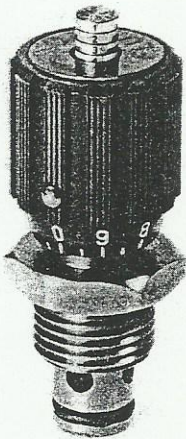
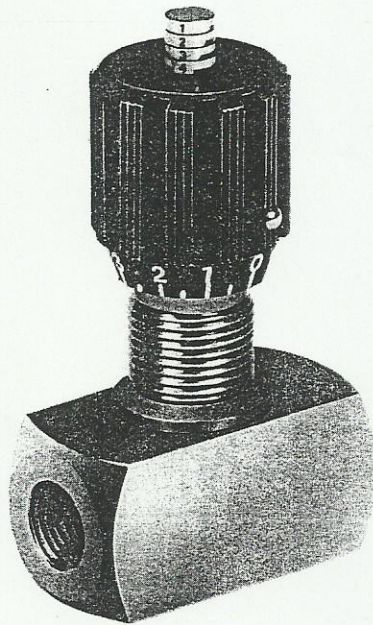


# Flutec

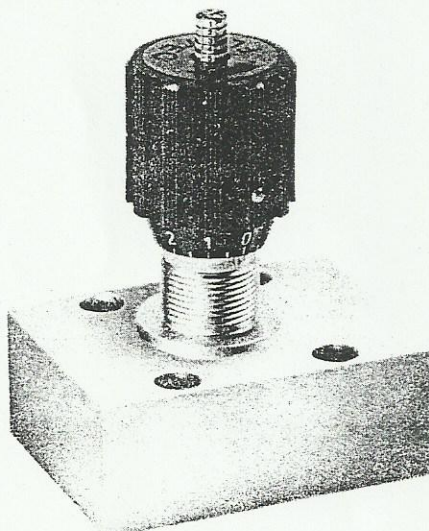
## FLOW CONTROL AND SHUT-OFF VALVES



Type: DVE



Type: DV/AV



Type: DVP/AVP

### 1. DESCRIPTION

The FLUTEC flow control and shut-off valves permit a simple and accurate control of hydraulic fluids. The control valves can either be supplied with a spindle (AV) for shutting off the flow or a spindle (DV) for an easy and accurate control of the flow.

With increasing number of turnings of the control knob, starting from the closed position, the flow increases evenly. The last turning results in a complete opening of the flow passage.

The coloured scale permits a good repetition of settings and the coloured triangle provides a visual indication of the flow passage. Increase of the coloured triangle equals increased flow through the passage.

A set screw is provided in the side of the cap to lock the control valve in set position to comply with safety standards.

The following models of flow control and shut-off valves are available:

DV/AV - for inline mounting

DV...S / AV...S - for panel mounting  
(panel mounting set to be ordered separately)

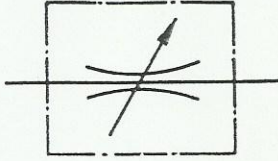
DVP/AVP - for manifold block mounting  
(also available are valves with threaded connections for panel mounting)

DVE/AVE - cartridge type for manifold block mounting.

## 2. ORDERING DATA

### 2.1. GENERAL

#### 1. Hydraulic symbol flow control and shut-off valve



#### 2.1.2. Type code (typical ordering example)

DV - 6 - 1 . 0 / 0 - P - S

#### Flow control and shut-off valves

DV = Flow control valve (inline mounting)

AV = Shut-off valve (inline mounting)

DVP = manifold block mounting

AVP = manifold block mounting

DVE = cartridge type

AVE = cartridge type (only sizes 8-16)

in steel only

#### Sizes

6 - 1/8"

8 - 1/4"

10 - 3/8"

12 - 1/2"

16 - 3/4"

20 - 1"

25 - 1 1/4"

30 - 1 1/2"

#### Type number

1 - steel

2 - brass

3 - stainless steel

#### Modification number

#### Supplementary details

0 = Whitworth thread R (BSP)

5 = NPT threaded connection

#### Sealings

P = Perbunan

V = Viton seal

#### Accessories

panel mounting set \*

\* When fitting to panel withdraw safety pin from control knob. Remove control knob from valve. Assemble on panel and replace control knob. The safety pin must be replaced and head of pin knocked down to be flushed with the outside of the control knob.

