



ELECTRO HYDRAULIC THRUSTER (ELDY) OPERATED BRAKES

DRUM Ø160 MM.....Ø710 MM



ELECTRO HYDRAULIC THRUSTER (ELDY)

RANGE - 23 KG 301 KG

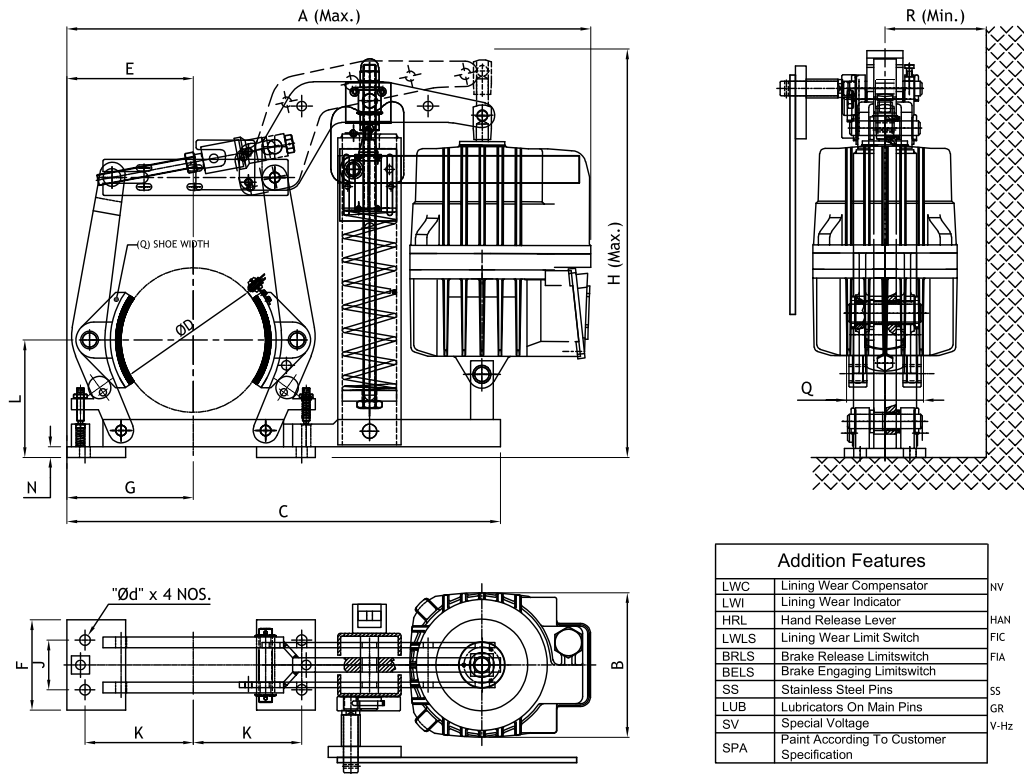




INDUSTRIAL BRAKES SMG BRAKES

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WITH EXTERNAL TORQUE SPRING



DIMENSIONS : (IN MM.)

Brake Model	Thruster Type	Braking Torque (Nm) (Kg-m)	MAX A	B	C	ØD	MAX E	F	G	MAX H	J	K	L	N	Q	R	d	Weight kg
SMG-160-23/05	ELDY - 23/05	250/25	590	160	480	160	140	100	140	455	55	120	130	12	55	85	12	24
SMG-200-23/05	ELDY - 23/05	300/30	640	160	538	200	170	100	170	470	55	145	160	10	70	110	14	31
SMG-200-30/05	ELDY - 30/05	400/40	640	160														34
SMG-250-23/05	ELDY - 23/05	330/33	730	160														36
SMG-250-30/05	ELDY - 30/05	440/44	730	160	615	250	210	100	200	550	65	180	190	10	90	125	18	38
SMG-250-50/06	ELDY - 50/06	720/72	770	160	722	300/315	250	115	240	650	80	220	230	12	110	160	18	47
SMG-300/315-23/05	ELDY - 23/05	440/44	860	160														54
SMG-300/315-30/05	ELDY - 30/05	520/52	860	160														57
SMG-300/315-50/06	ELDY - 50/06	870/87	900	190														66
SMG-300/315-80/06	ELDY - 80/06	1550/155	900	190	895	400	310	140	295	765	100	270	280	16	140	200	22	68
SMG-400-50/06	ELDY - 50/06	860/86	1060	190														96
SMG-400-80/06	ELDY - 80/06	1620/162	1060	190														98
SMG-400-121/06	ELDY - 121/06	2670/267	1060	240	895	400	310	140	295	780	100	270	280	16	140	200	22	107
SMG-500-80/06	ELDY - 80/06	1600/160	1190	190	1040	500	370	180	360	880	130	325	340	16	180	235	22	158
SMG-500-121/06	ELDY - 121/06	2910/291	1190	240														167
SMG-500-201/06	ELDY - 201/06	5220/522	1190	240														169
SMG-600/630-121/06	ELDY - 121/06	3700/370	1350	240	1190	600/630	460	220	440	1000	170	400	420	16	225	260	27	225
SMG-600/630-201/06	ELDY - 201/06	5900/590	1350	240														227
SMG-600/630-301/06	ELDY - 301/06	7900/790	1350	240														229
SMG-710-121/06	ELDY - 121/06	3800/380	1450	250	1286	710	510	250	480	1110	190	450	470	16	255	320	27	269
SMG-710-201/06	ELDY - 201/06	6300/630	1450	250														271
SMG-710-301/06	ELDY - 301/06	9400/940	1450	250														273

