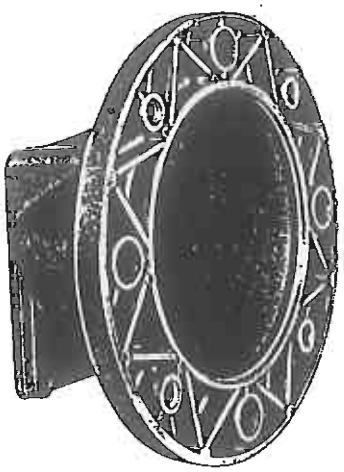
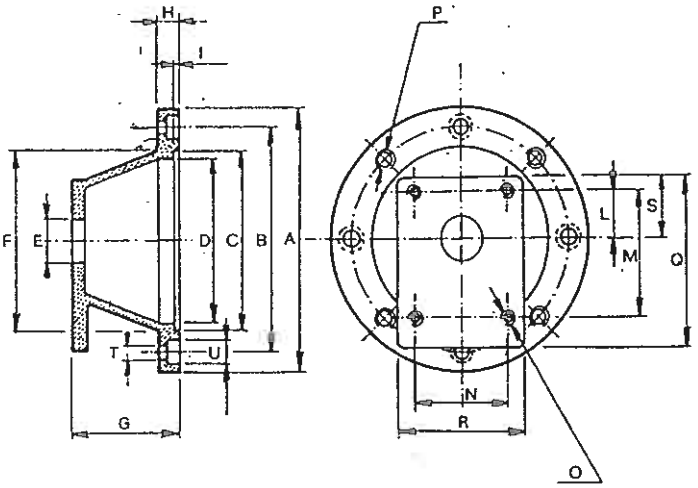
TECHNICAL INFORMATION

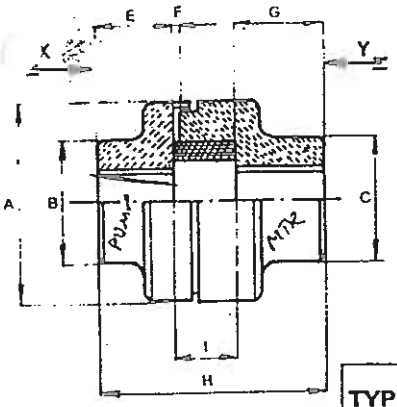
BELL HOUSING series "LS" & "LBS"

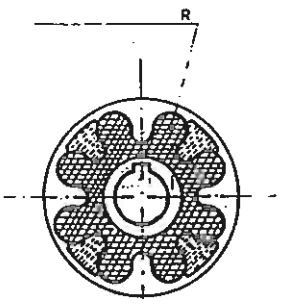


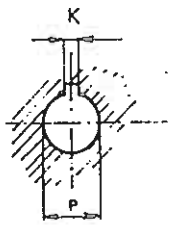


TYPE	HP 4 Pole	PUMP	A	B	C	D	E	F	G	H	I	L	M	N	O	P	Q	R	S	T	U
LS140	0,16	0,5 *	140	115	95	93	22	100	60	11	3	25,5	66	0	6M	8M	90	69	34	9,5	14
LS141	÷	1 P *					25,4					26,5	72	52							
LS142	0,25	1 C.M.					30					24,5	73	56							
LS160	0,33	0,5 *	160	130	110	106	22	114	70	14	3,6	25,5	66	0	6 M	8 M	90	69	34	9,5	14
LS161	÷	1 P *					25,4					26,5	72	52							
LS162	0,5	1 C.M.					30					24,5	73	56							
LS200	0,75	0,5 *	200	165	130	121	22	133	95	15	3,7	25,5	66	0	6 M	10M	118	86	43	11	17
LS201		1 P *					25,4					26,5	72	52							
LS202	÷	1 C.M.					30					24,5	73	56							
LS203	2	2 *					36,5					32,5	96	71,5	8 M						
LS250		1 P *	250	215	180	165	25,4	185	105	21	4,2	26,5	72	52	6 M	12M	118	86	43	14	20
LS251		1 C.M					30					24,5	73	56							
LS252	3	2 *					36,5					32,5	96	71,5	8 M						
LS253	÷	2 *							115								170	120	59		
LS254	5,5	TF250					50,8					43	128	98,5	10M						
LS255		3 *										42									
LS256		3 M										43									
LS257		3 T										45	137	98,4							
LS300		2 *	300	265	230	215	36,5	235	143	21	4,5	32,5	96	71,5	8 M	12M	118	86	43	14	20
LS301	7,5	TF250					50,8					43	128	98,5	10M		170	120	59		
LS302	÷	3 *										42									
LS303	12,5	3 M										43									
LS304		3 T										45	137	98,4							
LS305		3.5.M					60					48,2	148	127	12M		180	158	62		
LS306		3,5 *					60,3					49,5	149,5	114,3	10M						
LS350		2 *	350	300	250	235	36,5	253	188	25	5	32,5	96	71,5	8 M	16M	118	96	43	18	26
LS351		TF250					50,8					43	128	98,5	10M		170	120	59		
LS352	15	3 *										42									
LS353	÷	3 M										43									
LS354	30	3 T										45	137	98,4							
LS355		3,5 M					60					48,2	148	127	12M		180	158	62		
LS356		3,5 *					60,3					49,5	149,5	114,3	10 M						
LS357		4 M					63,5					65	196	142,8	12 M		230	175	77		
LS358		4 *										64,3	188	143							
LBS18	0,16÷0,25	ZBR	140	115	95	93	32	100	60	11	3,4	10.3	40	40	6 M.	8 M	90	69	34	9.5	14
LBS19	0,33÷0,5	ZBR	160	130	110	101	32	114	70	14	3,6	10.3	40	40	8 M.	8M	90	69	34	9.5	14
LBS20	0,75	ZBR	200	165	130	121	32	133	95	15	3,7	10.3	40	40	8 M.	10M	118	86	43	11	17
LBS21	÷ 2	ZFR-S					80					34.5	100	72							
LBS22		ZBR	250	215	180	165	32	185	105	21	4,2	10.3	40	40	8M	12M	118	86	43	14	20
LBS23	3	ZFR-S					80					34.5	100	72							
LBS24	÷	ZFR-S							115								170	120	59		
LBS25	5,5	ZGR-S					105					48	145	102	10M						
LBS26	7,5	ZFR-S	300	265	230	215	80	235	143	21	4,5	34.5	100	72	8M	12M	118	86	43	14	20
LBS27	÷ 12,5	ZGR-S					105					48	145	102	10M		170	120	59		
LBS28	15	ZFR-S	350	300	250	235	80	253	188	25	5s	34.5	100	72	8M	16M	118	86	43	18	16
LBS29	÷ 30	ZGR-S					105					48	145	102	10M		170	120	59		

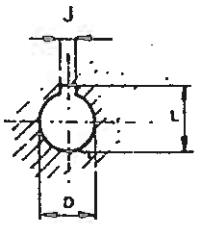
FLEXIBLE COUPLINGS TYPE ND FOR BELLHOUSINGS 'L' 'LS' 'LB' 'LBS'



