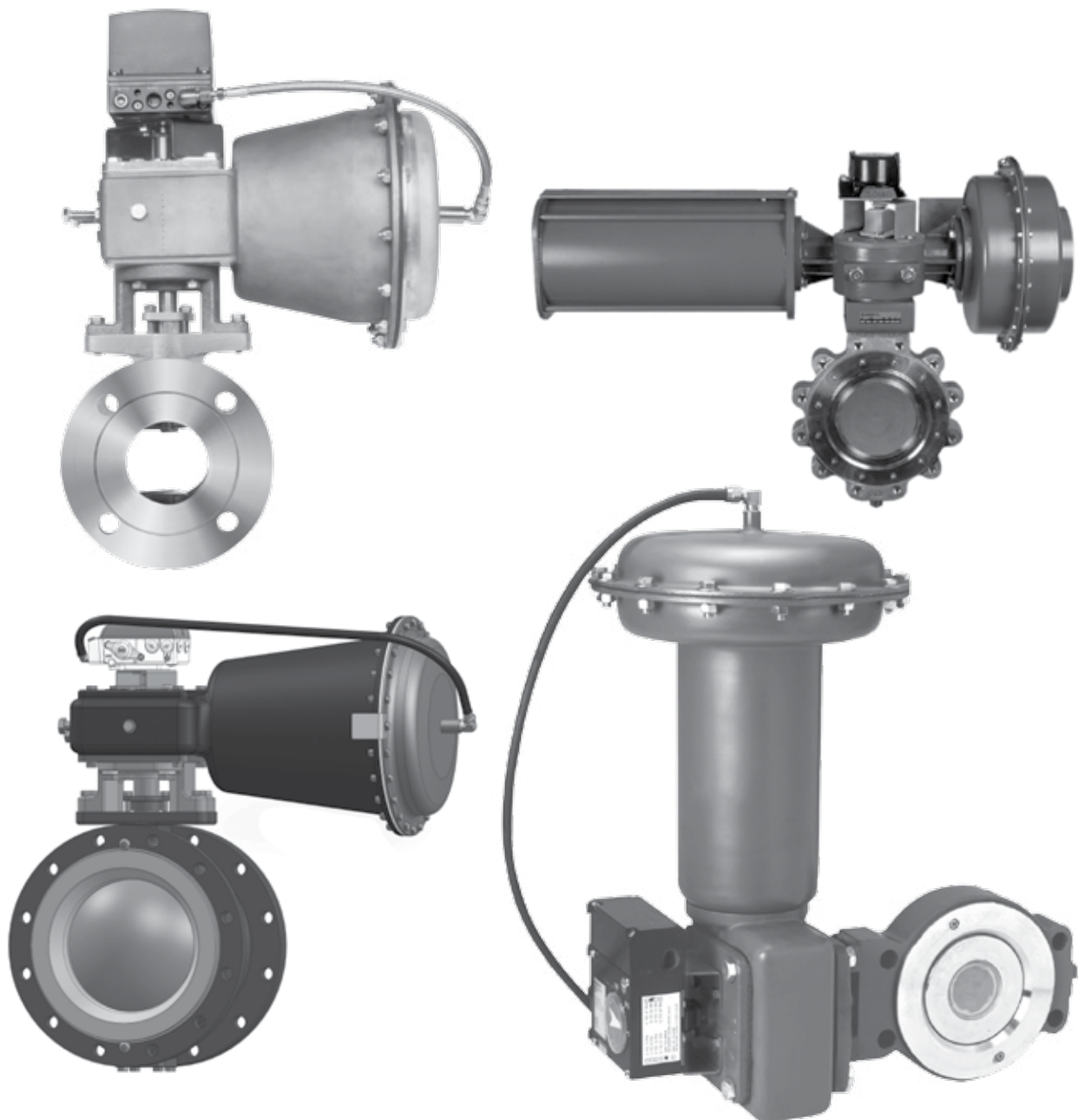




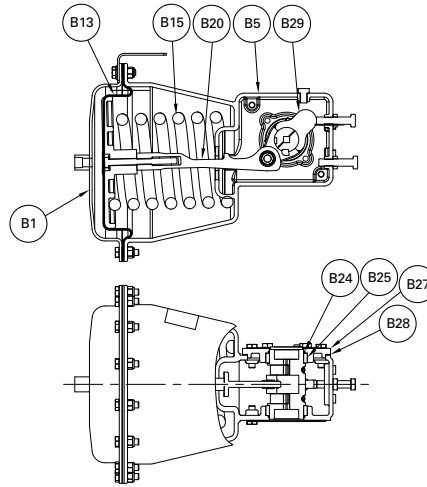
DeZURIK ROTARY DIAPHRAGM ACTUATORS TECHNICAL SPECIFICATIONS



Materials of Construction

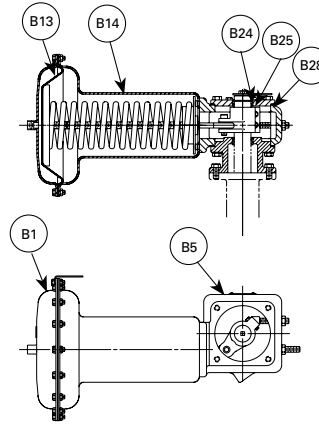
DR-40B

Item	Description	Material
B1	Diaphragm Cover	316 Stainless Steel, ASTM A240/A276
B5	Housing	Stainless Steel, CF-8M, ASTM A351
B13	Diaphragm	Acrylonitrile-Butadiene
B15	Spring	Silicon Manganese Steel
B20	Clevis	Investment Cast Steel, Grade 13Q (IC8620), ASTM A732
B24	O-Ring	Acrylonitrile-Butadiene
B25	Bearing	Bronze, Oil impregnated, ASTM B 438
B27	Top Cover	Stainless Steel, CF-8M, ASTM A351
B28	Gasket	Black Chloroprene
B29	Coupling	Stainless Steel, CF-8M, ASTM A743



