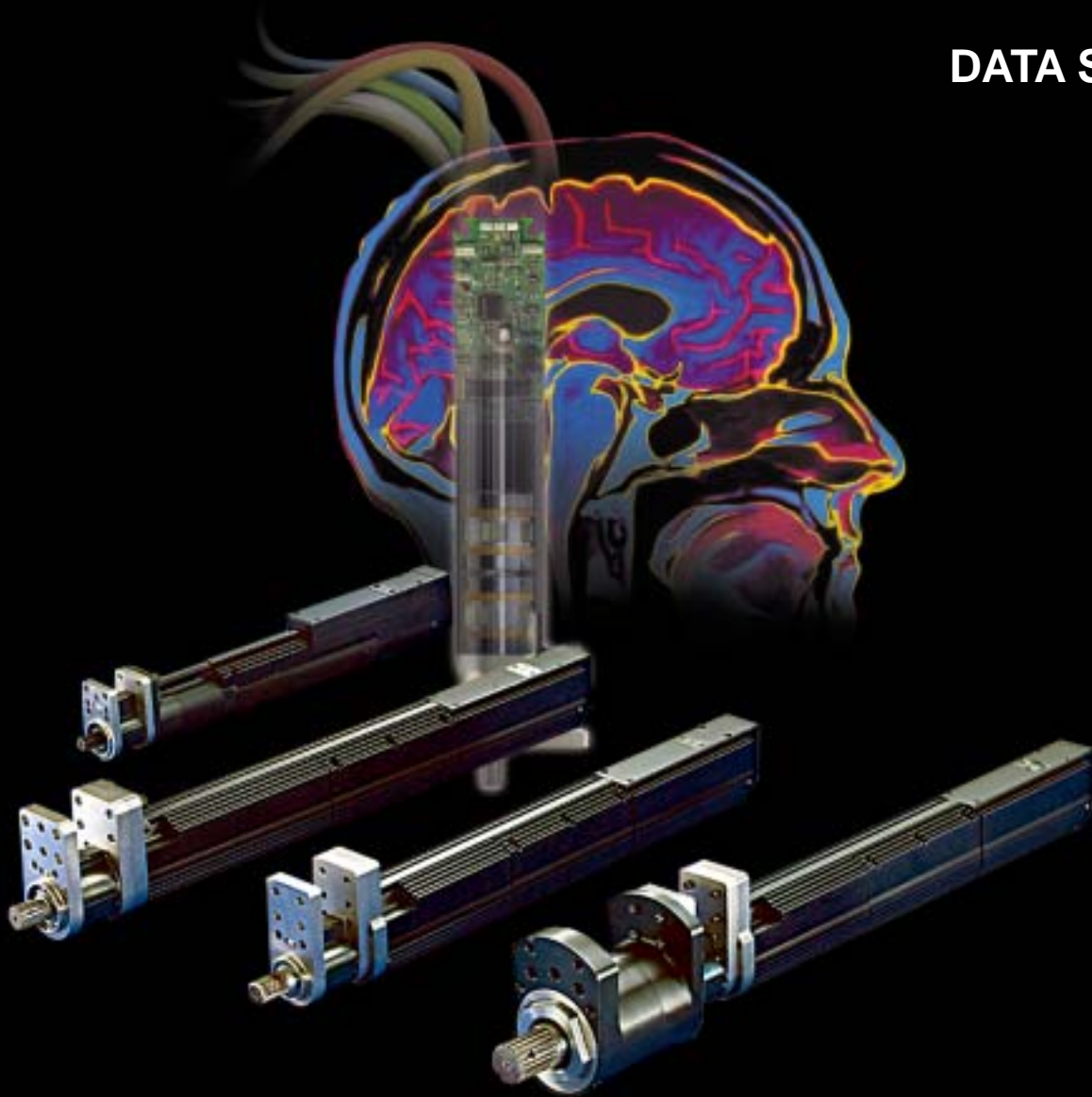


177/277 SERIES

HI-TORQUE, HEAVY-DUTY
FASTENING TOOLS

DATA SHEET



The leader in intelligent fastening systems



177/277 Series Nutrunner Configurations



Hi Torque In-line, Offset and Right Angle tools.

