

ELECTRIC TUBE EXPANSION SYSTEMS



TUBE TOOLS



Manufacturer & Exporter of:

Tube Cleaners, Tube Expanders, Tube Tools, Tube Removal Tools
Torque Wrenches, Torque Multiplier, Hydraulic Tube Expansion
System, Flexible shaft Grinders & Accessories.

● **TORQUE CONTROLLED TUBE EXPANSION SYSTEM: (Current based)**

BHARTIYA Electric Tube Expansion Drive Unit is governed by a separate Electric Control Panel which is adjusted by a simple Digital Display. When the Electrically Driven Motor reaches the desired Torque, the Control unit Mechanism automatically shuts off the Power and on pressing the Reverse Button the Tube Expander retracts out from the Tube. The Fully Automatic system ensures the Tube are rolled to maximum tightness without excessive cold worked stress in Tube Metal which prevents injuring Tube ends or distorting Tube Sheet Ligaments.



Model No.	Phase	Supply Voltage Volts	Maximum Current AMPS	Control Panel Suitable for Drives
BTC - 23010	Single	230	10	BD-0, BD-1, BD-2, BD-2TS, BD-3, BM-2M5 BD-3M5, BD-2M25, BD-3M25
BTC - 11020	Single	110	20	BD-0L, BD-1L, BD-2L, BD-2TSL, BD-3L, BD-2LM5, BD-3LM5, BD-2LM25, BD-3LM25

Note:

Latest Design Highly Advanced - Micro processor based torque control unit - Also available - quote on request.

● **ELECTRICALLY OPERATED DRIVE UNITS FOR CURRENT BASED TUBE EXPANSION MACHINE:**



BD-0



BD-1



BD-2



BD-3



MPG-3N-II

Features:

1. It consists of heavy duty motors.
2. Continuous cycle operation vs. Intermittent cycle operation of drives from other manufactures.
3. High torque to weight ratio.
4. Spare parts are easily available worldwide.

DRIVE MODEL		NO LOAD SPEED R.P.M	EXPANSION RANGE		FULL LOAD CURRENT APMS		FULL LOAD TORQUE KGM	DRIVE WEIGHT KGS.
230V	110V		S.STEEL TUBE O.D. M.M.	COPPER TUBE O.D. M.M.	230V	110V		
BD-0	BD-0L	700	6 to 12	8 to 16	1.3	2.6	0.36	2.8
BD-1	BD-1L	550	10 to 16	13 to 22	2.6	6.8	0.46	4.1
BD-2	BD-2L	560	16 to 28	19 to 34	2.7	8.0	1.26	7.7
BD-2TS	BD-2TSL	1380/560	16 to 28	19 to 34	2.75	5.5	2.2/3.0	5.4
BD-3	BD-3L	270	25 to 45	38 to 65	6.0	12.0	3.0	11.3
BD-2M5	BD-2LM5	112	25 to 50	38 to 70	4.0	8.0	3.8	10.0
BD-3M5	BD-3LM5	56	25 to 57	38 to 100	6.0	12.0	12.0	16.0
BD-2M25	BD-2LM25	21	38 to 63	-	4.0	8.0	31.5	15.0
BD-3M25	BD-3LM25	11	50 to 104	-	6.0	12.0	48.0	19.0
MPG-3N-I	MPG-3L-I	130	25 to 76	25 to 102	12.0	12.0		8.0
MPG-3N-II	MPG-3L-II	430	25 to 50	25 to 76	12.0	12.0		8.0

● **ELECTRIC TORQUE CONTROLLER (Wattage based):**



- 01. Fully Solid State Design - no moving parts - no wear and tear - no noise - consequently long life.
- 02. Uses the latest micro-controller chip for control functions.

