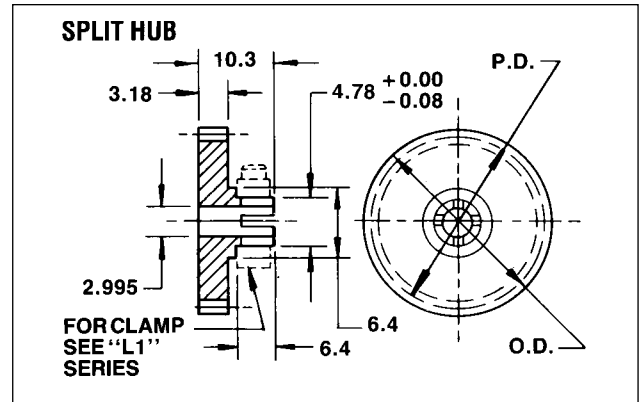
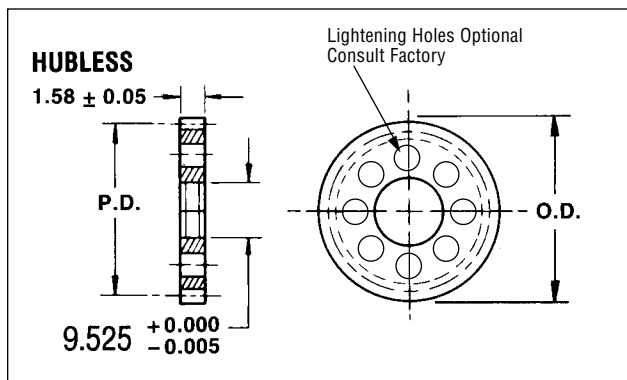
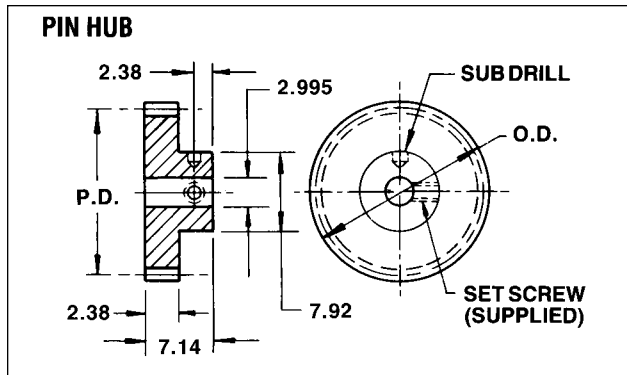


SPUR GEARS — 0.25 Module ■ 1.58, 2.38 and 3.18mm Face Width ■ 20° Pressure Angle

Pin Hub — 3mm Bore ■ Split Hub — 3mm Bore ■ Hubless — 9.525mm Bore

All Dimensions are millimeters



Material: 303 Stainless Steel
2024-T4 Aluminum (Anodized Before Cutting)

Tolerances

Quality Number	T7 *	T6	T5
Bore	+0.013 -0.000	+0.008 -0.000	+0.005 -0.000
Pitch Diameter	+0.000 -0.025	+0.000 -0.018	+0.000 -0.013
Outside Diameter	+0.00 -0.05	+0.00 -0.04	+0.00 -0.03
Total Composite and Tooth to Tooth Tolerance	Refer to Technical Reference 12-2		

* Standard Quality Level —

No suffix on part number when ordering standard quality level. i.e. **MSG3-24**

Specify quality level for T6 / T5 orders. i.e. **MSG3-24-T5**

For Gear Hubs See Pages 12-65 & 12-66

Gear Data			Stainless Steel Part No.			Aluminum Part No.		
No. Teeth	Pitch Dia.	Outside Dia.	Pin Hub	Split Hub	Hubless	Pin Hub	Split Hub	Hubless
†24	6.0	6.5	MSG3-24	MSG35-24	—	MSG4-24	MSG36-24	—
†28	7.0	7.5	MSG3-28	MSG35-28	—	MSG4-28	MSG36-28	—
32	8.0	8.5	MSG3-32	MSG35-32	—	MSG4-32	MSG36-32	—
36	9.0	9.5	MSG3-36	MSG35-36	—	MSG4-36	MSG36-36	—
40	10.0	10.5	MSG3-40	MSG35-40	—	MSG4-40	MSG36-40	—
48	12.0	12.5	MSG3-48	MSG35-48	—	MSG4-48	MSG36-48	—
54	13.5	14.0	MSG3-54	MSG35-54	—	MSG4-54	MSG36-54	—
60	15.0	15.5	MSG3-60	MSG35-60	MHS1-60	MSG4-60	MSG36-60	MHS2-60
72	18.0	18.5	MSG3-72	MSG35-72	MHS1-72	MSG4-72	MSG36-72	MHS2-72
84	21.0	21.5	MSG3-84	MSG35-84	MHS1-84	MSG4-84	MSG36-84	MHS2-84
96	24.0	24.5	MSG3-96	MSG35-96	MHS1-96	MSG4-96	MSG36-96	MHS2-96
100	25.0	25.5	MSG3-100	MSG35-100	MHS1-100	MSG4-100	MSG36-100	MHS2-100
120	30.0	30.5	MSG3-120	MSG35-120	MHS1-120	MSG4-120	MSG36-120	MHS2-120
132	33.0	33.5	MSG3-132	—	MHS1-132	MSG4-132	—	MHS2-132
144	36.0	36.5	MSG3-144	—	MHS1-144	MSG4-144	—	MHS2-144
168	42.0	42.5	MSG3-168	—	MHS1-168	MSG4-168	—	MHS2-168
180	45.0	45.5	MSG3-180	—	MHS1-180	MSG4-180	—	MHS2-180
192	48.0	48.5	MSG3-192	—	MHS1-192	MSG4-192	—	MHS2-192
216	54.0	54.5	—	—	MHS1-216	—	—	MHS2-216
240	60.0	60.5	—	—	MHS1-240	—	—	MHS2-240
264	66.0	66.5	—	—	MHS1-264	—	—	MHS2-264
288	72.0	72.5	—	—	MHS1-288	—	—	MHS2-288

†Hob Cuts Into Hub

Other Bore Sizes Available, Consult Factory.

FOR SPECIAL SPUR GEARS, ORDER AS FOLLOWS:

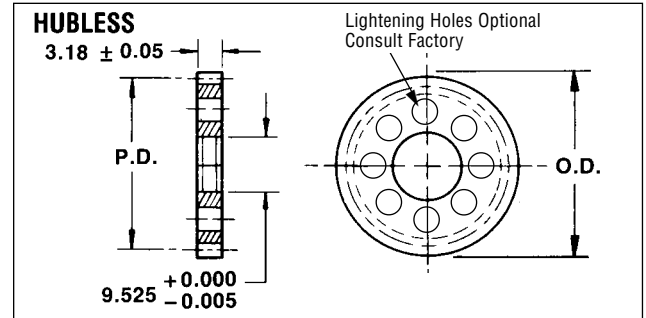
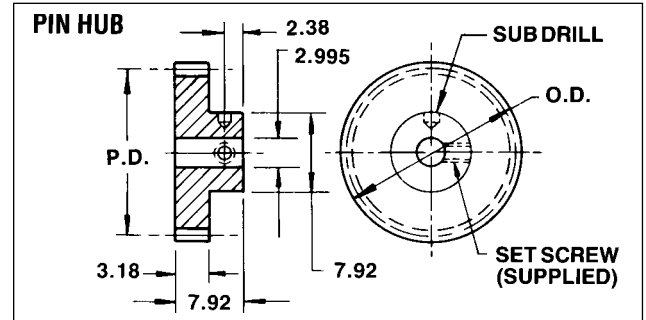
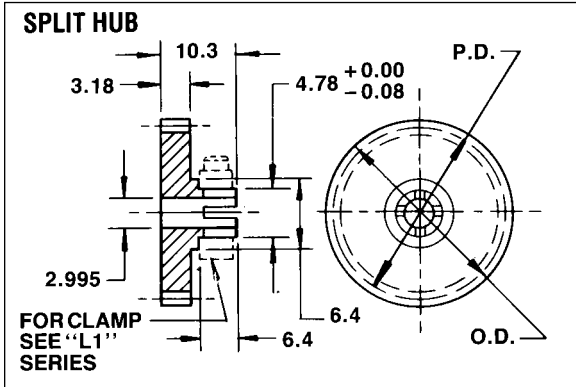
For Unlisted Number of Teeth, Specify the Number of Teeth Desired.

EXAMPLE: MSG3-24 and MSG3-28 are in the above table, for a 27 tooth gear specify Part Number MSG3-27-T7.

