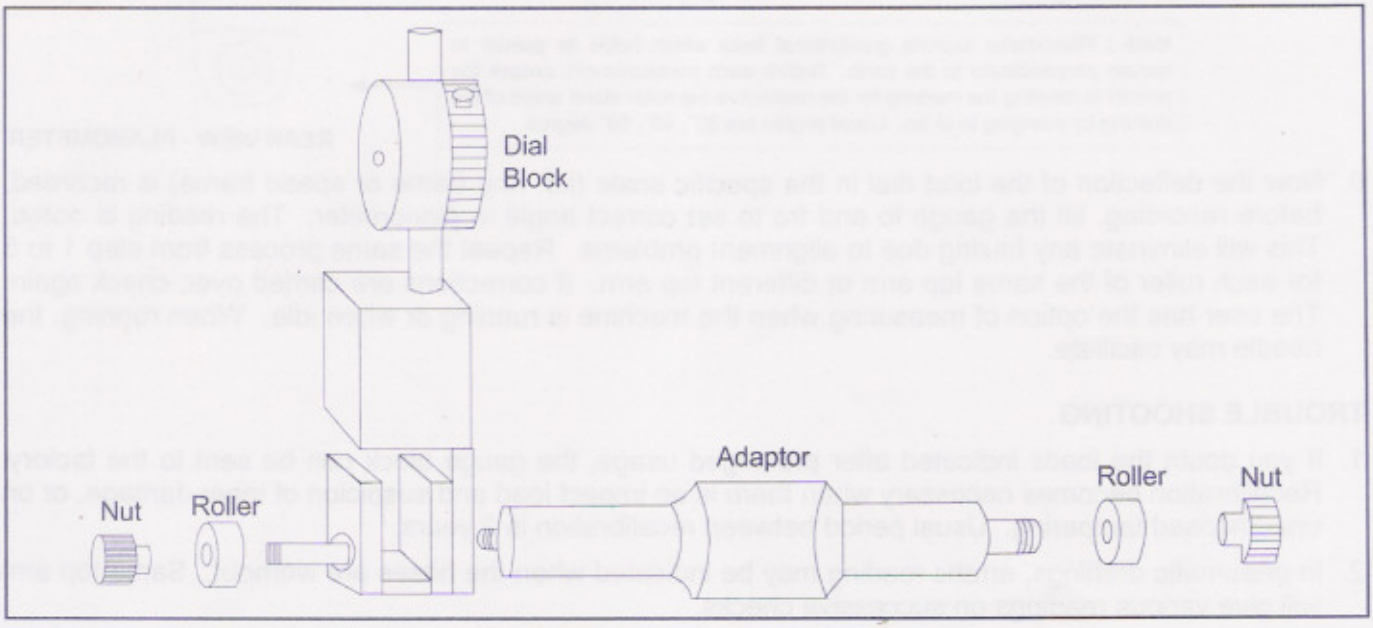
APEX TOP ARM LOAD GAUGE
USER'S MANUAL

In the box containing the guage, you will find the following items.

1. The dial block
2. A box of adaptors for various draftings. (and nuts and spanner)
3. A pad with roller pairs.



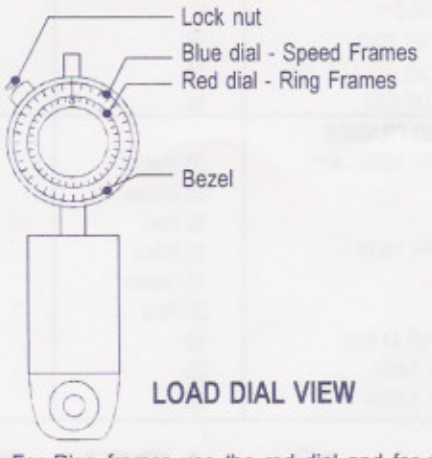
ASSEMBLY

1. Take the dial block. Take the suitable adaptor from the pouch. It has markings for the drafting like SKF PK 225, LR G 5/1 etc.
2. Now, screw on the adaptor into the dial block and tighten with spanner
3. The roller pad has rollers with sizes embossed on the face. Now, from the roller pad, remove the roller pair of size very near to the cot size running in the mill. (Example if 28.4 is running, select 28.5, if 28.1 is running then select 28.0). Slide the roller one at each end of the present gauge adaptor assembly. (See fig. 1) Assemble in such a way that the size showing plate is at the extreme end.
4. Now take the two knurled nuts and screw them on each end. Tighten by hand.

