



## HYDRAULIC DRIVEN BOOSTER

The hydraulic driven booster is a device that increases the pressure of the fluids. When acting in one direction, it consists of two connected cylinders, different in diameter. When acting in both directions, the cylinders are three in number.

Operating principle: a fluid with low pressure is supplied into the cylinder "B" /see fig. 1 and fig. 2/, which has a bigger diameter, and a fluid with high pressure is pushed out of the cylinders "M" or "N", which have smaller diameters.

The ratio "K" of the pressure increase is determined by the correlation between the areas on which the pressure in the corresponding cylinders is applied according to the formulas:

- for cylinder "M"  $K_M = (D^2 - d_1^2) : D_1^2$

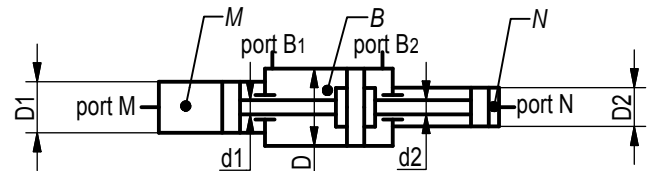
( $d_1^2$ , when the cylinder is a plunger one)

- for cylinder "N"  $K_N = (D^2 - d_2^2) : D_2^2$

( $d_2^2$ , when the cylinder is a plunger one)

For the continuous work of the multiplier is necessary to have a continuous reverse of the input flow on ports B1 and B2.

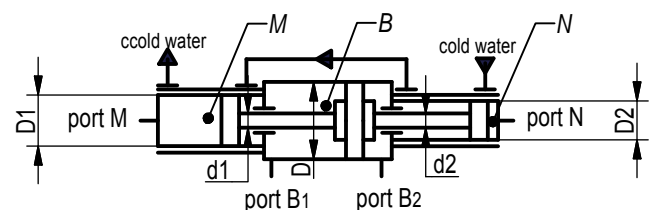
The multipliers, produced by HIDROPNEVMOTEHNIKA AD, are offered not only as individual items, but also combined with a power pack /for example see fig. 3 and fig. 4/, the characteristics of which are based on the specific requirements of the customer. The power pack, except controlling the operation of the multiplier, can perform additional hydraulic functions as well.



Multiplier acting in both directions.

In cylinders "M" and "N" the working fluid is a liquid.

Fig. 1



Multiplier acting in both directions.

In cylinders "M" and "N" the working fluid is gaseous.

Cylinders "M" and "N" are cooled down

Fig. 2

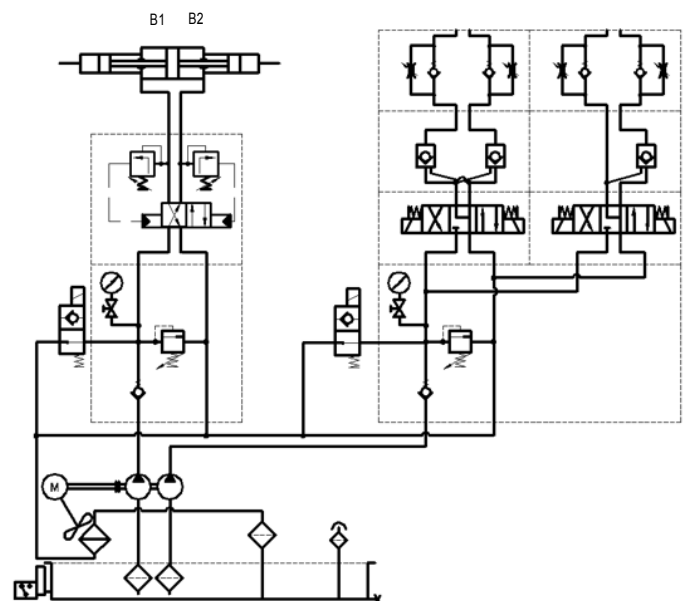
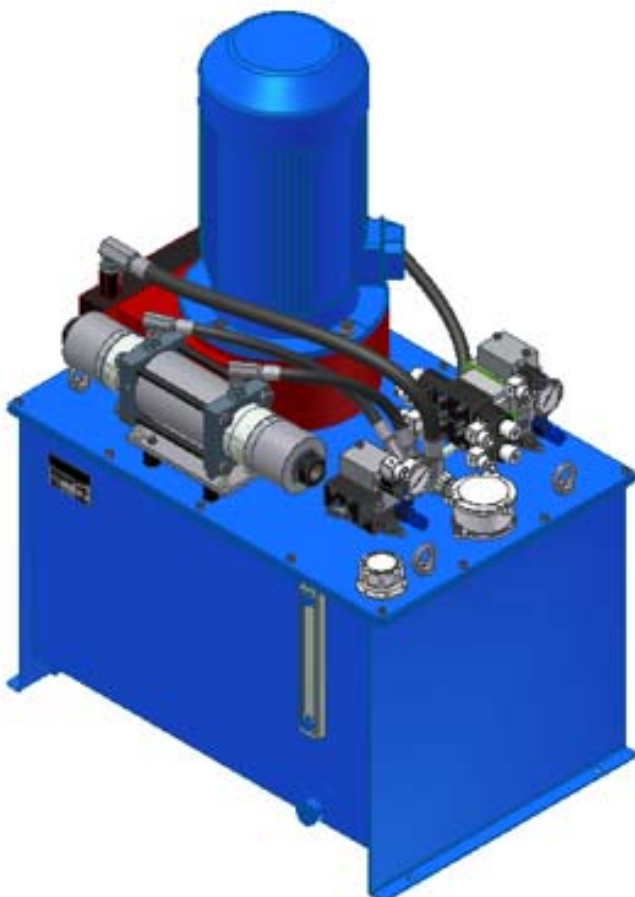