MODEL*	lbf-ft	kgfm	Nm	RPM HI/LO	IN-LINE TOOL	OFFSET TOOL	RIGHT ANGLE TOOL	HOLD AND DRIVE TOOL	SLIDING SPINDLE ATTACHMENT**
T177X0150	111	15.3	150	616/356	△	△	△	△	△
T177X0200	148	20.4	200	435/250	△	△	△	△	△
T177X0410	302	41.8	410	212/122	△	△	△	—	△
T177X0550	406	56.1	550	150/86	△	△	△	—	△
T177X0750	553	76.5	750	133/78	△	△	△	—	△
T177X1000	738	102	1,000	105/61	△	△	△	—	△
T277X0325	240	33.1	325	460/265	△	△	△	—	△
T277X0450	332	45.9	450	325/190	△	△	△	—	△
T277X0600	443	61.2	600	260/150	△	△	△	—	△
T277X1000	738	102	1,000	115/65	△	△	△	—	△
T277X1625	1,199	166	1,625	88/50	△	—	—	—	△
T277X2250	1,660	229	2,250	62/36	△	—	—	—	△
T277X3000	2,213	306	3,000	50/28	△	—	—	—	△

*In the MODEL column, substitute the appropriate letter for the "X": I for In-line, F for Offset, R for Right Angle, H for Hold and Drive

**The model number of the sliding spindle attachment varies by tool configuration, socket retention type, stroke and length. Refer to pages 6 – 8.

Key to reading the 9-digit Tool model prefix in the table above (and the suffix later in this document).

9-Digit Prefix				Variable Suffix (depends on tool)		
Tool	Series	Type (X)	Capacity	Display*	No. of Transducers	Cable Connector**
T	177 277	A = Right Angle H = Hold and Drive I = In-line F = Offset	0150 Nm to 3000 Nm	Alphanumeric	1 – results recorded by controller 2 – results recorded by controller and auditing device	Rear Exit Forward Exit Side Exit

*Alphanumeric display is standard.

** Cable connector options are shown on page 5.

177/277 Series In-Line Nutrunners



From left:
 177 Series 150 to 200 Nm In-line
 277 Series 1,000 Nm
 277 Series 325 to 600 Nm In-line
 277 Series 1,625 to 3,000 Nm In-line


PART NO.	TORQUE			RPM		WEIGHT		LENGTH**		WIDTH		HEIGHT		SIDE TO CENTER	
	lbf-ft	kgfm	Nm	Hi	Lo	lb	kg	in	mm	in	mm	in	mm	in	mm
T177I0150A1R	111	15.3	150	616	356	18.5	8.4	22.6	574	2.36	59.9	3.94	100.1	1.18	30.0
T177I0200A1R	148	20.4	200	435	250	18.5	8.4	22.6	574	2.36	59.9	3.94	100.1	1.18	30.0
T177I0410A1R	302	41.8	410	212	122	32.2	14.6	27.6	701	2.75	69.9	5.82	147.8	1.38	35.1
T177I0550A1R	406	56.1	550	150	86	32.2	14.6	27.6	701	2.75	69.9	5.82	147.8	1.38	35.1
T177I0750A1R	553	76.5	750	133	78	46.7	21.2	31.4	798	3.25	82.6	6.08	154.4	1.65	41.9
T177I1000A1R	738	102	1,000	105	61	46.7	21.2	31.4	798	3.25	82.6	6.08	154.4	1.65	41.9
T277I0325A1R	240	33.1	325	460	265	47.5	21.5	30.2	767	3.25	82.6	6.08	154.4	1.65	41.9
T277I0450A1R	332	45.9	450	325	190	47.5	21.5	30.2	767	3.25	82.6	6.08	154.4	1.65	41.9
T277I0600A1R	443	61.2	600	260	150	47.5	21.5	30.2	767	3.25	82.6	6.08	154.4	1.65	41.9
T277I1000A1R	738	102	1,000	115	65	57.2	25.9	33.5	851	3.25	82.6	6.08	154.4	1.65	41.9
T277I1625A1R	1,199	166	1,625	88	50	84.8	38.5	36.7	932	4.92	125.0	7.10	180.3	2.46	62.5
T277I2250A1R	1,660	229	2,250	62	36	84.8	38.5	36.7	932	4.92	125.0	7.10	180.3	2.46	62.5
T277I3000A1R	2,213	306	3,000	50	28	84.8	38.5	36.7	932	4.92	125.0	7.10	180.3	2.46	62.5

