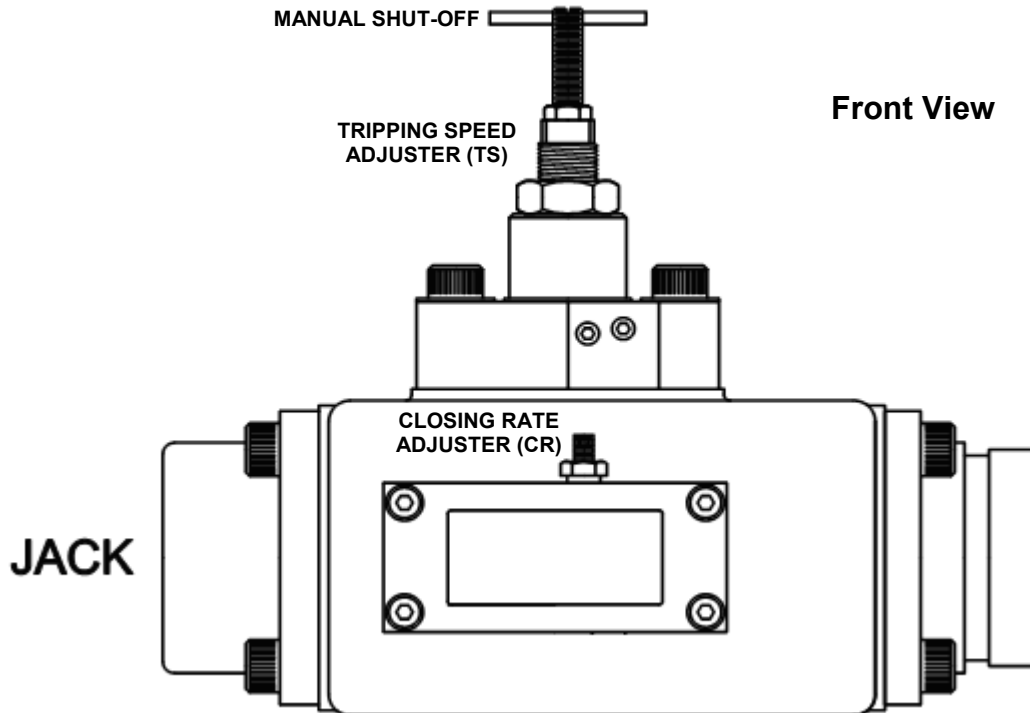


**Introduction**

The Maxton Overspeed Valve (Pipe Rupture / Shut Off Valve) is designed to provide protection against supply line failure or over speed in the down direction. The OSV can be adjusted to stop the elevator in the event of an over speed condition caused by a broken supply line or an abnormally high rate of flow between the OSV and the power unit. The OSV should be mounted as close the Jack as possible. The OSV complies with UFGS 14 24 00 - 2.4.2.2 and ASME A17.1 / CSA B44.



**Specifications**

**Standard Rated Contract Flow**

OSV E1	30 - 100 gpm (114 - 379 l/min)
OSV STD	100 - 300 gpm (379 - 1136 l/min)

**Operating Pressure**

Minimum	50 psi (3.4 bar)
Maximum	800 psi (55 bar)

**Line Connections**

Jack Port (Flange)	2, 2 1/2" NPT or Grooved
Tank Port (Flange)	2, 2 1/2" NPT or Grooved

**Operating Temperature** 80°-150° F (26° - 65° C)

**Oil Type** Hyd. ISO VG 32  
150 SUS @ 100° F (38° C)

**Overall Dimensions**

Width	11 1/4 inches (286mm)	Height	10 1/8 inches (257mm)
Depth	6 9/16 inches (167mm)	Weight	28 lbs. (12.7kg)

**Standard Features**

- Works on pressure drop, no electricity is required.
- Incorporates a manual shut off for use as a pit shut off valve.
- Adjustable closing rate.
- Unit body construction.
- Steel sleeve inserts in valve body.
- Grooved or threaded line connections.
- Individualized adjustments.
- Factory tested prior to shipping.
- 2 year limited warranty.