H. O. Unit - I : C-15/16, Nand Jyot Industrial Estate, Andheri-Kurla Road, Mumbai - 400072 ,
Tel : (022) 42469700/730
E-mail : sales@socgroup.in

Unit - II: Plot No. 4912, G. I. D. C., Phase IV, Vatva, Ahmedabad - 382445
Tel.: (079) 68169700/702/712
E-mail : enquiry2@socgroup.in

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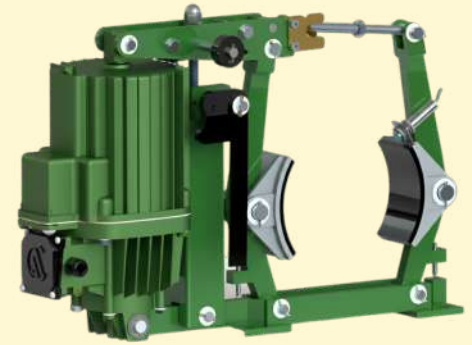
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CRANE CONTROL GEAR

V6
07/11/25



TECHNICAL DATA

LWC	Lining Wear Compensator
LWI	Lining Wear Indicator
HRL	Hand Release Lever
LWLS	Lining Wear Limit Switch
BRLS	Brake release limit switch
BELS	Brake Engaging Limit Switch
SS	Stainless Steel Pins
LUB	Lubricators On Main Pins
SV	Special Voltage
SPA	Paint According To Customer Specification



FEATURES

1. Robust and rugged design to withstand arduously the environment in Steel and Rolling Mills.
2. DIN Standard 15435
3. Auto Liner Compensator
4. Manual Release
5. Asbestos Free Liner
6. Aluminum Brake Shoe
7. Open /Close brake limit sensor
8. Consistent braking torque due to properly selected and tested brake liner material.
9. The design ensures the efficient distribution of forces.

INSTALLATION OF BRAKE

The brake foundation is made as per the dimensional catalogue Mount as follows :

1. Increase brake shoe clearance to about 5 mm by turning tie rod adjusting nut. (N Fig).
2. Pull out pin #1. (Fig 3) in base and side arm.
3. Swing side arm upwards. (Fig 4)
4. Push base frame below brake drum.
5. Align brake in radial and axial directions.
6. Swing down side arm and fix it to the base by pin #1.
7. Install thruster unit.
8. Fix base frame on foundation.

Align brake shoes with the drum within ± 0.3 mm in all axis.

REPLACEMENT OF WORN OUT SHOES

1. Unscrew tie rod nut n to release brake shoes from the drum.
2. Remove hinge pin in the shoe and remove brake shoe by sliding it over the drum as shown
3. Replace brake shoe with a new one in a similar manner and install it by putting hinge pin in arm
4. Repeat (2) and (3) for the second arm.
5. Re adjust the brake

