

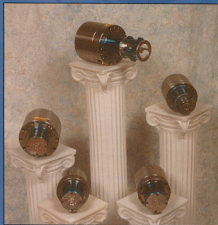


# **Stephens Dynamics Inc.**

★ ★ The New Leader in Rotating Cylinder Technology ★ ★

USA Manufactured

Hydraulic ~ Pneumatic ~ Special Cylinders



★ 21<sup>st</sup> Century Design

- ★ Patent Pending & Trade Marked Products
- ★ Continuous Improvement Design & Build
- ★ Ultra Precision Manufacturing
- ★ Enhanced Experienced Customer Service

[www.stephensdynamics.com](http://www.stephensdynamics.com)



# Hydraulic Rotating Cylinders



Stephens Dynamics Inc. Model SCH & SCHL hydraulic rotating cylinders are the right choice for a remarkable broad range of applications. The newly enhanced design of our SCH & SCHL cylinders are very versatile with through port (for coolant or part detection) and stroke detection features, as well as very durable due to non-rotating port connections. There are no fragile rods for rotating couplings and no oscillating or wobbly target dogs to cause vibration or premature wear. SDI has experienced Regional Factory Sales Representatives who can help with your onsite cylinder and engineering needs along with our in house engineering personnel. We have an outstanding collection of high-performance features.

**High Speed Rotation** currently up to 7000 RPMS on all bore sizes with future engineering for higher speeds.

**Individually Balanced Cylinders** enhance high speed operation in vertical, horizontal and inverted applications for smooth quiet machine operation and improved part finishes.

**Built-in Lock Checks** provide maximum protection. Internal check valves trap operating pressure in cylinder in case of power or hydraulic system failure. Our Lock Checks also work in "Hi/Lo" applications.

Easy replacement cartridges ideal for quick maintenance.

**Efficient Compact Design** allows operation in restricted areas. The SCH & SCHL short length makes it ideal for vertical applications where spindle-to-floor clearance is limited.

**Directly Interchanges** with all American Standard Mountings for quick easy replacement of your old style cylinders.

**Tailrod Option** The SCH & SCHL can be equipped with a tailrod to sense piston position, i.e. automatic loading applications.

**Cylinder Performance** test sheets and installation instructions for your convenience shipped with every cylinder.

**Warranty** 1 year from date of purchase.

**Extended Warranties** also available. Contact factory for details.

**Complete Service Repair Center** for all Stephens Dynamics Inc.

cylinder models. Service response time (both sales and product) is a point of pride with us. We also repair all competitors cylinders including ITW, LMC, SP Sheffer, Auto Bloc and many other cylinder makes.

**Special Non-Work Holding**

**Applications** For specific applications, these cylinders can be used and/or modified for various uses in a multitude of environments. Consult factory representative.



WE HAVE AVAILABLE; CHUCKS AND THRU-HOLE CYLINDERS MADE BY MMK MATSUMOTO CORP

2 Stephens Dynamics Inc. • Phone: (765) 459-4451 • Fax: (765) 457-1410

# STANDARD ROTATING HYDRAULIC CYLINDERS

— "SPECIALS" AVAILABLE UPON REQUEST —

— NOTICE : 10 MICRON FILTRATION ON HYDRAULIC SUPPLY REQUIRED —



STEPHENS DYNAMICS

—ROTATING CYLINDERS—

1800 E. DODGE

KOKOMO, IN 46902

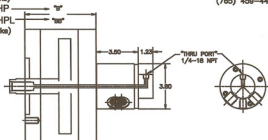
(765) 458-4451

(Thru Port Cyl. without Safety Lock Checks)

Model SCHP

Model SCHPL

(Thru Port Cyl. with Safety Lock Checks)

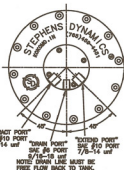
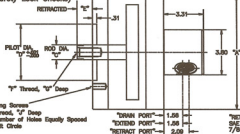


(Hyd. Cylinder without Safety Lock Checks)

Model SCH

Model SCHL

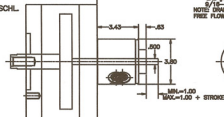
(Hyd. Cylinder with Safety Lock Checks)



Mounting Screws  
1/4" Thread, 1/2" Deep  
1/2" Number of Holes Equally Spaced  
1/2" Bolt Circle

"RETRACT PORT" SAE #10 PORT 7/8-14 uni  
"DRAIN PORT" SAE #6 PORT 9/16-18 uni  
"EXTEND PORT" SAE #10 PORT 7/8-14 uni  
NOTE: DRAIN LINE MUST BE FREE FLOW BACK TO TANK.

