



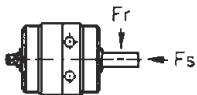
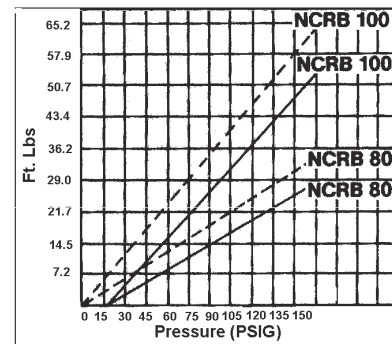
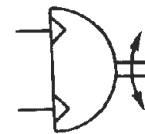
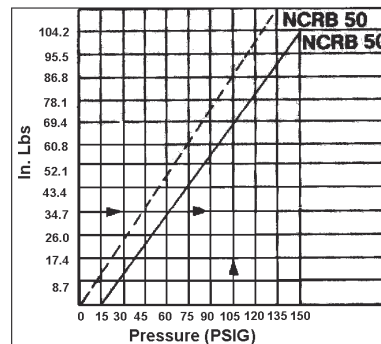
VANE TYPE ROTARY ACTUATOR: BORE SIZES Ø50•80•100MM SERIES NCRB

- ✓ 90°, 180°, 270° rotation
- ✓ Special vane seal design eliminates leakage
- ✓ Low operating and start-up torque
- ✓ Long operating life

TECHNICAL SPECIFICATIONS

Media	Compressed Air
Working Pressure	0.1 ~ 1.5MPa / 15 ~ 220 PSI
Ambient Temperature	5 ~ 60°C / 40 ~ 140°F
Rotation Angle	90°, 180°, 270°
Seal Material	Buna N
Drive Shaft	Double Shaft, One side with key and groove, other side is a square shaft

TORQUE SPECIFICATIONS SERIES NCRB



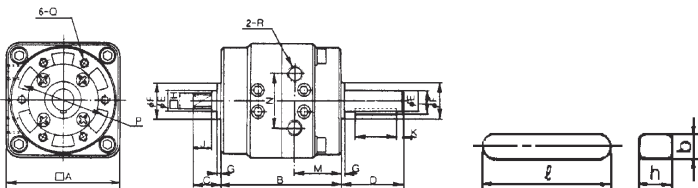
Maximum shaft loading and kinetic energy

Type	Fr (N)	Fs (N)	E max (Nm)
NCRB50	250	200	0.084
NCRB80	500	500	0.040
NCRB100	600	550	0.061

Actual _____

Theoretical - - - - -

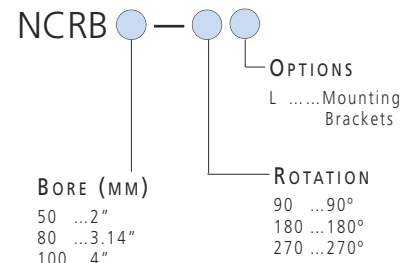
DIMENSIONS (INCH) NCRB50~100



Model	A	B	C	D	E	F	G	H	J	K	L	M	N	P	Q	R	b	h	ℓ
NCRB50	2.64	3.38	0.77	1.55	0.47	0.98	0.12	0.39	0.51	0.20	0.53	1.34	1.18	1.97	M6x1x10	NPT 1/8"	0.16	0.16	0.79
NCRB80	3.74	4.06	0.93	2.11	0.67	1.18	0.12	0.51	0.63	0.20	0.75	1.57	1.77	2.75	M8x1.25x13	NPT 1/4"	0.20	0.20	1.42
NCRB100	4.92	4.92	1.18	2.56	0.98	1.77	0.16	0.75	0.87	0.20	1.10	1.97	1.97	3.15	M10x1.5x13	NPT 1/4"	0.28	0.28	1.57

HOW TO ORDER

NCRB ROTARY ACTUATOR



OPTIONS BRACKETS

NCRB50~100

Model	Bracket No	Includes
NCRB50	CRB50-Y-1	2"L" Brackets
NCRB80	CRB80-Y-1	with 8 Mounting
NCRB100	CRB100-Y-1	Screws