Fig. 3

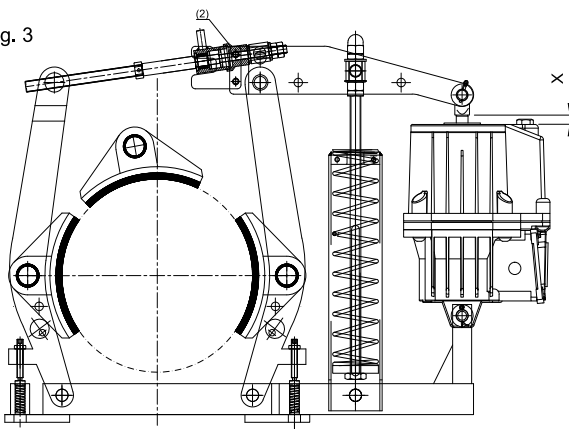


Fig. 4

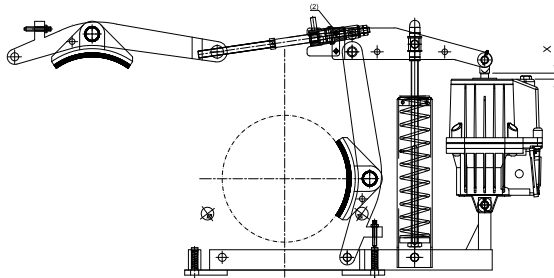
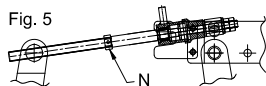
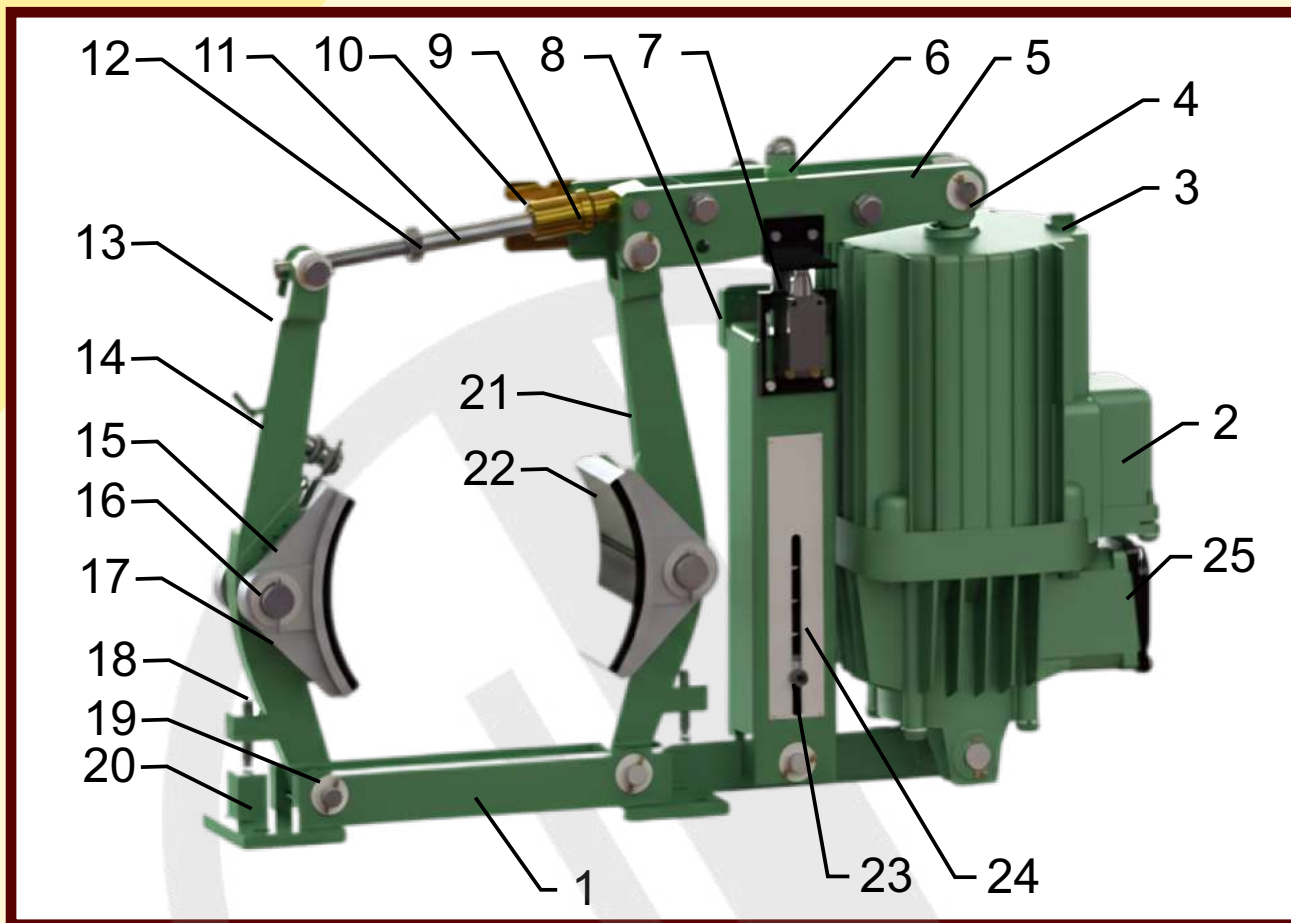


