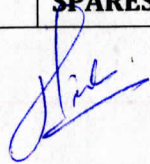
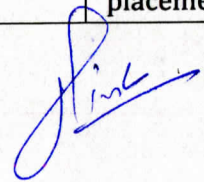


1.2	Hydraulic tank of suitable capacity (Approx. 300 Ltr.), complete with oil filling cap with filter, vent plug, level indicator, drain plug, inspection cover, flow switch, Float switch, Drain valve, Tank breather filter etc. (i) All the items mentioned at Clause No. 1.1 shall be mounted on this hydraulic tank with suitable manifolds and properly terminated for onward connection to the machine. (ii) Dimension of the tank shall be decided by party after site visit.	VENDOR TO SPECIFY	01 No.	
1.3	Electrical terminal box suitably mounted and aesthetically placed.		01 No.	
1.4	Centralized lubrication system	Cenlub 5.0	01 No.	
1.5	Copper tubes of OD - 2mm, 4mm, 6 mm each 10 m each		01 set	
1.6	Seamless steel pipe of 35 mm ID, minimum 1 mm thickness, 2000mm length	Hyloc/parker/hydroline/gates/hydraulics/Jindal	5 Nos.	
1.7	Seamless steel pipe of 50 mm ID, minimum 2 mm thickness, 2000mm length	Hyloc/parker/hydroline/gates/hydraulics/Jindal	5 Nos.	
1.8	Minimess coupling for measuring devices	VENDOR TO SPECIFY	10 Nos.	
1.9	Distributor as per existing scheme	VENDOR TO SPECIFY	1 set	
2.0	<b><i>Drawing of the offered hydraulic system incorporating above mentioned devices shall be submitted along with offer. Before submitting the drawing, vendor shall study the existing hydraulic plan (Refer our Annexure- C) and satisfy itself. Vendor shall ensure that machine functionality with the new hydraulic system is maintained. Hydraulic items/components shall be of Hydac/Vickers/Rexroth-Bosch/Hawe/Parker/Yuken make only. Motor shall be of ABB/Seimens/CG Make only. Distributor should be Parker /Hydac /Vickers /Rexroth-Bosch/Hawe /Yuken/Eaton make only.</i></b>	Vendor to confirm		
3.0	<b>SPARES:</b> Following spares shall be supplied along with the order.			





3.1	Directional control valves	Vendor to confirm	5 no each	
3.2	Solenoid Coils	Vendor to confirm	10 no each	
3.3	Filter elements 05 nos. of each type.	Vendor to confirm	1 set	
3.4	Pump	Vendor to confirm	1 no	
3.5	Pressure Gauge(0-10 Kg/cm <sup>2</sup> ) & (0-25 Kg/cm <sup>2</sup> )	Vendor to confirm	2 No.	
<b>4.0</b>	<b>General Conditions:-</b>			
4.1	Party shall supply any additional required hydraulic tube fittings, Stud end fittings, all clamps, fixtures and fasteners, required to complete the job.	Vendor to confirm		
4.2	Any other material not mentioned above but found necessary to complete the job, shall be in party's scope of supply.	Vendor to confirm		
4.3	All oil seals, O-rings etc. for ram and ejector cylinders shall be supplied by the party and fitted in the cylinders.	Vendor to confirm		
4.4	Vendors are advised to visit the machine before submitting the offer.	Vendor to confirm		
4.5	An Electric junction box shall be provided on the hydraulic tank along with phoenix make 6 Amp. Connectors. All the Motors, Solenoids etc. shall be wired up to this junction box.	Vendor to confirm		
<b>5.0</b>	<b>Acceptance &amp; commissioning:-</b>			
5.1	Vendor shall deploy the manpower for commissioning of the system within seven days of intimation from BHEL Hardwar. Vendor shall arrange boarding, lodging and transportation for their personnel.	Vendor to confirm		
5.2	Complete supplied system shall be commissioned by the vendor on the machine and vendor shall ensure leakage free connection in the supplied system.	Vendor to confirm		
5.3	Acceptance shall be at BHEL, Hardwar after successful commissioning and testing of the supplied system for all the hydraulic function of the machine.	Vendor to confirm		
<b>6.0</b>	<b>Delivery</b> -Delivery of material shall be within 90 days from placement of purchase order or earlier.	Vendor to confirm		