SPUR GEARS — 0.3 Module ■ 3.18mm Face Width ■ 20° Pressure Angle

Pin Hub — 3mm Bore ■ Split Hub — 3mm Bore ■ Hubless — 9.525mm Bore

All Dimensions in Millimeters



Material: 303 Stainless Steel
2024-T4 Aluminum (Anodized Before Cutting)

Gear Data			Stainless Steel Part No.			Aluminum Part No.		
No. Teeth	Pitch Dia.	Outside Dia.	Pin Hub	Split Hub	Hubless	Pin Hub	Split Hub	Hubless
†20	6.0	6.6	MSG5-20	—	—	MSG6-20	—	—
†24	7.2	7.8	MSG5-24	—	—	MSG6-24	—	—
†25	7.5	8.1	MSG5-25	—	—	MSG6-25	—	—
†26	7.8	8.4	MSG5-26	—	—	MSG6-26	—	—
†27	8.1	8.7	MSG5-27	MSG37-27	—	MSG6-27	MSG38-27	—
†30	9.0	9.6	MSG5-30	MSG37-30	—	MSG6-30	MSG38-30	—
†32	9.6	10.2	MSG5-32	MSG37-32	—	MSG6-32	MSG38-32	—
34	10.2	10.8	MSG5-34	MSG37-34	—	MSG6-34	MSG38-34	—
35	10.5	11.1	MSG5-35	MSG37-35	—	MSG6-35	MSG38-35	—
36	10.8	11.4	MSG5-36	MSG37-36	—	MSG6-36	MSG38-36	—
40	12.0	12.6	MSG5-40	MSG37-40	—	MSG6-40	MSG38-40	—
50	15.0	15.6	MSG5-50	MSG37-50	—	MSG6-50	MSG38-50	—
55	16.5	17.1	MSG5-55	MSG37-55	MHS3-55	MSG6-55	MSG38-55	MHS4-55
60	18.0	18.6	MSG5-60	MSG37-60	MHS3-60	MSG6-60	MSG38-60	MHS4-60
70	21.0	21.6	MSG5-70	MSG37-70	MHS3-70	MSG6-70	MSG38-70	MHS4-70
75	22.5	23.1	MSG5-75	MSG37-75	MHS3-75	MSG6-75	MSG38-75	MHS4-75
80	24.0	24.6	MSG5-80	MSG37-80	MHS3-80	MSG6-80	MSG38-80	MHS4-80
85	25.5	26.1	MSG5-85	MSG37-85	MHS3-85	MSG6-85	MSG38-85	MHS4-85
90	27.0	27.6	MSG5-90	MSG37-90	MHS3-90	MSG6-90	MSG38-90	MHS4-90
100	30.0	30.6	MSG5-100	MSG37-100	MHS3-100	MSG6-100	MSG38-100	MHS4-100
110	33.0	33.6	MSG5-110	MSG37-110	MHS3-110	MSG6-110	MSG38-110	MHS4-110
120	36.0	36.6	MSG5-120	MSG37-120	MHS3-120	MSG6-120	MSG38-120	MHS4-120
130	39.0	39.6	MSG5-130	—	MHS3-130	MSG6-130	—	MHS4-130
140	42.0	42.6	MSG5-140	—	MHS3-140	MSG6-140	—	MHS4-140
150	45.0	45.6	MSG5-150	—	MHS3-150	MSG6-150	—	MHS4-150
160	48.0	48.6	MSG5-160	—	MHS3-160	MSG6-160	—	MHS4-160
170	51.0	51.6	MSG5-170	—	MHS3-170	MSG6-170	—	MHS4-170
180	54.0	54.6	MSG5-180	—	MHS3-180	MSG6-180	—	MHS4-180
200	60.0	60.6	—	—	MHS3-200	—	—	MHS4-200
216	64.8	65.4	—	—	MHS3-216	—	—	MHS4-216
240	72.0	72.6	—	—	MHS3-240	—	—	MHS4-240
260	78.0	78.6	—	—	MHS3-260	—	—	MHS4-260
320	96.0	96.6	—	—	MHS3-320	—	—	MHS4-320

†Hob Cuts Into Hub

Other Bore Sizes Available, Consult Factory.

FOR SPECIAL SPUR GEARS, ORDER AS FOLLOWS: For Unlisted Number of Teeth, Specify the Number of Teeth Desired.

EXAMPLE: MSG6-20 and MSG6-32 are in the above table, for a 33 tooth gear specify Part Number MSG6-33

Tolerances

Quality Number	T7 *	T6	T5
Bore	+ 0.013 - 0.000	+ 0.008 - 0.000	+ 0.005 - 0.000
Pitch Diameter	+ 0.000 - 0.025	+ 0.000 - 0.018	+ 0.000 - 0.013
Outside Diameter	+ 0.00 - 0.05	+ 0.00 - 0.04	+ 0.00 - 0.03
Total Composite and Tooth to Tooth Tolerance	Refer to Technical Reference 12-2		

* Standard Quality Level —

No suffix on part number when ordering standard quality level. i.e. **MHS3-60**

Specify quality level for T6 / T5 orders. i.e. **MHS3-60-T5**

Phone: 800-243-6125 ■ FAX: 203-758-8271

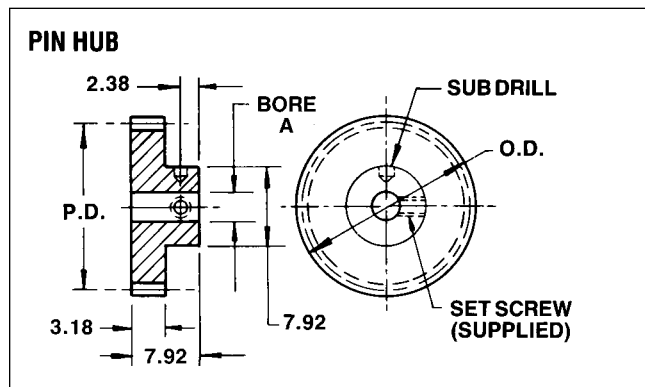
E-Mail: info@pic-design.com

PIC DESIGN

SPUR GEARS — 0.4 Module ■ 3.18mm Face Width ■ 20° Pressure Angle

Pin Hub — 3 and 4mm Bores

All Dimensions in Millimeters



Material: 303 Stainless Steel
2024-T4 Aluminum (Anodized Before Cutting)

Dimen.	Bore	
	3 mm	4 mm
A	2.995	3.995

Tolerances

Quality Number	T7 *	T6	T5
Bore	+ 0.013 - 0.000	+ 0.008 - 0.000	+ 0.005 - 0.000
Pitch Diameter	+ 0.000 - 0.025	+ 0.000 - 0.018	+ 0.000 - 0.013
Outside Diameter	+ 0.00 - 0.05	+ 0.00 - 0.04	+ 0.00 - 0.03
Total Composite and Tooth to Tooth Tolerance	Refer to Technical Reference 12-2		

* Standard Quality Level —

No suffix on part number when ordering standard quality level. i.e. **MSG7-25**

Specify quality level for T6 / T5 orders. i.e. **MSG7-25-T5**

Gear Data			Stainless Steel Part No.		Aluminum Part No.	
No. Teeth	Pitch Dia.	Outside Dia.	3 mm Bore	4 mm Bore	3 mm Bore	4 mm Bore
24	9.6	10.4	MSG7-24	MSG9-24	MSG8-24	MSG10-24
25	10.0	10.8	MSG7-25	MSG9-25	MSG8-25	MSG10-25
26	10.4	11.2	MSG7-26	MSG9-26	MSG8-26	MSG10-26
28	11.2	12.0	MSG7-28	MSG9-28	MSG8-28	MSG10-28
30	12.0	12.8	MSG7-30	MSG9-30	MSG8-30	MSG10-30
32	12.8	13.6	MSG7-32	MSG9-32	MSG8-32	MSG10-32
36	14.4	15.2	MSG7-36	MSG9-36	MSG8-36	MSG10-36
40	16.0	16.8	MSG7-40	MSG9-40	MSG8-40	MSG10-40
42	16.8	17.6	MSG7-42	MSG9-42	MSG8-42	MSG10-42
44	17.6	18.4	MSG7-44	MSG9-44	MSG8-44	MSG10-44
46	18.4	19.2	MSG7-46	MSG9-46	MSG8-46	MSG10-46
48	19.2	20.0	MSG7-48	MSG9-48	MSG8-48	MSG10-48
50	20.0	20.8	MSG7-50	MSG9-50	MSG8-50	MSG10-50
60	24.0	24.8	MSG7-60	MSG9-60	MSG8-60	MSG10-60
64	25.6	26.4	MSG7-64	MSG9-64	MSG8-64	MSG10-64
70	28.0	28.8	MSG7-70	MSG9-70	MSG8-70	MSG10-70
72	28.8	29.6	MSG7-72	MSG9-72	MSG8-72	MSG10-72
75	30.0	30.8	MSG7-75	MSG9-75	MSG8-75	MSG10-75
80	32.0	32.8	MSG7-80	MSG9-80	MSG8-80	MSG10-80
84	33.6	34.4	MSG7-84	MSG9-84	MSG8-84	MSG10-84
85	34.0	34.8	MSG7-85	MSG9-85	MSG8-85	MSG10-85
90	36.0	36.8	MSG7-90	MSG9-90	MSG8-90	MSG10-90
95	38.0	38.8	MSG7-95	MSG9-95	MSG8-95	MSG10-95
96	38.4	39.2	MSG7-96	MSG9-96	MSG8-96	MSG10-96
100	40.0	40.8	MSG7-100	MSG9-100	MSG8-100	MSG10-100
105	42.0	42.8	MSG7-105	MSG9-105	MSG8-105	MSG10-105
120	48.0	48.8	MSG7-120	MSG9-120	MSG8-120	MSG10-120
160	64.0	64.8	MSG7-160	MSG9-160	MSG8-160	MSG10-160

Other Bore Sizes Available, Consult Factory.