Durability: 1-million cycles for 177 Series 150-750 Nm and 277 Series 325-600 Nm; 500,000 cycles for 177 Series 1,000 Nm and 277 Series 1,000-3,000 Nm

*To specify a second transducer (audited by an external torque/angle measuring device), substitute A2X for A1X at the end of the part number.

**Length is measured from the rear of the tool to the mounting face on the first transducer, or to the torque multiplier on 277 Series models 1,625 Nm and higher. As illustrated below, length does not include the splined drive or mounting pilot onto which a square, extension or sliding spindle drive is attached.

For bolt circle patterns, see page 9.

177 Series In-Line Nutrunners	150 & 200 Nm	
	410 & 550 Nm	
	750 & 1000 Nm	
277 Series In-Line Nutrunners	325,450 & 600 Nm	
	1000 Nm	
	1625, 2250 & 3000 Nm	

177/277 Series Offset Nutrunners



177 Series 150-200 Nm Offset Tool



277 Series 325 Nm Offset Tool

PART NO.	TORQUE			RPM		WEIGHT		LENGTH		WIDTH		HEIGHT		SIDE TO CENTER	
	lbf-ft	kgfm	Nm	Hi	Lo	lb	kg	in	mm	in	mm	in	mm	in	mm
T177F0150A1R	111	15.3	150	616	356	25.8	11.7	27.9	709	2.36	59.9	4.40	111.8	0.66	16.8
T177F0200A1R	148	20.4	200	435	250	25.8	11.7	27.9	709	2.36	59.9	4.40	111.8	0.66	16.8
T177F0410A1R	302	41.8	410	212	122	62.2	28.2	36.2	919	3.25	82.6	6.94	176.3	0.94	23.9
T177F0550A1R	406	56.1	550	150	86	62.2	28.2	36.2	919	3.25	82.6	6.94	176.3	0.94	23.9
T177F0750A1R	553	76.5	750	133	78	76.7	34.8	40.0	1016	3.25	82.6	6.94	176.3	0.94	23.9
T177F1000A1R	738	102	1,000	105	61	76.7	34.8	40.0	1016	3.25	82.6	6.94	176.3	0.94	23.9
T277F0325A1R	240	33.1	325	460	265	66.9	30.3	38.7	983	3.25	82.6	6.50	165.1	0.82	20.8
T277F0450A1R	332	45.9	450	325	190	77.5	35.1	38.8	986	3.25	82.6	6.94	176.3	0.94	23.9
T277F0600A1R	443	61.2	600	260	150	77.5	35.1	38.8	986	3.25	82.6	6.94	176.3	0.94	23.9
T277F1000A1R	738	102	1,000	115	65	87.2	39.5	42.1	1069	3.25	82.6	6.94	176.3	0.94	23.9

Durability: 1-million cycles for 177 Series 150-750 Nm and 277 Series 325-600 Nm; 500,000 cycles for 177 Series 1,000 Nm and 277 Series 1,000 Nm

*To specify a second transducer (audited by an external torque/angle measuring device), substitute A2X for A1X at the end of the part number.
 **Length is measured from the rear of the tool to the mounting face on the offset head. Does not include the splined drive or mounting pilot onto which a square drive or sliding spindle is attached.

For bolt circle patterns, see page 10. Contact Customer Service for additional information and lead times.

177 Series Offset Nutrunners	150 & 200 Nm	
	410 & 550 Nm	
	750 & 1000 Nm	
277 Series Offset Nutrunners	325 Nm	
	450 & 600 Nm	
	1000 Nm	

177/277 Series Right Angle Nutrunners



177 Series 150-200 Nm Right Angle tool, right angle heads 150-200 Nm, 325-600 Nm and 1,000 Nm, 277 Series 1000 Nm Right Angle Tool.