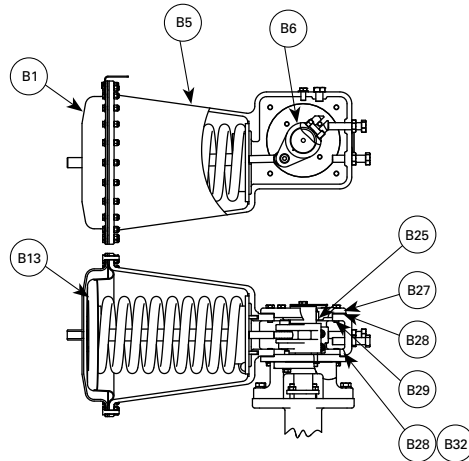
DR-55/85

Item	Description	Material
B1	Diaphragm Cover	Steel
B5	Housing	Cast Iron
B13	Diaphragm	Acrylonitrile-Butadiene
B14	Spring Case	Steel
B24	O-Ring	Acrylonitrile-Butadiene
B25	Bearing	Sintered Bronze
B28	Gasket	Black Chloroprene



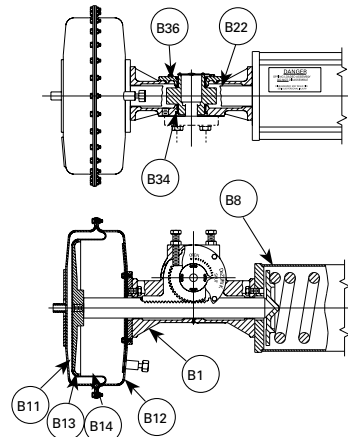
DR-125

Item	Description	Material
B1	Diaphragm Cover	Carbon Steel, ASTM A1011
B5	Housing	Cast Iron, Class B, ASTM A126
B6	Linkarm	Steel, Cast, Grade 1A, ASTM A732
B13	Diaphragm	Acrylonitrile-Butadiene
B25	Bearing	Sintered Bronze
B27	Cover	Cast Iron, Class B, ASTM A126
B28	Gasket	ASTM F 104, Type F712121
B29	Stub Shaft	Stainless, Bar, 316, Condition A, ASTM A276
B32	Bottom Cover	Steel, Wrought, A36, ASTM A36