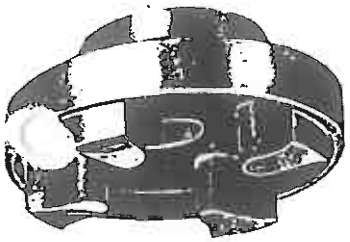




View X
PUMP



View Y
MTR







TYPE	Bell-Housing L	Bell-Housing LS	MOTOR SIZE	MOTOR H.P.	P	A	B	C	D	E	F	G	H	I	J	K	L	R	Taper
ND 01	1401	140	63	0,16 ÷ 0,25	05 M 05 GT 1P. 1 C 1M.	48	30	30	11	17	2	19	52	16	4	2 / 2.4 / 3	12.7	42	1 : 8
" 02																			
" 03	1402	141																	
" 04	1403	142																	
" 05																			
ND 1	1601	160	71	0,33 ÷ 0,5	05 M 05 GT 1P. 1 C 1M.				14			29	62		5	2 / 2.4 / 3	16.2		
" 1 A																			
" 2	1602	161																	
" 3	1603	162																	
" 3 A																			
" 4	2001	200	80	0,75 ÷ 1	05 M 05 GT 1P. 1 C 1M.			38	19			54	87		6	2 / 2.4 / 3	21.7		
" 4 A																			
" 5	2002	201																	
" 6	2003	202																	
" 6 A																			
ND 7	2004	203	80	0,75 ÷ 1	2 CA. 2	65	34	42	19	21,5	2	47,5	87	18	6	3.2 / 4	21.7	62	
" 7 A																			
" 8	2002	201	90	1,5 ÷ 2	1P. 1 C 1M. 2 CA. 2			48	24						8	2.4 / 3 / 3.2 / 4	27,2		
" 9	2003	202																	
" 9 A																			
" 10	2004	203																	
" 10 A																			
" 11	2501	250	100 ÷ 112	3 ÷ 5,5	1P. 1 C 1M. 2 CA. 2			53	28			55	94,5			2.4 / 3 / 3.2 / 4	31.2		1 : 8
" 12	2502	251																	
" 12 A																			
" 13	2503	252																	
" 13 A																			
ND 14	2504	253	100 ÷ 112	3 ÷ 5,5	2 CA. 2 3	90	42	55	28	27	2	60	107	20	8	3.2 / 4	31.2	82	
" 14 A																			
" 15	2505÷08	254÷257																	
" 16	3001	300	132	7,5 ÷ 12,5	2 CA. 2 3			73	38			86	133		10	3,2 / 4	41.7		
" 16 A																			
" 17	3002÷06	301÷304																	
ND 18	3001	300	132	7,5 ÷ 12,5	2 CA. 2 3 35 M 35 CA	115	64	73	38	34	2	76	133	24	10	3.2 / 4 / 5 / 4.76	41.7	103	
" 18 A																			
" 18 B	3002÷06	305÷304																	
" 18 C	3006	305																	
" 18 D	3007	306																	
" 19	3501	350	160	15 ÷ 20	2 CA. 2 3 35 M 35 CA 4 T. 4			84	42	42		109	175		12	3.2 / 4 / 5 / 4.76 / 7 / 6.35	45.7		
" 19 A																			
" 20	3502÷06	351÷354																	
" 21	3506	355																	
" 21 A	3507	356																	
" 22	3508	357																	
" 22 A	3509	358																	
" 23	3501	350	180	25 ÷ 30	2 CA. 2 3 35 M 35 CA 4 T. 4			94	48						14	3.2 / 4 / 5 / 4.76 / 7 / 6.35	52.2		
" 23 A																			
" 24	3502÷06	351÷354																	
" 25	3506	355																	
" 25 A	3507	356																	
" 26	3508	357																	
" 26 A	3509	358																	
ND 27	4001÷03	—	200	31 ÷ 40	3 35 M 35 CA 4 T. 4	141	75	106	55	52	2	94	175	29	16	4 / 5 / 4.76 / 7 / 6.35	60.2	132	
" 28	4004	—																	
" 28 A	4006	—																	
" 29	4007	—																	
" 29 A	4007	—																	
ND 198	LB18	LBS18	63	0,16÷0,25	ZBR	48	30	30	11	17	2	22	55	16	5	2	16,2	42	1 : 5
» 199	LB19	LBS19	71	0,33÷0,5				38	14			52	84		6		21,7		
» 200	LB20	LBS20	80	0,75÷1					19										
» 201	LB20	LBS20	90	1,5÷2	ZBR	65	34	48	24	22	2	47	87	18	8	2	27,2	62	
» 202	LB21	LBS21	80	0,75÷1	ZFR/S			42	19						6	3	21,7		
» 203			90	1,5÷2				48	24						8		27,2		
» 204	LB22	LBS22	100 112	3÷5,5	ZBR			53	28			56	96			2	31,2		
» 206	LB23	LBS23			ZFR/S											3			
» 208	LB24	LBS24	100 112	3÷5,5	ZFR/S	90	42	55	28	26	2	60	106	20	8	3 / 5	31,2	82	
» 209	LB25	LBS25			ZGR/S														
» 210	LB26	LBS26	132	7,5÷12,5	ZFR/S			73	38			87	133		10	3	41,7		
» 211	LB27	LBS27			ZGR/S											5			
» 212	LB26	LBS26	132	7,5÷12,5	ZFR/S	115	64	73	38	34	2	75	133	24	10	3	41,7	103	
» 213	LB27	LBS27			ZGR/S											5			
» 214	LB28	LBS28	160	15÷20	ZFR/S			84	42	42	2	109	175	24	12	3	45,7		
» 215			180	25÷30				94	48						14		52,2		
» 216	LB29	LBS29	160	15÷20	ZGR/S			84	42						12	5	45,7		
» 218			180	25÷30				94	48						14		52,2		

PREFERRED

Cetop	Type	Pitch	Config.
5	PARALLEL CIRCUIT SIDE ENTRY	114.3	A B

ORDERING CODE INFORMATION

IMPORTANT
Although this Manifold Block can be called up out of the options given on Page 10, our internal Order/Production system responds to the Code Number given here for this particular Manifold Block.
Please ensure that you order this specific item by reference to the number below and not that on Page 10.

ALUM ALLOY	Code No. 105170/*
STEEL	Code No. 105171/*

*See 'Number of Stations' — Length/Weight details

Manifolds ordered to the above Code conform to the following specification.

- CETOP No. - 5
- 'A' and 'B' Ports (location) - Side Entry
- Material and Working Pressure - Alum Alloy, 105 bar; - Steel, 315 bar
- Thread Form - B.S.P. Parallel
- 'A' and 'B' Ports (size) - ½" B.S.P.
- 'P' and 'T' Ports (size) - ½" B.S.P.

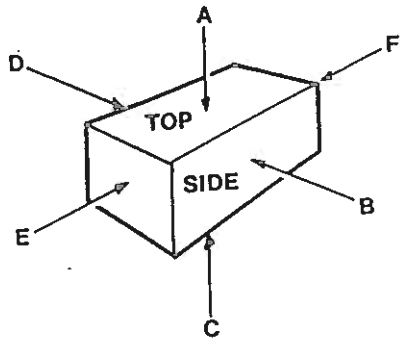
Note:- 'A', 'B', 'P' & 'T' interface holes are supplied drilled 11mm dia.

- Valve Fixings (D Holes) - M6 — 1.0 x 12 Full Thread
- Manifold Fixings (C Holes) - 6.8 dia. through, counterbored 11 dia. to depth shown
- Pitch - 114.3
- Number of Stations / Length/Weight details

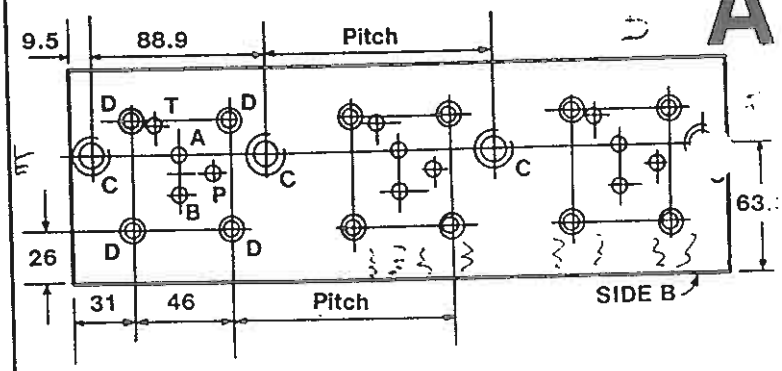
BASED ON 114.3 PLM

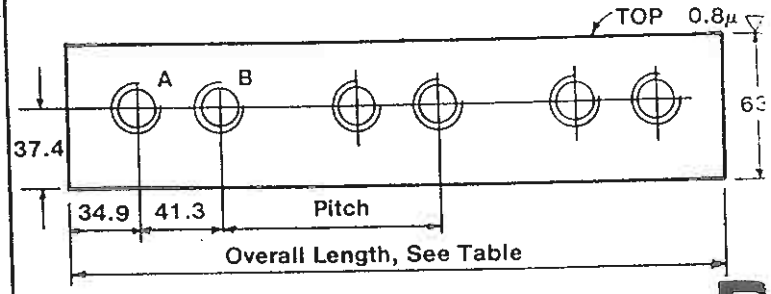
*	No. of Stations	Overall Length	Weight (kgs) Alum Alloy	Weight (kgs) Steel
1	One	108.0	1.6	4.6
2	Two	222.3	3.4	9.8
3	Three	336.6	5.2	15.0
4	Four	450.9	7.0	20.2
5	Five	565.2	8.8	25.4
6	Six	679.5	10.6	30.6