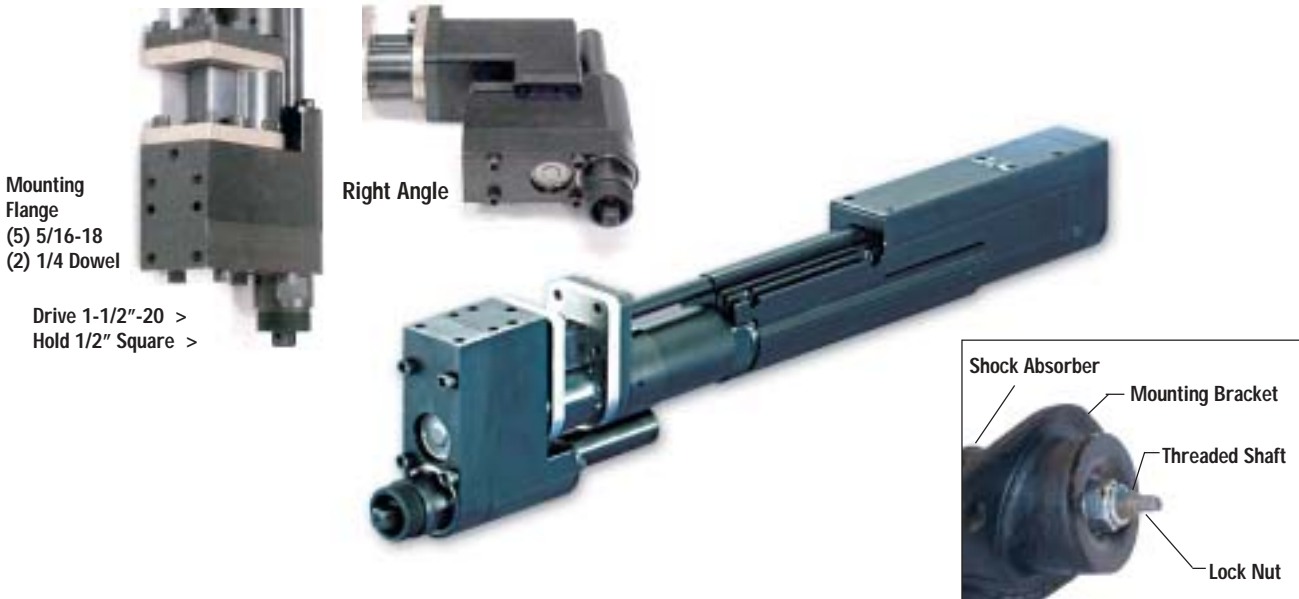
PART NO.	TORQUE			RPM		WEIGHT		LENGTH		WIDTH		HEIGHT		SIDE TO CENTER	
	lbf-ft	kgfm	Nm	Hi	Lo	lb	kg	in	mm	in	mm	in	mm	in	mm
T177A0150A1R	111	15.3	150	616	356	27.6	12.5	28.1	714	3.00	76.2	5.52	140.2	1.50	38.1
T177A0200A1R	148	20.4	200	435	250	27.6	12.5	28.1	714	3.00	76.2	5.52	140.2	1.50	38.1
T177A0410A1R	302	41.8	410	212	122	57.7	26.2	35.3	897	3.75	95.3	8.32	211.3	1.88	47.8
T177A0550A1R	406	56.1	550	150	86	57.7	26.2	35.3	897	3.75	95.3	8.32	211.3	1.88	47.8
T177A0750A1R	553	76.5	750	133	78	82.8	37.5	39.1	993	4.40	111.8	9.20	233.7	2.20	55.9
T177A1000A1R	738	102	1,000	105	61	82.8	37.5	39.1	993	4.40	111.8	9.20	233.7	2.20	55.9
T277A0325A1R	240	33.1	325	460	265	73	33.1	37.9	963	3.75	95.3	8.32	211.3	1.88	47.8
T277A0450A1R	332	45.9	450	325	190	73	33.1	37.9	963	3.75	95.3	8.32	211.3	1.88	47.8
T277A0600A1R	443	61.2	600	260	150	73	33.1	37.9	963	3.75	95.3	8.32	211.3	1.88	47.8
T277A1000A1R	738	102	1,000	115	65	93.3	42.3	42.4	1077	4.40	111.8	9.20	233.7	2.20	55.9

Durability: 1-million cycles for 177 Series 150-750 Nm and 277 Series 325-600 Nm; 500,000 cycles for 177 Series 1,000 Nm and 277 Series 1,000 Nm

*To specify a second transducer (audited by an external torque/angle measuring device), substitute A2X for A1X at the end of the part number.

