

RCS ROD CYLINDER SLIDE

SINGLE SIDE ACCESS:

- Ports, mounting holes, stop collar and switch adjustments are located on the same side for easy access.

AVAILABLE IN 5 BORE SIZES:

- 20mm, 25mm, 32mm, 40mm, 50mm
3/4", 1", 1-1/4", 1-1/2", 2"

STROKE LENGTH:

- From 1 to 12 inches (25 to 305mm) in one inch (25mm) increments.

OPTIONAL SWITCHES:

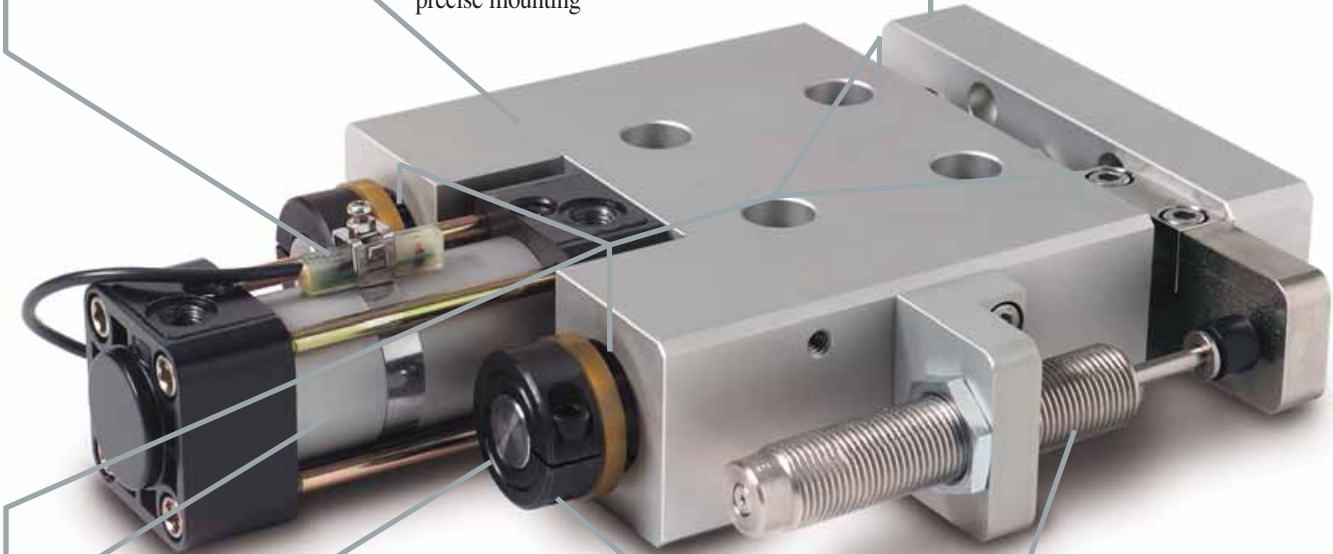
- Tol-O-Matic universal switches available in DC Reed, Hall-effect and AC Triac.
- Available with quick-disconnect couplers.

SLIDE BODY:

- Precision machined mounting surfaces.
- Flexible mounting for easy integration into new or existing applications.
- Lightweight, low profile, durable design.
- Use dowel pins in provided dowel holes to achieve precise mounting

TOOLING PLATE:

- Precision machined mounting surfaces.
- Flexible mounting option for easy integration into new or existing applications.
- Use dowel pins in provided dowel holes to achieve precise mounting



CYLINDER:

- Industry standard ISO style repairable tie rod cylinder.
- Integral air cushions to improve cylinder life.

GUIDE RODS:

- Hardened, precision ground steel.
- Available in standard size for use with linear ball bearings and oversized for use with composite bearings.
- Shares the industry's highest rating for load capacity.

OPTIONAL STOP COLLARS/BUMPERS:

- Often used in high impact applications.
- Used to adjust stroke length.

OPTIONAL SHOCK ABSORBERS:

- Smoother deceleration.
- Self-compensates for load changes.
- Use for increased operating speeds and higher productivity.

BEARINGS:

- Each guide rod has two precision bearings optimally located for greatest stability.
- Choose either linear ball bearings or composite bearings to get the best value with the least possible deflection.
- Combined with hardened precision ground guide rods these rugged bearings provide smooth, precise linear motion.
- Standard internal wicks are saturated to provide permanent lubrication

LINEAR BALL BEARINGS

- Provide greatest tooling plate accuracy
- Longest life.
- Lowest friction - most efficient.
- Best choice for low contaminant environments.

COMPOSITE BEARINGS

- Use oversized guide shafts to provide maximum rigidity and less deflection
- Thin profile bearing allows use of

oversize guide rods without enlarging the slide body.

- Best choice for high contaminant or high impact environments.

