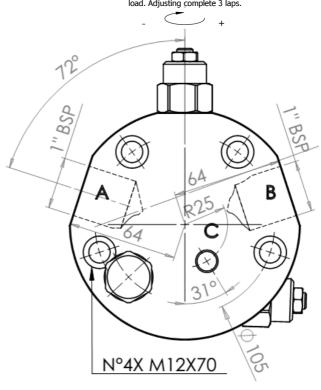
Pressure

Speed

Mass 5 kg

Turn the screw clockwise to reduce the calibration and adjust the load. Adjusting complete 3 laps.





OPTIONS	A C B	MOUNTABLE ON
	X	GM05, GM1, GM2, GM3, GM4, GM5A P05, P1, P2 Only with DBM: GS05, GS1, GS2, GS3, GS4, GS5A BD1, BD2 GK3(A), GFK3(A), GK4, GFK4



Flow



**D51** Details

Distributor with ports 1" BSP, with overcentre valve and  $% \left( 1\right) =\left( 1\right) \left( 1\right) \left($ 

shuttle valve for high pressure pilot:

Pilot ratio: 10:1

Max. flow: 120 lit/min Setting: 100-350 bar

Reccomended setting pressure: 1.3 x work pressure

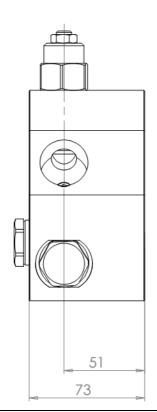
Standard setting: 210 bar

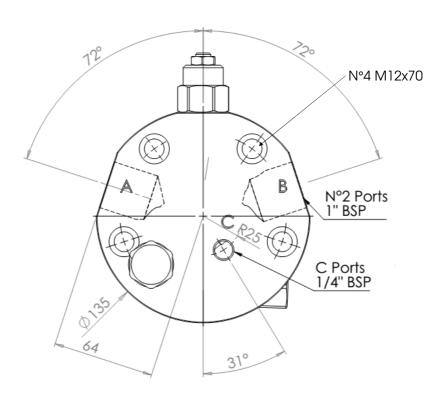
	•		
	[rpm]	[bar]	[l/min]
Cont.	1600	250	120
Peak	2400	350	240

Pressure

Speed

Mass 5 kg





OPTIONS	
	A C B
	<b>└ → →</b>

# **MOUNTABLE ON**

GM05, GM1, GM2, GM3, GM4, GM5A P05, P1, P2

Only with DBM: GS05, GS1, GS2, GS3, GS4, GS5A BD1, BD2 GK3(A), GFK3(A), GK4, GFK4





**D510** 

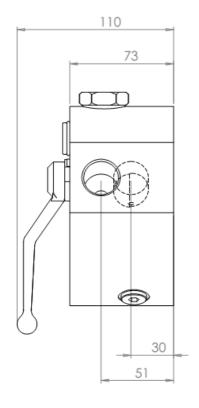
Distributor with ports 3/4" BSP.

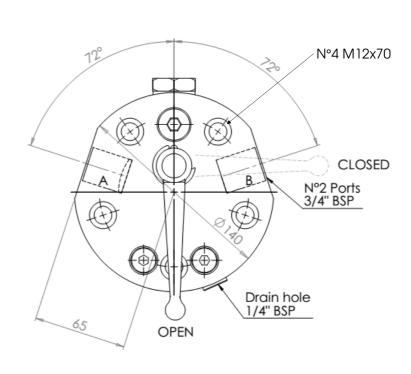
Freewheeling type "C" pag.10.

D	e	ta	il	S

	Speed	Pressure	Flow
	[rpm]	[bar]	[l/min]
Cont.	1600	250	200
Peak	2400	500	400

Mass 5 kg





OPTIONS	Α	В	MOUNTABLE ON
	3.5 bor	3.5 bar	GM05, GM1, GM2, GM3, GM4, GM5A P05, P1, P2 Only with DBM: GS05, GS1, GS2, GS3, GS4, GS5A BD1, BD2 GK3(A), GFK3(A), GK4, GFK4





D524 Details

Distributor with ports 1" BSP with double overcentre valve , double sliding spool pressure relief valves, relief valve and with shuttle valve for high pressure pilot:

Pilot ratio: 4.5:1

Minimum setting pressure: 140-350 bar

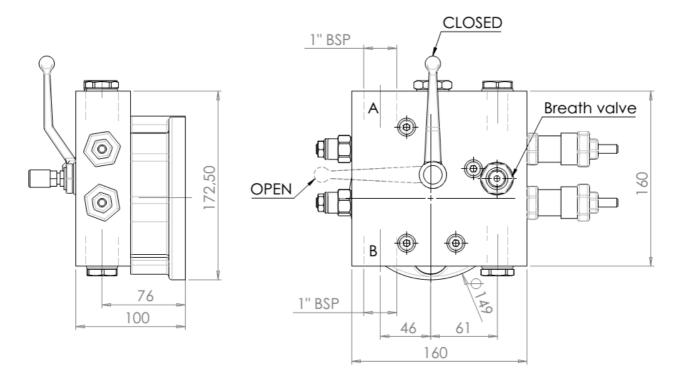
Recommended setting pressure: 1.3 x work pressure

Standard setting: 210 bar

Freewheeling type "C" pag.10.

	Speed	Pressure	Flow
	[rpm]	[bar]	[l/min]
Cont.	1600	250	60
Peak	2400	350	120

Mass 5 kg



OPTIONS	В А	MOUNTABLE ON
	₩ 16 bar	GM05, GM1, GM2, GM3, GM4, GM5A P05, P1, P2 Only with DBM: GS05, GS1, GS2, GS3, GS4, GS5A BD1, BD2 GK3(A), GFK3(A), GK4, GFK4





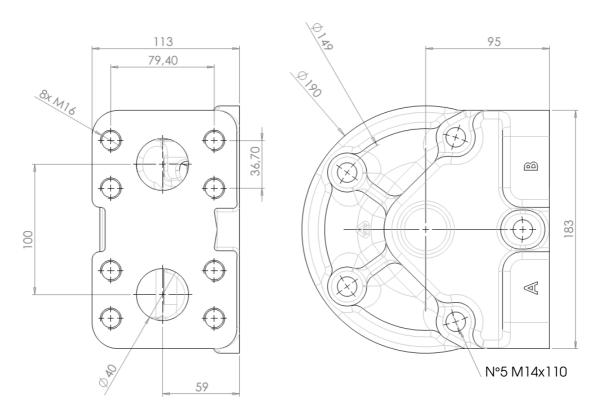
**D90** Details

Distributor with ports 1" 1/2 SAE 6000 psi.

STANDARD ON: GM6, BD5, GS3, GS4, GS5A, L7B

	Speed	Pressure	Flow
	[rpm]	[bar]	[l/min]
Cont.	700	250	500
Peak	1200	420	1000

Mass 14.5 kg



OPTIONS	MOUNTABLE ON
К	
J	CM2 CM4 CME4 CMC
HU	GM3, GM4, GM5A, GM6 GS3, GS4, GS5A, GS6A L7B
	S7B BD5, BD6
	<i>BB3, BB</i> 0





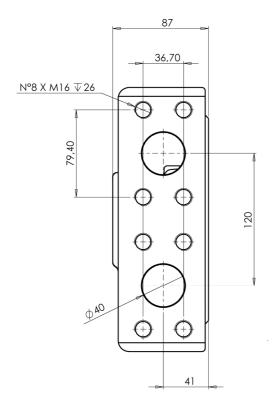
**D907** Details

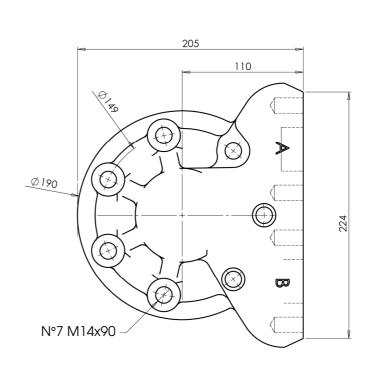
Distributor with ports 1" 1/2 SAE 6000 psi.

STANDARD ON: TF3.5, TS8F(w).