#### 2.1.3. Mounting position optional

#### 2.1.4 Hydraulic fluid mineral oil please consult for other fluids

2.2. HYDRAULIC TECHNICAL DATA

2.2.1. Max. working pressures

for different valve materials:  
 steel : 350 bar  
 brass : 150 bar  
 stainless steel : 350 bar

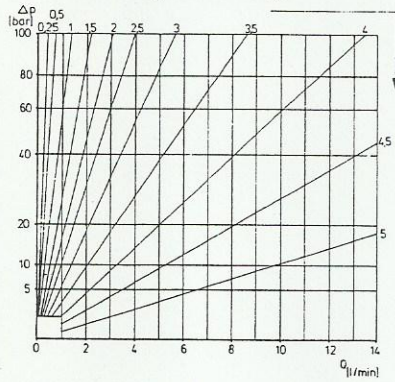
2.2.2. Fluid temperature

$v_{min} \dots v_{max} \dots =$   
 $-20^{\circ}C \dots +100^{\circ}C$

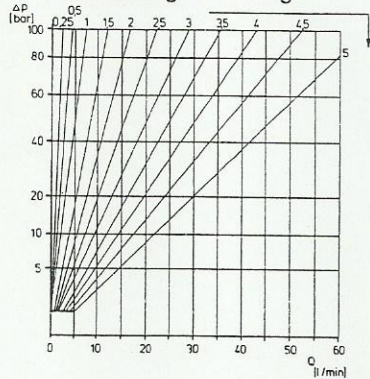
2.2.3. Nominal flow rate

pressure differential  $\Delta p$  related  
 to flow setting measured at  $t_{01} =$   
 $50^{\circ}C$   
 $(\gamma = 35 \text{ c St})$

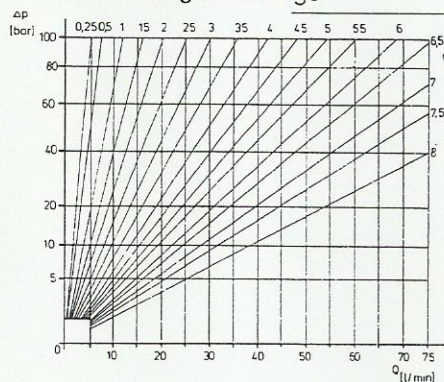
Types: DV/DVP-6  
 flow setting in turnings



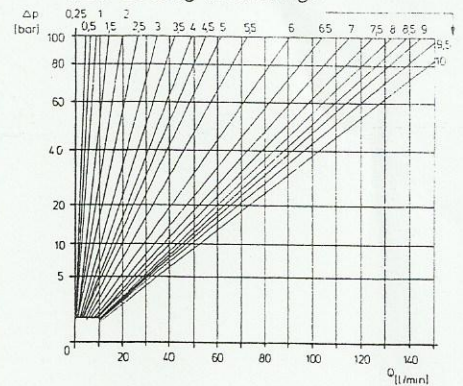
Types: DV/DVP-8  
 flow setting in turnings



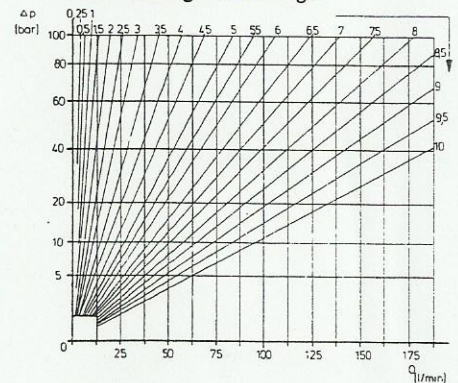
Types: DV/DVP-10  
 flow setting in turnings