**Optional Features**

- 3" Grooved flanges

THE INFORMATION CONTAINED HEREIN IS FOR USE BY SKILLED HYDRAULIC ELEVATOR PROFESSIONALS

**CAUTION**

Never adjust the OSV while the car is in motion. (Stay out of the pit when the car is running.)

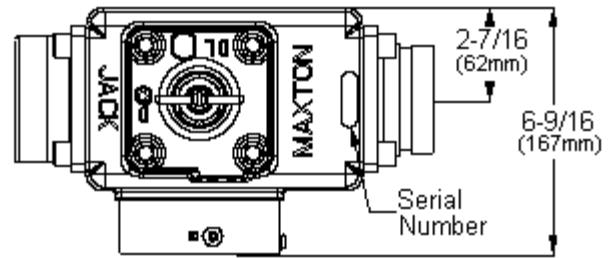
Manual shut off (MS) must be fully open (CCW) during normal operation.

When utilizing the OSV as a pit valve, turn Manual Shut Off in (CW) to stop.

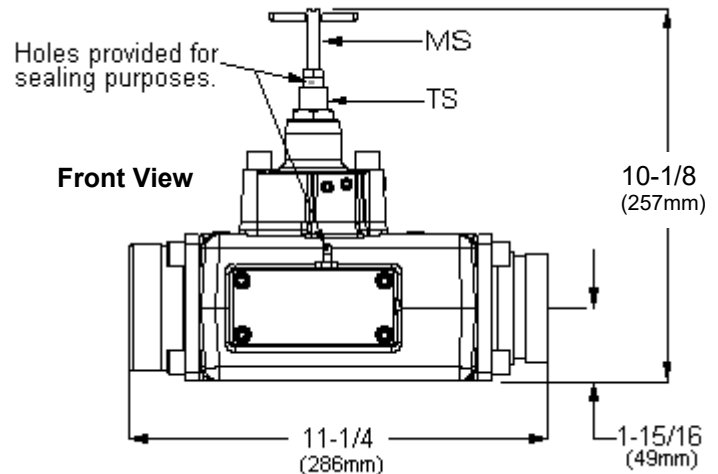
Once tripped or after opening the Manual Shut Off, the OSV must be reset to a normal open position by making an up run.

Maxton recommends the OSV have a threaded connection to the jack.

Top View



Front View



INITIAL SETTINGS		
TS	TRIPPING SPEED	OUT (CCW) to stop.
CR	CLOSING RATE	OUT (CCW) to stop.
MS	MANUAL SHUT OFF	OUT (CCW) to stop.

**NOTE:** To achieve accurate settings, OSV adjustments should be conducted with a fully loaded car. Whenever possible, run car to an intermediate floor during adjustments and tests. **It may be advisable to adjust for a slightly faster down transition to insure floor stop.**

**ADJUSTMENT PROCEDURES**

1. Set car speed by opening the Down Valve (main control valve) or increase the load to achieve contract down speed +25% (contract speed = full down speed with rated load).
2. Return car to the upper floor; Verify tripping flow on the PRECALCULATED TRIPPING FLOW TABLE. Turn **TS** in (CW) the number of turns indicated on the TRIPPING SPEED PRESET GRAPH. Exit the pit and register a down call. Minor Adjustment may be needed for final tripping speed. Lock jam nut.  
**If piston diameter is unknown**, turn **TS** in (CW) one turn. Exit the pit and register a down call. Repeat this procedure until the valve actuates. Lock jam nut.
3. Return the car to the upper floor, turn **CR** in (CW) three turns initially. Exit the pit and register a down call. Repeat this procedure using one-turn increments to obtain a comfortable, firm stop.
4. Seal adjustments **TS** and **CR** as required by local code.
5. Adjust the down valve and down transition back to normal settings (contract speed = full down speed with rated load).

