

# KR-200 Regulator Specifications **Table of Contents**

- 2. Specifications and Data Sheet
- 3. Configuration Overview
- 4. Regulator with Manual Operator Installation Drawing
- 5. Regulator with Failsafe Air Operator Installation Drawing
- 6. Regulator with Failsafe Hydraulic Operator Installation Drawing
- 7. General Assembly Overview
- 8. L and H Model Configurations Assembly Drawing
- 9. D and W Model Configurations Assembly Drawing
- 10. P Model Configurations Assembly Drawing
- 11. Failsafe Air and Hydraulic Operators Assembly Drawing
- 12. High Pressure Low Deadband Adjustment Head Assembly Drawing
- 13. High Pressure Low Deadband Manual Operator Assembly Drawing
- 14. High Pressure Low Deadband Failsafe Air Operators (Standard and High Torque) Assembly Drawing
- 15. High Pressure Low Deadband Failsafe Hydraulic Operator Assembly Drawing
- 16. Internal Override Bypass Direct Operation Assembly Drawing
- 17. Internal Override Bypass with SV-25 Assembly Drawing
- 18. Internal Override Bypass with SVx-25 Assembly Drawing



All PacSeal Hydraulics' KR Pressure Regulators are designed with ShearFlo® metal-to-metal sealing technology. ShearFlo® sealing technology features:

- High cycle life and anti-wear design is suitable for critical service applications, including contaminated fluids.
- Leak proof, contaminant resistant metal-to-metal seal is accomplished by lapping and polishing hardened stainless steel sealing elements to exacting standards of finish and flatness.
- The sealing elements are spring preloaded and pressure energized, which maintains contact between the two sealing surfaces at all times.

All KR Regulators are tested to PacSeal's strict quality control standards to ensure proper function and reliability. Every ShearFlo® sealing component in a repair kit is inspected to ensure trouble-free performance after field maintenance and repair.

PacSeal Hydraulics' KR Pressure Regulators serve as pressure reducing and regulating valves to maintain system pressure at a desired value (set pressure) which is below that of the supply pressure.

The operator controls the outlet pressure by modulating the compression of springs that act on a pressurized piston. This in turn balances the hydraulic load inside the body. The operator options are as follows:

- Manual
- Failsafe Air Motor with Manual Override
- Failsafe Hydraulic Motor with Manual Override
- Hydraulic Pilot

The internal override bypass operator provides a lean solution for tight space applications by allowing full accumulator pressure to be supplied downstream of the regulator without a dedicated 4-way bypass valve in the hydraulic circuit.

NOTE: To prevent hammering, the downstream hydraulic circuit must have adequate flow; such that the pipe/hose and all fittings' diameter matches that of the KR-200 outlet. To safeguard this further, an accumulator is recommended to be used downstream of the regulator's outlet.

General	Specifications	
Supply Port Size	1-1/4 in. NPT or SAE (2X)	
Outlet Port Size	2 in. NPT or SAE	
Vent Port Size	1 in. NPT or SAE (2X)	
Working Pressure Options (Liquid)	3000, 5000, or 6000 psi	
Regulated Outlet Pressure Options	See Product Configurator	
Cv Factor Outlet	33	
Cv Factor Vent	4.1	
Rated Flow	300 gpm	
Temperature Rating (Regulators and Failsafe Air Motors)	-40° to 250°F	
Weight	See installation drawings	
M	aterials	
ShearFlo Sealing Components (i.e. Rotor and Seal Rings)	Hardened Stainless Steel	
Body	Stainless Steel	
Flanges and Operators	Carbon Steel	
Hardware	Coated Carbon Steel	
O-rings	Buna-N (N), Viton (V), or EPR (E)	
Backup Rings	Teflon	

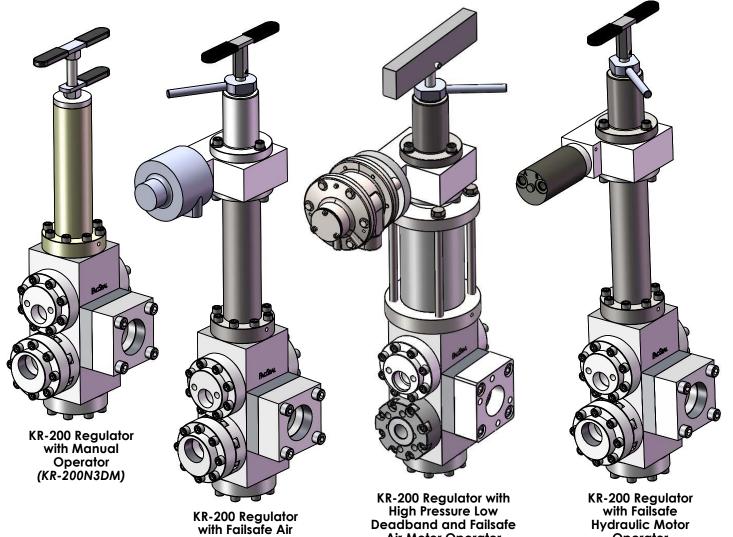
Model	Regulated Outlet Pressure [psi]	Deadand Range [psi]*
L	300-1800	100-150
D	500-3000	200-300
Н	500-3300	100-150
W	700-4500	200-300
Р	50-6000	0-100

\*Deadband is the difference between the set pressure and the actual outlet pressure that triggers the KR to open. The deadband will vary depending on factors that influence the friction between the seal rings and flow plates. Namely, type of fluid and lubricity properties, temperature, differential pressure between supply and regulated outlet, seal ring and flow plate wear condition, and lastly interpretation influenced by gauge sensitivity. The Reset Range or Hysteresis is within +/-150 psi for all models.

						zoo kogolalolo
Model Number Configurator						
Basic Supply Regulated Outlet Pressure Operator		Operator	Internal Override			
Model		Pressure	Operating Range <sup>2</sup>	Deadband		Bypass
	N NPT	<b>3</b> 3000 psi	<b>L</b> 300-1800 psi	100-150 psi	M Manual	-IO Direct
	<b>S</b> SAE	<b>5</b> 5000 psi	<b>L</b> 000 1000 psi	100-130 psi	FSA Failsafe Air Motor	-IS with SV-25
KR-200	C Code-61 <sup>1</sup>	<b>5</b> 5000 psi	<b>D</b> 500-3000 psi	200-300 psi	FSH Failsafe Hydraulic Motor	-IX with SVx-25
1011-200	<b>D</b> Code-62 <sup>1</sup>	<b>6</b> 6000 psi	<b>H</b> 500-3300 psi	100-150 psi		Leave blank if
		<b>6</b> 6000 psi	<b>W</b> 700-4500 psi	200-300 psi		— N/A
		3, 5, or 6	<b>P</b> <sup>3</sup> 50-6000 psi	0-100 psi	H Hydraulic Pilot	- /V/A

Notes: <sup>1</sup>Not a standard option - special order only

<sup>&</sup>lt;sup>3</sup> Maximum regulated outlet pressure matches the supply pressure for a regulator with the Hydraulic Pilot operator



**Motor Operator** (KR-200S3LFA)

**Air Motor Operator** (KR-200C3HFSA)

Operator (KR-200N3DFSH)

Displayed models are just a few examples of the many potential configurations



#### PROPRIETARY AND CONFIDENTIAL

THE INFORMATION CONTAINED IN THIS DRAWING IS THE SOLE PROPERTY OF PacSeal.

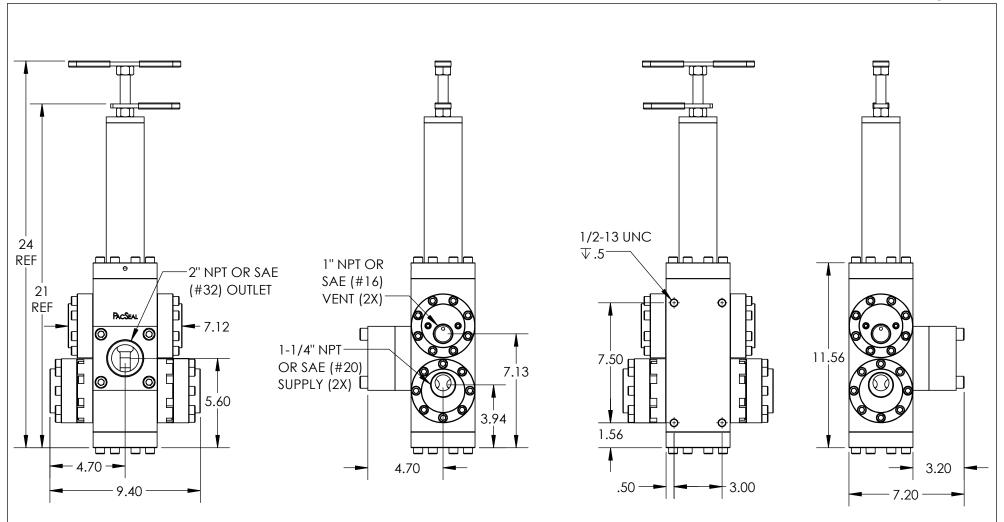
ANY REPRODUCTION IN PART OR AS A WHOLE WITHOUT THE WRITTEN PERMISSION OF PacSeal IS PROHIBITED.

TITLE

Configuration Overview

**REV** SIZE SHEET 3 OF 18

<sup>&</sup>lt;sup>2</sup> Regulated Outlet Pressure cannot exceed supply pressure. Absolute Outlet Pressure is 0 psi up to 25% above the maximum operating



#### Notes:

- Adjustment handle can be threaded in or out to increase or decrease compression on the spring and thus on the regulated outlet pressure.
- 2. Model configuration (Regulated Outlet Pressure) options: L, D
- Weight 84 lb. 3.
- All dimensions are consistent for KR-200 NPT or SAE ORB porting options, regardless of supply/outlet pressure and operator selection.



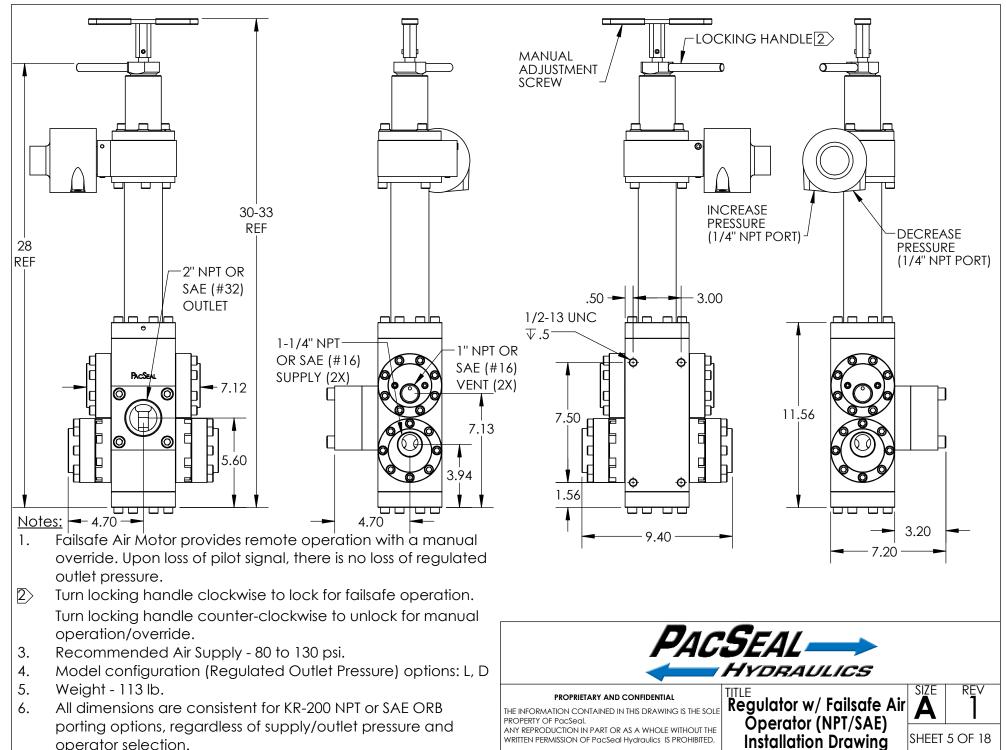
2

THE INFORMATION CONTAINED IN THIS DRAWING IS THE SOLE ANY REPRODUCTION IN PART OR AS A WHOLE WITHOUT THE

WRITTEN PERMISSION OF PacSeal Hydraulics IS PROHIBITED.

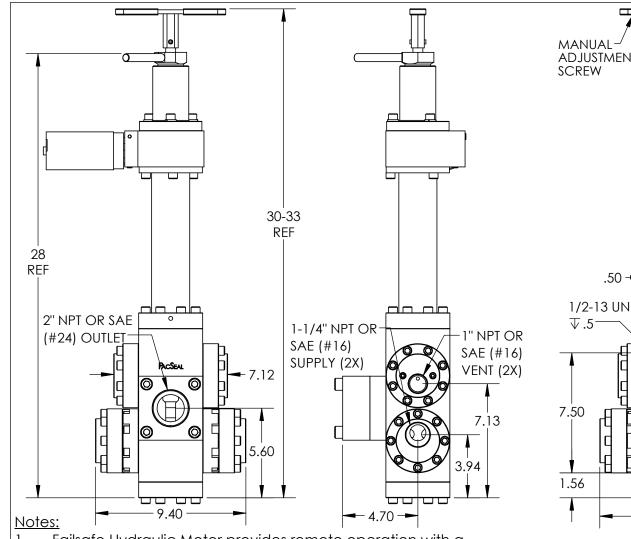
Regulator w/ Manual Operator (NPT/SAE) Installation Drawing

SIZE REV SHEET 4 OF 18



3

operator selection.



LOCKING HANDLE 2 **ADJUSTMENT** DECREASE-**INCREASE** PRESSURE **PRESSURE** (#6 SAE PORT) (#6 SAE PORT) 3.00 1/2-13 UNC 11.56 3.20

- Failsafe Hydraulic Motor provides remote operation with a manual override. Upon loss of pilot signal, there is no loss of regulated outlet pressure.
- Turn locking handle clockwise to lock for failsafe operation.

  Turn locking handle counter-clockwise to unlock for manual operation/override.
- 3. Max Hydraulic Motor Supply Pressure 1500 psi
- 4. Model configuration (Regulated Outlet Pressure) options: L, D
- 5. Weight 110 lb.
- 6. All dimensions are consistent for KR-200 NPT or SAE porting options, regardless of supply/outlet pressure and operator selection.



2

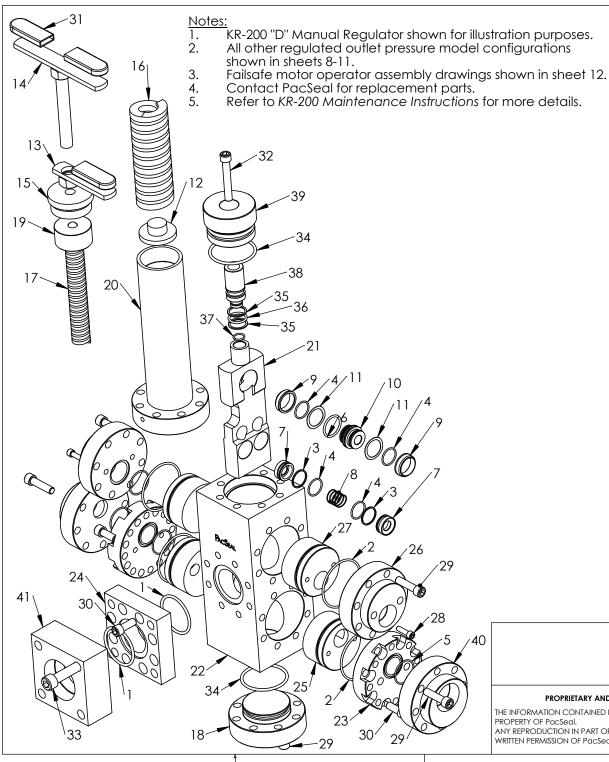
#### PROPRIETARY AND CONFIDENTIAL

THE INFORMATION CONTAINED IN THIS DRAWING IS THE SOLE PROPERTY OF PacSeal.

ANY REPRODUCTION IN PART OR AS A WHOLE WITHOUT THE WRITTEN PERMISSION OF PacSeal Hydraulics IS PROHIBITED.

Regulator w/ Failsafe
Hydarulic Operator
(NPT/SAE)
Installation Drawina

SIZE REV A 1



ITEM NO.	PART NUMBER		QTY.
1	23-1126	O-Ring	2
2	23-1263	O-Ring	4
3	23-1322	Backup Ring	4
4	23-1323	O-Ring	6
5	23-1325	O-Ring	6
6	23-1334	O-Ring	1
7	40-0014	Seal Ring,	4
8	40-0110	Spring	2
9	40-0113	Seal Ring- Vent	2
10	40-0114	Valve, Cage	1
11	40-0115	Wave Spring	2
12	40-0134	Spring Plate	1
13	40-0135	Lock Handle	1
14	40-0136	Adjusting Screw & Handle	1
15	40-0140	Plug, Adjustment Head	1
16	40-0143	Spring, Outer	1
17	40-0144	Spring, Inner	1
18	40-0197	Flange, Lower	1
19	40-0300	Spring Guide	1
20	40-0383	Ajustment Head	1
21	40-0714	Seal Container, KR-150	1
21 22	40-1343	Body, KR-200	1
23	40-1345	Adapter, Inlet Flange	2
24	40-1347	Adapter, Outlet Flange 2" NPT	1
25	40-1350	Flow Plate, Supply	2
26	40-1383	Flange, Inlet & Vent	2
27	40-2213	Flow Plate Vent, KR-200	2
28	50-0066	SHCS	8
29	50-0069	Bolt, SHCS	48
30	50-0072	SHCS	24
31	50-0239	Grip, Handle	3
32	50-0331	SHCS	1
33	50-0340	SHCS	4
34	Note 2	O-Ring	2
35	Note 2	Backup Ring	2
36	Note 2	O-Ring	1
37	Note 2	O-Ring	1
38	Note 2	Piston, Manual	1
39	Note 2	Piston Guide, Manual	1
40	Note 4	Flange, 1-1/4" NPT Inlet	2
41	Note 4	Flange, 2" NPT Outlet	1
	In a Cr	A /	



TITLE

#### PROPRIETARY AND CONFIDENTIAL

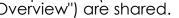
THE INFORMATION CONTAINED IN THIS DRAWING IS THE SOLE PROPERTY OF PacSeal.

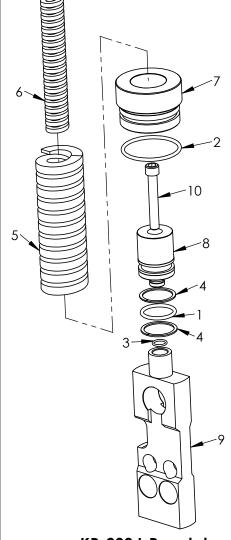
ANY REPRODUCTION IN PART OR AS A WHOLE WITHOUT THE WRITTEN PERMISSION OF PacSeal Hydraulics IS PROHIBITED. **General Assembly** Overview

REV SIZE SHEET 7 OF 18

Notes:

The listed components vary based on Supply and Regulated Outlet Pressures, while all other regulator components (shown in sheet 7 "General Assembly Overview") are shared.





**KR-200 L Regulator** 

ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1	23-1124	O-Ring	1
2	23-1319	O-Ring	1
3	23-1333	O-Ring	1
4	23-1342	Backup Ring	2
5	40-0143	Spring, Outer	1
6	40-0144	Spring, Inner	1
7	40-1351	Piston Guide, L	1
8	40-1352	Piston, L	1
9	40-0714	Seal Container	1
10	50-0331	Screw	1

Model	Supply Pressure (psi)	Regulated Outlet Pressure (psi)	Deadband (psi)
L	3000/5000	300-1800	100-150
Н	5000/6000	500-3300	100-150

**KR-200 H Regulator**With High Pressure Output
Adjustment Head

ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1	23-1124	O-Ring	1
2	23-1319	O-Ring	1
3	23-1333	O-Ring	1
4	23-1342	Backup Ring	2
5	40-0714	Seal Container	1
6	40-1351	Piston Guide, L	1
7	40-1352	Piston, L	1
8	40-2927	KR-75/140/150 L-HP Manual Operator	1
9	50-0331	Screw	1



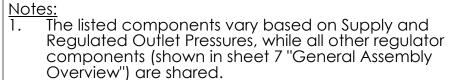
PROPRIETARY AND CONFIDENTIAL

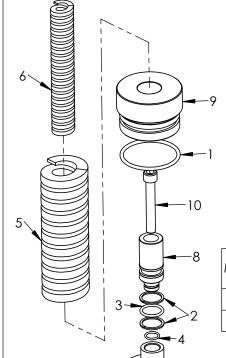
THE INFORMATION CONTAINED IN THIS DRAWING IS THE SOLE PROPERTY OF PacSeal.

ANY REPRODUCTION IN PART OR AS A WHOLE WITHOUT THE WRITTEN PERMISSION OF PacSeal IS PROHIBITED.

L and H Model **Configurations Assembly Drawing** 







Model	Supply Pressure (psi)	Ouliei	Deadband (psi)
	( ,	Pressure (psi)	·· ,
D	5000/6000	500-3000	200-300
W	6000	700-4500	200-300



	-		
ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1	23-1319	O-Ring	1
2	23-1331	Backup Ring	2
3	23-1332	O-Ring	1
4	23-1333	O-Ring	1
5	40-0714	Seal Container	1
6	40-0717	Piston, D	1
7	40-0718	Piston Guide, D	1
8	40-2927	High Pressure Output Adj. Head	1
9	50-0331	SHCS	1

ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1	23-1319	O-Ring	1
2	23-1331	Backup Ring	2
3	23-1332	O-Ring	1
4	23-1333	O-Ring	1
5	40-0143	Spring, Outer	1
6	40-0144	Spring, Inner	1
7	40-0714	Seal Container	1
8	40-0717	Piston, D	1
9	40-0718	Piston Guide, D	1
10	50-0331	SHCS	1



PROPRIETARY AND CONFIDENTIAL

THE INFORMATION CONTAINED IN THIS DRAWING IS THE SOLE PROPERTY OF PacSeal.

ANY REPRODUCTION IN PART OR AS A WHOLE WITHOUT THE WRITTEN PERMISSION OF PacSeal IS PROHIBITED.

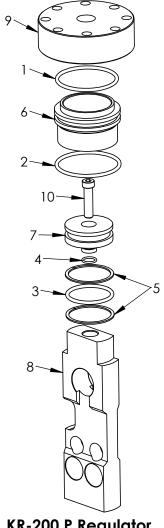
TITLED and W Model Configurations Assembly Drawing SHEET 9 OF 18

SIZE

**REV** 

Notes: The listed components vary based on Supply and Regulated Outlet Pressures, while all other regulator components (shown in sheet 7 "General Assembly Overview") are shared.

Model	Supply Pressure (psi)	Regulated Outlet Pressure (psi)	Deadband (psi)
Р	3000/5000/6000	50-6000	0-100



## KR-200 P Regulator (Hydraulic Pilot)

ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1	23-1128	O-Ring	1
2	23-1327	O-Ring	1
3	23-1330	O-Ring	1
4	23-1333	O-Ring	1
5	23-1413	Backup Ring	2
6	40-0318	Piston Guide	1
7	40-0319	Piston, Hydraulic	1
8	40-0320	Seal Container	1
9	40-0324	Hydraulic Head	1
10	50-0068	Bolt, SHCS	1



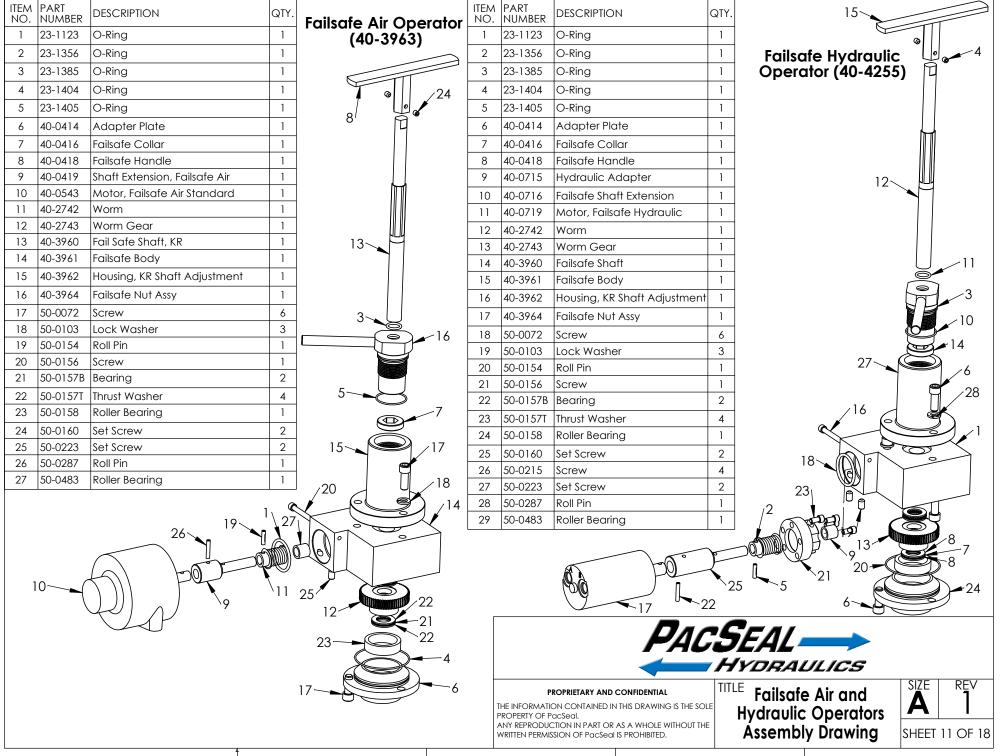
PROPRIETARY AND CONFIDENTIAL

THE INFORMATION CONTAINED IN THIS DRAWING IS THE SOLE PROPERTY OF PacSeal.

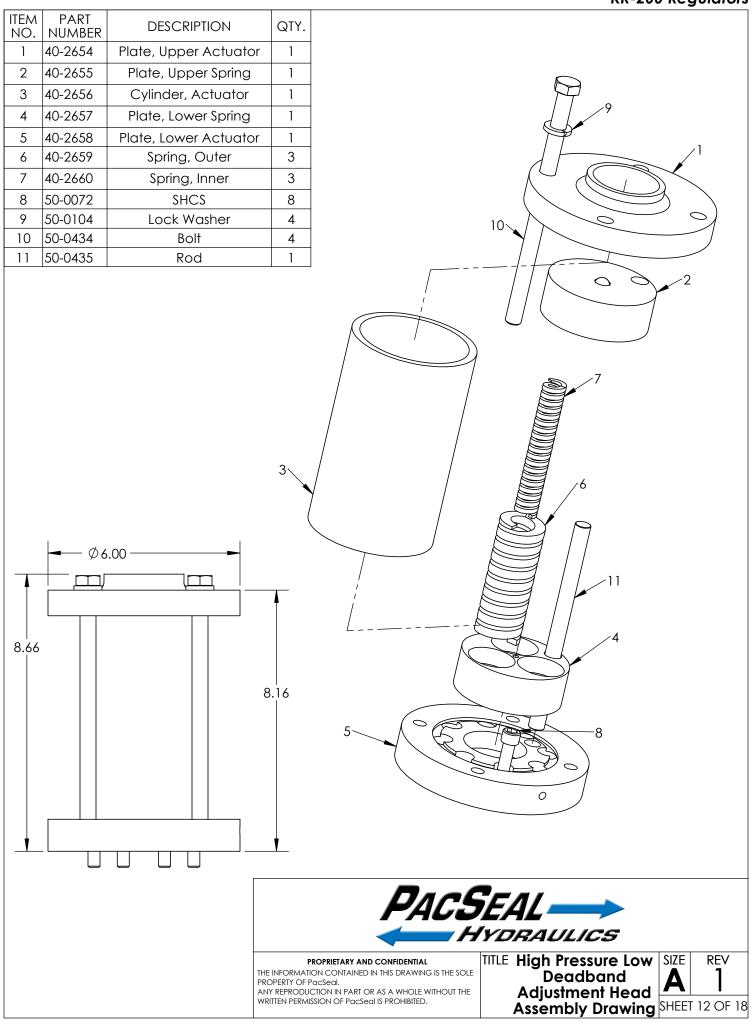
ANY REPRODUCTION IN PART OR AS A WHOLE WITHOUT THE WRITTEN PERMISSION OF PacSeal IS PROHIBITED.

TITLE P Model Configurations Assembly Drawing SHEET 10 OF 18

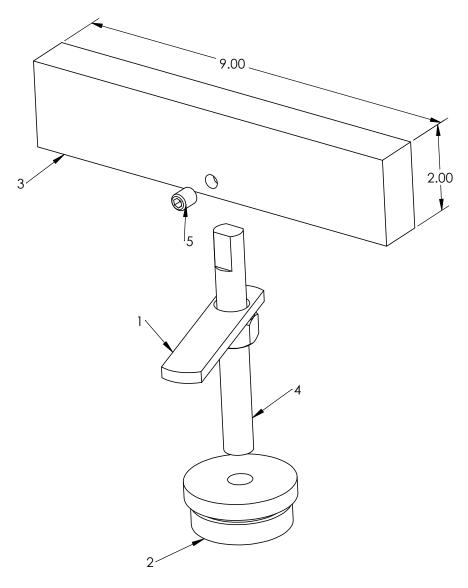
SIZE **REV** 



5 4 2



ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1	40-0135	Lock Handle	1
2	40-0140	Plug, Adjustment Head	1
3	40-3237	Handle, Fail Safe HP	1
4	40-3414	Adjusting Rod	1
5	50-0482	Set Screw	2



## KIT PART NUMBER 40-3558



#### PROPRIETARY AND CONFIDENTIAL

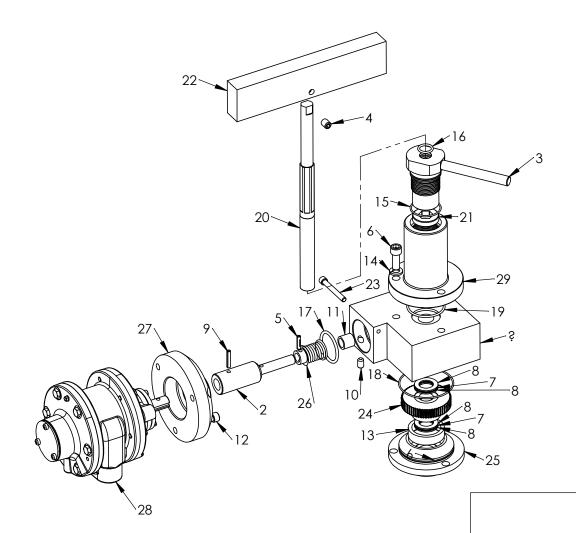
THE INFORMATION CONTAINED IN THIS DRAWING IS THE SOLE PROPERTY OF PacSeal.

ANY REPRODUCTION IN PART OR AS A WHOLE WITHOUT THE WRITTEN PERMISSION OF PacSeal IS PROHIBITED.

TITLE
High Pressure Output
Manual Handle
Assembly Drawing



# High Pressure Output Failsafe Air Actuator (40-4280) with Standard Motor Used exclusively with "H" and "W" Regulators



5

ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1	23-1123	O-Ring	1
2	23-1356	O-Ring	1
3	23-1385	O-Ring	1
4	23-1404	O-Ring	1
5	23-1405	O-Ring	1
6	40-0414	Adapter Plate	1
7	40-0416	Collar	1
8	40-0716	Shaft Extension, Air	1
9	40-2742	Worm	1
10	40-2743	Worm Gear	1
11	40-3237	Handle, High Torque	1
12	40-3757	Adapter Plate	1
13	40-3761	Motor, Air High Torque	1
14	40-3960	Shaft	1
15	40-3961	Body	1
16	40-3962	Housing	1
17	40-3964	Failsafe Nut Ass'y	1
18	50-0072	Bolt	6
19	50-0103	Lock Washer	3
20	50-0154	Roll Pin	1
21	50-0156	Bolt	1
22	50-0157B	Bearing	2
23	50-0157T	Thrust Washer	4
24	50-0158	Roller Bearing	1
25	50-0223	Bolt	2
26	50-0287	Roll Pin	1
27	50-0319	Bolt	3
28	50-0482	Set Screw	2
29	50-0483	Roller Bearing	1



#### PROPRIETARY AND CONFIDENTIAL

THE INFORMATION CONTAINED IN THIS DRAWING IS THE SOLE PROPERTY OF PacSeal.

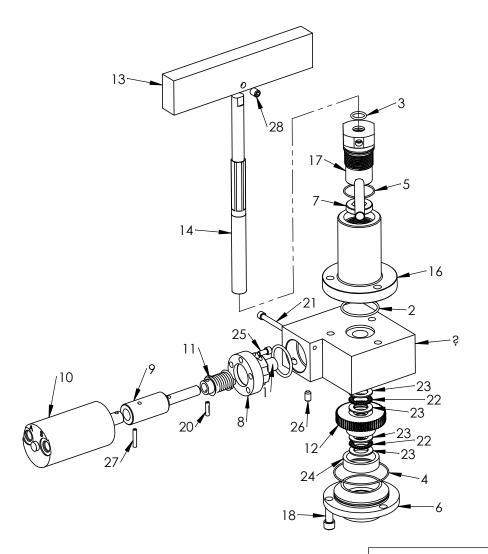
ANY REPRODUCTION IN PART OR AS A WHOLE WITHOUT THE WRITTEN PERMISSION OF PacSeal IS PROHIBITED.

TITLE

High Pressure Output Failsafe Air Operators **Assembly Drawing** 

REV SIZE SHEET 14 OF 18

## High Pressure Output Failsafe Hydraulic Actuator (40-4284) with High Torque Motor Used exclusively with "H" and "W" Regulator



5

ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1	23-1123	O-Ring	1
2	23-1356	O-Ring	1
3	23-1385	O-Ring	1
4	23-1404	O-Ring	1
5	23-1405	O-Ring	1
6	40-0414	Adapter Plate	1
7	40-0416	Collar	1
8	40-0715	Hydraulic Adapter	1
9	40-0716	Shaft Extension, Hydraulic	1
10	40-0719	Motor, Hydraulic	1
11	40-2742	Worm	1
12	40-2743	Worm Gear	1
13	40-3237	Handle, High Torque	1
14	40-3960	Shaft	1
15	40-3961	Body	1
16	40-3962	Housing	1
17	40-3964	Failsafe Nut Ass'y	1
18	50-0072	Bolt	6
19	50-0103	Lock Washer	3
20	50-0154	Roll Pin	1
21	50-0156	Bolt	1
22	50-0157B	Bearing	2
23	50-0157T	Thrust Washer	4
24	50-0158	Roller Bearing	1
25	50-0215	Bolt	4
26	50-0223	Set Screw	2
27	50-0287	Roll Pin	1
28	50-0482	Set Screw	2
29	50-0483	Roller Bearing	1



#### PROPRIETARY AND CONFIDENTIAL

THE INFORMATION CONTAINED IN THIS DRAWING IS THE SOLE PROPERTY OF PacSeal.

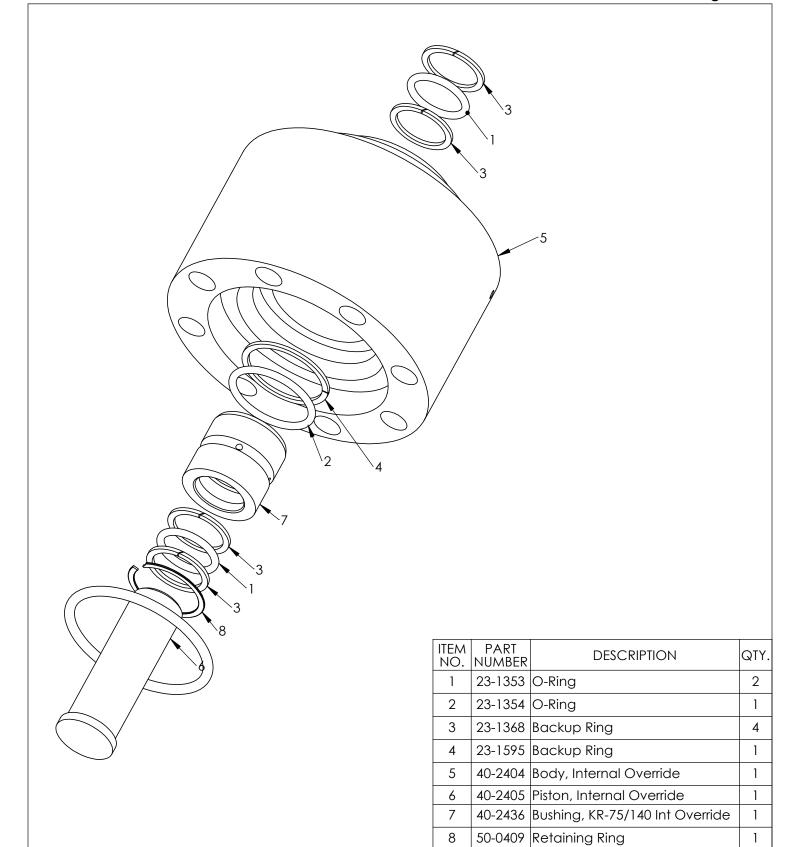
ANY REPRODUCTION IN PART OR AS A WHOLE WITHOUT THE WRITTEN PERMISSION OF PacSeal IS PROHIBITED.

TITLE

High Pressure Output Failsafe Hydraulic Operator **Assembly Drawing** 

REV SIZE

SHEET 15 OF 18





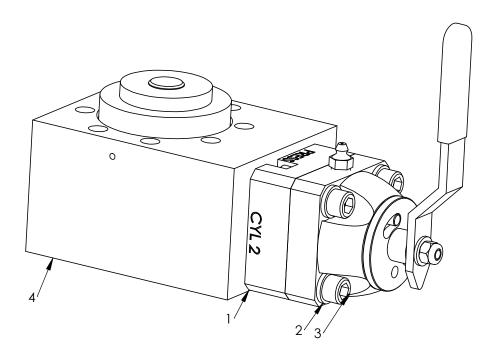
23-1126 O-Ring

#### PROPRIETARY AND CONFIDENTIAL

THE INFORMATION CONTAINED IN THIS DRAWING IS THE SOLE PROPERTY OF PacSeal. ANY REPRODUCTION IN PART OR AS A WHOLE WITHOUT THE WRITTEN PERMISSION OF PacSeal IS PROHIBITED.

TITLE Internal Override **Bypass Direct Operation Assembly** Drawing

SIZE **REV** SHEET 16 OF 18



ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1	40-3301	SV-25 Open Center	1
2	50-0103	Lock Washer	4
3	50-0338	SHCS	4
4	40-3459	Internal Override, KR-75	1



#### PROPRIETARY AND CONFIDENTIAL

THE INFORMATION CONTAINED IN THIS DRAWING IS THE SOLE

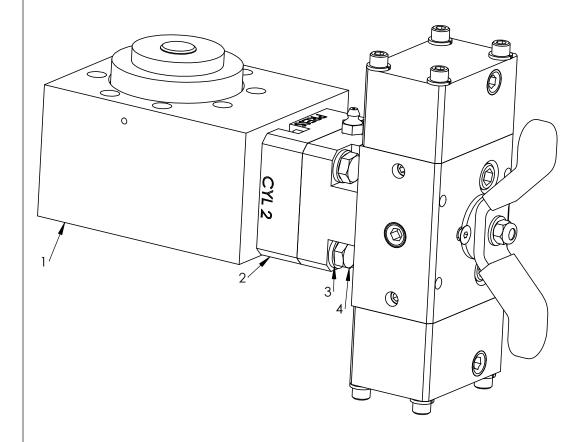
PROPERTY OF PacSeal.

ANY REPRODUCTION IN PART OR AS A WHOLE WITHOUT THE WRITTEN PERMISSION OF PacSeal IS PROHIBITED.

Internal Override Bypass w/ SV-25 Assembly Drawing

SIZE REV SHEET 17 OF 18

ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1	40-3459	Internal Override, KR-75	1
2	40-4549	SVx-25 Open Center, 2-Pos 45° CW	1
3	50-0103	Lock Washer	4
4	50-0291	Bolt	4





PROPRIETARY AND CONFIDENTIAL

THE INFORMATION CONTAINED IN THIS DRAWING IS THE SOLE PROPERTY OF PacSeal.

ANY REPRODUCTION IN PART OR AS A WHOLE WITHOUT THE WRITTEN PERMISSION OF PacSeal IS PROHIBITED.

TITLE

Internal Override
Bypass w/ \$Vx-25
Assembly Drawing

SIZE REV 1 SHEET 18 OF 18