RCS OPTIONS

BUMPER/STOP COLLARS . . .	150
SHOCK ABSORBERS	184
SWITCHES.	174

APPLICATION GUIDELINES . .	197
ORDERING	151
SELECTION.	159

RCS20



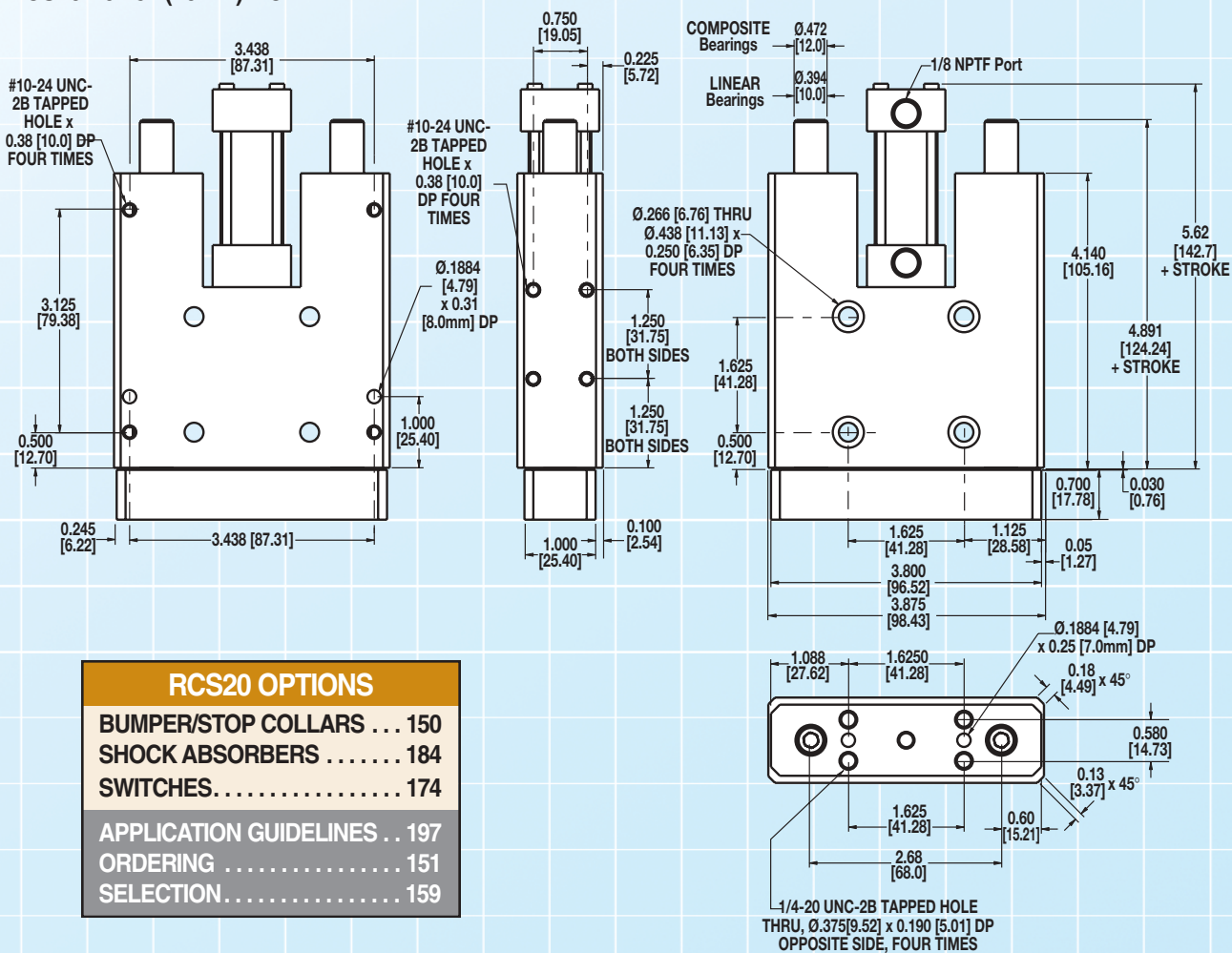
SPECIFICATIONS RCS20

	LB	CB	
Base Weight (with 1" stroke)	2.38 1.08	2.56 1.16	lbs. kgs.
Weight per in. (25mm) of Stroke:	0.133 0.060	0.163 0.074	lbs. kgs.
Max. Pressure	150 10.3	150 10.3	PSI bar
Max. Stroke (in 1" increments)	12.0 305	12.0 305	in. mm

DIMENSIONAL DATA

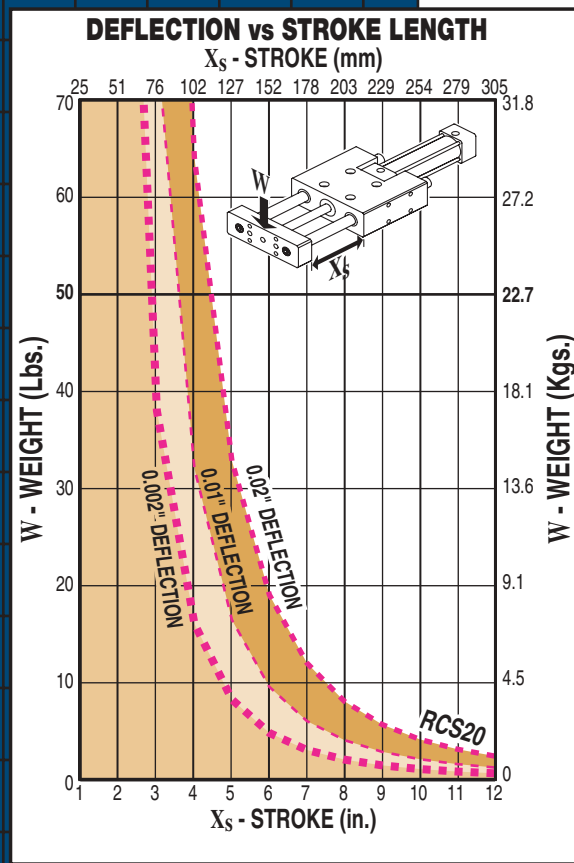
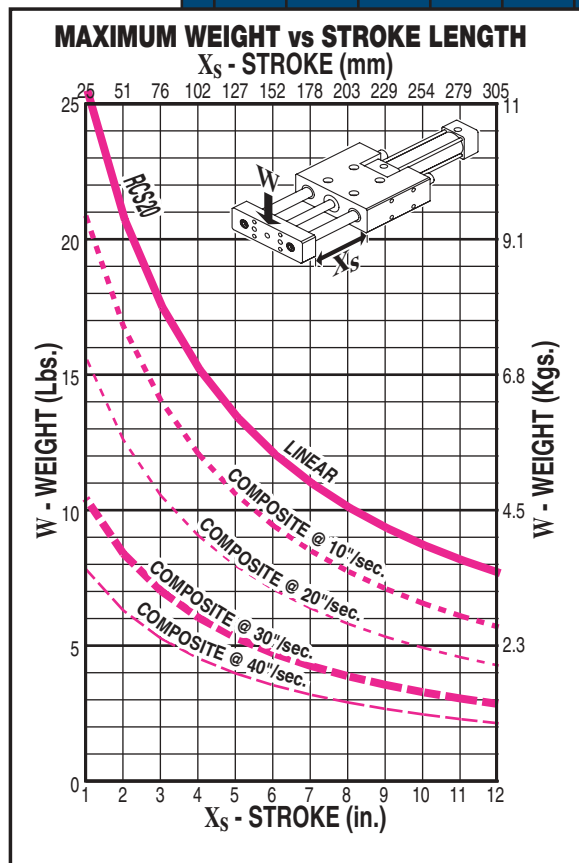
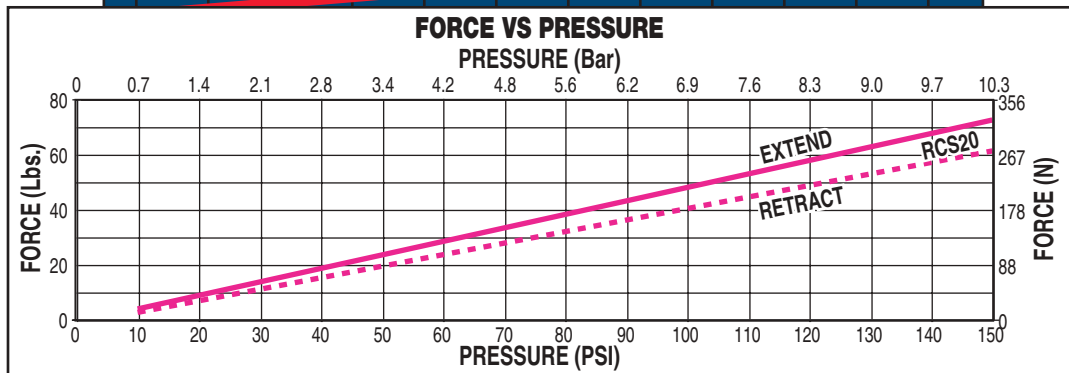


RCS20 - 0.75" (20MM) BORE



PERFORMANCE DATA

3/4" Bore RCS20

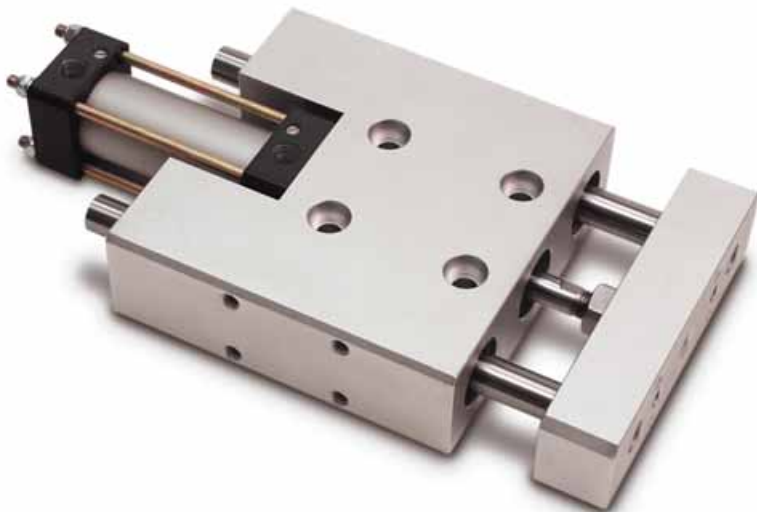


NOTES ABOUT PERFORMANCE GRAPHS:

FORCE vs. PRESSURE: Performance data applies to either Composite or Linear Ball bearings.

