



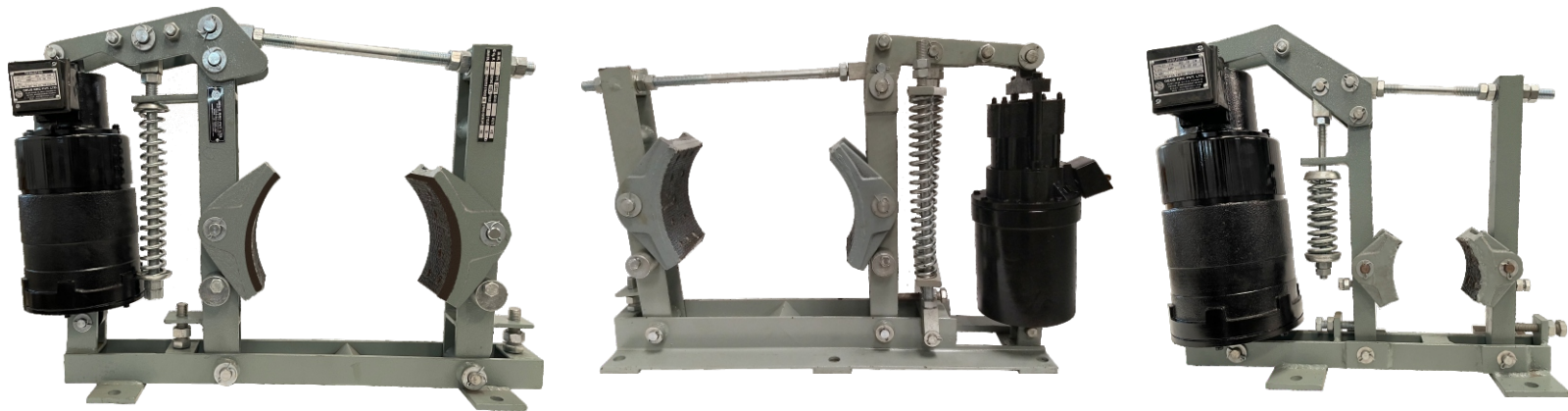
DEUS RRC PVT. LTD.



Leading manufacturer of SNT Radio Remote Control Systems & other Crane Control Equipments.

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Thruster Brakes Mill Duty MDT 100mm - 400mm



Introduction

Thruster Brake is a device used to retard the speed and to hold the moving machinery when it is stationary. The braking force to the shoes is applied through the spring by means of lever/rod mechanism. The shoes are moved clear off the drum again through lever/arm linkage mechanism by thruster which overcomes spring force.

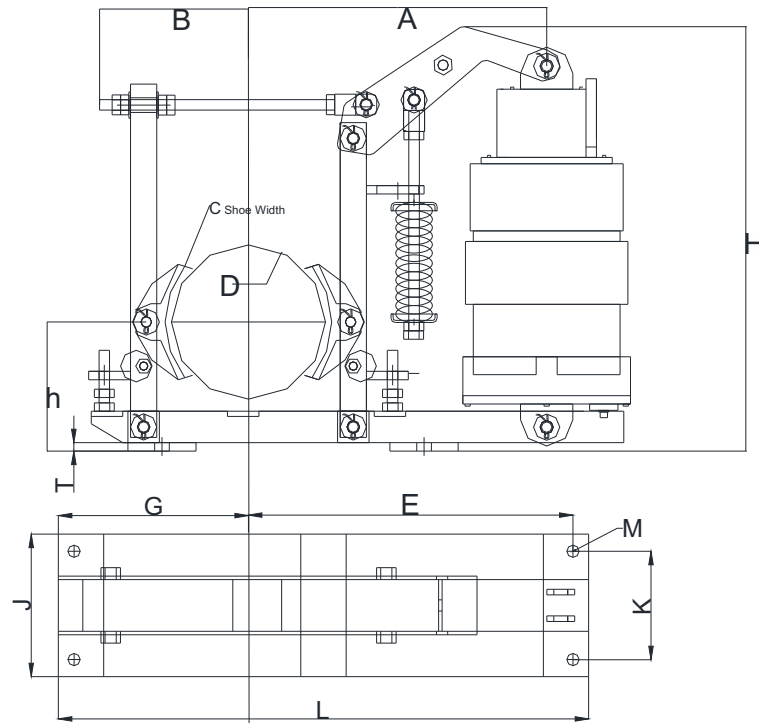
CONSTRUCTION:

- 1. **Base/Arms:** Rigid welded construction with accessible fixing.*
- 2. **Shoes:** Self-aligning, easily removable high grade cast iron fitted with best quantity fabric linings.
Large cooling surface*
- 3. **The Rod/Guide Rode:** Large section securely fixed in a lug. The tie rod transmits the spring force on the simple lever system.*
- 4. **Springs:** Compression springs are vertically mounted through the guide rods and are held securely between guide plates. One or more springs are used depending upon the brake size and thruster capacity to obtain the desired braking torque.
The **Related Motor Torque** is given by :*

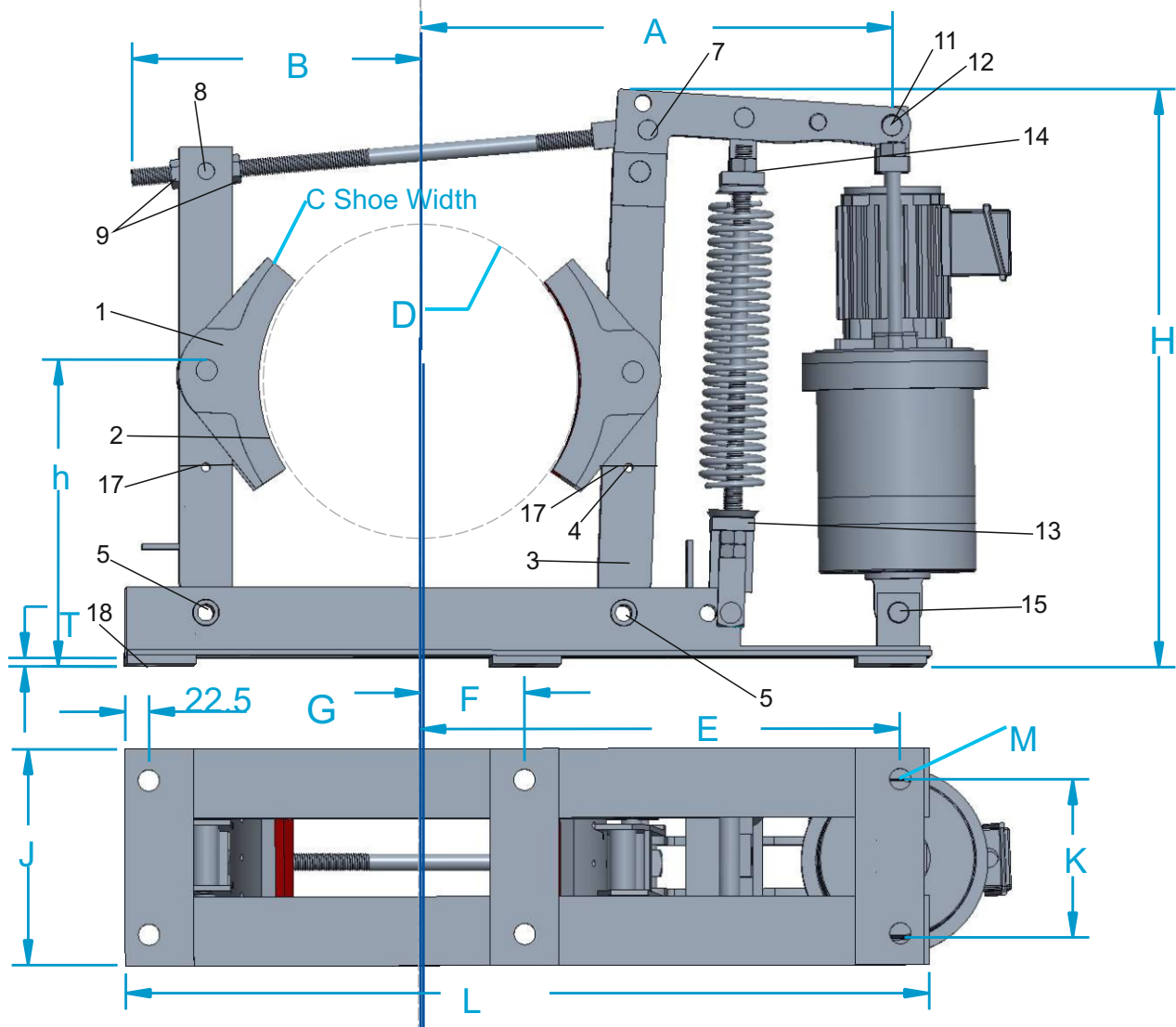
$$T = \frac{716.2 \times \text{HP}}{\text{RPM}} \quad \text{OR} \quad \frac{9552 \times \text{KW}}{\text{RPM}}$$

