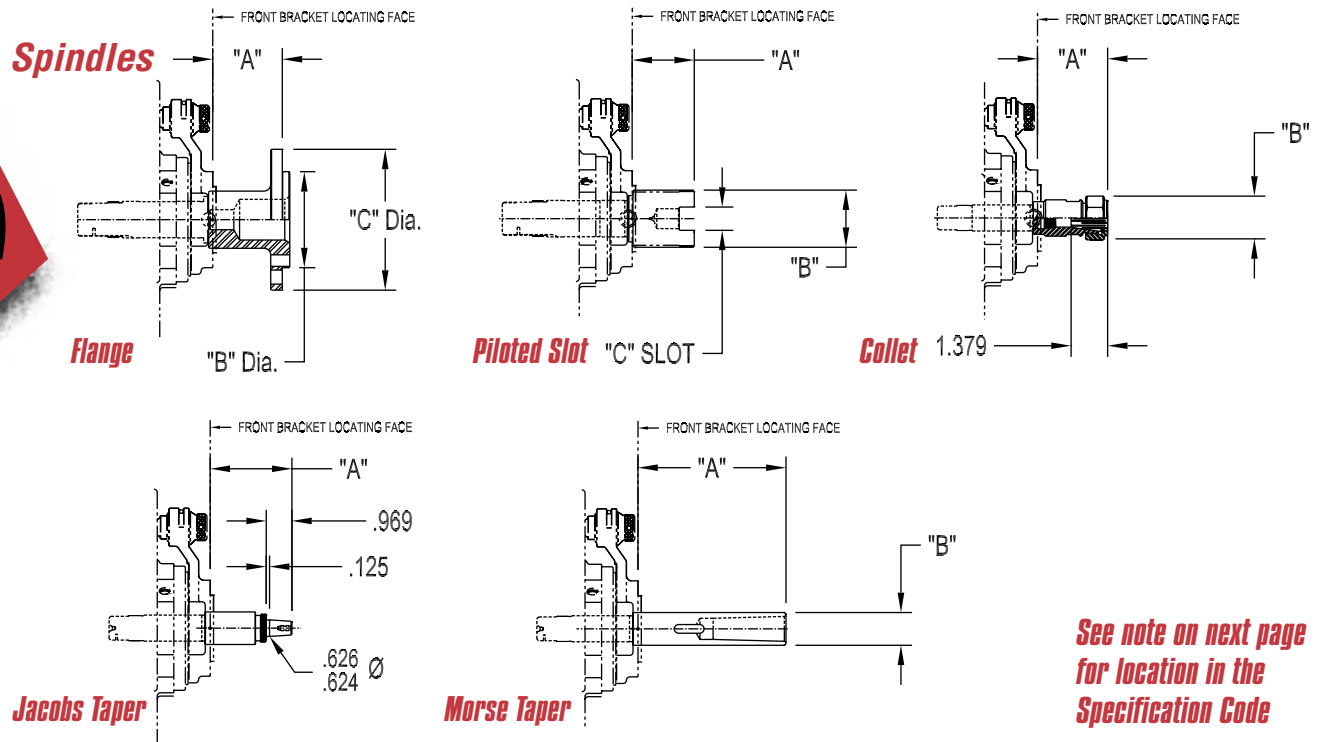


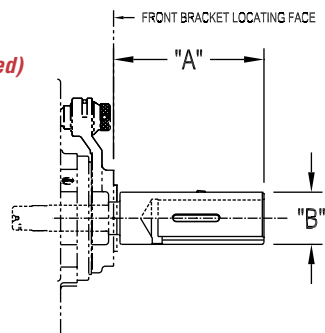
CUSTOM ADD-ONS FOR ENGLISH UNITS



Catalog No.	Description	"A"	"B"	"C"
AA	Flange	2.625	3.619/3.621	5.313
AB	Piloted Slot	2.3125	2.150/2.160	
AC	Piloted Slot - Lead Screw			
AD	Piloted Slot - High Torque			
AE	Piloted Slot High Torque - Lead Screw	2.75	2.250/2.230	
AF	#25 ER Collet Socket	2.656	1.625	
AG	#32 ER Collet Socket			
AH	#33 Jacobs Taper	1.594	1.594	
AI	#33 Jacobs Taper Extended	3.094	3.094	
AJ	#33 Jacobs Taper Extra Long	5.281	5.281	
AK	#2 Morse Taper	3.562	1.235/1.230	
AL	#2 Morse Taper Extended	5.344	1.235/1.230	
AM	#2 Morse Taper Quill Support			
AN	#2 Morse Taper High Speed			
AO	#2 Morse Taper Series "A"	5.688	1.9684/1.9689	
AP	#2 Morse Taper Series "A" Extended	7.688	1.9684/1.9689	
AQ	#3 Morse Taper	6.562	1.2347/1.2350	
AR	#3 Morse Taper High Torque	6.188	2.1653/2.1659	
AS	#3 Morse Taper High Torque Extended	7.812	2.1653/2.1659	
AT	#4 Morse Taper	5.688	1.9684/1.9689	
AU	#4 Morse Taper Extended	7.688	1.9684/1.9689	
AV	#4 Morse Taper High Torque	7.812	2.1653/2.1659	
AW	#4 Morse Taper Lead Screw	5.688	1.870/1.875	

Note: HT spindles are only available for hydraulic, all HT lead screw units and 87XX series ballscrew units.

Spindles (Continued)



Adjustable Adapter

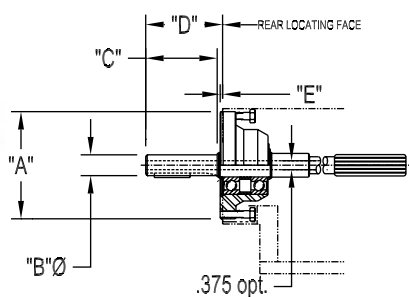
Note: Location in the Specification Code

Model Spindle Drive Belt/Pulley Motor Belt Housing Special
 X X XX _____ X X XX XX XX XX