	Speed	Pressure	Flow
	[rpm]	[bar]	[l/min]
Cont.	700	250	500
Peak	1200	420	1000

Mass 13.5 kg





1" 1/2 SAE 6000psi

OPTIONS	MOUNTABLE ON
К	
J	
HU	TF3.5
	TS8F(W)





**D907D** Details

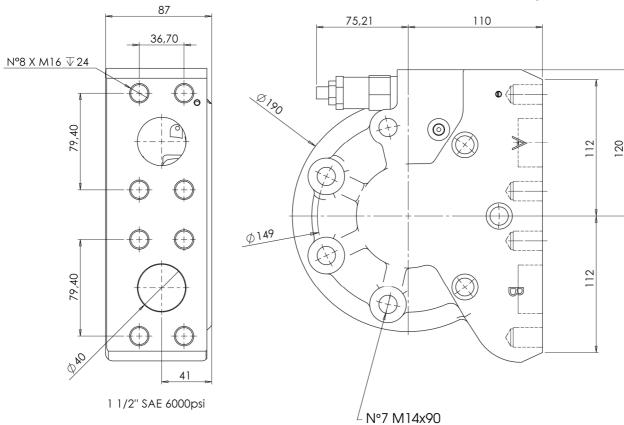
Distributor with ports 1" 1/2 SAE 6000 psi, with the hydraulic valve for the pilot of the dual displacement:

Standard setting: 20 bar Minimum setting: 5 bar

STANDARD ON: TD3.5, TS8DF(W)

	Speed	Pressure	Flow
	[rpm]	[bar]	[l/min]
Cont.	700	400	500
Peak	1200	420	1000

Mass 14 kg



OPTIONS	ΑΒ	MOUNTABLE ON
К		
J	Pilot	
HU	1/4" BSP	TD3.5
PI	min displ	TS8DF(W)
VPI		
	II	



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**D907V** Details

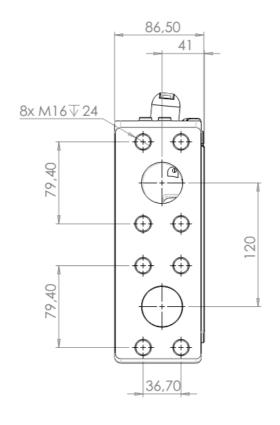
Distributor with ports 1" 1/2 SAE 6000 psi, with electrical proportional valve for pilot the displacement:

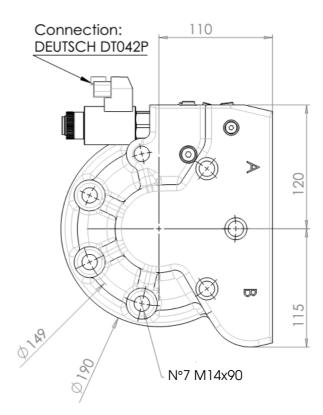
Voltage: 12 Volt

STANDARD ON: TV3.5, TS8VF(W)

	Speed	Pressure	Flow
	[rpm]	[bar]	[l/min]
Cont.	700	400	500
Peak	1200	420	1000

Mass 14 kg





OPTIONS	A B	MOUNTABLE ON
К		
J		
HU		
V24		TV3.5 TS8VF(W)
OV	mox displ	
	**	



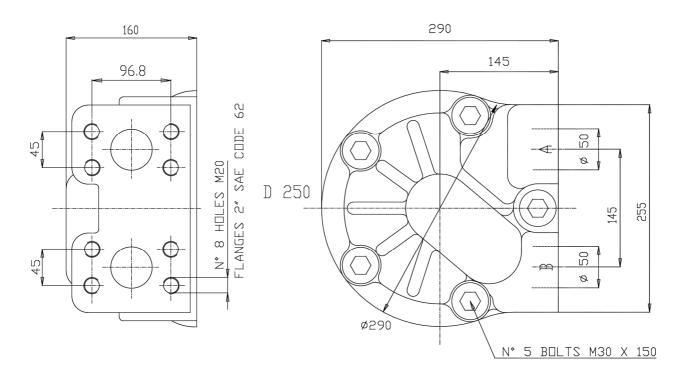


D250 Details

Distributor with ports 2" SAE 6000 psi.

STANDARD ON: GS6A, L7B, L9, BD6, S7B, S9

	Speed	Pressure	Flow
	[rpm]	[bar]	[l/min]
Cont.	500	250	1000
Peak	1000	420	2000
Mass 50 kg			



OPTIONS	MOUNTABLE ON
J	
	GM6 GS6A L7B, L9 S7B, S9 BD6









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