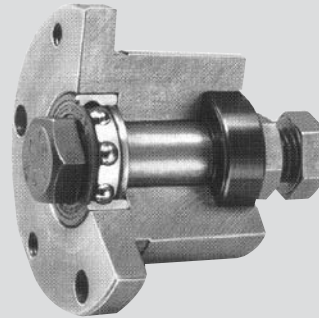
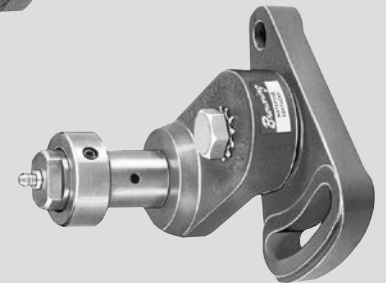


**...DRIVE TIGHTENERS, IDLERS, IDLER BUSHINGS, SET COLLARS, KEYSTOCK AND CAST IRON BARS  
A WIDE VARIETY OF SPECIALIZED PRODUCTS FOR AUTOMATIC PRODUCTION**

REGAL is adding new BROWNING® power transmission products on a continuing basis to broaden the industry's already widest line. As part of this ongoing program, REGAL today offers a wide variety of Drive Tighteners, Idlers, Idler Bushings, Set Collars, and many other power transmission products. All of these products exemplify REGAL'S commitment to serving your every requirement in power transmission drives and components.



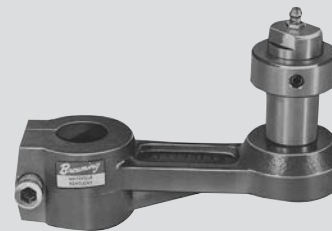
**Idler Bushings**



**Adjusting Tighteners**



**Fixed Angle Tighteners**



**Single Adjusting Tighteners**



**Fixed Flange Tighteners**



**V-Belt Sheave Idlers**



**Flat Face Idlers**



**Sprocket Idlers**



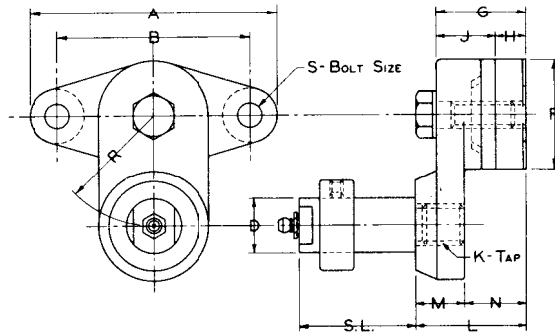
**Keystock**



**Gear Idlers**



### MALLEABLE



### ADJUSTING TIGHTENERS

TABLE No. 1

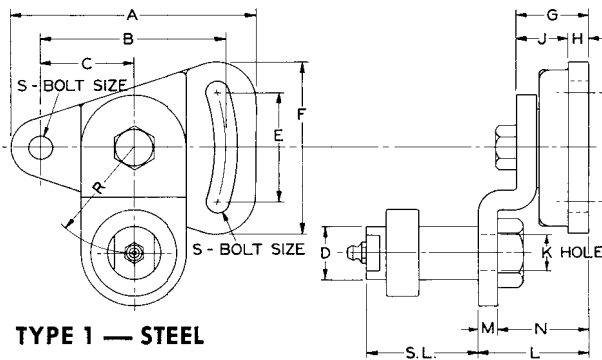
PART No.	SHAFT	DIMENSIONS														WT. Lbs.
		A	B▲	D	F	G	H	J	K	L	M	N	R	S▲	S.L.	
ATN1	N1①	2 5/8"	2"	.500"	1 1/8	15/16"	5/16"	5/8"	3/8 - 16"	1 3/16"	1/2"	11/16"	1"	1/4"	1 1/2"	.5
ATH	None②	4 1/2	3 1/2	-	2	1 11/16	5/8	1 1/16	1/2 - 13	2 1/16	7/8	1 3/16	2	3/8	-	2.8
ATP	None②	4 1/2	3 1/2	-	2	1 11/16	5/8	1 1/16	5/8 - 11	2 1/16	7/8	1 3/16	2	3/8	-	2.7
ATQ	None②	4 1/2	3 1/2	-	2	1 11/16	5/8	1 1/16	3/4 - 10	2 1/16	7/8	1 3/16	2	3/8	-	2.6
ATQ	N2③	4 1/2	3 1/2	1.000	2	1 11/16	5/8	1 1/16	3/4 - 10	2 1/16	7/8	1 3/16	2	3/8	2 1/8	3.5
ATQ	N3③	4 1/2	3 1/2	1.000	2	1 11/16	5/8	1 1/16	3/4 - 10	2 1/16	7/8	1 3/16	2	3/8	3 1/8	3.7
ATQ	N4③	4 1/2	3 1/2	1.000	2	1 11/16	5/8	1 1/16	3/4 - 10	2 1/16	7/8	1 3/16	2	3/8	4 1/8	4.0
ATQ-1	None②	6 3/4	5 1/4	-	3	2 3/8	13/16	1 9/16	1 - 8	2 15/16	1 5/16	1 5/8	5	5/8	-	9.8
ATQ-1	N5③	6 3/4	5 1/4	1.500	3	2 3/8	13/16	1 9/16	1 - 8	2 15/16	1 5/16	1 5/8	5	5/8	4	12.3
ATQ-1	N6③	6 3/4	5 1/4	1.500	3	2 3/8	13/16	1 9/16	1 - 8	2 15/16	1 5/16	1 5/8	5	5/8	6	13.3

▲Holes are cast, some variations may be expected.

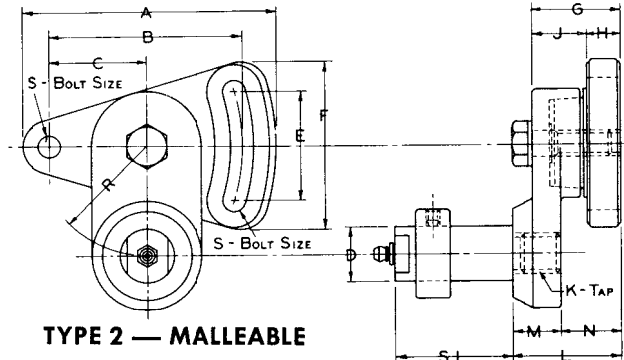
①Shaft is included.

②No shaft is required when used with Idler Bushings shown on page I-8.