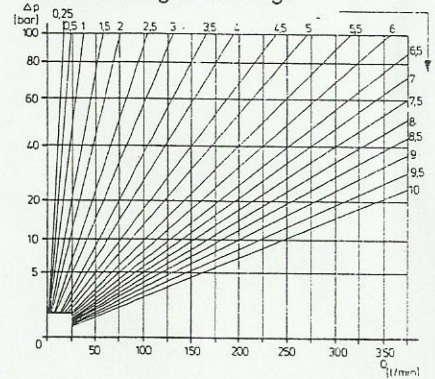
Types: DV/DVP-12  
 flow setting in turnings



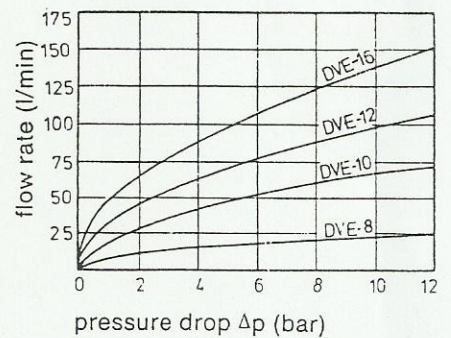
Types: DV/DVP-16  
 flow setting in turnings



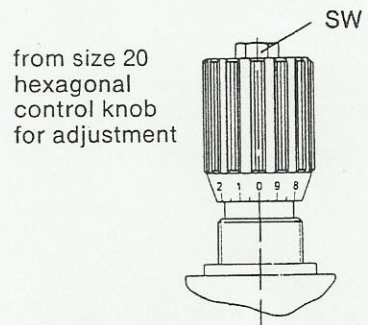
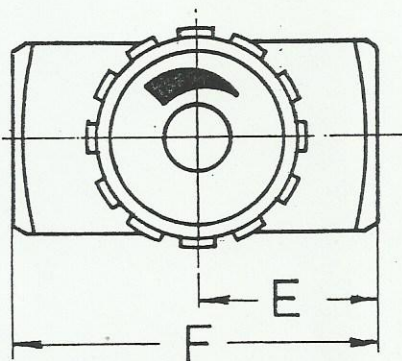
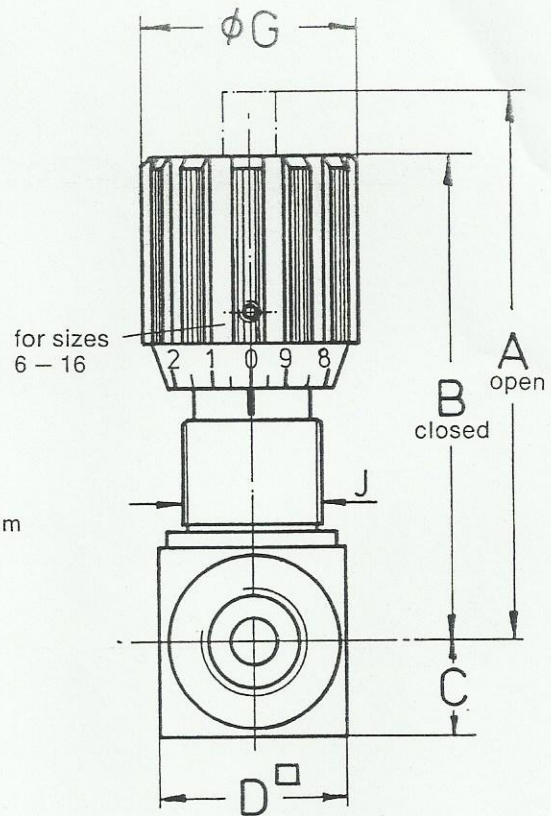
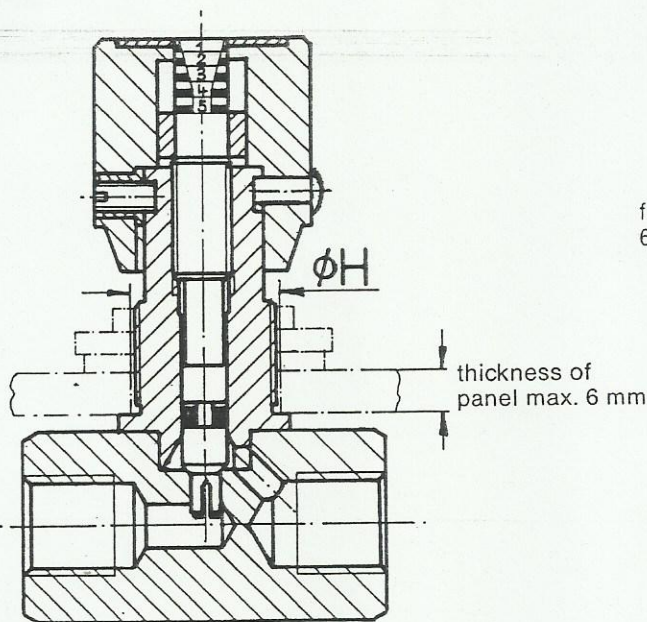
Types: DV/DVP-20/25/30  
 flow setting in turnings