ELECTRIC TUBE EXPANSION SYSTEM:



03. Uses one main circuit board for easy maintenance.
04. Accurately calibrated digital torque setting with a resolution of 1 watt makes torque settings accurate and can be easily reproduced for identical results.
05. Connected drive is automatically recognized & indicated by means of LED on the torque controller.
06. Soft start has been provided for all drives, which reduces starting currents in the drive. As a result, life of carbon brushes & drive increases.
07. Torque setting arranged in four different ranges to suit four different drives. Appropriate wattage range is automatically selected for the connected drive, hence drives can not be abused or overused.
08. Actual drive wattage (torque) is displayed. Set wattage (torque), drive current and line voltage can be seen by Press of a button.
09. Adjustable reverse time from (1 sec to 100 secs.)
10. Trip time adjustable from (0.1 sec to 10 secs.)
11. Pause time (time interval between cycles) adjustable from (1 sec to 100 secs.)
12. Manual reverse by push button, in case of emergency.
13. Drive Speed adjustable in reverse rotation.
14. Hand (trigger) mode or foot switch mode, both are available.
15. Expansions can be carried out either in single cycle mode or auto repeat mode.
16. MCB has been provided to protect the drives against over current by short circuits..
17. Plug in type PCBs reduce down time to minimum during trouble shooting.
18. LED indicators provided for forward, reverse & trip conditions of drive.
19. Superior SCR technology has been incorporated rather than triacs. SCRS have much better voltage, current & dv/dt ratings than triacs. This leads to greater reliability & the power circuit becomes almost failsafe.
20. All the spares inside the panel viz : PCBs, Transformers, CT, Relays DPM etc. Can be replaced by use of only a screw driver.
21. PC/Printer compatible.

Model No.	Voltage Single Phase 50/60 Hz	Weight (Kg)
TCW-09-110	110 V	11.0
TCW-09-230	230 V	11.0

Note :

Voltage Stabilizers for use with TCW torque controllers. All TCW torque controllers are supplied with operation manuals.

ELECTRIC TUBE EXPANSION SYSTEM:

● ELECTRICALLY OPERATED DRIVE UNITS FOR WATTAGE BASED TUBE EXPANSION MACHINE



MPG-0N



MPG-1N



MPG-2N



MPG-3N

Features:

1. It consists of heavy duty German Made motors.
2. Continuous cycle operation vs. Intermittent cycle operation of drives from other manufactures.
3. High torque to weight ratio.

DRIVE MODEL		NO LOAD SPEED R.P.M	EXPANSION RANGE		FULL LOAD CURRENT APMS		DRIVE WEIGHT KGS.
230V	110V		S.STEEL TUBE O.D. M.M.	COPPER TUBE O.D. M.M.	230V	110V	
MPG-0N	MPG-0L	2800	6 to 10	6 to 12	2.6	2.6	2.0
MPG-1N-I	MPG-1L-I	1000	10 to 16	13 to 20	6.0	6.0	2.5
MPG-1N-II	MPG-1L-II	1900	8 to 13	11 to 16			
MPG-2N-I	MPG-2L-I	480	16 to 45	16 to 50	12.0	12.0	7.5
MPG-2N-II	MPG-2L-II	1080	16 to 32	16 to 38			
MPG-3N-I	MPG-3L-I	130	25 to 76	25 to 102	12.0	12.0	8.5
MPG-3N-II	MPG-3L-II	430	25 to 50	25 to 76			

● VOLTAGE STABILIZER / TRANSFORMERS:

Features:

- * Digital display of output voltage.
- * Used in on site application and areas which has high voltage fluctuations.

● ACCESSORIES FOR ELECTRIC TUBE EXPANSION:

- a. Telescopic Shaft:
- b. Quick Change Chucks & Adaptors:
- c. Torque Multiplication Gear Boxes:
- d. Movable Trolley:

BHARTIYA ENTERPRISES

WORKS: A48, OSIYA MATA COMPOUND, KALHER VILLAGE, RETI BUNDER ROAD
TK. BHIWANDI, DIST. THANE, M.S., INDIA- 421 302.

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