MAXIMUM WEIGHT vs. STROKE LENGTH: Do not exceed maximum load curve. (Deflection curves are provided for reference.) Maximum load is based on 200,000,000 linear inches of travel.

RCS25



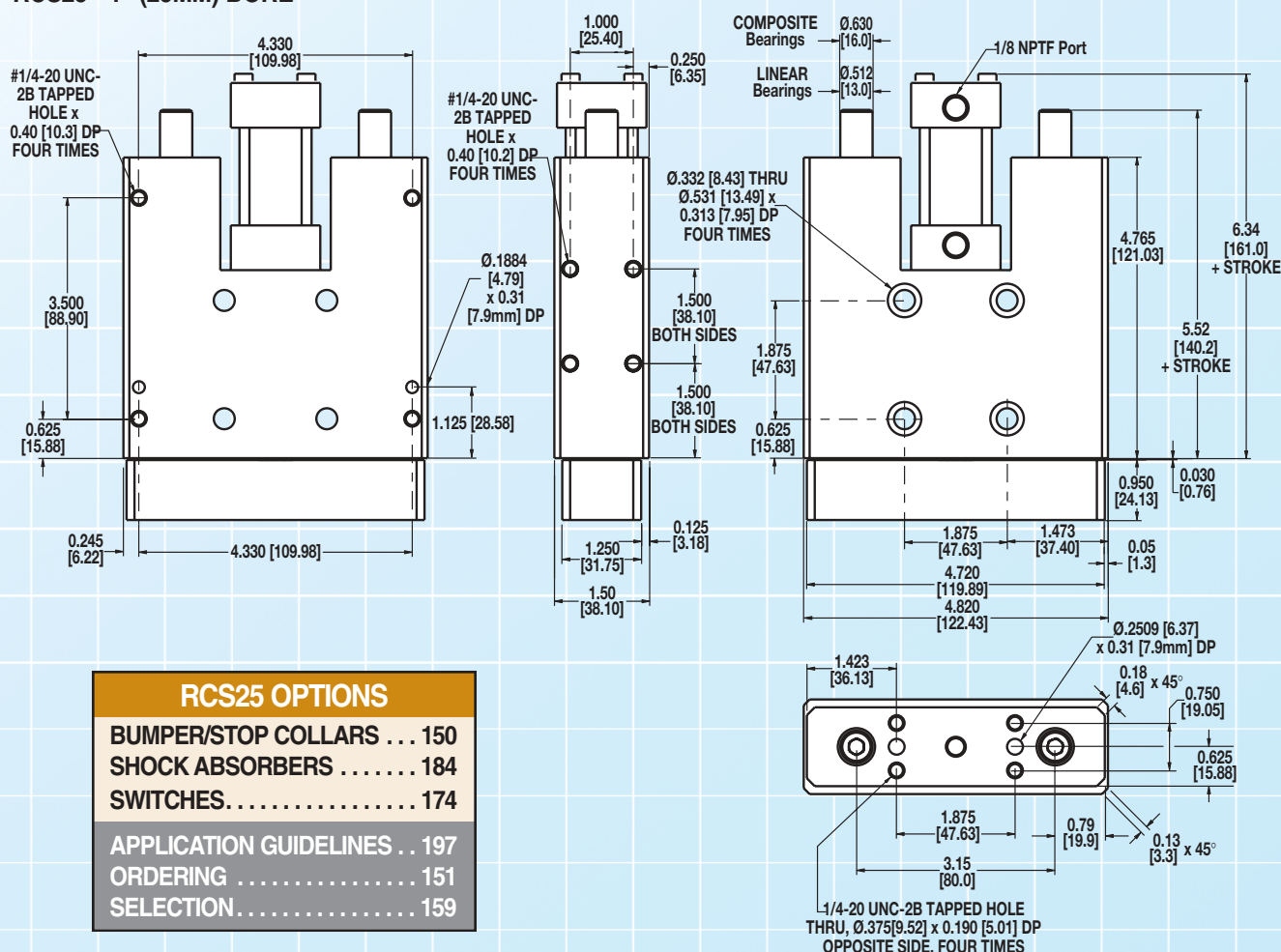
SPECIFICATIONS RCS25

	LB	CB	
Base Weight (with 1" stroke)	4.54 2.06	4.84 2.20	lbs. kgs.
Weight per in. (25mm) of Stroke:	0.208 0.094	0.267 0.121	lbs. kgs.
Max. Pressure	150 10.3	150 10.3	PSI bar
Max. Stroke (in 1" increments)	12.0 305	12.0 305	in. mm