Types: DVE-8/10/12/16  
 $\Delta p$ -Q-curve

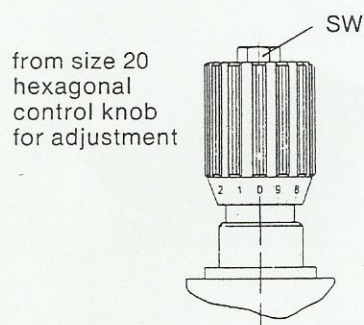
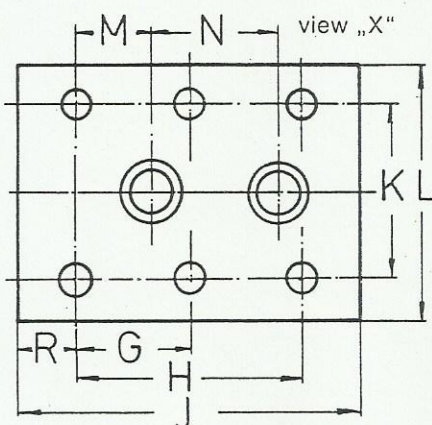
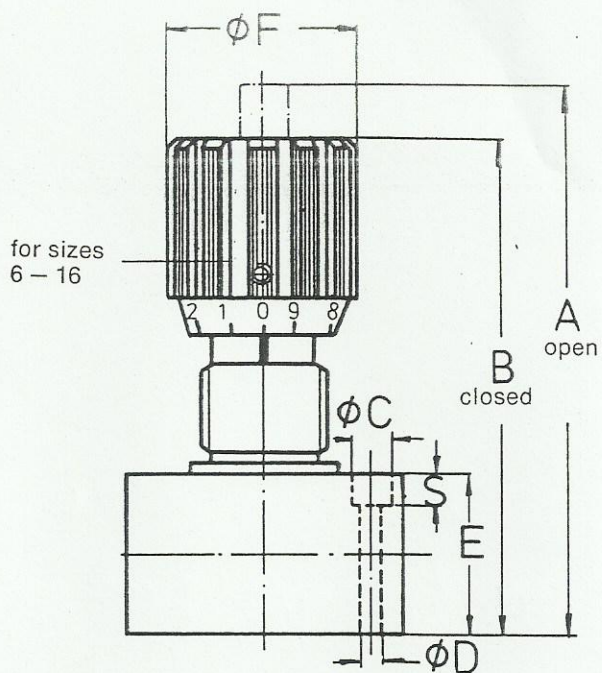
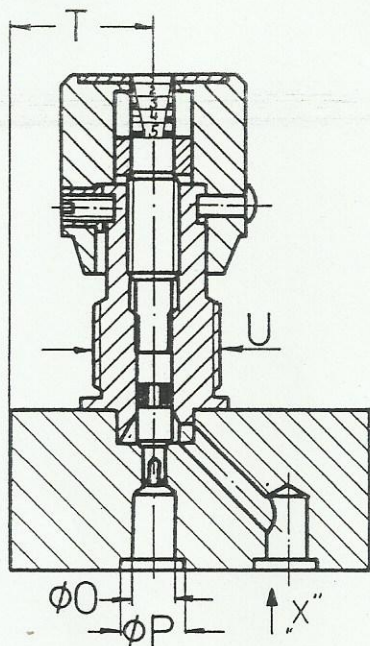


