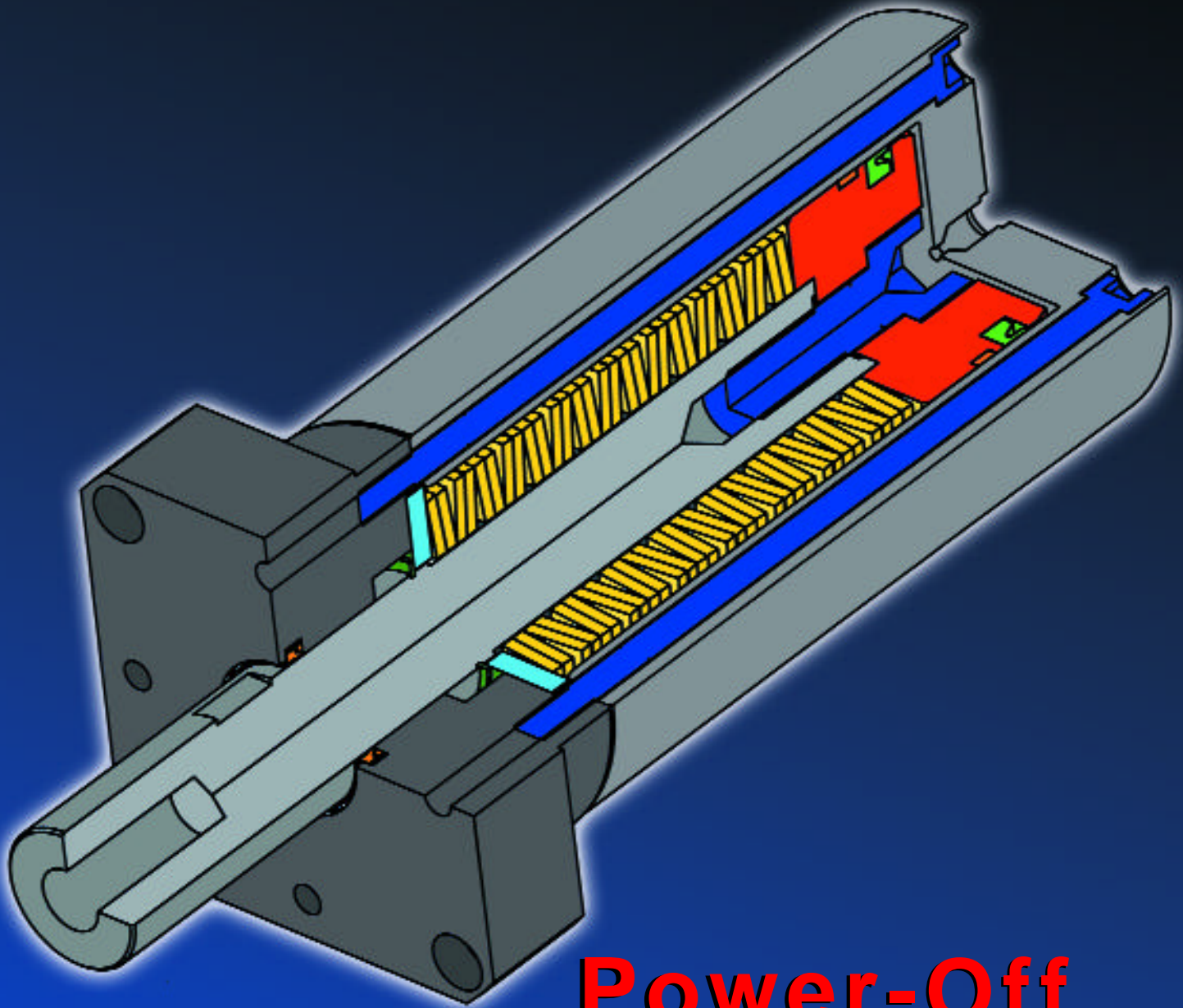


# **MFORCE™**

## **Force Cartridges**



**Power-Off  
Workholding**

# AMFORCE™

Mechanically Clamped - Hydraulically Unclamped

## WHEN YOU NEED POSITIVE CLAMPING...

AMFORCE™ is designed to apply constant (pull) clamping force in applications for fixtures, tools, pallets and workpieces.