DIMENSIONAL DATA



RCS25 - 1" (25MM) BORE



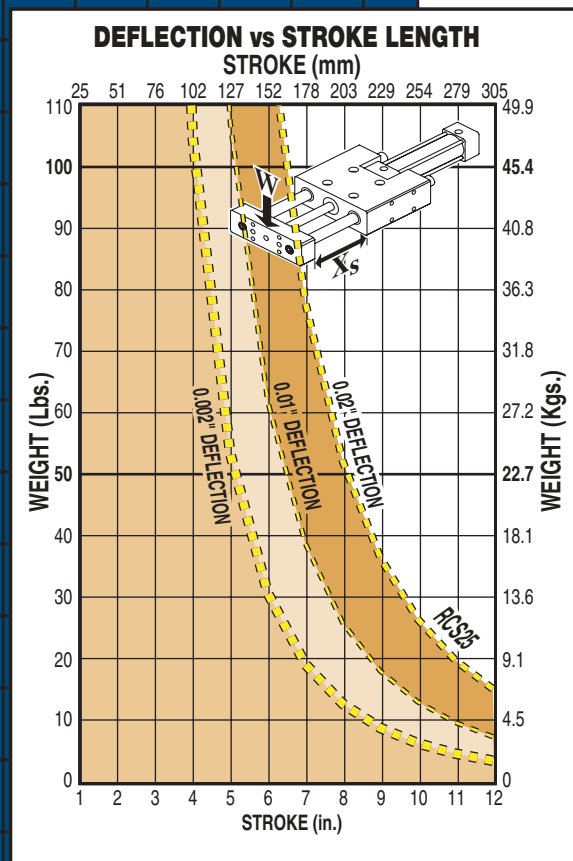
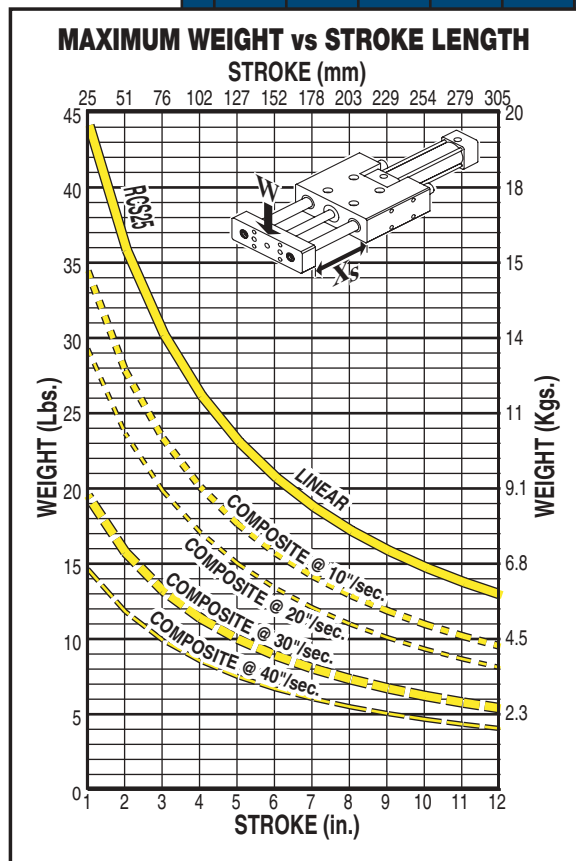
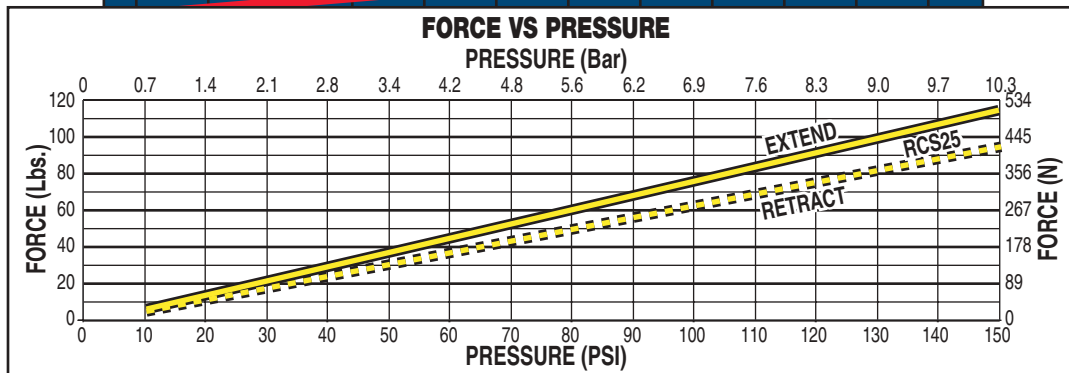
RCS25 OPTIONS

BUMPER/STOP COLLARS ... 150
SHOCK ABSORBERS 184
SWITCHES..... 174

APPLICATION GUIDELINES .. 197
ORDERING 151
SELECTION..... 159

PERFORMANCE DATA

1" Bore RCS25



NOTES ABOUT PERFORMANCE GRAPHS:

FORCE vs. PRESSURE: Performance data applies to either Composite or Linear Ball bearings.

MAXIMUM WEIGHT vs. STROKE LENGTH: Do not exceed maximum load curve. (Deflection curves are provided for reference.) Maximum load is based on 200,000,000 linear inches of travel.

Base Weight (with 1" stroke)	7.13 3.23	7.72 3.50	lbs. kgs.
Weight per in. (25mm) of Stroke:	0.311 0.141	0.409 0.186	lbs. kgs.
Max. Pressure	150 10.3	150 10.3	PSI bar
Max. Stroke (in 1" increments)	12.0 305	12.0 305	in. mm

3D CAD AVAILABLE AT
WWW.TOLOMATIC.COM

The image displays three technical drawings of RCS32 options, each with detailed dimensions in inches and millimeters.

Top Left Drawing: Shows a component with a central vertical assembly. Dimensions include a top width of 5.000 [127.00], a central hole diameter of 1.188 [30.16], and a bottom width of 5.000 [127.00]. It features 1/4-20 UNC-2B TAPPED HOLES x 0.50 [12.7] DP FOUR TIMES.

Top Middle Drawing: Shows a component with a central vertical assembly. Dimensions include a top width of 1.188 [30.16], a central hole diameter of 0.344 [8.73], and a bottom width of 1.600 [40.64]. It features 1/4-20 UNC-2B TAPPED HOLES x 0.50 [12.7] DP FOUR TIMES.

Top Right Drawing: Shows a component with a central vertical assembly. Dimensions include a top width of 1.188 [30.16], a central hole diameter of 0.344 [8.73], and a bottom width of 1.600 [40.64]. It features 1/4-20 UNC-2B TAPPED HOLES x 0.50 [12.7] DP FOUR TIMES.

Bottom Left Drawing: Shows a component with a central vertical assembly. Dimensions include a top width of 1.188 [30.16], a central hole diameter of 0.344 [8.73], and a bottom width of 1.600 [40.64]. It features 1/4-20 UNC-2B TAPPED HOLES x 0.50 [12.7] DP FOUR TIMES.

Bottom Middle Drawing: Shows a component with a central vertical assembly. Dimensions include a top width of 1.188 [30.16], a central hole diameter of 0.344 [8.73], and a bottom width of 1.600 [40.64]. It features 1/4-20 UNC-2B TAPPED HOLES x 0.50 [12.7] DP FOUR TIMES.

Bottom Right Drawing: Shows a component with a central vertical assembly. Dimensions include a top width of 1.188 [30.16], a central hole diameter of 0.344 [8.73], and a bottom width of 1.600 [40.64]. It features 1/4-20 UNC-2B TAPPED HOLES x 0.50 [12.7] DP FOUR TIMES.