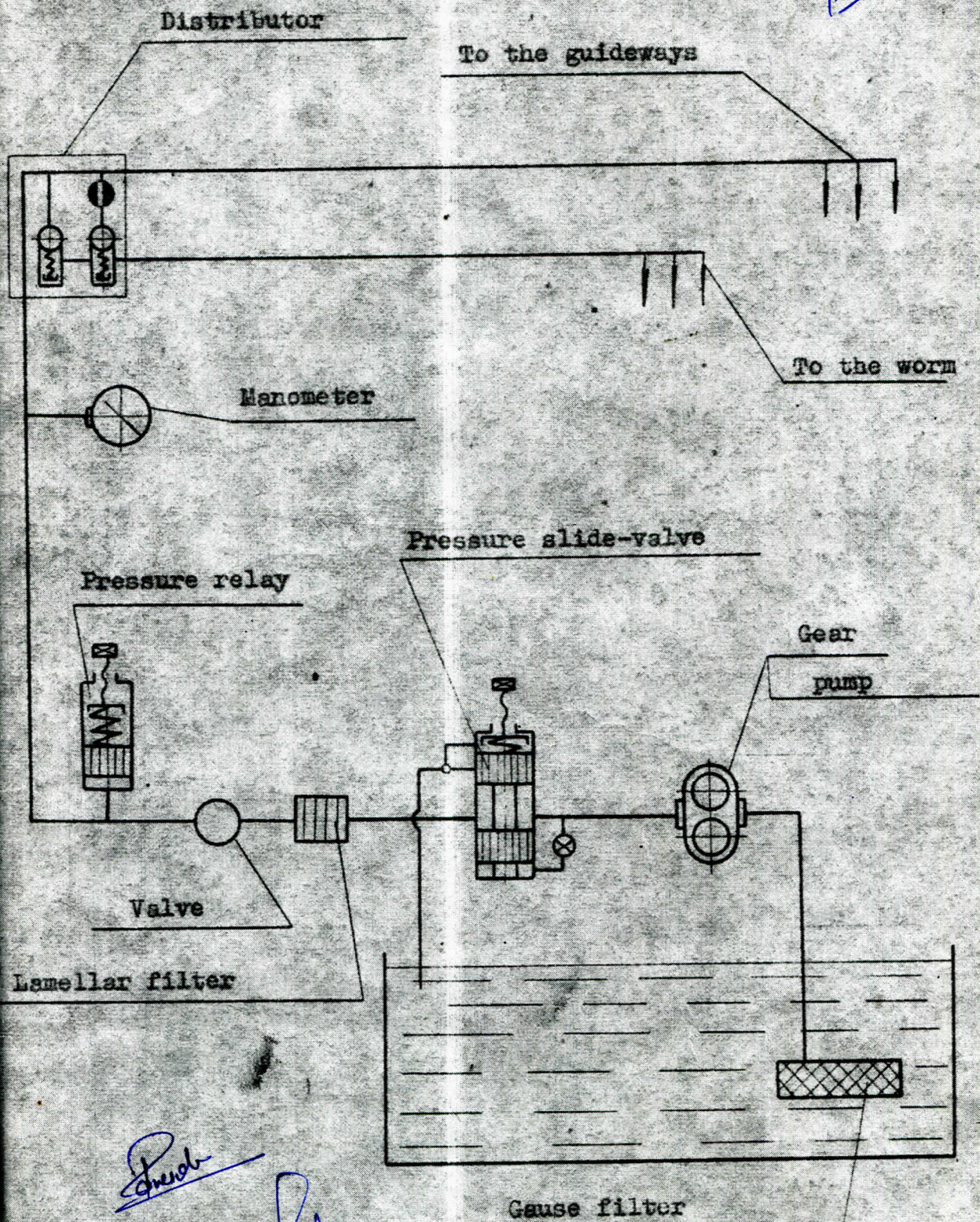


Existing Hydraulic Circuit Diagram  
For Planer m/c

Annex-B1

7A256-T-000-011

Sheet 64



Lubrication chart of the bed guideways and of  
the main drive worm.



