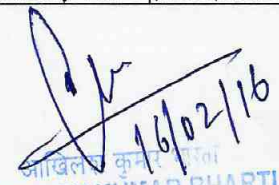


## Bill of Materials

Ref: HY/EM/AM/15-16/BOM-FGS 50

S. No	Designation	Name	Name Plate Details	Parameter	Quantity
1	MA 3	Electric Motor	4 AP 90s - 6	0.75 KW 940 RPM	1
2	Zc	Gear Wheel Pump	c 060 XTM	2.72 Lt/min at 1000 rpm, Pressure 17.5 Mpa	1
3	Af	Hydraulic Accumlator		215 AGV - 1.0 Ltr, Working Pressure: 15.6 to 19.6 Mpa, Charging Pressure Maximum 7.8 Mpa, Ratio of actual working pressure to that in bag less than 5	1
4	Az	Hydraulic Accumlator		215 AGV - 2.5 Ltr, Working Pressure: 15.6 to 19.6 Mpa, Charging Pressure Maximum 7.8 Mpa, Ratio of actual working pressure to that in bag less than 5	1
5	S1, S2, S3	Solenoid Operated Directional Valve	RSE 1 -042 R 11/24 - 1/00		3
6	S4	Solenoid Operated Directional Valve	RSE 1 -042 R 15/24 - 1/00		1
7	S5	Solenoid Operated Directional Valve	RSE 1 -043P11/24 - 1/00		
8	VJ1, VJ2, VJ3	Non Return Valve	VJ-1-100-0.05-02	Non Return Valve Nominal Inside Diameter 10mm, Nominal Flow Rate 60 cu.dm per min, Nominal Pressure 25 Mpa, Transmitted Power 26kW, Maximum permissible size of fluid 40 Microns,	3
9	SF	Suction Filter	Filter CSN 02 7706.OE	100 Microns	1
10	FP	Pressure Line Filter	CSN 02 7706.OC	25 Microns	1
11	VR	Reducing Valve	VR 2-10/00	Nominal Inside Diameter 10mm, Nominal Flow rate 40 cu.dm/min, Working Pressure 0.5 to 10 Mpa, Adjustable Range of reduced Pressure: 0.5 to 15.5 Mpa, Maximum Flow Through Control Valve 1.5 cu.dm per min	1
12	Vpr	Relief Valve	VP 6-165/120 4/5"	NID 10mm, Max Pressure 16.5 Mpa	1
13	K	Pressur Switch	CSN 30 4433		5
14	T1F, T1Z	pressure Guage	CSN 25 7221, Type 13 358	0-25 Mpa	2
15	T	Oil Tank		30 Lts	1
16		Motor Pump Coupling		Gear Coupling	1
17		Bell Housing		Bell Housing	1
18		Oil Level Indicator			1
19		Manifold Block			2
20		Float Switch		Level Float Switch	1
21		Hydraulic Hose pipes	length approximately 1 mt	for connection with powerpack and machine	9