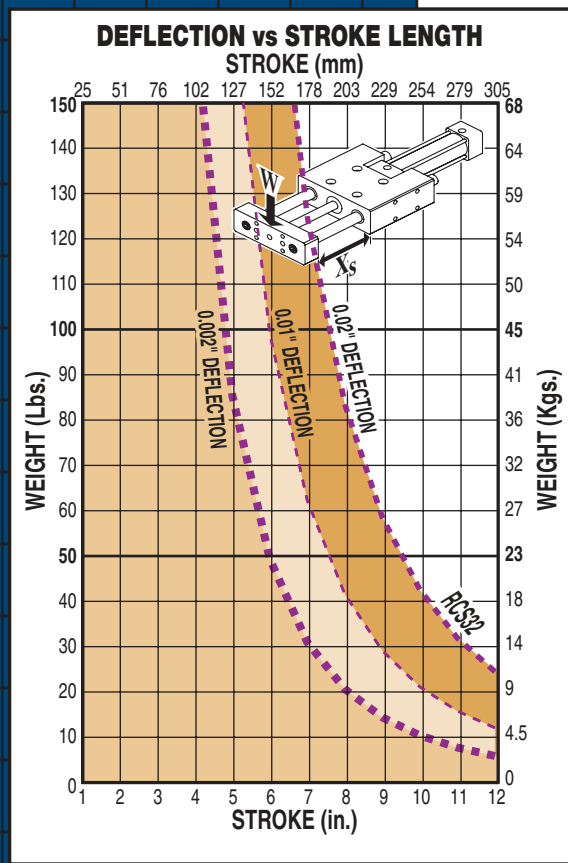
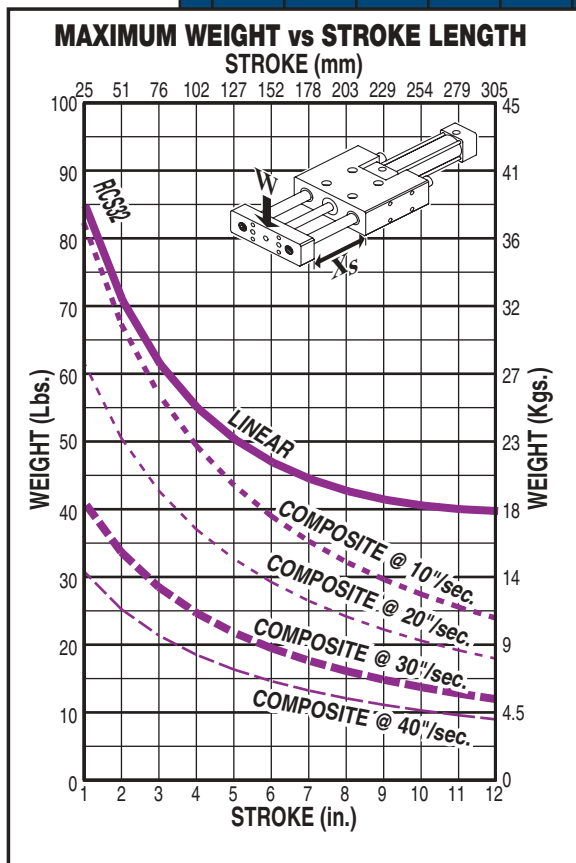
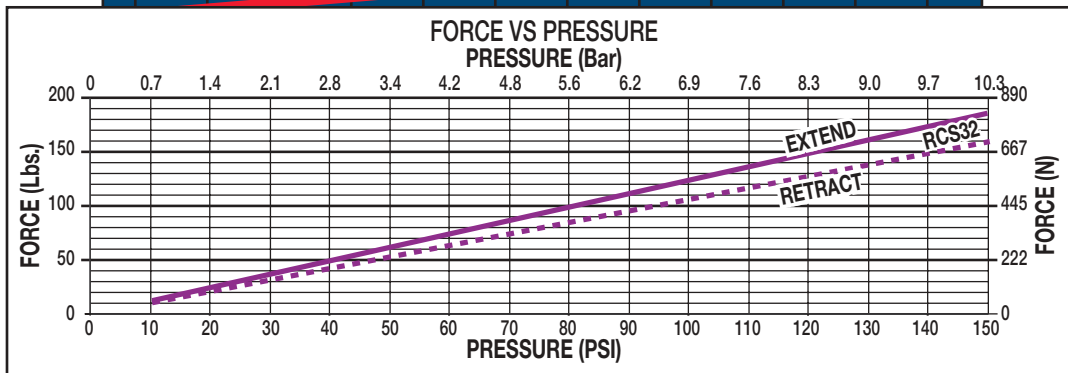
Table:

RCS32 OPTIONS	
BUMPER/STOP COLLARS . . .	150
SHOCK ABSORBERS	184
SWITCHES	174
APPLICATION GUIDELINES . . 197	
ORDERING	151
SELECTION	159

Bottom Right Drawing: Shows a component with a central vertical assembly. Dimensions include a top width of 1.188 [30.16], a central hole diameter of 0.344 [8.73], and a bottom width of 1.600 [40.64]. It features 1/4-20 UNC-2B TAPPED HOLES x 0.50 [12.7] DP FOUR TIMES.

PERFORMANCE DATA

1 1/4" Bore RCS32



NOTES ABOUT PERFORMANCE GRAPHS:

FORCE vs. PRESSURE: Performance data applies to either Composite or Linear Ball bearings.

MAXIMUM WEIGHT vs. STROKE LENGTH: Do not exceed maximum load curve. (Deflection curves are provided for reference.) Maximum load is based on 200,000,000 linear inches of travel.

RCS40



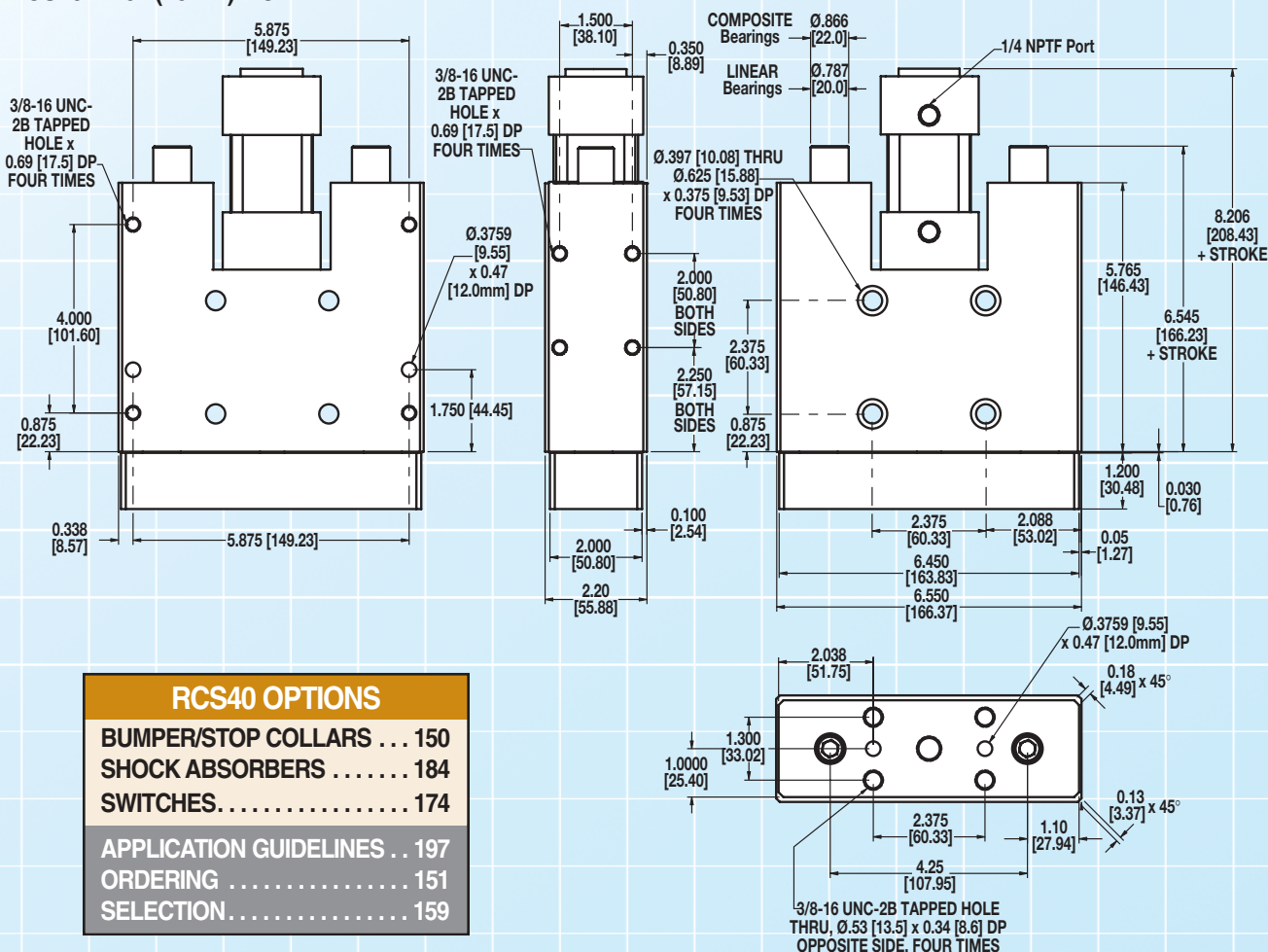
SPECIFICATIONS RCS40

	LB	CB	
Base Weight (with 1" stroke)	8.62 3.91	9.54 4.33	lbs. kgs.
Weight per in. (25mm) of Stroke:	0.452 0.205	0.606 0.275	lbs. kgs.
Max. Pressure	150 10.3	150 10.3	PSI bar
Max. Stroke (in 1" increments)	12.0 305	12.0 305	in. mm