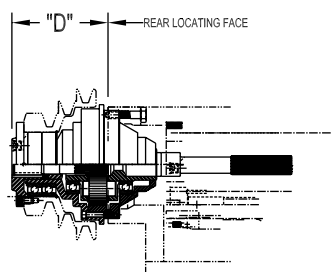
Catalog No.	Description	"A"	"B"
AY	3/4" Adjustable Adapter, 3/4" A.A.L.S. & 7/8" A.A.L.S.	3.469	1.230/1.235
AZ	3/4" Adjustable Adapter - Extra Long		
BA	1" Adjustable Adapter	4.094	1.595/1.600
BB	1" Adjustable Adapter - Short	3.094	1.595/1.600
BC	1" Adjustable Adapter - Extra Long With 4"	5.688	1.9684/1.9689
BD	1" Adjustable Adapter - Extra Long With 6"	7.688	1.9684/1.9689
BE	1-1/16" Adjustable Adapter	4.094	1.595/1.600
BF	1-1/16" Adjustable Adapter - Extra Long	5.688	1.9684/1.9689
BG	1-1/16" Adjustable Adapter - Quick Change	4.938	1.6090/1.6095
BH	1-1/16" Adjustable Adapter - Quick Change	8.156	1.6090/1.6095
BI	1-1/4" Adjustable Adapter	5.688	1.9684/1.9689
BJ	1-3/8" Adjustable Adapter - Quick Change	4.938	1.9840/1.9845
BK	1-3/8" Adjustable Adapter	5.688	1.9840/1.9845
BL	1-3/8" Adjustable Adapter - Extra Long	7.688	1.9840/1.9845
BM	1-3/8" Adjustable Adapter - High Torque	7.313	2.1653/2.1659
BN	1-3/8" Adjustable Adapter - High Torque Extra Long	8.938	2.1653/2.1659
BO	1-1/2" Adjustable Adapter	5.688	1.9684/1.9689
BP	1-1/2" Adjustable Adapter - Extra Long	7.688	1.9840/1.9845
BQ	1-1/2" Adjustable Adapter - High Torque	6.188	2.1653/2.1659
BR	1-7/8" Adjustable Adapter - High Torque	6.188	2.6245/2.6255
BS	1-7/8" Adjustable Adapter - Extra Long	7.188	1.9840/1.9845
BT	1-7/8" Adjustable Adapter - High Torque Lead Screw	6.563	2.625
SP	Special		

Note: HT spindles are only available for hydraulic, all HT lead screw units and 87XX series ballscrew units.

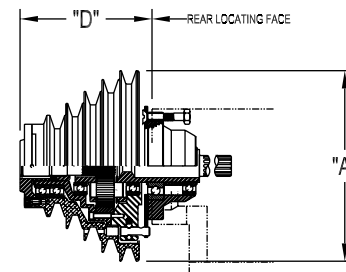
Drives



Inline Drive



Planetary Reduction



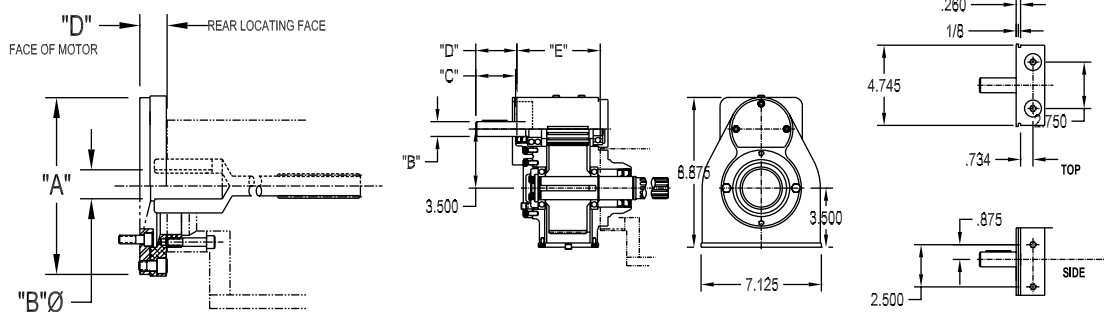
Hi-Lo

**See note on next page
for location in the
Specification Code**

Catalog No.	Description	"A"	"B"	"C"	"D"	"E"
A	Inline Shaft Drive	5.000	.8740/.8745	3.000	3.250	0.125
B	High Torque	5.000	1.3740/1.3745	3.438	3.688	0.250
C	Coolant Through	5.000	1.3740/1.3745	3.438	3.688	0.250
D	Draw Bar	5.000	1.3740/1.3745	3.438	3.688	0.250
E	Draw Bar With Grease Port	5.000	1.3740/1.3745	3.438	3.688	0.250
F	Planetary Reduction 6:1	6.250			3.688	
G	Planetary Reduction - High Torque	6.250			3.688	
H	Coolant Through	6.250			3.688	
I	Hi-Lo Reduction - Standard	8.000			5.500	
J	Hi-Lo Reduction - High Torque	8.000			5.500	

Note: If an HT spindle has been selected, choose an HT drive. HT drive is also required for coolant through or draw bar applications. (Spindle choices: AE, AR, AS, AV, BM, BN, BQ, BT).

Drives (Continued)



Direct Drive

Gear Reduction

Note: Location in the Specification Code

Model	Spindle	Drive	Belt/Pulley	Motor	Belt Housing	Special
X X XX	XX	—	X	XX	XX	XX

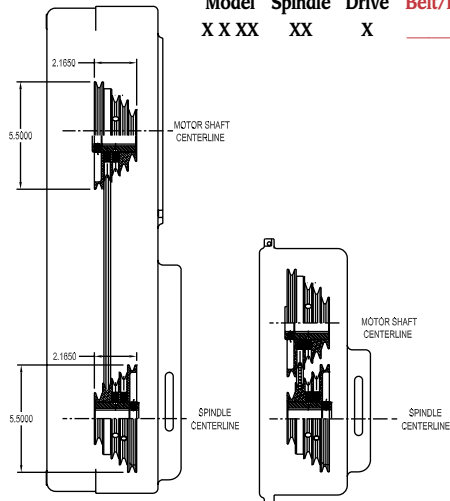
Catalog No.	Description	"A"	"B"	"C"	"D"	"E"
K	5/8" Direct Drive	6-1/2	5/8		17/32	
L	3/4" Direct Drive	6-1/2	3/4		17/32	
M	7/8" Direct Drive	6-1/2	7/8		17/32	
N	1-1/8" Direct Drive	9-1/2	1-1/8		19/32	
O	1-3/8" Direct Drive	9-1/2	1-3/8		19/32	
P	1-3/8" Direct Drive - High Torque	9-1/2	1-3/8		19/32	
Q	14mm Direct Drive	6-1/2	14mm		17/32	
R	19mm Direct Drive	6-1/2	19mm		17/32	
S	24mm Direct Drive	9-1/2	24mm		19/32	
T	28mm Direct Drive	9-1/2	28mm		19/32	
U	2.9:1 Reduction Drive		.8740/.8745	2.380	2.438	4.938
V	4.2:1 Reduction Drive		.8740/.8745	2.380	2.438	4.938
W	5.7:1 Reduction Drive		.8740/.8745	2.380	2.438	4.938
X	2.9:1 Reduction Drive - High Torque		.8740/.8745	2.380	2.438	4.938
Y	4.2:1 Reduction Drive - High Torque		.8740/.8745	2.380	2.438	4.938
Z	5.7:1 Reduction Drive - High Torque		.8740/.8745	2.380	2.438	4.938

Note: If an HT spindle has been selected, choose an HT drive. HT drive is also required for coolant through or draw bar applications. (Spindle choices: AE, AR, AS, AV, BM, BN, BQ, BT).