Where Hp/Kw=motor output & rpm=rev/minute

Thruster Brakes Mill Duty MDT 100mm - 250mm



Thruster Brakes Mill Duty MDT 200mm - 400mm



ELECTRO HYDRAULIC THRUSTER BRAKE COMPLETE CHART :

Drum Dia D In mm	100	150	200	250	300	200	250	300	400	400	TORQUE RATING									
	A	B	C	h	H	J	L	K	E	F	G	M	Thruster Capacity (Kg)	Braking Torque (Kg-m)	T	Brake Type	Drum Diameter (mm)	Thruster Capacity (Kgs)	Thruster Stroke (mm)	Braking Torque (Kg-M)
	235	265	360	355	430	360	355	430	503	503						MDT 100-18	100	18	51	6
	165	195	215	240	285	215	240	285	360	360						MDT 160-18	160	18	51	9
	70	70	88	100	140	88	100	140	180	180						MDT 200-18	200	18	51	20
	125	125	200	225	275	205	225	275	310	310						MDT 200-34	200	34	51	32
	415	415	513	563	600	513	563	600	650	650						MDT 250-18	250	18	51	35
	130	130	150	160	205	150	160	205	236	236						MDT 250-34	250	34	51	42
	420	465	600	640	750	580	640	750	955	955						MDT 300-18	300	18	51	42
	100	100	125	125	145	125	125	145	180	180						MDT 300-34	300	34	51	62
	150	150	360	305	460	360	305	460	508	508						MDT 400-34	400	34	51	90
	-	-	-	-	105	-	-	105	65	65						MDT 400-46	400	46	51	110
	100	100	170	185	250	170	185	250	377	377						MDT 400-68	400	68	76	170
	14	14	14	18	20	14	18	20	20	20										
Thruster Capacity (Kg)	18	18	18	18	18	34	34	34	34	68										
Braking Torque (Kg-m)	6	9	20	35	42	32	42	62	90	170										
T	13	13	13	13	13	13	13	14	14	14										

INSTALLING BRAKE IN POSITION

To insert the brake in position, the brake shoes are to be taken apart to clear the drum diameter. To do this, slacken the spring settling nut and the tie-rod nut in the 14 9 side arm and pull it slightly. This increases the distance between the brake shoes. Insert the brake on the foundation bolts. Adjust shoes by setting screws and position them on brake 17 drum. Re-tighten the setting bolt and the tie-rod nut. 9 Tighten the foundation bolt 18

INSTALLING THRUSTER ON BRAKE

The thruster tank is to be filled with sufficient quantity of oil as mentioned in the Thruster dimension Table. To mount the thruster on the brake, remove one side split pins on the thruster hinge pins in the base frame of brake and lever. 15 12 Remove both pins and re-insert them after positioning the thruster on the pin holes in the base and the lever of the base. Replace both split pins. Check that the thruster movement is unobstructed when the crane lever is pulled manually and the thrust rod of the thruster is free to move. Open the terminal box cover of the thruster and connect power supply cables to the three terminals on the terminal plate inside the terminal box. Terminate the earthing lead on the earth terminal plate inside the terminal provided on the thruster or brake. Replace the terminal box cover on the terminal box. The thruster is ready for operation.

ALIGNING AND SETTING OF BRAKE

Next, align the brake shoes with the diameter and the surface of the brake drum and adjust the lock nuts 9 on the tie-rod such that shoes grip the brake drum equally. Energize the power cables, this will cause the thrust rod of the thruster to move up and the shoes release the brake drum. Adjust the gap between the drum and shoes to 0.3 to 0.5mm (with feeler gauge) equally by adjusting the setting bolts 17 on both arms. For equal and uniform liner wear it is necessary that the shoes and the arms move equally. Ensure the brake drum is free to rotate when the brake is released.