Optional Tallrod available Only on Models SCH & SCHL.



BORE DIA. (in)	RETRACT AREA (sq in)	EXTEND AREA (sq in)	SPEED (rpm)	PRESS. (psi)	STROKE (in)	DIMENSIONS											
						A	B	BB	C	D	E	F	G	H	J	K	L
10	74.8	77.9	7,000	1000	2.0	11.4	6.42	6.80	2.00	6.000	1.0	1 1/2-14	2.3	5/8-11	1.1	8	9.50
8	47.3	49.6	7,000	1000	2.0	9.4	6.42	6.80	1.75	4.500	1.0	1 1/4-12	2.3	1/2-13	1.0	8	5.50
6	25.9	27.7	7,000	1000	2.0	7.4	6.42	6.80	1.50	4.500	1.0	1-14	2.0	1/2-13	1.0	4	5.50
4.5	14.3	15.5	7,000	1000	1.5	5.75	5.82	6.30	1.25	3.000	1.0	3/4-16	1.8	1/2-13	1.0	4	3.75
3	6.1	6.8	7,000	1000	1.0	5.75	5.42	5.80	1.00	3.000	1.0	3/4-16	1.8	1/2-13	1.0	4	3.75



# Pneumatic Rotating Cylinder



Stephens Dynamics Inc. Model SCA & SCAL pneumatic rotating cylinders provide for a remarkable broad range of applications. The newly enhanced design of our SCA & SCAL cylinders are very versatile with through port (for coolant or part detection) and stroke detection features, as well as very durable due to non-rotating port connections. There are no fragile rods for rotating couplings and no oscillating or wobbly target dogs to cause vibration or premature wear. SDI has experienced Regional Factory Sales Representatives who can help with your onsite cylinder and engineering needs along with our in house engineering personnel. Our continual efficient engineering formulas allow these cylinders to be enhanced by an outstanding collection of high-performance features.



**High Speed Rotation** currently up to 7000 RPMs on all bore sizes with future engineering for higher speeds.

**Individually Balanced Cylinders** enhance high speed operation in vertical, horizontal and inverted applications for smooth quiet machine operation and improved part finishes.

**Built-in Lock Checks** provide maximum protection. Internal check valves trap operating pressure in cylinder in case of power or pneumatic system failure.

Our Lock Checks also work in "Hi/Lo" applications. Easy replacement cartridges ideal for quick maintenance.

**Lightweight Efficient Compact Design** allows operation in restricted areas. The SCA & SCAL short length makes it ideal for vertical applications where spindle-to-floor clearance is limited.

**Directly Interchanges** with all American Standard Mountings for quick easy replacement of your old style cylinders.

**Easy Maintenance Pneumatic Rotary Coupler** A Stephens Dynamics Inc. seal-less design increases RPM and withstands higher operating temperatures. Double sealed ball bearings eliminate lubrication maintenance. Simple design is easy to service. The rotary coupler is secured to the cylinder with just four screws eliminating the need to remove the entire cylinder to service the rotary coupler.

**Tailrod Option** The SCA & SCAL can be equipped with a tailrod to sense piston position, i.e., automatic loading applications.

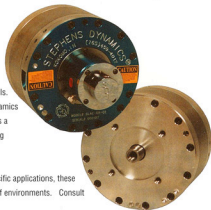
**Cylinder Performance** test sheets and installation instructions for your convenience shipped with every cylinder.

**Warranty** 1 year from date of purchase.

**Extended Warranties** also available. Contact factory for details.

**Complete Service Repair Center** for all Stephens Dynamics Inc. cylinder models. Service response time (both sales and product) is a point of pride with us. We also repair all competitors cylinders including ITW, LMC, SP Sheffer, Auto Bloc and many other cylinder makes.

**Special Non-Work Holding Applications** For specific applications, these cylinders can be used and/or modified for various uses in a multitude of environments. Consult factory representative.