③SHAFT MUST BE ORDERED SEPARATELY



TYPE 1 — STEEL



TYPE 2 — MALLEABLE

### DOUBLE ADJUSTING TIGHTENERS

TABLE No. 2

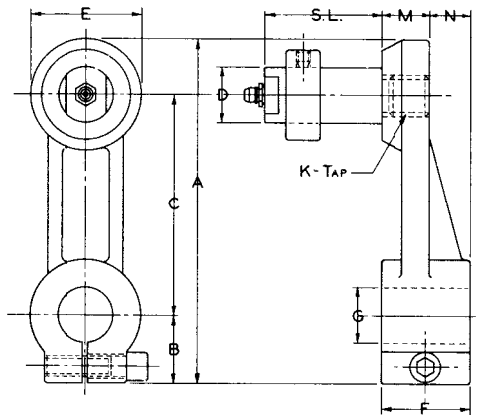
PART No.	TYPE	SHAFT	DIMENSIONS														WT. Lbs.		
			A	B▲	C	D	E	F	G	H	J	K	L	M	N	R		S▲	S.L.
DATN1	2	N1①	2 23/32"	2"	15/16"	.500"	1 1/4"	1 31/32"	15/16"	3/8"	9/16"	3/8 - 16	1 3/16"	1 1/2"	11/16"	1"	1/4"	1 1/2"	.7
DATSH	1	None②	4 5/8	3 1/2	1 3/4	-	2 1/16	3 1/4	1 5/16	3/8	15/16	9/16 Dia.	2 1/16	3/8	1 11/16	2	3/8	-	2.8
DATSP	1	None②	4 5/8	3 1/2	1 3/4	-	2 1/16	3 1/4	1 5/16	3/8	15/16	11/16 Dia.	2 1/16	3/8	1 11/16	2	3/8	-	2.8
DATSQ	1	None②	4 5/8	3 1/2	1 3/4	-	2 1/16	3 1/4	1 5/16	3/8	15/16	25/32 Dia.	2 1/16	3/8	1 11/16	2	3/8	-	2.7
DATSQ	1	N2③	4 5/8	3 1/2	1 3/4	1.000	2 1/16	3 1/4	1 5/16	3/8	15/16	25/32 Dia.	2 1/16	3/8	1 11/16	2	3/8	2 1/8	3.4
DATSQ	1	N3③	4 5/8	3 1/2	1 3/4	1.000	2 1/16	3 1/4	1 5/16	3/8	15/16	25/32 Dia.	2 1/16	3/8	1 11/16	2	3/8	3 1/8	3.8
DATSQ	1	N4③	4 5/8	3 1/2	1 3/4	1.000	2 1/16	3 1/4	1 5/16	3/8	15/16	25/32 Dia.	2 1/16	3/8	1 11/16	2	3/8	4 1/8	4.0
DATQ-1	2	None②	6 15/16	5 1/4	2 5/8	-	3	4 9/16	2 3/8	7/8	1 1/2	1 - 8	2 15/16	1 5/16	1 5/8	5	5/8	-	11.3
DATQ-1	2	N5③	6 15/16	5 1/4	2 5/8	1.500	3	4 9/16	2 3/8	7/8	1 1/2	1 - 8	2 15/16	1 5/16	1 5/8	5	5/8	4	13.6
DATQ-1	2	N6③	6 15/16	5 1/4	2 5/8	1.500	3	4 9/16	2 3/8	7/8	1 1/2	1 - 8	2 15/16	1 5/16	1 5/8	5	5/8	6	14.9

▲Holes and Slots are cast in Type 2, some variations may be expected.

①Shaft is included.

②No shaft is required when used with Idler Bushings shown on page I-8.

③SHAFT MUST BE ORDERED SEPARATELY.



**MALLEABLE**

### SINGLE ADJUSTING TIGHTENERS

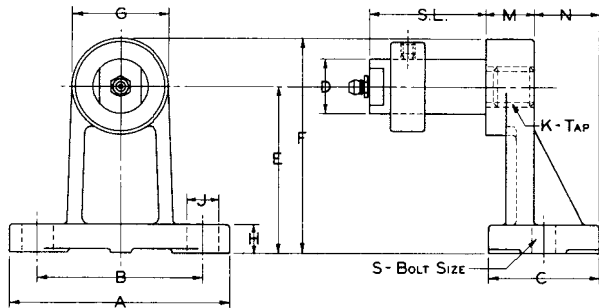
TABLE No. 1

PART No.	SHAFT	DIMENSIONS											WT. Lbs.
		A	B	C	D	E	F	G	K	M	N	S.L.	
SATN1	N1 <sup>①</sup>	3 9/32"	2 3/32"	2"	.500"	1 1/8"	1 3/16"	1/2"	3/8 - 16	1/2"	5/16"	1 1/2"	.8
SATH	None <sup>②</sup>	6 1/4	1 1/4	4	-	2	1 5/8	1	1/2 - 13	7/8	3/4	-	2.4
SATP	None <sup>②</sup>	6 1/4	1 1/4	4	-	2	1 5/8	1	5/8 - 11	7/8	3/4	-	2.3
SATQ	None <sup>②</sup>	6 1/4	1 1/4	4	-	2	1 5/8	1	3/4 - 10	7/8	3/4	-	2.3
SATQ	N2 <sup>③</sup>	6 1/4	1 1/4	4	1.000	2	1 5/8	1	3/4 - 10	7/8	3/4	2 1/8	2.9
SATQ	N3 <sup>③</sup>	6 1/4	1 1/4	4	1.000	2	1 5/8	1	3/4 - 10	7/8	3/4	3 1/8	3.1
SATQ	N4 <sup>③</sup>	6 1/4	1 1/4	4	1.000	2	1 5/8	1	3/4 - 10	7/8	3/4	4 1/8	3.4
SATQ-1	None <sup>②</sup>	9 3/8	1 7/8	6	-	3	2 7/16	1 1/2	1 - 8	1 5/16	1 1/8	-	8.0
SATQ-1	N5 <sup>③</sup>	9 3/8	1 7/8	6	1.500	3	2 7/16	1 1/2	1 - 8	1 5/16	1 1/8	4	10.5
SATQ-1	N6 <sup>③</sup>	9 3/8	1 7/8	6	1.500	3	2 7/16	1 1/2	1 - 8	1 5/16	1 1/8	6	11.5

①Shaft is included.

②No shaft is required when used with Idler Bushings shown on page I-8.

③SHAFT MUST BE ORDERED SEPARATELY.



