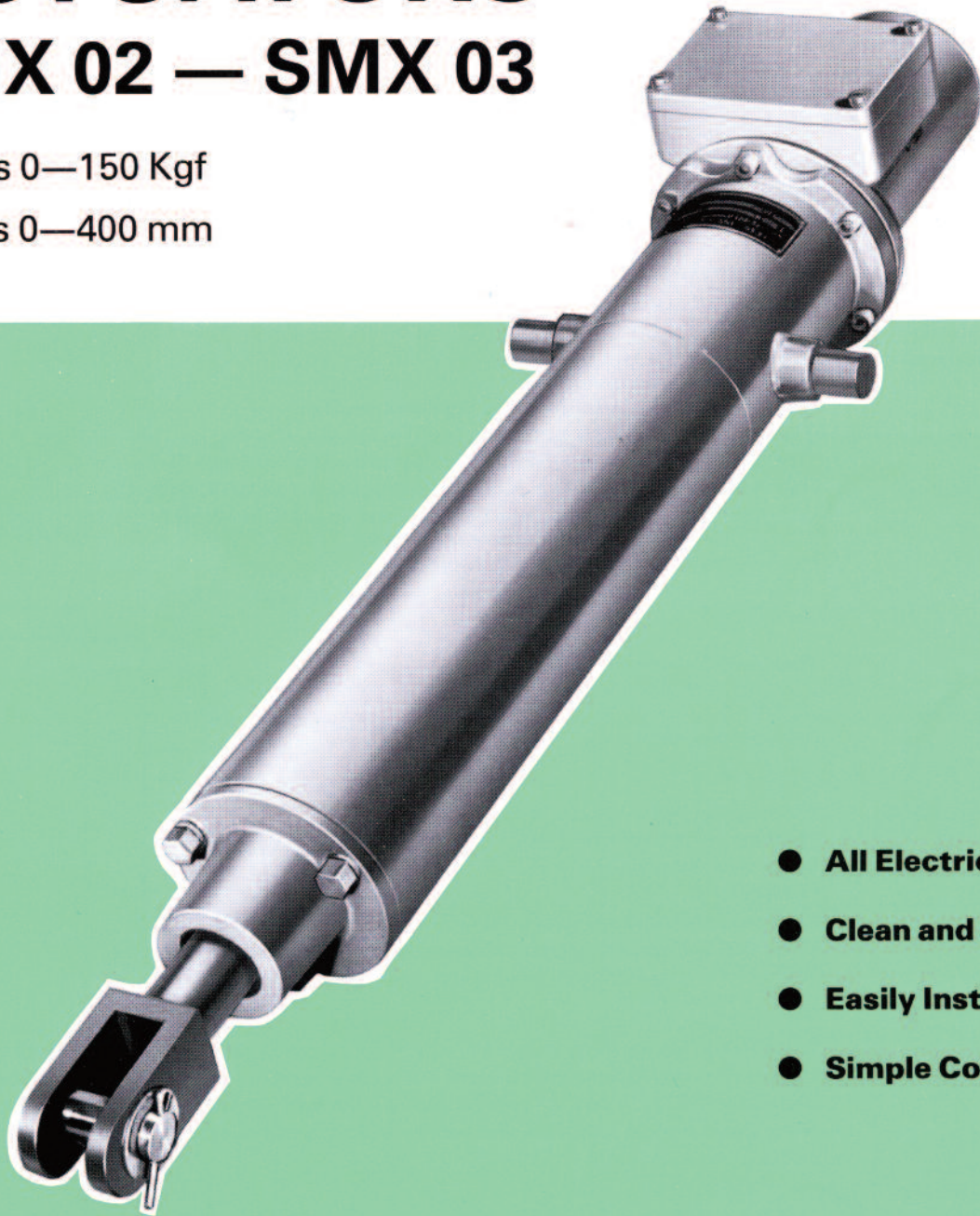


LINEAR ACTUATORS SMX 02 — SMX 03

Thrusts 0—150 Kgf

Strokes 0—400 mm



- All Electric
- Clean and Compact
- Easily Installed
- Simple Construction

ELECTRIC ACTUATOR
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TECHNICAL DATA

SIZE	PUSH/PULL FORCE		PUSH/PULL SPEED		STROKE		Motor POWER watts	Motor SPEED rpm	NETT WEIGHT	
	kgf	lb.	mm/sec.	ins./sec.	mm.	ins.			kg	lb.
SMX 02	80	175	60	2-4	0-100	0-3.9	300	1500	20	44
					0-200	0-7.9	600	3000	22	48
					0-300	0-11.8			24	53
					0-400	0-15.7			26	57
SMX 03	150	330	60	2-4	0-100	0-3.9	450	1500	21	46
					0-200	0-7.9	900	3000	23	51
					0-300	0-11.8			25	55
					0-400	0-15.7			27	59

Higher push/pull forces, longer strokes and slower or faster speeds are available.