DIMENSIONAL INFORMATION

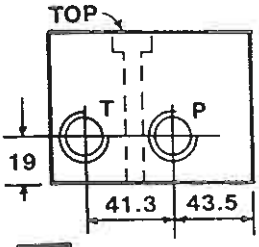


A

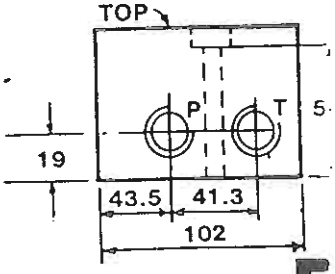




B



E



F

VICKERS

Wet armature solenoid operated directional control valves

Model DG4V-5, 20 design



Basic characteristics

Max. pressure	315 bar
Max. flow rates	Up to 120 l/min, dependent on spool
Mounting surface	ISO 4401/ CETOP R35H size 5/NFPA DO2/DIN 24340 (NG10)

Contents

	Page
1. General description	D. 31
2. Functional symbols	D. 31
3. Model codes	D. 32
4. Operating data:	
• Max. pressures	D. 33
• Control data	D. 33
• Performance data	D. 33
• Hydraulic fluids	D. 34
• Temperature limits	D. 34
• Other characteristics and options	D. 34
5. Installation dimensions	D. 35

D

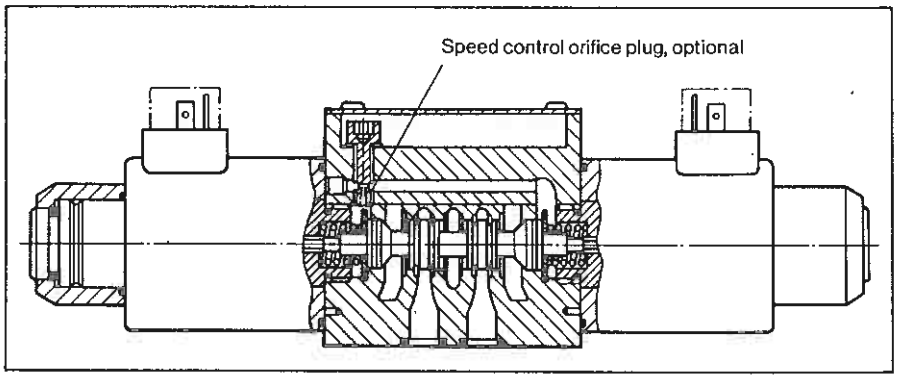
1. General description

A new range of four-port solenoid operated directional control valves with four-land spool design to facilitate provision of smooth, variable valve response speeds.

The initial launch includes:

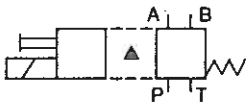
- AC and DC wet-armature solenoid options with DIN 43650 electrical connections and manual overrides.
- Purpose-designed smooth change-over 'J'-code spools in all DC models.
- Variable speed change-over potential in all DC models; see 'Response times' section.
- Many spool types; in spring-offset, spring-centred and detented arrangements.

Typical construction of a spring-centred DC valve with variable speed pilot control passage is shown below.



2. Functional symbols

Single solenoid spring offset valves, solenoid at port A end of body



DG4V-5-*A models

0 = 

2 = 

22 = 

23 = 

DG4V-5-*B models

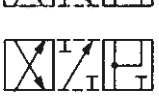
0 = 

1 = 

2 = 

3 = 

6 = 

7 = 

11 = 

31 = 

33 = 

34 =

521 = 

561 = 

DG4V-5-8BL models

8 = 

▲Transient condition only.

GB-C-2281

Single solenoid spring offset valves, solenoid at port B end of body



DG4V-5-*AL models

0 =


2 =


22 =


23 =


DG4V-5-*BL models

0 =


1 =


2 =


3 =


6 =


7 =


11 =


31 =


33 =
34 =


52 =

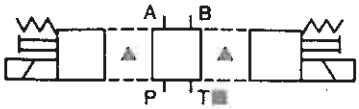

56 =


DG4V-5-8B models

8 =


■ Both ports T_A and T_B are available
▲Transient condition only.

Double-solenoid spring-centred valves



DG4V-5-*C models

0 =


1 =


2 =

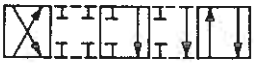

3 =

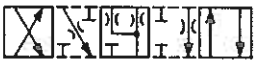

6 =

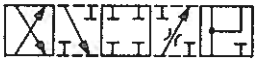

7 =


8 =

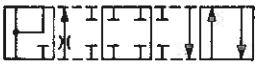

11 =


31 =


33 =
34 =


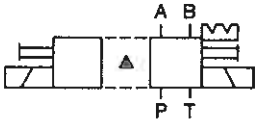
52 =


56 =


521 =


561 =


Double solenoid, two-position detented valves



DG4V-5-*N models

2 =


6 =


3. Model codes

For valves:

(F13-)DG4V-5-**(L)(J)(-**)-(V)M-
[1] [2][3][4][5] [6]

-6-20
[7][8] [9]

[1] **Prefix, fluid compatibility**
Blank = AC or DC-voltage models for mineral oils, water-in-oil (invert) emulsions or phosphate esters. AC-voltage models for water glycols.
F13 = DC-voltage models for water glycols.

[2] **Spool type**
See "Functional symbols" section

[3] **Spool spring arrangement**
A = Spring offset, end-to-end
AL = As "A" but left-hand build
B = Spring offset, end-to-centre
BL = As "B" but left-hand build
C = Spring centred
N = No-spring, detented
See also "Functional symbols" section

[4] **Spool design**
J = All DC valves except 'OA' spool/spring arrangements. AC valves with '8B(L)' and '8C' spool/spring arrangements.
Omit for 'OA' DC-valves and all AC valves except '8B(L)' and '8C' spool/spring arrangements.

[5] **Manual override option**
P = Standard overrides in both ends of single-solenoid valves
H = Water-resistant override(s) in solenoid end(s)△
H2 = Water-resistant overrides in both ends of single-solenoid valves
Z = No overrides at either end
Omit for standard plain override(s) in solenoid end(s) only△
△ No override in non-solenoid end of single-solenoid valves.

[6] **Solenoid energisation identity**
V = Solenoid "A" is at port A end and/or solenoid "B" is at port B end, independent of spool type
Omit for US ANSI B93.9 standard requiring solenoid "A" to connect P to A when energised and/or solenoid "B" to connect P to B

[7] **Electrical connection(s)**
U = DIN 43650 mounting(s) without plug(s)

[8] **Coil rating**
A = 110 V AC 50
C = 220 V AC 50
ED = 240 V AC 50
EK = 115 V AC 60
EH = 230 V AC 60
G = 12 V DC
H = 24 V DC
HL = 24 V DC (32W)
OJ = 48 V DC
P = 110 V DC

[9] **Design number**
Subject to change.

For mounting subplates and fixing bolt kits
See 'Packaged systems and components' leaflet C-2336.

For electrical plug(s)
See end of 'Installation dimensions' section.

4. Operating data

● **Max. pressures**
Ports P, A & B ..... 315 bar
Ports T_A and T_B ..... 120 bar for AC sol.
160 bar for DC sol.

● **Control data**

Coil ratings
See [8] in "Model codes" section

Power consumption
AC solenoids

	AC 50 Hz	AC 60 Hz
Inrush, max.▲VA	700	750
Steady-state △VA	375	440
Holding VA	105	130

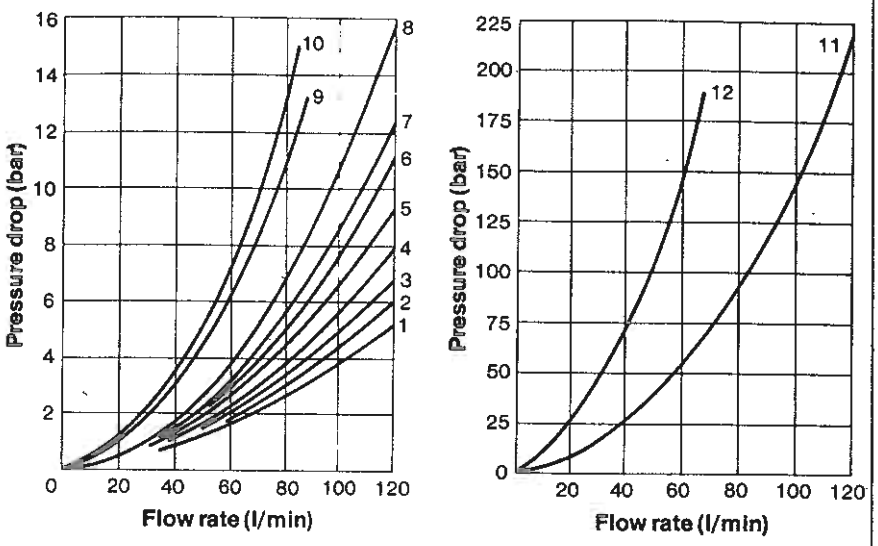
All above values are RMS

▲Armature fully retracted, 1st half-cycle
△At start of normal working stroke of valve spool. Previously called "Inrush".

