

1 WARRANTY

If you experience any problems with your **DURATRК** cylinder within the 12-month warranty period, you should first contact W.C. Branham Inc.

The warranty may be invalid if the cylinder has been tampered with, in any way, without prior authorization from **W.C. Branham Inc.**

2 SAFETY

The **DURATRК** rodless cylinder is designed to be used safely as long as the following conditions are adhered to:

- The cylinder must be installed, operated and maintained by skilled and authorized personnel.
- These operating instructions should be followed at all times.
- The cylinder should only be used for intended applications, i-e: to move loads or exert force.
- Operations that impair function or safety should be avoided
- The Cylinder should not be used in hostile conditions without prior assessment by W.C.Branham Inc.
- No unauthorized modifications/alterations should be made.

3 TECHNICAL DATA

Operating pressure:

- 29 to 116PSI (2 to 8bar)

Temperature range:

- -4 °F to +176 °F (-20 °C to +80 °C)

Medium:

- Filtered and slightly oiled or non-lubricated

Compressed air maximum speed:

- 78.74 in./sec. (2.0 m/sec.)
- In any orientation

4 FUNCTION

The piston, which is connected to the carrier, is moved by compressed air in the cylinder. Air should be controlled using suitable valve(s). Piston speed should be adjusted using flow control fittings. The load to be moved is attached to the carrier. The piston position can be detected using reed or hall effect switches.

5 DESIGN

- The cylinder is installed using the mounting hole threads located on the ends or end cap foot mountings.
- The work load should be attached to the carrier.
- For long cylinders, additional mid-section supports should be used.
- The cylinder has permanent grease lubrication.
- The longitudinal slot in the cylinder is sealed by a PU band and protected by a stainless steel cover strip.

6 STORAGE

Store the cylinder in dry areas free from dust and keep dust caps in ports if stored for a long time. Only store the cylinder on a flat surface and avoid bending.

7 INSTALLATION

- Remove and dispose of all packaging.
- Cycle the cylinder by hand making it at least three full strokes.
- Install the cylinder into position ensuring that the cylinder is fully supported, not warped and all connections as well as operating parts are accessible.

8 ADDING DURATRК INTO SERVICE

Prior to, check that:

- Cycle the cylinder by hand, making it at least three full strokes (without air pressure).
- The cylinder has been plumbed correctly and that there is nothing which is likely to obstruct the moving load.

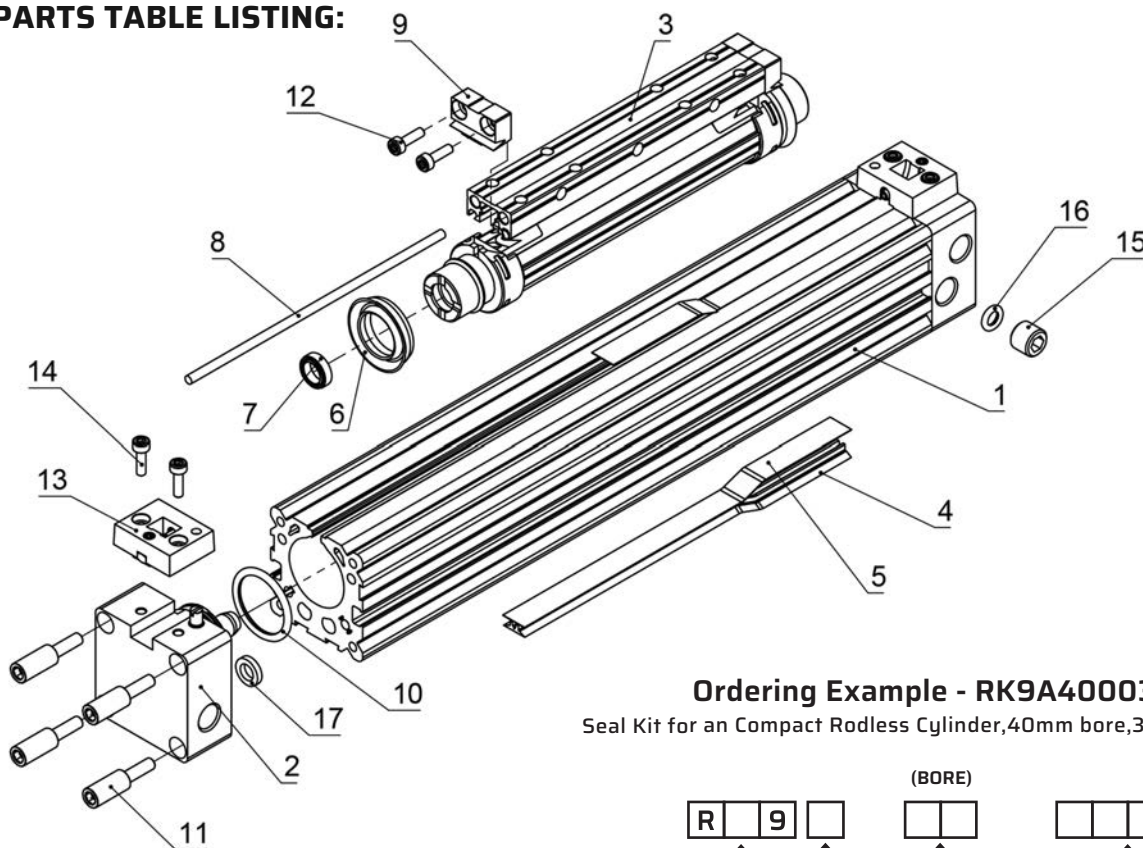
Commissioning the cylinder:

- **CAUTION:** Before turning on air pressure be sure that when the cylinder is positioned the exhaust air is not vented without restriction. It is advisable to have exhaust speed controls in place when commissioning the cylinder. Otherwise, high kinetic energies could result in damaging or destroying the cylinder.

NOTE: If the cylinder sits for an atypical length of time prior to putting into the service, you may experience pressure loss through the seal slot underneath the carrier. This is normal and it is suggested that the cylinder be cycled for a preiod of time for break in.

- Adjust the end cushioning with screw that is situated at the top of the end caps

► **DTS/DTK PARTS TABLE LISTING:**

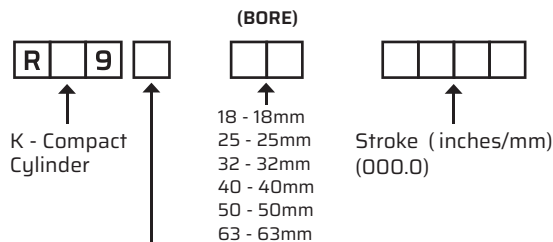


Ordering Example - RK9A400031

Seal Kit for an Compact Rodless Cylinder, 40mm bore, 31 inch stroke.

► **Spare Parts Ordering.** Choose the desired repair kit(s).

In addition to repair kit configured, please submit the cylinder model, assembly number and/or serial number. This information will verify the correct repair kit(s) ordered.
Thank you.



REF #	DESCRIPTION	QTY								
			KIT A	KIT B	KIT C	KIT D	KIT H	KIT J	KIT K	KIT T
			SEALS/WEAR	SEALS/WEAR & FIXINGS	END CAPS NPT SET/PAIR	END CAPS BSPP SET/PAIR	PISTON/YOKE ASSY DTS/DTF/STD	PISTON/YOKE ASSY DTK/DTKF? COMPACT	SEAL BAND COVER STRIP	TUBE PROFILE
1	TUBE PROFILE	1	--	--	--	--	--	--	--	Stroke, In./mm
2	END CAP SET	1	--	--	Included	Included	--	--	--	--
3	PISTON/YOKE	1	--	--	--	--	Included	Included	--	--
4	SEALING BAND	1	Stroke, In./mm	Stroke, In./mm	--	--	--	--	Stroke, In./mm	--
5	COVER STRIP	1	Stroke, In./mm	Stroke, In./mm	--	--	--	--	Stroke, In./mm	--
6	SEAL, PISTON	2	Included	Included	--	--	Included	Included	--	--
7	SEAL, CUSHION	2	Included	Included	--	--	Included	Included	--	--
8	WIPER, SUPPORT BAR	2	Included	Included	--	--	Included	Included	--	--
9	WIPER, END	2	--	Included	--	--	Included	Included	--	--
10	O-RING, TUBE	2	Included	Included	Included	Included	--	--	--	--
11	SCREW, END CAP	8	--	Included	Included	Included	--	--	--	--
12	SCREW, END WIPER	4	--	Included	--	--	Included	Included	--	--
13	RETAINER, STRIP	2	--	Included	--	--	--	--	--	--
14	SCREW, RETAINER STRIP	4	--	Included	--	--	--	--	--	--
15	PLUG, PORT	6	--	--	Included	Included	--	--	--	--
16	O-RING, PORT	6	Included	Included	Included	Included	--	--	--	--
17	SEAL, FLAT	2	Included	Included	Included	Included	--	--	--	--
	LANASUPERLUB2010	3 oz	Included	Included	Included	Included	Included	Included	Included	Included

