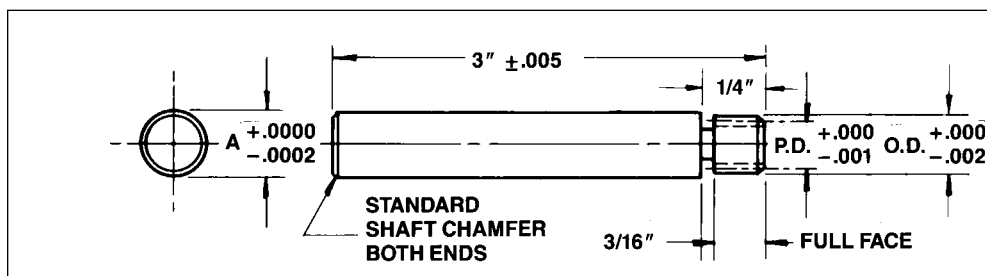


PRECISION PINION SHAFTS — 1/8", 3/16", 1/4" Shaft Diameter ■ 3/16" Face Width

20° Pressure Angle ■ Agma Quality No. 10 ■ No Centers ■ P.D. Less Than Shaft Diameter



Material: 303 Stainless Steel

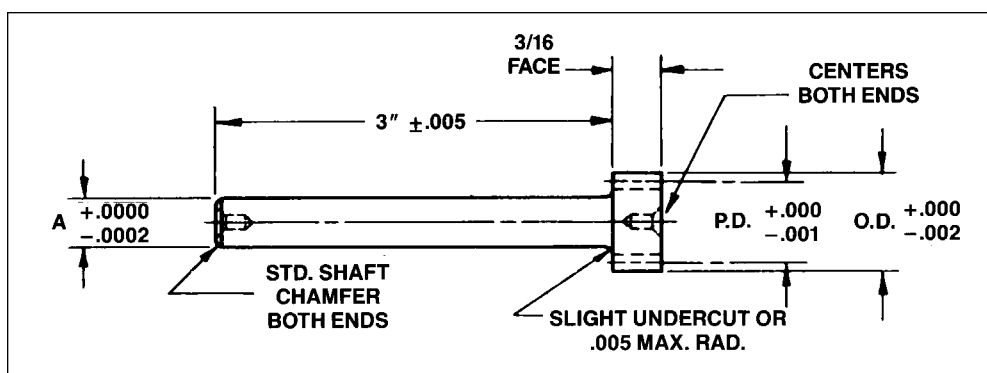
A	Pitch	No. Teeth	P. D.	O. D.	Part No.
.1247 (1/8)	96	10	.1042	.125	F4-1
	120	12	.1000	.116	F4-2
	200	18	.0900	.100	F4-3
	200	20	.1000	.110	F4-4
.1872 (3/16)	72	10	.1388	.166	F5-1
	80	10	.1250	.150	F5-6
	96	10	.1042	.125	F5-2
	96	12	.1250	.146	F5-4
	96	14	.1458	.166	F5-5

Other Lengths and/or Teeth Available, Consult Factory.

A	Pitch	No. Teeth	P. D.	O. D.	Part No.
.2497 (1/4)	48	10	.2083	.250	F6-1
	64	12	.1875	.219	F6-2
	64	14	.2187	.250	F6-3
	72	14	.1944	.222	F6-4
	72	16	.2222	.250	F6-5
	80	10	.1250	.150	F6-8
	80	12	.1500	.175	F6-9
	96	16	.1666	.187	F6-6
	96	18	.1875	.208	F6-7

PRECISION PINION SHAFTS — 1/8", 3/16", 1/4" Shaft Diameter ■ 3/16" Face Width

20° Pressure Angle ■ Agma Quality No. 10 ■ Centers ■ P.D. Greater Than Shaft Diameter



Material: 303 Stainless Steel

A	Pitch	No. Teeth	P. D.	O. D.	Part No.
.1247 (1/8)	64	16	.2500	.281	*F7-1
	96	24	.2500	.271	*F7-6
.1872 (3/16)	48	12	.2500	.291	*F8-1
	48	18	.3750	.416	*F8-2
	64	16	.2500	.281	*F8-3
	72	18	.2500	.278	*F8-5
	80	20	.2500	.275	*F8-7

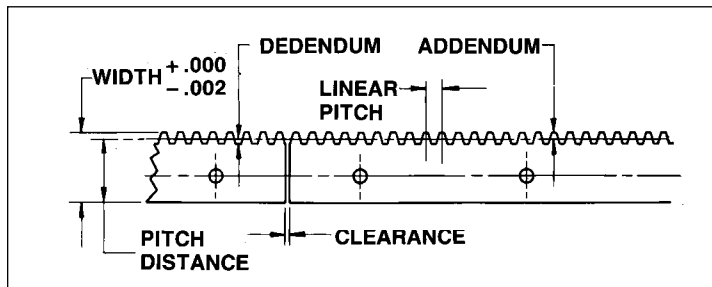
Other Lengths and/or Teeth Available, Consult Factory.