(SEE NOTE ABOVE)

**FULL LOAD TEST PROCEDURE**

1. Load car to rated capacity.
2. Increase down speed in accordance with Main Control Valve's manufactures instructions until rupture valve sets.
3. Verify rupture valve set within range permitted by local code.
4. Verify adjustments are sealed on rupture valve.
5. Return Main control valve to operational settings.

**PRECALCULATED OSV TRIPPING FLOW TABLE**  
 DIRECT ACTING APPLICATIONS  
 JACK PISTON DIAMETER (INCHES)

	2	2 1/2	2 3/4	3	3 1/2	4	4 3/8	4 1/2	5	5 7/16	5 1/2	6	6 1/2	7	7 1/2	8	8 1/2	9 1/2	10 5/8	12 5/8	
L	1	0.20	0.33	0.39	0.46	0.63	0.81	0.98	1.04	1.28	1.51	1.54	1.84	2.15	2.50	2.88	3.26	3.69	4.60	5.76	8.13
O	5	1.03	1.60	1.93	2.30	3.13	4.08	4.88	5.16	6.38	7.54	7.71	9.18	11	13	14	16	19	23	29	41
A	10	2.04	3.19	3.86	4.59	6.25	8.16	10	10	13	15	15	19	21	25	29	33	36	46	58	81
D	20	4.08	6.38	7.71	9.18	13	16	20	21	25	30	31	36	43	50	58	65	74	93	115	163
E	30	6.13	10	12	14	19	25	29	31	39	45	46	55	65	75	86	98	110	138	173	244
D	40	8.16	13	15	19	25	33	39	41	51	60	61	74	86	100	115	130	148	184	230	325
	50	10	16	19	23	31	41	49	51	64	75	78	91	108	125	144	164	184	230	288	406
C	60	12	19	24	28	38	49	59	63	76	90	93	110	129	150	173	196	221	276	345	488
A	70	14	23	28	33	44	58	69	73	89	105	108	129	151	175	201	229	258	323	403	569
R	80	16	25	31	36	50	65	78	83	103	121	124	148	173	200	230	261	295	369	460	650
	90	19	29	35	41	56	74	88	93	115	136	139	165	194	225	259	294	331	414	519	731
S	100	20	33	39	46	63	81	98	104	128	151	154	184	215	250	288	326	369	460	576	813
P	110	23	35	43	50	69	90	108	114	140	166	170	203	238	275	315	359	405	506	634	894
E	120	25	39	46	55	75	98	118	124	153	181	185	220	259	300	344	391	443	553	691	975
E	125	25	40	49	58	78	103	123	129	160	189	193	230	269	313	359	408	460	575	720	1016
D	130	26	41	50	60	81	106	128	134	166	196	200	239	280	325	373	424	479	599	749	1056
	140	29	45	54	64	88	114	136	145	179	211	216	258	301	350	401	458	516	645	806	1138
F	150	30	48	58	69	94	123	146	155	191	226	231	275	324	375	430	490	553	690	864	1219
P	160	33	51	61	74	100	130	156	165	204	241	246	294	345	400	459	523	590	736	921	1300
M	170	35	54	65	78	106	139	166	175	216	256	263	313	366	425	488	555	626	783	979	1383
	180	36	58	70	83	113	148	176	186	230	271	278	330	388	450	516	588	664	829	1036	1464
	190	39	60	74	88	119	155	185	196	243	286	293	349	410	475	545	620	700	875	1094	1545
	200	41	64	78	91	125	164	195	206	255	301	309	368	431	500	574	653	738	920	1151	1626