Fig. 5





BRAKE PARTS



01) BASE

02) **ELDY THRUSTER**

03) OIL PLUG

04) THRUSTER PIN

05) LEVER

06) TORQUE ADJUSTER

07) SPRING ROD

08) **MANUAL RELEASE**

09) **AUTO LINER WEAR
COMPENSATOR DEVICE**

10) FORK

11) TIE ROD

12) TIGHTENING NUT

13) SIDE ARM

14) NAME PLATE

15) SHOE

16) SHOE PIN

17) SHOE ADJUSTER

18) ARM ADJUSTER

19) BASE PIN

20) MOUNTING

21) MAIN ARM

22) SHOE LINER

23) TORQUE INDICATOR

24) SPRING

25) TERMINAL BOX

ELECTRO-HYDRAULIC THRUSTERS (ELDY)

THRUSTER SPECIFICATIONS :

The centrifugal pump and motor are immune from external overloading. Standard motor design is suitable for 415 Volts /50 Hz /3-phase supply. Other voltages (wye) connected, class 'F' windings have internal star point and the three supply phases can be connected on the terminal board, irrespective of the phase sequence. The bi-directional radial flow impeller works with equal performance efficiency in both directions.

CONSTRUCTION FEATURES & OPERATION :

The two main sub-assemblies of the hydraulic thruster, the electric motor and the hydraulic unit are co-axially assembled to form the working unit.

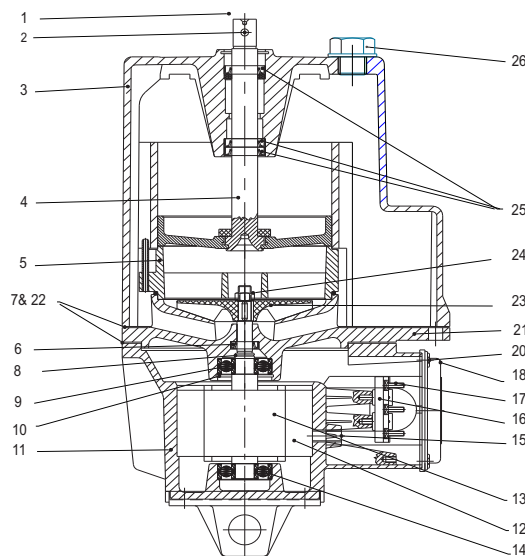
In the switched off state (de-energised), the piston is at its lowest position due to external load (as brake spring of the drum brake), and the brake is applied. When energized, the electric motor drives the centrifugal pump and delivers working fluid under the piston, under high pressure. This moves the piston axially in the guided path, and delivers thrust of force required to operate the attached device (like thruster brake) via the piston rod and the eye-lug attached device to it. The working stroke can be step-lessly controlled by external load.

The delivered thrust is jerk-free, smooth, in constant magnitude and perfectly linear. Except at the end positions, the power intake of the motor is reduced as compared to the power demand while lifting. Thus, the thruster is insensitive to external over-loading. This makes the thermal overload protection to the motor unnecessary.

PERFORMANCE FEATURES :

- Compact, light weight and elegant design.
- Reliable and maintenance free operation.
- Smooth jerk free perfectly linear motion.
- Low noise, and does not emit electrical disturbances.
- IP-55, IP-65 degree of protection.
- Suitable for out-door installation.
- Low power input.
- Up to 720 operations per hour.
- Easy mounting and dismounting.
- Bi-direction operation.
- Immune from external over loading
- Immune from supply voltage variations.
- Class F insulation scheme.
- Voltages up to 600V AC. 3 Ø

- | | |
|---------------------------------|---------------------------|
| 1. Pressure strap | 2. Tubular pin |
| 3. Housing | 4. Piston assembly. |
| 5. Guide ring | 6. Oil seal. |
| 7. Gasket | 8. Circlip |
| 9. D.G.B. Bearing | 10. Circlip. |
| 11. Motor housing. | 12. Starter with winding. |
| 13. Rotor assembly. | 14. D. G. B. Bearing. |
| 15. Grub screw. | 16. Terminal board. |
| 17. Cable screw nut. | 18. Terminal box cover. |
| 19. Terminal box gasket. | 20. Fixing screw. |
| 21. Middle flange. | 22. Gasket. |
| 23. Impeller. | 24. Hex. Nut. |
| 25. Oil seal. | 26. Oil plug. |
| 27. Hex. Socket head cap screw. | |