**MALLEABLE**

### FIXED ANGLE TIGHTENERS

TABLE No. 2

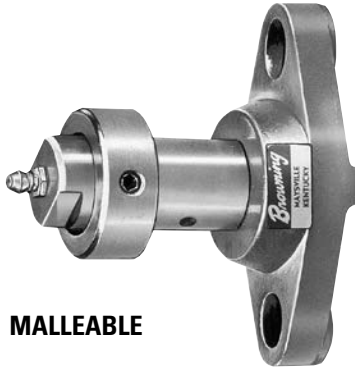
PART No.	SHAFT	DIMENSIONS														WT. Lbs.
		A	B▲	C	D	E	F	G	H	J▲	K	M	N	S.L.	S▲	
FATN1	N1 <sup>①</sup>	2 3/8"	1 3/4"	1 1/8"	.500"	1 1/2"	2"	1"	1/4"	9/32"	3/8 - 16	1/2"	1 1/16"	1 1/2"	1/4"	.4
FATH	None <sup>②</sup>	4	3	2	-	3	3 7/8	1 3/4	1/2	9/16	1/2 - 13	7/8	1 3/16	-	3/8	1.6
FATP	None <sup>②</sup>	4	3	2	-	3	3 7/8	1 3/4	1/2	9/16	5/8 - 11	7/8	1 3/16	-	3/8	1.5
FATQ	None <sup>②</sup>	4	3	2	-	3	3 7/8	1 3/4	1/2	9/16	3/4 - 10	7/8	1 3/16	-	3/8	1.4
FATQ	N2 <sup>③</sup>	4	3	2	1.000	3	3 7/8	1 3/4	1/2	9/16	3/4 - 10	7/8	1 3/16	2 1/8	3/8	2.5
FATQ	N3 <sup>③</sup>	4	3	2	1.000	3	3 7/8	1 3/4	1/2	9/16	3/4 - 10	7/8	1 3/16	3 1/8	3/8	2.6
FATQ	N4 <sup>③</sup>	4	3	2	1.000	3	3 7/8	1 3/4	1/2	9/16	3/4 - 10	7/8	1 3/16	4 1/8	3/8	3.0
FATQ-1	None <sup>②</sup>	7 1/2	6	3 1/2	-	6	7 5/16	2 5/8	3/4	15/16	1 - 8	1 5/16	2 1/4	-	5/8	8.1
FATQ-1	N5 <sup>③</sup>	7 1/2	6	3 1/2	1.500	6	7 5/16	2 5/8	3/4	15/16	1 - 8	1 5/16	2 1/4	4	5/8	10.6
FATQ-1	N6 <sup>③</sup>	7 1/2	6	3 1/2	1.500	6	7 5/16	2 5/8	3/4	15/16	1 - 8	1 5/16	2 1/4	6	5/8	11.5

▲Slots are cast, some variations may be expected.

①Shaft is included.

②No shaft is required when used with Idler Bushings shown on page I-8.

③SHAFT MUST BE ORDERED SEPARATELY.



**MALLEABLE**

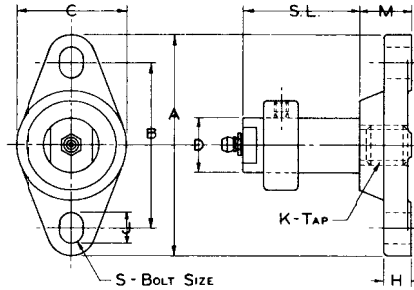


TABLE No. 1

### FIXED FLANGE TIGHTENERS

PART No.	SHAFT	DIMENSIONS										WT. Lbs.
		A	B▲	C	D	H▲	J▲	K	M	S.L.	S▲	
FFTN1	N1①	2 3/8"	1 3/4"	1 1/8"	.500"	1/4"	9/32"	3/8 - 16	1/2"	1 1/2"	1/4"	.3
FFTH	None②	4	3	2	-	1/2	9/16	1/2 - 13	15/16	-	3/8	.9
FFTP	None②	4	3	2	-	1/2	9/16	5/8 - 11	15/16	-	3/8	.9
FFTQ	None②	4	3	2	-	1/2	9/16	3/4 - 10	15/16	-	3/8	.8
FFTQ	N2③	4	3	2	1.000	1/2	9/16	3/4 - 10	15/16	2 1/8	3/8	1.6
FFTQ	N3③	4	3	2	1.000	1/2	9/16	3/4 - 10	15/16	3 1/8	3/8	1.8
FFTQ	N4③	4	3	2	1.000	1/2	9/16	3/4 - 10	15/16	4 1/8	3/8	2.1
FFTQ-1	None②	7 1/2	6	3 1/2	-	3/4	15/16	1 - 8	1 7/16	-	5/8	4.8
FFTQ-1	N5③	7 1/2	6	3 1/2	1.500	3/4	15/16	1 - 8	1 7/16	4	5/8	7.3
FFTQ-1	N6③	7 1/2	6	3 1/2	1.500	3/4	15/16	1 - 8	1 7/16	6	5/8	8.5

▲Slots are cast, some variations may be expected.

①Shaft is included.

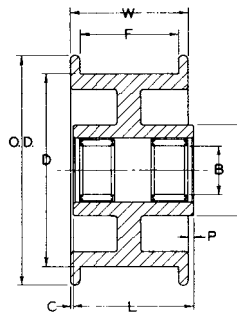
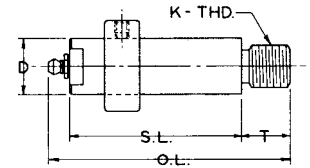
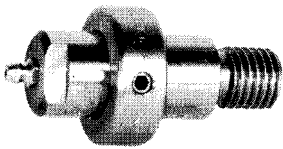
②No shaft is required when used with Idler Bushings shown on page I-8.

③SHAFT MUST BE ORDERED SEPARATELY.