**Tripping Flow (GPM)**

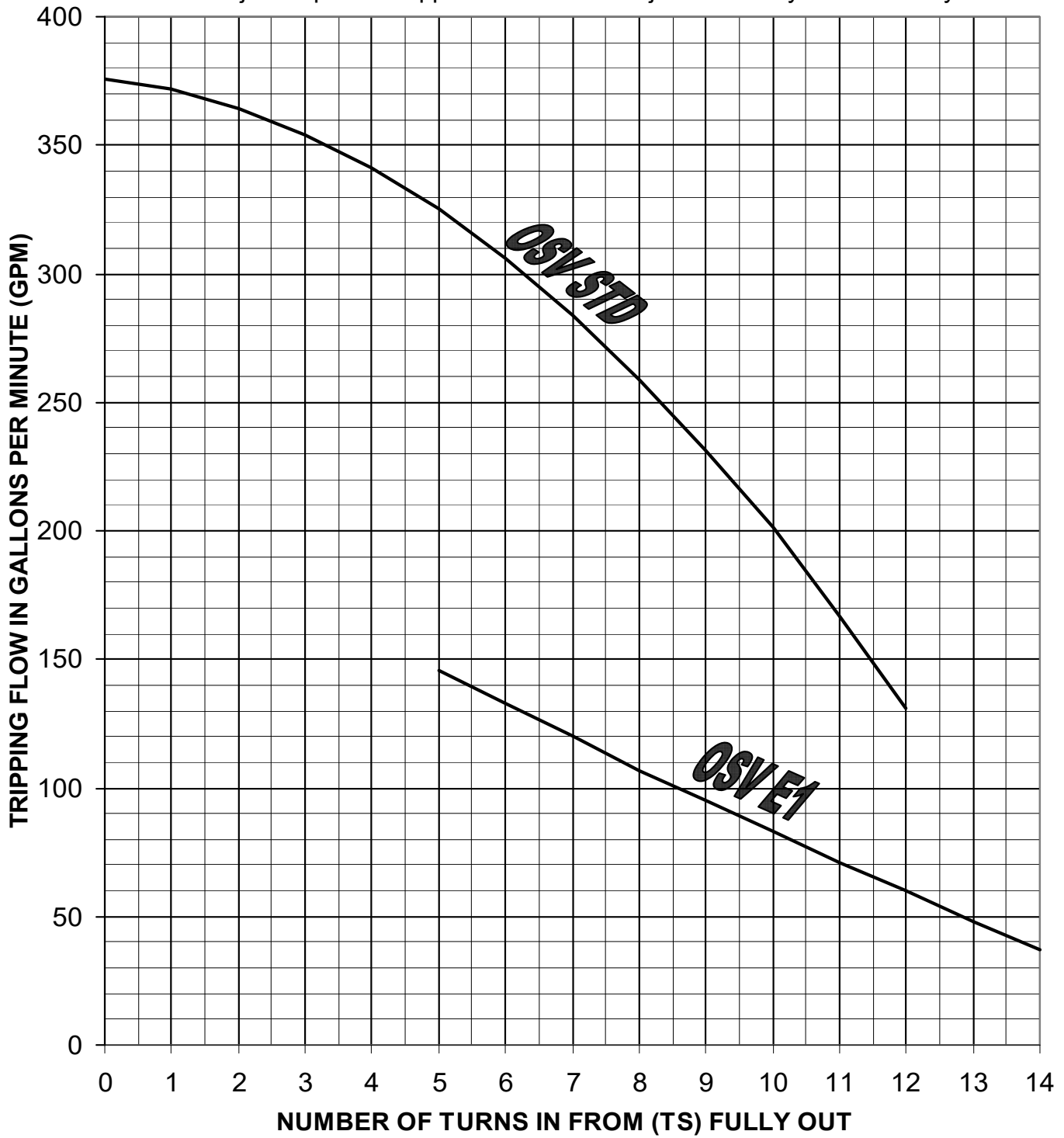
**NOTICE:** DO NOT USE THIS TABLE FOR CALCULATING PUMP OUTPUT.  
 TABLE REPRESENTS OSV TRIPPING FLOW ONLY. RATED FLOW X 125%

Table Instructions:

1. Intersect loaded down speed with the piston diameter.
2. Intersection = Tripping Flow.
3. Apply tripping flow to the chart on the following page to determine the number turns needed in on the TS adjuster.