### 3. INSTALLATION DIMENSIONS: DV/AV



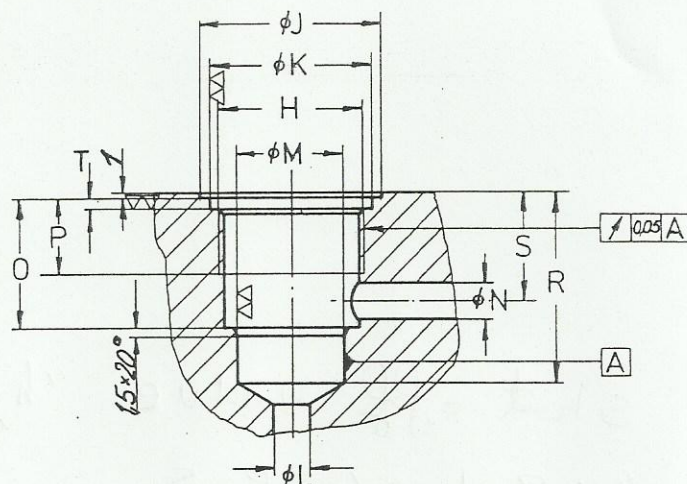
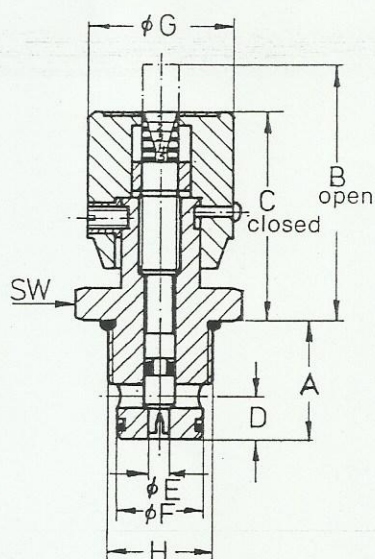
Size	Thread	A	B	C	D	E	F	G	H	J	SW	Weight (kg)
DV/AV- 6	1/8"	55	50	8	16	19	38	24	13	Pg 7	—	0,12
DV/AV- 8	1/4"	72	65	12,5	25	24	48	29	19	Pg 11	—	0,25
DV/AV-10	3/8"	74	67	15	30	29	58	29	19	Pg 11	—	0,4
DV/AV-12	1/2"	92	82	17,5	35	34	68	38	23	Pg 16	—	0,7
DV/AV-16	3/4"	106	96	22,5	45	39	78	38	23	Pg 16	—	1,2
DV/AV-20	1"	145	128	25	50	54	108	49	38	Pg 29	19	2,1
DV/AV-25	1 1/4"	150	133	30	60	54	108	49	38	Pg 29	19	2,8
DV/AV-30	1 1/2"	155	138	35	70	54	108	49	38	Pg 29	19	3,5