FOR SPECIAL SPUR GEARS, ORDER AS FOLLOWS:

For Unlisted Number of Teeth, Specify the Number of Teeth Desired.

EXAMPLE: MSG7-24 and MSG7-25 are in the above table, for a 27 tooth gear specify Part Number MSG7-27.

SPUR GEARS — 0.4 Module ■ 3.18 and 4.76mm Face Width ■ 20° Pressure Angle

Pin Hub — 6mm Bore

All Dimensions in Millimeters

Gear Data			Stainless Steel Part No.		Aluminum Part No.	
No. Teeth	Pitch Dia.	Outside Dia.	3.18 mm Face	4.76 mm Face	3.18 mm Face	4.76 mm Face
†26	10.4	11.2	MSG11-26	MSG13-26	MSG12-26	MSG14-26
†29	11.6	12.4	MSG11-29	MSG13-29	MSG12-29	MSG14-29
†30	12.0	12.8	MSG11-30	MSG13-30	MSG12-30	MSG14-30
†32	12.8	13.6	MSG11-32	MSG13-32	MSG12-32	MSG14-32
36	14.4	15.2	MSG11-36	MSG13-36	MSG12-36	MSG14-36
40	16.0	16.8	MSG11-40	MSG13-40	MSG12-40	MSG14-40
42	16.8	17.6	MSG11-42	MSG13-42	MSG12-42	MSG14-42
48	19.2	20.0	MSG11-48	MSG13-48	MSG12-48	MSG14-48
50	20.0	20.8	MSG11-50	MSG13-50	MSG12-50	MSG14-50
55	22.0	22.8	MSG11-55	MSG13-55	MSG12-55	MSG14-55
56	22.4	23.2	MSG11-56	MSG13-56	MSG12-56	MSG14-56
60	24.0	24.8	MSG11-60	MSG13-60	MSG12-60	MSG14-60
64	25.6	26.4	MSG11-64	MSG13-64	MSG12-64	MSG14-64
72	28.8	29.6	MSG11-72	MSG13-72	MSG12-72	MSG14-72
75	30.0	30.8	MSG11-75	MSG13-75	MSG12-75	MSG14-75
80	32.0	32.8	MSG11-80	MSG13-80	MSG12-80	MSG14-80
84	33.6	34.4	MSG11-84	MSG13-84	MSG12-84	MSG14-84
85	34.0	34.8	MSG11-85	MSG13-85	MSG12-85	MSG14-85
88	35.2	36.0	MSG11-88	MSG13-88	MSG12-88	MSG14-88
96	38.4	39.2	MSG11-96	MSG13-96	MSG12-96	MSG14-96
100	40.0	40.8	MSG11-100	MSG13-100	MSG12-100	MSG14-100
104	41.6	42.4	MSG11-104	MSG13-104	MSG12-104	MSG14-104
112	44.8	45.6	MSG11-112	MSG13-112	MSG12-112	MSG14-112
120	48.0	48.8	MSG11-120	MSG13-120	MSG12-120	MSG14-120
127	50.8	51.6	MSG11-127	MSG13-127	MSG12-127	MSG14-127
140	56.0	56.8	MSG11-140	MSG13-140	MSG12-140	MSG14-140
144	57.6	58.4	MSG11-144	MSG13-144	MSG12-144	MSG14-144
160	64.0	64.8	MSG11-160	MSG13-160	MSG12-160	MSG14-160

†Hob Cuts Into Hub

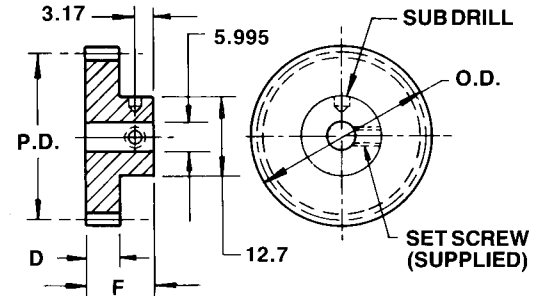
Other Bore Sizes Available, Consult Factory.

FOR SPECIAL SPUR GEARS, ORDER AS FOLLOWS:

For Unlisted Number of Teeth, Specify the Number of Teeth Desired.

EXAMPLE: MSG11-29 and MSG11-30 are in the above table, for a 31 tooth gear specify Part Number MSG11-31

PIN HUB



Material: 303 Stainless Steel

2024-T4 Aluminum (Anodized Before Cutting)

Dimen.		
D	3.18	4.76
F	9.52	11.10

Tolerances

Quality Number	T7 *	T6	T5
Bore	+ 0.013 - 0.000	+ 0.008 - 0.000	+ 0.005 - 0.000
Pitch Diameter	+ 0.000 - 0.025	+ 0.000 - 0.018	+ 0.000 - 0.013
Outside Diameter	+ 0.00 - 0.05	+ 0.00 - 0.04	+ 0.00 - 0.03
Total Composite and Tooth to Tooth Tolerance	Refer to Technical Reference 12-2		

* Standard Quality Level —

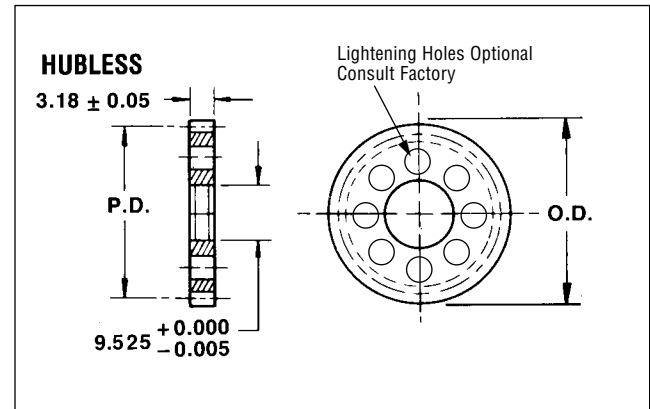
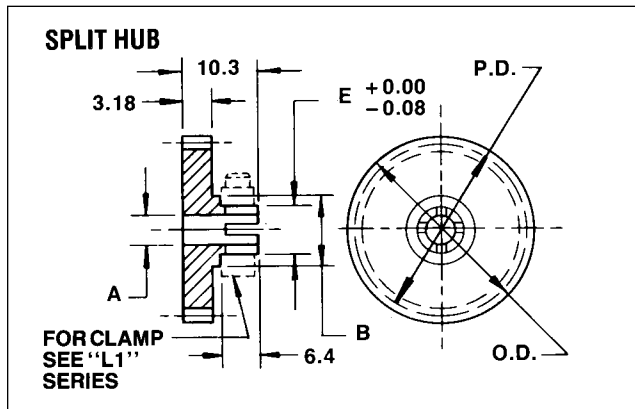
No suffix on part number when ordering standard quality level. i.e. **MSG11-26**

Specify quality level for T6 / T5 orders. i.e. **MSG11-26-T5**

SPUR GEARS — 0.4 Module ■ 3.18mm Face Width ■ 20° Pressure Angle

Split Hub — 4 and 6mm Bores ■ Hubless — 9.52mm Bore

All Dimensions in Millimeters



Material: 303 Stainless Steel
2024-T4 Aluminum (Anodized Before Cutting)

Dimen.	
A	3.995 5.995
B	7.92 9.52
E	6.4 7.92

Tolerances

Quality Number	T7 *	T6	T5
Bore	+ 0.013 - 0.000	+ 0.008 - 0.000	+ 0.005 - 0.000
Pitch Diameter	+ 0.000 - 0.025	+ 0.000 - 0.018	+ 0.000 - 0.013
Outside Diameter	+ 0.00 - 0.05	+ 0.00 - 0.04	+ 0.00 - 0.03
Total Composite and Tooth to Tooth Tolerance	Refer to Technical Reference 12-2		

