

## MODEL 7085-S Full Power Follow-Up Cylinder

These cylinders are constructed entirely in bronze and stainless steel and are available with servo valve for full follow-up (7085-S) option or without (7085). They are also available in a balanced or unbalanced configuration. If a single cylinder is not sufficient to provide the required rudder torque, they can be installed in a twin cylinder configuration whereby one cylinder with servo would serve as a master with a plain 7085 cylinder acting as the second actuator. The cylinder is rated at a design pressure of 1000 psi (69 bar) and is available in many stock lengths. The cylinder bore is 3-1/2" and the piston rod is 1-1/2" in diameter.

These cylinders are economically priced and will outperform any other product in the market place as far as durability and savings are concerned.

### Ordering Information

7085-SB Servo assisted Balanced  
7085-SU Servo assisted Unbalanced

#### 7085 BALANCED CYLINDER

Stroke inches	Main Cylinder Displacement *	
	inch <sup>3</sup>	cm <sup>3</sup>
10	78.5	1286
12	94.2	1543
16	125.6	2058
20	157	2573

\* Displacement is based on one cylinder

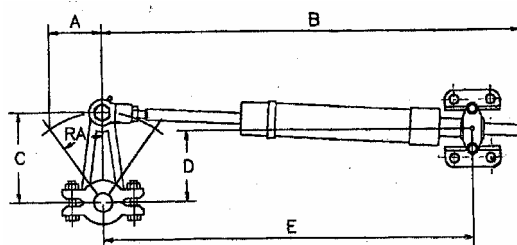
#### 7085 UNBALANCED CYLINDER

Stroke inches	Main Cylinder Displacement **	
	inch <sup>3</sup>	cm <sup>3</sup>
10	174.8	2864
12	209.8	3438
16	279.7	4583
20	349.6	5729

\*\* Displacement is based on two cylinders

#### 7085 SERVO CYLINDER

Stroke inches	Servo Cylinder Displacement	
	inch <sup>3</sup>	cm <sup>3</sup>
10	9.2	151
12	11.0	180
16	14.7	241
20	18.4	302