  
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05

**TECHNICAL SPECIFICATIONS FOR SUPPLY OF  
HYDRAULIC POWERPACK FOR FGS-50 MILLING MACHINE**

Sl. No.	Description for BHEL Requirement Spec No.S-EM-AM-03/00, dt.12/02/2016	Offered	Deviations	Remarks
1	<b>PURPOSE</b> Hydraulic power pack for FGS-50 Horizontal Milling machine.			
2.0	<b>TECHNICAL PARAMETERS</b>			
2.1	Tank Capacity:30 Lits Minimum			
2.2	Motor: 415 V 50 Hz, 3 Phase, 1 HP 1000 rpm or equivalent. Motor make Siemens, ABB only			
2.3	Pump: 2.72 LPM at 1000 rpm and 17.5 Mpa pressure or equivalent			
2.4	All other required valves, filters, manifold blocks, pressure guages as per Bill of materials HY/EM/AM/15-16/BOM-FGS 50. Supplied materials should be similar or equivalent.			
2.5	Original hydraulic drawing is attached. As per 2-RS-2256. System should be similar or equivalent.			
2.6	All the connections are in the scope of supplier. All the pressure adjustments should be done by supplier as per requirement.			
2.7	Voltage of all valves and control equipment is			
2.8	Supplier may submit hydraulic drawing of equipment for technical qualification.			
2.9	Number of outlets: 09 Climb Cut Milling 2. Climb Cut Milling 3. Knee Skipping Down/Up 4. Knee Skipping Down/Up 5. Locking of Longitudinal Axis 6. Locking of cross Axis 7. Locking of vertical Axis 8. Pressure oil supply to other functions 9. Run Back line	1.		
2.10	All hydraulic equipment must be of Rexroth/Yuken/Denison/Vickers makes only.			

*Sharath*  
12/02/2016

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1 of 3

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04


Sl. No.	Description for BHEL Requirement Spec No.S-EM-AM-03/00, dt.12/02/2016	Offered	Deviations	Remarks
2.10	Supplier may visit the machine location for better understanding. Supplier may collect machine drawing before supply.			
2.11	Working Temperature: 60 Deg C			
2.12	Mounting: Free standing arrangement			
3	<b>SPARES</b>			
3.1	List of spares: 1. Hydraulic Pump: Qty 01 Nos 2. Pressure Line Filter: Qty 02 Nos 3. Suction Filter: Qty 02 Nos 4. Pressure switch: Qty 02 Nos 5. Motor Pump Coupling: Qty: 01 Nos			
4	<b>DOCUMENTATION:-</b>			
	Three sets of drawings to be supplied.			

  
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Sl. No.	Description for BHEL Requirement Spec No.S-EM-AM-03/00, dt.12/02/2016	Offered	Deviations	Remarks
5	Erection, commissioning & proveout is the responsibility of the supplier. Vendor shall be responsible for any deviation /rejection due to malfunctioning of the equipment.			
6	<b>VENDOR PREQUALIFICATION:</b>			
	The vendor should have supplied earlier similar systems. Vendor shall enclose PO copies along with offer document.			
7	<b>PRE-INSPECTION:</b>			
	BHEL shall pre-inspect the machine at supplier works before dispatch.			
8	<b>GUARANTEE:-</b>			
	24 months from the date of acceptance of the equipment.			
9	Two part bid system shall be followed.			