DC solenoids
At rated voltage and wire temperature of 20°C:
Type HL 32W
Others 38-42W

● **Performance data**
Typical with mineral oil @ 36 cSt and a specific gravity of 0,87

Pressure drops



Spool/spring code	Spool positions covered	P to A	P to B	A to T	B to T	P to T	A to B or B to A
OA(L)	Both	2	2	4	5	–	–
OB(L) & OC	De-energised	–	–	–	–	3▲	–
	Energised	1	1	6	7	–	–
1B(L) & 1C	De-energised	–	–	–	–	6△	–
	Energised	1	2	6	4	–	–
2A(L)	Both	3	3	5	6	–	–
2B(L) & 2C	All	2	2	4	5	–	–
2N	Both	3	3	5	6	–	–
3B(L) & 3C	De-energised	–	–	5	–	–	–
	Energised	2	3	6	5	–	–
6B(L) & 6C	De-energised	–	–	5●	6△	–	–
	Energised	3	3	6	7	–	–
6N	Both	4	4	4	5	–	–
7B(L) & 7C	De-energised	3●	3△	–	–	–	5⊖
	Energised	2	2	5	6	–	–
8B(L) & 8C	All	2	2	7	8	8	–
11B(L) & 11C	De-energised	–	–	–	–	6●	–
	Energised	2	1	4	7	–	–
22A(L)	Both	3	3	–	–	–	–
23A(L)	Both	3	3	5	6	–	–
31B(L) & 31C	De-energised	–	–	–	6	–	–
	Energised	3	2	4	7	–	–
33B(L) & 33C	De-energised	–	–	12●	12△	–	–
	Energised	2	2	5	6	–	–
34B(L) & 34C	De-energised	–	–	11●	11△	–	–
	Energised	2	2	5	6	–	–
52BL & 52C	All	7●	8	4	–	–	9⊖
56BL & 56C	De-energised	–	–	8●	10△	–	–
	Energised	7●	8	6	–	–	9⊖
521B & 521C	All	8	7△	–	5	–	9⊖
561B & 561C	De-energised	–	–	10●	8△	–	–
	Energised	8	7△	–	7	–	9⊖

▲A and B blocked
△A blocked
●B blocked
⊖P blocked

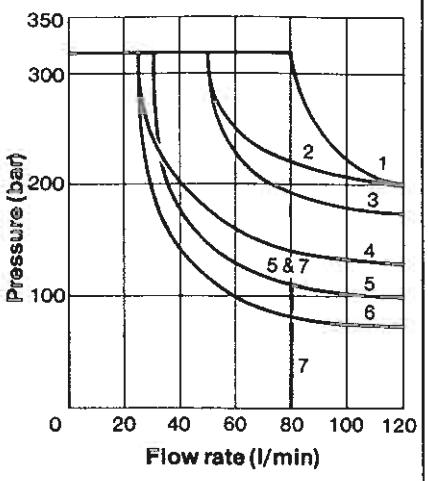
Max. flow rates
Based on warm solenoid(s) operating at 10% below rated voltage.
Flow limits applicable to following usages:

1. All valves except those with types 22, 52, 56, 521 and 561 spools having simultaneous equal flow rates from P to A or B and from B or A to T.
2. Valves with type 22 spools having flow from P to A or B, the other being blocked. T is drained at all times.
3. Valves with types 52, 56, 521 and 561 spools having one service port connected to the full bore end of a 2:1 area ratio double-acting cylinder and the other service port to the annulus end.
4. Valves with type 23 spools having single flow from A or B to T, P and the other service port being blocked.

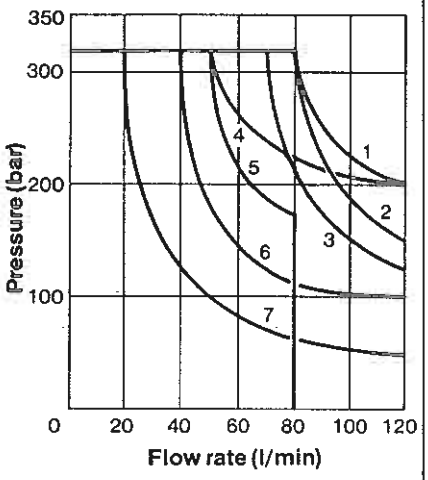
Consult Vickers with application details if any of the following are required:

a) Single flow path i.e. P to A, P to B, A to T or B to T.
b) Substantially different simultaneous flow rates between P to A or B and B or A to T.
c) Spools as in 3 above are to be used with cylinder ratios greater than about 3:1 at low flow rates or 2:1 at high flow rates.

AC solenoid valves



DC solenoid valves



Spool/spring code	AC valve graph curve	DC valve graph curve
OA(L)	3	2
OB(L) & OC	2	4
1B(L) & 1C	6	7
2A(L)	3	2
2B(L), 2C & 2N	1	1
3B(L), 3C, 6B(L) & 6C	4	6
6N	3	3
7B(L) & 7C	1	1
8B(L) & 8C	7	5
11B(L), 11C & 22A(L)	6	7
23A(L)	5	6
31B(L) & 31C	4	6
33B(L), 33C, 34B(L) & 34C	3	6
52B(L), 52C, 56BL, 56C, 521B, 521C, 561B & 561C	4	6

Response times, typical
Time taken from when signal is first applied at the solenoid until the spool completes its travel. Based on DG4V-5-2C at 60 l/min from P to A to B to T and at 160 bar with mineral oil at 36 cSt and at 50°C:
AC energising..... 30 ms
AC de-energising ..... 40 ms
DC energising..... 120 ms ▲
DC de-energising ..... 45 ms ▲★

★ In pure switched conditions, devoid of the effects of any suppression diodes and full-wave rectifiers.
▲ DG4V-5-2CJ valves. Longer response times can be obtained by fitting an orifice plug in a special pilot port, standard in all bodies. An orifice kit 459065, containing a selection of plugs of differing orifice size, can be ordered separately. Ask your Vickers representative for details.

● **Hydraulic fluids**
Water glycols can be used with F13-prefix DC-voltage models or with non-prefix AC-voltage models. Non-prefix DC-voltage models and all AC-voltage models can be used with anti-wear hydraulic oils, water-in-oil emulsions, phosphate esters (not alkylbased).
The extreme operating viscosity range is from 500 to 13 cSt but the recommended running range is 54 to 13 cSt.
For further information about fluids see 'Technical information' leaflet B-920.

● **Temperature limits**
Minimum ambient .....–20°C
Maximum ambient:
AC 50 Hz valves..... 50°C
AC 60 Hz valves..... 40°C
DC valves ..... 70°C
Fluid temperatures

	Mineral oil	Water-containing
Min.	–20°C	+10°C
Max*	+70°C	+54°C

*To obtain optimum service life from both fluid and hydraulic system, 65°C normally is the maximum temperature except for water-containing fluids.

For synthetic fluids consult manufacturer or Vickers representative where limits are outside those for mineral oil.
Whatever the actual temperature range, ensure that viscosities stay within the limits specified in the 'Hydraulic fluids' section.