* Standard Quality Level —

No suffix on part number when ordering standard quality level. i.e. **MHS6-48**

Specify quality level for T6 / T5 orders. i.e. **MHS6-48-T5**

Gear Data			Stainless Steel Part No.			Aluminum Part No.		
			Split Hub		Hubless	Split Hub		Hubless
No. Teeth	Pitch Dia.	Outside Dia.	4 mm Bore	6 mm Bore	9.525 Bore	4 mm Bore	6 mm Bore	9.525 Bore
†22	8.8	9.6	MSG39-22	MSG41-22	—	MSG40-22	MSG42-22	—
†24	9.6	10.4	MSG39-24	MSG41-24	—	MSG40-24	MSG42-24	—
†25	10.0	10.8	MSG39-25	MSG41-25	—	MSG40-25	MSG42-25	—
30	12.0	12.8	MSG39-30	MSG41-30	—	MSG40-30	MSG42-30	—
32	12.8	13.6	MSG39-32	MSG41-32	—	MSG40-32	MSG42-32	—
36	14.4	15.2	MSG39-36	MSG41-36	—	MSG40-36	MSG42-36	—
38	15.2	16.0	MSG39-38	MSG41-38	—	MSG40-38	MSG42-38	—
40	16.0	16.8	MSG39-40	MSG41-40	—	MSG40-40	MSG42-40	—
48	19.2	20.0	MSG39-48	MSG41-48	MHS5-48	MSG40-48	MSG42-48	MHS6-48
50	20.0	20.8	MSG39-50	MSG41-50	MHS5-50	MSG40-50	MSG42-50	MHS6-50
56	22.4	23.2	MSG39-56	MSG41-56	MHS5-56	MSG40-56	MSG42-56	MHS6-56
60	24.0	24.8	MSG39-60	MSG41-60	MHS5-60	MSG40-60	MSG42-60	MHS6-60
64	25.6	26.4	MSG39-64	MSG41-64	MHS5-64	MSG40-64	MSG42-64	MHS6-64
72	28.8	29.6	MSG39-72	MSG41-72	MHS5-72	MSG40-72	MSG42-72	MHS6-72
80	32.0	32.8	MSG39-80	MSG41-80	MHS5-80	MSG40-80	MSG42-80	MHS6-80
96	38.4	39.2	MSG39-96	MSG41-96	MHS5-96	MSG40-96	MSG42-96	MHS6-96
104	41.6	42.4	MSG39-104	MSG41-104	MHS5-104	MSG40-104	MSG42-104	MHS6-104
112	44.8	45.6	MSG39-112	MSG41-112	MHS5-112	MSG40-112	MSG42-112	MHS6-112
120	48.0	48.8	—	MSG41-120	MHS5-120	—	MSG42-120	MHS6-120
127	50.8	51.6	—	MSG41-127	MHS5-127	—	MSG42-127	MHS6-127
144	57.6	58.4	—	MSG41-144	MHS5-144	—	MSG42-144	MHS6-144
160	64.0	64.8	—	MSG41-160	MHS5-160	—	MSG42-160	MHS6-160
176	70.4	71.2	—	MSG41-176	MHS5-176	—	MSG42-176	MHS6-176
192	76.8	77.6	—	MSG41-192	MHS5-192	—	MSG42-192	MHS6-192
224	89.6	90.4	—	MSG41-224	—	—	MSG42-224	—
240	96.0	96.8	—	MSG41-240	—	—	MSG42-240	—

†Hob Cuts Into Hub.

Other Bore Sizes Available, Consult Factory.

FOR SPECIAL SPUR GEARS, ORDER AS FOLLOWS:

For Unlisted Number of Teeth, Specify the Number of Teeth Desired.

EXAMPLE: MSG41-25 and MSG41-30 are in the above table, for a 31 tooth gear specify Part Number MSG41-31

For Gear Hubs See Pages 12-65 & 12-66

SPUR GEARS — 0.5 Module ■ 3.18mm Face Width ■ 20° Pressure Angle

Pin Hub — 3 and 4mm Bores

All Dimensions in Millimeters

Gear Data			Stainless Steel Part No.		Aluminum Part No.	
No. Teeth	Pitch Dia.	Outside Dia.	3 mm Bore	4 mm Bore	3 mm Bore	4 mm Bore
†14	7.0	8.0	MSG15-14	MSG17-14	MSG16-14	MSG18-14
†16	8.0	9.0	MSG15-16	MSG17-16	MSG16-16	MSG18-16
†18	9.0	10.0	MSG15-18	MSG17-18	MSG16-18	MSG18-18
20	10.0	11.0	MSG15-20	MSG17-20	MSG16-20	MSG18-20
21	10.5	11.5	MSG15-21	MSG17-21	MSG16-21	MSG18-21
24	12.0	13.0	MSG15-24	MSG17-24	MSG16-24	MSG18-24
26	13.0	14.0	MSG15-26	MSG17-26	MSG16-26	MSG18-26
27	13.5	14.5	MSG15-27	MSG17-27	MSG16-27	MSG18-27
30	15.0	16.0	MSG15-30	MSG17-30	MSG16-30	MSG18-30
32	16.0	17.0	MSG15-32	MSG17-32	MSG16-32	MSG18-32
36	18.0	19.0	MSG15-36	MSG17-36	MSG16-36	MSG18-36
40	20.0	21.0	MSG15-40	MSG17-40	MSG16-40	MSG18-40
42	21.0	22.0	MSG15-42	MSG17-42	MSG16-42	MSG18-42
48	24.0	25.0	MSG15-48	MSG17-48	MSG16-48	MSG18-48
50	25.0	26.0	MSG15-50	MSG17-50	MSG16-50	MSG18-50
55	27.5	28.5	MSG15-55	MSG17-55	MSG16-55	MSG18-55
60	30.0	31.0	MSG15-60	MSG17-60	MSG16-60	MSG18-60
64	32.0	33.0	MSG15-64	MSG17-64	MSG16-64	MSG18-64
72	36.0	37.0	MSG15-72	MSG17-72	MSG16-72	MSG18-72
75	37.5	38.5	MSG15-75	MSG17-75	MSG16-75	MSG18-75
80	40.0	41.0	MSG15-80	MSG17-80	MSG16-80	MSG18-80
84	42.0	43.0	MSG15-84	MSG17-84	MSG16-84	MSG18-84
90	45.0	46.0	MSG15-90	MSG17-90	MSG16-90	MSG18-90
96	48.0	49.0	MSG15-96	MSG17-96	MSG16-96	MSG18-96
100	50.0	51.0	MSG15-100	MSG17-100	MSG16-100	MSG18-100
120	60.0	61.0	MSG15-120	MSG17-120	MSG16-120	MSG18-120
144	72.0	73.0	MSG15-144	MSG17-144	MSG16-144	MSG18-144
180	90.0	91.0	MSG15-180	MSG17-180	MSG16-180	MSG18-180

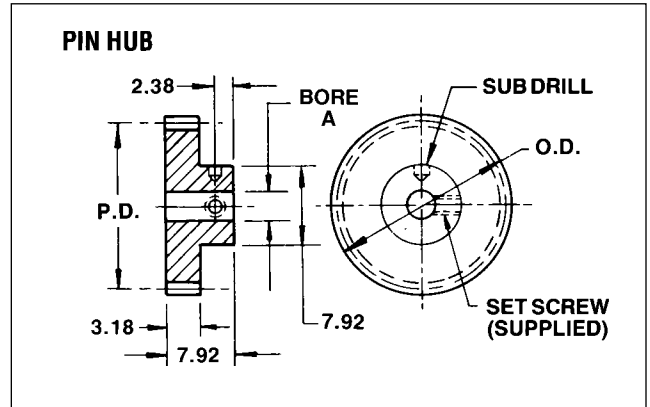
†Hob Cuts Into Hub.

Other Bore Sizes Available, Consult Factory.

FOR SPECIAL SPUR GEARS, ORDER AS FOLLOWS:

For Unlisted Number of Teeth, Specify the Number of Teeth Desired.

EXAMPLE: MSG15-27 and MSG15-30 are in the above table, for a 31 tooth gear specify Part Number MSG15-31



Material: 303 Stainless Steel

2024-T4 Aluminum (Anodized Before Cutting)

Dimen.	Bore	
	3 mm	4 mm
A	2.995	3.995

Tolerances

Quality Number	T7 *	T6	T5
Bore	+ 0.013 - 0.000	+ 0.008 - 0.000	+ 0.005 - 0.000
Pitch Diameter	+ 0.000 - 0.025	+ 0.000 - 0.018	+ 0.000 - 0.013
Outside Diameter	+ 0.00 - 0.05	+ 0.00 - 0.04	+ 0.00 - 0.03
Total Composite and Tooth to Tooth Tolerance	Refer to Technical Reference 12-2		

* Standard Quality Level —

No suffix on part number when ordering standard quality level. i.e. **MSG15-60**

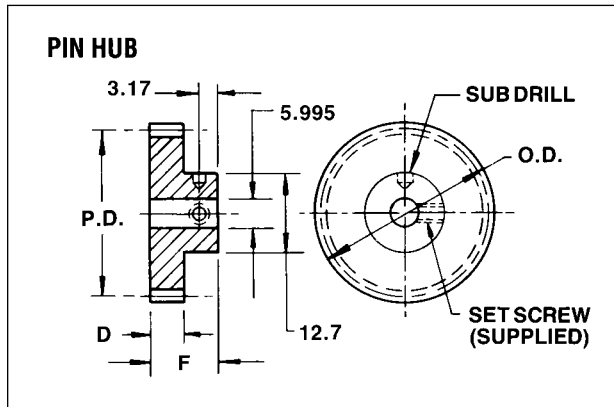
Specify quality level for T6 / T5 orders.

i.e. **MSG15-60-T5**

SPUR GEARS — 0.5 Module ■ 3.18 and 4.76mm Face Width ■ 20° Pressure Angle

Pin Hub — 6mm Bore

All Dimensions in Millimeters



Material: 303 Stainless Steel
2024-T4 Aluminum (Anodized Before Cutting)

Dimen.		
D	3.18	4.76
F	9.52	11.10

Tolerances

Quality Number	T7 *	T6	T5
Bore	+ 0.013 - 0.000	+ 0.008 - 0.000	+ 0.005 - 0.000
Pitch Diameter	+ 0.000 - 0.025	+ 0.000 - 0.018	+ 0.000 - 0.013
Outside Diameter	+ 0.00 - 0.05	+ 0.00 - 0.04	+ 0.00 - 0.03
Total Composite and Tooth to Tooth Tolerance	Refer to Technical Reference 12-2		