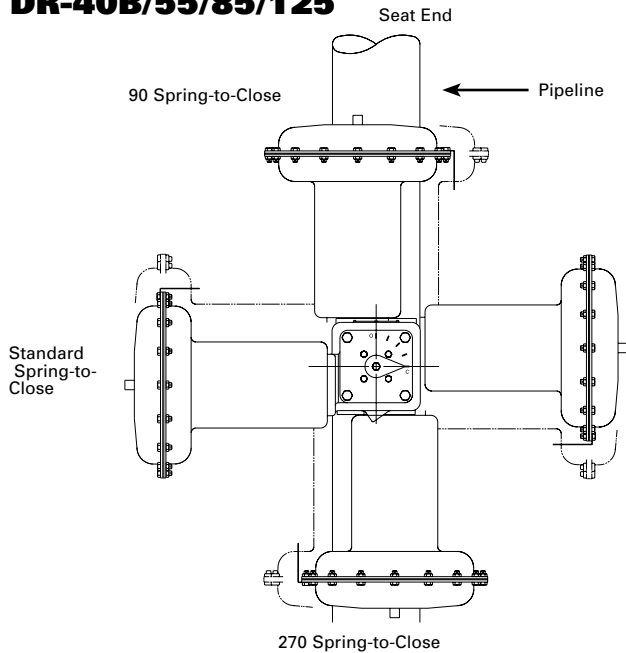
DR-145A/250A

Item	Description	Material
B1	Housing Assembly	Cast Iron
B8	Spring Cartridge	Steel
B11	Diaphragm Cover	Steel
B12	Lower Diaphragm Cover	Steel
B13	Diaphragm Disc	Ductile Iron
B14	Diaphragm	Acrylonitrile-Butadiene with Nylon
B22	Gasket	Non-asbestos Gasket Material
B34	Seal	Acrylonitrile-Butadiene
B36	Seal	Acrylonitrile-Butadiene



Actuator Mounting

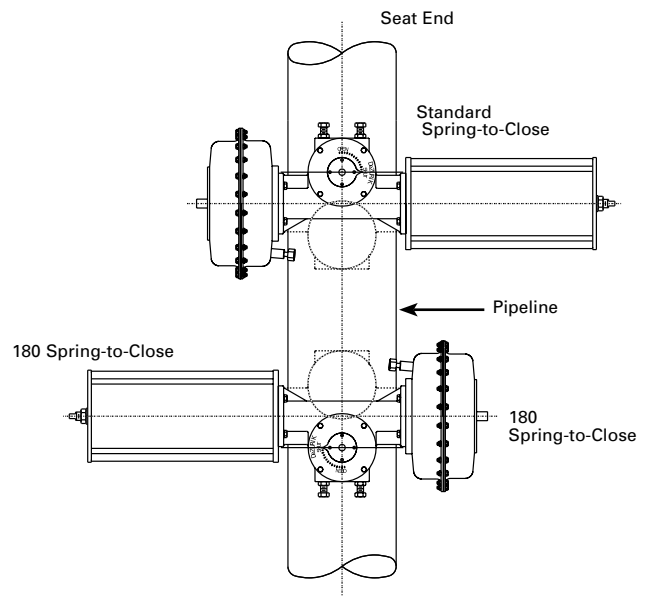
DR-40B/55/85/125



The solid line shows spring-to-close actuator in four mounting positions. The phantom line shows the actuator in spring-to-open positions.

All four mounting positions may not be available on all valve/actuator size combinations. Check installation drawings for valid mounting positions.

DR-145A/250A



The solid line shows spring-to-close actuator in two mounting positions. The phantom lines show the orientation of the gear sector for spring-to-open positions.

Actuator Weights

Actuator Size	Weight	Manual Override Weight
DR-40B	37	7
	17	3
DR-55	80	12
	36	6
DR-85	110	21
	50	10
DR-125	245	50
	111	23
DR-145A	425	50
	193	23
DR-250A	505	50
	229	23

Pounds
Kilograms

Ordering

To order rotary diaphragm actuators, select the actuator model from the appropriate valve sizing charts. Specify the mounting position as second line information. As reference information, the actuator code is defined in the following charts.