ELDY 23/05



ELDY 30/05

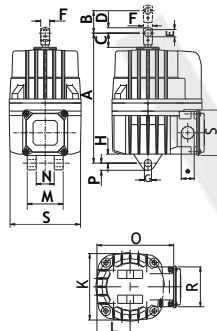


ELDY 50/06
ELDY 80/06
ELDY 80/12

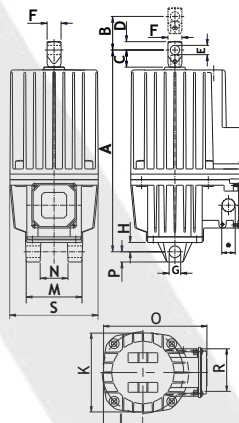


ELDY 121/06
ELDY 121/12
ELDY 201/06
ELDY 201/12

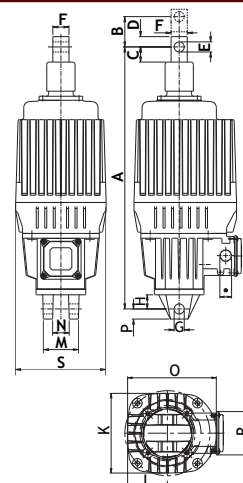
Electro-Hydraulic Thrusters (Eldy) All cable entry 3/4" B S Conduit Threads



ELDY 23/5



ELDY 30/5, 50/6, 80/6



ELDY 121/6, 201/6, 301/6

TYPE	Lifting Force		Stroke MM	Power consumption W	Current consumption A	Oil Capacity Litres	Weight K. G.	A	B	C	D	E	F	G	H	K	L	M	N	O	P	R	S
	Nm	Kg-m																					
ELDY-23/5	230	23	50	165	0.5	1.6	10	286	50	26	12	16	20	16	20	160	80	80	40	200	16	100	160
ELDY-30/5	300	30	50	200	0.5	1.9	13	370	50	34	15	16	25	16	18	160	80	80	40	197	16	100	160
ELDY-50/6	500	50	60	330	0.5	4.2	20	435	60	36	18	20	30	20	23	195	97	120	60	254	22	100	195
ELDY-80/6	800	80	60	330	1.2	4.2	24	450	60	36	18	20	30	20	23	195	97	120	60	254	22	100	195
ELDY-121/6	1210	121	60	330	1.2	9.4	33	645	60	38	25	25	40	25	35	240	112	90	40	260	25	100	240
ELDY-201/6	2010	201	60	550	1.3	9.4	35	645	60	38	25	25	40	25	35	240	112	90	40	260	25	100	240
ELDY-301/6	3010	301	60	550	1.4	9.4	37	645	60	38	25	25	40	25	35	240	112	90	40	260	25	100	240
ELDY-121/12*	1210	121	120	330	1.2	9.4	37	705	120	38	25	25	40	25	35	240	112	90	40	260	25	100	240
ELDY-201/12*	2010	201	120	550	1.3	9.4	39	705	120	38	25	25	40	25	35	240	112	90	40	260	25	100	240
ELDY-301/12*	3010	301	120	550	1.4	9.4	41	705	120	38	25	25	40	25	35	240	112	90	40	260	25	100	240

