Form No.



PRODUCT STANDARD

HYDERABAD

GT ENGINEERING

Prod. Std. No.: GT51140

Rev. No. 09

Page : 1 of 4

HYDRAULIC MANIFOLD ASSEMBLY

1.0 DESCRIPTION

The hydraulic manifold is part of the high-pressure hydraulic supply system and provides a convenient means of inter connecting a number of small components required in this subsystem. It is located in a compartment above the oil tank.

2.0 OPERATION

The path of oil flow through the manifold is described as follows. (Refer Scheme – Fig. 1 in page 3)

Oil from the hydraulic pump enters the manifold and ported directly to check valve inlet with branches to air bleed valve and to the relief valve. If the oil pressure is above the relief valve setting, the relief valve will open and relieve the oil directly to drain at a rate sufficient to just maintain the set pressure at the valve inlet. The air bleed valve allows any air that may be trapped in this portion of the supply system to escape during the pump start up cycle. The check valve prevents back inflow from the system and also isolates the two relief valves in a dual pump installation.

3.0 SYSTEM COMPONENTS FOR COMPLETE HYDRAULIC MANIFOLD ASSEMBLY:

All the valves coming in Hydraulic manifold assembly should be of M/s Vickers / M/s Yuken make or equivalent.

M/s Vickers and M/s Yuken make Model Nos are given below.

3.1 **RELIEF VALVE:**

Adjustable pilot – operated valves. Type

Flow 80 LPM

Pr. Relief Range : 35 to 140 Kg/cm²

Model No. : CG-06-C-50 (M/s Vickers)

BG-06-P-3280 (M/s Yuken)

: 94.89 ±1.75 Kg/cm² (g) Set Pressure

3.2 CHECK VALVE:

Max Flow : 80 LPM Max Pressure : 210 Kg/cm² Free low Pr drop 0.5 to 2 Kg/cm²

Model No. C4G-815-s19 (M/s Vickers)

CRG-06-30-30 (M/s Yuken)

3.3 **AIR BLEED VALVE:**

Valve closing pressure : 9.5 Kg/cm²

Model No. ABS-03-10-1N80 (M/s Vickers)

ST-1004-5-1080 (M/s Yuken)

4.0 **DOCUMENTATION:**

- 4.1 Manufacturing drawings and quality plan are to be submitted for BHEL approval prior to manufacture.
- 4.2 4 copies of Test Certificates to be enclosed with each consignment.
- 4.3 15 copies of O&M manuals with catalogues of components to be enclosed with each consignment.
- 4.4 4 copies of Guarantee Certificates to be sent for each consignment.

The information on this document is the property of BHARAT HEAVY ELECTRICALS LIMITED. in any way detrimental to the interest of the company. COPYRIGHT AND CONFIDENTIAL It must not be used directly or indirectly

164C2442G002 GT51359 Ref. Doc

TD-106. – 2 Rev. No.: 00

Form No.:



PRODUCT STANDARD

HYDERABAD GT ENGINEERING

Prod. Std. No. : GT51140

Rev. No. 09

Page : 2 of 4

TABLE-I

BHEL VAR NO.	DESCRIPTION	BHEL MATERIAL CODE	WT. IN (KG)	REMARKS
01	HYD MAINFOLD ASSY. AS PER FIG-I Ref. Drawings: 23552251001,33552251001	GT9751140013	7.0	
02	RELIEF VALVE VICKERS MODEL: CG-06-C-50	GT9751140021	1.5	VICKERS MAKE
03	AIR BLEED VALVE VICKERS MODEL: ABS-03-10-1N80	GT9751140030	1.0	ONLY ACCEPTABLE
04	CHECK VALVE VICKERS MODEL: C4G-815-S19	GT9751140048	1.0	

COPYRIGHT AND CONFIDENTIAL

The information on this document is the property of BHARAT HEAVY ELECTRICALS LIMITED.

It must not be used directly or indirectly in any way detrimental to the interest of the company.

Ref. Doc 164C2442G002 GT51359 TD-106. – 2 Rev. No. : 00



PRODUCT STANDARD

HYDERABAD GT ENGINEERING **Prod. Std. No.: GT51140**

Rev. No. 09

Page : 3 of 4

P

C2 C1 Ρ1 Т1

FIG-1

Ref. Doc

164C2442G002 GT51359

The information on this document is the property of BHARAT HEAVY ELECTRICALS LIMITED. It must not be used directly or indirectly in any way detrimental to the interest of the company.

COPYRIGHT AND CONFIDENTIAL

TD-106. – 2 Rev. No. : 00

Form No.:



PRODUCT STANDARD

HYDERABAD GT ENGINEERING

Prod. Std. No. : GT51140

Rev. No. 09

Page : 4 of 4

RECORD OF REVISIONS

Rev. No.	Date	Revision Details	Revised By	Approved By
01	04.04.91	A General detail spec made	KGD	KRMR
02	11.10.94	Table – I added	KGD	KRMR
03	26.07.96	Revised inline with EMI-011	KGD	KRMR
04	28.01.99	 Reilef Valve, check Valve & Air Bleed Valve, make & model numbers are added. Specification retyped 	YVR	BIB
05	12.12.03	Relief valve Model No. changed from CG-06-C-10 to CG-06-C-50.	YVR	BIB
06	14.02.12	Modified Clause 3.1	SS	AJH
07	31.08.21	M/S YUKEN valves added.	kranthi	Suresh v
08	21.10.24	FIG.01 Revised, Ref Drawing no's added in Table-1, Var-01	kranthi	Suresh v
09	03.11.24	Remarks added in table-01	A Raju	Kranthi Ch
	01 02 03 04 05 06 07	01 04.04.91 02 11.10.94 03 26.07.96 04 28.01.99 05 12.12.03 06 14.02.12 07 31.08.21 08 21.10.24	01 04.04.91 A General detail spec made 02 11.10.94 Table – I added 03 26.07.96 Revised inline with EMI-011 1. Reilef Valve, check Valve & Air Bleed Valve, make & model numbers are added. 2. Specification retyped 05 12.12.03 Relief valve Model No. changed from CG-06-C-10 to CG-06-C-50. 06 14.02.12 Modified Clause 3.1 07 31.08.21 M/S YUKEN valves added. 08 21.10.24 FIG.01 Revised, Ref Drawing no's added in Table-1, Var-01	01 04.04.91 A General detail spec made KGD 02 11.10.94 Table – I added KGD 03 26.07.96 Revised inline with EMI-011 KGD 04 28.01.99 1. Reilef Valve, check Valve & Air Bleed Valve, make & model numbers are added. YVR 05 12.12.03 Relief valve Model No. changed from CG-06-C-10 to CG-06-C-50. YVR 06 14.02.12 Modified Clause 3.1 SS 07 31.08.21 M/S YUKEN valves added. kranthi 08 21.10.24 FIG.01 Revised, Ref Drawing no's added in Table-1, Var-01 kranthi

COPYRIGHT AND CONFIDENTIAL

The information on this document is the property of BHARAT HEAVY ELECTRICALS LIMITED.

It must not be used directly or indirectly in any way detrimental to the interest of the company.

Ref. Doc 164C2442G002 GT51359