



# Work Supports

## Fluid Advance

### For Retracted Plunger Applications

- Available in three capacities 1,000, 2,500 and 4,000 lb.
- Normally retracted plungers do not interfere with part loading. Advance them with hydraulic pressure, exerting only spring force to bring the plunger into contact with your part (this force is not adjustable by adjusting hydraulic pressure). Hydraulic pressure then automatically sequences, "freezing" the plunger properly against the part. All this accomplished with a single hydraulic line.
- Ventless configuration and built in wiper keeps chips and debris out, reducing the chance of plunger/sleeve sticking or binding.

Internally vented plunger gives air trapped between the hydraulic advance piston and the support plunger a place to escape, even when you install a custom contact point. Heavy end effectors/contact points are not recommended.

Stainless steel plunger and sleeve assemblies help guard against corrosion in most machining environments.

Standard SAE porting and alternate o-ring manifold face seal is located in the base of the support for bolt down installation. The base can be removed for direct cartridge mounting.

Feeder caps (page B-10) and retaining collars (page L-1) are available as mounting options.



U. S. Patent No.  
5,957,443

Model No.	Support Capacity* (lb)	Mounting Style ***	Contact Force** (lb.)	Stroke (in.)	Base Dimensions (in.)	Retracted Height (in.)	Oil Capacity (cu. in.)
<b>Fluid Advance Work Supports, hydraulic pressure lifts spring which lifts plunger, hydraulic pressure locks.</b>							
10-0706-04	1000	Cartridge	1-6	0.25	N/A	2.09	0.08
10-0806-05		SAE/Manifold			0.90 X 1.31 X 1.75	2.48	0.16
10-0708-07	2500	Cartridge	3-10	0.25	N/A	2.85	0.12
10-0808-07		SAE/Manifold			1.25 X 1.50 X 2.31	3.25	0.19
10-0715-06	4000	Cartridge	6-12	0.50	N/A	2.85	0.59
10-0815-06		SAE/Manifold			0.99 X 2.88 X 3.19	3.25	0.65

\* Support capacities are listed at 5,000 psi maximum operating pressure. Support capacities for other pressures must be determined by consulting the graph on page B-5.

\*\* Restrict flow rate to a maximum of 130 cu. in./minute.

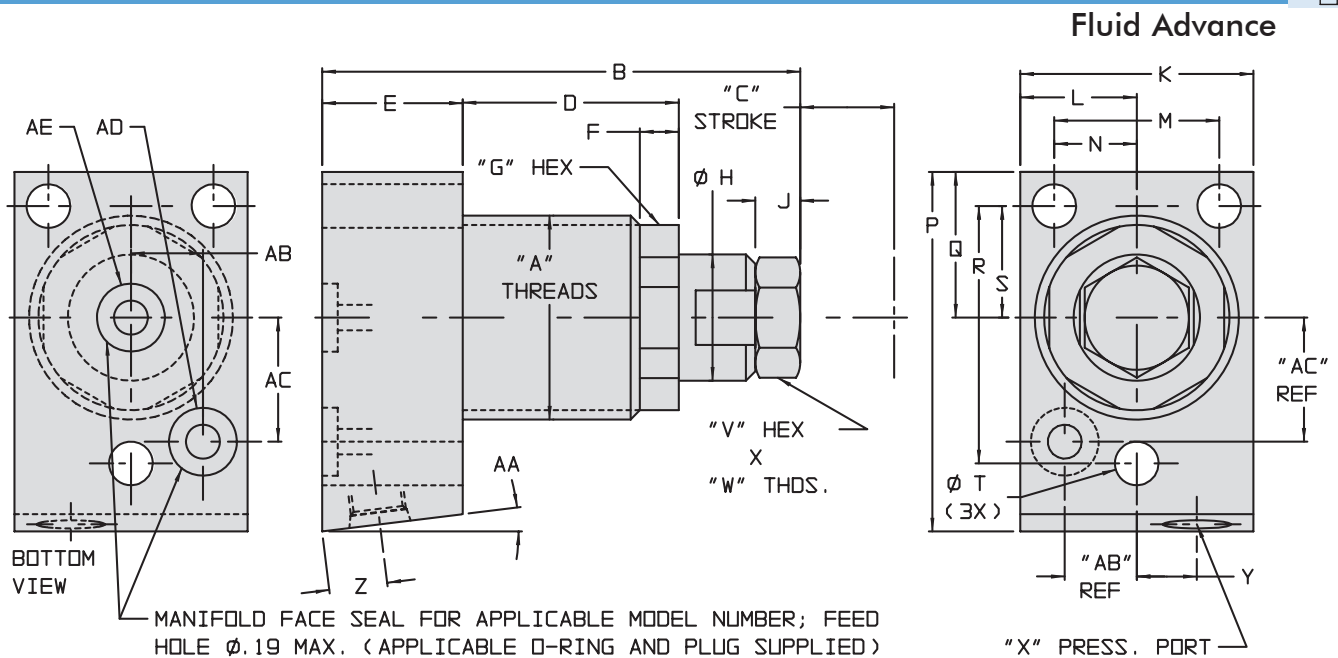
\*\*\* For cartridge mount models, see dimensions on pages B-12 and B-13