MEASUREMENT :

Now this assembly resembles a top roller. To measure top arm loads follow the rules.

1. Ensure the load dial pointer is in zero position. If not, slightly tap the dial by the finger to see if it returns. If still not, loosen the lock nut by hand and slightly rotate the bezel in the appropriate direction till zero is achieved. Tap by finger again. Fine tune, if necessary. Then tighten the lock nut. Now your gauge is ready for measurement. See fig for details). For every few hundred measurements, the zero may change. Then follow the same procedure.



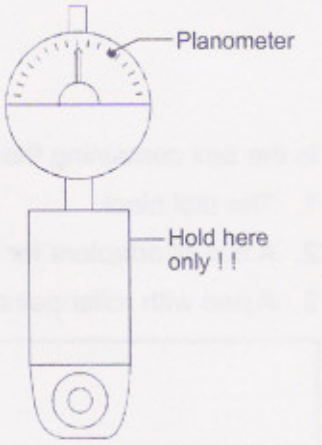
LOAD DIAL VIEW

Note : For Ring frames use the red dial and for speed frames use blue dial. Units are directly in kilograms. The dial should not be rotated to face the operator since the planometer will not work then. Prevent shocks and falls. Do not lubricate any part. Never open the box since calibration may change.

MOUNTING ON TOP ARMS :

1. Select the top arm to be measured.
2. Release the pressure lever of top arm and remove the front roller.
3. Now, replace the gauge in place of the top roller and snap it with the top arm. Hold the gauge by hand only the box portion.
4. Holding the gauge, press the top arm lever.
5. Ensure correct inclination using planometer which is at the back of the load dial. see fig.

Note : Planometer exploits gravitational force which helps its pointer to remain perpendicular to the earth. Before each measurement, ensure the pointer is meeting the marking for the respective top roller stand angle of the drafting by swinging to or fro. Usual angles are 30°, 45°, 60° degree.



REAR VIEW - PLANOMETER

6. Now the deflection of the load dial in the specific scale (i.e. ring frame or speed frame) is recorded, before recording, tilt the gauge to and fro to set correct angle in planometer. The reading is noted. This will eliminate any fouling due to alignment problems. Repeat the same process from step 1 to 5 for each roller of the same top arm or different top arm. If corrections are carried over, check again. The user has the option of measuring when the machine is running or when idle. When running, the needle may oscillate.

TROUBLE SHOOTING

1. If you doubt the loads indicated after prolonged usage, the gauge block can be sent to the factory. Recalibration becomes necessary when there is an impact load and suspicion of inner damage, or on unauthorised tampering. Usual period between recalibration is 2 years.
2. In pneumatic draftings, erratic reading may be indicated when the hoses are wornout. Same top arm will give various readings on successive checks.
3. While checking for apron roller, the total of the shell plus twice the thickness of the apron has to be taken and the roller of respective diameter should be chosen.
4. While checking, all rovings and silvers should be removed from the bottom rollers since they may influence the load.

LOAD SETTING VALUES FOR RING FRAMES & SPEED FRAMES

Name of Drafting	Front Roller Load	Middle Roller	Rear	Rear	Planometer Seeting in Deg.	Selection of scale
RING FRAMES						
SKF PK 225*	10 Black	--	--	--		
	14 Green	10	14	--	Textool 60°	
	18 Red	--	--	--	Jeets 45°	Red
SKF PK 211	8	7	5.4	--	Lakshmi & Rieter 45°	
LR G 5/1 P3/1	16	14	16	--	others as per	
LR D J/5 FS 140, 160	14	10	14	--	stand angle	
WST UT 620	14	10	14	--		
SPEED FRAMES						
SKF PK 1600 - 40*	20 Black	10	10	10		
	25 Green	15	15	15		
	30 Red	20	20	20	20 or as per	
SKF PK 1500	10 Black	20	15.	15	stand angle	
	15 Green	25	20	20	of the speed	Blue
	20 Red	30	25	25	frame	
WST UT M 620	16	12	14	14		
LR LF 1400	20	12	12	12		
LR LF 1400A	20	12	16	--		

APEX

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