#### 4. INSTALLATION DIMENSIONS: DVP/AVP



Size	A	B	C	D	E	F	G	H	J	K	L	M	N	O	P	R	S	T	U	SW	Weight (kg)
DVP/AVP- 6	63	58	11	6,6	16	24	—	19	35	28,5	41,5	1,5	16	5	9,8	8	7	9,5	Pg 7	—	0,2
DVP/AVP- 8	79	72	11	6,6	20	29	—	35	47,5	33,5	46	4,5	25,5	7	12,7	6,5	7	12	Pg 11	—	0,4
DVP/AVP-10	84	77	11	6,6	25	29	—	33,5	51	38	51	4,2	25,5	10	15,7	8,5	7	14	Pg 11	—	0,6
DVP/AVP-12	99	89	11	6,6	25	38	—	38	75	44,5	57,5	4,0	30	13	18,7	18,5	7	22,5	Pg 16	—	1,0
DVP/AVP-16	113	103	14	9,0	30	38	38	76	93,5	54	70	11	54,5	17	24,5	8,5	9	19,5	Pg 16	—	1,7
DVP/AVP-20	165	148	14	9,0	45	49	47,5	95	111	60	76,5	19	57	22	30,5	8	9	31,5	Pg 29	19	3,6
DVP/AVP-25	165	148	18	11	45	49	60	120,5	143	76	100	21	79,5	28,5	37,5	11	11	46	Pg 29	19	5,5
DVP/AVP-30	170	153	20	14	50	49	71,5	143	171	92	115	24	95	35	43,5	15	13	39	Pg 29	19	7,5

## 5. INSTALLATION DIMENSIONS: DVE/AVE



installation dimensions for cartridge

### Cartridge

Size	A	B	C	D	$\phi E$	$\phi F$	$\phi G$	H	SW	Weight (kg)
DVE/AVE - 8	26	47	40	11	4,5	14	29	R 1/2"	27	0,15
DVE/AVE - 10	30	64	54	13,5	8	16	38	R 1/2"	27	0,25
DVE/AVE - 12	40	65	55	15	9,5	19	38	R 3/4"	32	0,5
DVE/AVE - 16	43,5	65	55	19	11	27	38	R 1"	41	0,7

### Installation Dimensions for Cartridge

Size	$\phi J$	$\phi K^{+0,1}$	$\phi L$	$\phi M^{H8}$	$\phi N$	O	P	R	S	T <sup>+0,1</sup>
DVE/AVE - 8	32	24	5	14	5	17,5	14	29	15	1,9
DVE/AVE - 10	32	24	8	16	8	20,5	14	33	17,5	1,9
DVE/AVE - 12	37	30	10	19	10	29	21	43	25	1,9
DVE/AVE - 16	47	36	12	27	12	30	21	47	25,5	2,4

			Ref. L.M.	Instructie tekening
4x	N	Watertight loadsharing valve box "Hydraudyne" acc. drawing 304.157 E P.L.		304.157 E + Part List
		Each built up with:		
		1x Valve block "Rexroth" Type AG 19424-0-4.		AG19424+ <i>Part List.</i>
		8xa Solenoid operated 4-wayvalve "Rexroth" 4WE 6 J 5X/AG 24 ND-SO 329		RE 23177 RD 23177-E-S0329
		8xb Solenoid operated 4-wayvalve "Rexroth" 4WE 6 D9-5X/AG 24ND - SO 511		RE 23177 RD 23177-E-S0511
		1xc Reliefvalve "Rexroth" DBDS20 K1X/400/J-SO 73 with grinded seat. Adjusted at 315 bar.		RE 25400 RD 25400-E/J-S073
		1xd Reliefvalve "Rexroth" DBDS20 K1X/400/J-SO 73 with grinded seat. Adjusted at 235 bar.		RE 25400 RD 25400-E/J-S073
		8xe Dual pilot operated checkvalve "Rexroth" Z2S 6-4X/J-SO 43 with grinded seat and poppet and spring 3 bar.		RE 21546 Z2S6-40/J-SO 43 + Part List.
		16xi 2/2-wayvalve "Rexroth" LC16 A00 E5x/016 (with Quadring sealed poppet).		RE 81050 RD 81050-E
		16xj 2/2-wayvalve cover "Rexroth" AG 19426-2-3		
		8xk Dual flow controlvalve "Rexroth" Z2FS 6-3X/J		RE 27505 RD 27505-E Z2FS6-3x/J + Part.1.
		16xl Checkvalve "Rexroth" NG6 Insert of Z2 S6-4x/J-SO 43. with grinded seat, poppet and spring 3 bar.		RE 21546 Z2S6-40/J-SO 43 +
		2xm Orifice Ø1,0 TNr 142665 (M8x1).		Part List
		2x Pos. Na, 2x Nb, 2x Ne, 4x Ni, 4x Nj, 2x Nk, 4x Nl mounted together on valveblock "Rexroth" AG19426-0-4 Pos. Na up to and Nm mounted together on one block AG 19424-0-4.		AG19426+ <i>Part List.</i>
		2xf Pressure gauge "Econosto" box Ø63, range 0-400 bar. <i>Front</i> flange, <i>rear</i> connection ¼" B.S.P. Glycerine filled acc. fig. 930.		fig. 930
		1xg Pressure gauge "Econosto" box Ø63, range 0-250 bar. <i>Front</i> flange, <i>rear</i> connection ¼" B.S.P. Glycerine filled acc. fig. 930.		fig. 930
		Totaalstuklijst		Modification 1 2 3
1	2	3		68.0701-19 Ref.: L.M.