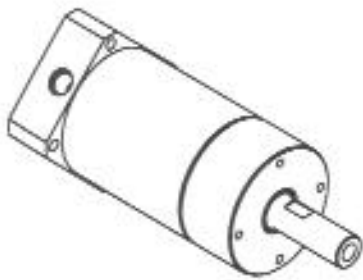
Hydraulic pressure is used to unclamp the workpiece, but is not required to maintain the clamping force on the workpiece. High quality heavy duty disk springs are used to produce the clamping force.

### Positive Clamping Operation

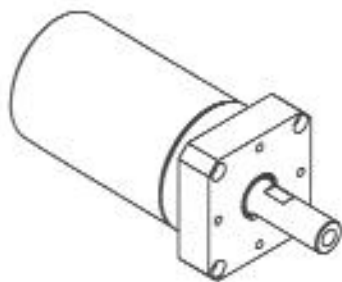
The applied clamping force is determined by how far the rod is extended when it contacts the workpiece. This force will vary due to workpiece variations. Note that in order to load and unload the workpiece the rod must be extended further than the effective clamping position. AMFORCE™ Power-off Fixture Clamps are offered in 3 types, which are available with 5 different clamping forces.

### Function:

The clamps are actuated by a column of disk springs which generate a high pull force on the clamp arms. The force is released by hydraulic pressure. Hydraulic failure will therefore have no effect on the workholding capability and power-off clamping is guaranteed.



**Bottom Flange Type**

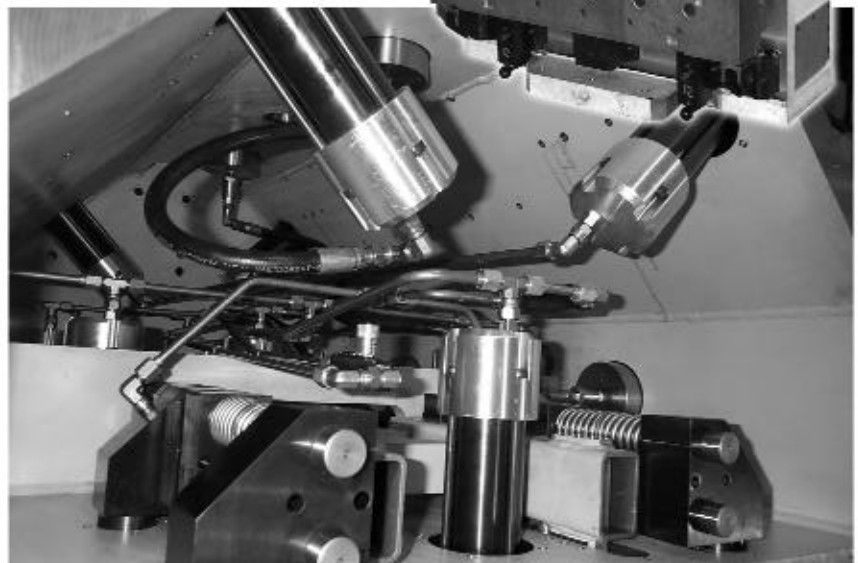
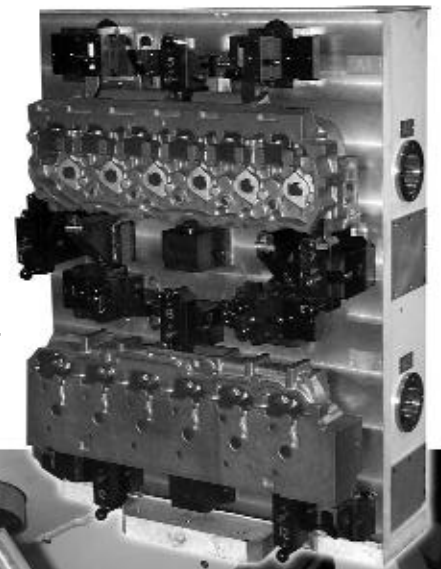