fig.3

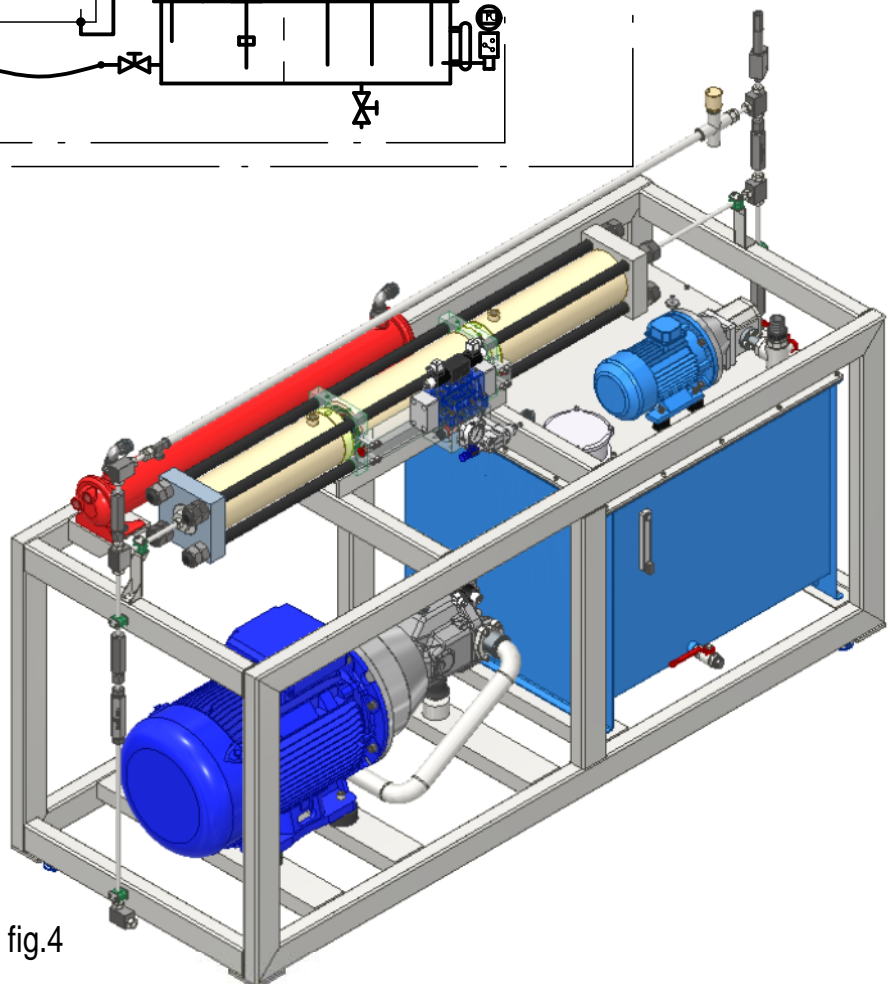
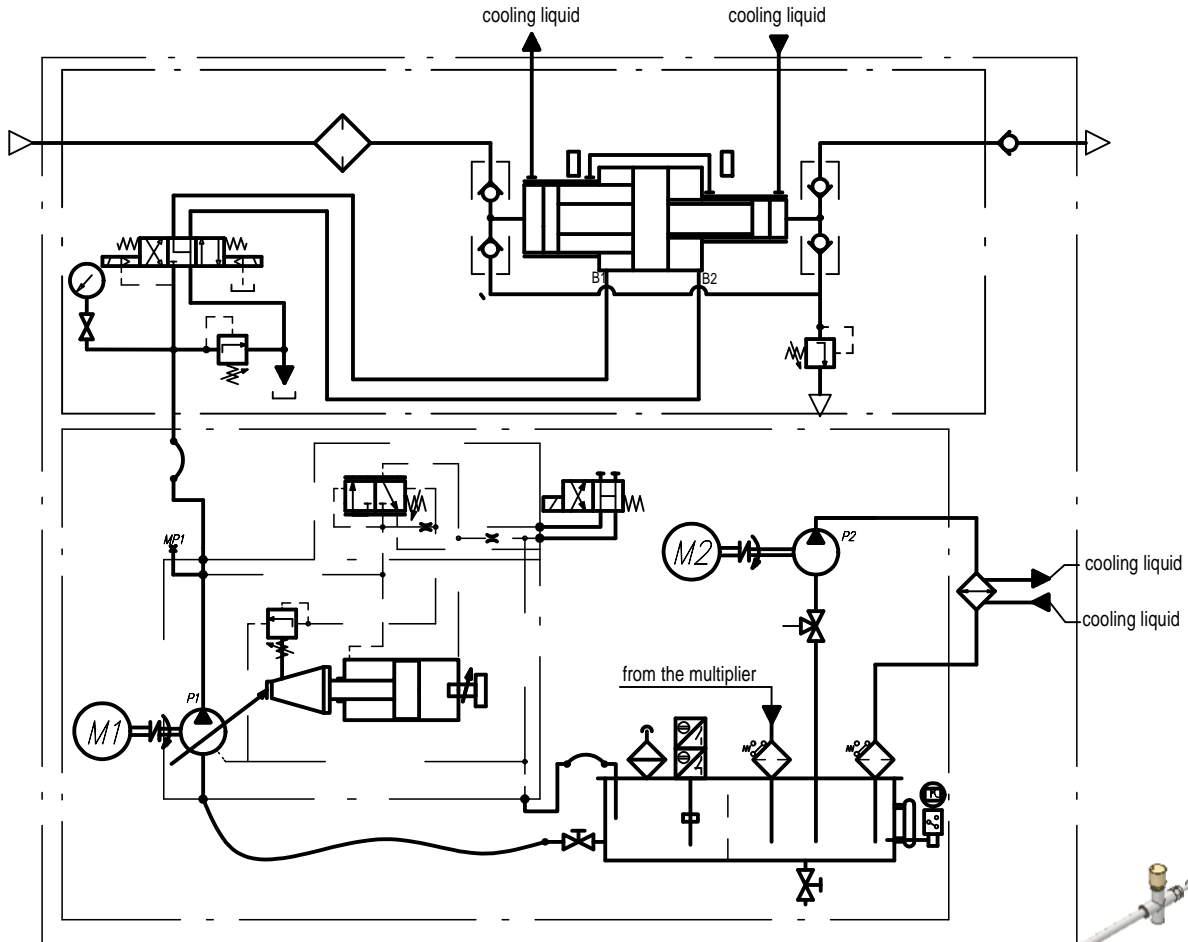