**NOTE: The maximum system back-pressure a fluid advance work support can overcome is 10 psi. Returning back-pressure greater than 10 psi may cause slow or failed retraction.**

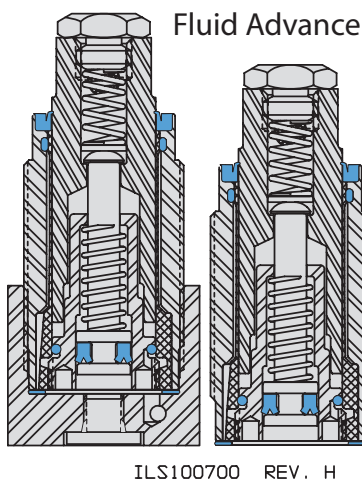
## Dimensions

Model No.	Capacity	A	B	C	D	E	F	G	H	J	K	L	M	N	P
<b>Fluid Advance Work Supports, hydraulic pressure lifts spring which lifts plunger, hydraulic pressure locks.</b>															
10-0806-05	1000	1-16	2.48	0.25	1.14	0.90	0.21	0.88	0.62	0.14	1.31	0.66	0.90	0.45	1.75
10-0808-07	2500	1 1/4-16	3.25	0.25	1.35	1.25	0.36	1.13	0.81	0.19	1.50	0.75	1.06	0.53	2.31
10-0815-06	4000	2 1/4-16	3.25	0.50	1.57	0.99	0.50	2.00	1.50	0.19	2.88	1.44	2.06	1.03	3.19



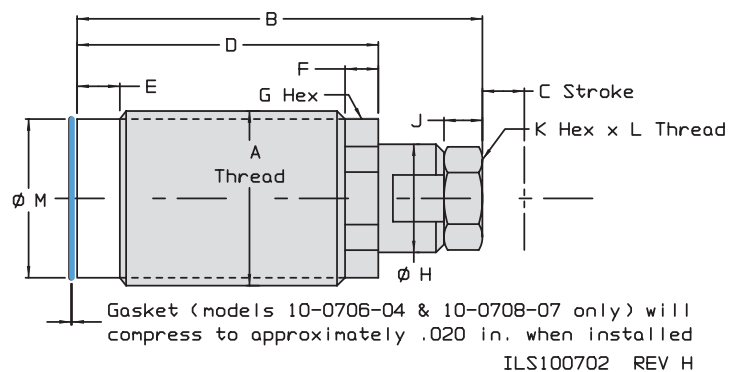


ILS100701 REV J



ILS100700 REV. H

For Proper sealing, mating surface must be flat within 0.003 in. with a maximum 63  $\mu$ in  $R_a$  surface finish.



ILS100702 REV H

## Cartridge Dimensions

Model No.	Capacity	A	B	C	D	E	F	G	H	J	K	L	M
<b>Work Support, Oil Rise, Cartridge</b>													
10-0706-04	1000	1-16	2.09	0.25	1.66	0.24	0.21	0.88	0.62	0.14	0.50	5/16-18 X 0.19	0.92
10-0708-07	2500	1 1/4-16	2.85	0.25	2.16	0.31	0.36	1.13	0.81	0.19	0.63	7/16-14 X 0.25	1.17
10-0715-06	4000	2 1/4-16	2.85	0.50	2.16	0.19	0.50	2.00	1.50	0.19	0.75	1/2-13 X 0.25	2.16

