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TUBE EXPANSION SYSTEM



Hydraulic Tube Expansion System



HYDRAULIC TORQUE CONTROL UNIT

Model	TUBE EXPANSO
Input Electrical	3 Phase, 415V+/- 10%V
Electric Motor	3.7KW / 5HP, 1430 RPM, 50/60 Hz
Control Voltage	24VDC
Max. Working Pressure	100 BAR
Oil Tank Capacity	45 LTR.
Dimensions	L820 x W325 x H985
Weight Without Oil	110 KG.
Hydraulic Oil	SAE VG 68
Standard Hose Size (length)	1/2" (10mtrs)



TUBE EXPANSION DRIVE HEAD

Type		TEDH-4		TEDH-5		TEDH-6	
Socket		3/8" & 1/2"		1/2", 3/4" & 1"		3/4" & 1"	
RPM		480		84		62	
Tube Range		Mini	Max	Mini	Max	Mini	Max
Tube OD	inch	Ø 3/4	Ø 1.1/2	Ø 1.1/2	Ø 3	Ø 2	Ø 4
	mm	Ø 19.0	Ø 38.1	Ø 38.1	Ø 76.2	Ø 50.8	Ø 101.6
Tube Thickness	inch	1/16	3/32	1/8	5/32	9/64	1/4
	mm	1.65	2.77	3.2	4.0	3.5	6.35
Tube Sheet Thickness	inch	13/16	1.1/4	1.1/4	1.25/32	2	2.9/16"
	mm	20	32	32	45	50.8	60
Dimension (mm)		762 X 254 X 254		762 X 254 X 254		762 X 254 X 254	
Weight - kg (lbs)		9.2 (20)		11.0 (24)		11.5 (26)	

STANDARD ACCESSORIES



Remote Control Cable and Hydraulic hoses can be supplied for other length on request.

Electrical Tube Expansion System



Electronic Torque Controller Unit is a highly compact, light weight, durable and solid state-wattage based electronic panel.

It is designed to provide accurate tube expansion.



Electronic Torque Control Panel

Specification



Model	ETCW
Volts	230
Frequency	50/60 Hz
Amp	12
Weight	7.5 kg



ETCW is wattage based Electronic controller using the latest Microcontrollers which reduce number of components. Specially designed to give fast and uniform tube expansion with fingertips.

Features

- Automatically detects the connected Drive.
- Slow start has been provided to all the Drives for safety.
- Microcontroller based circuits.
- Trip, Reverse & Pause time are adjustable.
- Fully solid state design.
- LED on the panel board indicates the forward, reverse or trip condition of drive.
- Precise-control for Torque by selecting the Wattage.
- Accurately calibrated digitally torque setting.
- MCB has been provided for the safety.
- User Friendly Software with all protections.



Current based electronic torque control panel are available on request.

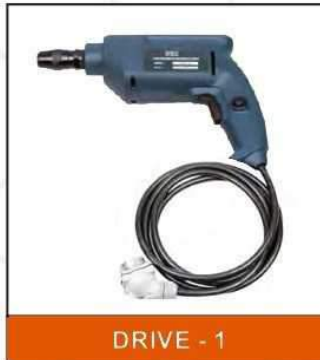
Electrical Tube Expansion System



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Electrical Expansion Drive



DRIVE - 1



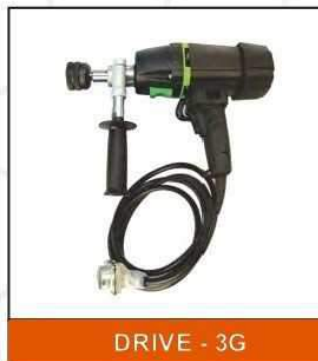
DRIVE - 2



DRIVE - 3R



DRIVE - 4R



DRIVE - 3G



DRIVE - 4G

Features :

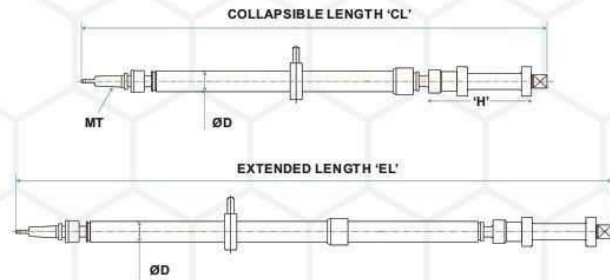
- 1) HeavyDuty German motors form the heart of these drives.
- 2) Continuouscycle operation vs. Intermittent cycle operation of drives from other manufactures.
- 3) Hightorque to weight ratio.