177 Series Right Angle Nutrunners	150 & 200 Nm	
	410 & 550 Nm	
	750 & 1000 Nm	
277 Series Right Angle Nutrunners	325, 450 & 600 Nm	
	1000 Nm	

177 Series Hold and Drive Nutrunners



177 Series Hold and Drive tools are available in in-line and right angle models, 150 – 200 Nm.

PART NO.	TORQUE			RPM		WEIGHT		LENGTH		WIDTH		HEIGHT		SIDE TO CENTER	
	lbf-ft	kgfm	Nm	Hi	Lo	lb	kg	in	mm	in	mm	in	mm	in	mm
T177I0150A1RH	111	15.3	150	616	356	29.6	13.4	27.5	699	2.36	59.9	5.71	145.0	1.08	27.4
T177I0200A1RH	148	20.4	200	435	250	29.6	13.4	27.5	699	2.36	59.9	5.71	145.0	1.08	27.4
T177A0150A1RH	111	15.3	150	616	356	29.6	13.4	30.9	785	2.36	59.9	9.63	244.6	1.08	27.4
T177A0200A1RH	148	20.4	200	435	250	29.6	13.4	30.9	785	2.36	59.9	9.63	244.6	1.08	27.4

Durability: 1-million cycles

Cable Connector Options



Three styles of cable connectors are integrated into the rear of the 177 and 277 Series Nutrunners for different cable entry positions. (These are not cable adapters.)

A Tool 177 Series In-line 200 Nm with Alphanumeric display and 1 transducer with:

Rear Entry connector is T177I0200A1R (0°)
 Side Entry connector is T177I0200A1S (90°)
 Forward Entry connector is T177I0200A1F (180°)

R Option – Rear Entry

The cable exits the rear of the tool. This is the base option for these tools: 177 Series and 277 Series, right.



S Option – Also known as a 90, the Side Entry connector permits the cable to exit the side of the tool. Positions can be adjusted in the field in 45° increments, as shown far left for the 177 Series, and left for the 277 Series.



F Option – Forward Entry: Also known as a 180, the Forward Entry connector permits the cable to exit forward and run along the side of the tool. The 177 Series is shown top row above and the 277 Series is shown second row above. The positions of each connector joint can be adjusted in the field in 45° increments.

Drive Accessories (Square, Sliding Spindle & Fixed Extension)

Version of the Accessory



I = Standard, single side mounting flange, giving 180° of minimum side to center clearance. Fits In-line and Right Angle Tools.

H = Heavy Side Load, double side flanges increase side load capability, but reduces mounting clearance. Fits In-line and Right Angle Tools.

F = Offset, single side mounting flange, giving 150° of minimum side to center clearance. Fits offset tools only. Offset gearboxes have a smaller side to center clearance than the spindles.