SEE INSIDE FRONT COVER FOR
DETAILS OF YOUR LOCAL SALES OFFICE



FOR FURTHER TECHNICAL
DETAILS ON THIS
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N351

VANE TYPE ROTARY ACTUATOR:
BORE SIZES Ø10•15•20•30MM
SERIES NCRB1BW

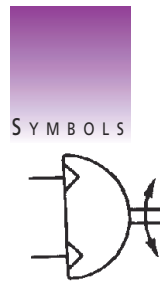
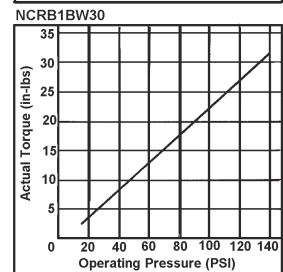
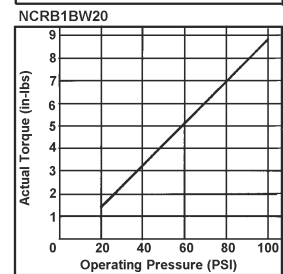
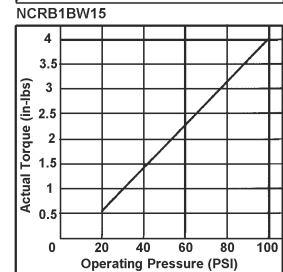
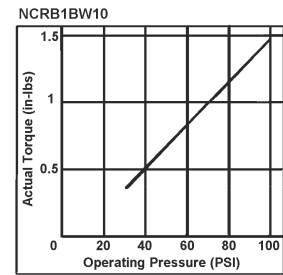
- ✓ 90°, 180°, 270° rotation
- ✓ High reliability and long life
- ✓ Light weight
- ✓ Optional auto switch and adjustable rotation



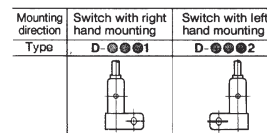
TECHNICAL SPECIFICATIONS

Model	CRB1BW10	CRB1BW15	CRB1BW20	CRB1BW30
Rotation	90° / 180° / 270°			
Fluid	Air			
Proof Pressure	1.05MPa / 153PSI			1.5MPa / 218PSI
Operating Pressure Range	0.14 ~ 0.7MPa / 20~100PSI			0.1~0.23MPa/15~40PSI
Rotation Speed Range (s/90°)	0.03~0.3			0.04~0.3
Maximum	90°	180°	270°	
Operating	5	3.5	2.5	
Cycle (Nz)	4	3	2	
Ambient and Op Fluid Temp	5 ~ 60°C / 40 ~ 140°F			
Lubrication	No Lubrication Required			
Type Of Shaft	Double End Shaft / Both With Flat			
Type Of Mounting	Basic, Flange			
Rotation Tolerance	+5° -0		+4° -0	