* Standard Quality Level —

No suffix on part number when ordering standard quality level. i.e. **MSG19-20**
Specify quality level for T6 / T5 orders.
i.e. **MSG19-20-T5**

Gear Data			Stainless Steel Part No.		Aluminum Part No.	
No. Teeth	Pitch Dia.	Outside Dia.	3.18 Face Width	4.76 Face Width	3.18 Face Width	4.76 Face Width
†20	10.0	11.0	MSG19-20	MSG21-20	MSG20-20	MSG22-20
†22	11.0	12.0	MSG19-22	MSG21-22	MSG20-22	MSG22-22
†24	12.0	13.0	MSG19-24	MSG21-24	MSG20-24	MSG22-24
†26	13.0	14.0	MSG19-26	MSG21-26	MSG20-26	MSG22-26
30	15.0	16.0	MSG19-30	MSG21-30	MSG20-30	MSG22-30
32	16.0	17.0	MSG19-32	MSG21-32	MSG20-32	MSG22-32
34	17.0	18.0	MSG19-34	MSG21-34	MSG20-34	MSG22-34
36	18.0	19.0	MSG19-36	MSG21-36	MSG20-36	MSG22-36
40	20.0	21.0	MSG19-40	MSG21-40	MSG20-40	MSG22-40
42	21.0	22.0	MSG19-42	MSG21-42	MSG20-42	MSG22-42
48	24.0	25.0	MSG19-48	MSG21-48	MSG20-48	MSG22-48
50	25.0	26.0	MSG19-50	MSG21-50	MSG20-50	MSG22-50
55	27.5	28.5	MSG19-55	MSG21-55	MSG20-55	MSG22-55
60	30.0	31.0	MSG19-60	MSG21-60	MSG20-60	MSG22-60
72	36.0	37.0	MSG19-72	MSG21-72	MSG20-72	MSG22-72
75	37.5	38.5	MSG19-75	MSG21-75	MSG20-75	MSG22-75
80	40.0	41.0	MSG19-80	MSG21-80	MSG20-80	MSG22-80
84	42.0	43.0	MSG19-84	MSG21-84	MSG20-84	MSG22-84
90	45.0	46.0	MSG19-90	MSG21-90	MSG20-90	MSG22-90
96	48.0	49.0	MSG19-96	MSG21-96	MSG20-96	MSG22-96
100	50.0	51.0	MSG19-100	MSG21-100	MSG20-100	MSG22-100
105	52.5	53.5	MSG19-105	MSG21-105	MSG20-105	MSG22-105
110	55.0	56.0	MSG19-110	MSG21-110	MSG20-110	MSG22-110
120	60.0	61.0	MSG19-120	MSG21-120	MSG20-120	MSG22-120
126	63.0	64.0	MSG19-126	MSG21-126	MSG20-126	MSG22-126
144	72.0	73.0	MSG19-144	MSG21-144	MSG20-144	MSG22-144
156	78.0	79.0	MSG19-156	MSG21-156	MSG20-156	MSG22-156
180	90.0	91.0	MSG19-180	MSG21-180	MSG20-180	MSG22-180

†Hob Cuts Into Hub.

Other Bore Sizes Available, Consult Factory.

FOR SPECIAL SPUR GEARS, ORDER AS FOLLOWS:

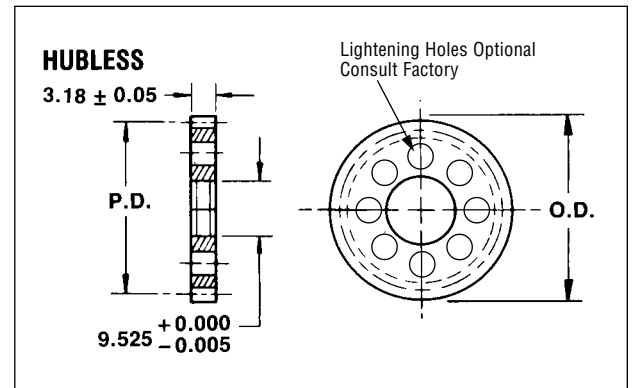
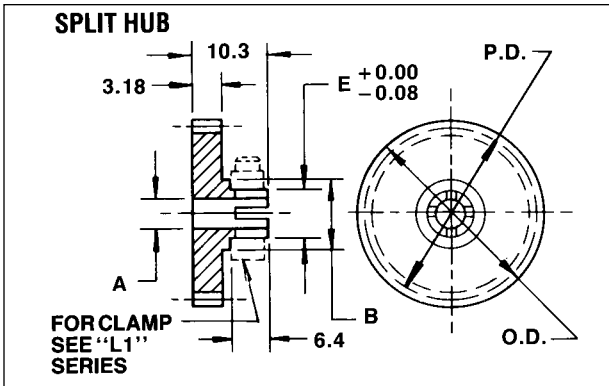
For Unlisted Number of Teeth, Specify the Number of Teeth Desired.

EXAMPLE: MSG21-26 and MSG21-30 are in the above table, for a 31 tooth gear specify Part Number MSG21-31

SPUR GEARS — 0.5 Module ■ 3.18mm Face Width ■ 20° Pressure Angle

Split Hub — 4 and 6mm Bores ■ Hubless — 9.52mm Bore

All Dimensions in Millimeters



Material: 303 Stainless Steel
2024-T4 Aluminum (Anodized Before Cutting)

Gear Data			Stainless Steel Part No.			Aluminum Part No.		
			Split Hub		Hubless	Split Hub		Hubless
No. Teeth	Pitch Dia.	Outside Dia.	4 mm Bore	6 mm Bore	9.525 mm Bore	4 mm Bore	6 mm Bore	9.525 mm Bore
†20	10.0	11.0	MSG43-20	MSG45-20	—	MSG44-20	MSG46-20	—
†21	10.5	11.5	MSG43-21	MSG45-21	—	MSG44-21	MSG46-21	—
22	11.0	12.0	MSG43-22	MSG45-22	—	MSG44-22	MSG46-22	—
23	11.5	12.5	MSG43-23	MSG45-23	—	MSG44-23	MSG46-23	—
24	12.0	13.0	MSG43-24	MSG45-24	—	MSG44-24	MSG46-24	—
25	12.5	13.5	MSG43-25	MSG45-25	—	MSG44-25	MSG46-25	—
27	13.5	14.5	MSG43-27	MSG45-27	—	MSG44-27	MSG46-27	—
30	15.0	16.0	MSG43-30	MSG45-30	MHS7-30	MSG44-30	MSG46-30	MHS8-30
32	16.0	17.0	MSG43-32	MSG45-32	MHS7-32	MSG44-32	MSG46-32	MHS8-32
36	18.0	19.0	MSG43-36	MSG45-36	MHS7-36	MSG44-36	MSG46-36	MHS8-36
40	20.0	21.0	MSG43-40	MSG45-40	MHS7-40	MSG44-40	MSG46-40	MHS8-40
42	21.0	22.0	MSG43-42	MSG45-42	MHS7-42	MSG44-42	MSG46-42	MHS8-42
44	22.0	23.0	MSG43-44	MSG45-44	MHS7-44	MSG44-44	MSG46-44	MHS8-44
48	24.0	25.0	MSG43-48	MSG45-48	MHS7-48	MSG44-48	MSG46-48	MHS8-48
55	27.5	28.5	MSG43-55	MSG45-55	MHS7-55	MSG44-55	MSG46-55	MHS8-55
60	30.0	31.0	MSG43-60	MSG45-60	MHS7-60	MSG44-60	MSG46-60	MHS8-60
72	36.0	37.0	MSG43-72	MSG45-72	MHS7-72	MSG44-72	MSG46-72	MHS8-72
78	39.0	40.0	MSG43-78	MSG45-78	MHS7-78	MSG44-78	MSG46-78	MHS8-78
84	42.0	43.0	MSG43-84	MSG45-84	MHS7-84	MSG44-84	MSG46-84	MHS8-84
90	45.0	46.0	MSG43-90	MSG45-90	MHS7-90	MSG44-90	MSG46-90	MHS8-90
96	48.0	49.0	—	MSG45-96	MHS7-96	—	MSG46-96	MHS8-96
108	54.0	55.0	—	MSG45-108	MHS7-108	—	MSG46-108	MHS8-108
120	60.0	61.0	—	MSG45-120	MHS7-120	—	MSG46-120	MHS8-120
127	63.5	64.5	—	MSG45-127	MHS7-127	—	MSG46-127	MHS8-127
132	66.0	67.0	—	MSG45-132	MHS7-132	—	MSG46-132	MHS8-132
168	84.0	85.0	—	MSG45-168	MHS7-168	—	MSG46-168	MHS8-168
192	96.0	97.0	—	MSG45-192	MHS7-192	—	MSG46-192	MHS8-192

Dimen.		
A	3.995	5.995
B	7.92	9.52
E	6.4	7.92

Tolerances

Quality Number	T7 *	T6	T5
Bore	+ 0.013 - 0.000	+ 0.008 - 0.000	+ 0.005 - 0.000
Pitch Diameter	+ 0.000 - 0.025	+ 0.000 - 0.018	+ 0.000 - 0.013
Outside Diameter	+ 0.00 - 0.05	+ 0.00 - 0.04	+ 0.00 - 0.03
Total Composite and Tooth to Tooth Tolerance	Refer to Technical Reference 12-2		

* Standard Quality Level —

No suffix on part number when ordering standard quality level. i.e. **MSG43-20**
Specify quality level for T6 / T5 orders.
i.e. **MSG43-20-T5**

†Hub Cuts Into Hub.