■ SPECIFICATIONS

Supply Voltage Single Phase 50/60 Hz	Drive Model	Speed I / II	No Load R.P.M.	Expansion Range				Drive Weight Kgs.
				Steel Tube O.D.		Copper Tube O.D.		
				inch	mm	inch	mm	
230 V	Drive - 1	I	2000	1/4" - 3/8"	6 - 10	1/4" - 1/2"	6 - 12	2
	Drive - 2	I	1000	3/8" - 5/8"	10 - 16	3/8" - 3/4"	13 - 20	
		II	1900	5/16" - 3/8"	8 - 13	5/16" - 1/2"	8 - 13	
	Drive - 3R	I	560	5/8" - 1.3/4"	16 - 28	3/4" - 1.3/8"	19 - 34	7.5
	Drive - 4R	I	380	1" - 1.3/4"	25 - 45	1.1/2" - 2.1/4"	38 - 57	11.3
	Drive - 3G	I	480	5/8" - 1.3/4"	16 - 45	5/8" - 2"	16 - 50	7.5
		II	1080	5/8" - 1.3/4"	16 - 32	5/8" - 1.1/2"	16 - 38	
	Drive - 4G	I	130	1" - 3"	25 - 76	1" - 4"	25 - 102	8.5
II		430	1" - 2"	25 - 50	1" - 3"	25 - 76		
110 V	Drive - 1	I	2000	1/4" - 3/8"	6 - 10	1/4" - 1/2"	6 - 12	2
	Drive - 2	I	1000	3/8" - 5/8"	10 - 16	3/8" - 3/4"	13 - 20	
		II	1900	5/16" - 3/8"	8 - 13	5/16" - 1/2"	8 - 13	
	Drive - 3R	I	560	5/8" - 1.3/4"	16 - 28	3/4" - 1.3/8"	19 - 34	7.5
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	Drive - 4G	I	130	1" - 3"	25 - 76	1" - 4"	25 - 102	8.5
II		430	1" - 2"	25 - 50	1" - 3"	25 - 76		

Telescopic Shafts


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Features :

- Used to free the operator from handling drives.
- Sturdy construction absorbs all torque during tube expansion.

■ SPECIFICATIONS

Model Number	MT Shank	CL mm	EL mm	Handle Length 'H' mm	D mm	For Use with Drive Model	Weight	Supplied with Quick Change Chucks and Adapters
TS-1 E	2 MT	850	1250	200	38.0	Drive-3G	2.75	3/8", 1/2", 3/4"
TS-2 E	3 MT	1000	1505	225	38.0	Drive-4G	5.75	1/2", 3/4", 1"
TS-3 E	3 MT	1000	1400	250	51.0	Drive-4G	9.20	1/2", 3/4", 1"

Accessories For Electric Tube Expansion System



TROLLEY

Features :

- Heavy Duty Sheet Metal Construction.
- Conveniently houses all tools needed for expanding tubes.

Model	Description
FS-1	Set of 3 Foot Switches
ETCW	Torque Controller
TR-1	Collapsible Trolley - Stainless Steel
TMSB-5	Spring Balancer
SB-1	Swivel Bracket
Drive	Electric Drive
TS	Telescopic Shaft


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Pneumatic Rolling Drives



Pneumatic Rolling Drives are specifically designed to ensure uniform tube to tube sheet expansions, there by ensuring exact rolling of tubes.

Features :

- Light weight aluminum body.
- Ergonomically correct push/pull throttle.
- Automatically stops tube expansion at defined setting.
- Precision control measures torque output.

■ SPECIFICATIONS

Model Number	Free Speed rpm	Min Torque Nm	Max Torque Nm	Tube Capacity inch	Air Consumption l/min	Weight kg
850-1250	1250	1.58	12.20	3/4	1700	4.80
850-600	600	2.49	21.81	1	1700	4.80
850-400	400	5.00	36.00	1.1/4	1700	4.80

Right Angle Rolling Drives



Right Angle Rolling Drives are specifically designed for expanding boiler tubes in steam, mud drums, fire tube & related boiler equipment.

Features :

- Unique head design consisting of fully enclosed bearing for long & trouble free life.
- Both models equipped with roll throttle as standard. Lever throttle optional.
- Easy adjustable torque.
- Angle head can be setup in numerous positions.
- 360 degree adjustable air exhaust.

■ SPECIFICATIONS

Model Number	Free Speed rpm	Min Torque Nm	Max Torque Nm	Tube Capacity inch	Square Drive inch	Weight kg
P72-RT-190	190	95	190	2.5	5/8	5.80
P72-RT-90	90	200	410	4	3/4	6.70