Key to Reading the Accessory Part Number

Example: **A XXX t — v XXX d r X XX**

Accessory

Tool Series

177 for 150-200 Nm
277 for all others

Type of Accessory

Drive (square) with mounting plate and support bearing

Extension square drive with housing and support bearing

Sliding spindle square drive

– Special Options

– a place holder

S sealed output for extreme environments

Version*

I = In-line (Standard)**

H = Heavy Side Load

F = Offset

Maximum Torque Capacity

200 – 177 Series 150, 200 Nm

600 – 177 Series 410, 550 Nm
277 Series 325, 450, 600 Nm

1K0 – 177 Series 750, 1000 Nm
277 Series 1000 Nm

3K0 – 277 Series 1625, 2250, 3000 Nm

Extension Length***

05-in A177t-v200
A277t-v600
A277t-v1K0

07-in A177t-v200
A277t-v600
A277t-v1K0

09-in A177t-v200
A277t-v600
A277t-v1K0

11-in A177t-v200
A277t-v600
A277t-v1K0

A277t-v3K0

13-in A277t-v3K0

Sliding Spindle Retraction Length***

1 in A177S, A277S

2 in A177S, A277S

3 in A277S

or Fixed Extension Drive Housing Length***

4 in A177E

5 in A177E

6 in A277E

7 in A177E & A277E

8 in A277E

Retention Type for Socket

Ball – 1/2, 5/8 in

Pin – 1/2, 5/8, 3/4 in

Thru-Hole – 1/2, 5/8, 3/4, 1, 1-1/2 in.

Drive Size (Square)

4 = 1/2 in A177t-v200 only

5 = 5/8 in A177t-v200 and A277t-v600

6 = 3/4 in A177t-v200 and A277t-v600

8 = 1 in A277t-v600

A277t-v1K0

B = 1-1/2 in A277t-v1K0

A277t-v3K0

NOTE: The 277 Series 325 Nm offset tool requires an A066t-F410dxxx.

* See version of the accessory inset at the top of this page.

**In-line (standard) sliding spindles can be used on right angle tools.

*** Retraction, Extension, and Housing lengths are not used in square drive assembly accessories.

Sliding Spindle Drives — (For In-line, Right Angle Tools)

177 SERIES 150 & 200 Nm	177 SERIES 410 & 550 Nm	177 SERIES 750 & 1000 Nm	277 SERIES 325 - 600 Nm	277 SERIES 1000 Nm	277 SERIES 1625 - 3000 Nm	DRIVE SIZE (SQUARE)	RETENTION TYPE	RETRACTION		LENGTH	
								in	mm	in	mm
A177S-I2004P105	—	—	—	—	—	1/2 in	Pin*	1	25	5	127
A177S-I2004P207	—	—	—	—	—	1/2 in	Pin*	2	50	7	178
A177S-I2004P209	—	—	—	—	—	1/2 in	Pin*	2	50	9	228
A177S-I2004P211	—	—	—	—	—	1/2 in	Pin*	2	50	11	279
A177S-I2005P105	—	—	—	—	—	5/8 in	Pin*	1	25	5	127
—	A277S-I6005P107	—	A277S-I6005P107	—	—	5/8 in	Pin*	1	25	7	178
A177S-I2005P207	—	—	—	—	—	5/8 in	Pin*	2	50	7	178
A177S-I2005P209	A277S-I6005P209	—	A277S-I6005P209	—	—	5/8 in	Pin*	2	50	9	228
A177S-I2005P211	—	—	—	—	—	5/8 in	Pin*	2	50	11	279
—	A277S-I6005P311	—	A277S-I6005P311	—	—	5/8 in	Pin*	3	76	11	279
A177S-I2006P105	—	—	—	—	—	3/4 in	Pin*	1	25	5	127
—	A277S-I6006P107	—	A277S-I6006P107	—	—	3/4 in	Pin*	1	25	7	178
A177S-I2006P207	—	—	—	—	—	3/4 in	Pin*	2	50	7	178
A177S-I2006P209	A277S-I6006P209	—	A277S-I6006P209	—	—	3/4 in	Pin*	2	50	9	228
A177S-I2006P211	—	—	—	—	—	3/4 in	Pin*	2	50	11	279
—	A277S-I6006P311	—	A277S-I6006P311	—	—	3/4 in	Pin*	3	76	11	279
—	—	A277S-I1K08T107	A277S-I6008T107	A277S-I1K08T107	—	1 in	Thru Hole	1	25	7	178
—	—	A277S-I1K08T209	A277S-I6008T209	A277S-I1K08T209	—	1 in	Thru Hole	2	50	9	228
—	—	A277S-I1K08T311	A277S-I6008T311	A277S-I1K08T311	—	1 in	Thru Hole	3	76	11	279
—	—	—	—	A277S-I1K0BT107	—	1-1/2 in	Thru Hole	1	25	7	178
—	—	A277S-I1K0BT209	—	A277S-I1K0BT209	—	1-1/2 in	Thru Hole	2	50	9	228
—	—	A277S-I1K0BT311	—	A277S-I1K0BT311	—	1-1/2 in	Thru Hole	3	76	11	279
—	—	—	—	—	A277S-I3K0BT109	1-1/2 in	Thru Hole	1	25	9	228
—	—	—	—	—	A277S-I3K0BT211	1-1/2 in	Thru Hole	2	50	11	279
—	—	—	—	—	A277S-I3K0BT313	1-1/2 in	Thru Hole	3	76	13	330