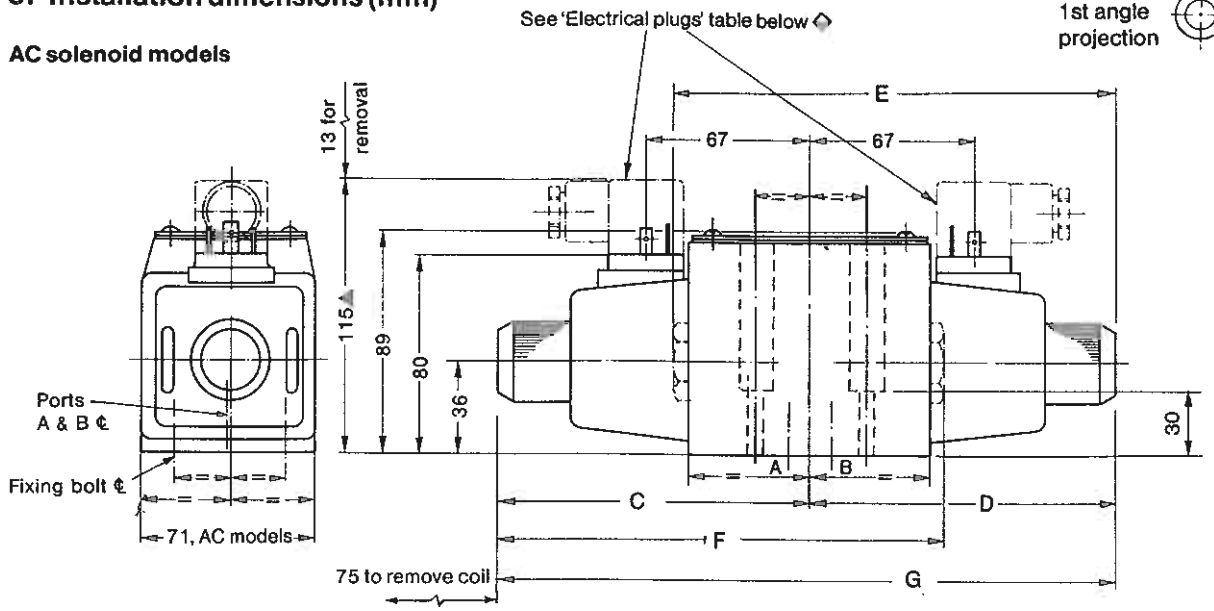
Solenoid surface temperatures
Typical maximums at 20°C ambient:
AC 50 Hz solenoids..... 80°C
AC 60 Hz solenoids..... 92°C
DC solenoids..... 78°C

● **Other characteristics and options**
– Filtration requirements
35 μm or finer for up to 250 bar operation
25 μm or finer for up to 315 bar operation
– Valve weights, approx.
Single solenoid models, AC coils..... 4,0 kg
Single solenoid models, DC coils..... 4,8 kg
Double solenoid models, AC coils..... 4,5 kg
Double solenoid models, DC coils..... 6,3 kg

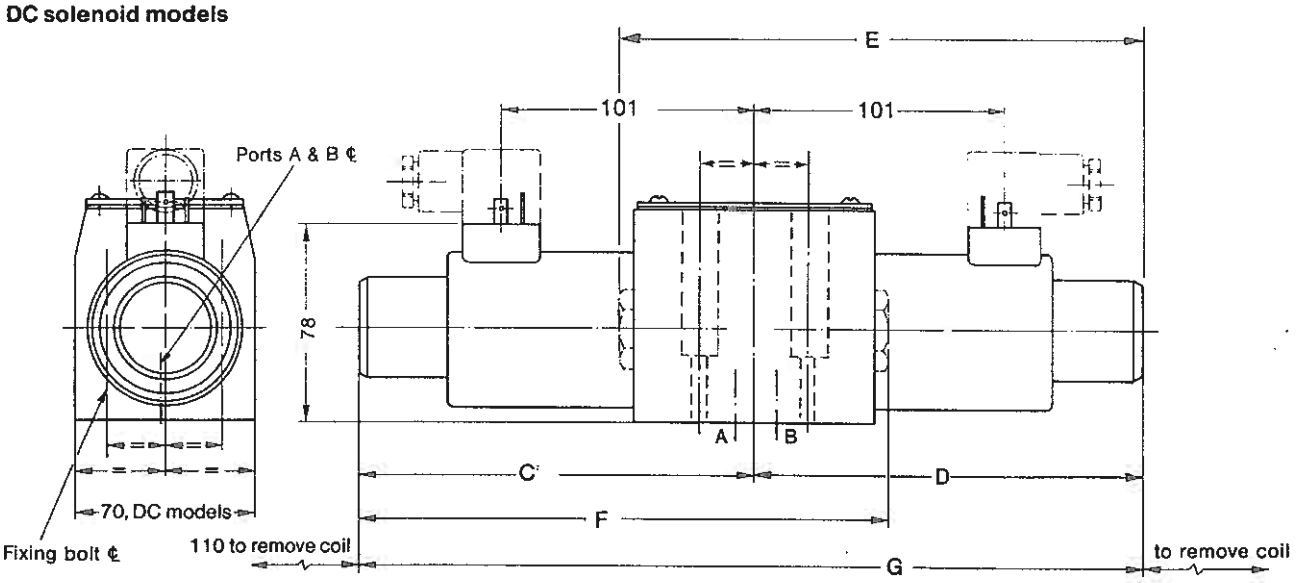
5. Installation dimensions (mm)

1st angle projection

AC solenoid models



DC solenoid models



Model (See also [5] in 'Model codes)	Spool types	Solenoid identity Port 'A' end	Solenoid identity Port 'B' end
DG4V-5-*A(J)/B(J)(-**)-M	All except '8'	B	–
DG4V-5-*A(J)/B(J)(-**)-VM	All except '8'	A	–
	'8' only	–	B
DG4V-5-*AL(J)/BL(J)(-**)-M	All except '8'	–	A
DG4V-5-*AL(J)/BL(J)(-**)-VM	All except '8'	–	B
	'8' only	A	–
DG4V-5-*C(J)/N(J)(-**)-M	All except '8'	B	A
DG4V-5-*C(J)/N(J)(-**)-VM	All spools	A	B

Electrical plug(s) (without indicator light) to DIN 43650.
Must be ordered separately by part number(s).

Part No.	Colour	Solenoid identity marked	Cable gland
710775	Black	B	Pg. 11 Ø6-10mm
710776	Grey	A	

▲ May vary according to plug source

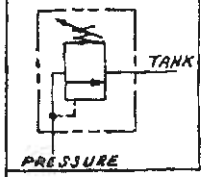
◇ The cable entry can be repositioned at 90° intervals from the position shown. This is done by re-assembling the contact holder into the appropriate position inside the plug housing.

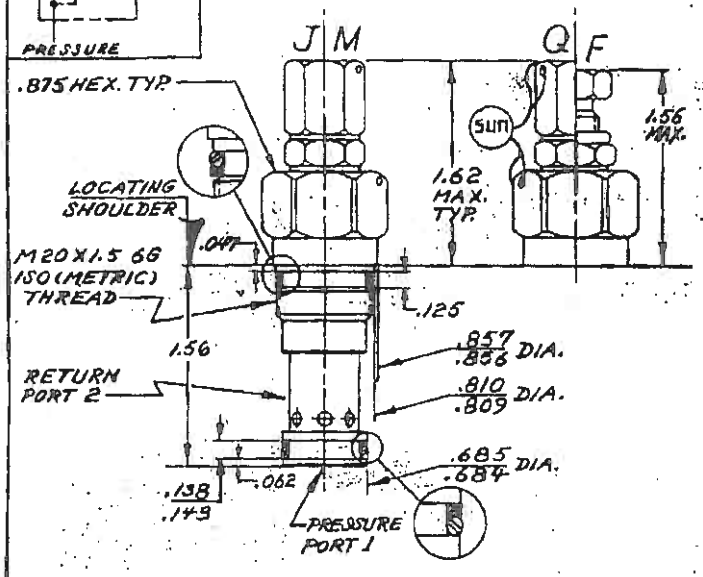
	Model	Solenoid at:	C	D	E	F	G
AC solenoids	DG4V-5-*A(L)/B(L)(-Z)-(V)M	Port A end Port B end	123 –	– 123	– 182	182 –	– –
	DG4V-5-*A(L)/B(L)-H2-(V)M	Port A end Port B end	138 –	– 138	– 223	223 –	– –
	DG4V-5-*A(L)/B(L)-P-(V)M	Port A end Port B end	123 –	– 123	– 195	195 –	– –
	DG4V-5-*C/N(-Z)-(V)M *	Both ends	123	123	–	–	246
	DG4V-5-*C/N-H-(V)M	Both ends	138	138	–	–	276
DC solenoids	DG4V-5-*A(L)/B(L)(-Z)-(V)M	Port A end Port B end	156 –	– 156	– 215	215 –	– –
	DG4V-5-*A(L)/B(L)-H2-(V)M	Port A end Port B end	185 –	– 185	– 270	270 –	– –
	DG4V-5-*A(L)/B(L)-P-(V)M	Port A end Port B end	156 –	– 156	– 228	228 –	– –
	DG4V-5-*C/N(-Z)-(V)M	Both ends	156	156	–	–	312
	DG4V-5-*C/N-H-(V)M	Both ends	185	185	–	–	370