fig.4

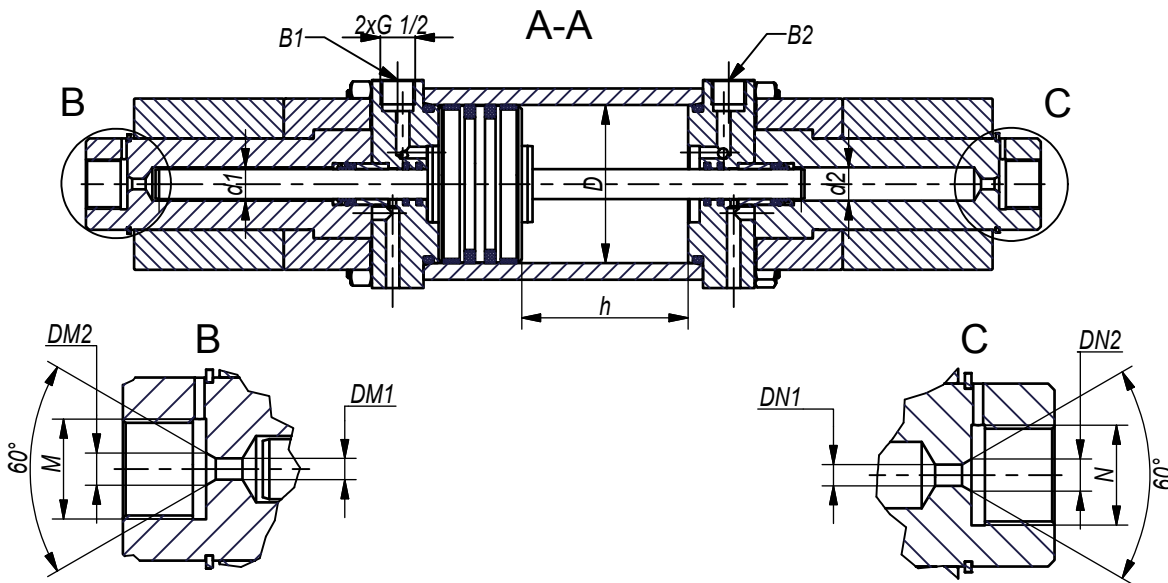
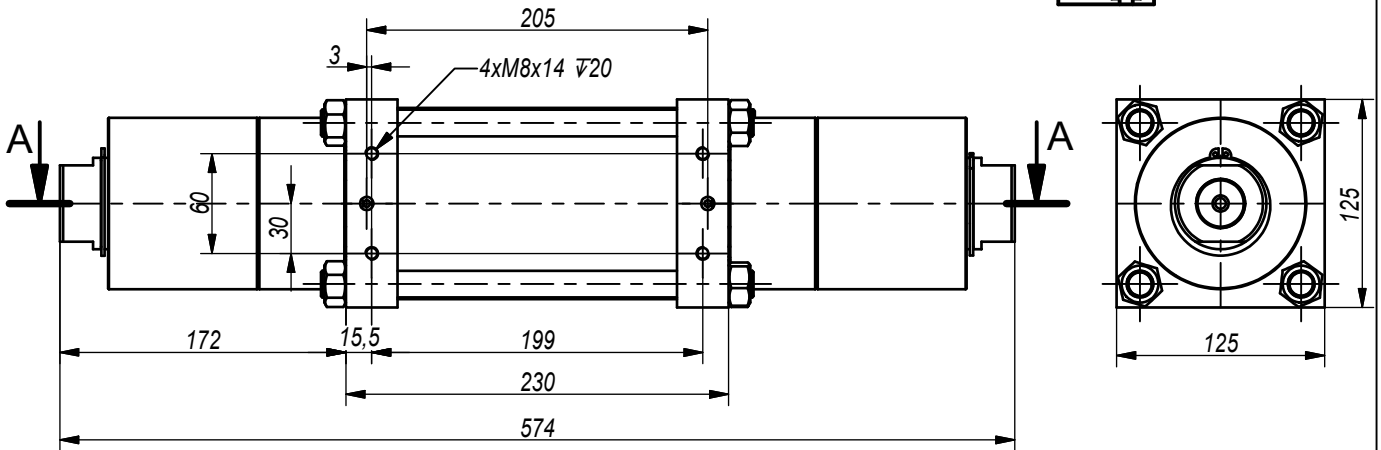
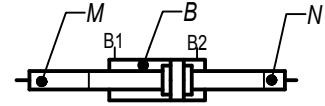
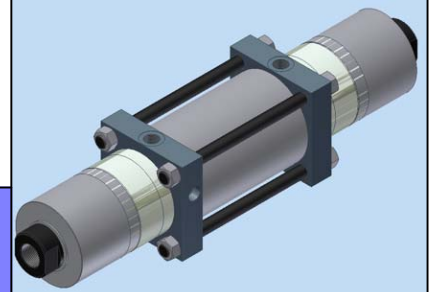


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## HYDRAULIC DRIVEN BOOSTER

ML .../...