Actuator Type	
Give actuator type code as follows:	
DR	= Rotary Diaphragm Actuator
DRL	= Rotary Diaphragm Actuator with Lockout Available on 40B, 55 and 85 only

Diaphragm Size	
Give diaphragm size code as follows:	
40B	= 40 Square inches (255cm ²)
55	= 55 Square inches (350cm ²)
85	= 85 Square inches (550cm ²)
125	= 125 Square inches (800cm ²)
145A	= 145 Square inches (950cm ²)
250A	= 250 Square inches (1600cm ²)

Input Size	
Give input size code as follows:	
SP20	= 20 psi (150 kPa) spring (not available on DR-40B or 125) DR-55/85 = Start – 8 psi (55 kPa), Span – 4 psi (28 kPa) (Non-adjustable start point. A positioner is recommended for precise throttling.)
SP35	= 35 psi (250 kPa) spring
SP60	= 60 psi (400 kPa) spring

Spring Action	
Give spring action code as follows:	
DR Only	
D	= Direct, Spring-to-Open
R	= Reverse, Spring-to-Close
DRL Only	
DP	= Direct, Spring-to-Open, Valve Locked in Closed Position (Lock at pressure end of stroke. Includes MO plus chain)
RP	= Reverse, Spring-to-Close, Valve Locked in Open Position (Lock at pressure end of stroke. Includes MO plus chain)
DF	= Direct, Spring-to-Open, Valve Locked in Open Position (Lock at failure end of stroke. Includes screw and lockbox)
RF	= Reverse, Spring-to-Close, Valve Locked in Closed Position (Lock at failure end of stroke. Includes screw and lockbox)
DE	= Direct, Spring-to-Open, Valve Locked in Open or Closed Position (Lock at both ends of stroke. Includes MO, chain, screw and lockbox)
RE	= Reverse, Spring-to-Close, Valve Locked in Open or Closed Position (Lock at both ends of stroke. Includes MO, chain, screw and lockbox)

Actuator Mounting
Specify standard, 90, 180 or 270 actuator mounting as second line information. Standard and 180 only available options on 145A and 250A. Refer to the mounting positions available on the appropriate installation drawing to determine suitability for your piping configuration.

Ordering Example:
BHP,2,W1,CS,TC,S2-S2-FT-TT*DR-40B-SP35-R
180 actuator mounting.

Accessories for Diaphragm Actuators

Manual Overrides

Manual overrides are available for valve operation if signal or supply pressure fails. The override on DR-40B, 55 and 85 size actuators uses a handwheel to compress the diaphragm spring. On DR-125, 145A and 250A sizes, a manual hydraulic pump and cylinder is used to compress the diaphragm spring. Manual override is included with DRL lockout actuators using the DP, RP, DE or RE spring action options. To order a manual override, enter a hyphen and the code MO after the actuator order code.

Ordering Example:

BHP,2,W1,CS,TC,S2-S2-FT-TT*DR-40B-SP35-D-MO

Stainless Steel Bolting on Valve & Actuator (SB16)

On DR-40B actuators, 316 Stainless Steel bolting is standard. When a DR-40B is ordered on 316 stainless steel valves, valve bolting is 316 stainless steel and valve-to-actuator bracket is 316 stainless steel as standard on BHP, RCV or VPB valves. When a DR-40B is ordered on carbon steel valves, the SB16 code upgrades all valve bolting to stainless steel and the valve-to-actuator bracket is 316 stainless steel on BHP, RCV or VPB valves.

On DR-55/85/125, diaphragm cover bolts are 316 stainless steel as standard. When the SB16 order code is specified on the actuator, all remaining external bolting will be stainless steel (top cover, pointer, adapter and accessory bolting) and epoxy paint on actuator is included.

On DR-145A/250A actuators, the SB16 must be ordered for diaphragm cover bolts, plus all other external bolting, to be of stainless steel.

Ordering Example:

BHP,4,L1,CS,TC,S2-S10B,FT-TT*DR-40B-SP60-R,SB16

303 Stainless Steel Braided Hose & 316 Stainless Steel Fittings (SFB)

Accessories are provided with rubber hose and brass fittings as standard. To order 316 stainless steel flexible braided hose and fittings, add the order code SFB after the actuator code. If ordered with positioner, gauge cases will also be stainless steel. Includes stainless steel accessory bracket.