### TRIPPING SPEED ADJUSTER (TS) PRESETS\*

\* Adjusted position approximate - Final adjustment may be necessary

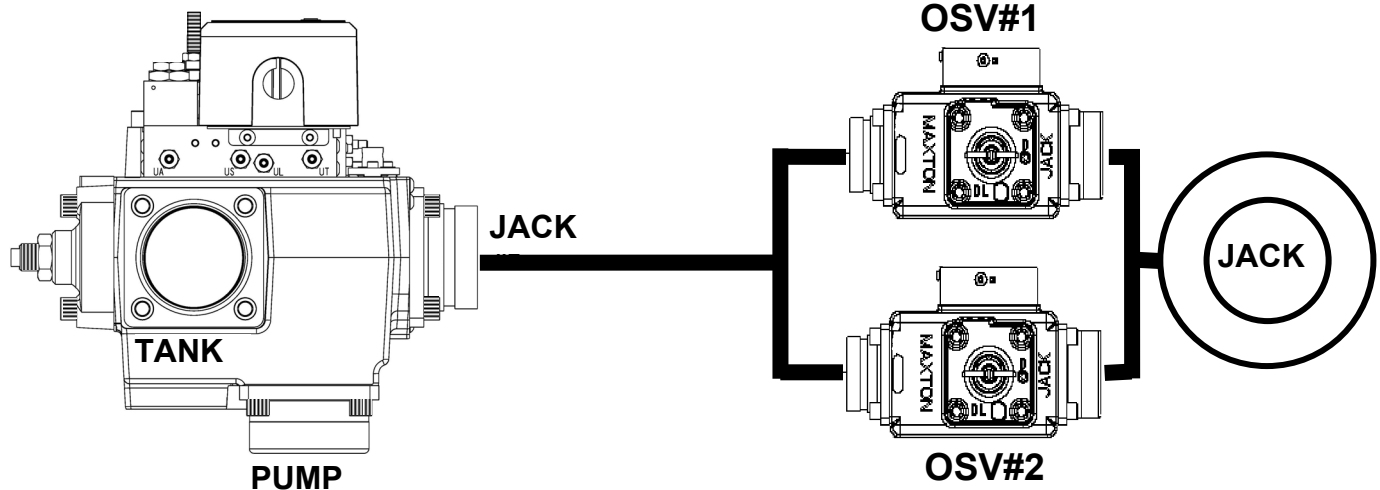


Tripping flow 125% = piston dia. X piston dia. X .051 X Contract Speed (max. down speed with rated load)

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## DUAL OSV ADJUSTMENT PROCEDURES

### MAIN CONTROL VALVE



### ADJUSTMENT (OSV#1):

#### **IMPORTANT: NOTE THE NUMBER OF TURNS IN ON THE TS AND CR ADJUSTERS.**

1. Set car speed by adjusting the down valve (Main control valve) to **HALF** of the desired tripping speed.
2. Return car to the upper floor; Turn MS (Manual Shut Off) adjuster IN (CW) to stop on the OSV#2.
3. OSV#1: Turn TS Adjuster IN (CW) one turn. Exit the pit and register a down call. Repeat this procedure until the valve actuates. **NOTE THE NUMBER OF TURNS IN ON THE TS ADJUSTER.**
4. Return car to the upper floor. Lock TS jam nut. Turn CR IN (CW) three turns. Exit the pit and register a down call. Repeat this procedure using one-turn increments to obtain a comfortable, firm stop. **NOTE THE NUMBER OF TURNS IN ON THE CR ADJUSTER.**

### ADJUSTMENT (OSV#2):

5. OSV#2: Turn MS and TS adjusters OUT (CCW) to stop.
6. Turn TS adjuster IN (CW) the same number of turns as TS on OSV#1 from initial setting.
7. Turn CR adjuster IN (CW) the same number of turns as CR on OSV#1 from initial setting.
8. Send car down. OSV#1 should trip. Send car to upper floor.