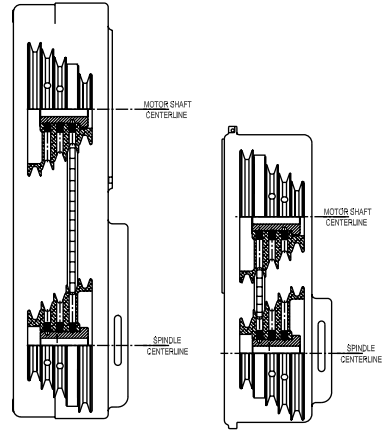
Belts/Pulleys

Note: Location in the Specification Code

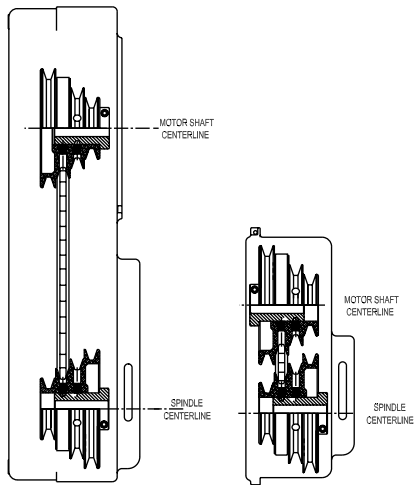
Model	Spindle	Drive	Belt/Pulley	Motor	Belt Housing	Special
X X XX	XX	X	_____	XX	XX	XX



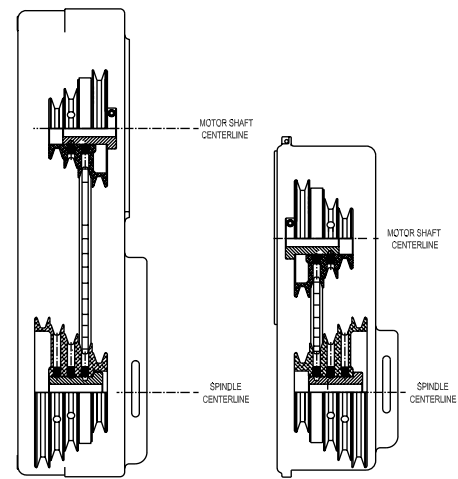
A - 5 Step "3V" Section Pulley



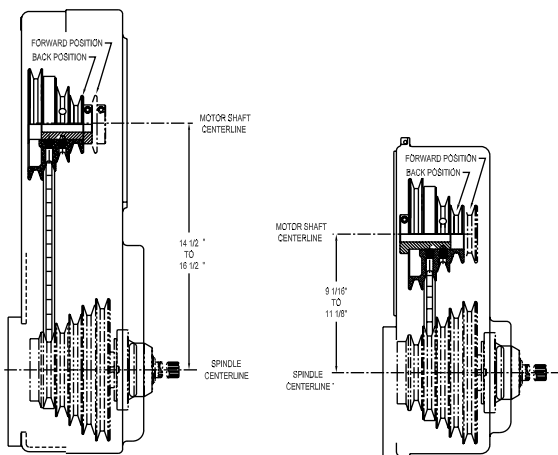
B - 5 Step "B" Section Pulley



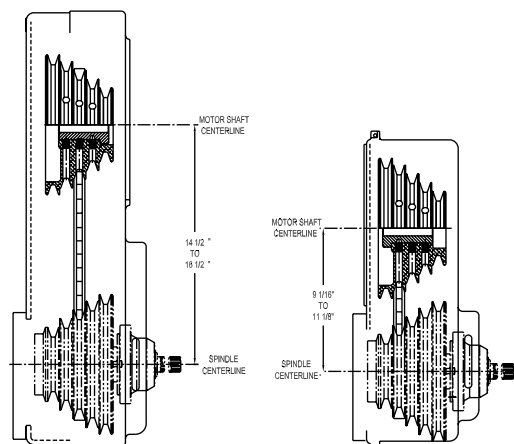
C - 4 Step "B" Section Pulley



**D - 4 Step "B" Section Pulley
5 Step "B" Section Pulley**



**E - 4 Step Pulley & Belt Assembly
to Hi-Lo 1:1 & 6:1 Ratio Drive Assembly**



**F - 5 Step Pulley & Belt Assembly
to Hi-Lo 1:1 & 6:1 Ratio Drive Assembly**

Belts/Pulleys (Continued) See note on previous page for location in the Specification Code

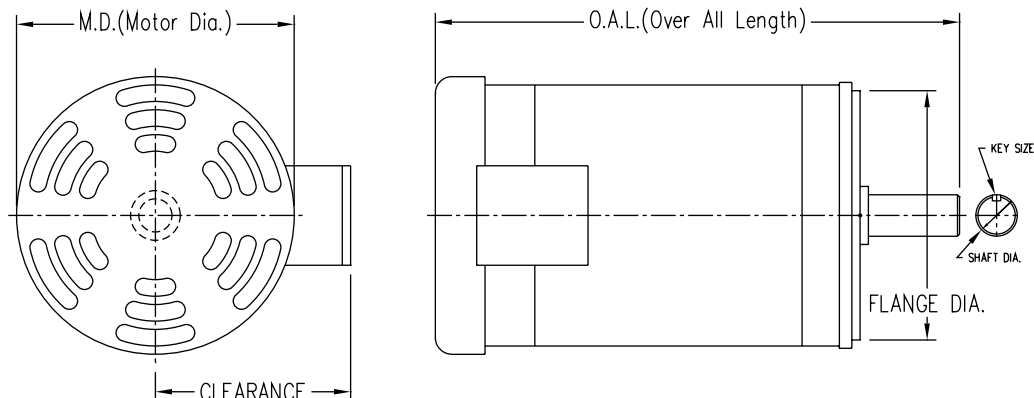
Motor RPM	A			B			C			D					
	5 Step "3V" Section Pulleys			5 Step "B" Section Pulleys			4 Step "B" Section Pulleys			4 Step Pulley on Motor 5 Step Pulley on Driven Shaft					
	RPM	HP Max. Duty		RPM	HP Std. Duty	HP Max. Duty	RPM	HP Std. Duty	HP Max. Duty	Low Range			High Range		
									RPM	HP Std. Duty	HP Max. Duty	RPM	HP Std. Duty	HP Max. Duty	
870	410	0.8		450	0.2	1.7	435	0.8	1.4	335	0.8	1.4	375	0.8	1.4
	660	1.5		620	1.8	2.4	700	1.2	1.8	500	1.2	1.8	580	1.2	1.8
	870	1.6		870	2.2	3.0	1090	1.8	2.5	725	1.7	2.4	870	1.6	2.3
	1130	1.8		1220	2.2	3.0	1740	1.5	2.0	1050	2.0	2.7	1300	1.9	2.7
	1820	1.7		1700	2.0	3.0									
1160	550	1.1		600	1.4	2.1	580	0.9	1.6	450	0.9	1.6	500	0.9	1.6
	880	2.0		830	2.2	2.9	930	1.4	2.2	660	1.4	2.2	770	1.4	2.2
	1160	2.1		1160	2.8	3.8	1450	2.1	3.0	960	2.1	3.0	1160	2.0	2.8
	1500	2.3		1620	2.7	3.7	2320	1.3	2.5	1390	2.5	3.3	1730	2.3	3.3
	2400	2.1		2250	2.1	3.4									
1750	830	1.5		900	1.8	2.8	875	1.0	2.0	680	1.0	2.0	750	1.0	2.0
	1330	2.8		1250	2.9	3.9	1400	1.8	2.9	1000	1.8	2.9	1160	1.8	2.9
	1750	3.0		1750	3.6	5.0	2200	2.8	4.0	1450	2.7	3.9	1750	2.5	3.6
	2270	3.3		2450	3.4	4.7	3500	1.7	3.0	2100	3.1	4.3	2600	2.9	4.3
	3650	2.7		3400	2.1	3.8									
3500	1650	2.6													
	2670	4.7													
	3500	5.0													
	4550	5.4													
	7300	3.8													