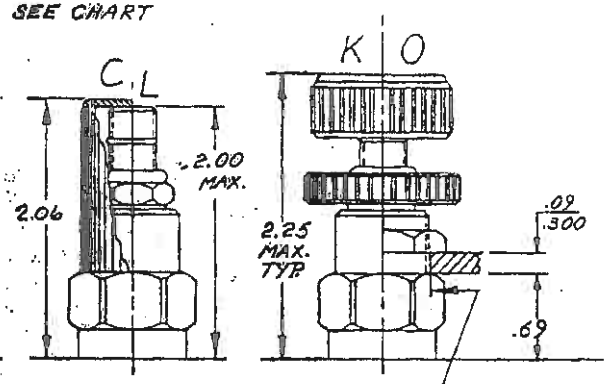
CONTROL TYPES

ALSO SEE CHART

SYMBOL







MODEL DESIGNATION

RPEC-***

- * SEALS
- * ADJUSTMENT RANGES
- * CONTROLS

NOTES

1. PILOT OPERATED, BALANCED SPOOL, DESIGN
2. 5000 PSI MAXIMUM SYSTEM WORKING PRESSURE
3. TYPICAL ADJUSTMENT, "SCREW IN TO INCREASE, PRESSURE SETTING."
4. SETTINGS:
   - A) STANDARD SETTINGS: VALVES SET PER CHART.
   - B) CUSTOMER SPECIFIED SETTINGS: SETTING, STAMPED ON CARTRIDGE HEX.
5. FOR CAVITY DIMENSIONS SEE, "T-10A, DIMENSIONS, TOOLING, & PORTING." DWG.
6. TYP. PART NO., RPEC JAN
7. SEAL KIT: 990-010-006

CODE	ADJUSTMENT DESCRIPTION:	MAX. PRESS. STOP	LEAKAGE DURING ADJUSTMENT.	PARTS RETAINED.
C	TAMPER-RESISTANT	FACTORY SET SETTING STAMPED ON CARTRIDGE HEX.		
O	HANDKNOB WITH PANEL MOUNT PROVISION	YES	NO	YES
K	HANDKNOB	YES	NO	YES
L	LEAKPROOF	YES	NO	YES
F	STANDARD EXTERNAL HEX	YES	SLIGHT	NO
Q	CAPPED AND LOCKWIRED	FACTORY SET SETTING STAMPED ON CARTRIDGE HEX.		
M	CAPPED WITH LOCKWIRE PROVISIONS	NO	SLIGHT	NO
J	CAPPED	NO	SLIGHT	NO

CONTROLS

SEE FIELD or DRAWING

CODE	RANGE	TYPE
W	100-4500	1000
C	150-6000	1000
A	100-3000	1000
B	50-1500	1000
D	25-800	1000
Q	60-700	200
E	25-700	200

CODE	SEALS
V	VITON
N	BUNA-N

ADJUSTMENT RANGE

SEALS

REVISION	DATE	DWN	CHK	REL
D	1.56 DIM. WAS 1.594	1-5-90	BRS	
C	ADDED "W" ADJUST. RANGE & OPTION WAS TAMPER-PROOF	2-12-88	DAH	
B	ADDED "C" ADJUST., DELETED "T"	1-8-86	DAH	RC
A	REDRAWN & CHARTED	11-14-83	HP	JM

UNLESS OTHERWISE SPECIFIED
DIMENSION TOL. .x = ± .030, .xx = ± .015, .xxx = ± .005
ANGLE TOL = 1°
FINISH 125 V
REMOVE ALL BURRS

TITLE: OUTLINE
RELIEF VALVE-PRESS. REGULATING

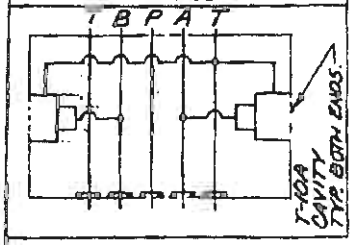
SCALE	REF.	MATERIAL
1:1	T-10A CAVITY	

DRAWN	CHECK	RELEASE	HEAT TREAT & FINISH
~~HJCD~~	J.D.A.		
DATE 11-11-83	DATE 11-14-83	DATE	

REVISION D — PART NO. RPEC-***

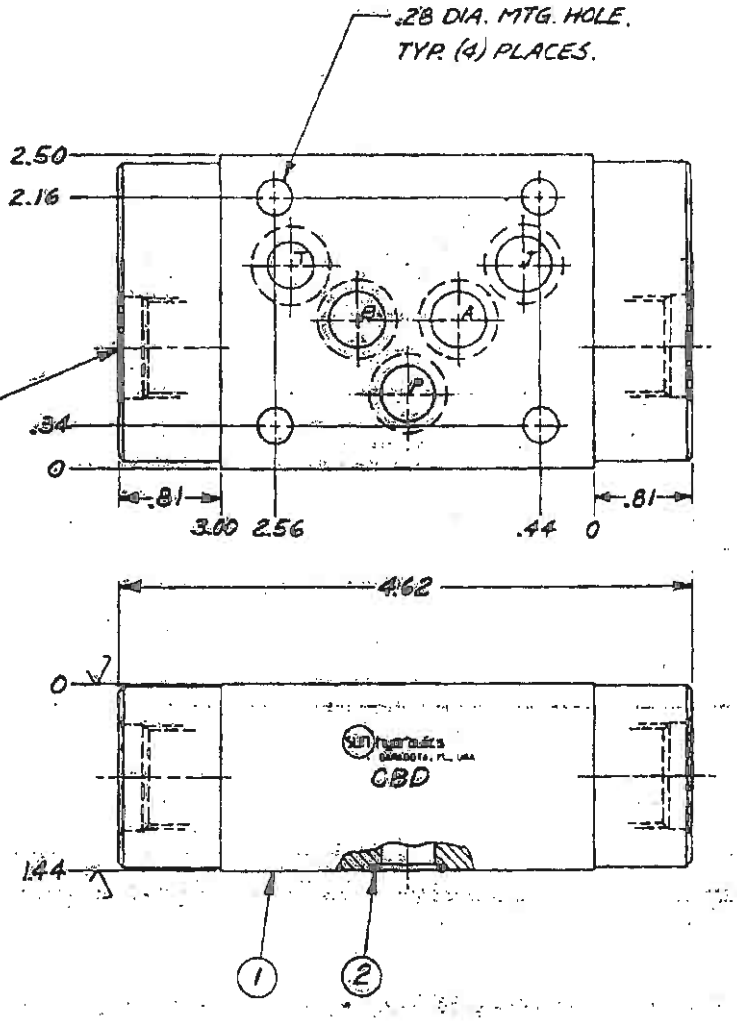
sun hydraulics CORPORATION
1500 COUNTY LINE ROAD
SARASOTA, FLORIDA U.S.A.
TELEPHONE 941-

SYMBOL



REVISION	PART NO.
A	CBD

NOTES:
1) SEALS: BUNA-N



ITEM	PART NO.	PART NAME	QTY
2	500-001-014	SEAL "O" RING	5
1	151-200	BODY	1

OUTLINE & ASSEMBLY

LET.	REVISION	DATE	DRN	CHK	REL
-	SEALS WERE VITON	8-14-92	BKS		2005
-	BOSS WAS ROUND	9-3-87	RJB		
A	ADDED 2ND TANK PORT	4-14-87	DAS		4/87

UNLESS OTHERWISE SPECIFIED
DIMENSION TOL. x = ± .030, xx = ± .015, xxx = ± .005
ANGLE TOL. ± 1°
FINISH 125 √
REMOVE ALL BURRS

TITLE	REVISION	PART NO.
BODY: D02, RELIEF ON "A" & "B", TO "T" PORT.	A	CBD

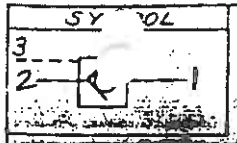
SCALE	REF.	MATERIAL
1=1		ALUM.