WE HAVE AVAILABLE: CHUCKS AND THRU-HOLE CYLINDERS MADE BY MMK MATSUMOTO CORP

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# STANDARD ROTATING AIR CYLINDERS

- "SPECIALS" AVAILABLE UPON REQUEST -

- NOTICE : 5 MICRON FILTRATION ON AIR SUPPLY REQUIRED -



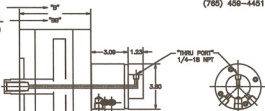
**STEPHENS DYNAMICS**  
-ROTATING CYLINDERS-  
1800 E. DODGE  
KOKOMO, IN 46902  
(765) 458-4451

(Thru Port Cyl. without Safety Lock Checks)

Model SCAP

Model SCAPL

(Thru Port Cyl. with Safety Lock Checks)

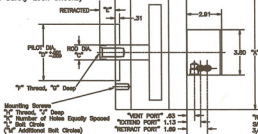


(Air Cylinder without Safety Lock Checks)

Model SCA

Model SCAL

(Air Cylinder with Safety Lock Checks)





# Special Cylinders



Stephens Dynamics Inc. special hydraulic and pneumatic rotating cylinders can fulfill a tremendous variety of engineering applications. Our individually designed cylinders are very durable due to non-rotating port connections. There are no fragile rods for rotating couplings and no oscillating or wobbly target dogs to cause vibration or premature failure. SDI has experienced Regional Factory Sales Representatives who can help with your onsite cylinder and engineering needs along with our in house engineering personnel. Customizing our state of the art standard cylinders, incorporating special features and custom designs are routine for Stephens Dynamics Inc. We can incorporate many of our high-performance features as well as special light-weight rotating actuator designs which can be achieved through our vast library of cylinder products.

## **Multiple Versatility** in all styles of Special Rotating

Cylinders - fast acting, reciprocating oil body, stroke detection with through port, duplex, non-standard stroke, tailrods, prox targets or trip dog, special piston rods and transfer line cylinders.

## **Built-in Lock Checks** provide maximum protection.

Internal check valves trap operating pressure in cylinder in case of power or hydraulic system failure. Our Lock Checks also work in "Hi/Lo" applications. Easy replacement cartridges ideal for quick maintenance.

## **Tailrod Option** specials can be equipped with a tailrod to sense piston position, i.e. automatic loading applications.

## **Individually Balanced Cylinders** symmetrically and

dynamically to enhance high speed operation in vertical, horizontal and inverted applications for smooth quiet machine operation and improved part finishes.

## **Directly Interchanges** with many existing cylinder mountings for quick easy replacement of your old style cylinders.

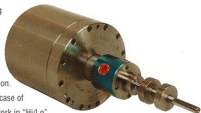
## **High Speed Rotation** currently up to 7000 RPMs on all bore sizes with future engineering for higher speeds.

**Cylinder Performance** test sheets and installation instructions for your convenience shipped with every cylinder.

**Warranty** 1 year from date of purchase.

**Extended Warranties** also available. Contact factory for details. Complete service repair center for all Stephens Dynamics Inc. special cylinders. Service response time (both sales and product) is a point of pride with us. We also repair all competitors cylinders including ITW, LMC,

SP Sheffer, Auto Bloc and many other cylinder makes.



WE HAVE AVAILABLE: CHUCKS AND THRU-HOLE CYLINDERS MADE BY MMK MATSUMOTO CORP



# Extended Warranty Cylinder

Patent Pending



## *It Takes A Lickin' and Keeps on Spinnin'*

Stephens Dynamics Inc. Model SFA & SFAL pneumatic rotating cylinders provide for a remarkable broad range of applications. The Extended Warranty Cylinder virtually frees your machine from cylinder seizures. This cylinder functions in all the ultimate adverse manufacturing environments you are looking to solve such as vibrating environments, supply line condensation, contaminants, etc. Our newly designed SFA & SFAL cylinders are very versatile with the same features as the SCA and SCAL models in performance and dimensional data.

### **Standard 2 Year Warranty - Longest Warranty In The Industry.**

SDI has experienced Regional Factory Sales Representatives who can help with your onsite cylinder and engineering needs along with our in house engineering personnel. Our steadfast engineering formulas allow these cylinders to be enhanced by an outstanding collection of high-performance features.

**High Speed Rotation** currently up to 7000 RPMs on all bore sizes with future engineering for higher speeds.

**Individually Balanced Cylinders** enhance high speed operation in vertical, horizontal and inverted applications for smooth quiet machine operation and improved part finishes.

**Built-in Lock Checks** provide maximum protection. Internal check valves trap operating pressure in cylinder in case of power or pneumatic system failure. Our Lock Checks also work in "Hi/Lo" applications. Easy replacement cartridges ideal for quick maintenance.

**Lightweight Efficient Compact Design** allows operation in restricted areas. The SFA & SFAL short length makes it ideal for vertical applications where spindle-to-floor clearance is limited.

**Directly Interchanges** with all American Standard Mountings for quick easy replacement of your old style cylinders.

**Tailrod Option** The SFA & SFAL can be equipped with a tailrod to sense piston position, i.e. automatic loading applications.