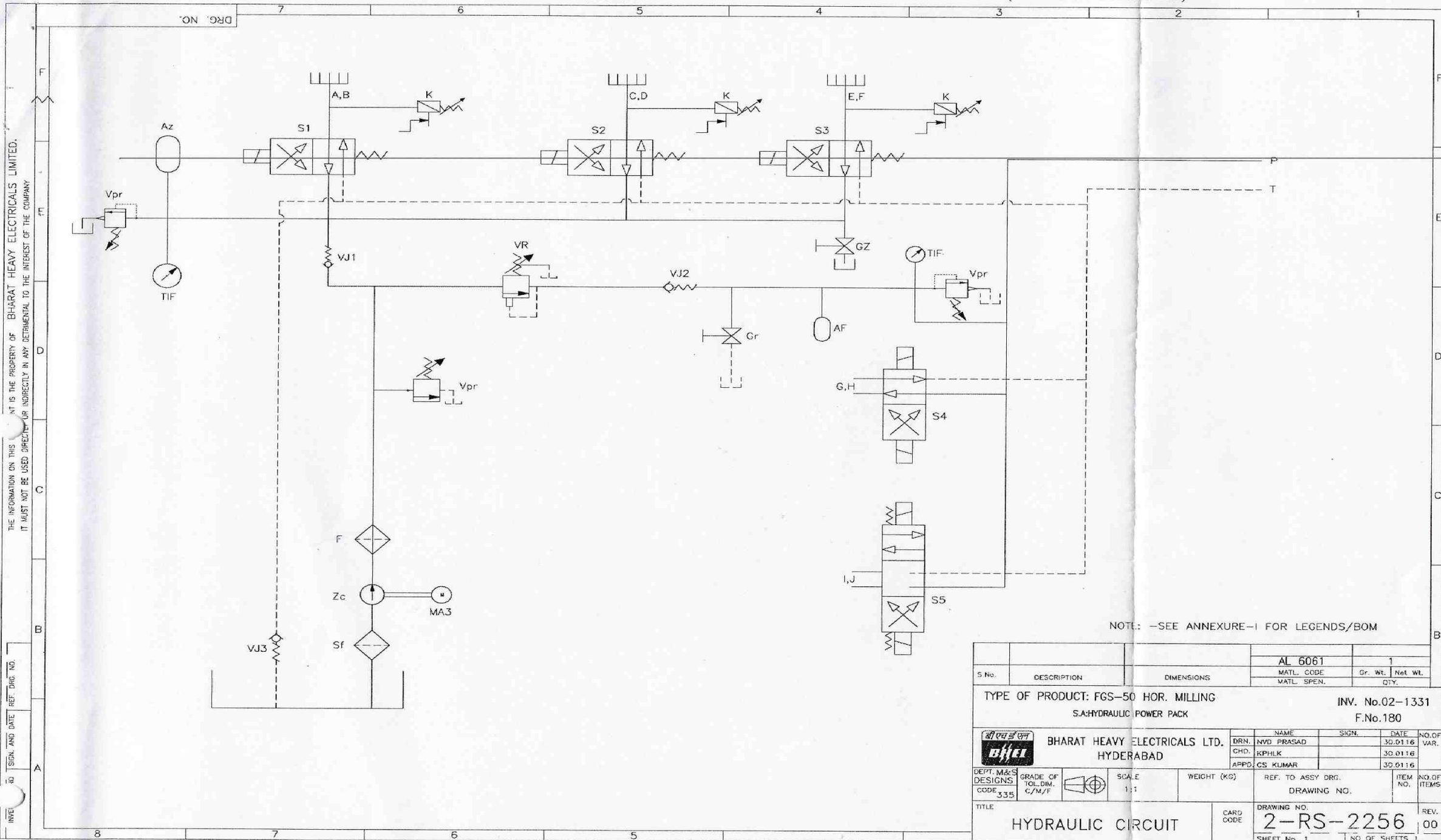
  
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02

FIRST ANGLE PROJECTION

(ALL DIMENSIONS ARE IN mm)



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SIGN AND DATE REF. DRG. NO.

NOTE: --SEE ANNEXURE-I FOR LEGENDS/BOM

S.No.		DESCRIPTION		DIMENSIONS		AL 6061		1			
						MATL. CODE		Gr. Wt.			
						MATL. SPEN.		QTY.			
TYPE OF PRODUCT: FGS-50 HOR. MILLING						INV. No.02-1331					
S.A:HYDRAULIC POWER PACK						F.No.180					
		BHARAT HEAVY ELECTRICALS LTD. HYDERABAD				NAME		SIGN.		DATE	
DRN.		NVD PRASAD		30.0116		CHD.		KPHLK		30.0116	
APPD.		CS KUMAR		30.0116		REF. TO ASSY DRG.		DRAWING NO.		ITEM NO.	
DEPT. M&S DESIGNS		GRADE OF TOL.DIM. C/M/F		SCALE 1:1		WEIGHT (KG)		REF. TO ASSY DRG.		ITEM NO.	
CODE 335								DRAWING NO.		NO. OF ITEMS	
TITLE						CARD CODE		DRAWING NO.		REV.	
HYDRAULIC CIRCUIT								2-RS-2256		00	
						SHEET No. 1		NO. OF SHEETS 1			