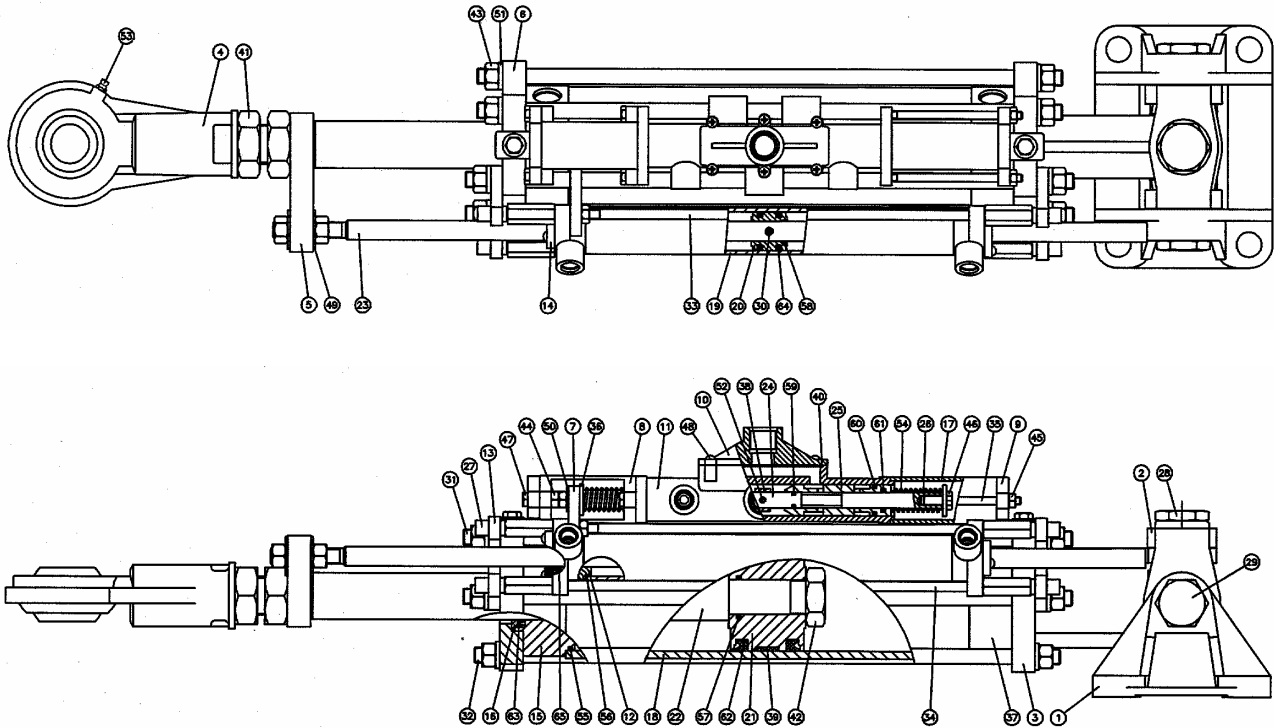


#### Balanced cylinder option

STROKE		TORQUE		A		B		C		D		E	
in.	mm	lb-ft	kg-m	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm
10	254	4580	633	5	127	36.3	921	8.7	221	7.9	201	36.2	919
12	305	5560	769	6	152	40.3	1022	10.5	266	9.5	242	39.2	995
16	406	7400	1023	8	203	48.3	1226	14.0	354	12.7	322	45.2	1148
20	508	9200	1272	10	254	56.3	1429	17.4	443	15.9	403	51.2	1300

Torque is based on one cylinder at 1000 psi and rudder angle 35°.

# DIMENSIONS AND PARTS LIST MODEL 7085-S



ITEM	QTY	PART NO.	DESCRIPTION	ITEM	QTY	PART NO.	DESCRIPTION	ITEM	QTY	PART NO.	DESCRIPTION
1	1	7085-0001	Foot	23	1	7085-0023	Servo piston rod	47	4	1001-1012	Hex Hd Mach. Screw
2	1	7085-0002	Swivel	24	1	7085-0024	Inner spool	48	6	1010-0810	Rd. Hd Philips Screw
3	1	7085-0003	End cap - swivel end	25	2	7085-0025	Outer spool	49	2	1023-0115	Washer
4	1	7085-0004	Rod end	26	2	7085-0026	Bushing	50	3	1023-0111	Washer
5	1	7085-0005	Link Arm	27	4	7085-0027	Hex nut	51	12	1023-0314	Lock washer
6	1	7085-0006	End cap	28	2	7085-0028	Hex shoulder bolt (short)	52	1	1024-0810	Spring pin
7	1	7085-0007	Servo link	29	2	7085-0029	Hex shoulder bolt (long)	53	1	1501-0301	Grease nipple
8	1	7085-0008	Spring cover	30	1	7040-0012	Servo piston pin	54	2	1201-0216	Spring
9	2	7085-0009	Servo mounting bracket	31	2	7085-0032	Main tie rod (long)	55	2	1101-0236	O-ring
10	1	7085-0010	Spool housing cover	32	4	7085-0033	Main tie rod (short)	56	2	1101-0024	O-ring
11	1	7085-0011	Spool housing	33	1	7085-0034	Servo tie rod	57	1*	1101-0216	O-ring (U)
12	2	7085-0012	Servo end cap	34	1	7085-0035	Servo tie rod	57	1*	1101-0222	O-ring (B)
13	2	7085-0013	Bracket	35	2	7085-0036	Tie rod	58	1	1101-0016	O-ring
14	2	7085-0014	Seal cover	36	2	7085-0037	Washer	59	2	1101-0109	O-ring
15	2	7085-0015	Main shaft guide	37	1	7085-0038	Rear end cap (U)	60	4	1102-0007B	U-cup
16	2	7085-0016	Seal retainer	38	1	7085-0039	Sleeve	61	2	1102-0005B	U-cup
17	1	7085-0017	Spacer	39	1	7085-0041	Wear ring	62	2	1102-2037	U-cup
18	1	7085-0018	Main tube	40	1	7085-0042	Gasket	63	*	1102-2028	U-cup
19	1	7085-0019	Servo tube	41	2	1022-0273	Hex jam nut	64	2	1102-2020	U-cup
20	1	7085-0020	Servo piston	42	1*	1022-0270	Hex jam nut (U)	65	2	1102-2006-H	U-cup
21	1*	7085-0021	Main piston (B)	43	14	1022-0164	Hex nut	†	1*	7085-0031	Main piston pin (B)
21	1*	7085-0121	Main piston (U)	44	2	1022-0161	Hex nut				
22	1*	7085-0022	Main piston rod (B)	45	2	1022-0110	Hex nut				
22	1*	7085-0122	Main piston rod (U)	46	3	1001-1112	Hex Hd. Cap Screw				

\* Quantity may vary with option  
† item not shown on diagram