Other Bore Sizes Available, Consult Factory.

FOR SPECIAL SPUR GEARS, ORDER AS FOLLOWS:

For Unlisted Number of Teeth, Specify the Number of Teeth Desired.

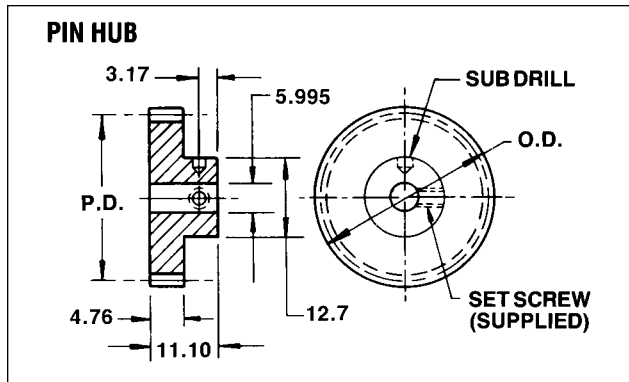
EXAMPLE: MSG43-36 and MSG43-38 are in the above table, for a 37 tooth gear specify Part Number MSG43-37

For Gear Hubs See Pages 12-65 & 12-66

SPUR GEARS — 0.6 Module ■ 4.76mm Face Width ■ 20° Pressure Angle

Pin Hub — 6mm Bore

All Dimensions in Millimeters



Material: 303 Stainless Steel
2024-T4 Aluminum (Anodized Before Cutting)

Tolerances

Quality Number	T7 *	T6	T5
Bore	+ 0.013 - 0.000	+ 0.008 - 0.000	+ 0.005 - 0.000
Pitch Diameter	+ 0.000 - 0.025	+ 0.000 - 0.018	+ 0.000 - 0.013
Outside Diameter	+ 0.00 - 0.05	+ 0.00 - 0.04	+ 0.00 - 0.03
Total Composite and Tooth to Tooth Tolerance	Refer to Technical Reference 12-2		

* Standard Quality Level —

No suffix on part number when ordering standard quality level. i.e. **MSG23-16**
Specify quality level for T6 / T5 orders.
i.e. **MSG23-16-T5**

Gear Data			Stainless Steel Part No.	Aluminum Part No.
No. Teeth	Pitch Dia.	Outside Dia.		
†16	9.6	10.8	MSG23-16	MSG24-16
†18	10.8	12.0	MSG23-18	MSG24-18
†20	12.0	13.2	MSG23-20	MSG24-20
†22	13.2	14.4	MSG23-22	MSG24-22
24	14.4	15.6	MSG23-24	MSG24-24
28	16.8	18.0	MSG23-28	MSG24-28
30	18.0	19.2	MSG23-30	MSG24-30
32	19.2	20.4	MSG23-32	MSG24-32
34	20.4	21.6	MSG23-34	MSG24-34
40	24.0	25.2	MSG23-40	MSG24-40
44	26.4	27.6	MSG23-44	MSG24-44
48	28.8	30.0	MSG23-48	MSG24-48
50	30.0	31.2	MSG23-50	MSG24-50
56	33.6	34.8	MSG23-56	MSG24-56
60	36.0	37.2	MSG23-60	MSG24-60
64	38.4	39.6	MSG23-64	MSG24-64
72	43.2	44.4	MSG23-72	MSG24-72
80	48.0	49.2	MSG23-80	MSG24-80
84	50.4	51.6	MSG23-84	MSG24-84
88	52.8	54.0	MSG23-88	MSG24-88
96	57.6	58.8	MSG23-96	MSG24-96
100	60.0	61.2	MSG23-100	MSG24-100
112	67.2	68.4	MSG23-112	MSG24-112
120	72.0	73.2	MSG23-120	MSG24-120

†Hob Cuts Into Hub.

Other Bore Sizes Available, Consult Factory.

FOR SPECIAL SPUR GEARS, ORDER AS FOLLOWS:

For Unlisted Number of Teeth, Specify the Number of Teeth Desired.

EXAMPLE: MSG23-28 and MSG23-30 are in the above table, for a 27 tooth gear specify Part Number MSG23-31.

SPUR GEARS — 0.7 Module ■ 4.76mm Face Width ■ 20° Pressure Angle

Pin Hub — 6mm Bore

Gear Data			Stainless Steel Part No.	Aluminum Part No.
No. Teeth	Pitch Dia.	Outside Dia.		
†16	11.2	12.6	MSG25-16	MSG26-16
†18	12.6	14.0	MSG25-18	MSG26-18
†20	14.0	15.4	MSG25-20	MSG26-20
22	15.4	16.8	MSG25-22	MSG26-22
24	16.8	18.2	MSG25-24	MSG26-24
28	19.6	21.0	MSG25-28	MSG26-28
30	21.0	22.4	MSG25-30	MSG26-30
32	22.4	23.8	MSG25-32	MSG26-32
34	23.8	25.2	MSG25-34	MSG26-34
40	28.0	29.4	MSG25-40	MSG26-40
44	30.8	32.2	MSG25-44	MSG26-44
48	33.6	35.0	MSG25-48	MSG26-48
50	35.0	36.4	MSG25-50	MSG26-50
56	39.2	40.6	MSG25-56	MSG26-56
60	42.0	43.4	MSG25-60	MSG26-60
64	44.8	46.2	MSG25-64	MSG26-64
72	50.4	51.8	MSG25-72	MSG26-72
80	56.0	57.4	MSG25-80	MSG26-80
84	58.8	60.2	MSG25-84	MSG26-84
88	61.6	63.0	MSG25-88	MSG26-88
96	67.2	68.6	MSG25-96	MSG26-96
100	70.0	71.4	MSG25-100	MSG26-100
112	78.4	79.8	MSG25-112	MSG26-112
120	84.0	85.4	MSG25-120	MSG26-120

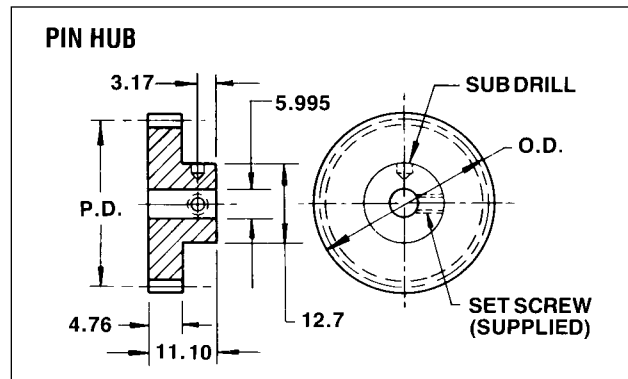
†Hob Cuts Into Hub.

Other Bore Sizes Available, Consult Factory.

FOR SPECIAL SPUR GEARS, ORDER AS FOLLOWS:

For Unlisted Number of Teeth, Specify the Number of Teeth Desired.

EXAMPLE: MSG25-30 and MSG25-32 are in the above table, for a 33 tooth gear specify Part Number MSG25-33



Material: 303 Stainless Steel

2024-T4 Aluminum (Anodized Before Cutting)

Tolerances

Quality Number	T7 *	T6	T5
Bore	+ 0.013 - 0.000	+ 0.008 - 0.000	+ 0.005 - 0.000
Pitch Diameter	+ 0.000 - 0.025	+ 0.000 - 0.018	+ 0.000 - 0.013
Outside Diameter	+ 0.00 - 0.05	+ 0.00 - 0.04	+ 0.00 - 0.03
Total Composite and Tooth to Tooth Tolerance	Refer to Technical Reference 12-2		

* Standard Quality Level —

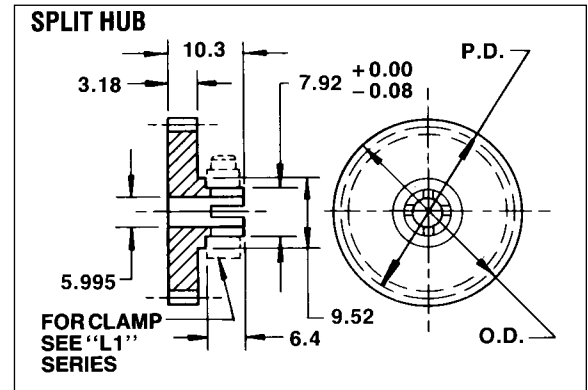
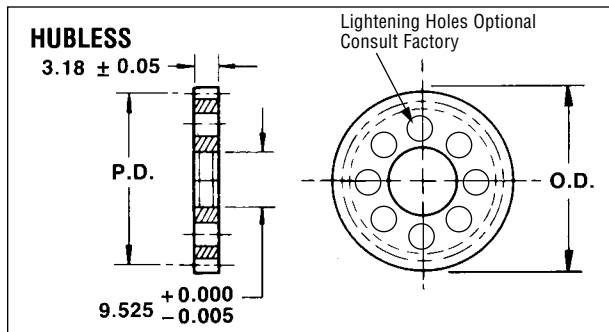
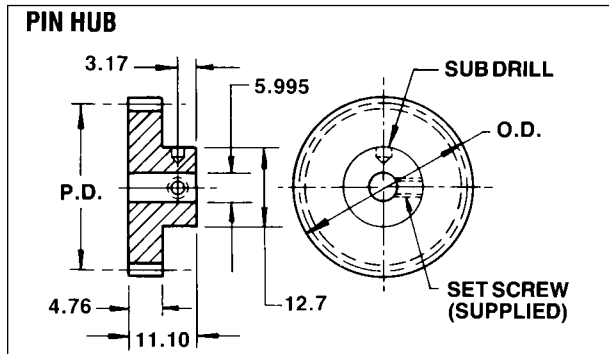
No suffix on part number when ordering standard quality level. i.e. **MSG25-16**

