

5800G

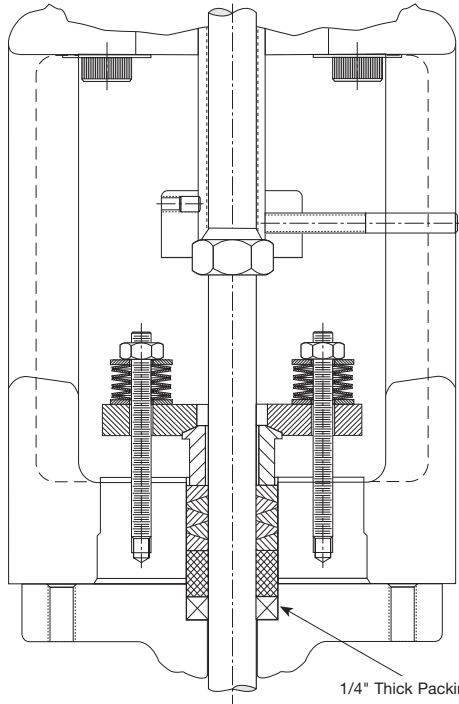
Installation Instructions




Control Valve Kits Designed by Chesterton to Fit Leslie® Valves

1. **Precaution:** System should be shut down, depressurized, drained, and cool before valve is handled. Observe all plant safety requirements.
 2. **Check the condition of the valve for the following:**
 - A 10 to 32 RMS (7.5 to 24 Ra) stem finish is required.
 - The stuffing box bore should be 125 RMS (94 Ra) or better finish.
 - The stem run out should not exceed ± 0.010 TIR/FT ($\pm 0,25$ TIR/M)
 - The Packing Box Ring (.250" thick metal ring) should be in the bottom of the stuffing box. (See *Packing Configuration*)
 3. The stuffing box must be clean, i.e. completely free of any previous packing or foreign material. The valve stem must be clean, free of nicks, scratches and burrs.
 4. Verify the split carbon sleeve height provided is correct. The height of the carbon sleeve should be the calculated height. The calculated height is the difference between the stuffing box depth and the measured packing set height. The packing height is approximately four times the cross section for the 5800G Set. If required, install the Split Carbon Sleeve (5101) or 5600HD Ring in the bottom of the stuffing box. Make sure the two halves align and are seated properly on the stuffing box bottom.
 5. Carefully install graphite wedge rings starting with an End Cap, followed by an I.D. Sealing Ring, O.D. Sealing Ring, I.D. Sealing Ring, and End Cap. (See *Packing Configuration*)
 - a) Install rings over the valve stem by twisting slightly, never open rings with a hinge like action.
 - b) Stagger ring joints 90°.
 - c) Use outer most or next ring to push previously installed rings into stuffing box until all rings are in place. **DO NOT USE A TAMPING TOOL**, you may damage the sealing surface on the wedge shaped rings.
 6. Gently seat the packing set with the Chesterton Tamping Tool.
 7. Install the packing follower and packing gland flange. Make sure the packing follower enters into the stuffing box.
 8. Lubricate the studs, bottom of the nuts, and live loading assembly components (belleville springs and flat washer) with Chesterton recommended anti-seize compound. Verify the springs and flat washers are properly stacked as shown in the chart. (See *Packing Configuration*)
 9. Install the new gland studs. Verify the B7 studs and the 2H nuts provided are of the same or better grade than the studs and nuts being replaced.
 10. Install a live loading assembly on each stud.
 11. Install the two packing gland nuts. Tighten each nut until finger tight. Alternately tighten the gland nuts with a torque wrench until the recommended torque is achieved. Verify that the packing gland is square and perpendicular to the stem.
 12. To properly consolidate the packing: Actuate the valve 10 times, retighten the packing gland nuts at the end of the last down / in-stroke. Actuate the valve 10 more times, retighten the packing gland nuts at the end of the last down / in-stroke.
 13. Follow normal safety precautions when returning the valve to service.
 14. It is advisable to check gland adjustment after a few hours of service. Take up as necessary.
- If the valve does not actuate properly at the compressed assembly height, release all packing gland load completely. Then gradually tighten the packing gland nuts until no leakage is observed. Do not tighten to the point where the stem will not actuate. *Reference the Torque and Friction Values.*

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PACKING CONFIGURATION



-  SEALING RINGS: *Style 5800 Set*
-  CARBON BUSHING: *Style 5101*
OR
GTPHD RING: *Style 5600* } WHEN REQUIRED
-  1/4" Thick Packing Box Ring