**Top Flange Type**

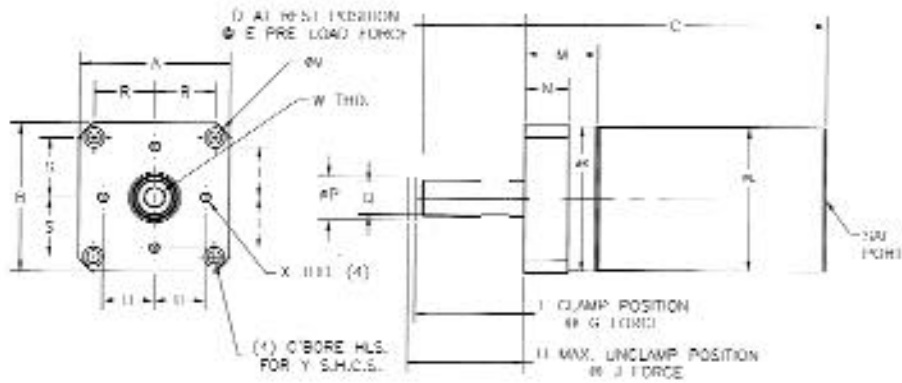


**Manifold Top Flange Type**

- ❖ Power-off clamping holds parts securely in case of power failure.
- ❖ Rigid, oversized construction guarantees long life.
- ❖ Wide variety of mounting styles, sizes, and clamp arms available.
- ❖ Simple piping with single acting design.
- ❖ Tapped hole on end of the rod allows for attaching custom components for retrofit applications.



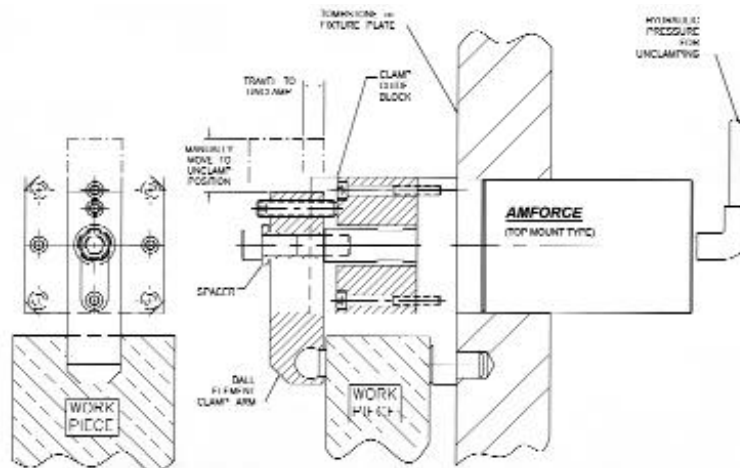
# Top Mount Type



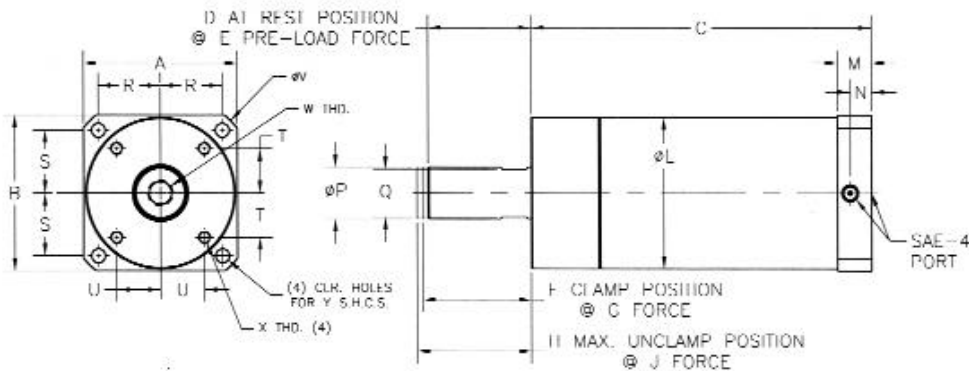
Model No.	FCT-0500-4-2	FCT-1000-4-2	FCT-2000-6-3	FCT-3000-8-4	FCT-4000-8-4
A	1.88	2.56	3.25	4.00	4.500
B	1.88	2.56	3.25	4.00	4.500
C	4.63	5.13	7.12	8.50	9.75
D	1.000	1.750	2.500	2.625	3.000
E	230 lbs	600 lbs	900 lbs	1400 lbs	1700 lbs
F	1.125	1.875	2.688	2.875	3.250
*G	460 lbs	1000 lbs	2000 lbs	3000 lbs	3800 lbs
H	1.250	2.000	2.875	3.125	3.500
J	700 lbs	1790 lbs	3200 lbs	5280 lbs	6200 lbs
K Dia.	1.688-1.686	2.500-2.498	3.125-3.123	3.875-3.873	4.375-4.373
L Dia.	1.668	2.480	3.094	3.840	4.350
M	1.00	1.25	1.50	1.75	2.00
N	.63	.75	.75	1.00	1.25
P Dia.	.437-.435	.625-.623	.875-.873	1.250-1.248	1.493-1.491
Q Flats	.375	.563	.75	1.125	1.375
R	.688	1.031	1.313	1.625	1.813
S	.688	1.031	1.313	1.625	1.813
T	.656	1.031	1.313	1.625	1.813
U	.656	1.031	1.313	1.625	1.813
V Dia.	2.250	3.312	4.250	5.250	5.875
W	1/4-28x.50	3/8-24x.75	1/2-20x1.00	5/8-11x1.25	3/4-10x1.50
X	#6-32x.50	#10-32x.75	1/4-20x.88	5/16-18x1.00	3/8-16x1.00
Y	#6	#10	1/4	5/16	3/8
Min. Oper. Pressure	1200 PSI	1200 PSI	1200 PSI	1200 PSI	1200 PSI
Max. Oper. Pressure	2500 PSI	2500 PSI	2500 PSI	2500 PSI	2500 PSI