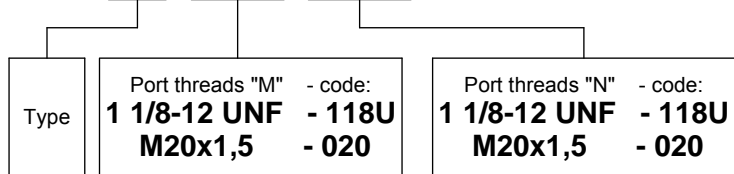


Actuating liquid in chamber "B" - hydraulic oil with a viscosity 20...400 cSt.  
Working fluid in chambers "N" and "M" - 5% water and oil emulsion.

Type	Port threads M	Port threads N	D	d1	d2	Stroke of the piston h	Qnom B1, B2	Pmax hB1, B2	Pmax port N	Pmax port M	DM1	DM2	DN1	DN2
			[mm]	[mm]	[mm]	[mm]	[l/min]	[bar]	[bar]	[bar]	[mm]	[mm]	[mm]	[mm]
ML 118U/118U	1 1/8-12 UNF	1 1/8-12 UNF	95	20	20	100	25	210	5000	5000	6,4	11,1	6,4	11,1
ML 020/020	M20x1,5	M20x1,5	95	20	20	100	25	110	3000	3000	3,2	6,6	3,2	6,6

### ORDERING CODE

### ML 118U / 118U



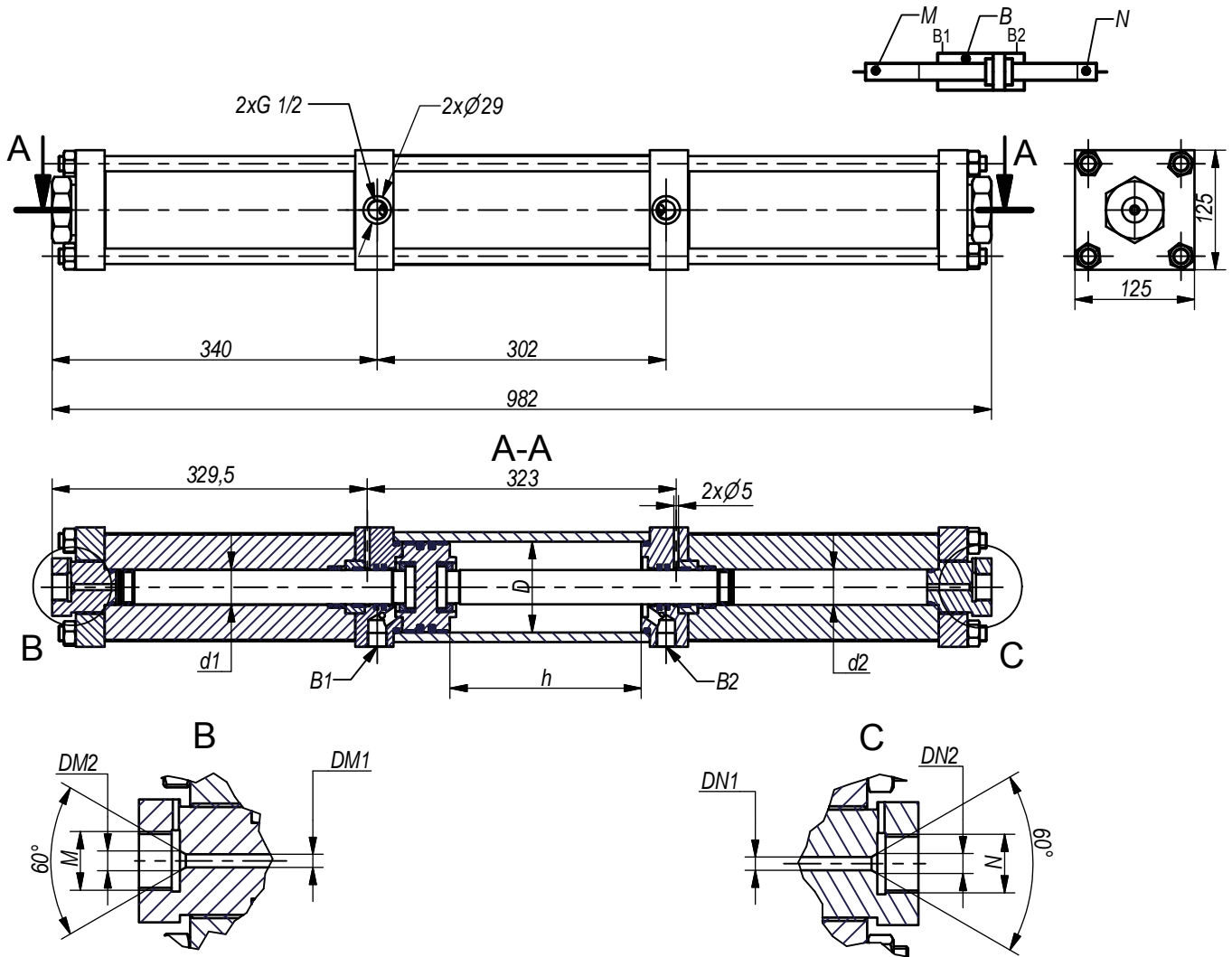
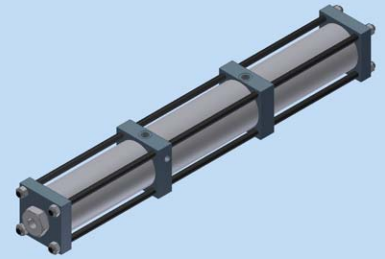