Radial Min.	Axial Min.	Uncomp. Height	Compress. Height	Bolt Dia.	Spring Configuration	AWC Live Load Item #
.675"	1.570"	1.565"	1.445"	.500"	2 in Parallel / 6 in Series	015940
.625"	.865"	.860"	.770"	.500"	6 in Series	024480
.625"	1.515"	1.510"	1.330"	.500"	12 in Series	025325
.675"	1.337"	1.332"	1.098"	.500"	10 in Series	025344
.625"	1.160"	1.155"	.958" 5 Ft-lbs .909" 6 Ft-lbs	.500"	10 in Series	025460
.625"	.782"	.777"	.659" 5 Ft-lbs .638" 6 Ft-lbs	.500"	6 in Series	025496
.790"	1.228"	1.223"	1.100"	.500"	2 in Parallel / 4 in Series	029033
.790"	.959"	.954"	.795"	.625"	6 in Series	029483
.790"	1.207"	1.202"	1.016"	.625"	8 in Series	029903
.625"	.971"	.966"	.809"	.500"	8 in Series	030444
.790"	1.362"	1.357"	1.246"	.625"	2 in Parallel / 4 in Series	031073
.625"	1.418"	1.413"	1.293"	.500"	2 in Parallel / 6 in Series	032502
.625"	2.411"	2.406"	2.166"	.500"	2 in Parallel / 12 in Series	033245
.790"	.850"	.845"	.800"	.625"	2 in Parallel / 2 in Series	200180
.790"	1.275"	1.270"	1.183"	.625"	2 in Parallel / 4 in Series	200232
.790"	.703"	.698"	.593"	.500"	4 in Series	200271
.790"	.758"	.753"	.666"	.500"	4 in Series	200492
.675"	1.113"	1.108"	.911"	.500"	8 in Series	200518
.675"	.664"	.659"	.565"	.500"	4 in Series	200519
.675"	.807"	.802"	.762"	.500"	2 in Parallel / 2 in Series	200520
.625"	.987"	.982"	.835"	.625"	8 in Series	200521

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800 PSI System Operating Pressure												
Valve Size	Stroke Length	Actuator Size	Stem O.D.	Box I.D.	Stud Dia.	Overall Stud Length Req.	Box Depth *	5101 Bushing Qty. / Hgt.	Live Load Item #	Chesterton Kit Item #	Calculated Packing Friction	Torque Ft-lbs
1" - 4"	2"	10"	.750"	1.250"	2 @ .500"	4.000"	1.875"	1 @ .750"	025460	148100	153 lbs	5
1" - 4"	2"	13"	.750"	1.250"	2 @ .500"	4.000"	1.875"	1 @ .750"	025460	148100	153 lbs	5
1" - 4"	2"	16" or 20"	.750"	1.250"	2 @ .500"	4.000"	1.875"	1 @ .750"	025460	148100	153 lbs	5
2" - 4" T2	2"	6"	.500"	1.250"	2 @ .500"	4.000"	1.875"	5600HD/.250"	025460	148104	140 lbs	6
6" T2	3"	10"	.750"	1.250"	2 @ .500"	3.500"	1.875"	1 @ .750"	025496	148107	153 lbs	5
6" T2	3"	13"	.750"	1.250"	2 @ .500"	4.000"	1.875"	1 @ .750"	025460	148100	153 lbs	5
6" T2	3"	16" or 20"	.750"	1.250"	2 @ .500"	3.750"	1.875"	1 @ .750"	030444	148110	153 lbs	5
6"	3"	13"	1.000"	1.500"	2 @ .500"	4.000"	1.625"	1 @ .500"	025460	148112	187 lbs	6
6"	3"	16" or 20"	1.000"	1.500"	2 @ .500"	3.500"	1.625"	1 @ .500"	025496	148115	187 lbs	6
8" T2	3"	10"	.750"	1.750"	2 @ .625"	N/A	2.250"	N/A	No L.L.	148118	280 lbs	14
8" T2	3"	13"	.750"	1.750"	2 @ .625"	4.625"	2.250"	N/A	029903	148119	280 lbs	14
8" T2	3"	16" or 20"	.750"	1.750"	2 @ .625"	N/A	2.250"	N/A	No L.L.	148118	280 lbs	14
8" - 12"	3"	16" or 20"	1.250"	1.750"	2 @ .625"	N/A	2.250"	1 @ 1.125"	No L.L.	148122	234 lbs	9
8" - 12"	3"	13"	1.250"	1.750"	2 @ .625"	4.250"	2.250"	1 @ 1.125"	200521	148123	234 lbs	9
1500 PSI System Operating Pressure												
Valve Size	Stroke Length	Actuator Size	Stem O.D.	Box I.D.	Stud Dia.	Overall Stud Length Req.	Box Depth *	5101 Bushing Qty. / Hgt.	Live Load Item #	Chesterton Kit Item #	Calculated Packing Friction	Torque Ft-lbs
1" - 4"	2"	10"	.750"	1.250"	2 @ .500"	4.250"	1.875"	1 @ .750"	025325	148101	263 lbs	9
1" - 4"	2"	13"	.750"	1.250"	2 @ .500"	4.250"	1.875"	1 @ .750"	025325	148101	263 lbs	9
1" - 4"	2"	16" or 20"	.750"	1.250"	2 @ .500"	4.250"	1.875"	1 @ .750"	025325	148101	263 lbs	9
2" - 4" T2	2"	6"	.5	1.250"	2 @ .500"	3.500"	1.875"	1 @ .750"	200271	148108	263 lbs	9
6" T2	3"	13"	.750"	1.250"	2 @ .500"	4.250"	1.875"	1 @ .750"	025325	148101	263 lbs	9
6" T2	3"	16" or 20"	.750"	1.250"	2 @ .500"	3.750"	1.875"	1 @ .750"	024480	148111	263 lbs	9
6"	3"	13"	1.000"	1.500"	2 @ .500"	4.250"	1.625"	1 @ .500"	025344	148113	351 lbs	11
6"	3"	16" or 20"	1.000"	1.500"	2 @ .500"	3.500"	1.625"	1 @ .500"	200519	148116	351 lbs	11
8" T2	3"	10"	.750"	1.750"	2 @ .625"	N/A	2.250"	N/A	No L.L.	148118	526 lbs	27
8" T2	3"	13"	.750"	1.750"	2 @ .625"	4.625"	2.250"	N/A	200232	148120	526 lbs	27
8" T2	3"	16" or 20"	.750"	1.750"	2 @ .625"	N/A	2.250"	N/A	No L.L.	148118	526 lbs	27
8" - 12"	3"	16" or 20"	1.250"	1.750"	2 @ .625"	N/A	2.250"	1 @ 1.125"	No L.L.	148122	438 lbs	16
8" - 12"	3"	13"	1.250"	1.750"	2 @ .625"	4.250"	2.250"	1 @ 1.125"	029483	148124	438 lbs	16
2600 PSI System Operating Pressure												
Valve Size	Stroke Length	Actuator Size	Stem O.D.	Box I.D.	Stud Dia.	Overall Stud Length Req.	Box Depth *	5101 Bushing Qty. / Hgt.	Live Load Item #	Chesterton Kit Item #	Calculated Packing Friction	Torque Ft-lbs
1" - 4"	2"	10"	.750"	1.250"	2 @ .500"	4.250"	1.875"	1 @ .750"	032502	148102	456 lbs	15
1" - 4"	2"	13"	.750"	1.250"	2 @ .500"	5.250"	1.875"	1 @ .750"	033245	148103	456 lbs	15
1" - 4"	2"	16" or 20"	.750"	1.250"	2 @ .500"	4.250"	1.875"	1 @ .750"	032502	148102	456 lbs	15
2" - 4" T2	2"	6"	.500"	1.250"	2 @ .500"	4.000"	1.875"	5600HD/.250"	029033	148106	456 lbs	20
6" T2	3"	10"	.750"	1.250"	2 @ .500"	3.500"	1.875"	1 @ .750"	200492	148109	456 lbs	15
6" T2	3"	13"	.750"	1.250"	2 @ .500"	4.250"	1.875"	1 @ .750"	032502	148102	456 lbs	15
6" T2	3"	16" or 20"	.750"	1.250"	2 @ .500"	3.500"	1.875"	1 @ .750"	200492	148109	456 lbs	15
6"	3"	13"	1.000"	1.500"	2 @ .500"	4.250"	1.625"	1 @ .500"	015940	148114	608 lbs	19
6"	3"	16" or 20"	1.000"	1.500"	2 @ .500"	3.500"	1.625"	1 @ .500"	200520	148117	608 lbs	19
8" T2	3"	10"	.750"	1.750"	2 @ .625"	N/A	2.250"	N/A	No L.L.	148118	911 lbs	47
8" T2	3"	13"	.750"	1.750"	2 @ .625"	4.625"	2.250"	N/A	031073	148121	911 lbs	47
8" T2	3"	16" or 20"	.750"	1.750"	2 @ .625"	N/A	2.250"	N/A	No L.L.	148118	911 lbs	47
8" - 12"	3"	16" or 20"	1.250"	1.750"	2 @ .625"	N/A	2.250"	1 @ 1.125"	No L.L.	148122	759 lbs	28
8" - 12"	3"	13"	1.250"	1.750"	2 @ .625"	4.250"	2.250"	1 @ 1.125"	200180	148125	759 lbs	28

* The stuffing box depth is measured with the .250" thick packing Box Ring installed in the bottom of the stuffing box.