DRAWN	CHECK	RELEASE	HEAT TREAT & FINISH
RJB	JLB	762	
DATE 11/27/84	DATE 3-22-85	DATE 3/28/85	

sun hydraulics corporation
SARASOTA, FLORIDA
TELEPHONE 813/360-6660

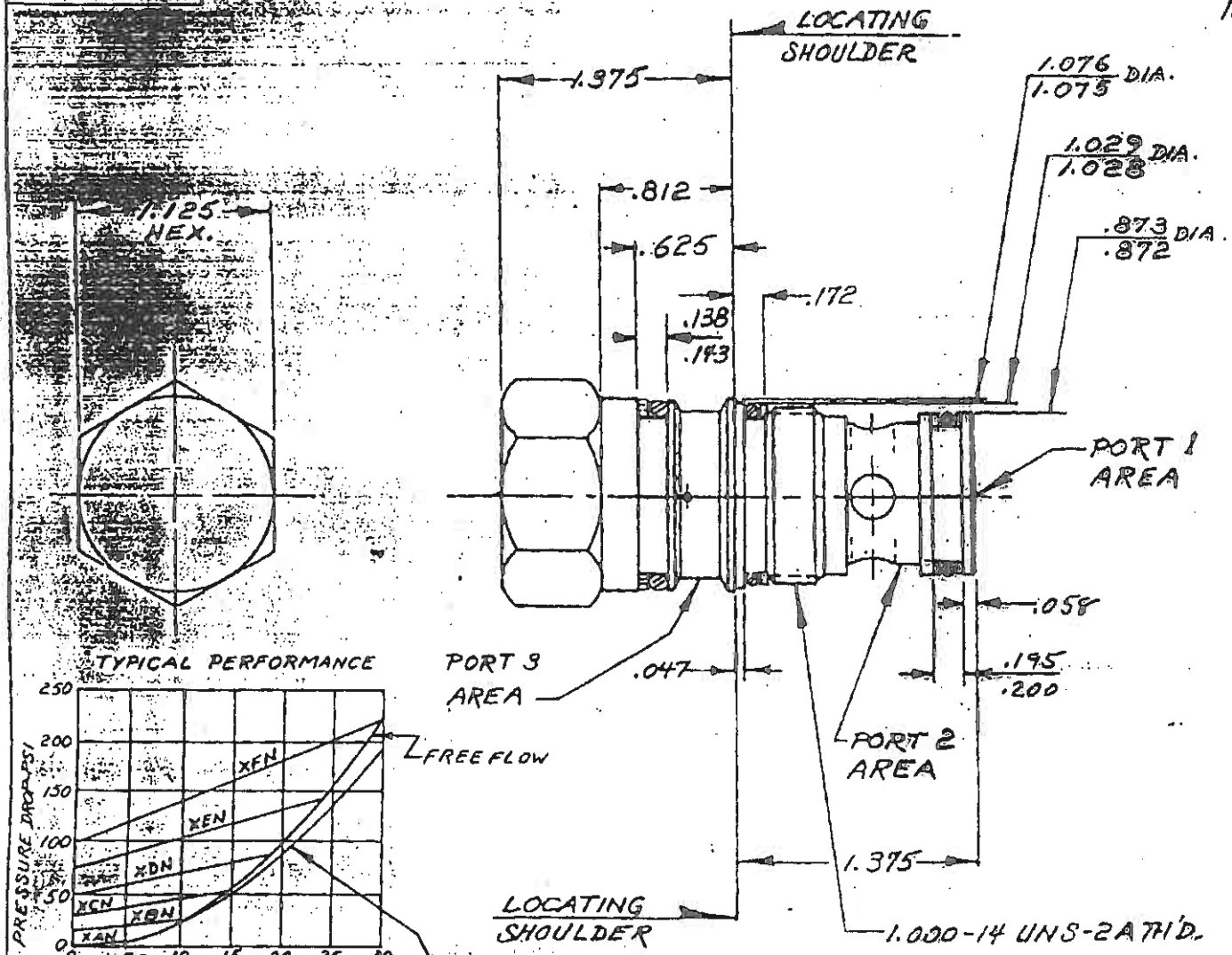
REVISION	PART NO.
A	CKEB X*N

SYMBOL



NOTES

1. FOR CAVITY DIMENSION'S SEE "T-2A, DIMENSIONS-TOOLING & PORTING" DWG.
2. SEALS: BUNA-N
3. PILOT RATIO: 3:1
4. SEAT: STEEL



TYPICAL PERFORMANCE

XFN	100 PSI
XEN	75 PSI
XDN	50 PSI
XCN	30 PSI
XBN	15 PSI
XAN	4 PSI
MODEL NO.	CRACKING PRESSURE

LET	REVISION	DATE	CHECK	REL.
	SWITCHED PORTS 1 & 2 ON SYMBOL	12-21-84	DAS	
A	REVISED PER RELEASE #3	1/85	RJC	744

UNLESS OTHERWISE SPECIFIED

DIMENSION TOL.
.x = ±.030
.xx = ±.015
.xxx = ±.005

ANGLE TOL. ±1°
FINISH 125/
REMOVE ALL BURRS

OUTLINE

TITLE: PILOT TO OPEN CHECK VALVE

SCALE	REF.	MATERIAL
1:1	WAS CPEA XBN	STEEL

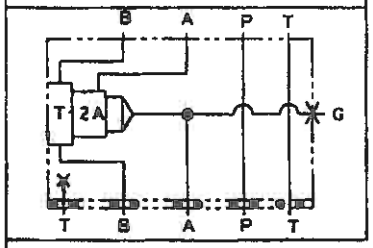
DRAWN	CHECK	RELEASE	HEAT TREAT & FINISH
DAS	RJC		
DATE 1-10-83	DATE 1-11-83	DATE	

REVISION	PART NO.
A	CKEB X*N

sun hydraulics CORPORATION
1617 67TH STREET • P.O. BOX 3377
SARASOTA, FLORIDA 33578
TELEPHONE 813/355-2903

C/E

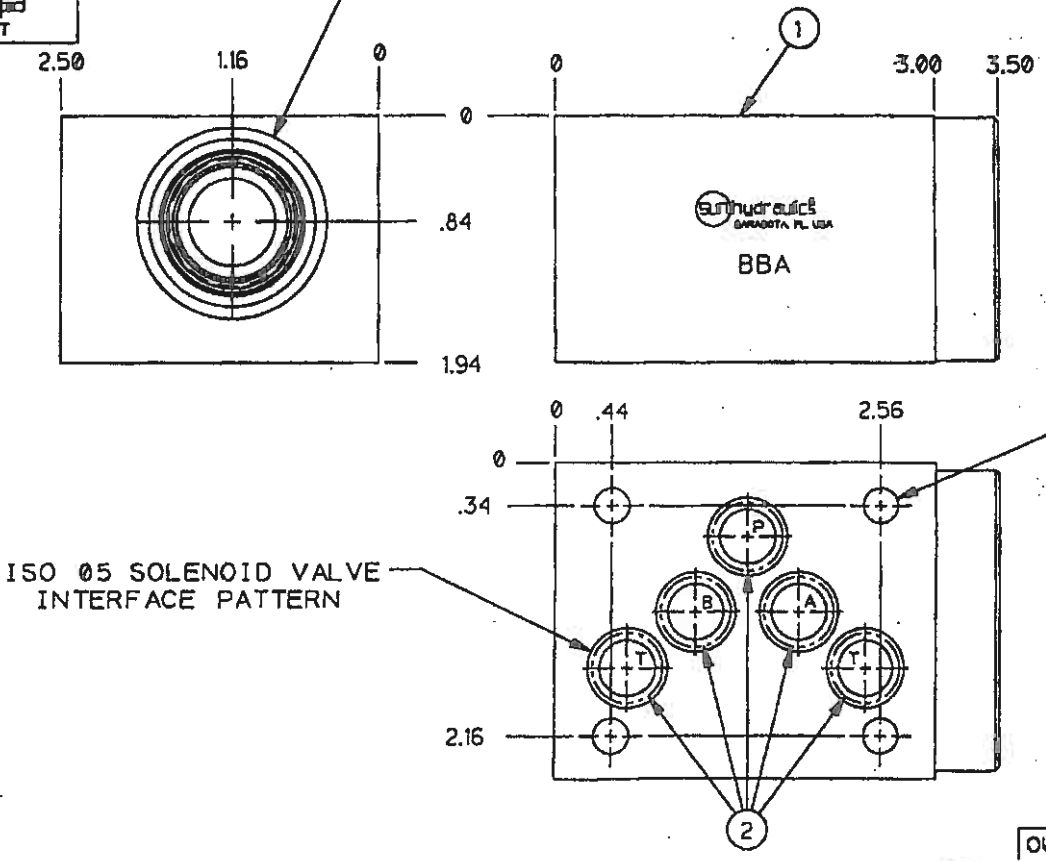
SYMBOL



3RD ANGLE PROJECTION

REVISION	PART NO.
F	BBA

MODEL NO.	BODY DASH NO.	GAGE PORT
BBA	001	.250-18 NPTF
BBA/M	003	.250-18 BSPP



ITEM	PART NO.	PART NAME	QTY
3	330-018-002	.250-18 BSPP PLUG	1
BBA/M			
BBA	340-003	.250-18 NPTF PLUG	
2	500-001-014	"O" RING	5
1	150-134-SEE CHART	BODY	1

NOTES:

1) SEALS: BUNA-N

2) ALUMINUM BODIES - 3000 PSI MAXIMUM CONTINUOUS SERVICE PRESSURE.