A	Pitch	No. Teeth	P. D.	O. D.	Part No.
.2497 (1/4)	24	12	.5000	.583	F9-1
	32	16	.5000	.562	F9-2
	48	12	.2500	.291	F9-3
	48	18	.3750	.416	*F9-4
	64	16	.2500	.281	*F9-5
	64	20	.3125	.343	*F9-6
	64	24	.3750	.406	*F9-7
	1/10	10	.3183	.3820	F9-8

*Q12 and Q14 Tolerances Available on Request.

FINE PITCH RACK DATA — 24 to 120 Pitch

Terminology



AVAILABLE PITCHES AND TOOTH DATA

Pitch	Linear Pitch	Addendum	Dedendum	Whole Depth
24	.1309	.0417	.0520	.0937
1/10	.1000	.0318	.0402	.0720
32	.0982	.0313	.0395	.0708
48	.0654	.0208	.0270	.0478
64	.0491	.0156	.0208	.0364
72	.0436	.0139	.0187	.0326
80	.0393	.0125	.0170	.0295
96	.0327	.0104	.0145	.0249
120	.0262	.0083	.0120	.0203

MATERIALS

Standard: 416 Stainless-Steel relieved, not heat treated
2024-T4 Aluminum (Anodized).

Available on Request: Stainless, Carbon & Alloy Steels,
Non-Ferrous & Non-Metallic Materials.

FINISHES

Hardened, Nitrided, Anodizes.

LENGTHS

Available Up To 36"

FACE WIDTHS

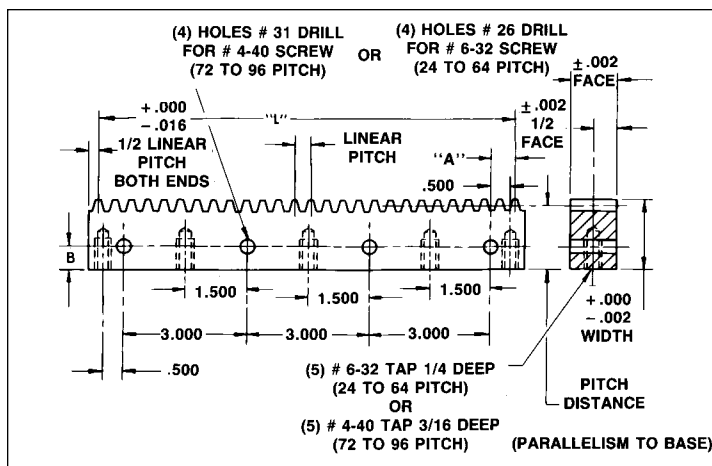
Available Up To 2"

PIC CLASSIFICATIONS AND TOLERANCES

PIC Class Rack	MAXIMUM SPACING ERROR		Parallelism To Base
	Tooth-to-Tooth	Accumulated in 11"	
PREC. 1	.0005	.002	.001
PREC. 2	.0004	.001	.0007
PREC. 3	.0002	.0006	.0005

FINE PITCH RACK DATA — 24 to 96 Pitch

20° Pressure Angle ■ PIC Prec. 1, 2, 3



Material:
416 Stainless Steel
Stress Relieved
Ground on all Sides

RACK DATA								Part No.
Pitch	L	Pitch Distance	Face	Width	Linear Pitch	A	B	
24	10.9956	.4383	.230	.480	.1309	.998	.218	AG-31
1/10	10.9000	.4482	.230	.480	.1000	.950	.218	AG-32
32	10.9956	.4487	.230	.480	.0982	.998	.218	AG-33
48	10.9956	.4592	.230	.480	.0654	.998	.218	AG-34
64	10.9956	.4644	.230	.480	.0491	.998	.218	AG-35
72	10.9956	.3411	.167	.355	.0436	.998	.156	AG-36
96	10.9956	.3446	.167	.355	.0327	.998	.156	AG-38

To order PREC. 2 Racks, add-P2 to Part No.

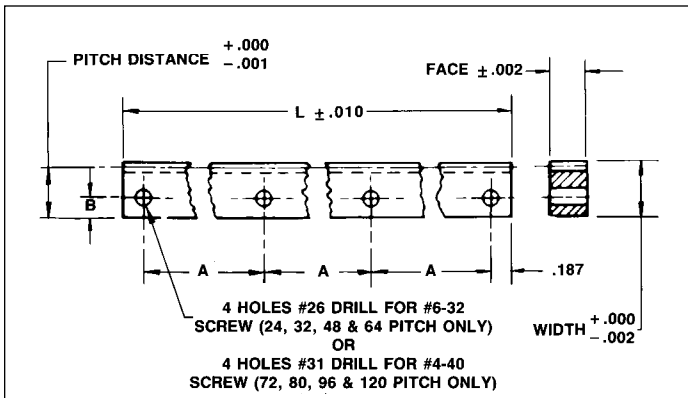
To order PREC. 3 Racks, add-P3 to Part No.