* Higher Stroke On Request

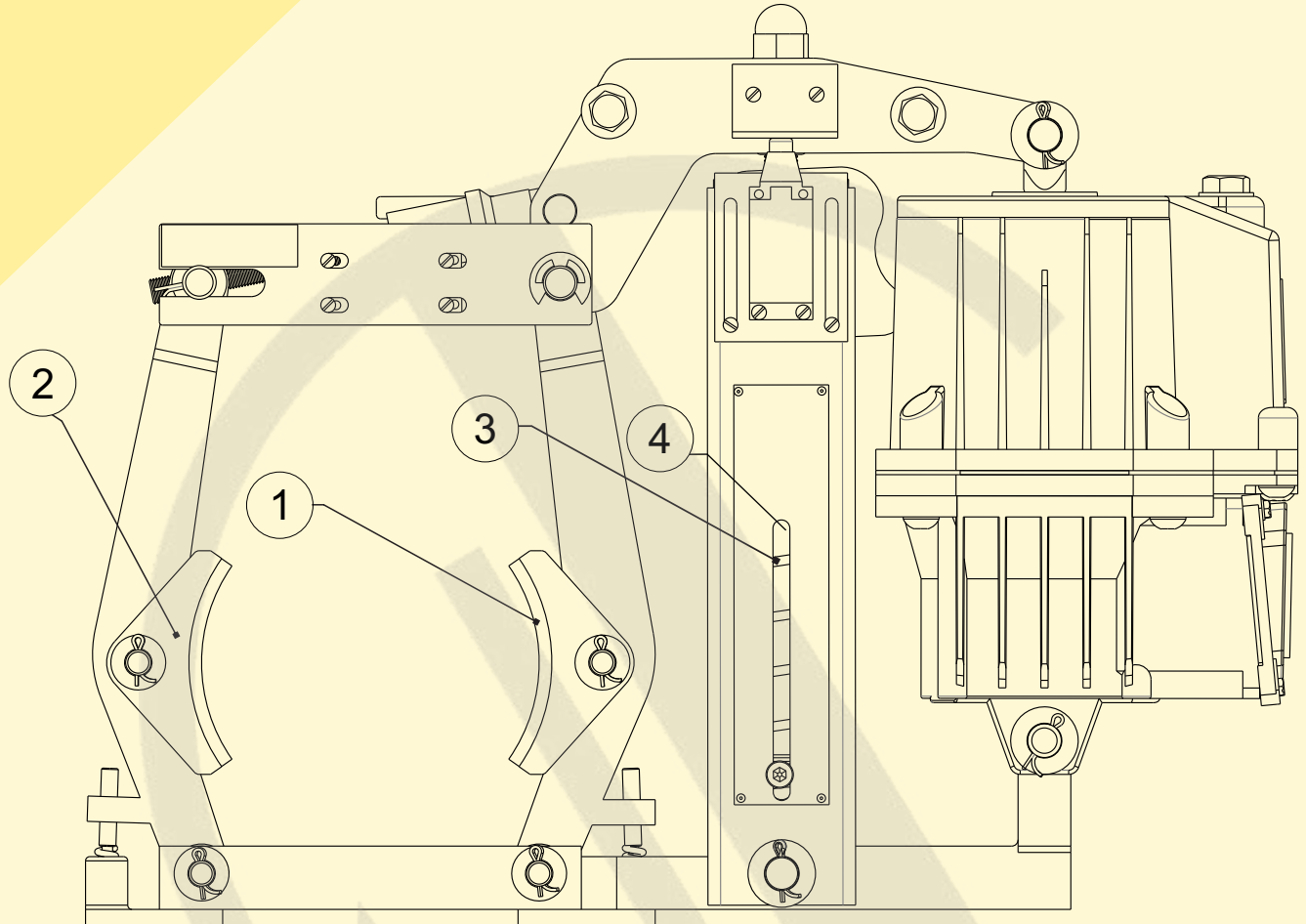
The base mounting with type Eldy- 50 , Eldy-80, Eldy- 121 , Eldy-201 & Eldy-301 is bolted and 90° rotatable, the top pressure lug is rotatable on all units.

Working fluid use transformer oil filled at factory

Safety Measures

Actuation time for all ELDY Thrusters is Max 1.5 sec.

Dust proof double seal. Double seat to oil chamber. Piston rod chromium plated to size. Piston rod tube to protect against ingress of foreign bodies with types Ed 121, Ed 201, Ed 301



SPARES FOR SMG BRAKE

1



**BRAKE LINING WITH
RIVET (PAIR)**

2



**BRAKE SHOE WITH
LINING (PAIR)**

3



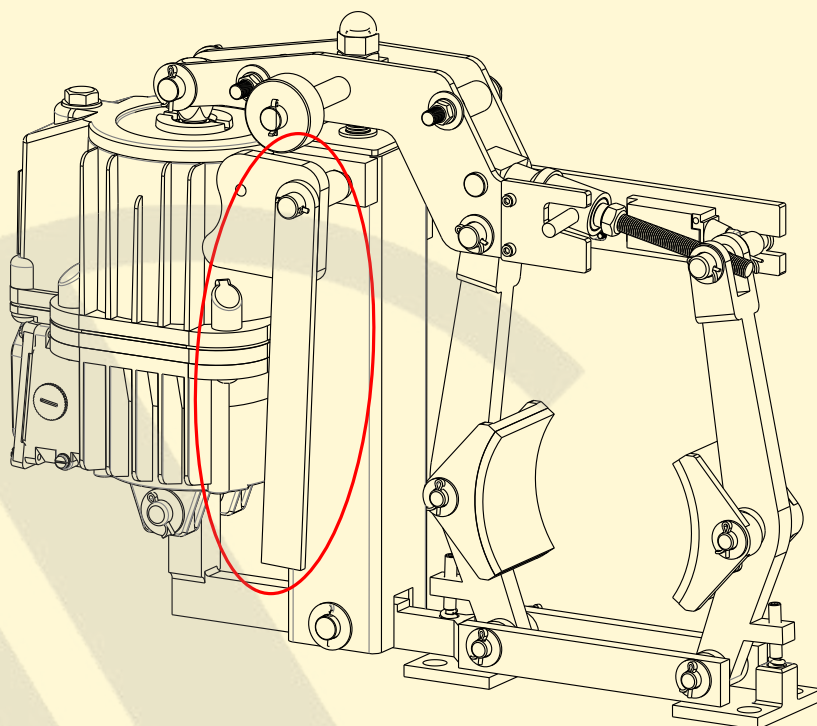
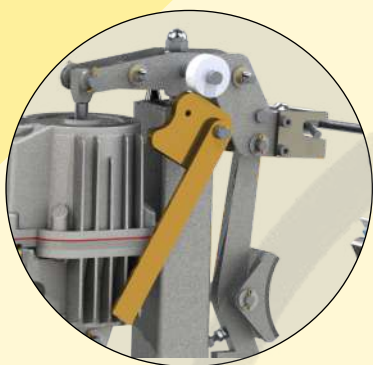
MAIN SPRING