G "B" Section Belt & Pulley (Specify RPM) _____

H Timing Belt & Pulley (Specify RPM) _____

Motor RPM	E						F		
	4 Step Pulley on Motor Only (For Use With "I" or "J" Hi-Lo Drive)			4 Step Pulley on Motor Only (For Use With "I" or "J" Hi-Lo Drive)			5 Step Pulley on Motor Only (For Use With "I" or "J" Hi-Lo Drive)		
	Low Range			High Range			High Range		
	HP Transmitted	In Low Position RPM	In High Position RPM	HP Transmitted	In Low Position RPM	In High Position RPM	HP Transmitted	In Low Position RPM	In High Position RPM
870	1.3	56	340	1.4	63	375	1.7	72	450
	1.7	83	550	1.7	98	585	2.4	104	620
	2.4	145	870	2.4	145	870	3.0	145	870
	2.9	218	1320	2.9	218	1320	3.0	204	1220
							3.0	280	1700
1160	1.5	75	450	1.6	83	500	2.1	97	580
	2.2	110	660	2.1	130	780	2.9	138	830
	3.0	160	960	2.9	190	1140	3.8	193	1160
	3.8	230	1380	3.6	290	1740	3.7	271	1620
							3.4	385	2320
1750	1.8	113	680	2.0	125	750	2.8	145	875
	2.9	166	1100	2.7	195	1170	3.9	208	1250
	4.0	243	1460	3.9	290	1740	5.0	240	1750
	5.0	350	2100	4.8	440	2640	4.7	408	2450
							3.8	-	3500

Motors



Note: Motors are ball bearing, enclosed NEMA "C" Flange Mounted, 230/460 volt, 3 phase, 60 Hertz. Maximum motor size is limited to HP transmitted on Belts/Pulley chart if using step pulleys or by .009 HP/Rev for standard drives and spindles, .055 HP/Rev on HT drives and spindles or by the 8-1/2" flange ø if using our belt housing.

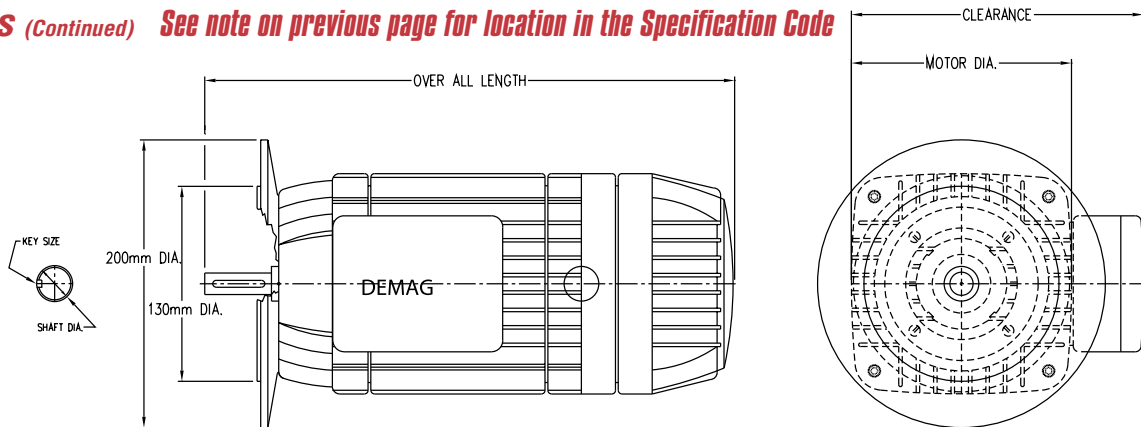
Note: Location in the Specification Code

Model Spindle Drive Belt/Pulley Motor Belt Housing Special
 X X XX XX X X — XX XX

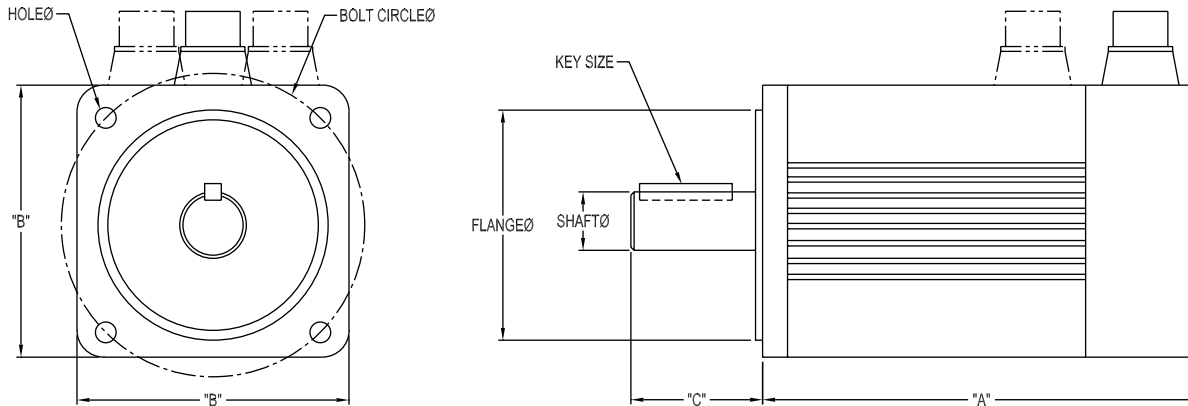
Catalog No.	H.P.	R.P.M.	Frame	Shaft Dia.	Key Size	Flange Dia.	O.V.L.	Motor Dia.	Clearance
A	1/2	1200	56C	5/8"	3/16"	4-1/2"	13.25	6-5/8"	5"
B	1/2	1800	56C	5/8"	3/16"	4-1/2"	12.00	6-5/8"	5"
C	1/2	3600	56C	5/8"	3/16"	4-1/2"	11.38	6-5/8"	5"
D	3/4	1200	143TC	7/8"	3/16"	4-1/2"	13.25	6-5/8"	5-1/4"
E	3/4	1800	56C	7/8"	3/16"	4-1/2"	11.38	6-5/8"	5"
F	3/4	3600	56C	7/8"	3/16"	4-1/2"	11.38	6-5/8"	5"
G	1	1200	145C	7/8"	3/16"	4-1/2"	13.38	6-5/8"	5-1/4"
H	1	1800	143C	7/8"	3/16"	4-1/2"	12.31	6-5/8"	5-1/4"
I	1	3600	56C	7/8"	3/16"	4-1/2"	11.38	6-5/8"	5"
J	1-1/2	1200	145C	7/8"	3/16"	4-1/2"	13.31	6-5/8"	5-7/8"
K	1-1/2	1800	145C	7/8"	3/16"	4-1/2"	12.31	6-5/8"	5-7/8"
L	1-1/2	3600	143C	7/8"	3/16"	4-1/2"	12.06	6-5/8"	5-7/8"
M	2	1200	145C	7/8"	3/16"	4-1/2"	15.68	7-7/8"	5-7/8"
N	2	1800	145C	7/8"	3/16"	4-1/2"	16.55	6-5/8"	5-7/8"
O	2	3600	145C	7/8"	3/16"	4-1/2"	16.45	6-5/8"	5-7/8"
P	3	1200	213TC	1-3/8"	5/16"	8-1/2"	18.68	9-9/16"	7-7/8"
Q	3	1800	182TC	1-1/8"	1/4"	8-1/2"	15.19	7-7/8"	5-7/8"
R	3	3600	145TC	7/8"	3/16"	4-1/2"	14.19	6-5/8"	5-1/4"
S	5	1200	215C	1-3/8"	5/16"	8-1/2"	19.81	9-9/16"	7-3/8"
T	5	1800	184TC	1-1/8"	1/4"	8-1/2"	16.55	7-7/8"	5-7/8"
U	5	3600	182TC	7/8"	3/16"	8-1/2"	16.55	7-7/8"	5-7/8"
V	7-1/2	1800	213TC	1-3/8"	5/16"	8-1/2"	18.68	9-9/16"	7-3/8"
W	7-1/2	3600	184TC	7/8"	3/16"	8-1/2"	16.56	7-7/8"	5-7/8"
X	10	1800	215TC	1-3/8"	5/16"	8-1/2"	19.21	10-1/4"	7-3/8"
X1	10	3600	215TC	1-3/8"	5/16"	8-1/2"	18.68	7-7/8"	5-7/8"
Y	15	1800	254C	1-5/8"	3/8"	8-1/2"	23.60	12-15/16"	9-5/8"
Y1	15	3600	254TC	1-5/8"	3/8"	8-1/2"	23.16	12-15/16"	9-5/8"
Z	20	1800	256TC	1-5/8"	3/8"	8-1/2"	23.66	12-15/16"	9-5/8"
Z1	20	3600	256TC	1-5/8"	3/8"	8-1/2"	23.16	12-15/16"	9-5/8"

CUSTOM ADD-ONS FOR ENGLISH UNITS

Motors (Continued) See note on previous page for location in the Specification Code

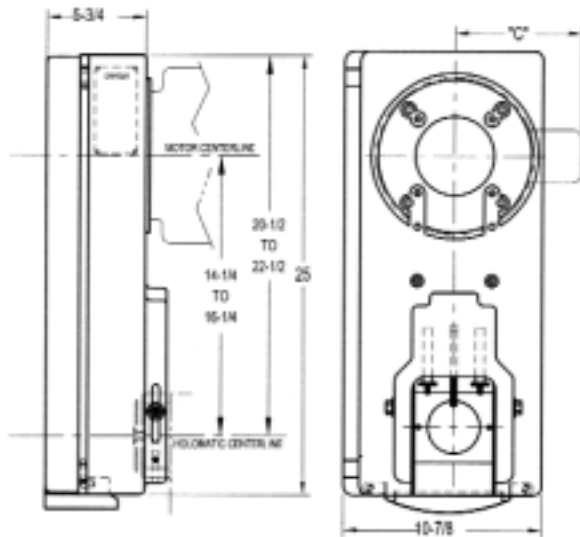


Catalog No.	H.P.	R.P.M.	Frame	Shaft Dia.	Key Size	Flange "A" Dia.	Flange "B" Dia.	O.V.L.	Motor Dia.	Clearance
AA	.97	1090	KBA80B	19mm/0.784	6MM/.236	130mm/5.118	200mm/7.874	338mm/13.307	158mm/6.220	8-5/8"
BB	1.35	1660	KBA80A	19mm/0.784	6MM/.236	130mm/5.118	200mm/7.874	353mm/13.897	158mm/6.220	8-5/8"
CC	1.55	1110	KBA90B	24mm/0.944	8MM/.315	130mm/5.118	200mm/7.874	394mm/15.512	178mm/7.007	9-1/2"
DD	2.4	1145	KBA100B	28mm/1.102	8MM/.315	130mm/5.118	200mm/7.874	441mm/17.365	196mm/7.716	5-1/4"
EE	3.5	1140	KBA112B	28mm/1.102	8MM/.315	130mm/5.118	200mm/7.874	464mm/18.267	220mm/8.661	11-3/4"
FF	3.7	1725	KBA100B	28mm/1.102	8MM/.315	130mm/5.118	200mm/7.874	441mm/17.365	196mm/7.716	10-3/4"