Change the sliding spindle to a fixed extension spindle by substituting an "E" for the "S" in the part number. Housing length will replace retraction field. Contact Customer Service for more information.
 Change the standard load to a high side load by substituting an "H" for the "I" in the part number.

*Change the socket retention from pin detent to ball detent or thru hole by substituting a "B" or a "T" for the "P" in the part number.

Sliding Spindle Drives — (For Offset Tools)

177 SERIES 150 & 200 Nm	177 SERIES 410 & 550 Nm	177 SERIES 750 & 1000 Nm	277 SERIES 325 Nm	277 SERIES 450 & 600 Nm	277 SERIES 1000 Nm	DRIVE SIZE (SQUARE)	RETENTION TYPE	RETRACTION		LENGTH	
								in	mm	in	mm
A177S-F2004P105	—	—	—	—	—	1/2 in	Pin*	1	25	5	127
A177S-F2004P207	—	—	—	—	—	1/2 in	Pin*	2	50	7	178
A177S-F2004P209	—	—	—	—	—	1/2 in	Pin*	2	50	9	228
A177S-F2004P211	—	—	—	—	—	1/2 in	Pin*	2	50	11	279
A177S-F2005P105	—	—	—	—	—	5/8 in	Pin*	1	25	5	127
—	A277S-F6005P107	—	A066S-F4105P107	A277S-F6005P107	—	5/8 in	Pin*	1	25	7	178
A177S-F2005P207	—	—	—	—	—	5/8 in	Pin*	2	50	7	178
A177S-F2005P209	A277S-F6005P209	—	A066S-F4105P209	A277S-F6005P209	—	5/8 in	Pin*	2	50	9	228
A177S-F2005P211	—	—	—	—	—	5/8 in	Pin*	2	50	11	279
—	A277S-F6005P311	—	A066S-F4105P311	A277S-F6005P311	—	5/8 in	Pin*	3	76	11	279
A177S-F2006P105	—	—	—	—	—	3/4 in	Pin*	1	25	5	127
—	A277S-F6006P107	—	A066S-F4106P107	A277S-F6006P107	—	3/4 in	Pin*	1	25	7	178
A177S-F2006P207	—	—	—	—	—	3/4 in	Pin*	2	50	7	178
A177S-F2006P209	A277S-F6006P209	—	A066S-F4106P209	A277S-F6006P209	—	3/4 in	Pin*	2	50	9	228
A177S-F2006P211	—	—	—	—	—	3/4 in	Pin*	2	50	11	279
—	A277S-F6006P311	—	A066S-F4105P311	A277S-F6005P311	—	3/4 in	Pin*	3	76	11	279
—	—	A277S-F1K08T107	—	—	A277S-F1K08T107	1 in	Thru Hole	1	25	7	178
—	—	A277S-F1K08T209	—	—	A277S-F1K08T209	1 in	Thru Hole	2	50	9	228
—	—	A277S-F1K08T311	—	—	A277S-F1K08T311	1 in	Thru Hole	3	76	11	279

Change the sliding spindle to a fixed extension spindle by substituting an "E" for the "S" in the part number. Housing length will replace the retraction field. Contact Customer Service for more information.
 *Change the socket retention from pin detent to ball detent or thru hole by substituting a "B" or a "T" for the "P" in the part number.