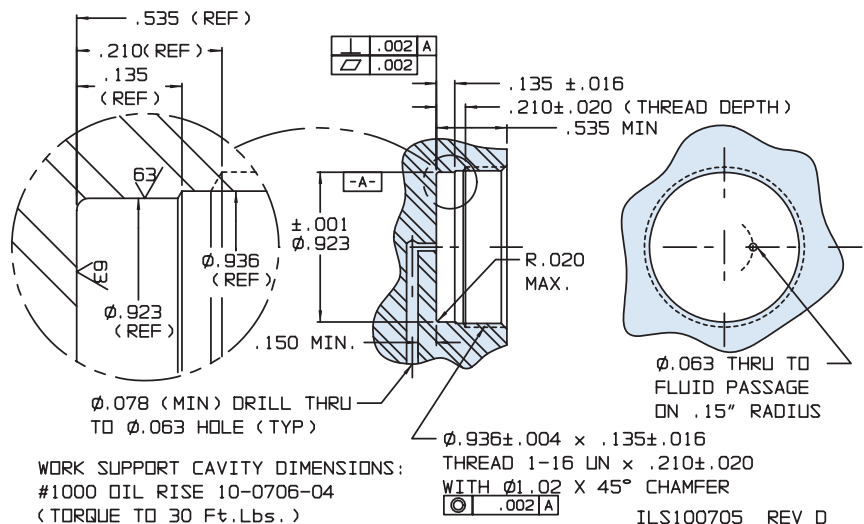
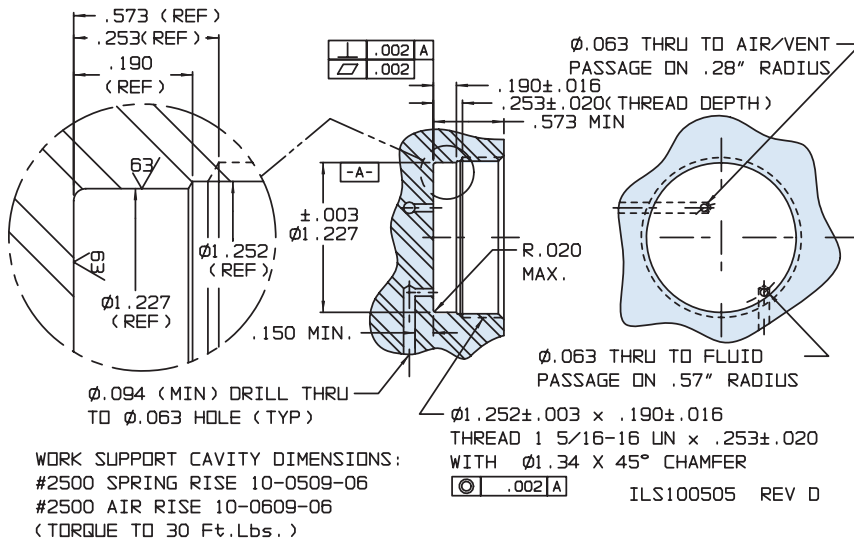
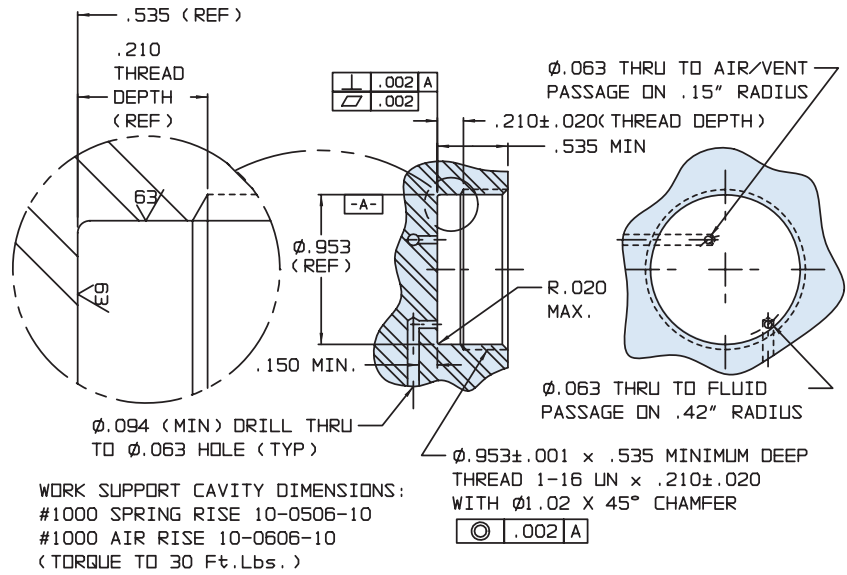
	Q	R	S	T	V	W	X	Y	Z	AA	AB	AC	AD	AE	Model No.
<b>Fluid Advance Work Supports, hydraulic pressure lifts spring which lifts plunger, hydraulic pressure locks.</b>															
	0.69	1.20	0.51	0.22	0.50	5/16-18 X 0.19	SAE 2	0.33	0.38	7°	0.38	0.69	YES	N/A	10-0806-05
	0.94	1.66	0.72	0.28	0.63	7/16-14 X 0.25	SAE 4	0.43	0.38	N/A	N/A	N/A	N/A	YES	10-0808-07
	1.44	2.41	1.03	0.28	0.75	1/2-13 X 0.25	SAE 4	0.63	0.38	N/A	N/A	N/A	N/A	YES	10-0815-06