DIMENSIONAL DATA



RCS40 - 1.5" (40MM) BORE



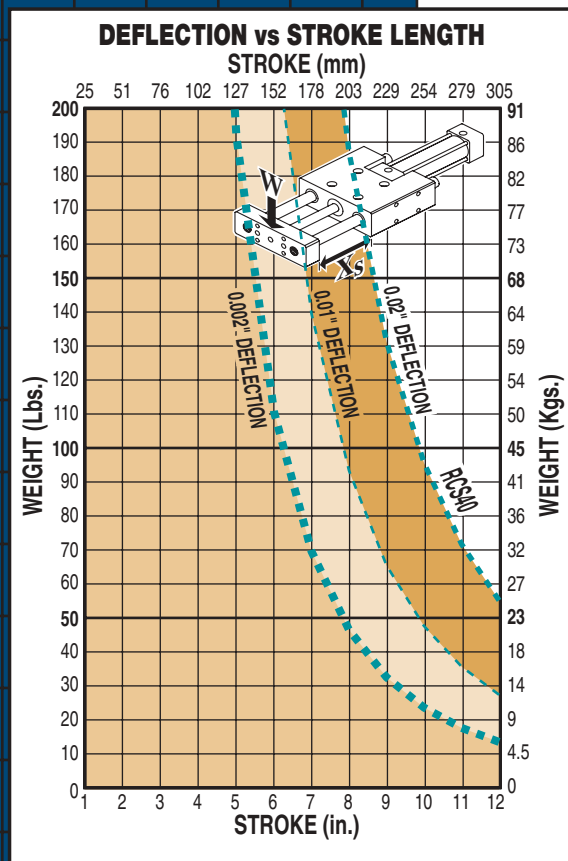
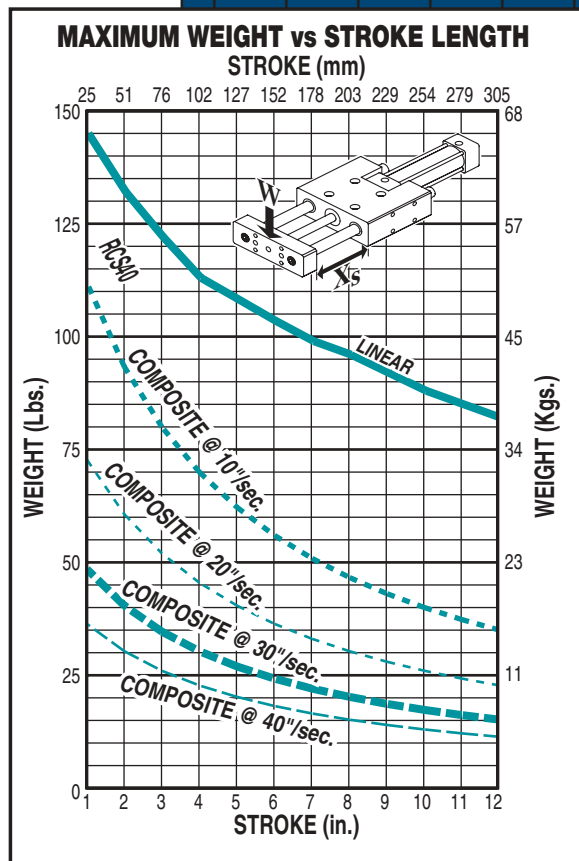
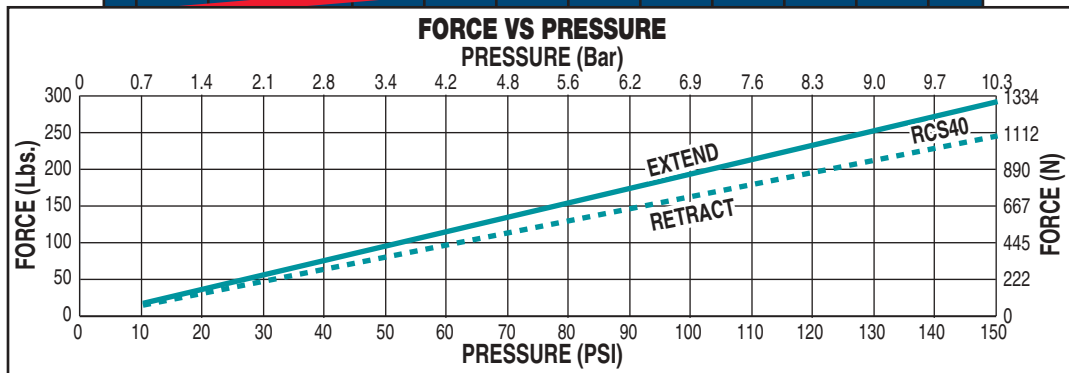
RCS40 OPTIONS

BUMPER/STOP COLLARS ... 150
SHOCK ABSORBERS 184
SWITCHES..... 174

APPLICATION GUIDELINES .. 197
ORDERING 151
SELECTION..... 159

PERFORMANCE DATA

1½" Bore RCS40



NOTES ABOUT PERFORMANCE GRAPHS:

FORCE vs. PRESSURE: Performance data applies to either Composite or Linear Ball bearings.

MAXIMUM WEIGHT vs. STROKE LENGTH: Do not exceed maximum load curve. (Deflection curves are provided for reference.) Maximum load is based on 200,000,000 linear inches of travel.