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## HYDRAULIC DRIVEN BOOSTER

**MLV .../...**



Actuating liquid in chamber "B" - hydraulic oil with a viscosity 20...400 cSt.  
Working fluid in chambers "N" and "M" - 5% water and oil emulsion.

Type	Port threads M	Port threads N	D	d1	d2	Stroke of the piston h	Qnom B1, B2	Pmax B1, B2	Pmax port N	Pmax port M	DM1	DM2	DN1	DN2
			[mm]	[mm]	[mm]	[mm]	[l/min]	[bar]	[bar]	[bar]	[mm]	[mm]	[mm]	[mm]
MLV 118U/118U	1 1/8-12 UNF	1 1/8-12 UNF	95	36	36	200	40	270	1590	1590	6,4	9,7	6,4	9,7

### ORDERING CODE

**MLV 118U / 118U**

Type

Port threads "M" - code:  
**1 1/8-12 UNF-118U**

Port threads "N" - code:  
**1 1/8-12 UNF- 118U**

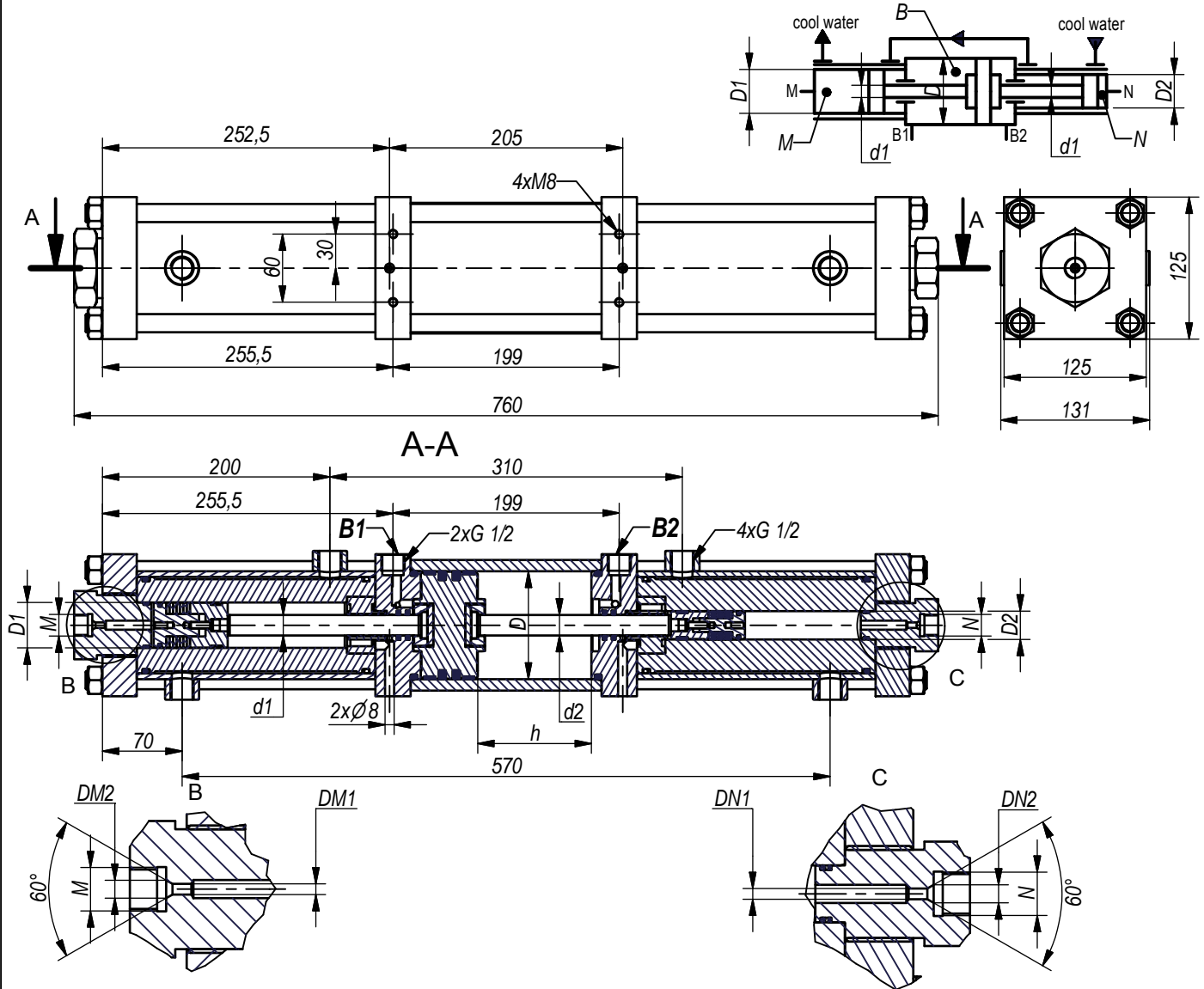
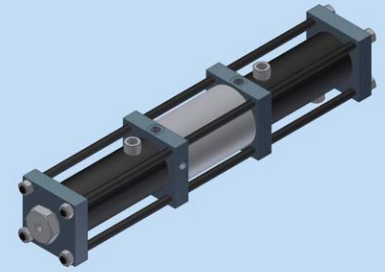


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## HYDRAULIC DRIVEN BOOSTER

**MG .../...**

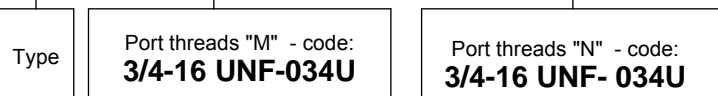


Actuating liquid in chamber "B" - hydraulic oil with a viscosity 20...400 cSt.  
Working fluid in chambers "N" and "M" - gas.