TORQUE SPECIFICATIONS

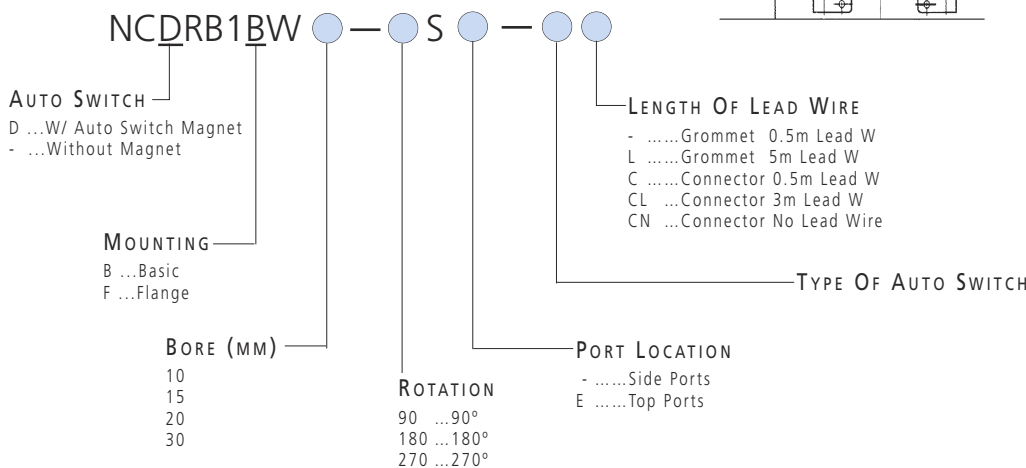


FITTING LOCATION AND ROTATION OF AUTO SWITCH



HOW TO ORDER

NCRB1BW ROTARY ACTUATOR



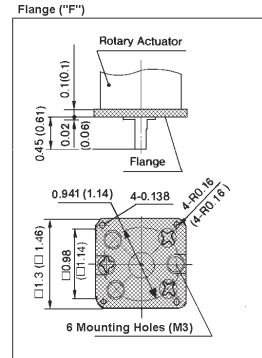
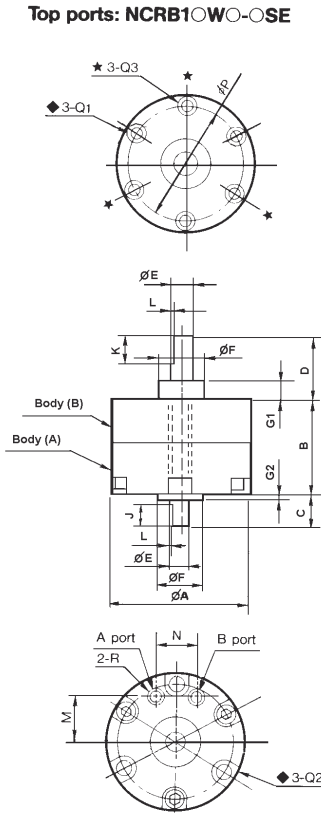
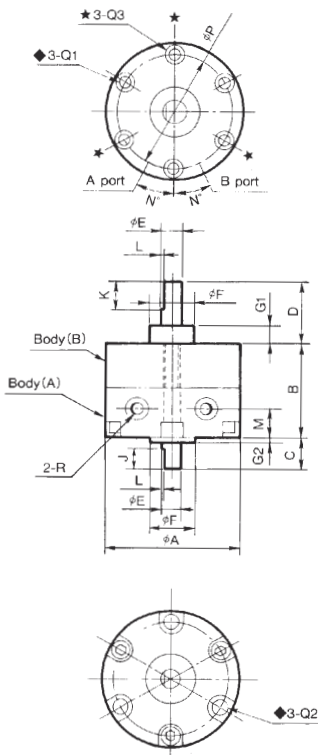
FOR MORE TECHNICAL INFORMATION ON THIS SERIES, PLEASE REFER TO CAT:N350