All dimensions are in inches

# Work Supports

## Cartridge Mount Cavity Dimensions

B-12







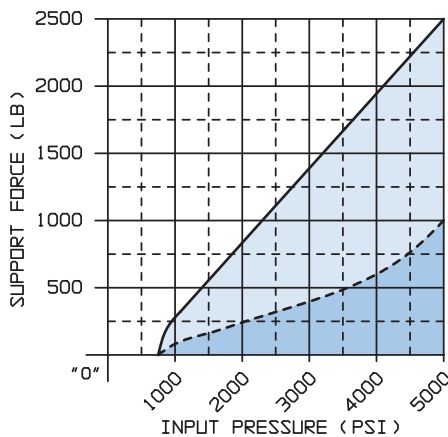
### Standard Features

- Highly repeatable, repeats position plus or minus 0.0002 inches.
- May be bolted up or down to mount directly on fixture plates. May also be installed through a hole and locked in place using retaining collars for easy adjustment.
- Standard SAE porting is located in the base of the support for easy access to both the clamp and vent ports (bronze filter installed before shipping).
- Design features insure VektorFlo® work supports last longer, stand up to harsh environments and abuse better than other models without these features.
- Proprietary wiper and seal designs reduce contamination and drag for longer lasting, better performing work supports.
- Special corrosion resistant plungers and sleeves reduce the tendency to stick.
- Special large diameter plungers and sleeves provide greater rigidity.
- Cartridge mount work supports available in all styles for installation into customer machined cavities.



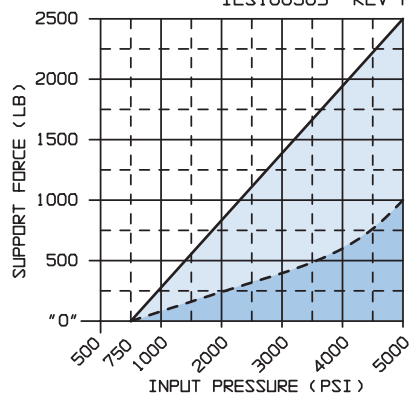
B-5

### Capacity Charts For Specific Work Support Models



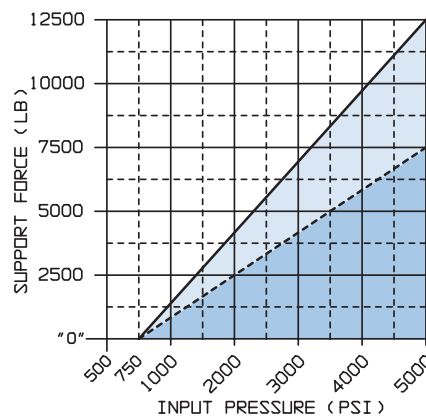
10-0509-06	10-0506-10
10-0509-07	10-0506-11
10-0509-08	10-0506-12
10-0609-06	10-0606-10
10-0609-07	10-0606-11
10-0609-08	10-0606-12

ILS100503 REV F



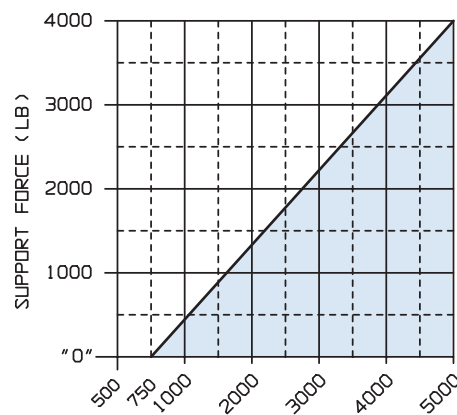
10-0708-07	10-0706-04
10-0808-07	10-0806-05

ILS100703 REV E



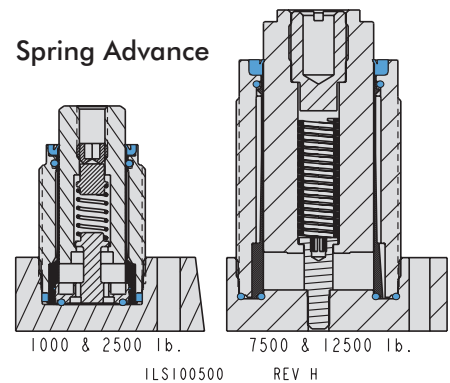
10-0520-07	10-0515-06
10-0620-07	10-0615-06

ILS100603 REV D

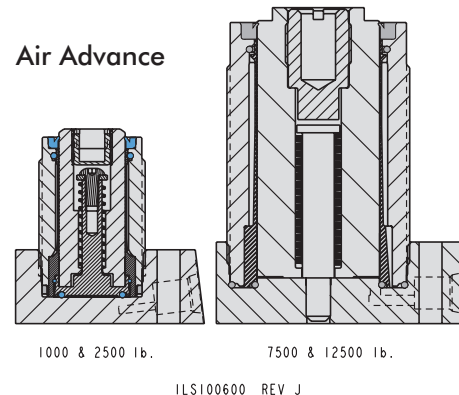


10-0715-06 & 10-0815-06  
ILS100704 REV D

#### Spring Advance



#### Air Advance



#### Fluid Advance