9 DIS-ASSEMBLY AND REBUILD PROCEDURES

A: Instructions for removing and adding a reed or hall effect switch if necessary.

Note switch orientation and use proper care when handling switches.

Removing:

- For DURATRK Cylinders with bore sizes 25mm or greater loosen grub screw on switch and rotate switch 90 degrees to take switch out of slot.
- For DURATRK Cylinders that have a switch bracket. Loosen grub screw on the switch bracket and remove switch.
- For DURATRK 18mm Bore Cylinders that have C- type switch groove and C - type switch body. Loosen grub screw on switch and slide switch out of the groove.

Adding after cylinder is rebuilt and tested:

- Slide switch into the slot on the body (1) or re-insert in switch bracket or switch groove. Fix in place with grub screw.

B: Instructions for dismantling and reassembling external guide carrier(s), if necessary.

Reference DTF/DTKF Parts Table on page 5.

Removing:

- Undo and remove carriage bolt (9), washer (8), cone nut (5) and clamp wedge (4).
- Undo and remove point screws (6 & 7) only on one side of the carrier. This should allow the guide bearing & support bar (2) and (3) to slide out to one side. External guide carrier/slide bearing (1) can then be removed.

Adding after cylinder is rebuilt and tested:

- Assemble carriage/slide bearing (1) to tube body and insert guide bearing (2) & support bar (3). But do not connect the carrier guide to the piston/yoke assembly at this time.
- Apply Loctite 242 ® Blue Threadlocker or Equiv. to thread of point screws (6 & 7) and tighten until they are touching the guide bearing strip. Use a rubber mallet to gently tap the carrier on both sides so that the guide bearings can seat themselves.
- Check for free movement in carrier (1). Carrier should slide freely along cylinder tube body (1) but not have any sideways movement. If the carrier guide is set too tight, loosen the point screws by a 1/4 turn and use the rubber mallet and gently tap the carrier sides to carrier bearing can reseal.

- Insert cone nut (5) and clamp wedge (4) in position on carrier (1). Secure carrier to Piston/Yoke with screw (9) and washer (8), apply Loctite 242 to threads. Do not overtighten screws, check for free movement of yoke/carrier assembly.

C: Instructions for dis-assembly and rebuild.

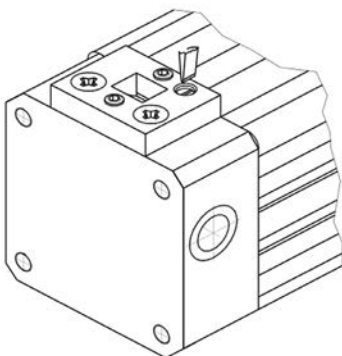
- 1: Remove strip retainer (13) by unfastening the two screws (14).
 - 2: Remove end cap fasteners (11) on both ends of the cylinder and remove end caps.
 - 3: Remove yoke (3), sealing strip (4) and cover strip (5) from cylinder body.
 - 4: Remove piston seals (6) and cushion seals (7) being careful not to damage any surfaces on the piston when removing seals.
 - 5: Inspect tube body (1), bore and slot, and replace if damaged - contact supplier.
 - 6: Clean and lubricate bore of cylinder using LANASUPERLUB1020, Kluber Microlube GL261 or Equiv. Apply coating throughout bore. It is not necessary to over lubricate the bore.
 - 7: Clean piston/yoke (3) assembly using LANASUPERLUB1020, Kluber Microlube GL261 or Equiv.
 - 8: Lightly lubricate replacement piston seals (6) and cushion seal (7) using LANASUPERLUB1020, Kluber Microlube GL261 or Equiv. Mount piston seals onto yoke (3) and align with groove. Put cushion seals (7) into recess ensuring that the small diameter is facing outwards.
- CAUTION: HANDLE THE SEAL BAND WITH CARE. ALWAYS CHECK THAT THE EDGES ARE NOT DAMAGED BEFORE ASSEMBLING INTO CYLINDER.**
- 9: Lubricate sealing band (4) lightly using LANASUPERLUB1020, Kluber Microlube GL261 or Equiv. Bend slightly the last 2 inches of the seal band and push through piston yoke (3).
 - 10: Insert longest end of sealing band into tube body (1) followed by the yoke (3).
 - 11: Assemble strip retainer (13) to end cap (2) and insert end cap into the end of bore where the yoke (3) is situated.
 - 12: Secure endcap (2) with end cap fasteners (11).
 - 13: Slide yoke (3) to other end of body and repeat operation with opposite endcap (2).
 - 14: Cut and Insert cover strip (5) and clamp it with strip retainer screws (14). Feed through yoke (3) and secure on other side.

15: Tighten strip retainer screws on one end of cylinder until flush with strip retainer (13). On the other end of the cylinder, pull the sealing band (4) using pliers to remove slack and secure with grub screw (14). Cut off overlapping sealing band (4) flush with the end cap.

16: Insert wear support bar (8) and screw on scraper block (23) with cap head screws (12). This will tighten cover strip (5).

10 TESTING CYLINDER

- Connect cylinder to air supply.
- Pressurize both sides of the piston yoke and then exhaust both sides
- Actuate the cylinder with exhaust air restricted, full stroke in both directions.
- Cycle cylinder 5 times, shut off valves and allow the pressure to stabilize for one minute.
- Measure lead rate and check: 18mm & 25mm bores <3.0 cu.in./min (50ml/min). 32,40,50,63mm bores <6.1 cu.in./min (100ml/min). Test with cylinder piston/yoke/carrier at right hand end, left hand end, and center.
- Check breakout pressure < 29 PSI (2.0 bar).
- Check end cushioning function. The end-of-travel cushioning is set at the cushioning screws (see illustration). The piston must be slowed using the cushioning so that it enters the end position gently. The cushion screw turns 90 degrees from fully closed to fully open.
- Check function of piston magnet for switches.



11 MAINTENANCE

Maintenance work should be carried out with the compressed air system depressurized.

To dismantle the cylinder, read instructions above.

Tools required:

- Metric and imperial allen keys
- Pliers
- Knife
- Rubber Mallet
- Flat blade screwdriver
- Loctite® 242 Blue Threadlocker or Equiv.
- LANASUPERLUB1020, Kluber Microlube GL261 or Equiv.

Prior to servicing cylinder, ensure that area to be used is clean and free from dirt and dust. Use soft rags with a mild detergent for cleaning.

Sliding surfaces should be cleaned at regular intervals, depending on the degree of use and the working environment. It is not necessary to grease the V-groove located on outer tube body where the guide bearing (2) rides.