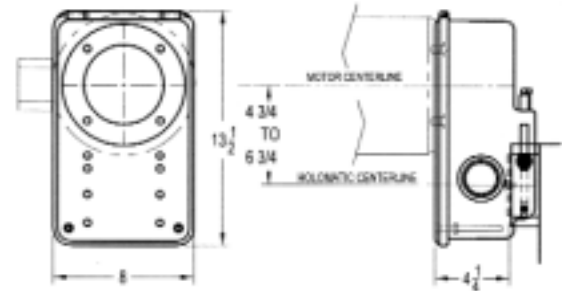


Catalog No.	Motors Description	"A" Length	"B" Width	"C" Length	Flange Dia.	Shaft Dia.	Key Size	Bolt Circle	HoleØ
GG	Yaskawa SGMSH-10A Servo Motor	(149) 5.87	(100) 3.94	(45) 1.77	(95) 3.740	(24) .945	8mm x 7mm	(115) 4.53	(7) .276
HH	Yaskawa SGMSH-15A Servo Motor	(175) 6.89	(100) 3.94	(45) 1.77	(95) 3.740	(24) .945	8mm x 7mm	(115) 4.53	(7) .276
II	Yaskawa SGMGH-13A Servo Motor	(185) 7.28	(130) 5.12	(58) 2.28	(110) 4.332	(22) .866	6mm x 6mm	(145) 5.709	(9) .354
JJ	Yaskawa SGMSH-30A Servo Motor	(199) 7.83	(130) 5.12	(63) 2.48	(110) 4.332	(28) 1.102	8mm x 7mm	(145) 5.709	(9) .354
KK	Yaskawa SGMGH-30A Servo Motor	(192) 7.56	(180) 7.09	(79) 3.11	(114.3) 4.5	(35) 1.378	10mm x 8mm	(200) 7.87	(13.5) .530
LL	Parker Max-Plus #230 Series 6" Frame Servo Motor	(368) 14.48	(142) 5.59	(50) 1.97	(130) 5.120	(19) .748	6mm x 6mm	(165) 6.496	(10) .394
MM	Parker Max-Plus Series F-4050-Q-H0AA Servo Motor	X	X	X	(110) 4.332	X		(145) 5.709	(10) .394
NN	Indramat Model #MKD071 Servo Motor	(275) 10.82	(133) 5.23	(40) 1.575	(95) 3.740	(19) .748	6mm x 6mm	(130) 5.118	(9) .354
OO	CSM, Inc. MPM1141FRMM-CM Servo Motor	(215) 8.46	(114) 4.49	(58) 2.28	(110) 4.332	(19) .748	6mm x 6mm	(130) 5.118	(9) .354
PP	CSM, Inc. MPM1421FRMM-CM Servo Motor	(285) 11.22	(142) 5.59	(48.5) 1.97	(130) 5.12	(24) .945	8mm x 7mm	(165) 6.496	(11) .433
QQ	Intex MPM892T2E-1172 Servo Motor	(222) 8.75	(82) 3.23	(30) 1.18	(73) 2.874	(24) .945	6mm x 6mm	(98) 3.86	(6) .326

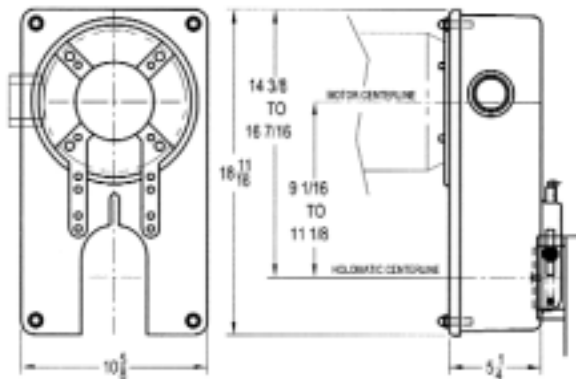
Belt Housings



"A" - Overhead (For 4-1/2" and 8-1/2" AK Motors)

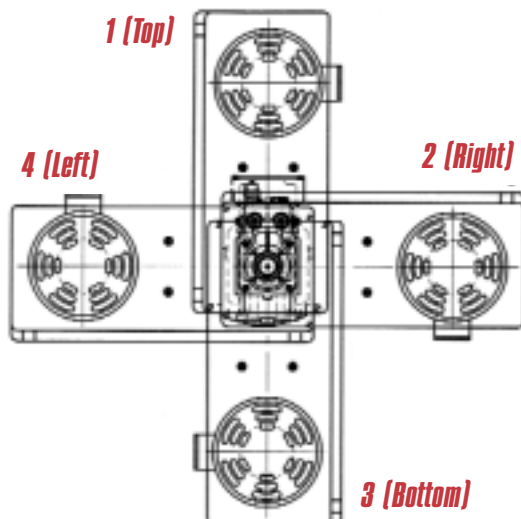


"B" - Small Extended (For 4-1/2" AK Motors Only)



"C" - Extended (For 4-1/2" and 8-1/2" AK Motors)

Note: These belt housings can be connected directly to all of the units or to the gear reductions. Alterations can be made for coolant and draw bar applications.



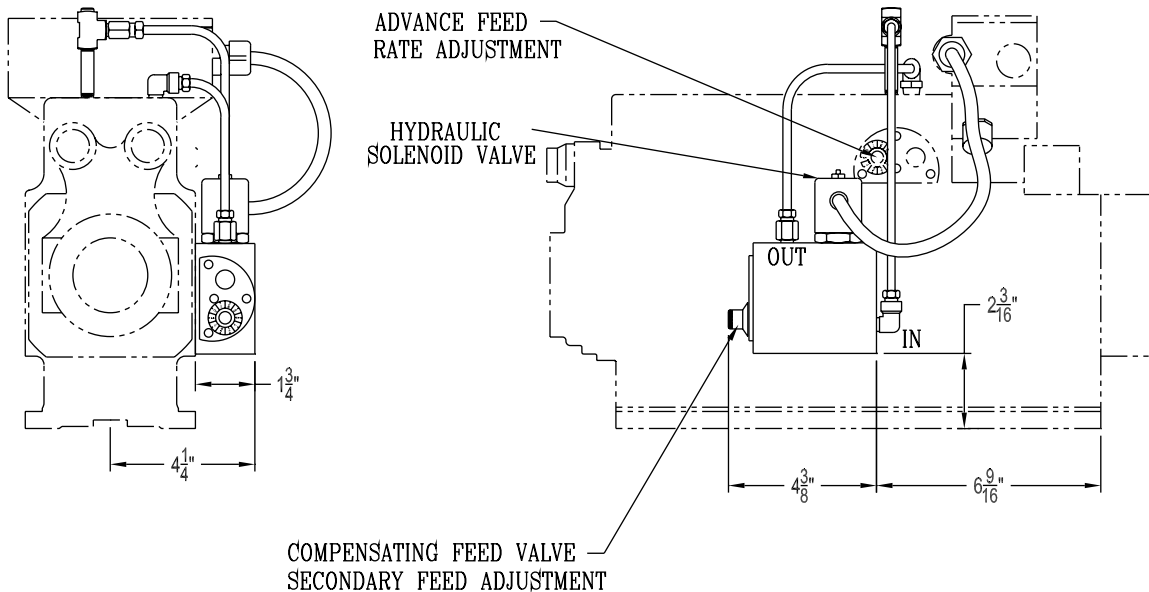
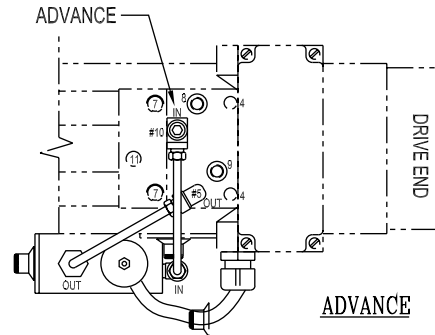
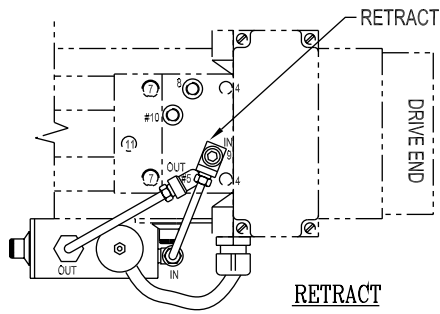
Looking at the unit from the spindle end, please indicate the orientation of the belt housing.

Note: Location in the Specification Code

Model	Spindle	Drive	Belt/Pulley	Motor	Belt Housing	Special
X X XX	XX	X	X	XX	_____	XX

Specials – Feed Control Valves See note below for location in the Specification Code

V1 – Dual Feed Manifold



V2 – Skip Feed Cam Bar (Not Shown)

Please specify rapid distance, skip distance and depth. Contact Haise Machines for more information.