OPTIONAL FEATURES

- PACK 1** Two adjustable end-of-stroke limit switches.
PACK 2 Two adjustable signal switches.
PACK 3 Potentiometer for positional indication or control.

Combinations

- Pack 1 + 2
- Pack 1 + 3
- Pack 2 + 3
- Pack 1 + 2 + 3

Hard-chromed Shaft — for abrasive or corrosive conditions.

Bellows — for protection of push/pull shaft.

Tropical finish — for working in high humidity or tropical areas.

High temperature — for high ambient temperatures and sustained switching.

Current Sensor — to adjust to the thrust required and to switch off the actuator if the demand exceeds the selected thrust.

Hand winding — with electrical interlock.

Brake — electro-magnetic type for accurate positioning.

MOUNTING

Trunnion or foot of front flange.

CONSTRUCTION

Steel and cast iron.

ENCLOSURES AVAILABLE

Weatherproof IP54.

Weatherproof and hoseproof IP55.

Dustproof and hoseproof IP65.

CSA ENC4.

Flameproof and explosion proof to BS 4683 part 2 1971 groups I, IIA and IIB.

British Coal Electrical Acceptance Certificate No 1996 covers Group I enclosures.

CSA explosion proof to Class I group D and class II groups F and G.

PRINCIPLE

Rotation of an electric motor is converted into linear motion by using a long motor spindle as a lead screw. The push/pull shaft is connected to a nut and is either extended or retracted as the nut travels along the lead screw. The nut is free to rotate for part of a revolution at each reversal to provide a hammer blow effect and is mounted between disc springs which provide cushioning and absorb energy to prevent locking of the screw shaft.

GENERAL INFORMATION

Advantages and economics of "All electric" installations —

No compressed air or hydraulic supply is required.

Quick response to control signals.

Maintains full thrust with power off.

No power consumption when not operating.

Can be mounted in any position.

Auxilliary switches can be provided inside actuator enclosure.

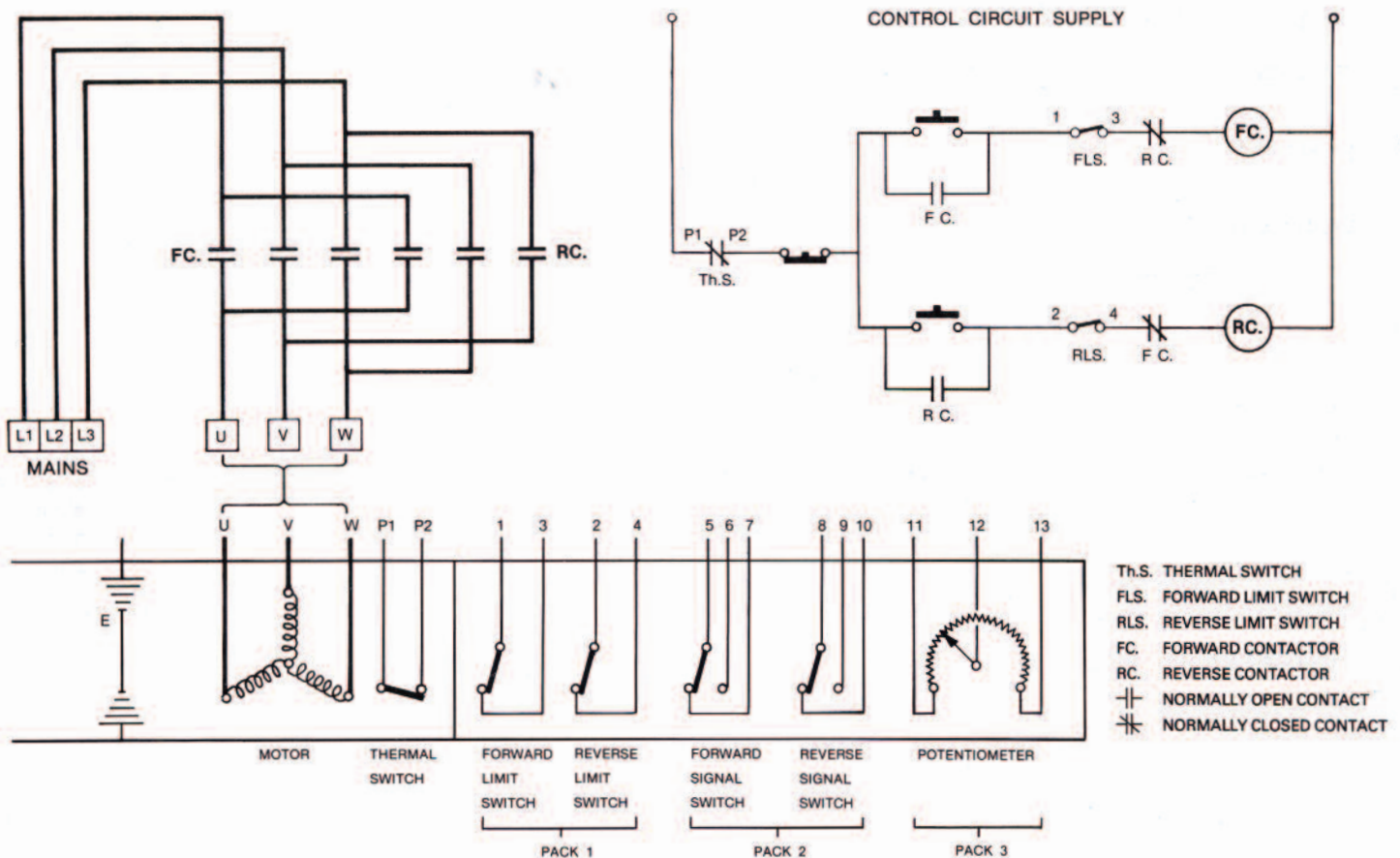
Maintenance responsibilities are not duplicated due to all electric.