LET	REVISION	DATE	DRN	CHK	REL
F	ADDED 2nd TANK PORT TO BODY	15JUN94	STV		7447
E	GAGE PORT WAS AT .63 HORIZ.	15JUN94	STV		
D	REDRAWN IN NEW FORMAT, ADDED BODY DASH NO.	07JUN94	STV	DAS	5747

UNLESS OTHERWISE SPECIFIED
DIMENSION TOL
.X ±.030
.XX ±.010
.XXX ±.005
ANGLE TOL ±½°
FINISH 80√
REMOVE ALL BURRS

OUTLINE & ASSEMBLY

TITLE: BODY- ISO 05 SANDWICH A PORT PILOTED FROM B PORT T-2A CAVITY

REVISION	PART NO.
F	BBA

SCALE	REF.	MATERIAL
1/1	IDENTICAL TO B6N	ALUMINUM

DRAWN	CHECK	RELEASE	HEAT TREAT & FINISH
HHP	JDA		
DATE	DATE	DATE	
15AUG75	08 FEB 77		

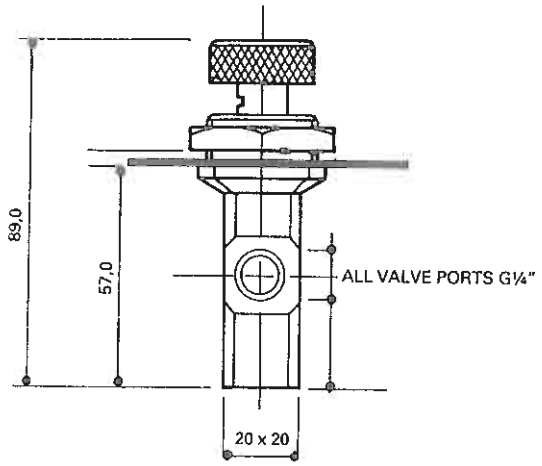
sun hydraulics CORPORATION
[illegible] WEST UNIVERSITY PKWY
SARASOTA, FLORIDA 34243, USA
TELEPHONE (941) [illegible]

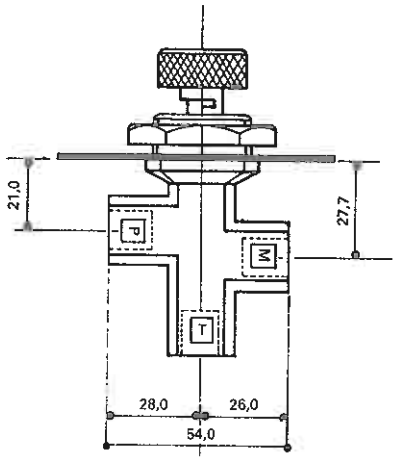
GAUGE ISOLATOR VALVES

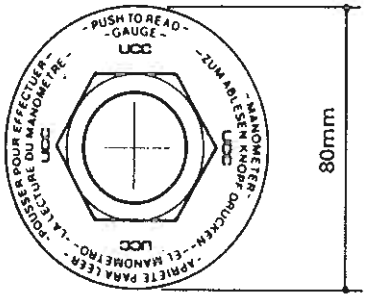
SPECIFICATIONS

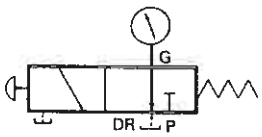
Construction:	
Single Station:	Cast iron and steel Knurled aluminium knob with 'Twist to lock' or 'push to read' type
Multi-station:	Steel. Aluminium casting. ABS.
Max. working pressure:	350 bar.
Port size:	Single Station = G¼ Multi-Station = G⅛
Weight:	Single Station = 0.90 Kg Multi-Station = 1.53 Kg

SINGLE STATION GAUGE ISOLATOR INSTALLATION DETAILS



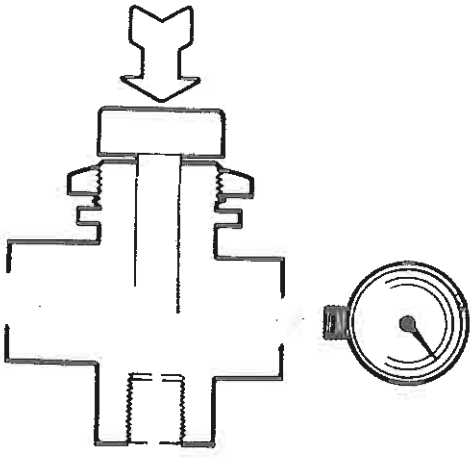


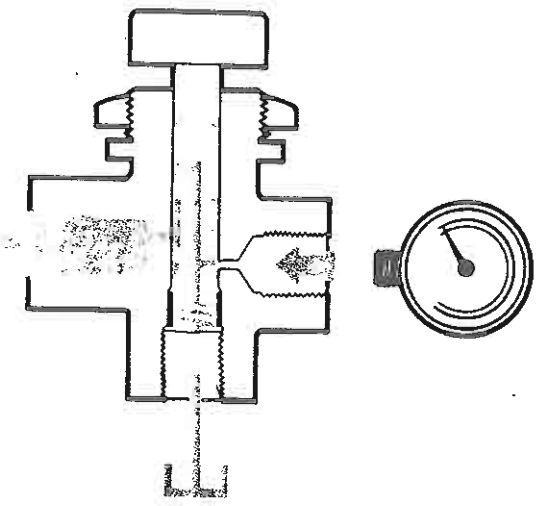




Circuit Symbol

OPERATION INFORMATION





ORDERING INFORMATION

Part Number.	Description
UC.GI.1486	**G ¼ Single station gauge isolator 'Twist to lock' type**
UC.GI.1414	**G ¼ Single station gauge isolator 'Push to read' type**

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HYDROKIT

HYDRAULIC OIL RESERVOIR SERIES RE

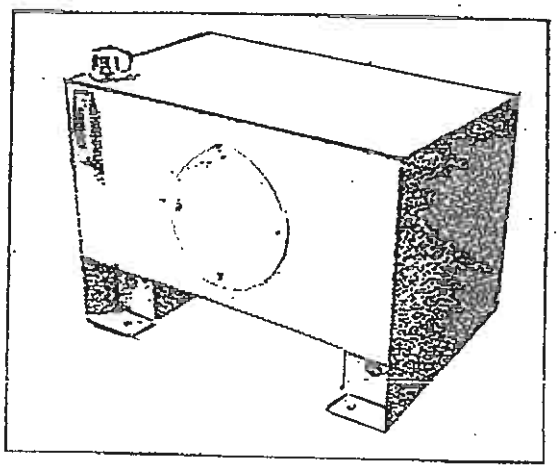
TO AHEM S8029 AND DIN 24339

RE 1002

1. DESCRIPTION

The RE range of oil reservoirs are designed to the recommendations of the Association of Hydraulic Equipment manufacturers, and include the following:

1. Inspection cover and seal
2. Drain plug
3. Sight Glass
4. Filler/breather/strainer
5. Primed in etch primer compatible with mineral oil (other finishes for other fluids upon request)



2. ORDERING CODE

RE	630	

RESERVOIR

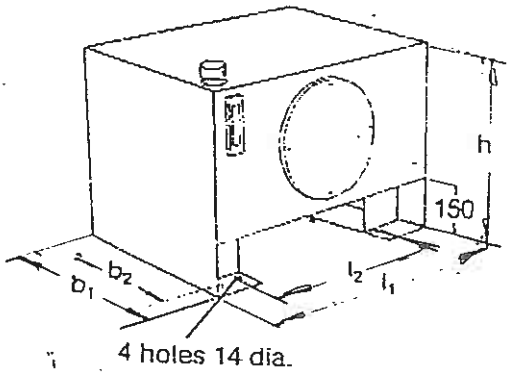
SIZE: 63, 100, 160, 250, 400, 630, 800, 1000, 1250

END USER* SPECIFICATION IF APPLICABLE

modification can be made to suit end user specifications

3. DIMENSIONS

Nominal useable fluid volume Vl	b_1 W	b_2	l_1 L	l_2	h H
63	365	285	508	308	560
100	460	360	633	393	560
160	590	490	810	570	560
250	690	590	1010	770	580
400	735	635	1514	1274	580
630	945	845	1514	1274	670
800	900	800	2014	1774	670
1000	1065	965	2014	1774	700
1250	1335	1235	2014	1774	700



Dimensions and details may be subject to alteration without prior notification.