Note: Location in the Specification Code

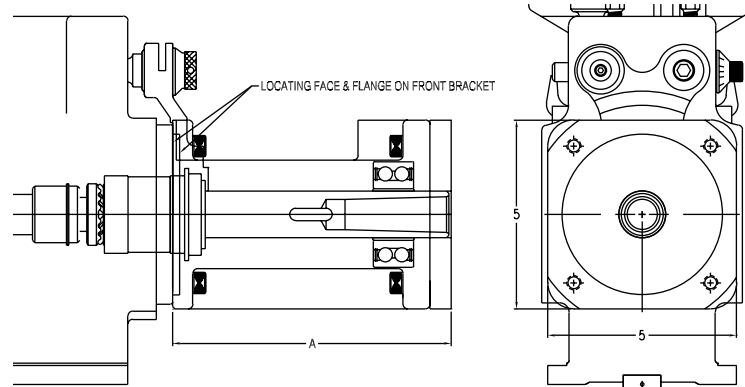
Model	Spindle	Drive	Belt/Pulley	Motor	Belt Housing	Special
X X XX	XX	X	X	XX	XX	_____

Specials (Continued)

See note on page 46 for location in the Specification Code

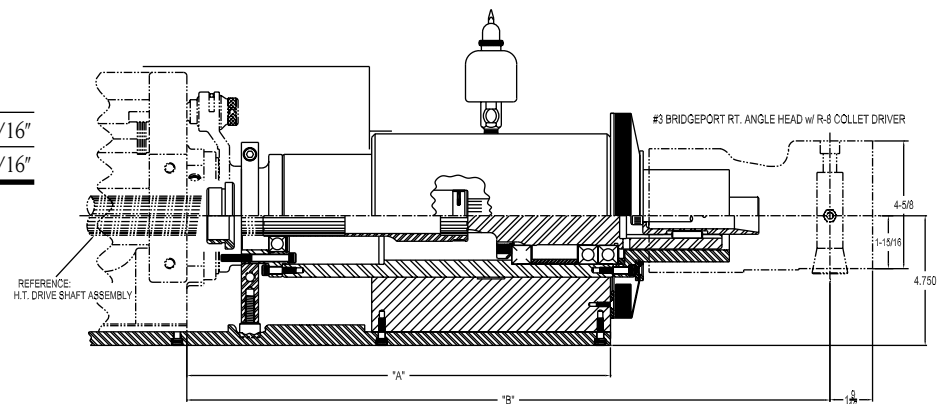
Spindle Support Assembly

Catalog No.	Stroke	"A"
SA1	4"	7-3/8"
SA2	6"	8-13/16"



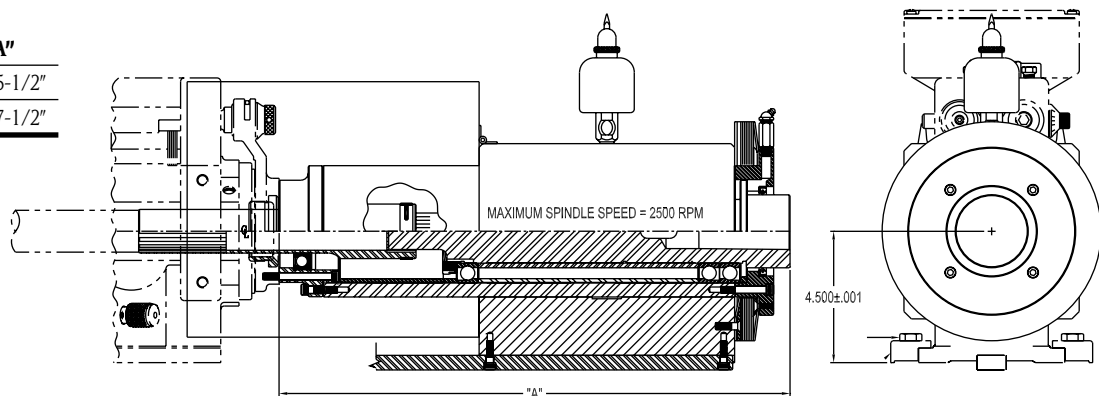
Right Angle Milling Attachment

Catalog No.	Stroke	"A"	"B"
SA3	4"	15-1/2"	23-9/16"
SA4	6"	17-1/2"	25-9/16"



Heavy Duty Boring Adaption With Roller Bearings

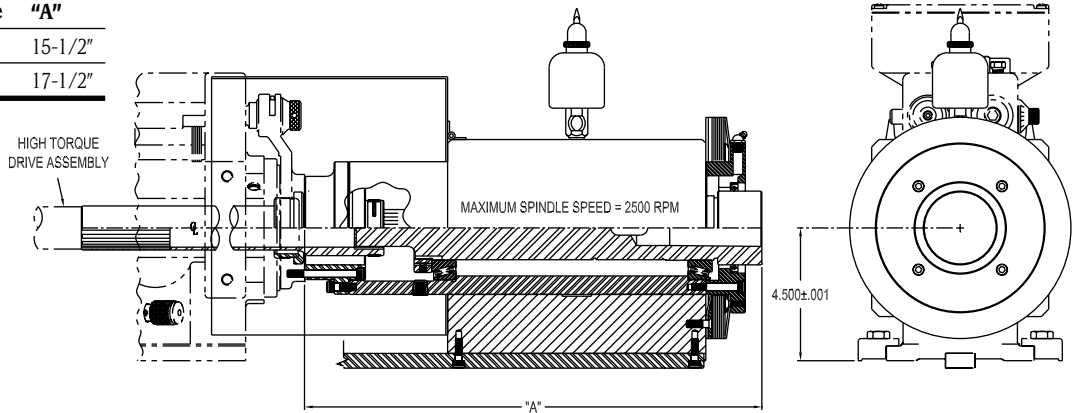
Catalog No.	Stroke	"A"
SA5	4"	15-1/2"
SA6	6"	17-1/2"