### TESTING OSV's:

9. Increase the car speed by opening the down valve (Main control valve) to verify that tripping speed is within Local Code requirements.
10. Seal **TS** and **CR** adjusters on both OSV's as required by local code.
11. Adjust the main down valve and down transition back to normal settings.  
(Contract Speed = Full down speed with rated load).

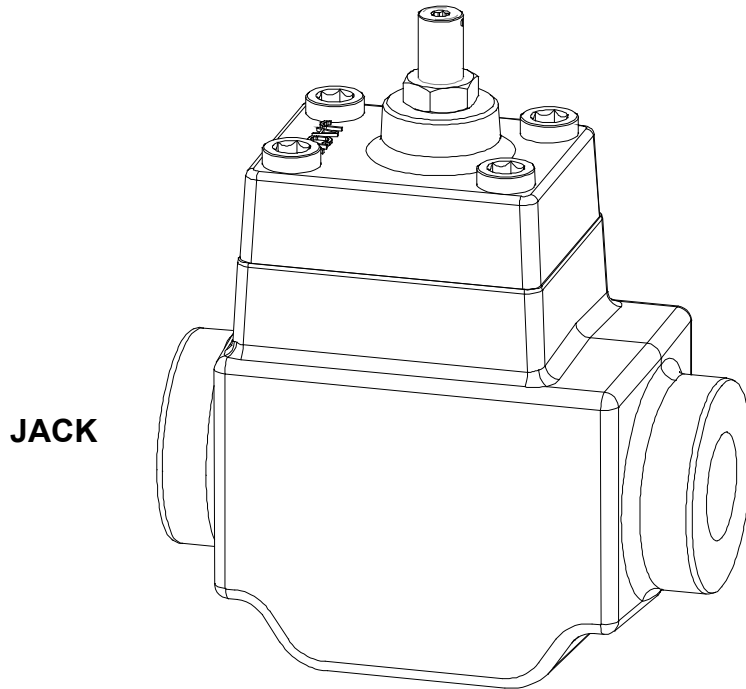
### ALTERNATE METHOD (TABLE AND CHART)

Verify tripping flow on the PRECALCULATED TRIPPING FLOW TABLE. Divide TRIPPING FLOW by two (TRIPPING FLOW / 2). Turn **TS** in (CW) on both valves as indicated on the TRIPPING SPEED PRESET GRAPH. Exit the pit and register a down call. Minor adjustment may be needed for final tripping speed. Adjust valves equally.

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**Introduction**

The Maxton OSV25 Overspeed Valve (Pipe Rupture) is designed to provide protection against supply line failure or over speed in the down direction. The OSV25 can be adjusted to stop the elevator in the event of an over speed condition caused by a broken supply line or an abnormally high rate of flow between the OSV25 and the power unit. The OSV25 complies with ASME A17.1 / CSA B44.



**Standard Features**

- Works on pressure drop, no electricity is required.
- Unit body construction.
- Factory tested prior to shipping.
- 2 year limited warranty.

<b>Working Flow</b> OSV25	(80% of Tripping Flow) 3 – 24 gpm (11.4 – 90.8 l/min.)	<b>Oil Type</b>	Hydraulic ISO VG 32 150 SUS @ 100°F (38°C)
<b>Operating Pressure</b> Minimum Maximum	150 psi (10.3 bars) 1000 psi (68.9 bars)	<b>Operating Temperature</b>	80° - 150°F (26 - 65°C)
<b>Line Connections</b> OSV25	¾" NPT Jack & Tank	<b>Overall Dimensions</b> Width Height Depth	4-5/8 inches (118 mm) 5-1/2 inches (140 mm) 2-3/8 inches (60 mm)
		<b>Weight</b>	2.9 lbs. (1.32 kg.)