Electrical components for control are generally inexpensive.

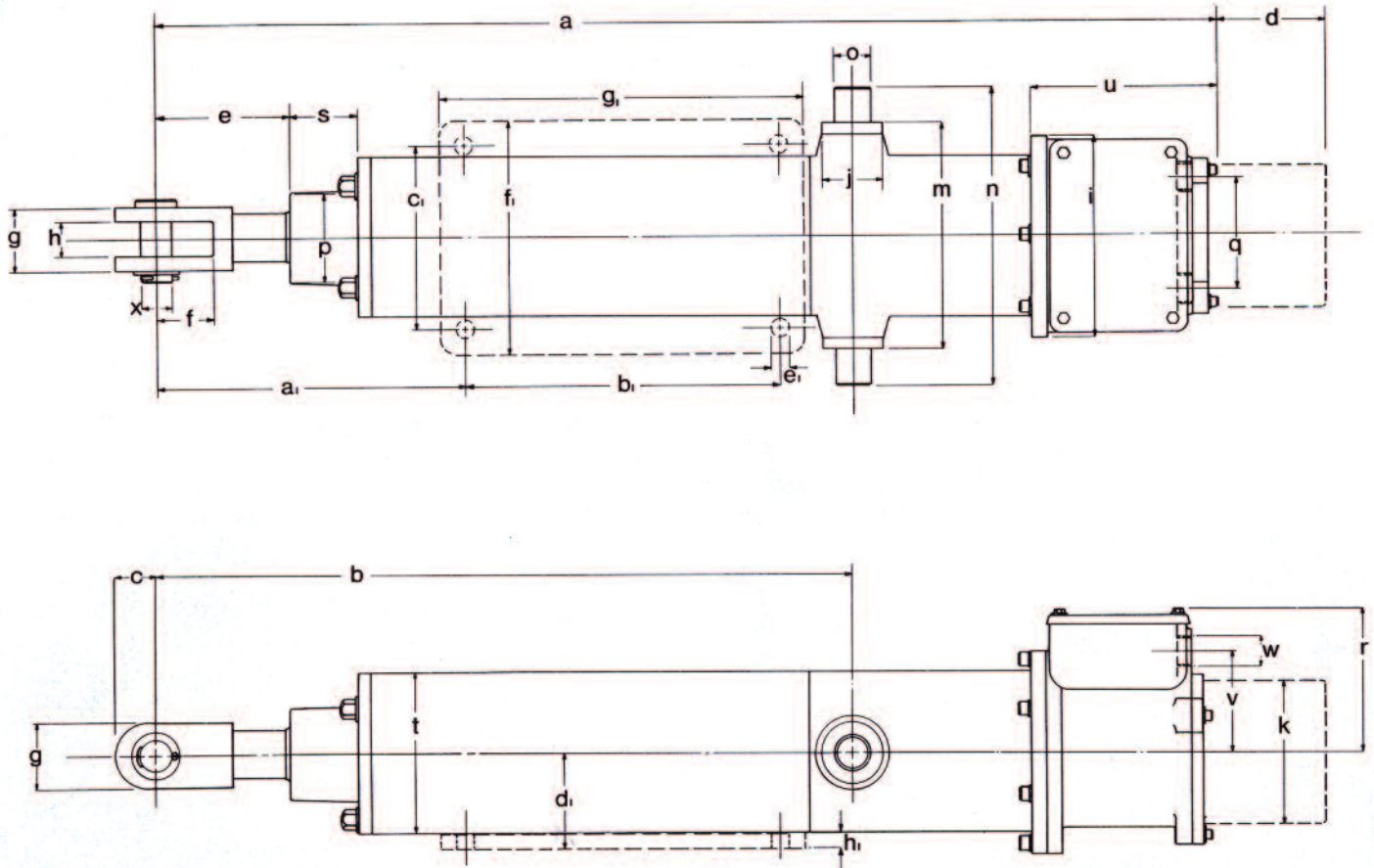
- ELECTRICS**
- MOTOR** — The motor is a squirrel cage type with die cast aluminium rotor, designed with a low starting current and low inertia. These characteristics have been chosen because an actuator is often required to start and stop frequently with accurate positioning.
 - THERMAL SWITCH** — Provided in the motor winding to prevent overheating. The thermal switch has to be connected into the control circuit.
 - STARTING** — This is by reversing contactors. These can be initiated by push buttons or from an automatic control system.
 - POTENTIOMETER** — When fitted, will provide remote indication of the shaft position or can be used with proportional control units. Accurate positioning may require a brake to be fitted.
 - SWITCHES** — For end-of-stroke and signalling; they are adjustable with locking cams.
 Inductive Ratings: 10 amps at 110 volts A.C.
 10 amps at 240 volts A.C.
 5 amps at 415 volts A.C.
 0.5 amps at 80 volts D.C.
 The switch housing provides easy access for switch setting and potentiometer adjustment.
 - SUPPLY** — A.C., 3-phase up to 600 volts; frequencies up to 60 Hz.
 - CABLES** — Tapped holes provided for incoming cable glands. Mains and control connections are made in a weatherproof terminal box with ample space for cabling.

