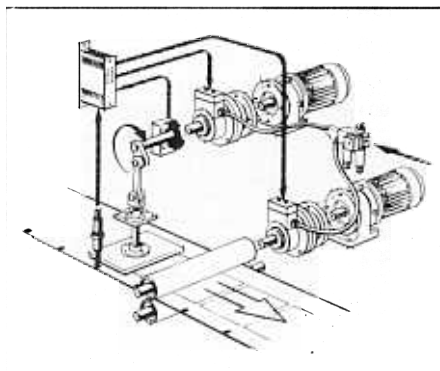


Precision Step Systems

3 - 1993

Introduction



The Laurence, Scott & Electromotors Precision Step System is the ideal solution where the following are required:

- higher production capacity
- greater automation
- higher precision
- reliability of operation
- low service costs

SRA Vacuum operated step unit



Type	Code no.	Dyn. Torque (Nm)	Max. rpm	Shaft (mm)
SRA 10	ND080B0022	5	1700	15
SRA 15	ND080B0001	11	1200	25
SRA 18	ND080B0002	21	1040	25
SRA 20	ND080B0003	33	920	25
SRA 23	ND080B0004	44	800	25
SRA 25	ND080B0011	57	760	40
SRA 30	ND080B0012	102	600	40
SRA 36	ND080B0013	167	500	40

Rotastep Compressed Air Clutch/brake



Type	Code No.	Dyn. Torque (Nm)	Shaft (mm)**
Rota 0610	ND080H1111	3 - 9	14
Rota 0810*	ND080H2111	6 - 18	19
Rota 1010	ND080H3111	12 - 36	24
Rota 1210	ND080H4111	22 - 66	28
Rota 1510	ND080H5111	40 - 120	28

The Rotastep :

- Solid or hollow shafts, Foot or flange mounted.
- Wide adjustable torque range.

Note: * Rotastep size 08 will be available summer 1993 ** Other shaft sizes are available

Fast Linear Actuator (FLA)



Type	Code no.	Stroke (mm)	Force (N)	Enclosure
FLA 0551	ND080F0057	5	140	IP54
FLA 2551	ND080F0058	25	140	IP54
FLA 6041	ND080F0110	4	200	IP54
FLA 6081	ND080F0112	8	200	IP54

The FLA is the ideal solution where the requirement is:

- Fast linear movement
- high number of cycles

**Electronic control
SRB3100**



Type	SRB 3100
Code no.	ND080B1047
Supply voltage	24 V a.c. +10/-15%
Supply frequency	50 - 60 Hz
Power consumption	35 W max.
max. cycling frequency	30 Hz
d.c. output	24 V, 100mA max.
Timer setting	7 - 400 msec
Signal source	NPN or PNP

Electronic unit type SRB3100 is designed to control the linear actuators type FLA. The SRB3100 is capable of the following functions:

- control of 2 x 1 valve
- signals for forward/backward motion from the same signal source (or two signal sources)
- voltage supply for signal source
- status signal (piston rod : forward/backward)
- Timer setting on return motion

**Electronic control
SRB3101**



Type	SRB 3101
Code no.	ND080B1052
Supply voltage	24 V a.c. +10/-15%
Supply frequency	50 - 60 Hz
Power consumption	40 W max.
d.c. output	24V ± 1V, 350 mA max.
Max. cycle frequency.	
Rotastep	20 Hz
SRA10	30 Hz
SRA15-36	20 Hz
Signal source	NPN or PNP

The driver unit SRB3101 is designed to control the Rotastep and SRA units, and gives the following functions:

- start and stop from two signal sources
- start and stop from the same signal sources
- control of 1 x 2 or 2 x 2 valves
- d.c. output for signal source supply
- activation on positive or negative edge of signals
- free mode (output shafts rotate freely)
- status signal (clutch/brake mode)
- start/stop inhibit

**Electronic control
SRB3103**



Type	SRB 3103
Code no.	ND080B1053
Supply voltage	24 V a.c. +10/-15%
Supply frequency	50 - 60 Hz
power consumption	max. 25 W
cycle frequency	15 Hz max.
Signal source	PNP or NPN
Socket code no.	ND080B2091

The SRB 3103 driver unit is for use with the Rotastep clutch/brake units. Its features include;

- Separate level controlled start and stop input
- PNP or NPN.signal selection

**Electronic control
SRB3110**



Type	SRB 3110
Code no.	ND080B1049
Supply voltage	100,115,200,220,240 V a.c. +10/-15%
Supply frequency	50 - 60 Hz
Power consumption	80 W max.
d.c. output	24 V ,500 mA max.
Max. cycle frequency	
2 x 1 valve	50 Hz
2 x 2 valves	20 Hz
3 x 2 valves	13 Hz
Enclosure	IP20
Signal source	PNP or NPN

The electronic control unit SRB3110 is designed to control the SRA, Rotastep or FLA . The SRB3110 has the following features:

- start and stop from the same signal source
- start and stop from two signal sources
- control of 1 x 2, 2 x 2, or 3 x 2 valves
- free mode
- activation on positive or negative edge of signals
- d.c. output for signal sources
- status signal (brake/clutch mode)
- manual start stop (manual/auto selection)
- connection for overload protection and options

Overload protection



Type	SRB 3211
Code no.	ND080B1063

The Overload protection type SRB 3211 is used to protect the SRA, Rotastep or FLA unit from mechanical overload. The card is to be mounted in side the SRB 3110.

Option box



Type	SRB3200
Code no.	ND080B1060
Enclosure	IP00

The option box, SRB 3200 is used together with an electronic control unit, SRB 3110

Options



Type	Code no.	Application	
SRB 3203	ND080B1016	Zero cross & speed compensation for sinusoidal feeding	
SRB 3233	ND080B1078	Start by counter feeding	
SRB 3234	ND080B1079	stop by counter feeding	

Counter



Type	SRB 3206
Code no.	ND080B1062
Number of digits	5
Counting range	0 - 999.99/0 -
Counting frequency	50 Hz max.
Supply voltage	24 V d.c ± 6 V
Power consumption	3 W max.
Dimensions	96 x 96 x 83 mm 43700
Cabinet	black plastic

The SRB 3206 is a 5 decade, general purpose, programmable counter. The SRB 3206 gives the following functions:

- programming of 4 different preset values
- shift of preset values during operation
- setting SI units/values by inputting a scale factor
- choice of digit ranges
- one or two channel incremental encoders can be used
- internal or external reset conditions
- inverting of counter direction (counting up/ down)
- counter blocking
- error messages on display

Photocell



Type	SRC1301	SRC1501
Code no.	ND080B1203	ND080B1205
Signal (output)	NPN, open collector	NPN, open collector
	IP 00	IP 54

Photocell type SRC1301/1501. Used with external position disc type SRC 1100 to generate signal for SRB control units.

External position disc



Type	SRC1100				
Code no.	ND080B0281	ND080B0282	ND080B0283	ND080B0284	ND080B0285
Slot no.	0	1	2	4	2*

External position disc type SRC1100 is used with photocell type SRC 1301/1501 for position and stepping motion of the SRA.

* Is used for Sinusoidal feeding

Encoder



Type	SRD 30				
Code no.	ND080B2041	ND080B2042	ND080B2043	ND080B2044	ND080B2045
Pulses per revolution	500	1000	2500	3600	5000
Operating voltage	24 V d.c.				
Max. revolutions	12000 rpm				
Max. pulse frequency	100 kHz				
Enclosure	IP56				

Photo - electric encoder type SRD 30, for industrial purposes.

- 5 types are available : 500,1000,2500,3600 & 5000 pulses per revolution
- 2 channels: 90° angular displaced outputs, A, B
- complementary outputs, A, B
- enclosure, anodised aluminium
- 6 mm stainless steel shaft
- cable connection, 1.5 m

**Vacuum pumps
Vacuum kit**



Type	SRD 7		SRD 8		SRD2	
Code no.	ND080B2007		ND080B2008		ND080B2002	
Supply frequency	50 Hz	60 Hz	50 Hz	60 Hz	Vacuum kit	
Motor power	0.25 kW	0.3 kW	0.55 kW	0.65 kW		
Operating voltage	Δ	175-260 V	202-300 V	175-260 V		202-300 V
	Y	300-450 V	350-520 V	300-450 V		350-520 V
Nominal current	Δ	1.9 A	2.0 A	3.8 A		3.9 A
	Y	1.1 A	1.15 A	2.2 A		2.25 A
Final pressure	100 mbar	100 mbar	150 mbar	150 mbar		

Vacuum pumps SRD 7 & 8 are pumps free from oil, equipped with a three phase motor. Together with the vacuum kit , SRD 2, these vacuum pumps are used for the operation of the SRA and FLA.

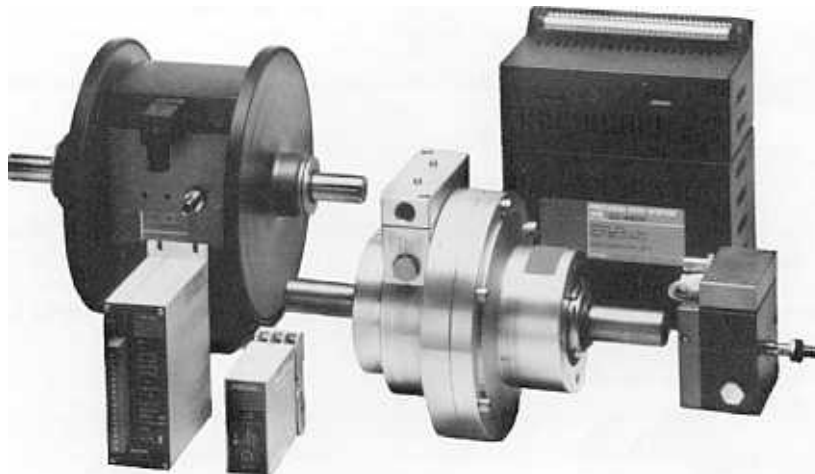
Air treatment kit



Type	SRD 10
Code no.	ND080B2010

The SRD 10 is the air treatment unit recommended by Laurence, Scott & Electromotors for use with the Rotastep clutch/brake unit.

The Precision Step System range is a product of the Small Machines Division of Laurence, Scott & Electromotors Ltd.



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