Specify quality level for T6 / T5 orders. i.e. **MSG25-16-T5**

SPUR GEARS — 0.8 Module ■ 3.18 and 4.76mm Face Width ■ 20° Pressure Angle

Pin Hub — 6mm Bore ■ Split Hub — 6mm Bore ■ Hubless — 9.52mm Bore

All Dimensions in Millimeters



Material: 303 Stainless Steel
2024-T4 Aluminum (Anodized Before Cutting)

For Gear Hubs See Pages 12-65 & 12-66

Tolerances

Quality Number	T7 *	T6	T5
Bore	+ 0.013 - 0.000	+ 0.008 - 0.000	+ 0.005 - 0.000
Pitch Diameter	+ 0.000 - 0.025	+ 0.000 - 0.018	+ 0.000 - 0.013
Outside Diameter	+ 0.00 - 0.05	+ 0.00 - 0.04	+ 0.00 - 0.03
Total Composite and Tooth to Tooth Tolerance	Refer to Technical Reference 12-2		

* Standard Quality Level —

No suffix on part number when ordering standard quality level. i.e. **MSG27-22**
Specify quality level for T6 / T5 orders. i.e. **MSG27-22-T5**

Gear Data			Stainless Steel Part No.			Aluminum Part No.		
No. Teeth	Pitch Dia.	Outside Dia.	Pin Hub	Split Hub	Hubless	Pin Hub	Split Hub	Hubless
22	17.6	19.2	MSG27-22	—	—	MSG28-22	—	—
24	19.2	20.8	MSG27-24	—	—	MSG28-24	—	—
26	20.8	22.4	MSG27-26	—	—	MSG28-26	—	—
28	22.4	24.0	MSG27-28	—	—	MSG28-28	—	—
30	24.0	25.6	MSG27-30	MSG47-30	MHS9-30	MSG28-30	MSG48-30	MHS10-30
32	25.6	27.2	MSG27-32	MSG47-32	MHS9-32	MSG28-32	MSG48-32	MHS10-32
34	27.2	28.8	MSG27-34	MSG47-34	MHS9-34	MSG28-34	MSG48-34	MHS10-34
36	28.8	30.4	MSG27-36	MSG47-36	MHS9-36	MSG28-36	MSG48-36	MHS10-36
38	30.4	32.0	MSG27-38	MSG47-38	MHS9-38	MSG28-38	MSG48-38	MHS10-38
40	32.0	33.6	MSG27-40	MSG47-40	MHS9-40	MSG28-40	MSG48-40	MHS10-40
44	35.2	36.8	MSG27-44	MSG47-44	MHS9-44	MSG28-44	MSG48-44	MHS10-44
48	38.4	40.0	MSG27-48	MSG47-48	MHS9-48	MSG28-48	MSG48-48	MHS10-48
56	44.8	46.4	MSG27-56	MSG47-56	MHS9-56	MSG28-56	MSG48-56	MHS10-56
60	48.0	49.6	MSG27-60	MSG47-60	MHS9-60	MSG28-60	MSG48-60	MHS10-60
64	51.2	52.8	MSG27-64	MSG47-64	MHS9-64	MSG28-64	MSG48-64	MHS10-64
68	54.4	56.0	MSG27-68	MSG47-68	MHS9-68	MSG28-68	MSG48-68	MHS10-68
72	57.6	59.2	MSG27-72	MSG47-72	MHS9-72	MSG28-72	MSG48-72	MHS10-72
80	64.0	65.6	MSG27-80	MSG47-80	MHS9-80	MSG28-80	MSG48-80	MHS10-80
88	70.4	72.0	MSG27-88	MSG47-88	MHS9-88	MSG28-88	MSG48-88	MHS10-88
96	76.8	78.4	MSG27-96	MSG47-96	MHS9-96	MSG28-96	MSG48-96	MHS10-96
108	86.4	88.0	MSG27-108	MSG47-108	MHS9-108	MSG28-108	MSG48-108	MHS10-108
112	89.6	91.2	MSG27-112	MSG47-112	MHS9-112	MSG28-112	MSG48-112	MHS10-112
128	102.4	104.0	MSG27-128	MSG47-128	MHS9-128	MSG28-128	MSG48-128	MHS10-128
132	105.6	107.2	MSG27-132	MSG47-132	MHS9-132	MSG28-132	MSG48-132	MHS10-132

†Hob Cuts Into Hub.

Other Bore Sizes Available, Consult Factory.

FOR SPECIAL SPUR GEARS, ORDER AS FOLLOWS:

For Unlisted Number of Teeth, Specify the Number of Teeth Desired.

EXAMPLE: MSG27-30 and MSG27-32 are in the above table, for a 33 tooth gear specify Part Number MSG27-33

SPUR GEARS — 0.8 Module ■ 9.52 Face Width ■ 20° Pressure Angle

DIN Quality 7 ■ Pin Hub — 10mm Bore

All Dimensions in Millimeters

Gear Data			Stainless Steel Part No.	Bronze Part No.
No. Teeth	Pitch Dia.	Outside Dia.		
†20	16.0	17.6	MSG29-20	MSG30-20
†24	19.2	20.8	MSG29-24	MSG30-24
28	22.4	24.0	MSG29-28	MSG30-28
30	24.0	25.6	MSG29-30	MSG30-30
32	25.6	27.2	MSG29-32	MSG30-32
36	28.8	30.4	MSG29-36	MSG30-36
40	32.0	33.6	MSG29-40	MSG30-40
48	38.4	40.0	MSG29-48	MSG30-48
56	44.8	46.4	MSG29-56	MSG30-56
60	48.0	49.6	MSG29-60	MSG30-60
64	51.2	52.8	MSG29-64	MSG30-64
72	57.6	59.2	MSG29-72	MSG30-72
80	64.0	65.6	MSG29-80	MSG30-80
96	76.8	78.4	MSG29-96	MSG30-96
112	89.6	91.2	MSG29-112	MSG30-112
128	102.4	104.0	MSG29-128	MSG30-128
144	115.2	116.8	MSG29-144	MSG30-144
160	128.0	129.6	MSG29-160	MSG30-160

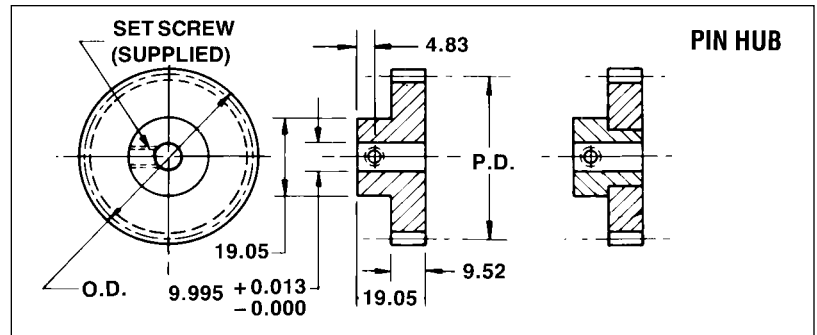
†Hob Cuts Into Hub.

Other Bore Sizes Available, Consult Factory.

FOR SPECIAL SPUR GEARS, ORDER AS FOLLOWS:

For Unlisted Number of Teeth, Specify the Number of Teeth Desired.

EXAMPLE: MSG29-30 and MSG29-32 are in the above table, for a 33 tooth gear specify Part Number MSG29-33.