Bolt Circle Patterns – In-Line

177 Series 150 & 200 Nm



Ø2.47 in (62.7mm)



Ø2.78 in (70.6mm)



Ø3.40 in (86.4mm)



Ø4.10 in (104.1mm)



Ø4.81 in (122.2mm)

177 Series 410 & 550 Nm



Ø2.80 in (71.1mm)



Ø3.23 in (82.0mm)



Ø3.96 in (100.6mm)



Ø4.78 in (121.4mm)



Ø5.60 in (142.2mm)

277 Series 325, 450 & 600 Nm



Ø3.32 in (84.3mm)



Ø3.83 in (97.3mm)



Ø4.69 in (119.1mm)



Ø5.65 in (143.5mm)



Ø6.63 in (168.4mm)

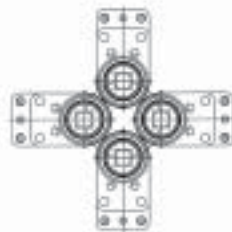
177 Series 750 & 1000 Nm and 277 Series 1000 Nm



Ø3.32 in (84.3mm)



Ø3.83 in (97.3mm)



Ø4.69 in (119.1mm)



Ø5.65 in (143.5mm)



Ø6.63 in (168.4mm)

277 Series 1625, 2250 & 3000 Nm



Ø4.92 in (125.0mm)



Ø5.68 in (144.3mm)



Ø6.96 in (176.8mm)



Ø7.69 in (195.3mm)



Ø9.84 in (249.9mm)

Bolt Circle Patterns – Offset

177 Series 150 & 200 Nm



Ø1.32 in (33.5mm)

WITH SPINDLE
Ø1.42 in (36.1mm)



Ø1.32 in (33.5mm)

WITH SPINDLE
Ø1.64 in (41.7mm)



Ø1.87 in (47.5mm)

WITH SPINDLE
Ø2.01 in (51.1mm)



Ø2.25 in (57.2mm)

WITH SPINDLE
Ø2.42 in (61.5mm)



Ø2.64 in (67.1mm)

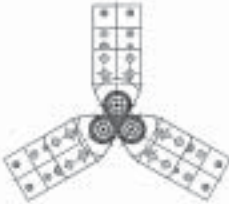
WITH SPINDLE
Ø2.84 in (72.1mm)

277 Series 325 Nm



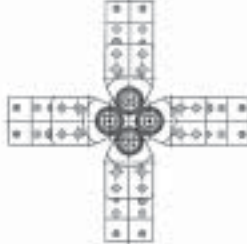
Ø1.63 in (41.4mm)

WITH SPINDLE
Ø1.63 in (41.4mm)



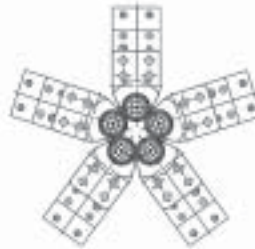
Ø1.88 in (47.8mm)

WITH SPINDLE
Ø1.88 in (47.8mm)



Ø2.30 in (58.4mm)

WITH SPINDLE
Ø2.30 in (58.4mm)



Ø2.77 in (70.36mm)

WITH SPINDLE
Ø2.77 in (70.36mm)



Ø3.25 in (82.6mm)

WITH SPINDLE
Ø3.25 in (82.6mm)

177 Series 410, 550, 750 & 1000 Nm and 277 Series 450, 600 & 1000 Nm



Ø1.86 in (47.8mm)

WITH SPINDLE
Ø2.13 in (54.1mm)



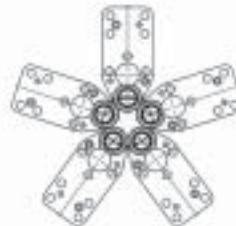
Ø2.17 in (55.1mm)

WITH SPINDLE
Ø2.45 in (62.2mm)



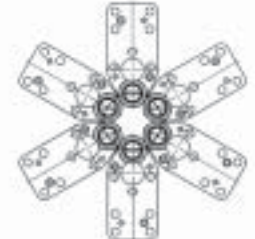
Ø2.65 in (67.3mm)

WITH SPINDLE
Ø3.01 in (76.5mm)



Ø3.19 in (81.0mm)

WITH SPINDLE
Ø3.62 in (91.95mm)



Ø3.75 in (95.3mm)

WITH SPINDLE
Ø4.25 in (108.0mm)



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