4

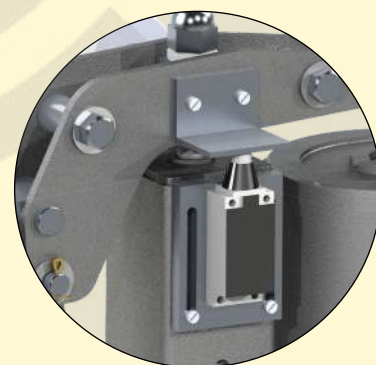
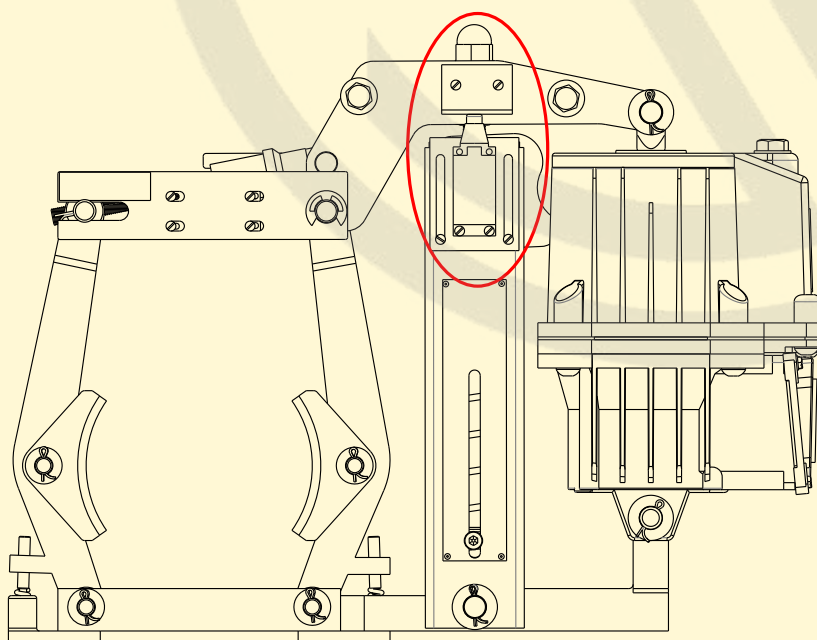