Tolerances	P1	P2	P3
Pitch Distance	+ .000 - .001	+ .0000 - .0007	+ .0000 - .0005
Tooth to Tooth	.0005	.0004	.0002
Total Composite	.002	.001	.0006

Total Composite-Max. Spacing Error Accumulated in 11".

FINE PITCH RACKS — 24 to 120 Pitch ■ 20° Pressure Angle

3" to 10" Lengths ■ PIC Prec. 1



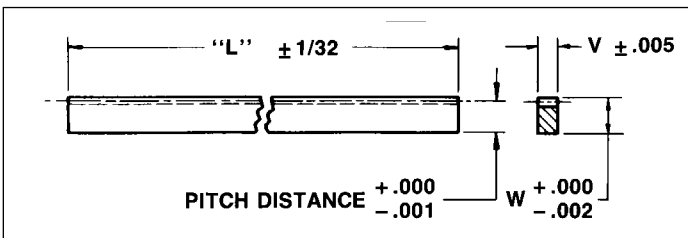
Material: 416 Stainless Steel
2024-T4 Aluminum (Anodized)

Pitch	L	Pitch Distance	Face	Width	A	B	Material	Part No.
24	10	.4383	.230	.480	3.208	.218	Stainless Aluminum	AG-9 AG-100
32	10	.4487	.230	.480	3.208	.218	Stainless Aluminum	AG-110 AG-120
48	9	.4592	.230	.480	2.875	.218	Stainless Aluminum	AG-1 AG-2
64	7	.4644	.230	.480	2.208	.218	Stainless Aluminum	AG-3 AG-4
72	5	.3411	.167	.355	1.541	.156	Stainless Aluminum	AG-5 AG-6
80	5	.3425	.167	.355	1.541	.156	Stainless Aluminum	AG-130 AG-140
96	3	.3446	.167	.355	.875	.156	Stainless Aluminum	AG-7 AG-8
120	3	.3467	.167	.355	.875	.156	Stainless Aluminum	AG-150 AG-160

For Longer Racks, See AG-31 to AG-36.

FINE PITCH RACKS — 24 to 120 Pitch ■ 20° Pressure Angle

Rectangular Stock ■ PIC Prec. 1



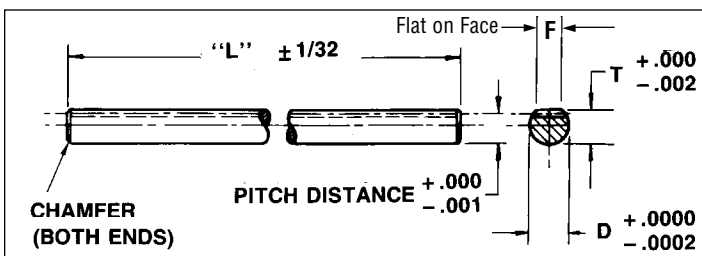
Material: 416 Stainless Steel *

*Available in Delrin with P.D. & W tolerance of $\begin{smallmatrix} +.000 \\ -.005 \end{smallmatrix}$
Part Numbers: AG-10D, AG-11D, AG-12D, AG-13D

Pitch	L	Pitch Distance	V	W	Part No.
24	18	.438	.230	.480	AG-10*
32	18	.449	.230	.480	AG-11*
48	18	.459	.230	.480	AG-12*
64	11	.464	.230	.480	AG-13*
72	11	.341	.167	.355	AG-14
96	11	.344	.167	.355	AG-15
120	11	.347	.167	.355	AG-16

FINE PITCH RACKS — 24 to 120 Pitch ■ 20° Pressure Angle

Round Stock ■ PIC Prec. 1



Material: 416 Stainless Steel *

*Available in Delrin with P.D. & T tolerance of $\begin{smallmatrix} +.000 \\ -.005 \end{smallmatrix}$ and D tolerance of $\begin{smallmatrix} +.002 \\ -.000 \end{smallmatrix}$
Part Number: AG-17D

Pitch	L	Pitch Distance	F	D	T	Part No.
24	18	.438	3/16	.4997	.480	AG-17*
32	18	.309	3/16	.3747	.340	AG-18
48	18	.199	5/32	.2497	.220	AG-19
64	11	.204	5/32	.2497	.220	AG-20
72	11	.142	1/8	.1872	.156	AG-21
96	11	.145	1/8	.1872	.156	AG-22
120	11	.107	3/32	.1247	.115	AG-23