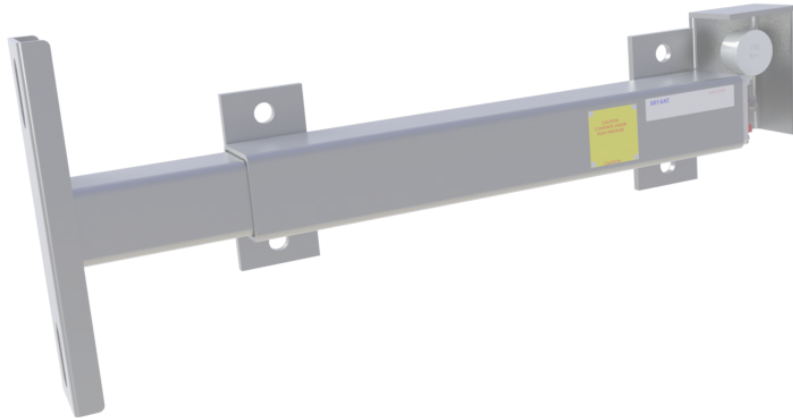


**OWNERS MANUAL
FOR
BRYANT PRODUCTS
HYDRAULIC TELESCOPER®**



**BE SURE TO READ THIS MANUAL BEFORE OPERATING
BRYANT HYDRAULIC TAKE-UPS**

CONTENTS:

1. System Cautions.
2. Grease type hydraulic cylinder take-ups.
 - 2.1 Fill at cylinder.
 - 2.2 Fill from remote location.
3. Oil type hydraulic cylinder take-ups.
 - 3.1 Fill at cylinder.



W1388 ELMWOOD AVE.
P.O. BOX 270
IXONIA, WI 53036
PHONE: 920-206-6920
FAX: 920-206-6929

CAUTIONS:

1.1 Caution:

Always work cautiously and safely when using Bryant hydraulic take-ups. Contents are under pressure and misuse or unsafe work habits could cause bodily harm.

1.2 Caution:

There is an important correlation between cylinder pressure and force applied. Always be sure you understand this relationship to prevent personal danger and damage to equipment. See Chart.

$$\text{Area} = \pi \times r^2$$

1.5" Dia. Piston (300 & 350 Series Telescopers)

(Gauge Pressure) x (Area of Piston) = Force Applied

250	1.77	442 PSI
500	1.77	885
750	1.77	1327
1000	1.77	1770
1500	1.77	2655
2000	1.77	3540 Max Standard 2000 psi Gauge
2500	1.77	4425
3000	1.77	5310

2" Dia. Piston (400 Series Telescopers)

(Gauge Pressure) x (Area of Piston) = Force Applied

500	3.14	1570 PSI
1000	3.14	3140
1500	3.14	4710
2000	3.14	6280 Max Standard 2000 psi Gauge
2500	3.14	7850
3000	3.14	9420

CAUTIONS:

3 1/2" Dia. Piston (500 Series Telescopers)

(Gauge Pressure) x (Area of Piston) = Force Applied

1	9.62	9.62	
2	9.62	19.24	
3	9.62	28.86	
4	9.62	38.48	
5	9.62	48.10	
6	9.62	57.72	
7	9.62	67.34	
8	9.62	76.96	
9	9.62	86.58	
10	9.62	96.20	
20	9.62	192.4	
30	9.62	288.6	
40	9.62	384.8	
50	9.62	481.0	
60	9.62	577.2	
70	9.62	673.4	
80	9.62	769.6	
90	9.62	865.8	
100	9.62	962.0	
200	9.62	1924	
300	9.62	2886	
400	9.62	3848	
500	9.62	4810	
600	9.62	5772	
700	9.62	6734	
800	9.62	7696	
900	9.62	8658	
1000	9.62	9620	
1500	9.62	14430	
2000	9.62	19240	Max Standard 2000 psi gauge
2500	9.62	24050	
3000	9.62	28860	

1.3 Hydraulic Lubricants:

It is recommended that the lubricant used is compatible with all components in the Bryant Hydraulic Telescoper (steel cylinder and polyurethane piston seal). Oil should be a good grade of hydraulic type with a SUS @ 100F between 100 and 2000.

Caution: Always use environmentally safe lubricants. Always dispose of used lubricants in accordance with local municipal regulations.



CAUTIONS:

1.4 Caution:

As ambient temperature changes, viscosity of lubricant will also change. Force applied to belt will also be affected. Temperature change will cause more or less tension on belt. To maintain a more constant belt tension, consult your lubricant engineer for synthetic oil options. Another option is use of the Bryant Accumulator P/N 34418, designed for applications where there is a temperature variation up to 100°F. If temperature varies greatly, it is recommended to use both the accumulator and good quality synthetic oil.

1.5 Caution:

All sliders are equipped with a warning label to indicate when full extension has been reached. Never extend Telescoper beyond this point.

1.6 Caution:

Always keep Telescoper in good operating order. Replace all broken components immediately using Bryant replacement parts or equivalent. Never replace damaged or broken components with inferior quality parts.