## Annexure-A

**Supply, Installation and commissioning of Hydraulic power pack for Russian Hydraulic press machine, 250 Ton (Model-D2434A) Plan no-3-359.**

**Purpose:** In the machine, existing hydraulic system is to be replaced with new one. Circuit diagram of existing hydraulic for all the operations is attached for reference in Annexure- A2, A3, A4.

**Details of the Existing System:** Existing hydraulic system is governed with a gear pump with operating pr. 20 Kg /Cm2, max pr: 50 Kg /Cm2, discharge: 120 to 130 LPM And Radial piston pump with operating pr. 160 Kg /Cm2, max pr: 350 Kg /Cm2, discharge: 10 to 12 LPM and following operations are performed in the press Upward and downward movement of Ram along with holding Ram at any position, Upward and downward movement of ejector along with holding ejector at any position. During pressing operation machine presses the job for 03 Hrs at set pressure and pump & motor are in idle condition during this period.

**One set of Hydraulic powerpack will consist of the following:-**

1. Hydraulic system for ram movement and pressing operation.
2. Hydraulic system for ejector movement.
3. Spares

**Scope of supply and Terms & Conditions for ONE (01) SET-**

SL. NO.	DESCRIPTION	MAKE	Quantity	Vendor's Remark
1.0	Hydraulic Power pack for hydraulic press			
1.1	Equivalent pump motor set/sets with required hydraulic accessories like non-return valves, Pressure relief valve, pressure switch, pressure line filter in inlet 100 µm and outlet 30 µm, flow switch, 3-position 4-port directional control valves with manifolds .Pump motor set shall be mounted over the machine inbuilt sump at its existing position with flanged mounted motor.	Parker/ Rexroth/ Vickers / Hawe / Yuken Only.	01 Set	
1.2	Hydraulic tank of suitable capacity (Approx. 500 Ltr.), complete with oil filling cap with filter, vent plug, level indicator, drain plug, inspection cover , Float switch, Drain valve, Tank breather filter etc.	VENDOR TO SPECIFY	01 No.	



	(i) All the items mentioned at Clause No. 1.1 shall be mounted on this hydraulic tank with suitable manifolds and properly terminated for onward connection to the machine. (ii) Dimension of the tank shall be decided by party after site visit.			
1.2	Oil Seals mounted in hydraulic system as per annexure-E of RAM drawing and drawing of oil seals as per annexures-D.	SKF / TIMKEN / PARKER / KOYO/CLARK	01 Set	
1.3	Electrical terminal box suitably mounted and aesthetically placed.		01 No.	
1.4	Seamless steel pipe of 35mm ID , minimum 1 mm thickness , 2000mm length	Hyloc/parker/hydroline/gates/hydraulics/Jindal	5 Nos.	
1.5	Seamless steel pipe of 50 mm ID , minimum 2 mm thickness , 2000mm length	Hyloc/parker/hydroline/gates/hydraulics/Jindal	5 Nos.	
1.6	Minimess coupling for measuring devices	VENDOR TO SPECIFY	05 Nos.	
1.7	Distributor as per existing scheme	VENDOR TO SPECIFY	1 set	
2.0	<b><i>Drawing of the offered hydraulic system incorporating above mentioned devices shall be submitted along with offer. Before submitting the drawing, vendor shall study the existing hydraulic plan (Refer our Annexure- A2) and satisfy itself. Vendor shall ensure that machine functionality with the new hydraulic system is maintained. Hydraulic items/components shall be of Hydac/Vickers/Rexroth-Bosch/Hawe/Parker/Yuken make only. Motor shall be of ABB/Seimens/CG Make only. Distributor should be Parker /Hydac /Vickers /Rexroth-Bosch/Hawe/ /Yuken/Eaton make only.</i></b>	Vendor to confirm		
3.0	<b>SPARES:</b> Following spares shall be supplied along with the order.			
3.1	Directional control valves	Vendor to confirm	5 no.	
3.2	Solenoid Coils	Vendor to confirm	10 no	