\* Minimum force at clamp position.

Dimensions in inches unless specified.  
For available clamp arms see back page.



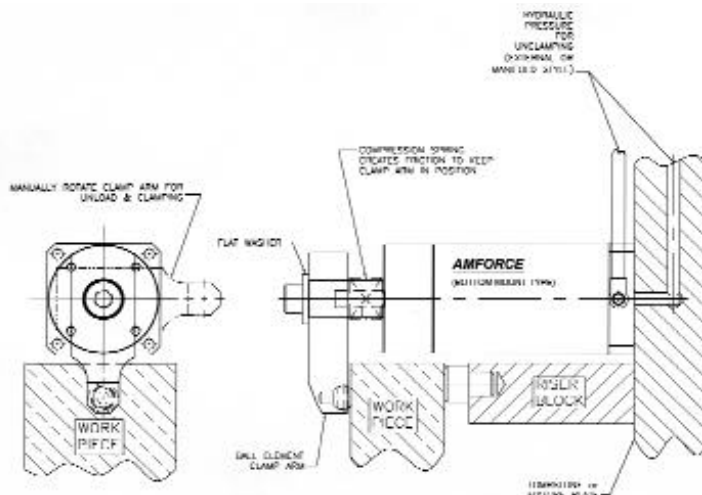
# Bottom Mount Type



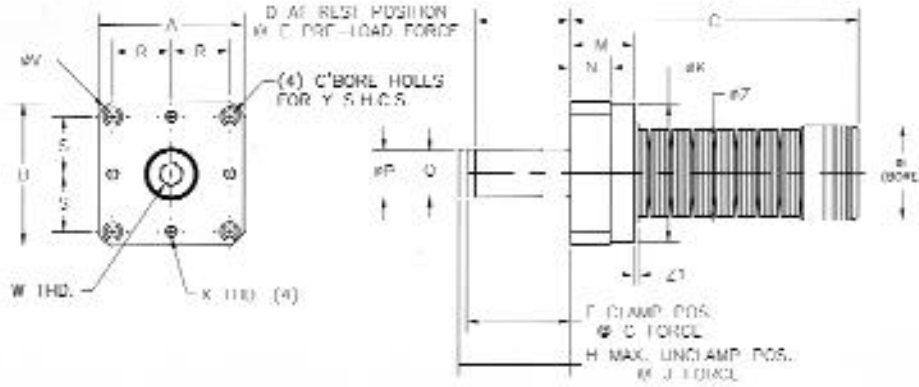
Model No.	FCB-0500-4-2	FCB-1000-4-2	FCB-2000-6-3	FCB-3000-8-4	FCB-4000-8-4
A	1.88	2.56	3.25	4.00	4.500
B	1.88	2.56	3.25	4.00	4.500
C	4.63	5.25	7.37	8.75	10.00
D	1.000	1.750	2.500	2.625	3.000
E	230 lbs	600 lbs	900 lbs	1400 lbs	1700 lbs
F	1.125	1.875	2.688	2.875	3.250
*G	460 lbs	1000 lbs	2000 lbs	3000 lbs	3800 lbs
H	1.250	2.000	2.875	3.125	3.500
J	700 lbs	1790 lbs	3200 lbs	5280 lbs	6200 lbs
L Dia.	1.668	2.500	3.125	3.875	4.375
M	1.00	1.00	1.00	1.00	1.00
N	.63	.63	.63	.63	.63
P Dia.	.437-.435	.625-.623	.875-.873	1.250-1.248	1.493-1.491
Q Flats	.375	.563	.750	1.125	1.375
R	.688	1.031	1.313	1.625	1.813
S	.688	1.031	1.313	1.625	1.813
T	.464	.729	.928	1.149	1.282
U	.464	.729	.928	1.149	1.282
V Dia.	2.250	3.312	4.250	5.250	5.875
W	1/4-28x.50	3/8-24x.75	1/2-20x1.00	5/8-11x1.25	3/4-10x1.50
X	#6-32x.50	#10-32x.75	1/4-20x.88	5/16-18x1.00	3/8-16x1.00
Y	#6	#10	1/4	5/16	3/8
Min. Oper. Pressure	1200 PSI	1200 PSI	1200 PSI	1200 PSI	1200 PSI
Max. Oper. Pressure	2500 PSI	2500 PSI	2500 PSI	2500 PSI	2500 PSI