**TORQUE ADJUSTING
ROD (TIE ROD)**

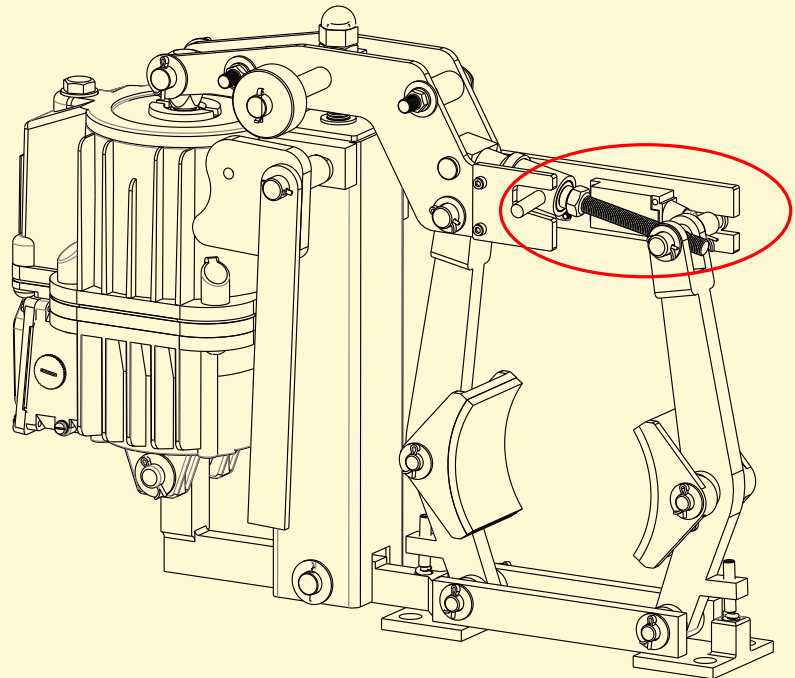
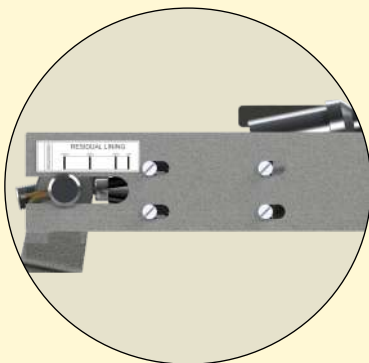
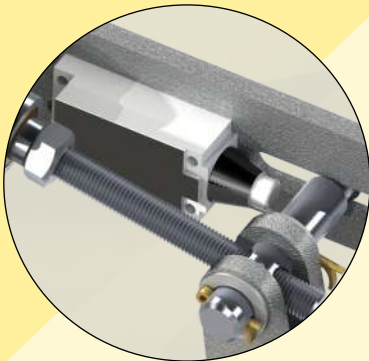
SAN (L/R) - MANUAL OPENING & LOCKING SYSTEMS



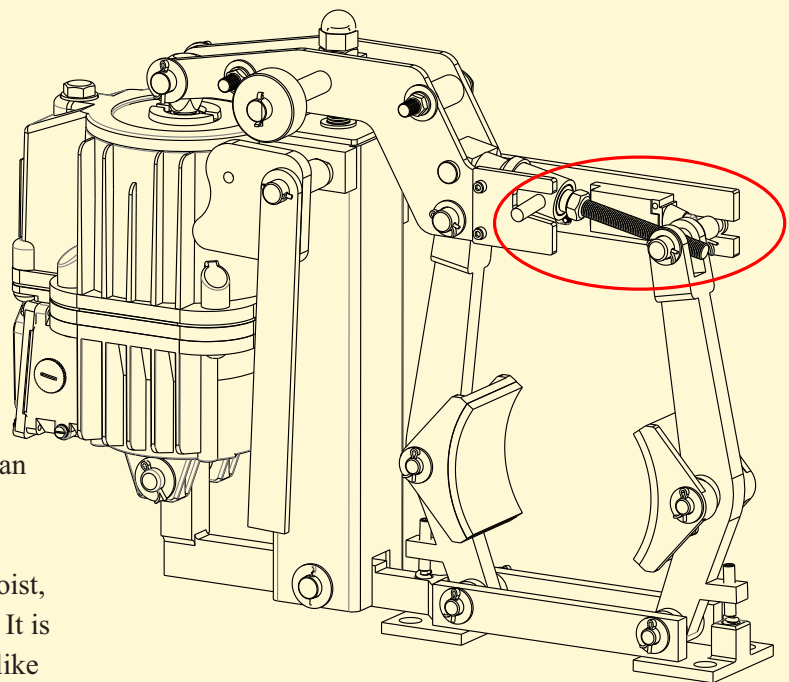
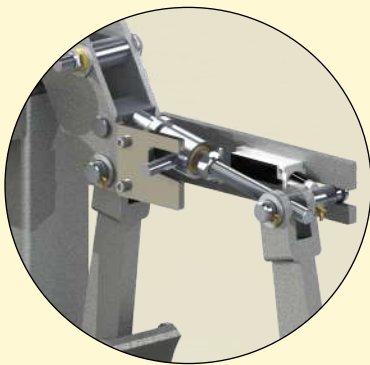
SCL - OPEN BRAKE SENSOR



SIC (L/R) - LINING WEAR INDICATOR



SV - AUTOMATIC LINING WEAR ADJUSTMENT



The Automatic lining wear adjustment feature is an optional item which is recommended very useful especially for all the Brakes used for intermittent application like Main Hoist, Aux Hoist, Boom Hoist, Grabbing and closing and any other similar type. It is not recommended to be used for Travel motions like CT & LT

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Phase IV, Vatva,
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Tel.: (079) 68169700/702/712,
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