DIMENSIONS
SEE NEXT PAGE

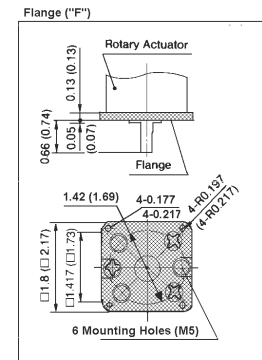
ACCESSORIES
SEE NEXT PAGE

DIMENSIONS WITH SIDE PORTS NCRB1_W_-_S ROTARY ACTUATOR

DIMENSIONS WITH TOP PORTS NCRB1_W_-_SE ROTARY ACTUATOR



Dim for NCR1W10
(): Dim for NCRB1W15



Dim for NCR1W20
(): Dim for NCRB1W30

Model (Dimensions in Inches)	A	B	C	D	E		F		G		J	K	L	M	N	P	Q (Depth)			R		
					Tolerances	Tolerance	G1	G2	Q1	Q2							Q3	90°	180°	270°		
NCRB1_W10_-_S	1.14	0.59	0.31	0.55	5/32	-0.00015	3/8	0	0.12	0.04	0.20	0.35	0.02	0.20	25	0.95	5-40UNC (0.2)	0.14 (0.26)	-	10-32UNF	M3	M3
NCRB1_W10_-_SE						-0.00045		-0.0012						0.33	0.37						M3	
NCRB1_W15_-_S	1.34	0.79	0.35	0.71	3/16	-0.00015	15/32	0	0.16	0.06	0.24	0.39	0.02	0.20	25	1.14	5-40UNC (0.39)	0.14 (0.24)	5-40UNC (0.2)	10-32UNF	M3	M3
NCRB1_W15_-_SE						-0.00045		-0.0016						0.43	0.39							
NCRB1_W20_-_S	1.65	1.14	0.39	0.79	15/64	-0.00015	9/16	0	0.18	0.06	0.28	0.39	0.02	0.35	25	1.42	8-32UNC (0.53)	0.18 (0.43)	8-32UNC (0.3)	10-32UNF		
NCRB1_W20_-_SE						-0.00045		-0.0016						0.55	0.51							
NCRB1_W30_-_S	1.97	1.57	0.51	0.87	5/16	-0.00002	5/8	0	0.20	0.08	0.31	0.47	0.04	0.39	25	1.69	10-24UNC (0.71)	0.21 (0.65)	10-24UNC (0.4)	10-32UNF		
NCRB1_W30_-_SE						-0.00006		-0.0016						0.61	0.55							

ACCESSORIES NCRB1BW ROTARY ACTUATOR

SWITCH MOUNTING CLAMP ASSEMBLY	
Model	Part No
NCDRB1BW10	P211170-1
NCDRB1BW15	P211190-1
NCDRB1BW20	P211160-1
NCDRB1BW30	P211180-1

FLANGE MOUNTING ASSEMBLY	
Model	Part No
NC_R1FW10	P211170-2
NC_R1FW15	P211190-2
NC_R1FW20	P211160-2
NC_R1FW30	P211180-2

FOR MORE TECHNICAL INFORMATION ON THIS SERIES, PLEASE REFER TO CAT:N350

MORE DIMENSIONS
SEE NEXT PAGE

MORE ACCESSORIES
SEE NEXT PAGE

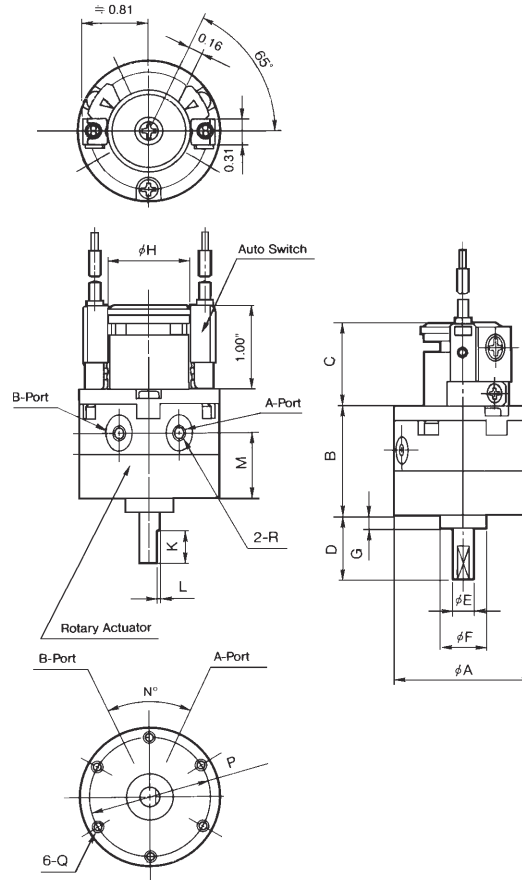
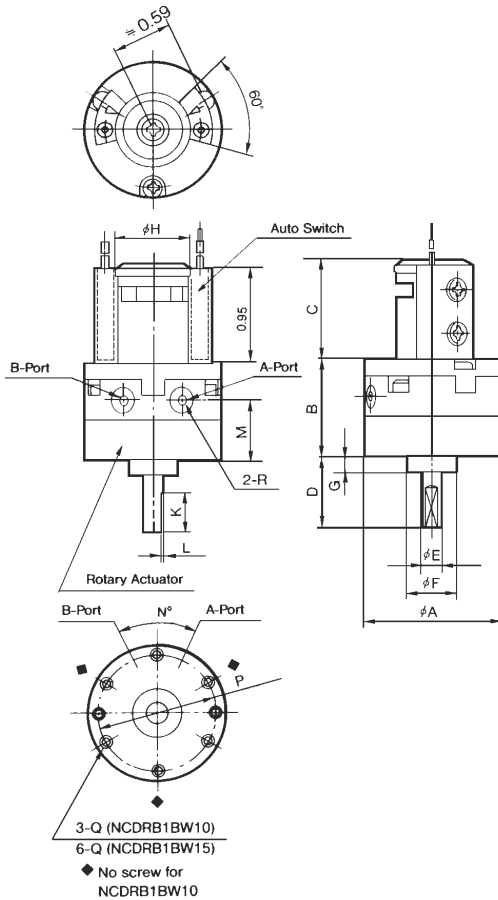
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DIMENSIONS SERIES NCDRB1BW10~15