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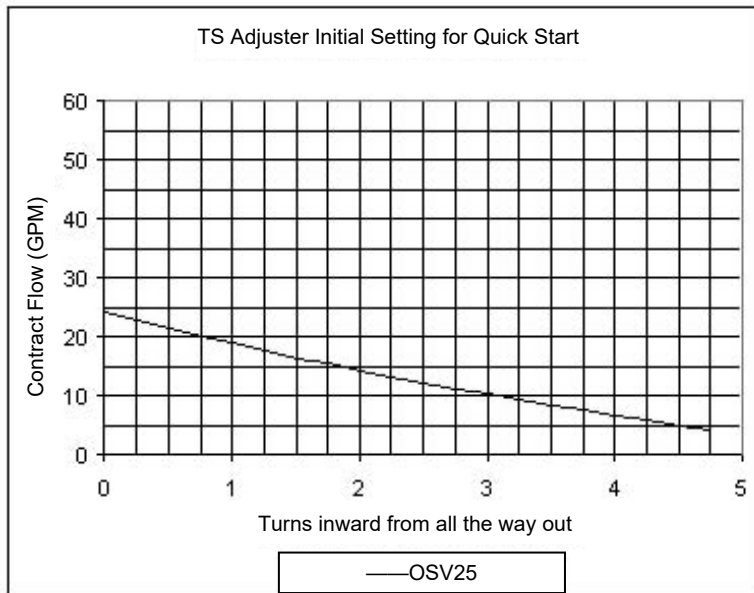
**CAUTION**

Stay out of the pit when the car is in motion.

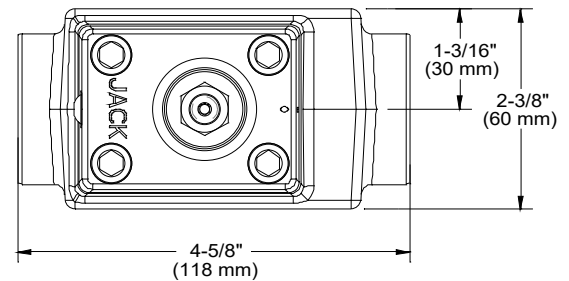
Once tripped, the OSV25 must be reset to a normal open position by making an up run.

**INITIAL SETTING:**

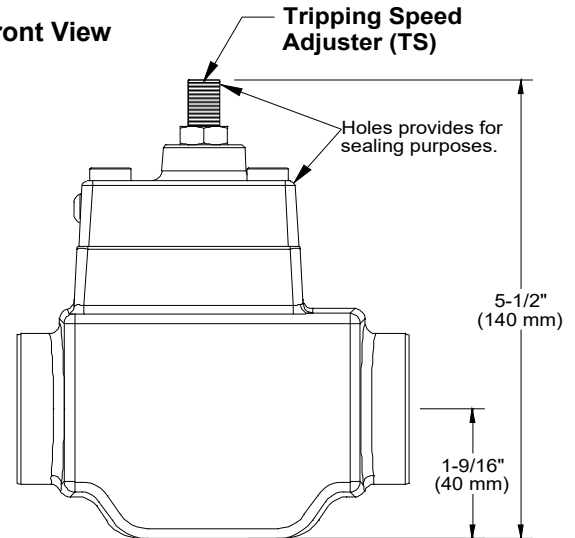
Turn Tripping Speed Adjuster (TS) OUT (CCW) to stop.



**Top View**



**Front View**



**ADJUSTMENT PROCEDURES**

**NOTE:** OSV25 adjustments should be conducted with a fully loaded car. Whenever possible, run car to an intermediate floor during adjustments and tests. It may be advisable to adjust for a slightly faster down transition to insure floor stop.

1. Set car speed to contract down speed +25% (contract speed = full down speed with rated load).
2. Return car to the upper floor; turn TS in (CW) one quarter turn. Exit the pit and register a down call. Repeat this procedure until the valve actuates. Tighten jam nut to lock setting in place.
3. Apply seal to TS adjuster as required by state and local code.
4. Adjust the down valve back to normal settings.