Specials (Continued) See note on page 49 for location in the Specification Code

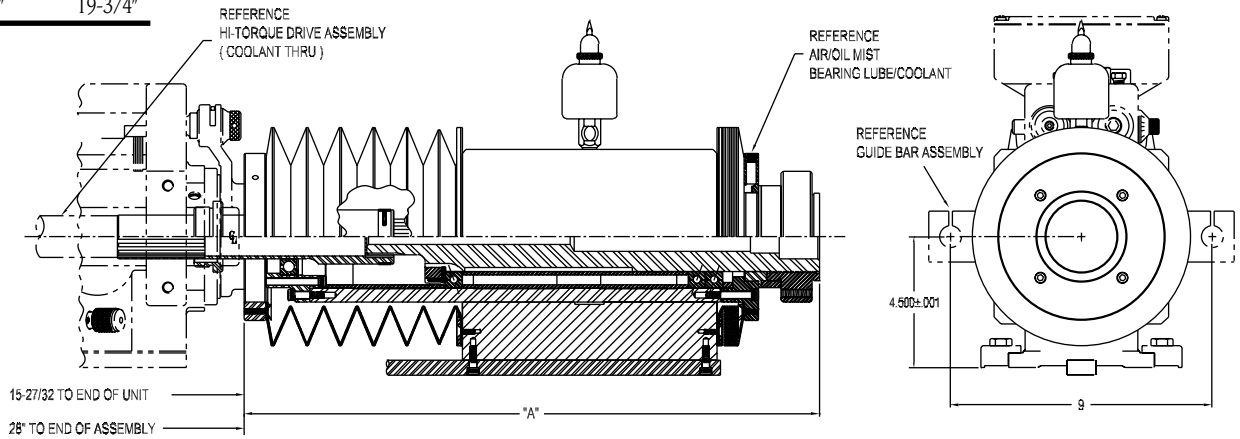
Heavy Duty Milling Adaption With Tapered Bearings

Catalog No.	Stroke	"A"
SA7	4"	15-1/2"
SA8	6"	17-1/2"



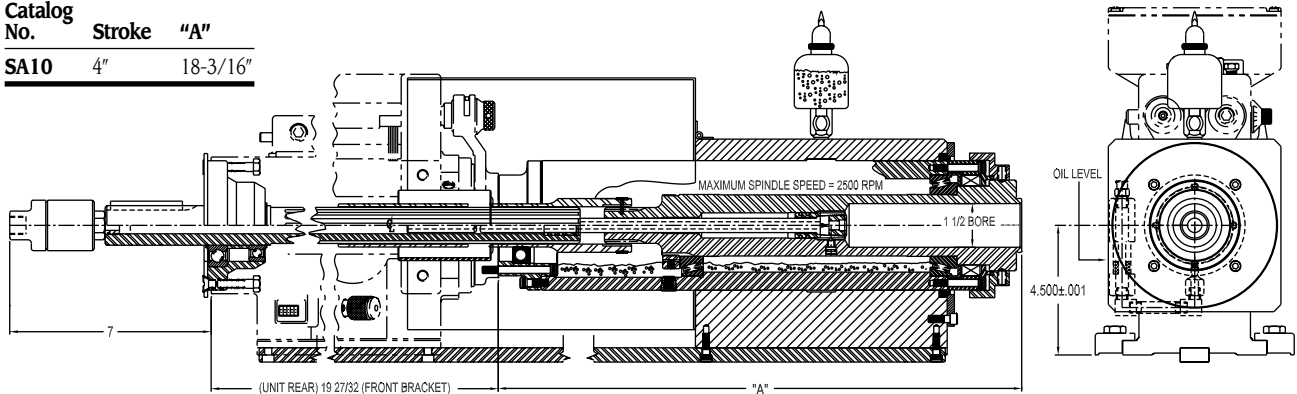
4" Stroke High Speed Boring Spindle

Catalog No.	Stroke	"A"
SA9	4"	19-3/4"



Heavy Duty Milling Adaption With Tapered Bearings and Thru Coolant

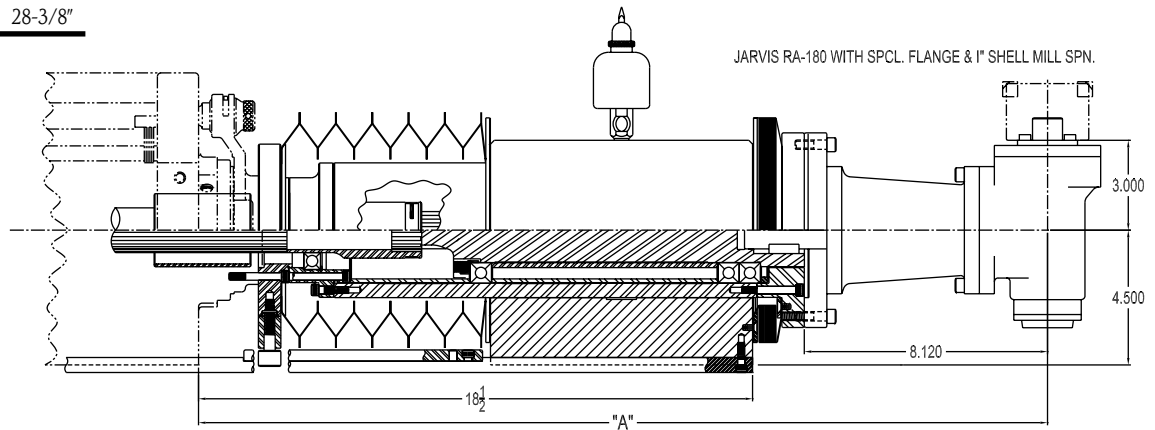
Catalog No.	Stroke	"A"
SA10	4"	18-3/16"



Specials (Continued)

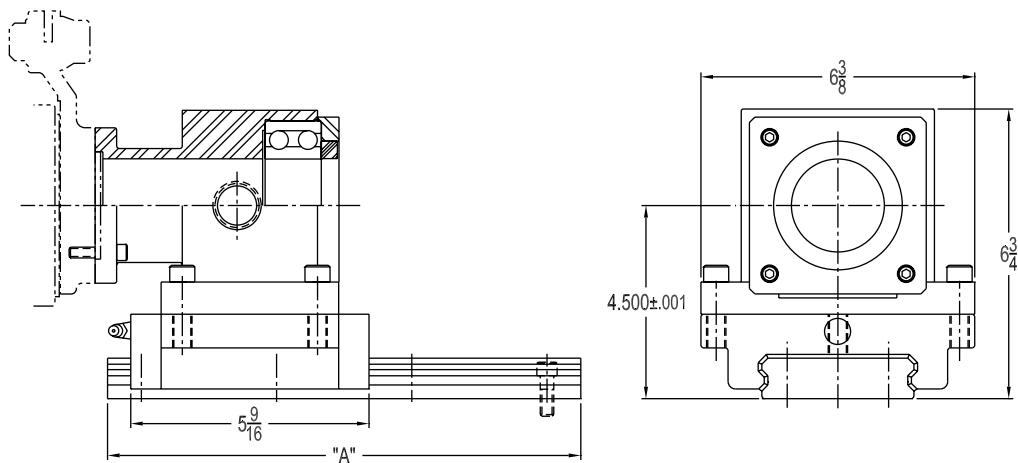
Heavy Duty Right Angle Milling Head

Catalog No.	Stroke	"A"
SA11	6"	28-3/8"



Support Quill and THK Slide Assembly

Catalog No.	Stroke	"A"
SA12	4"	11-1/32"
SA13	6"	14-3/16"



Note: Location in the Specification Code

Model	Spindle	Drive	Belt/Pulley	Motor	Belt Housing	Special
XX XX	XX	X	X	XX	XX	<u> </u>