DIMENSIONS SERIES NCDRB1BW20~30



Model (Dimensions in Inches)	A	B	C	D	E		F		G	H	K	L	M	N	P	Q (Depth)	R
					Tolerances	Tolerance	Tolerance	Tolerance									
NCDRB1BW10	1.14	0.75	0.98	0.55	5/32	-0.00015 -0.00045	0.35	0	0.12	0.73	0.35	0.02	0.39	50	0.94	5-40 (0.2)	M5 (10-32NOM) M3
NCDRB1BW15	1.34	0.94	0.98	0.71	3/16	-0.00001 -0.00017	0.47	0	0.16	0.73	0.39	0.02	0.59	50	1.14	5-40 (0.2)	M5 (10-32NOM) M3
NCDRB1BW20	1.65	1.32	1.00	0.79	15/64	-0.00015 -0.00045	9/16	0	0.18	0.98	0.39	0.02	0.79	50	1.42	8-32UNC (0.28)	10-32UNF
NCDRB1BW30	1.97	1.79	1.00	0.87	5/16	-0.0002 -0.0006	5/8	0	0.20	0.98	0.47	0.04	1.18	50	1.69	10-24UNC (0.40)	10-32UNF

ACCESSORIES

AUTO SWITCH SPECIFICATIONS

Note: Pre-wired Switches with 3/4 Pin Connectors available, please consult SMC Customer Service

Series	Model		Type	Load Voltage	Load Current	Power Source	Internal Voltage		Indicator Lamp
	LH Mount	RH Mount					Drop		
NCRB1BW10	D-97L	-	Reed	24VDC	5~40mA	5~28VDC	1.5V Max	Max 2.4V	ON: Red LED
	D-90L	-	Reed	24VDC or less	Max 50mA				None
	D-S992L	D-S991L	3 Wire Solid State NPN	28VDC or less	Max 150mA	5~28VDC	4V Max	Max 2.4V	ON: Red LED
	D-T992L	D-T991L	2 Wire Solid State	10~28 VDC	5~150mA				ON: Red LED
NCRB1BW20	D-R732L	D-R731L	Reed	24VDC; 100VAC	5~40mA; 5~20mA	5~28VDC	3V Max	Max 2.4V	ON: Red LED
NCRB1BW30	D-R802L	D-R801L	Reed	24VDC/AC or less; 100VDC/AC	Max 50mA; Max 20mA				None
NCRB1BW30	D-S792L	D-S791L	3 Wire Solid State NPN	28VDC or less	Max 150mA	5~28VDC	3V Max	Max 2.4V	ON: Red LED
	D-T792L	D-T791L	2 Wire Solid State	10~28 VDC	5~150mA				ON: Red LED



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