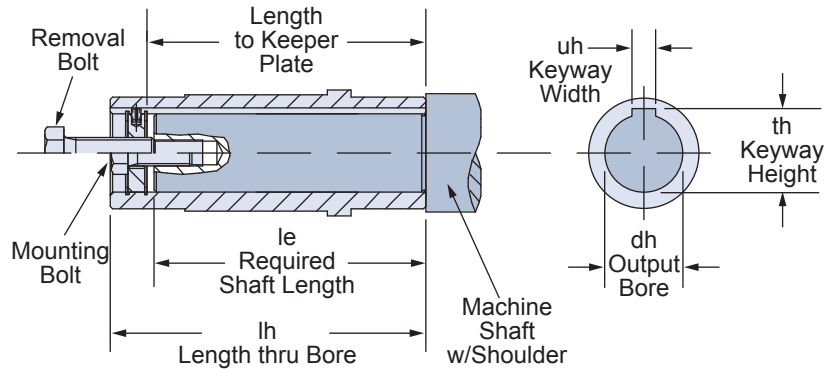


# MGS®/Servo Gear Units Hollow Output (F, K, KL, KSS)



STOBER reducers with a hollow output can be mounted to the equipment shaft from either side. Tolerances for the hollow bore are shown in Table 1. Be sure to tolerance the equipment shaft to fit accordingly.

**Table 1** Bore Tolerance (F, K, KL, KSS, S)

Bore Range	Tolerance	
	dh	uh
0.39 – 0.71	+0.0007 / -0.0000	
0.71 – 1.18	+0.0008 / -0.0000	
1.18 – 1.97	+0.0010 / -0.0000	+0.0019 -0.0000
1.97 – 3.15	+0.0012 / -0.0000	
3.15 & up	+0.0014 / -0.0000	

STOBER hollow output reducers utilize a keeper plate to prevent axial movement of the unit on the equipment shaft. The keeper plate is held in place with snap rings. Each keeper plate has a spring pin to prevent it from rotating inside the bore. The keeper plate is also drilled and tapped in the center to accept the removal bolt.



## Step 1 Drill and tap equipment shaft.

STOBER recommends you drill and tap the equipment shaft a minimum one size smaller than the tap in the keeper plate. If the keeper plate is drilled for a 1/2" removal bolt, we recommend a 3/8" bolt for securing to equipment shaft.

## Step 2 Install the keeper plate.

The keeper plate is installed on the outboard side of the unit (away from equipment shaft). Insert the first snap ring in the inner most slot. Then insert the keeper plate making sure to align the spring pin with the keyway. Insert the remaining snap ring to contain the keeper plate.



*Left: Installed keeper plate with snap ring viewed from outboard side of unit; Right: Keeper plate looking through equipment shaft entry side. Note spring pin aligned in keyway. (When installed, the equipment shaft will butt up to the keeper plate.)*

Important: Before installation, brush the inside of the bore with rust inhibiting grease. Do not mount the reducer dry as removal may be impossible.

Caution: When mounting the unit onto the shaft, avoid hammering as this may damage the bearings.

### Step 3 Mount onto equipment shaft.

Slide reducer onto equipment shaft. Insert the mounting bolt through the keeper plate and into the threaded shaft end.

### Removal of Hollow Output Reducers Using Keeper Plate

To dismantle the STOBBER unit from the equipment shaft, remove the mounting bolt. In its place, thread the removal bolt into the keeper plate to press against the shaft and loosen the shaft from the unit. (Removal of the reducer will be easier if the hollow output is greased before installation.)

For parts breakdown on a specific reducer, use our web site or call at 606.759.5090.

Table 2 Hollow Output Sizes\*

Imperial (inches)							Metric (mm)						
Unit	lh	th	uh	dh	le	Removal Bolt	Unit	lh	th	uh	dh	le	Removal Bolt 1
F1	3.74	0.84	3/16	3/4	2.76	3/8 – 16	F1	95.0	22.8	6.0	20H7	70	M8
F2	4.53	1.12	1/4	1	3.54	1/2 – 13	F2	115.0	28.3	8.0	25H7	90	M12
F3	5.12	1.37	1/4	1-1/4	3.95	1/2 – 13	F3	130.0	33.3	8.0	30H7	100	M12
F4	5.71	1.67	3/8	1-1/2	4.40	3/4 – 10	F4	145.0	43.3	12.0	40H7	111	M20
F6	7.09	2.23	1/2	2	5.54	3/4 – 10	F6	180.0	53.8	14.0	50H7	141	M20
K1	4.72	1.12	1/4	1	3.73	1/2 – 13	K1	120.0	28.3	8.0	25H7	95	M12
K2	5.83	1.31	1/4	1-3/16	4.66	1/2 – 13	K2	148.0	33.3	8.0	30H7	118	M12
K3	6.30	1.38	5/16	1-3/8	4.79	5/8 – 11	K3	160.0	38.3	10.0	35H7	122	M16
K4	7.40	1.67	3/8	1-1/2	6.09	3/4 – 10	K4	188.0	43.3	12.0	40H7	154	M20
K5	7.87	2.13	1/2	2	6.33	3/4 – 10	K5	200.0	53.8	14.0	50H7	161	M20
K6	8.46	2.23	1/2	2	6.92	3/4 – 10	K6	215.0	53.8	14.0	50H7	176	M20
K7	9.53	2.66	5/8	2-3/8	8.30	1 – 8	K7	242.0	64.4	18.0	60H7	214	M24
K8	11.81	3.03	5/8	2-3/4	10.23	1 – 8	K8	300.0	74.9	20.0	70H7	260	M24
K9	13.78	3.59	3/4	3-1/4	12.19	1 – 8	K9	350.0	95.4	25.0	90H7	299	M30
K10	16.14	4.25	1	4	14.04	1-1/4 – 7	K10	410.0	108.0	28.0	100H7	357	M30
KL1	3.43	0.71	0.188	5/8	2.78	1/4 – 20	KL1	87.0	18.3	5.0	16H7	57	M6
KL2	4.17	0.84	0.188	3/4	3.53	3/8 – 16	KL2	106.0	22.8	6.0	20H7	76	M8
KSS1	4.72	1.12	1/4	1	3.73	1/2 – 13	KSS1	—	—	—	—	—	—
KSS2	5.83	1.37	1/4	1-1/4	4.66	1/2 – 13	KSS2	—	—	—	—	—	—
KSS3	6.30	1.52	5/16	1-3/8	4.79	5/8 – 11	KSS3	—	—	—	—	—	—
KSS4	7.40	1.67	3/8	1-1/2	6.09	3/4 – 10	KSS4	—	—	—	—	—	—

\* Most outputs available in carbon or stainless steel. KSS are stainless steel only.