Material: 303 Stainless Steel
or Bronze Alloy

Tolerances	Tooth-to-Tooth Composite	Total Composite
Up to 20 Teeth Inclusive	0.018	0.025
Over 20 Teeth — up to 50 Pitch Dia.	0.013	0.025
Over 20 Teeth — 50.1 to 100 Pitch Dia.	0.013	0.030
Over 20 Teeth — 100.1 and Over	0.013	0.035

When ordering, Specify Part Number

Example: MSG29-30

SPUR GEARS — 1.0 Module ■ 9.52 Face Width ■ 20° Pressure Angle

DIN Quality 7 ■ Pin Hub — 10mm Bore

All Dimensions in Millimeters

Gear Data			Stainless Steel Part No.	Bronze Part No.
No. Teeth	Pitch Dia.	Outside Dia.		
†15	15.0	17.0	MSG33-15	MSG34-15
†16	16.0	18.0	MSG33-16	MSG34-16
†18	18.0	20.0	MSG33-18	MSG34-18
†20	20.0	22.0	MSG33-20	MSG34-20
24	24.0	26.0	MSG33-24	MSG34-24
28	28.0	30.0	MSG33-28	MSG34-28
30	30.0	32.0	MSG33-30	MSG34-30
36	36.0	38.0	MSG33-36	MSG34-36
40	40.0	42.0	MSG33-40	MSG34-40
48	48.0	50.0	MSG33-48	MSG34-48
56	56.0	58.0	MSG33-56	MSG34-56
60	60.0	62.0	MSG33-60	MSG34-60
72	72.0	74.0	MSG33-72	MSG34-72
80	80.0	82.0	MSG33-80	MSG34-80
96	96.0	98.0	MSG33-96	MSG34-96
112	112.0	114.0	MSG33-112	MSG34-112
120	120.0	122.0	MSG33-120	MSG34-120

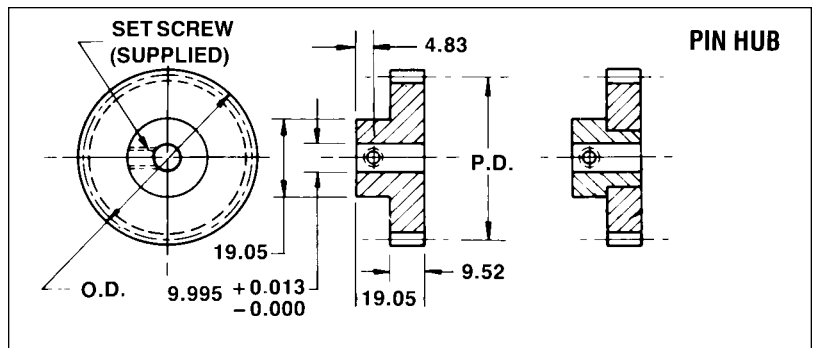
†Hob Cuts Into Hub.

Other Bore Sizes Available, Consult Factory.

FOR SPECIAL SPUR GEARS, ORDER AS FOLLOWS:

For Unlisted Number of Teeth, Specify the Number of Teeth Desired.

EXAMPLE: MSG33-30 and MSG33-32 are in the above table, for a 33 tooth gear specify Part Number MSG33-33.



Material: 303 Stainless Steel

Tolerances	Tooth-to-Tooth Composite	Total Composite
Up to 20 Teeth Inclusive	0.018	0.025
Over 20 Teeth — up to 50 Pitch Dia.	0.013	0.025
Over 20 Teeth — 50.1 to 100 Pitch Dia.	0.013	0.030
Over 20 Teeth — 100.1 and Over	0.013	0.035

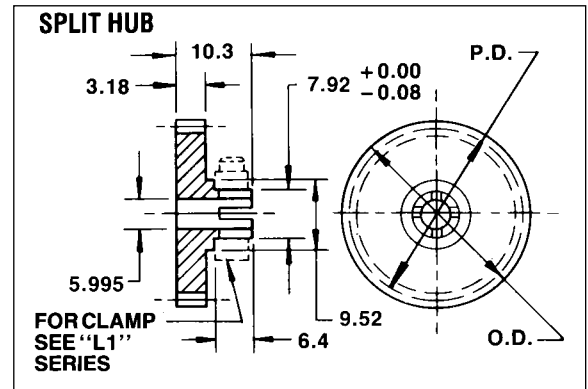
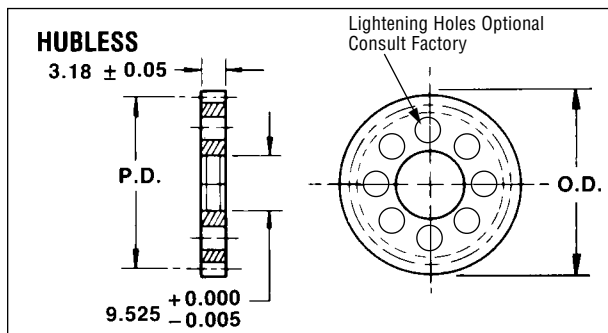
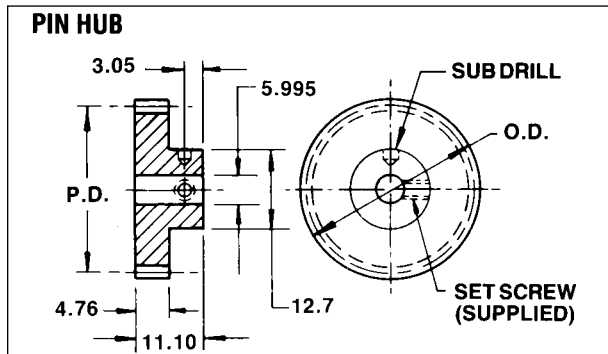
When ordering, Specify Part Number

Example: MSG33-30

SPUR GEARS — 1.0 Module ■ 3.18 and 4.76mm Face Width ■ 20° Pressure Angle

Pin Hub — 6mm Bore ■ Split Hub — 6mm Bore ■ Hubless — 9.52mm Bore

All Dimensions in Millimeters



Material: 303 Stainless Steel
2024-T4 Aluminum (Anodized Before Cutting)

For Gear Hubs See Pages 12-65 & 12-66

Tolerances

Quality Number	T7	T6	T5
Bore	+0.013 -0.000	+0.008 -0.000	+0.005 -0.000
Pitch Diameter	+0.000 -0.025	+0.000 -0.018	+0.000 -0.013
Outside Diameter	+0.00 -0.05	+0.00 -0.04	+0.00 -0.03
Total Composite and Tooth to Tooth Tolerance	Refer to Technical Reference 12-2		

When ordering, Specify Part Number and Quantity Number.
EXAMPLE: MSG31-30-T7

To order DIN Quality 5, 6, or 7, add -T5, -T6 or -T7, respectively to part number.

Gear Data			Stainless Steel Part No.			Aluminum Part No.		
No. Teeth	Pitch Dia.	Outside Dia.	Pin Hub	Split Hub	Hubless	Pin Hub	Split Hub	Hubless
†10	10.0	12.0	MSG31-10	—	—	MSG32-10	—	—
†12	12.0	14.0	MSG31-12	—	—	MSG32-12	—	—
†15	15.0	17.0	MSG31-15	—	—	MSG32-15	—	—
16	16.0	18.0	MSG31-16	—	—	MSG32-16	—	—
18	18.0	20.0	MSG31-18	MSG49-18	MHS11-18	MSG32-18	MSG50-18	MHS12-18
20	20.0	22.0	MSG31-20	MSG49-20	MHS11-20	MSG32-20	MSG50-20	MHS12-20
21	21.0	23.0	MSG31-21	MSG49-21	MHS11-21	MSG32-21	MSG50-21	MHS12-21
24	24.0	26.0	MSG31-24	MSG49-24	MHS11-24	MSG32-24	MSG50-24	MHS12-24
27	27.0	29.0	MSG31-27	MSG49-27	MHS11-27	MSG32-27	MSG50-27	MHS12-27
30	30.0	32.0	MSG31-30	MSG49-30	MHS11-30	MSG32-30	MSG50-30	MHS12-30
36	36.0	38.0	MSG31-36	MSG49-36	MHS11-36	MSG32-36	MSG50-36	MHS12-36
39	39.0	41.0	MSG31-39	MSG49-39	MHS11-39	MSG32-39	MSG50-39	MHS12-39
42	42.0	44.0	MSG31-42	MSG49-42	MHS11-42	MSG32-42	MSG50-42	MHS12-42
48	48.0	50.0	MSG31-48	MSG49-48	MHS11-48	MSG32-48	MSG50-48	MHS12-48
51	51.0	53.0	MSG31-51	MSG49-51	MHS11-51	MSG32-51	MSG50-51	MHS12-51
60	60.0	62.0	MSG31-60	MSG49-60	MHS11-60	MSG32-60	MSG50-60	MHS12-60
72	72.0	74.0	MSG31-72	MSG49-72	MHS11-72	MSG32-72	MSG50-72	MHS12-72
75	75.0	77.0	MSG31-75	MSG49-75	MHS11-75	MSG32-75	MSG50-75	MHS12-75
81	81.0	83.0	MSG31-81	MSG49-81	MHS11-81	MSG32-81	MSG50-81	MHS12-81
84	84.0	86.0	MSG31-84	MSG49-84	MHS11-84	MSG32-84	MSG50-84	MHS12-84
87	87.0	89.0	MSG31-87	MSG49-87	MHS11-87	MSG32-87	MSG50-87	MHS12-87
96	96.0	98.0	MSG31-96	MSG49-96	MHS11-96	MSG32-96	MSG50-96	MHS12-96
99	99.0	101.0	MSG31-99	MSG49-99	MHS11-99	MSG32-99	MSG50-99	MHS12-99
100	100.0	102.0	MSG31-100	MSG49-100	MHS11-100	MSG32-100	MSG50-100	MHS12-100

†Hob Cuts Into Hub.

Other Bore Sizes Available, Consult Factory.

FOR SPECIAL SPUR GEARS, ORDER AS FOLLOWS:

For Unlisted Number of Teeth, Specify the Number of Teeth Desired.

EXAMPLE: MSG31-27 and MSG31-30 are in the above table, for a 33 tooth gear specify Part Number MSG31-33-T7.