The Technical Data table shows motor speeds and linear speeds on 50 Hz supply — other frequencies give speeds pro rata.

TYPICAL SCHEMATIC



DIMENSIONS



TYPE	STROKE	SMX 02 a	SMX 03 a	b	c	e	f	g	h	i	j	k	m	n	o	p	q	r	s	t	u	v	w	x
SMX 02 and SMX 03	0 – 100 mm 0 – 3.9"	613 24.13	649 25.55	387 15.24	27 1.06	80 3.15	35 1.38	40 1.57	22 0.87	126 4.96	38 1.5	89 3.5	140 5.5	186 7.3	22 0.87	56 2.2	70 2.76	89 3.5	43 1.69	102 4.02	114 4.49	63 2.48	20mm conduit	20 0.78
	0 – 200 mm 0 – 7.9"	713 28.07	749 29.49	487 19.17																				
0 – 300 mm 0 – 11.8"	813 32.0	849 33.42	587 23.11																					
0 – 400 mm 0 – 15.7"	913 35.94	949 37.36	687 27.05																					

TYPE	STROKE	a ¹	b ¹	c ¹	d ¹	e ¹	f ¹	g ¹	h ¹
SMX 02 and SMX 03	0 – 100 mm 0 – 3.9"	262 10.31	190 7.48	114 4.49	60 2.36	11 0.43	146 5.7	225 8.9	10 0.4
	0 – 200 mm 0 – 7.9"	362 14.25							
0 – 300 mm 0 – 11.8"	462 18.19								
0 – 400 mm 0 – 15.7"	562 22.13								

LUBRICATION
 Retract the shaft and inject grease Rocol grade MTS 1000 through grease nipple provided on push/pull shaft every 200,000 operations or every 12 months

Add the following dimensions 'd' for extras.

TYPE	Pack 1 Pack 2 Pack 3 Pack 1 + 2	Pack 1 + 3 Pack 2 + 3	Pack 1 + 2 + 3
SMX 02 and SMX 03	71 2.8	92 3.62	121 4.76

Bellows diameter 102mm (4") when fitted.