\* Minimum force at clamp position.

Dimensions in inches unless specified.  
For available clamp arms see back page.



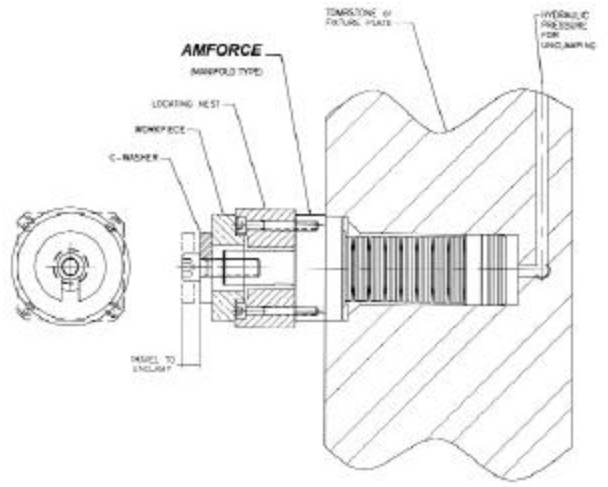
# Manifold Type



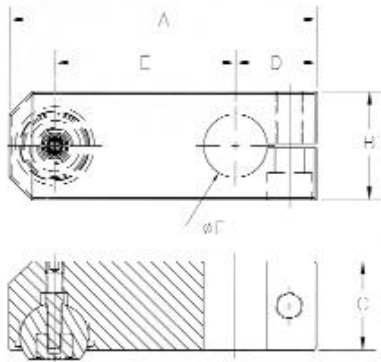
Model No.	FCM-0500-4-2	FCM-1000-4-2	FCM-2000-6-3	FCM-3000-8-4	FCM-4000-8-4
A	1.88	2.56	3.25	4.00	4.500
B	1.88	2.56	3.25	4.00	4.500
C	3.85	4.31	6.27	7.61	8.91
D	1.000	1.750	2.500	2.625	3.000
E	230lbs	600lbs	900lbs	1400lbs	1700lbs
F	1.125	1.875	2.688	2.875	3.250
*G	460lbs	1000lbs	2000lbs	3000lbs	3800lbs
H	1.250	2.000	2.875	3.125	3.500
J	700lbs	1790lbs	3200lbs	5280lbs	6200lbs
K Dia.	1.688-1.686	2.500-2.498	3.125-3.123	3.875-3.873	1.375-4.373
L Bore Dia.	1.000-1.002	1.625-1.627	2.000-2.002	2.500-2.503	3.000-3.003
M	1.00	1.25	1.50	1.75	2.00
N	.63	.75	.75	1.00	1.25
P Dia.	.437-.435	.625-.623	.875-.873	1.250-1.248	1.493-1.491
Q Flats	.375	.563	.750	1.125	1.375
R	.688	1.031	1.313	1.625	1.813
S	.688	1.031	1.313	1.625	1.813
T	.656	1.031	1.313	1.625	1.813
U	.656	1.031	1.313	1.625	1.813
V Dia.	2.250	3.312	4.250	5.250	5.875
W	1/4-28x.50	3/8-24x.75	1/2-20x1.00	5/8-11x1.25	3/4-10x1.50
X	#6-32x.50	#10-32x.75	1/4-20x.88	5/16-18x1.00	3/8-16x1.00
Y	#6	#10	1/4	5/16	3/8
Z Dia.	1.125	1.812	2.24	2.73	3.152
Z1	.063	.063	.063	.087	.115
Min. Oper. Pressure	1200 PSI	1200 PSI	1200 PSI	1200 PSI	1200 PSI
Max. Oper. Pressure	2500 PSI	2500 PSI	2500 PSI	2500 PSI	2500 PSI