1.7 Caution:

Never re-engineer or modify Bryant Telescopers in any way. They are designed and engineered for a specific purpose and any modification without the written consent of Bryant Products, Inc. will void any warranty and liability of Bryant Products, Inc.

1.8 Caution:

If disassembling for any reason, always use high quality sealant on all thread connections. Replace any parts with worn or damaged threads.

1.9 Caution:

Never use damaged or previously used fittings. They could be susceptible to leaking or splitting when in operation under pressure.

1.10 Caution:

As seasonal conditions change, it is recommended that you consult your lubrication engineer to determine if it is necessary to change cylinder lubrication.

GREASE FILLED HYDRAULIC TELESCOPER® MOUNTING AND OPERATING INSTRUCTIONS

DIRECT MOUNT UNIT:

- 2.1:1** Mount Telescopier firmly to each side of the conveyor.
- 2.1:2** Mount pillow block bearing plate. (Note that slider is not fastened to Telescopier. Take precautions to prevent it from falling out when installing – personal injury could result).
- 2.1:3** Affix belt to conveyor.
- 2.1:4** Using standard grease gun, begin to fill through zerk fitting. Be sure to fill cylinders on both sides of the conveyor equally so as not to damage bearing.
- 2.1:5** Drain bleeder fitting is not tightened so that when starting to fill system, as much air as possible may be able to escape. As cylinders fill, watch for grease being forced out through bleeders. Use a 5/16 box end wrench to tighten bleeder and close the system.
- 2.1:6** Continue to fill cylinders with grease until desired pressure is obtained. Be sure to watch that cylinders extend equally and perpendicular with the centerline of conveyor.
- 2.1:7** Note: If too much pressure is applied to one cylinder, slowly open bleeder to relieve pressure. Grease will drain and pressure will reduce. Close bleeder and increase or decrease pressure as required.
- 2.1:8** Once desired pressure is obtained and belt has been properly stretched, start conveyor to determine if belt is tracking properly. If there is a problem with tracking, check cylinder pressure, increase or decrease if necessary. Check to see that pulley is running perpendicular to centerline of conveyor, adjust take-up if necessary. Check to see that belt is tensioned properly. It may be necessary to make other adjustments on the conveyor. Straightness, level, rollers and idlers perpendicular and parallel to centerline of conveyor or other problems could cause a tracking problem.
- 2.1:9** Note: If conveyor is used in an outside application and synthetic grease and an accumulator are not used, always monitor pressure so as to maintain proper belt tension as temperature changes.

REMOTE GREASE UNIT FILLING:

- 2.2:1** Mount Telescoper firmly to each side of the conveyor.
- 2.2:2** Mount Remote Fill Fitting Manifold (one required for each cylinder) in a convenient location.
- 2.2:3** Connect remote filling manifold to cylinder using 1/4" OD steel hydraulic tubing. Tubing should be firmly secured to the side of the conveyor to prevent damage. It is also recommended to take care not to kink tubing when making bends. Always use a tubing bender.
- 2.2:4** Follow steps 2 through 9 as listed in section 2.1 of this manual

OIL FILLED HYDRAULIC TELESCOPER®

MOUNTING AND OPERATING INSTRUCTIONS

DIRECT MOUNT UNIT:

- 3.1 Mount Telescopers firmly to side of the conveyor.
- 3.2 Mount hydraulic pump to side of conveyor where it is easy to operate and will not be damaged during use.
- 3.3 Connect pump and cylinder using 1/4 OD steel hydraulic tubing. Tubing should be firmly clipped to the side of the conveyor to prevent damage. It is also recommended to take care not to kink tubing when making bends. Always use a tubing bender.
- 3.4 Mount pillow block bearing plate. (Note that slider is not fastened to Telescoper. Take precautions to prevent it from falling out when installing – personal injury could result).
- 3.5 Drain bleeder fitting is not tightened so that when starting to fill system, as much air as possible may be able to escape. As cylinders fill, watch for oil being forced out through bleeders. Use a 5/16 box end wrench to tighten bleeder and close the system
- 3.6 Continue to fill cylinders with oil until desired pressure is obtained. Be sure to watch that cylinders extend equally and perpendicular with the centerline of conveyor.
- 3.7 Note: If too much pressure is applied to one cylinder, slowly open bleeder to relieve pressure. Oil will drain and pressure will reduce. Close bleeder and increase or decrease pressure as required.
- 3.8 Once desired pressure is obtained and belt has been properly stretched, start conveyor to determine if belt is tracking properly. If there is a problem with tracking, check cylinder pressure, increase or decrease if necessary. Check to see that pulley is running perpendicular to centerline of conveyor and adjust take-up if necessary. Check to see that belt is tensioned properly. It may be necessary to make other adjustments on the conveyor. Straightness, level, rollers and idlers perpendicular and parallel to centerline of conveyor or other problems could cause a tracking problem.
- 3.9 Note: If conveyor is used in an outside application and synthetic oil and an accumulator are not used, always monitor pressure so as to maintain proper belt tension as temperature changes.