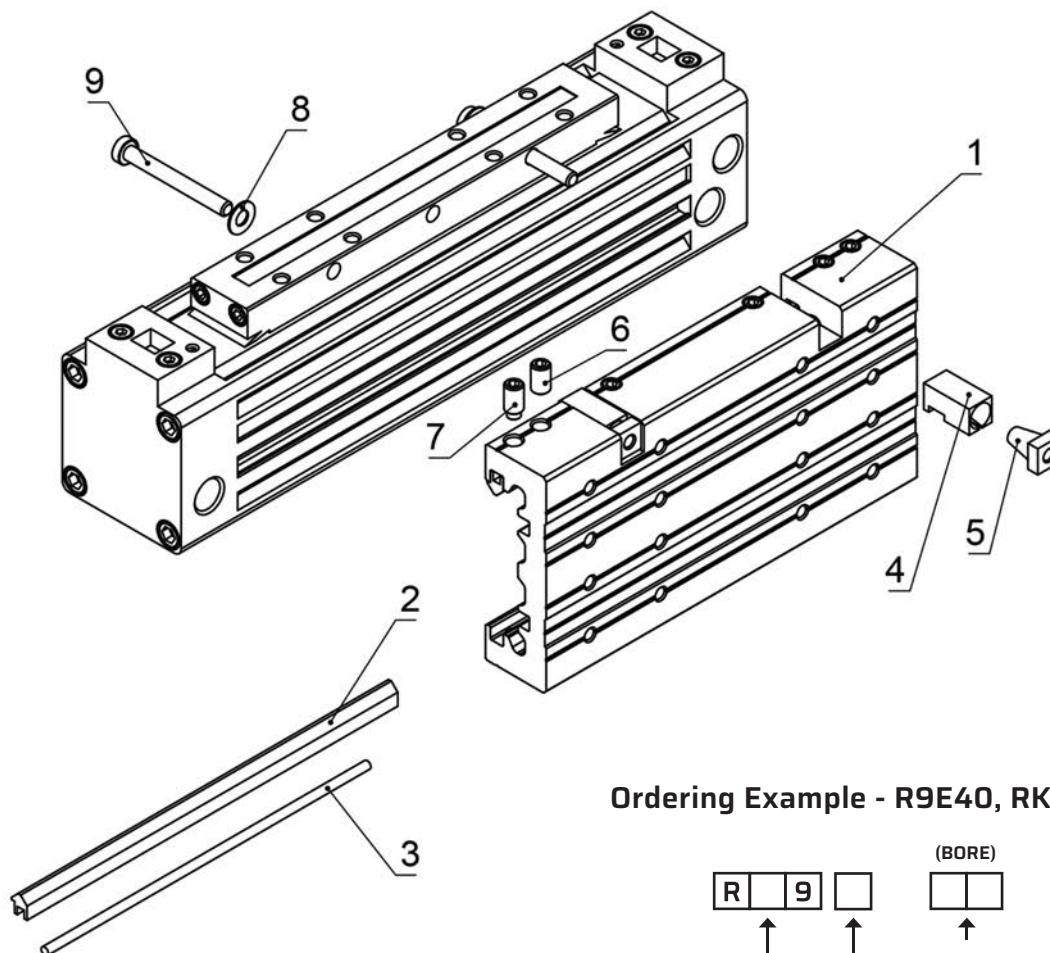
Contact Us

☎ Tel: 715 426 2000
800 428 1974

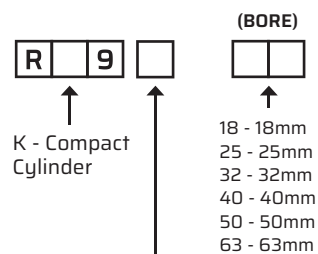
🌐 www.WCBranham.com
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Wisconsin, 54022 USA.

► **DTF/DTKF ADD-ON EXTERNAL GUIDE:**



Ordering Example - R9E40, RK9G25



REF #	DESCRIPTION	DTF	KIT E	KIT F	DTKF	KIT G
		QTY	1 EA. GUIDE/ ASSY DTF	2 EA. GUIDE/ ASSY DTF	QTY	1 EA. GUIDE/ ASSY DTKF
1	GUIDE, CARRIER	1	Included	Included X2	1	Included
2	BEARING, GUIDE BAR	2	Included	Included X2	2	Included
3	BAR, PRESS	2	Included	Included X2	2	Included
4	CLAMP WEDGE	2	Included	Included X2	2	Included
5	CONE NUT	2	Included	Included X2	2	Included
6	SCREW, CONE POINT	8	Included	Included X2	4	Included
7	SCREW, DOG POINT	4	Included	Included X2	4	Included
8	WASHER	2	Included	Included X2	2	Included
9	SCREW, CONNECTING	2	Included	Included X2	2	Included