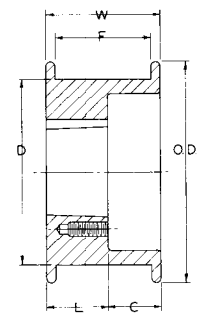
TABLE No. 2

### TIGHTENER SHAFTS

PART No.	DIMENSIONS					WT. Lbs.
	O.L.	D	K	T	S.L.	
N1	2 5/16"	.500"	3/8 - 16	7/16"	1 1/2"	.13
N2	3 3/8"	1.000	3/4 - 10	7/8"	2 1/8"	.6
N3	4 3/8"	1.000	3/4 - 10	7/8"	3 1/8"	.9
N4	5 3/8"	1.000	3/4 - 10	7/8"	4 1/8"	1.0
N5	5 11/16"	1.500	1 - 8	1 5/16"	4	2.8
N6	7 11/16"	1.500	1 - 8	1 5/16"	6	3.8



Type 1



Type 2

TABLE No. 3

### FLAT FACE IDLERS

PART No.	TYPE	SHAFT LENGTH	DIMENSIONS								WT. Lbs.	RADIAL LOAD CAPACITY IN POUNDS BASED ON 2500 HOURS AVERAGE LIFE AT RPM SHOWN ■								
			O.D.	D	B	H	W	F	L	P		C	100	500	1000	1500	2000	2500	3000	3500
N1D05F	1	1 1/2" *	1 3/4"	1 3/8"	1/2"	1 1/4"	3/4"	9/16"	3/4"	1/8"	1/8"	.3	665	406	331	294	269	250	237	226
N4D1F	1	2 1/8" *	4 3/8"	4	1	1 7/8"	1 7/16"	1 1/16"	1 1/4"	1/8"	5/16"	3.0	2927	1787	1458	1295	1185	1104	1047	997
N4D2F	1	3 1/8" *	4 3/8"	4	1	1 7/8"	2 7/16"	2 1/16"	2 1/2"	1/8"	1/16"	5.0	4348	2654	2166	1922	1760	1640	1544	1482
N4D3F	1	4 1/8" *	4 3/8"	4	1	1 7/8"	3 7/16"	3 1/16"	3 1/2"	1/8"	1/16"	7.8	5854	3574	2916	2590	2370	2208	2094	1994
N6D4F	1	6" *	7	6	1 1/2	2 5/8"	5	4 1/2	4	1/8"	1 1/8"	22.5	5884	3592	2930	2602	2380	2218	2102	2004
N6D6F	1	6" *	7	6	1 1/2	2 5/8"	6 3/4"	6 1/4"	5	1/8"	1 7/8"	29.5	5884	3592	2930	2602	2380	2218	2102	2004
4D1FH	2	H1▲	4 3/8"	4	▲	-	1 7/16"	1 1/16"	7/8"	-	9/16"	3.4	1518	1016	854	772	718	678	648	624
4D2FP	2	P1▲	4 3/8"	4	▲	-	2 7/16"	2 1/16"	1 5/16"	-	1 1/8"	4.6	1518	1016	854	772	718	678	648	624
4D3FP	2	P1▲	4 3/8"	4	▲	-	3 7/16"	3 1/16"	1 5/16"	-	2 1/8"	5.6	1518	1016	854	772	718	678	648	624

\*For use with Drive Tighteners shown on pages I-2 and I-3 and above with shaft lengths indicated.

▲ For use with H-1 1/2 or P1-5/8 IDLER BUSHINGS shown on page I-8.

■ See page I-8 for factors to use for Average Life of more or less than 2500 hours.

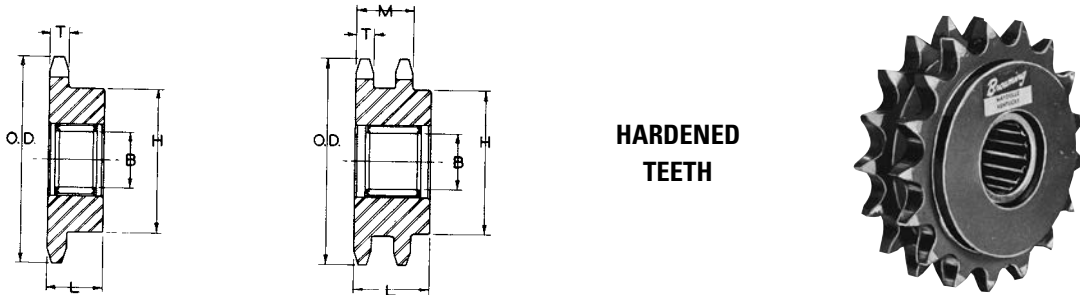
All Browning® Stock Idlers furnished with needle bearings have retainers that insure minimum internal friction and wear by separating the needle rollers. These bearings are inset approximately 1/8" on either end of the Idler hubs to form a grease cavity.



TABLE No. 1

### V-BELT SHEAVE IDLERS

PART No.	SHAFT LENGTH*	BELT SIZE	DIMENSIONS								WT. Lbs.	RADIAL LOAD CAPACITY IN POUNDS BASED ON 2500 HOURS AVERAGE LIFE AT RPM SHOWN ■							
			O.D.	B	H	F	L	P	C	100		500	1000	1500	2000	2500	3000	3500	
NOK17	1 1/2"	3L	1.92"	1/2"	1 1/2"	1/2"	3/4"	1/4"	0	.1	665	406	331	294	269	250	237	226	
NAK25	1 1/2"	4L or A	2.50	1/2	1 9/16	2 1/32	3/4	1/4	5/32"	.3	665	406	331	294	269	250	237	226	
NAK30	1 1/2"	4L or A	3.05	1/2	1 9/16	2 1/32	3/4	1/4	5/32"	.5	665	406	331	294	269	250	237	226	
NAK41	2 1/8"	4L or A	3.95	1	1 7/8	3/4	1	5/16	1/16	1.0	2174	1327	1083	961	880	820	772	741	
NBK40	2 1/8"	5L or B	3.96	1	1 7/8	7/8	1	1/4	1/8	1.1	2174	1327	1083	961	880	820	772	741	
NBK52	2 1/8"	5L or B	4.96	1	1 7/8	7/8	1	1/4	1/8	1.6	2174	1327	1083	961	880	820	772	741	



**HARDENED  
TEETH**

TABLE No. 2

### SPROCKET IDLERS WITH HARDENED TEETH

PART No.	SHAFT LENGTH*	CHAIN SIZE	No. TEETH	DIMENSIONS						WT. Lbs.	RADIAL LOAD CAPACITY IN POUNDS BASED ON 2500 HOURS AVERAGE LIFE AT RPM SHOWN ■							
				O.D.	T	M	H	L	B		100	500	1000	1500	2000	2500	3000	3500
<b>For ANSI Roller Chain - Dimensions in Inches</b>																		
HN25B19	1 1/2"	25	19	1.65"	.110"	-	1 7/32"	3/4"	1 1/2"	.1	665	406	331	294	269	250	237	226
HN35B13	1 1/2"	35	13	1.75	.168	-	1 5/32	3/4	1 1/2"	.1	665	406	331	294	269	250	237	226
HN35B19	2 1/8"	35	19	2.47	.168	-	1 13/16	1	1	.3	2174	1327	1083	961	880	820	772	741
HN41B19	2 1/8"	41	19	3.28	.227	-	2 7/16	1	1	.9	2174	1327	1083	961	880	820	-	-
HND40B19	2 1/8"	40	19	3.28	.284	-	2 7/16	1	1	1.0	2174	1327	1083	961	880	820	-	-
HN50B17	2 1/8"	50	17	3.72	.343	-	2 5/8	1	1	1.3	2174	1327	1083	961	880	820	-	-
HN60B17	2 1/8"	60	17	4.46	.459	-	2 5/8	1	1	1.9	2174	1327	1083	961	880	-	-	-
HN80B13	2 1/8"	80	13	4.66	.575	-	2 5/8	1 1/4	1	2.6	2174	1327	1083	961	880	-	-	-
HN100B11	4	100	11	5.01	.692	-	2 31/32	1 7/8	1 1/2	3.7	5884	3592	2930	2602	-	-	-	-
HN120B11	4	120	11	6.01	.924	-	3 11/16	2	1 1/2	7.1	5884	3592	2930	2602	-	-	-	-
HN140B11	4	140	11	7.01	.924	-	4 3/16	2 1/4	1 1/2	10.8	5884	3592	2930	2602	-	-	-	-
HND35B19	2 1/8"	35-2	19	2.47	.162	.561"	1 13/16	1	1	.4	2174	1327	1083	961	880	820	772	741
HND40B19	2 1/8"	40-2	19	3.28	.275	.841	2 7/16	1 1/4	1	1.6	2927	1787	1458	1295	1185	1104	-	-
HND50B17	2 1/8"	50-2	17	3.72	.332	1.045	2 5/8	1 3/8	1	2.0	2927	1787	1458	1295	1185	-	-	-
HND60B17	3 1/8"	60-2	17	4.46	.444	1.341	2 5/8	1 3/4	1	4.0	4348	2654	2166	1922	1760	-	-	-
HND80B13	3 1/8"	80-2	13	4.66	.557	1.710	2 5/8	2 1/4	1	5.2	4348	2654	2166	1922	-	-	-	-
HND100B11	4	100-2	11	5.01	.669	2.077	2 21/32	2 7/8	1 1/2	6.1	5884	3592	2930	2602	-	-	-	-

\*For use with Drive Tighteners shown on pages I-2 and I-3 and I-4 with shaft lengths indicated.

■ See page I-8 for factors to use for Average Life of more or less than 2500 hours.

All Browning® Stock Idlers furnished with needle bearings have retainers that insure minimum internal friction and wear by separating the needle rollers. These bearings are inset approximately 1/8" on either end of the Idler hubs to form a grease cavity.

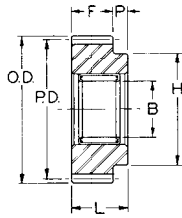


TABLE No. 1

### GEAR IDLERS - 14 1/2° PRESSURE ANGLE

PART No.	SHAFT LENGTH*	DIAM. PITCH	No. TEETH	DIMENSIONS							WT. Lbs.	RADIAL LOAD CAPACITY IN POUNDS BASED ON 2500 HOURS AVERAGE LIFE AT RPM SHOWN ■			
				O.D.	P.D.	B	F	L	P	H		100	500	1000	1500
				NSS1639HN	2 1/8"	16	39	2.56"	2.438"	1"		1/2"	1"	1/2"	2"
NSS1229HN	2 1/8"	12	29	2.58	2.417	1	3/4	1	1/4	2	.8	2174	1327	1083	961
NSS1025HN	2 1/8"	10	25	2.70	2.500	1	1	1	0	-	.9	2174	1327	1083	961
NSS821HN	2 1/8"	8	21	2.75	2.625	1	1 1/4	1 1/4	0	-	1.3	2927	1787	1458	1295

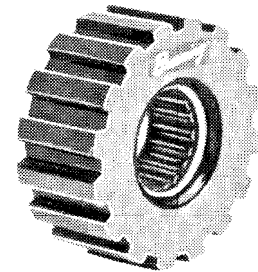
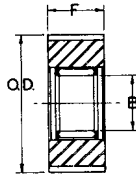


TABLE No. 2

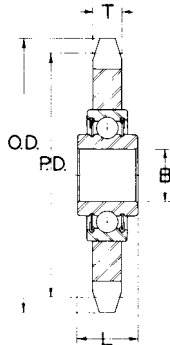
### GEARBELT® PULLEY IDLERS

PART No.	SHAFT LENGTH*	PITCH	No. GROOVES	DIMENSIONS			WT. Lbs.	RADIAL LOAD CAPACITY IN POUNDS BASED ON 2500 HOURS AVERAGE LIFE AT RPM SHOWN ■							
				O.D.	F	B		100	500	1000	1500	2000	2500	3000	3500
				N22L100	2 1/8"	3/8 (L)		22	2.602	1	1	1.0	2174	1327	1083
N16H100	2 1/8"	1/2 (H)	16	2.499	1	1	.9	2174	1327	1083	961	880	820	772	741
N16H200	3 1/8"	1/2 (H)	16	2.499	2	1	1.9	4348	2654	2166	1922	1760	1640	1544	1482

\*For use with Drive Tighteners shown on pages I-2 and I-3 and I-4 with shaft lengths indicated.

■ See page I-8 for factors to use for Average Life of more or less than 2500 hours.

All Browning® Stock Idlers furnished with needle bearings have retainers that insure minimum internal friction and wear by separating the needle rollers. These bearings are inset approximately 1/8" on either end of the Idler hubs to form a grease cavity.



**HARDENED  
TEETH**

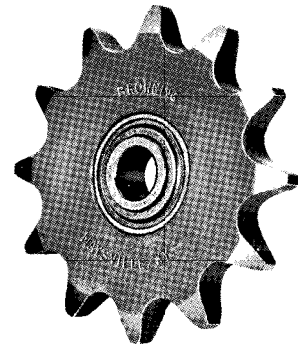


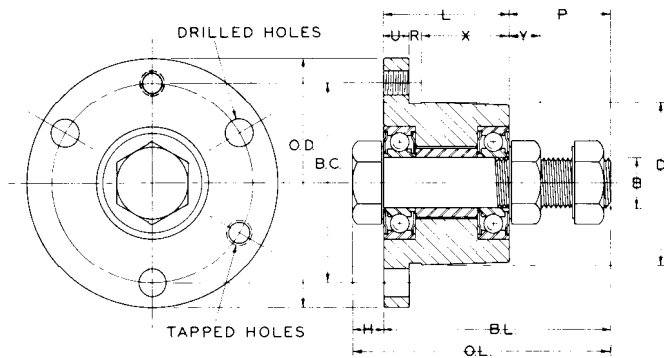
TABLE No. 3

### SPROCKET IDLERS WITH BALL BEARINGS\*

PART No.	CHAIN SIZE	No. TEETH	DIMENSIONS					WT. Lbs.	RADIAL LOAD CAPACITY IN POUNDS BASED ON 2500 HOURS AVERAGE LIFE AT RPM SHOWN ■				
			O.D.	P.D.	B	L	T		100	300	600	900	1200
			HB40A17 X 5/8	40	17	2.96"	2.721"		.630"	.720"	.284"	.5	530
HB50A15 X 5/8	50	15	3.32	3.006	.630	.720	.343	.6	530	360	298	262	230
HB60A13 X 5/8	60	13	3.49	3.134	.630	.720	.459	.8	530	360	298	262	230
HB80A12 X 3/4	80	12	4.33	3.864	.750	.610	.575	1.5	1660	1262	1061	958	892

\*Not for use with Drive Tighteners

■ See page I-8 for factors to use for Average Life of more or less than 2500 hours



Furnished complete with:  
**Ball Bearings, Cap Screws, Stud Bolts and Nuts**

Browning® Idler Bushings provide Idlers in the following products:

- |                         |                              |
|-------------------------|------------------------------|
| <b>SHEAVES</b>          | <b>HARDENED AND STANDARD</b> |
| <b>FHP</b>              | <b>SPROCKETS</b>             |
| <b>Multiple</b>         | <b>Single</b>                |
| <b>Poly-V</b>           | <b>Double</b>                |
| <b>358</b>              | <b>Triple</b>                |
| <b>GEARBELT PULLEYS</b> |                              |
| <b>GEARS</b>            |                              |



Available for H, P1, Q1 and R1 Bore Items.

TABLE No. 1

### SPECIFICATIONS

PART NUMBER	DIMENSIONS											TAPPED HOLES		DRILLED HOLES		APPROX. WT. Lbs.	
	O.D.	B.C.	D	B	O.L.	B.L.	H & Y	L	P	U	R	X	NO.	SIZE	No.		SIZE
*IDH1 - 1/2	2 1/2"	2"	1.625"	1/2"	2 9/16"	2 1/4"	5/16"	1 1/4"	1"	1/4"	1/8"	7/8"	2	1/4" - 20	2	5/16"	.9
*IDP1 - 5/8	3"	2 7/16"	1.937"	5/8"	3 41/64"	3 1/4"	29/64"	1 19/16"	1 5/16"	13/32"	7/32"	1 9/16"	2	5/16" - 18	3	3/8"	1.9
*IDQ1 - 3/4	4 1/8"	3 3/8"	2.875"	3/4"	4 7/32"	3 3/4"	19/32"	2 1/2"	1 1/4"	17/32"	7/32"	1 3/4"	2	3/8" - 16	3	7/16"	5.5
*IDQ1 - 1	4 1/8"	3 3/8"	2.875"	1"	4 39/64"	4"	39/64"	2 1/2"	1 1/2"	17/32"	7/32"	1 3/4"	2	3/8" - 16	3	7/16"	5.9
IDR1 - 1 1/2	5 3/8"	4 5/8"	4.000"	1 1/2"	6 1/2"	5 1/2"	1"	2 7/8"	2 5/8"	5/8"	1/4"	2"	2	3/8" - 16	3	7/16"	14.1

\*These sizes fit H, P, Q, and Q1 Drive Tighteners shown on pages I-2, I-3 and I-4.

NOTE-Mount Stud Bolt in either direction.

### LOAD RATINGS - IDLER BUSHINGS

TABLE No. 2

PART No.	RADIAL LOAD CAPACITY IN POUNDS BASED ON 2500 HOURS AVERAGE LIFE AT RPM SHOWN							
	100	500	1000	1500	2000	2500	3000	3500
IDH1 - 1/2	1518	1016	854	772	718	678	648	624
IDP1 - 5/8	1518	1016	854	772	718	678	648	624
IDQ1 - 3/4	3320	2222	1868	1688	1568	1486	1420	1366
IDQ1 - 1	3554	2378	2000	1806	1680	1590	1518	1462
IDR1 - 1 1/2	8326	5570	4684	4232	3936	3726	3560	3424

### AVERAGE LIFE FACTORS

Radial Load Capacities shown for NEEDLE BEARING IDLERS and IDLER BUSHINGS are based on 2500 Hours Average Life. If another average life is desired, these ratings must be modified by factors as follows:

<b>500 Hours - 1.71</b>	<b>4000 Hours - .85</b>	<b>9000 Hours - .65</b>
<b>1000 Hours - 1.36</b>	<b>5000 Hours - .79</b>	<b>10000 Hours - .63</b>
<b>1500 Hours - 1.19</b>	<b>6000 Hours - .75</b>	<b>15000 Hours - .55</b>
<b>2000 Hours - 1.07</b>	<b>7000 Hours - .71</b>	<b>20000 Hours - .50</b>
<b>3000 Hours - .94</b>	<b>8000 Hours - .68</b>	

### BROWNING® DRIVE TIGHTENERS AND IDLERS

Correct operating tension is an important factor in the satisfactory performance and life of any V-belt or chain drive. As V-belts wear they seat themselves deeper in the sheave grooves. This seating, along with belt stretch, lessens the initial tension. The result is slippage and loss in horsepower capacity unless some form of take up is used to restore and maintain original tension.

As chains wear they elongate, which results in sway or slap and increased vibration. This puts undue shock into the drive and increases bearing wear.

Both V-belt and chain drives wear at an increased rate if allowed to run with insufficient tension. Adjustment of center distance is the best method of maintaining proper tension. In cases of fixed centers, BROWNING® Drive Tighteners and Idlers provide the necessary means of take up. The BROWNING Drive Tighteners also provide a means of obtaining extra belt or chain wrap frequently needed for extremely high ratios, multiple shaft or serpentine drives.

Careful consideration must be given to the following when using idlers:

1. Too much tension in a drive causes excessive belt, chain and bearing wear.
2. Too little tension in a drive allows belt slippage or chain vibration, resulting in loss of power and additional wear.
3. All idlers should be used on the slack side of the drive.
4. V-belt drive idlers should be used on the inside of the belt. Allowance should be made for horsepower loss due to the reduced arc of contact.
5. Where necessary to use V-belt drive idlers on the outside of the belt, the reverse bending will reduce belt life.
6. Flat face pulley idlers can be used on either inside or outside of the belt.
7. Sprocket idlers should be used on the outside of chain drives, and with at least three teeth engaged in the chain.
8. Idlers used on the inside of a drive should be located approximately 1/3 of the center distance from the large sheave, pulley or sprocket.
9. Idlers used on the outside of a drive should be located approximately 1/3 of the center distance from the small sheave, pulley or sprocket.

For quick, accurate Phase Adjustment of Chain Drives, Gear Drives, Cams, etc.

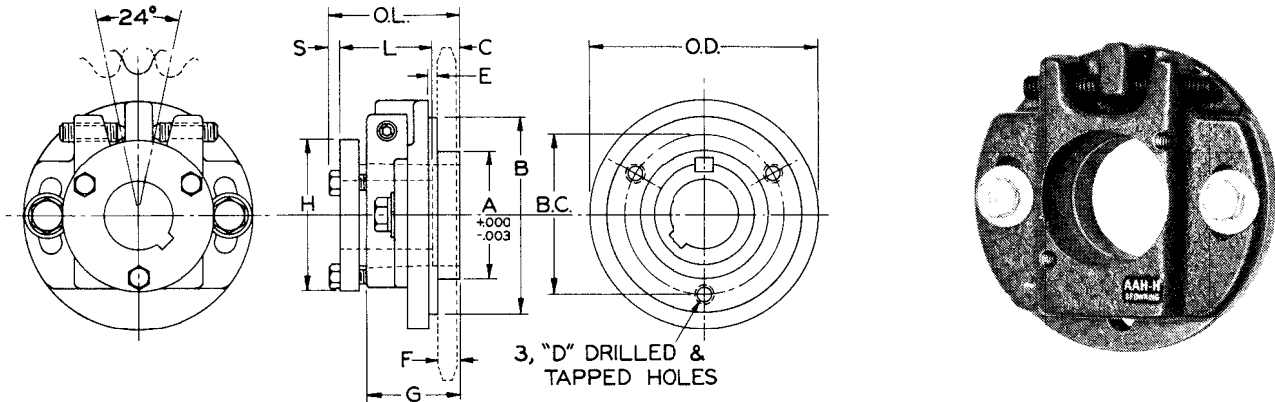


TABLE No. 1

### SPECIFICATIONS

HUB No.	DIMENSIONS												WT. Lbs.
	O.D.	O.L.	A	B	B.C.	C	D	E	F	G	L	S	
AAH-G	2 7/8	2 1/8	1.250	2 7/16	2 1/8	7/8	1/4 - 20 NC	3/16	5/16	1 1/2	1	3/16	1.3
AAH-H	3 3/4	2 11/32	2.125	3 5/16	2 7/8	27/32	3/8 - 16 NC	3/16	1/2	1 23/32	1 1/4	3/16	2.1
AAH-Q	6 1/4	3 9/32	3.500	5 5/8	4 3/8	1/2	1/2 - 13 NC	1/4	7/16	2 1/4	2 1/2	9/32	9.9

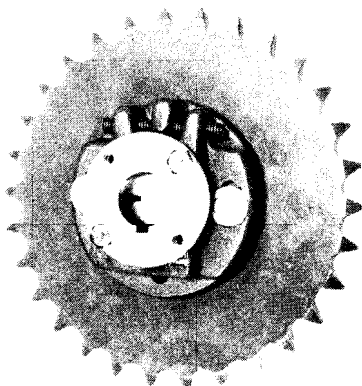
HUB No.	BUSHING No.	BORE RANGE	MINIMUM NUMBER OF TEETH ON ROLLER CHAIN SPROCKETS AND GEARS										
			CHAIN SIZE - TYPE A SPROCKETS						PITCH - CHANGE GEARS				
			35	41	40	50	60	80	20	16	12	10	8
AAH - G	G	3/8 - 1	24	18	19	16	-	-	52	42	-	-	-
AAH - H	H	3/8 - 1 1/2	32	24	24	20	19	-	70	56	43	-	-
AAH - Q	Q1	3/4 - 2 11/16	-	-	-	32	27	23	-	-	71	59	48

When a particular phase relationship is required between two parts of a machine, the Angle Adjusting Hub provides quick, accurate and positive phase adjustment. Without the Angle Adjusting Hub, phase relationship of parts requires extremely accurate machining of components as one tooth of a sprocket or gear is usually too coarse an adjustment.

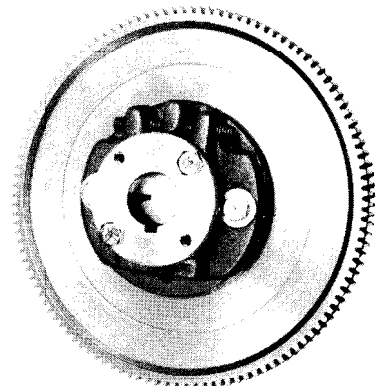
The desired component is simply bolted to the Angle Adjusting Hub

and by use of the two adjusting screws, infinite adjustment can be made throughout the 24° range of the Hub. Once adjusted the Hub cannot slip out of adjustment because, when both are tightened, the adjusting screws act against each other like jam nuts.

Angle Adjusting Hubs are machined for Browning Split Taper® Bushings so that the complete bore range of the bushings shown is available in 1/16" increments from STOCK.



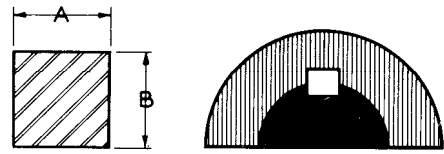
1. Eliminate extended deliveries on "Key-wayed on Centerline" items.
2. Compensate for Chain and Tooth wear in alignment applications.
3. Ideal for timing or synchronizing applications.
4. Bore Range of 3/8" - 2 11/16", .978 through 1 3/8 Spline and 14 mm through 60 mm bore available OFF THE SHELF.
5. Adjust quickly and easily.



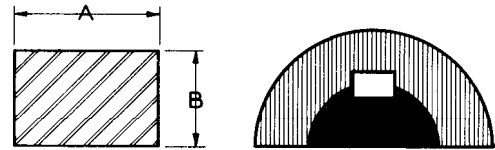
### BROWNING STANDARD KEYSEATS

TABLE No. 1

OLD STANDARD KEYSEATS		NEW STANDARD KEYSEATS	
BORE RANGE	KEYSEAT	BORE RANGE	KEYSEAT
1/2" - 9/16"	1/8" X 1/16"	1/2" - 9/16"	1/8" X 1/16"
5/8 - 7/8	3/16 X 3/32	5/8 - 7/8	3/16 X 3/32
1 5/16 - 1 9/16	1/4 X 1/8	1 5/16 - 1 1/4	1/4 X 1/8
1 3/8 - 1 13/16	3/8 X 3/16	1 5/8 - 1 3/8	5/16 X 5/32
1 7/8 - 2 1/4	1/2 X 1/4	1 7/16 - 1 3/4	3/8 X 3/16
2 9/16 - 2 13/16	5/8 X 5/16	1 13/16 - 2 1/4	1/2 X 1/4
2 7/8 - 3 13/16	3/4 X 3/8	2 5/16 - 2 3/4	5/8 X 5/16
3 7/8 - 4 11/16	1 X 1/2	2 13/16 - 3 1/4	3/4 X 3/8
4 3/4 - 5 11/16	1 1/4 X 5/8	3 5/16 - 3 3/4	7/8 X 7/16
5 3/4 - 6 15/16	1 1/2 X 3/4	3 13/16 - 4 1/2	1 X 1/2
7 - 7 15/16	1 3/4 X 7/8	4 9/16 - 5 1/2	1 1/4 X 5/8
		5 9/16 - 6 1/2	1 1/2 X 3/4
		6 3/16 - 7 1/2	1 3/4 X 5/8
		7 9/16 - 8	2 X 11/16



Square



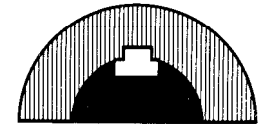
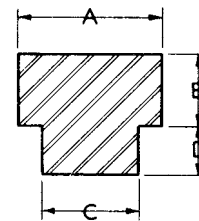
Rectangular

### SQUARE AND RECTANGULAR KEYS

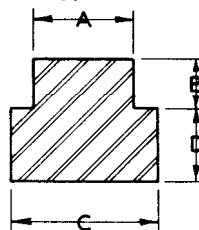
TABLE No. 2

SINGLE KEYS		24" LENGTHS		DIMENSIONS	
PART No.	*MAX. LENGTH	PART No.	WEIGHT Lbs.	A	B
K-24	3"	S-24	.13	1/8"	1/8"
K-25	3	S-25	.25	3/16	3/16
K-26	5	R-26	.31	1/4	3/16
K-27	5	S-27	.44	1/4	1/4
K-99	5	S-99	.63	5/16	5/16
K-28	5	R-28	.75	3/8	5/16
K-29	5	S-29	.88	3/8	3/8
K-41	7	S-41	1.0	7/16	7/16
K-30	7	R-30	1.4	1/2	7/16
K-31	7	S-31	1.5	1/2	1/2
K-39	7	S-39	2.0	9/16	9/16
K-37	7	S-37	2.6	5/8	5/8
K-38	9	S-38	3.0	11/16	11/16
K-32	12	R-32	3.0	3/4	1/2
K-33	12	R-33	3.1	3/4	5/8
K-34	12	S-34	3.6	3/4	3/4
K-40	12	S-40	5.1	7/8	7/8
K-35	12	R-35	4.9	1	3/4
K-36	12	S-36	6.5	1	1

\*Single keys will be cut to desired length up to Maximum Length shown. When longer Keys are specified we will furnish 24" lengths.



Type 1



Offset

Type 2

TABLE No. 3

### OFFSET KEYS

SINGLE KEYS		24" LENGTHS		TYPE	DIMENSIONS			
PART No.	*MAX. LENGTH	PART No.	WEIGHT Lbs.		A	B	C	D
K-1	3"	O-1	.13	1	3/16"	3/32"	1/8"	1/16"
K-2	3	O-2	.25	2	3/16	3/32	1/4	3/32
K-3	3	O-3	.31	2	3/16	3/32	1/4	1/8
K-4	5	O-4	.44	2	1/4	1/8	5/16	1/8
K-5	5	O-5	.50	2	1/4	1/8	3/8	1/8
K-6	5	O-6	.63	2	1/4	1/8	3/8	3/16
K-7	5	O-7	.69	1	3/8	3/16	5/16	1/8
K-51	5	O-51	.75	1	3/8	3/16	5/16	5/32
K-8	5	O-8	.88	2	3/8	3/16	7/16	5/32
K-9	5	O-9	.81	2	3/8	3/16	1/2	3/16
K-10	5	O-10	1.3	2	3/8	3/16	1/2	1/4
K-11	7	O-11	1.3	1	1/2	1/4	7/16	5/32
K-12	7	O-12	1.5	2	1/2	1/4	9/16	3/16
K-13	7	O-13	1.5	2	1/2	1/4	5/8	3/16
K-14	7	O-14	2.0	2	1/2	1/4	5/8	5/16
K-15	7	O-15	2.0	2	1/2	1/4	11/16	1/4
K-100	9	O-100	1.8	1	5/8	5/16	3/8	3/16
K-16	9	O-16	2.4	2	5/8	5/16	11/16	1/4
K-101	12	O-101	2.6	1	3/4	3/8	1/2	1/4
K-17	12	O-17	2.6	1	3/4	3/8	5/8	3/16
K-18	12	O-18	3.2	1	3/4	3/8	5/8	5/16
K-19	12	O-19	3.0	1	3/4	3/8	11/16	1/4
K-20	12	O-20	3.4	2	3/4	3/8	13/16	9/32
K-21	12	O-21	4.4	2	3/4	3/8	7/8	7/16
K-22	12	O-22	3.8	2	3/4	3/8	15/16	5/16
K-23	12	O-23	5.8	2	3/4	3/8	1	1/2
K-410	12	O-410	5.8	1	1	1/2	7/8	7/16

\*Single keys will be cut to desired length up to Maximum Length shown. When longer Keys are specified we will furnish 24" lengths.

For use with anything which keys to the shaft:

Sheaves  
Pulleys  
Couplings  
Sprockets  
Gears