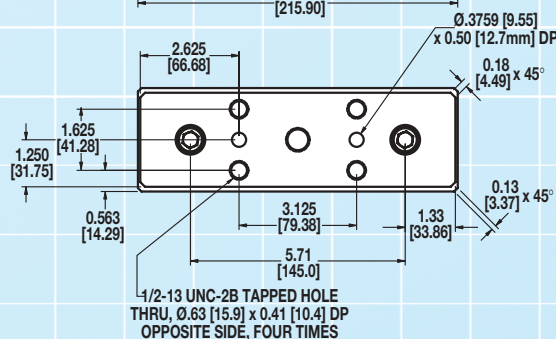
Base Weight (with 1" stroke)	16.53 7.50	18.03 8.18	lbs. kgs.
Weight per in. (25mm) of Stroke:	0.694 0.315	0.881 0.400	lbs. kgs.
Max. Pressure	150 10.3	150 10.3	PSI bar
Max. Stroke (in 1" increments)	12.0 305	12.0 305	in. mm

3D CAD AVAILABLE AT
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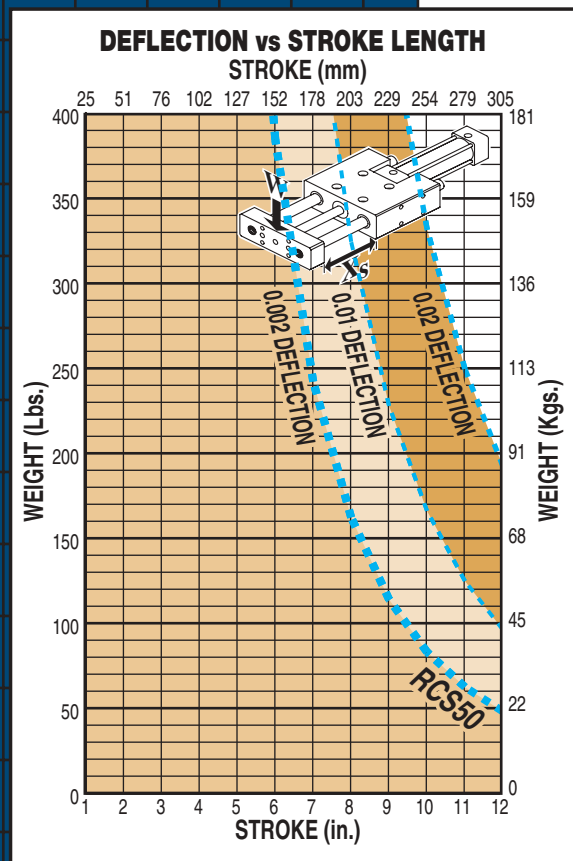
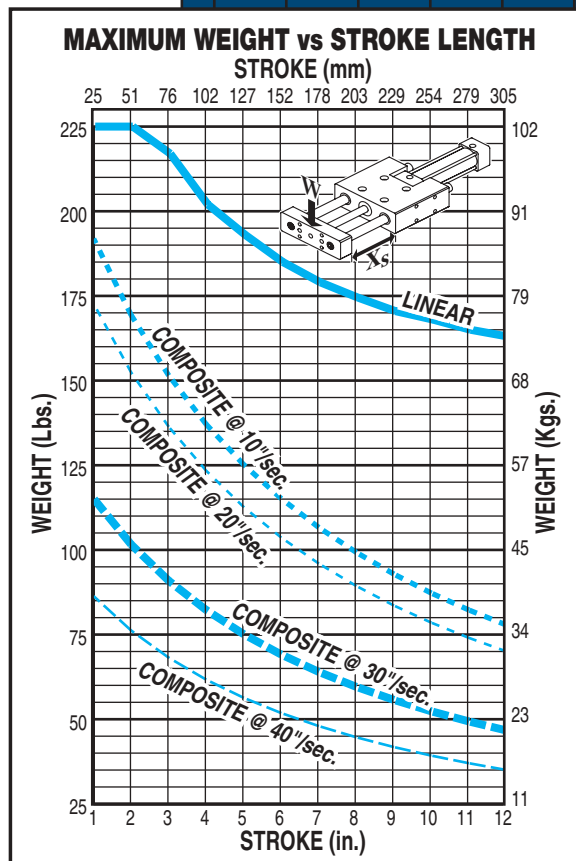
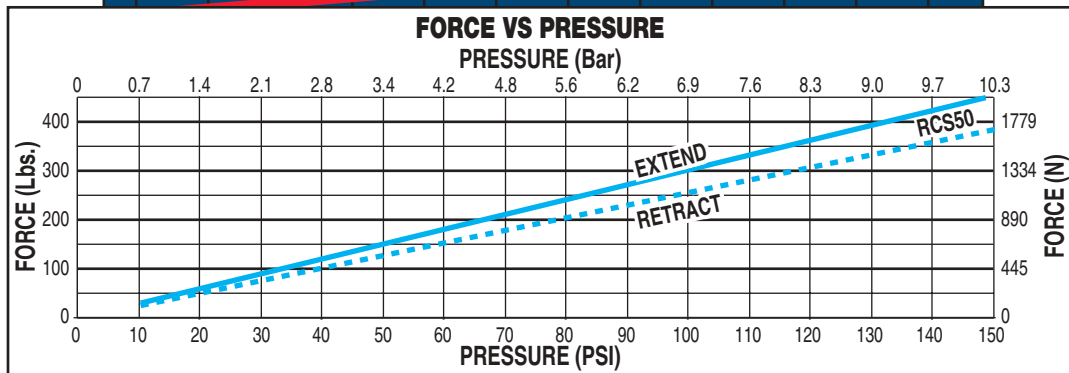
BUMPER/STOP COLLARS ... 150
SHOCK ABSORBERS 184
SWITCHES..... 174

APPLICATION GUIDELINES . . 197
ORDERING 151
SELECTION 159



PERFORMANCE DATA

2" Bore RCS50



NOTES ABOUT PERFORMANCE GRAPHS:

FORCE vs. PRESSURE: Performance data applies to either Composite or Linear Ball bearings.

MAXIMUM WEIGHT vs. STROKE LENGTH: Do not exceed maximum load curve. (Deflection curves are provided for reference.) Maximum load is based on 200,000,000 linear inches of travel.

STOP COLLAR/ BUMPER KITS

Stop Collar and Bumper Kits are available for most Tol-O-Matic rod cylinder slides. Bumpers are made of polyurethane and designed to prevent metal-to-metal contact and absorb impact shock.

RCS-Rod Cylinder Slide

Internal Bumpers – *Standard feature*: Designed for operating pressures of up to 150 PSI (10.34 bar) with a 10,000,000 cycle rating.

Bumper / Stop Collar Kit – *Optional feature, order for either extend or retract*

NOTE: When used in retract position, stop collar/bumper kit will reduce effective stroke by dimension "A", see drawing below.

POWER-BLOCK2

Internal Bumpers – *Standard feature*: made of urethane for noise reduction.

Designed for operating pressures of up to 150 PSI (10.34 bar) with a 10,000,000 cycle rating.

Stop Collar / Bumpers – *Not Available*

	RCS	PB	PB2
Stop Collars	OP	OP	–
Bumpers	OP	OP	–

– Not Available OP Optional ST Standard



DIMENSIONAL DATA

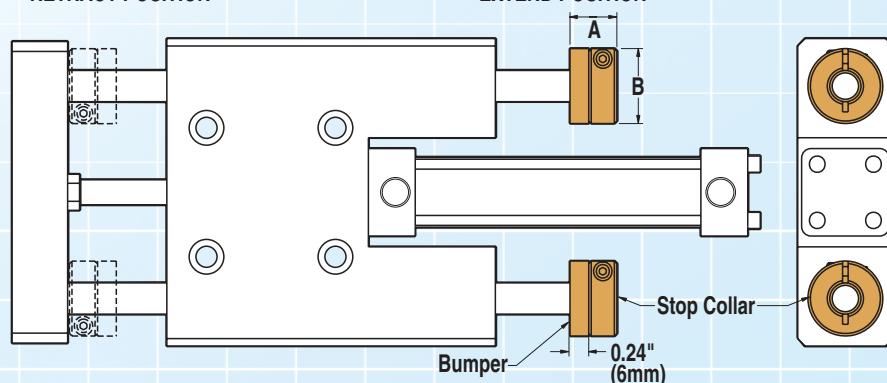
3D CAD AVAILABLE AT
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RCS BUMPER/STOP COLLARS

RETRACT POSITION

EXTEND POSITION



LINEAR BEARINGS

Model	in.	A mm	in.	B mm
RCS20LB	0.59	15.0	0.95	24.0
RCS25LB	0.67	17.0	1.10	28.0
RCS32LB	0.75	19.1	1.34	34.0
RCS40LB	0.83	21.0	1.58	40.0
RCS50LB	0.83	21.0	1.77	45.0

COMPOSITE BEARINGS

Model	in.	A mm	in.	B mm
RCS20CB	0.67	17.0	1.10	28.0
RCS25CB	0.75	19.0	1.34	34.0
RCS32CB	0.83	21.0	1.58	40.0
RCS40CB	0.83	21.0	1.77	45.0
RCS50CB	0.83	21.0	2.13	54.0

RCS - ORDERING

CONFIGURATOR EXAMPLE

MODEL, BORE, STROKE, AND BEARING				ACCESSORIES AND OPTIONS			
1.	2.	3.	4.	5.	6.	7.	8.
RCS	20	SK09	CB	TT1	BPR	SHE	POB

The above example describes a RCS Rod Cylinder Slide with a 0.75 " bore, a stroke length of 9.0" inches and composite bearings. Options include one Hall-effect (sourcing) switch with 5 meter lead, bumper/stop collar kit in retract position, one shock used in extend position and port orientation on bottom.

Boxes above represent the number of fields available for each section and not all of them will be used in every application. Omit empty boxes when you construct your configurator number (placeholders are not required). For the above example, the order string as it is typed would appear as follows:
RCS20SK09CBTT1BPRSHEPOB.

1. MODEL TYPE

Enter:

RCS Rod Cylinder Slide

2. CYLINDER BORE DIAMETER

Enter:

20 for 3/4" (20mm) **25** for 1" (25mm)
32 for 1 1/4" (32mm) **40** for 1 1/2" (40mm)
50 for 2" (50mm)

3. STROKE LENGTH

Enter:

SK then required stroke length in inches
 from 01 to 12 in 1" increments
 Example: **SK09** for 9.0 inch stroke

4. BEARING TYPE

Enter:

LB for linear bearings **CB** for composite bearings

Leave remaining fields blank if the options are not required.

5. SWITCHES ¹

Enter:

BT for Form C Reed Switch 5-m (*meter*) lead.
BM for Form C Reed Switch 5-m lead **QD** (*quick-disconnect*)
RT for Form A Reed Switch 5-m lead.
RM for Form A Reed Switch 5-m lead **QD**
CT for AC Triac Reed Switch 5-m lead
CM for AC Triac Reed Switch 5-m lead **QD**
KT for Hall-Effect (Sinking) 5-m lead
KM for Hall-Effect (Sinking) 5-m lead **QD**

TT for Hall-Effect (Sourcing) 5-m lead
TM for Hall-Effect (Sourcing) 5-m lead **QD**

Then enter:

The number of switches required.

¹**NOTE:** Switch magnet is a standard feature on all RCS rod cylinder slides.

6. BUMPER / STOP COLLAR KIT

Enter:

BPE for bumper/stop collar kit in extend position
²**BPR** for bumper/stop collar kit in retract position
²**BPB** for bumper/stop collar kits in extend & retract positions
²**RB** for bumpers Only in retract position
²**NOTE:** When used in retract position bumper/stop collar kit will reduce overall stroke see page 150.

7. SHOCK ABSORBERS

Enter:

SHE for shock absorber, in extend position
³**SHR** for shock absorber, in retract position
³**SHB** for shock absorbers, in extend & retract positions
SDE for shock hardware, in extend position
³**SDR** for shock hardware, in retract position
³**SDB** for shock hardware, in extend & retract positions
³**NOTE:** When used in retract position shock stop will reduce overall stroke see page 192.

8. PORT ORIENTATION

Enter:

POB for port orientation on bottom
Blank for port orientation on top

For the available field retrofit options and accessories, refer to kit listings on page 152 for part numbers.

RCS/PB2 FIELD RETROFIT

KIT (HARDWARE & SWITCH)	DESCRIPTION	SWITCH ONLY (NO HARDWARE)
BT	Form C Reed Switch with 5 meter lead	3600-9084
BM	Form C Reed Switch with Quick-disconnect Coupler (Male)	3600-9085
RT	Form A Reed Switch with 5 meter lead	3600-9082
RM	Form A Reed Switch with Quick-disconnect Coupler (Male)	3600-9083
CT	ac Triac Reed Switch with 5 meter lead	3600-9086
CM	ac Triac Reed Switch with Quick-disconnect Coupler (Male)	3600-9087
KT	Hall-effect (Sinking) Switch with 5 meter lead	3600-9090
KM	Hall-effect (Sinking) Switch with Quick-disconnect Coupler (Male)	3600-9091
TT	Hall-effect (Sourcing) Switch with 5 meter lead	3600-9088
TM	Hall-effect (Sourcing) Switch with Q-D Coupler (Male)	3600-9089
	Connector (Female) 5 meter lead	2503-1025

OPTION	MODEL	SWITCH
S W	P B 2 2 0	R T

To order field retrofit switch and hardware kits for all Tolomatic actuators: SW (Then the model and bore size, and type of switch needed)

Example: SWPB220RT

(Hardware and Form A Reed switch with 5 meter lead for 1.25" bore PB2 Rod Cylinder Slide)

(NOTE: Mounting hardware is required if replacing switch for any actuator manufactured before 7/1/97.)

RCS Rod Cylinder Slide Switch Hardware Kits and Options

SWITCH KITS	RCS20	RCS25	RCS32	RCS40	RCS50
Switch Hardware Kit	2220-1009	2225-1009	2230-1009	2240-1009	2250-1009

OTHER OPTIONS	RCS20LB	RCS20CB	RCS25LB	RCS25CB	RCS32LB	RCS32CB	RCS40LB	RCS40CB	RCS50LB	RCS50CB
SH Shock Absorber ^{3,4}	2220-9000	2220-9002	2225-9000	2225-9002	2230-9000	2230-9002	2240-9000	2240-9002	2250-9000	2250-9002
SD Shock Hardware ⁴	2220-9001	2220-9003	2225-9001	2225-9003	2230-9001	2230-9003	2240-9001	2240-9003	2250-9001	2250-9003
BP_ Bumper/Stop Collar Kit ²	2220-9004	2220-9005	2225-9004	2225-9005	2230-9004	2230-9005	2240-9004	2240-9005	2250-9004	2250-9005

Power-Block2 Switch Hardware Kits and Options

	PB208	PB210	PB217	PB220	PB232	PB252
Switch Hardware Kit	2506-9999	2506-9999	2506-9999	2506-9999	2506-9999	2506-9999
TN T-Nuts	3410-1013	3410-1013	3415-1013	3415-1013	3420-1013	3420-1013

¹Kits include one switch with mounting hardware

²Bumper Kit for H-Block includes 4 Bumpers per kit

³Same shock absorbers used for both light duty and heavy duty applications.

⁴One each

⁵Stop Collar/ Bumper Kits for Power-Block include two stop collars and two 1/4" thick polyurethane external bumpers to help absorb impact shock