Ordering Example:

BHP,4,L1,CS,TC,S2-S10B,FT-TT*DR-40B-SP60-R,P36C-SFB

316 Stainless Steel Rigid Tubing & Two-Ferrule Fittings (SF2)

Accessories are provided with rubber hose and brass fittings as standard. To order 316 stainless steel rigid tubing and 316 stainless steel two-ferrule fittings, add the order code SF2 after the actuator code. If ordered with positioner, gauge cases will also be stainless steel. Includes stainless steel accessory bracket.

Ordering Example:

BHP,4,L1,CS,TC,S2-S10B,FT-TT*DR-40B-SP60-R,P36C-AFR2-SF2

Positioners

DeZURIK rotary diaphragm actuators are available with pneumatic, electro-pneumatic or digital smart positioners.

Air Filter Regulator

The DeZURIK air filter regulator is designed to provide clean, accurate air pressure to actuators and positioners.

Solenoid Valves

Solenoid valves may be ordered mounted and piped as part of a complete valve/actuator assembly or they can be ordered as a separate item.

Position Indicating Switches and Position Transmitters

Mechanical or proximity switches are available SPST, SPDT or DPDT. They can be ordered separately or combined with a position transmitter in one enclosure. They can be mounted directly to DeZURIK actuators or positioners.

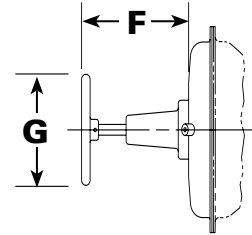
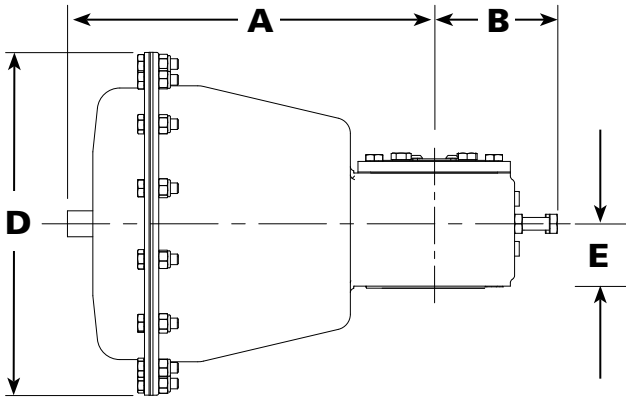
Speed Control Valves

Speed control valves are available to control valve opening or closing speed on pneumatic actuators.

Dimensions

DR-40B

Manual Override

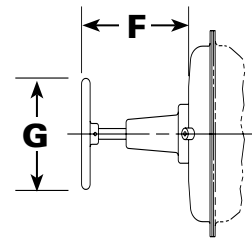
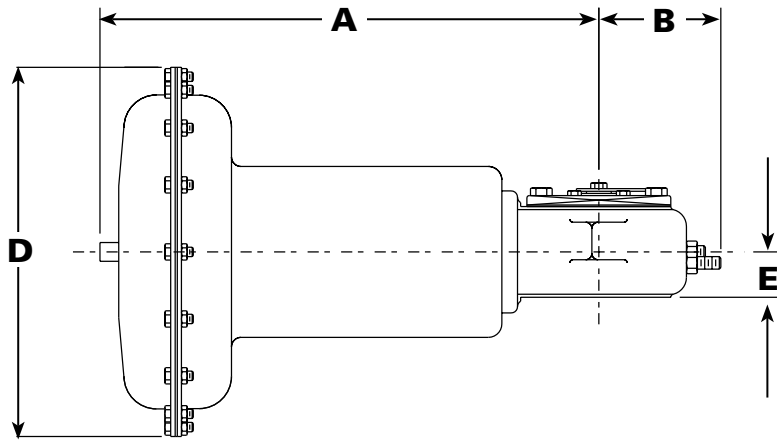


Actuator Model	A	B	D	E	F	G
DR-40B	10.83 275	3.64 92	10.12 257	1.90 48	7.04 179	8.00 203

Inches
Millimeters

DR-55/DR-85

Manual Override

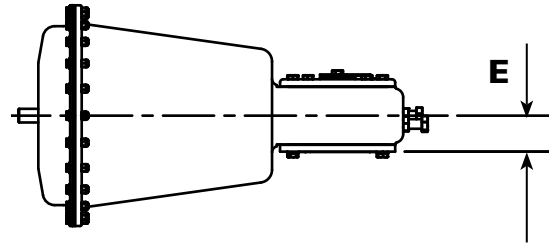
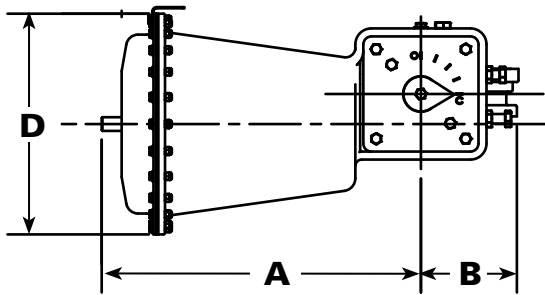


Actuator Model	A	B	D	E	F	G
DR-55	18.50 470	5.25 133	12.00 305	2.75 70	10.19 259	12.00 305
DR-85	19.88 505	5.25 133	14.75 375	2.75 70	10.19 259	12.00 305

Inches
Millimeters

Dimensions

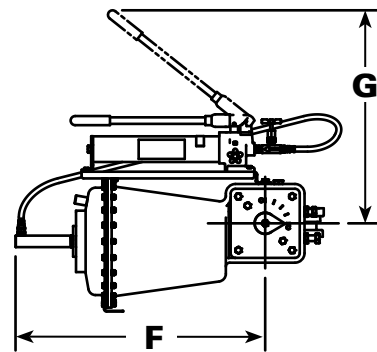
DR-125



Manual Override

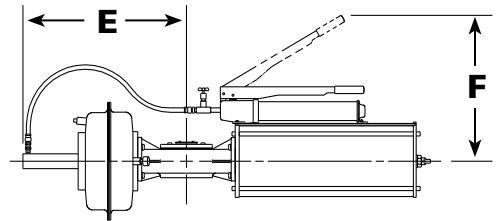
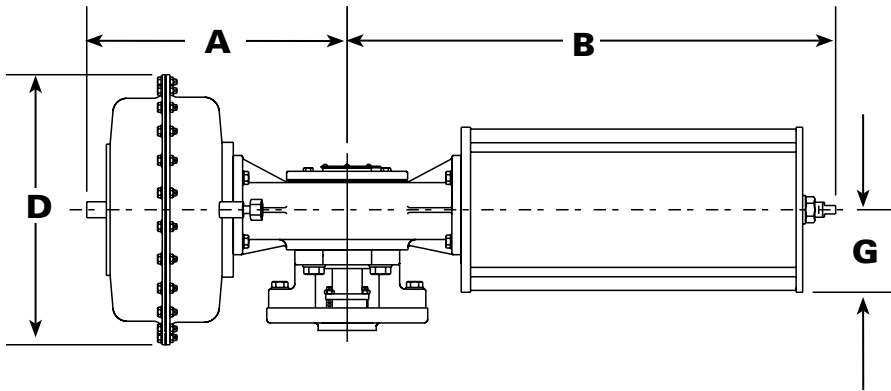
Actuator Model	A	B	D	E	F	G
DR-125	24.95 634	7.50 191	17.25 438	2.81 71	32.52 826	27.75 705

Inches
Millimeters



DR-145A/DR-250A

Manual Override



Actuator Model	A	B			D	E	F	G
		Spring Size						
		20	35	60				
DR-145A	17.44 443	30.06 764	33.12 841	31.31 795	18 457	25.91 658	26.75 679	5.50 140
DR-250A	17.81 452	40.19 1021	37.12 943	36.81 935	22.38 569	25.91 658	26.75 679	5.50 140

Inches
Millimeters

Sales and Service

For information about our worldwide locations, approvals, certifications and local representative:

Web Site: www.dezurik.com E-Mail: info@dezurik.com



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