**Cylinder Performance** test sheets and installation instructions for your convenience shipped with every cylinder.

**Extended Warranties** also available. Contact factory for details.

**Complete Service Repair Center** for all Stephens Dynamics Inc. cylinder models. Service response time (both sales and product) is a point of pride with us. We also repair all competitors cylinders including ITW, LMC, SP Sheffer, Auto Bloc and many other cylinder makes.

**Special Non-Work Holding Applications** For specific applications, these cylinders can be used and/or modified for various uses in a multitude of environments. Consult factory representative.

**Performance and Dimensional Information** see engineering chart for SCA and SCAL Pneumatic Cylinders.



WE HAVE AVAILABLE; CHUCKS AND THRU-HOLE CYLINDERS MADE BY MMK MATSUMOTO CORP

Email: [sales@stephensdynamics.com](mailto:sales@stephensdynamics.com) • [www.stephensdynamics.com](http://www.stephensdynamics.com)

# STANDARD CYLINDERS $\frac{PULL}{PUSH}$ FORCE CHART (POUNDS OF FORCE)



**STEPHENS DYNAMICS**  
-ROTATING CYLINDERS-  
1800 E. DODGE  
KOKOMO, IN 46902  
(765) 459-4451

## AIR CYLINDERS

Model SCA (Air Cylinder without Safety Lock Checka)  
Model SCAL (Air Cylinder with Safety Lock Checka)

BORE DIA. (in)	AIR PRESSURE SUPPLIED (PSI)													
	30		50		70		90		110		130		150	
12	3182	3223	5270	5327	7378	7521	9485	9670	11593	11819	13701	13988	15809	16117
10	2177	2238	3628	3731	5079	5223	6530	6715	7982	8207	9433	9700	10884	11192
8	1387	1433	2311	2388	3235	3343	4160	4298	5064	5253	6008	6208	6933	7163
6	760	806	1266	1343	1772	1880	2279	2417	2785	2954	3291	3491	3798	4028
4.5	425	453	708	755	991	1057	1274	1359	1557	1662	1840	1984	2123	2286
3	173	201	298	336	403	470	518	604	633	739	748	873	884	1007

## AIR CYLINDERS

Model SCAP (Thru Port Cyl. without Safety Lock Checka)  
Model SCAPL (Thru Port Cyl. with Safety Lock Checka)

BORE DIA. (in)	AIR PRESSURE SUPPLIED (PSI)													
	30		50		70		90		110		130		150	
12	3182	3218	5270	5363	7378	7508	9485	9653	11593	11798	13701	13943	15809	16088
10	2177	2233	3628	3721	5079	5210	6530	6698	7982	8187	9433	9675	10884	11163
8	1387	1427	2311	2378	3235	3330	4160	4281	5064	5232	6008	6184	6933	7135
6	760	800	1266	1334	1772	1867	2279	2401	2785	2934	3291	3468	3798	4001
4.5	425	448	708	746	991	1045	1274	1343	1557	1642	1840	1940	2123	2239
3	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

## HYDRAULIC CYLINDERS

Model SCH (Hyd. Cylinder without Safety Lock Checka)  
Model SCHL (Hyd. Cylinder with Safety Lock Checka)

BORE DIA. (in)	HYDRAULIC PRESSURE SUPPLIED (PSI)									
	200		400		600		800		1000	
10	14208	14923	28416	29845	42625	44788	56833	59890	71041	74613
8	8978	9551	17955	19103	26933	28654	35910	38205	44888	47757
6	4919	5371	9838	10743	14755	16114	19678	21485	24598	26857
4.5	2713	3021	5428	6042	8140	9083	10953	12084	13568	15105
3	1151	1343	2303	2687	3454	4030	4808	5373	5757	6717

## HYDRAULIC CYLINDERS

Model SCHP (Thru Port Cyl. without Safety Lock Checka)  
Model SCHPL (Thru Port Cyl. with Safety Lock Checka)

BORE DIA. (in)	HYDRAULIC PRESSURE SUPPLIED (PSI)									
	200		400		600		800		1000	
10	14208	14885	28416	29789	42625	44654	56833	59538	71041	74423
8	8978	9513	17955	19027	26933	28540	35910	38053	44888	47567
6	4919	5335	9838	10670	14755	16008	19678	21341	24598	26576
4.5	2713	2985	5428	5970	8140	8955	10953	11940	13568	14925



*"The New Leader in Rotating  
Cylinder Technology"*



## **Stephens Dynamics Inc.**

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