Ref.  
L.M.

Instruktie  
tekening

2xh Pressure transmitter "Bell and Howell"  
Type 4-373-0005  
Output range 0-20 mA.  
Feed 10-28 V.D.C.  
Pressure range 0-400 bar.

4-373 inst . +  
oper. instr.

2x Restriction "Bell and Howell"  
Type 466175 - 1/4" B.S.P. without airvent. (Brass)

466175

3xn Shut off valve "Flutec"  
DV-8-1.0/O-P-S.

E.5.11.2

2xo Pressure switch "Rexroth"  
HED10 A20/350-J  
1x Adjusted at 300 bar rising pressure  
1x Adjusted at 220 bar rising pressure

RE 30171  
E.301-00-4

Pos. Na up to and No mounted together in a water-tight steel box with hinged door with lock, pad eyes for hoisting and all electric components wired to the terminals in the junctionbox.  
Valve box with certificate of American Bureau of Shipping.

4x      0      Powerpack for loadsharing "Hydraudyne"  
acc. drawing 160.154 D      P.L.

160.154 D +  
Part List

Each built up with:

1xa Electric motor make "Asea"  
Type MBL 132-M38-4  
Foot/flange motor B3/B5  
Power 5,5 kW.  
Voltage 460V - 60Hz - 3phase.  
Starting direct on line.  
Speed at nominal power 1710 r.p.m.  
Isolation class F. Protection IP 54.  
Standstill heating 110V - 60Hz - 25W.  
Max. ambient temperature 62,5°C.  
Marine version according rules of A.B.S.  
with certificate.

Cat. MK20E  
Instr. 4209.177 Yd  
MK20-B1.R1+  
Part List

1xb Flexible shaftcoupling make "Flender Eupex"  
Size B.95. *Part 1. - φ25 H6: Part 4 - φ38 H6.*

Instr. V420

1xc Dual piston / gear pump "Rexroth"  
Size 1PF1 R4-10/1.60-700 RK1 MO1 +  
1PF2 G2-20/8 RN 1 MHL.  
Rotation clockwise.  
Low pressure pump delivery 14 ltr/min. at  
1710 r.p.m.  
High pressure pump delivery 2,5 ltr/min. at  
1710 r.p.m.  
With manufacturer's test certificate.

RE 11703  
RD 11703-E  
  
RE 11263  
RD 11263-E  
  
RE 10 034  
RD 10034-E

1xd Skid frame for mounting pump and electric motor together, with <sup>4x</sup>rubber blocks for noise reduction.. "Barry" C 1015.

Modification

1	2				
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68.0701-20

Totaalstuklijst

HYDRAUDYNE-BOXTEL

Ref.: L.M.