Type	Port threads M	Port threads N	D	D1	D2	d1	d2	Stroke of the piston h	Qnom B1, B2	Pmax B1, B2	Pmax port N	Pmax port M	DM1	DM2	DN1	DN2
			[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[l/min]	[bar]	[bar]	[bar]	[mm]	[mm]	[mm]	[mm]
MG 034U/034U	3/4-16 UNF	3/4-16 UNF	95	40	25	18	18	100	25	180	2500	990	4,7	7,9	4,7	7,9

### ORDERING CODE

**MG 034U / 034U**



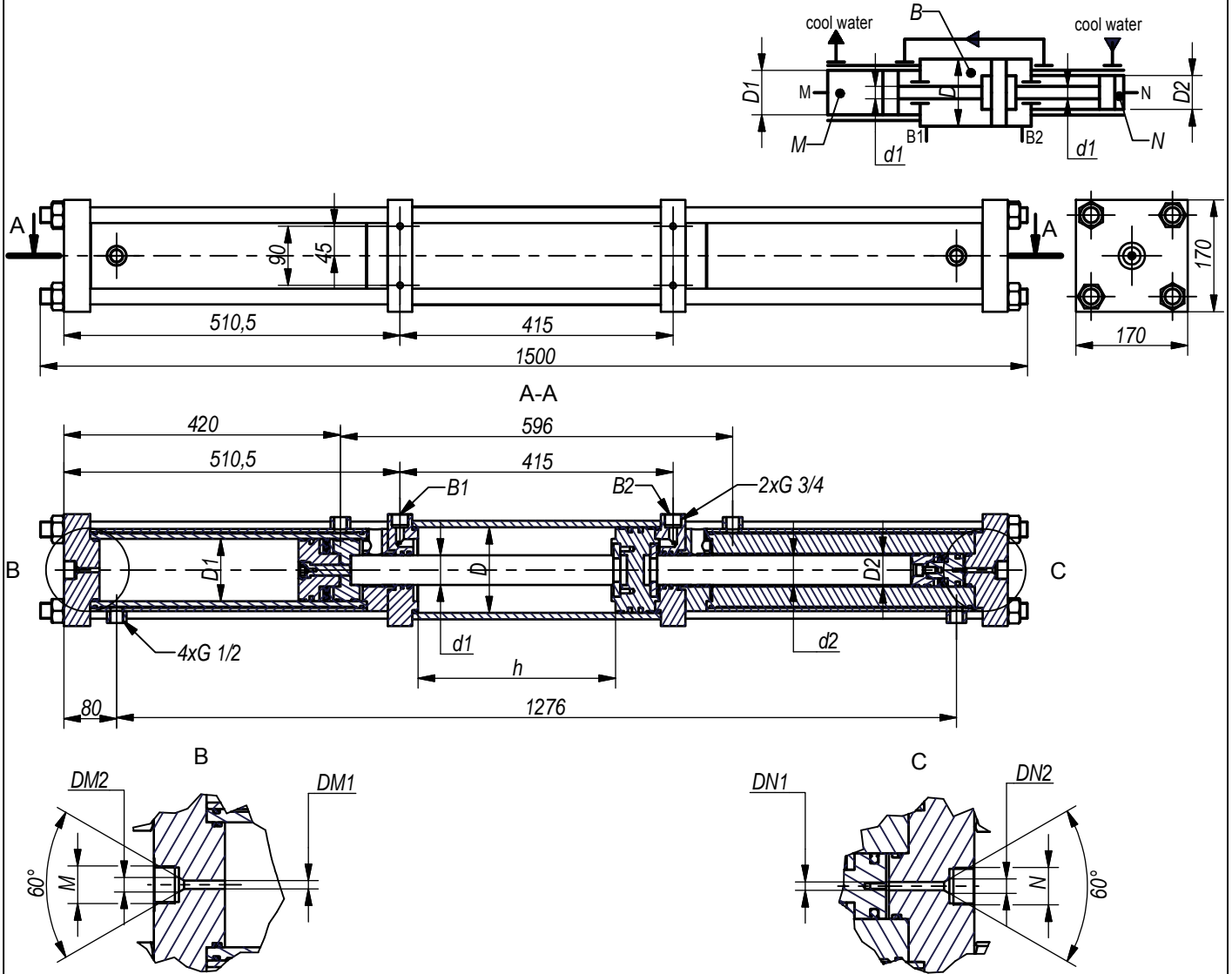
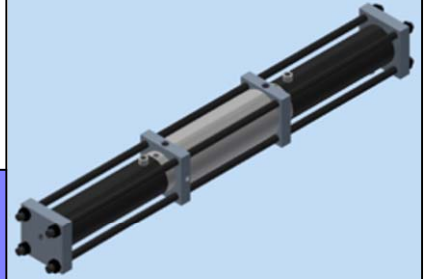


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## HYDRAULIC DRIVEN BOOSTER

**MGV .../...**



Actuating liquid in chamber "B" - hydraulic oil with a viscosity 20...400 cSt.  
Working fluid in chambers "N" and "M" - gas.

Type	Port threads M	Port threads N	D	D1	D2	d1	d2	Stroke of the piston h	Qnom B1, B2	Pmax B1, B2	Pmax port N	Pmax port M	DM1	DM2	DN1	DN2
	-	-	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[l/min]	[bar]	[bar]	[bar]	[mm]	[mm]	[mm]	[mm]
MGV 118U/118U	1 1/8-12 UNF	1 1/8-12 UNF	130	95	50	45	45	300	70	170	1010	500	6,4	11,1	6,4	11,1

### ORDERING CODE

**MGV 118U / 118U**

Type

Port threads "M" - code:  
**1 1/8-12 UNF-118U**

Port threads "N" - code:  
**1 1/8-12 UNF- 118U**

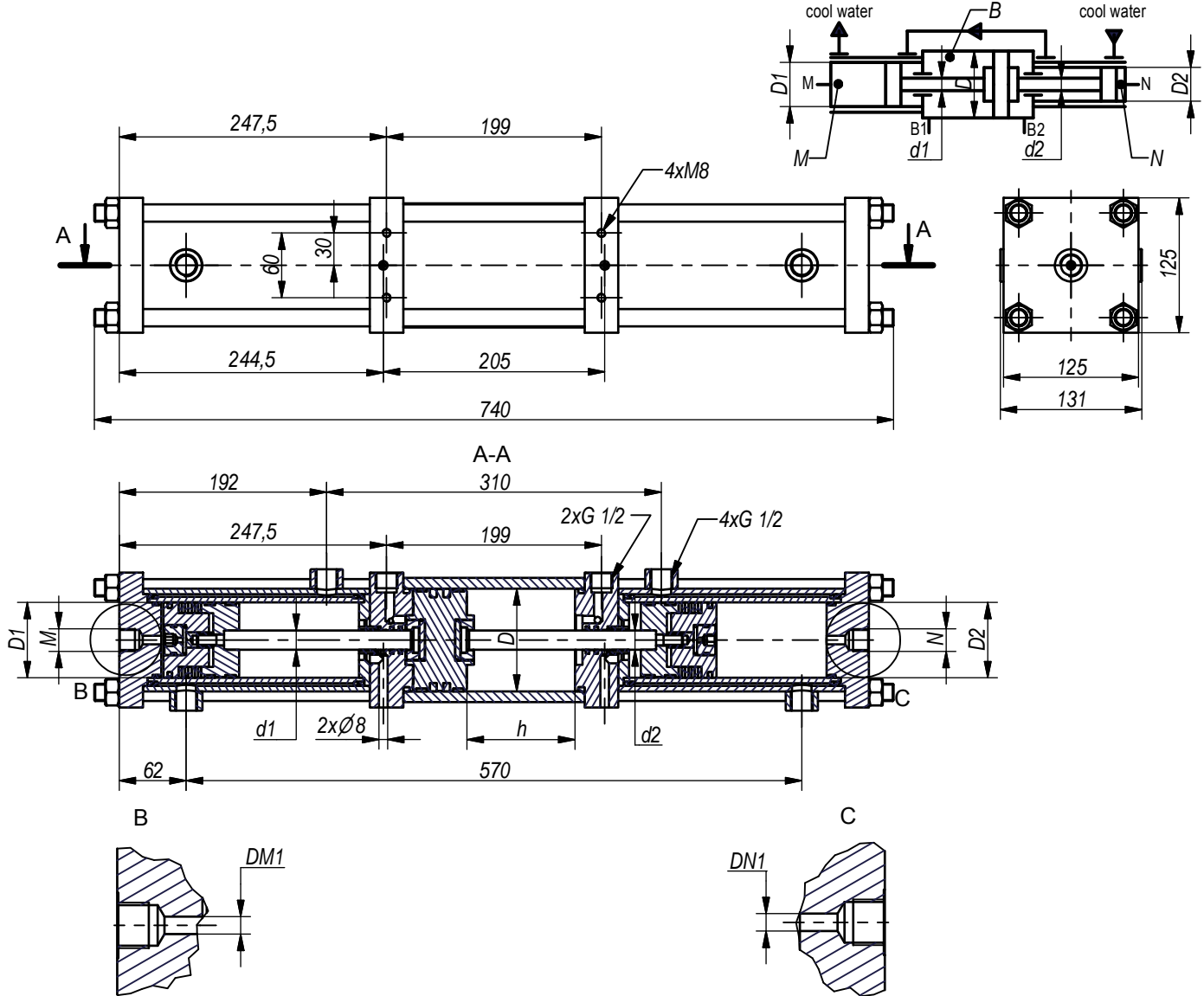
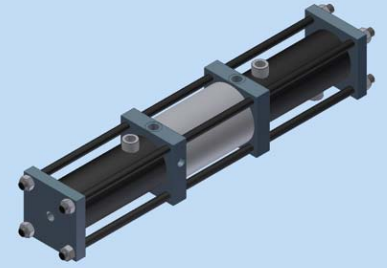


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## HYDRAULIC DRIVEN BOOSTER

**MGV1 .../...**

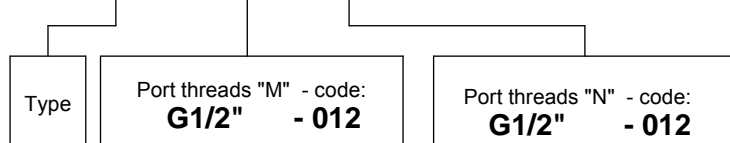


Actuating liquid in chamber "B" - hydraulic oil with a viscosity 20...400 cSt.  
Working fluid in chambers "N" and "M" - gas.

Type	Port threads M	Port threads N	D	D1	D2	d1	d2	Stroke of the piston h	Qnom B1, B2	Pmax B1, B2	Pmax port N	Pmax port M	DM1	DM2	DN1	DN2
			[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[l/min]	[bar]	[bar]	[bar]	[mm]	[mm]	[mm]	[mm]
MGV1 012/012	G1/2	G1/2	95	70	70	18	18	100	15	120	215	215	8	-	8	-

### ORDERING CODE

**MGV1 012 / 012**



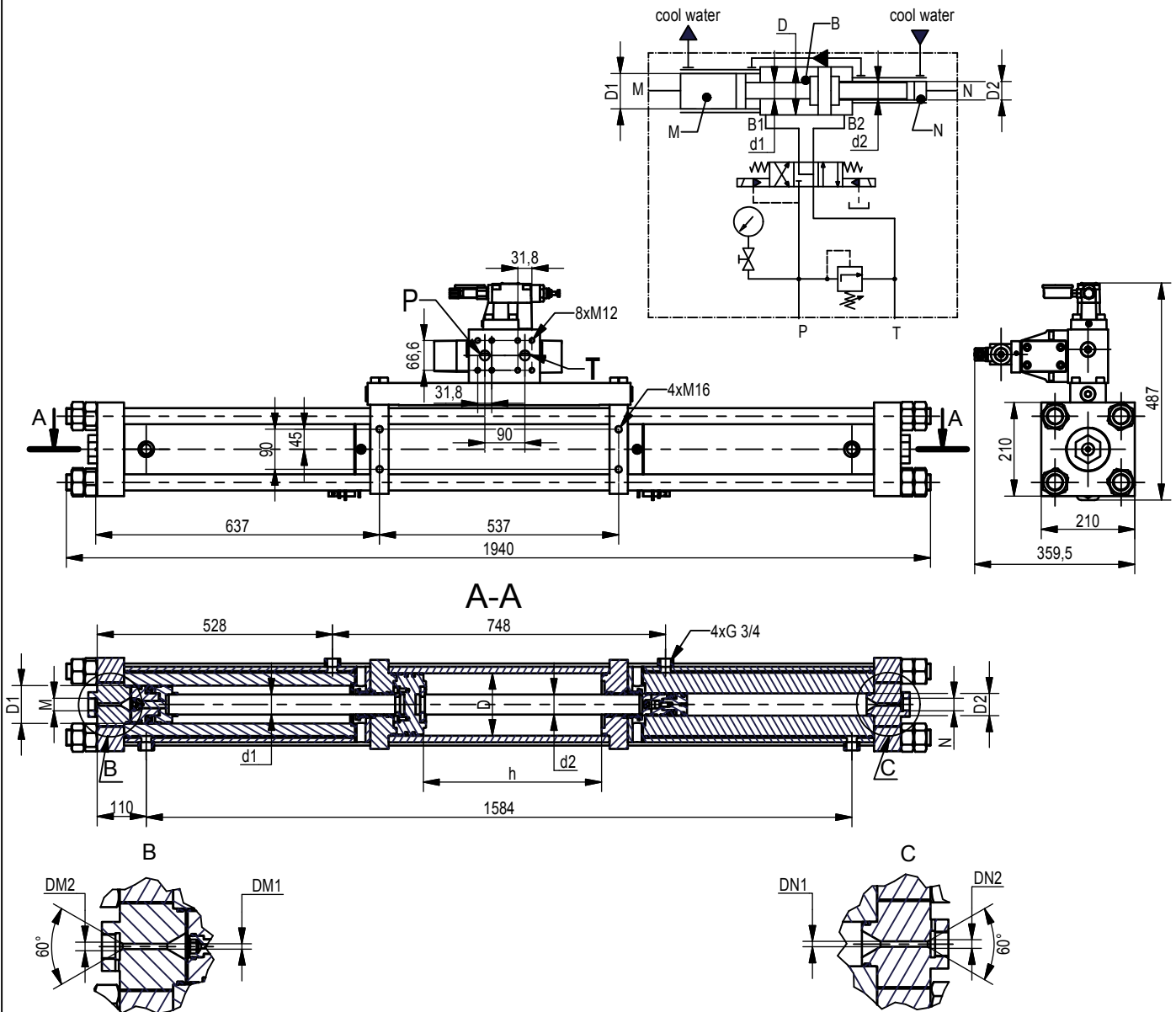


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## HYDRAULIC DRIVEN BOOSTER

**MGV2 .../...**



Задвижващ флуид в камера "B" - масло хидравлично с вискозитет 20...400 cSt.  
Работен флуид в камери "N" и "M" - газ.

Type	Port threads M	Port threads N	D	D1	D2	d1	d2	Stroke of the piston h	Qnom B1, B2	Pmax B1, B2	Pmax port N	Pmax port M	DM1	DM2	DN1	DN2
	-	-	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[l/min]	[bar]	[bar]	[bar]	[mm]	[mm]	[mm]	[mm]
MGV2 118U/118U	1 1/8-12 UNF	1 1/8-12 UNF	140	85	50	45	45	400	180	250	2000	800	6	9,7	6	9,7

### ORDERING CODE

**MGV2 118U / 118U**