\* Minimum force at clamp position.

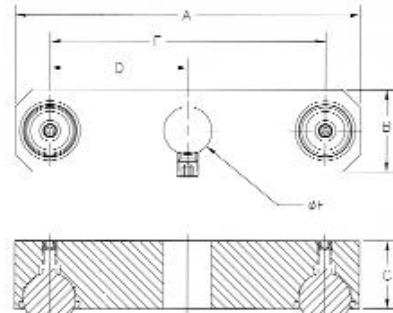
Dimensions in inches unless specified.  
For available clamp arms see back page.



# AMFORCE™ Clamp Arms



**Basic Clamp Arm**



**Double Clamp Arm**

Part Number	A	B	C	D	E	F
<b>Basic Clamp Arm</b>						
FC-0500-BCA	2.63	1.00	.62	.62	1.68	.438 / .440
FC-1000-BCA	3.25	1.25	.87	.93	2.00	.626 / .628
FC-2000-BCA	4.25	1.50	1.25	1.13	2.50	.876 / .879
FC-3000-BCA	5.00	2.00	1.25	1.38	3.00	1.251 / 1.253
FC-4000-BCA	6.00	2.75	1.50	1.88	3.50	1.491 / 1.498
<b>Double Clamp Arm</b>						
FC-0500-DCA	4.00	1.00	.62	1.62	3.25	.438 / .440
FC-1000-DCA	4.75	1.25	.87	2.00	4.00	.626 / .628
FC-2000-DCA	6.25	1.50	1.25	2.50	5.00	.876 / .879
FC-3000-DCA	7.25	2.00	1.38	3.00	6.00	1.251 / 1.253
FC-4000-DCA	8.25	2.75	1.50	3.50	7.00	1.494 / 1.498

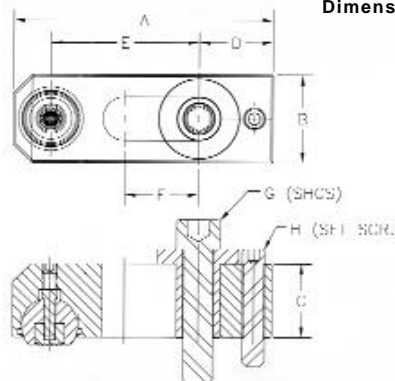
Dimensions in inches unless specified.

Standard Arms are furnished with smooth clamping surface. Add "s" to the end of part # for a Double Serated Ball.

Example:

FC-0500-BCA (Smooth Ball)

FC-0500-BCAS (Double Serated Ball)



**Sliding Clamp Arm**

Part Number	A	B	C	D	E	F	G	H
<b>Sliding Clamp Arm</b>								
FC-0500-SCA	2.63	1.00	.62	.62	1.68	.75	1/4-28 x 1 1/4	1/4-28 x 1 1/4
FC-1000-SCA	3.38	1.25	.87	1.06	2.00	.81	3/8-24 x 1 3/4	5/16-24 x 1 1/2
FC-2000-SCA	4.38	1.50	1.25	1.25	2.50	1.25	1/2-20 x 2 1/4	3/8-24 x 2
FC-3000-SCA	5.25	2.00	1.25	1.63	3.00	1.50	5/8-18 x 2 3/4	1/2-20 x 2
FC-4000-SCA	6.00	2.75	1.50	1.88	3.50	1.75	3/4-16 x 3	5/8-18 x 2 1/2

\*Ball elements have +/-6 degrees rotation.

Subject to technical modifications

Dimensions in inches unless specified.



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Your Local Advanced Representative is: