

# WRENCHES

WRENCHES

Some technicians claim they can hear the difference when Snap-on® wrenches are dropped – the ringing sound is clearer because of the special alloys. Paying attention to details is what has set Snap-on wrenches apart from all others for more than 85 years.

From the unmistakable luster of the chrome handles to thin wall Flank Drive® Wrenching System on the box ends; from the powerful Flank Drive® Plus open ends – that outperforms every other open end design – to the smooth operation of the ratcheting box mechanisms; Snap-on wrenches have the

balance and feel, and deliver the unmatched performance that technicians all over the world set as a standard.

Snap-on wrenches are proudly made in Elizabethton, Tennessee, by people dedicated to pushing quality to even higher levels.

From left to right:

### Ergonomic Adjustable Wrenches

With Snap-on red “Grip” handles, hands stay warm and fatigue less. FADH models grab fasteners away from their corners, providing 137% more turning power. Metric and fractional scales.

### Flank Drive Plus Ratcheting Box/Open End

Turns fasteners with up to 80 gear teeth for work in tight areas. Patented Flank Drive configuration, low profile easy action reverse lever and durable Nickel Chrome finish.

### High performance Wrenches

These wrenches feature extra length and the smallest profile available; their thin handles get them into areas you can’t reach any other way – without sacrificing strength.

### 4-Way Angle Head Wrenches

With heads set at 30° and 60° to the handle, you can flip this wrench four times to keep getting a new bite in tough situations. You can do more with Snap-on.



Conventional 12-point wrench and the contact it makes on the corner of a nut or bolt. The corner can round off under high loads causing the wrench to slip.



A Snap-on Flank Drive® wrench moves the contact away from the corner with a radius, and then provides flat-to-flat contact for up to 20% more turning power.



# Wrenches FLANK DRIVE® Plus Combination Reversible Ratcheting Box / Open End

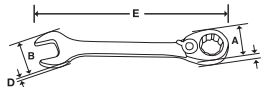


SOEXR20



SOEXR707

- Longer overall length for more leverage to let the wrench do the work
- 12-pt box end features the Flank Drive® wrenching configuration, the proven design for turning fasteners
- Open end features patented Flank Drive® Plus wrenching configuration that delivers up to 62% more turning power than conventional wrenches
- Low profile easy-action reverse lever won't get in your way
- Up to 80 gear teeth requires minimal movement in tight areas
- 15° offset for maximum knuckle clearance
- Meets or exceeds strength specifications in ASME B107.6



## Standard Length, 15° Offset

Hex Size	Part No.	A	B	C	D	E	Reverse Lever Repair Kit
3/8	SOEXR12	27/32	27/32	5/16	3/16	7	RKW3
7/16	SOEXR14	7/8	29/32	11/32	7/32	7 5/8	RKW3
1/2	SOEXR16	31/32	1 1/16	13/32	1/4	8 11/16	RKW5
9/16	SOEXR18	1 1/16	1 5/32	13/32	1/4	9 1/4	RKW6
5/8	SOEXR20	1 3/16	1 9/16	7/16	9/32	10 1/4	RKW8
11/16	SOEXR22	1 1/4	1 3/8	15/32	5/16	10 7/8	RKW9
3/4	SOEXR24	1 7/16	1 9/16	1/2	11/32	12	RKW11

SOEXR707 12-Point Set. SOEXR12 thru SOEXR24 (7 pcs) (3/8" to 3/4").

## Standard Length, 15° Offset

Hex Size	Part No.	A	B	C	D	E	Reverse Lever Repair Kit
8	SOEXRM8	17.8	17.0	7.1	4.3	149	RKW1
9	SOEXRM9	19.6	19.2	7.9	4.7	164	RKW2
10	SOEXRM10	21.5	21.1	8.3	5.1	179	RKW3
11	SOEXRM11	22.0	23.4	8.6	5.5	194	RKW3
12	SOEXRM12	23.5	25.1	9.3	5.9	207	RKW4
13	SOEXRM13	25.0	27.2	10.2	6.3	221	RKW5
14	SOEXRM14	27.0	29.2	10.2	6.7	235	RKW6
15	SOEXRM15	28.5	31.2	11.1	7.1	249	RKW7
16	SOEXRM16	30.5	33.0	11.1	7.4	261	RKW8
17	SOEXRM17	32.0	35.1	12.0	7.8	277	RKW9
18	SOEXRM18	34.5	37.1	12.0	8.2	291	RKW10
19	SOEXRM19	36.5	39.4	12.9	8.6	305	RKW11

SOEXRM710 12-Point Set. SOEXRM10 thru SOEXRM19 (10 pcs) (10 to 19mm).

# FLANK DRIVE® Combination Ratcheting Box / Open End



OEXR707



OEXRM19



OEXRM710

## Standard Length, 0° Offset

Up to 80 gear teeth - less than 5° of tooth engagement. Less movement required to engage next tooth - ideal in tight quarters.

Hex Size	Part No.	A	B	C	D	E
3/8	OEXR12	27/32	27/32	5/16	3/16	6 3/4
7/16	OEXR14	7/8	29/32	11/32	7/32	7 3/16
1/2	OEXR16	31/32	1 1/16	13/32	1/4	8 3/16
9/16	OEXR18	1 1/16	1 5/32	13/32	1/4	8 5/8
5/8	OEXR20	1 3/16	1 5/16	15/32	9/32	9 5/16
11/16	OEXR22	1 7/32	1 3/8	15/32	5/16	10 1/16
3/4	OEXR24	1 15/32	1 9/16	1/2	11/32	11

OEXR707 12-Point Set. OEXR12 thru OEXR24 (7 pcs) (3/8" to 3/4").

## Standard Length, 0° Offset

Up to 80 gear teeth - less than 5° of tooth engagement. Less movement required to engage next tooth - ideal in tight quarters.

Hex Size	Part No.	A	B	C	D	E
8	OEXRM8	17.8	17.0	7.1	4.3	147
9	OEXRM9	19.6	19.2	8.0	4.7	159
10	OEXRM10	21.5	21.1	8.4	5.1	171
11	OEXRM11	22.0	23.4	8.7	5.6	183
12	OEXRM12	23.5	25.1	9.3	5.9	195
13	OEXRM13	25.0	27.2	10.2	6.4	207
14	OEXRM14	27.0	29.2	10.2	6.7	219
15	OEXRM15	28.5	31.2	11.1	7.1	231
16	OEXRM16	30.5	33.0	11.1	7.4	243
17	OEXRM17	32.0	35.1	12.0	7.8	255
18	OEXRM18	34.5	37.1	12.0	8.2	267
19	OEXRM19	36.5	39.4	12.9	8.7	279

OEXRM710 12-Point Set. OEXRM10 thru OEXRM19 (10 pcs) (10 to 19mm).

## Ratcheting Wrench Adaptors

Use with reversible ratcheting box wrenches like the SOEXRM, BOERM, BOERMF and BOERMS series. Can also be used with the combination ratcheting box wrenches like the OEXRM and OXIRM series. Converts ratcheting wrench into a ratchet. Use reverse lever on wrench to secure or remove adaptor from wrench. Push button on adaptor to release socket.



RWA404

Stock No.	Configuration	Use with Ratcheting Wrench Size
RWA1FR	1/4" drive	1/2"
RWA2FR	3/8" drive	5/8"
RWA3FR	1/2" drive	3/4"
RWA4FR	1/4" hex	1/2"
RWA1	1/4" drive	13mm
RWA2	3/8" drive	16mm
RWA3	1/2" drive	19mm
RWA4	1/4" hex	13mm

**RWA404 Set** Includes RWA1, RWA2, RWA3 and RWA4 Ratcheting Wrench adaptors.

**RWA404FR Set** Includes RWA1FR, RWA2FR, RWA3FR and RWA4FR Ratcheting Wrench adaptors.

# FLANK DRIVE® Combination Ratcheting Box / Open End Wrenches



OXIR707



OXIRM13

- Up to 80 gear teeth — less than 5° of tooth movement. Less movement required to engage next tooth — ideal in tight quarters
- 12-pt Flank Drive® wrenching system
- Low ratcheting torque — less likely to move loose fastener in wrong direction. Less wasted movement
- Small footprint with 0° offset uni-directional gear. Ideal in tight quarters
- Hardened and constructed from high quality steel. Provides a better fit and yields a long lasting tool
- Tough, durable nickel chrome finish. Looks good, cleans up easily and resists corrosion



OXIRM707

## Short Handle, 0° Offset

mm		A	B	C	D	E
3/8	<b>OXIR12</b>	27/32	27/32	5/16	3/16	3 27/32
7/16	<b>OXIR14</b>	7/8	29/32	13/32	7/32	3 31/32
1/2	<b>OXIR16</b>	31/32	1 1/16	13/32	1/4	4 5/16
9/16	<b>OXIR18</b>	1 1/16	1 5/32	13/32	1/4	4 15/32
5/8	<b>OXIR20</b>	1 3/16	1 5/16	15/32	9/32	4 13/16
11/16	<b>OXIR22</b>	1 7/32	1 3/8	15/32	5/16	4 31/32
3/4	<b>OXIR24</b>	1 15/32	1 9/16	1/2	11/32	5 11/32

OXIR707 12 pt. Set. OXIR12 thru OXIR24 (7 pcs) (3/8" thru 3/4").

## Short Handle, 0° Offset

mm		A	B	C	D	E
8	<b>OXIRM8</b>	17.8	17.0	7.1	4.3	88.7
9	<b>OXIRM9</b>	19.6	19.2	8.0	11.9	92.7
10	<b>OXIRM10</b>	21.5	21.1	8.4	5.1	97.0
11	<b>OXIRM11</b>	22.0	23.4	8.7	5.6	101.1
12	<b>OXIRM12</b>	23.5	25.1	9.3	5.9	105.4
13	<b>OXIRM13</b>	25.0	27.2	10.2	6.4	109.5
14	<b>OXIRM14</b>	27.0	29.2	10.2	6.7	113.8
15	<b>OXIRM15</b>	28.5	31.2	11.1	7.1	118.1
16	<b>OXIRM16</b>	30.5	33.0	11.1	7.4	122.2
17	<b>OXIRM17</b>	32.0	35.1	12.0	7.8	126.5
18	<b>OXIRM18</b>	34.5	37.1	12.0	8.2	130.6
19	<b>OXIRM19</b>	36.5	39.4	12.9	8.7	135.4

OXIRM707 12 pt. Set. OXIRM8 thru OXIRM14 (7 pcs) (8 to 14mm).

OXIRM705 12 pt. Set. OXIRM15 thru OXIRM19 (5 pcs) (15 to 19mm).

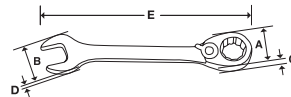
# Combination Reversible Ratcheting Box / Open End



BOER24



BOERM17



BOER708



BOERM712

## Standard Length, 15° Offset

mm		A	B	C	D	E
1/4	<b>BOER8</b>	21/32	21/32	1/4	5/32	4 1/2
5/16	<b>BOER10</b>	11/16	11/16	1/4	5/32	5 9/16
3/8	<b>BOER12</b>	27/32	7/8	5/16	3/16	6 9/16
7/16	<b>BOER14</b>	7/8	15/16	11/32	7/32	6 11/16
1/2	<b>BOER16</b>	31/32	1 1/32	13/32	1/4	7 1/16
9/16	<b>BOER18</b>	1 1/16	1 3/16	13/32	1/4	7 1/2
5/8	<b>BOER20</b>	1 3/16	1 5/16	7/16	9/32	8 1/4
11/16	<b>BOER22</b>	1 1/4	1 7/16	15/32	9/32	8 7/8
3/4	<b>BOER24</b>	1 7/16	1 17/32	1/2	11/32	9 13/16
13/16	<b>BOER26</b>	1 9/16	1 23/32	17/32	3/8	10 1/2
7/8	<b>BOER28</b>	1 21/32	1 27/32	9/16	3/8	11 1/4
15/16	<b>BOER30</b>	1 27/32	1 31/32	5/8	7/16	12
1	<b>BOER32</b>	1 7/8	2 3/32	5/8	7/16	12 7/8

BOER708 12-Point Set. BOER10 thru BOER24 (8 pcs) (5/16" to 3/4").

BOER704 12-Point Set. BOER26 thru BOER32 (4 pcs) (13/16" to 1").

## Standard Length, 15° Offset

mm		A	B	C	D	E
6	<b>BOERM6</b>	16.3	16.3	6.6	3.6	114.3
7	<b>BOERM7</b>	16.5	16.4	6.6	3.9	125.0
8	<b>BOERM8</b>	17.8	17.7	6.5	4.0	135.0
9	<b>BOERM9</b>	19.5	20.0	7.4	4.0	150.0
10	<b>BOERM10</b>	21.5	21.9	8.0	5.0	160.0
11	<b>BOERM11</b>	22.0	23.9	8.5	5.5	170.0
12	<b>BOERM12</b>	23.5	25.0	9.0	5.5	175.0
13	<b>BOERM13</b>	25.0	25.9	10.0	6.3	180.0
14	<b>BOERM14</b>	27.0	29.9	10.0	6.5	190.0
15	<b>BOERM15</b>	28.5	31.1	11.0	7.0	200.0
16	<b>BOERM16</b>	30.5	33.6	11.0	7.0	210.0
17	<b>BOERM17</b>	32.0	36.5	12.0	7.0	230.0
18	<b>BOERM18</b>	34.5	38.5	12.0	8.0	240.0
19	<b>BOERM19</b>	36.5	38.7	12.9	8.7	250.0
21	<b>BOERM21</b>	39.4	43.2	13.7	9.4	266.7
22	<b>BOERM22</b>	41.7	45.7	14.5	9.4	285.8
24	<b>BOERM24</b>	46.5	49.5	15.5	11.2	304.8
25	<b>BOERM25</b>	47.2	52.8	15.5	11.2	327.2

BOERM712 12-Point Set. BOERM8 thru BOERM19 (12 pcs) (8 to 19mm).

BOERM704 12-Point Set. BOERM21 thru BOERM25 (4 pcs) (21 to 25mm).



### WARNING

- Frequently inspect, clean, and lubricate ratchet mechanism with light oil.
- Read additional safety precautions on pages 534 to 537.



# Wrenches Combination Ratcheting Box / Open End



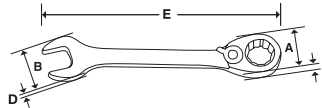
BOERF20A



BOERMF17A



BOERF708A



BOERMF712A

## Standard Length, Flex Head

Flex head pivots 90° in either direction to reach hard-to-get fasteners. Reversible, dual pawl ratcheting box end yields smooth operation and maximum strength. 4.5° (5° on smaller wrenches) gear engagement – less movement to engage the next gear. Tough, durable nickel-chrome finish.

## Standard Length, Flex Head

Flex head pivots 90° in either direction to reach hard-to-get fasteners. Reversible, dual pawl ratcheting box end yields smooth operation and maximum strength. 4.5° (5° on smaller wrenches) gear engagement – less movement to engage the next gear. Tough, durable nickel-chrome finish.

12	A	B	C	D	E	12	
5/16	BOERF10A	11/16	11/16	1/4	5/32	5 19/32	72
3/8	BOERF12A	27/32	7/8	5/16	3/16	6 3/8	72
7/16	BOERF14A	7/8	15/16	11/32	7/32	6 3/4	72
1/2	BOERF16A	31/32	1 1/32	13/32	1/4	7 13/32	80
9/16	BOERF18A	1 1/16	1 3/16	13/32	1/4	7 23/32	80
5/8	BOERF20A	1 3/16	1 9/16	7/16	9/32	8 7/16	80
11/16	BOERF22A	1 1/4	1 7/16	15/32	9/32	8 31/32	80
3/4	BOERF24A	1 7/16	1 17/32	1/2	11/32	10 1/16	80

BOERF708A 12-Point Set. BOERF10A thru BOERF24A (8 pcs) (5/16" to 3/4").

mm	12	A	B	C	D	E	12
8	BOERMF8A	17.8	17.7	6.5	4.0	142	60
9	BOERMF9A	19.5	20.0	7.4	4.0	152	72
10	BOERMF10A	21.5	21.9	8.0	5.0	162	72
11	BOERMF11A	22.0	23.9	8.5	5.5	172	72
12	BOERMF12A	23.5	25.0	9.0	5.5	180	80
13	BOERMF13A	25.0	25.9	10.0	6.3	188	80
14	BOERMF14A	27.0	29.9	10.0	6.5	196	80
15	BOERMF15A	28.5	31.1	11.0	7.0	204	80
16	BOERMF16A	30.5	33.6	11.0	7.0	214	80
17	BOERMF17A	32.0	36.5	12.0	7.0	228	80
18	BOERMF18A	34.5	38.5	12.0	8.0	242	80
19	BOERMF19A	36.5	38.7	12.9	8.7	256	80

BOERMF712A 12-Point Set. BOERMF8A thru BOERMF19A (12 pcs) (8 to 19mm).



BOERS16



BOERS708



BOERMS17



BOERMS712

## Short Handle, 15° Offset

Dual pawl ratcheting box end yields smooth operation and maximum strength. 15° offset box head provides extra knuckle clearance. Ratcheting box is reversible. Tough, durable nickel-chrome finish. Meets or exceeds strength specifications in ASME B107.6.

## Short Handle, 15° Offset

Dual pawl ratcheting box end yields smooth operation and maximum strength. 15° offset box head provides extra knuckle clearance. Ratcheting box is reversible. Tough, durable nickel-chrome finish. Meets or exceeds strength specifications in ASME B107.6.

12	A	B	C	D	E	
5/16	BOERS10	11/16	11/16	1/4	5/32	3 9/16
3/8	BOERS12	27/32	7/8	5/16	3/16	3 15/16
7/16	BOERS14	7/8	15/16	11/32	7/32	4 1/8
1/2	BOERS16	31/32	1 1/32	13/32	1/4	4 1/2
9/16	BOERS18	1 1/16	1 9/16	13/32	1/4	4 3/4
5/8	BOERS20	1 3/16	1 9/16	7/16	9/32	5 1/16
11/16	BOERS22	1 1/4	1 7/16	15/32	9/32	5 3/16
3/4	BOERS24	1 7/16	1 17/32	1/2	11/32	5 9/16

BOERS708 12-Point Set. BOERS10 thru BOERS24 (8 pcs) (5/16" to 3/4").

mm	12	A	B	C	D	E
8	BOERMS8	17.8	17.7	6.5	4.0	90
9	BOERMS9	19.5	20.0	7.4	4.0	95
10	BOERMS10	21.5	21.9	8.0	5.0	100
11	BOERMS11	22.0	23.9	8.5	5.5	105
12	BOERMS12	23.5	25.0	9.0	5.5	110
13	BOERMS13	25.0	25.9	10.0	6.3	115
14	BOERMS14	27.0	29.9	10.0	6.5	120
15	BOERMS15	28.5	31.1	11.0	7.0	125
16	BOERMS16	30.5	33.6	11.0	7.0	128
17	BOERMS17	32.0	36.5	12.0	7.0	132
18	BOERMS18	34.5	38.5	12.0	8.0	138
19	BOERMS19	36.5	38.7	12.9	8.7	142

BOERMS712 12-Point Set. BOERMS8 thru BOERMS19 (12 pcs) (8 to 19mm).

# FLANK DRIVE® Plus Combination Wrenches

Snap-on® FLANK DRIVE® Plus combination wrenches exceed the limits of any other open end design. The open end features a patented series of flutes or notches that allow the open end to grip a fastener away from its corners much like our box ends do. This gives you up to 62% more turning power and strength\* more than any other open end design. (\*Increase ranges from 20 to 62% over other open end wrenches on Class 8.8 fasteners.) Force is directed away from the weaker corners of the nut and directed to the stronger flats. You can actually see the grip—in fact, on some fasteners that you don't want marked, you should use our standard wrench. Coupled with our famous FLANK DRIVE® wrenching system on the box end, Snap-on combination wrenches are the overwhelming choice of professionals.

Selection, convenience, and quality. FLANK DRIVE® Plus combination wrenches are available in many different styles and sizes. And just like all Snap-on® wrenches, they are sized for optimum comfort and balance in your hand. **Mirror-like Finish.** Tough, durable, nickel-chrome plating helps protect against corrosion and makes it easy to wipe the wrenches clean. **Patented** under U.S. Patent No. 5,117,714.



SOEX24



SOEX710




SOEXM16



SOEXM710

## Standard Length

	12	A	B	C	D	E
1/4	SOEX8	13/32	17/32	3/16	5/32	5
5/16	SOEX10	1/2	21/32	7/32	5/32	5 3/4
11/32	SOEX11	17/32	23/32	1/4	3/16	6 1/8
3/8	SOEX12	19/32	25/32	1/4	3/16	6 1/2
7/16	SOEX14	21/32	29/32	7/32	7/32	7 1/4
1/2	SOEX16	3/4	1 1/16	11/32	1/4	8
9/16	SOEX18	27/32	1 5/32	3/8	9/32	8 3/4
5/8	SOEX20	15/16	1 5/16	13/32	9/32	9 1/2
11/16	SOEX22	1 1/32	1 13/32	7/16	5/16	10 1/4
3/4	SOEX24	1 1/8	1 9/16	15/32	11/32	11
13/16	SOEX26	1 3/16	1 21/32	17/32	3/8	11 3/4
7/8	SOEX28	1 9/32	1 13/16	9/16	3/8	12 1/2
15/16	SOEX30	1 3/8	1 29/32	19/32	13/32	13 1/4
1	SOEX32	1 15/32	2 1/32	5/8	7/16	14
1 1/16	SOEX34	1 9/16	2 5/32	19/32	15/32	14 3/4
1 1/8	SOEX36	1 5/8	2 5/16	11/16	15/32	15 17/32
1 3/16	SOEX38	1 23/32	2 13/32	23/32	1/2	16 1/4
1 1/4	SOEX40	1 13/16	2 9/16	3/4	17/32	17
1 5/16	SOEX42	1 29/32	2 21/32	3/4	9/16	17 25/32

SOEX710 12-Point Set. SOEX10 thru SOEX28 (10 pcs) (5/16" to 7/8") in storage tray.

SOEX707 12-Point Set. SOEX12 thru SOEX24 (7 pcs) (3/8" to 3/4") in storage tray.

## Standard Length

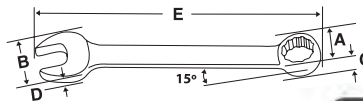
mm	12	A	B	C	D	E
7	SOEXM7	11	15	5	4	135
8	SOEXM8	13	17	6	4	146
9	SOEXM9	14	19	6	5	159
10	SOEXM10	15	21	7	5	171
11	SOEXM11	17	23	8	6	184
12	SOEXM12	18	25	8	6	195
13	SOEXM13	20	27	9	6	207
14	SOEXM14	21	29	9	7	219
15	SOEXM15	22	31	10	7	231
16	SOEXM16	24	33	10	7	242
17	SOEXM17	25	35	11	8	255
18	SOEXM18	27	37	12	8	267
19	SOEXM19	28	39	12	9	279
20	SOEXM20	30	41	13	9	292
21	SOEXM21	31	43	13	9	304
22	SOEXM22	33	46	14	10	318
23	SOEXM23	34	47	14	10	327
24	SOEXM24	35	49	15	11	337
25	SOEXM25	37	52	16	11	356

SOEXM710 12-Point Set. SOEXM10 thru SOEXM19 (10 pcs) (10 to 19mm) in storage tray.

SOEXM707 12-Point Set. SOEXM10 thru SOEXM17 (except SOEXM16) (7 pcs) (10 to 17mm) in storage tray.



SOEXM180



## Short Handle

mm	12	A	B	C	D	E
10	SOEXM100	15	21	7	5	133
11	SOEXM110	17	23	8	6	138
12	SOEXM120	18	25	8	6	143
13	SOEXM130	20	27	9	6	148
14	SOEXM140	21	29	9	7	152
15	SOEXM150	22	31	10	7	157
16	SOEXM160	24	33	10	7	162
17	SOEXM170	25	35	11	8	167
18	SOEXM180	27	37	12	8	172
19	SOEXM190	28	39	12	9	177

SOEXSM710 12-Point Set. SOEXM100 thru SOEXM190 (10 pcs) (10 to 19mm) in storage tray.



SOEXSM710

 **WARNING**

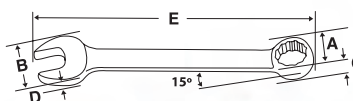
• Read additional safety precautions on pages 534 to 537.



# Wrenches FLANK DRIVE® Combination



OSH32B



OSH711B



OEX707B



OEX32B



GOEX20B



OEX714K



GOEX722K

## Standard Length

II	6	12	12	A	B	C	D	E
1/4	—	OEX8B	—	13/32	17/32	3/16	5/32	5
9/16	OSH10B	OEX10B	GOEX10B	1/2	21/32	7/32	5/32	5 3/4
11/32	OSH11B	OEX11B	—	17/32	3/4	1/4	3/16	6 1/8
3/8	OSH12B	OEX12B	GOEX12B	19/32	13/16	5/16	3/16	6 1/2
7/16	OSH14B	OEX14B	GOEX14B	21/32	29/32	5/16	7/32	7 1/4
1/2	OSH16B	OEX16B	GOEX16B	3/4	1 1/16	11/32	1/4	8
9/16	OSH18B	OEX18B	GOEX18B	27/32	1 3/16	3/8	9/32	8 3/4
5/8	OSH20B	OEX20B	GOEX20B	15/16	1 5/16	13/32	9/32	9 1/2
11/16	OSH22B	OEX22B	GOEX22B	1 1/32	1 13/32	7/16	5/16	10 1/4
3/4	OSH24B	OEX24B	GOEX24B	1 1/8	1 9/16	15/32	11/32	11
13/16	OSH26B	OEX26B	GOEX26B	1 3/16	1 21/32	17/32	3/8	11 3/4
7/8	OSH28B	OEX28B	GOEX28B	1 9/32	1 13/16	9/16	3/8	12 1/2
15/16	OSH30B	OEX30B	GOEX30B	1 3/8	1 29/32	19/32	13/32	13 1/4
1	OSH32B	OEX32B	GOEX32B	1 15/32	2 1/32	21/32	7/16	14
1 1/16	—	OEX34B	GOEX34B	1 9/16	2 3/16	11/16	15/32	14 3/4
1 1/8	—	OEX36B	GOEX36B	1 5/8	2 5/16	11/16	17/32	15 9/16
1 3/16	—	OEX38B	GOEX38B	1 3/4	2 7/16	3/4	1/2	16 5/16
1 1/4	—	OEX40B	GOEX40B	1 13/16	2 9/16	3/4	17/32	17 1/16
1 5/16	—	OEX42B	GOEX42B	1 29/32	2 21/32	3/4	9/16	17 13/16
1 3/8	—	OEX44B	GOEX44B	2	2 13/16	3/4	19/32	18 9/16
1 7/16	—	OEX46B	GOEX46B	2 1/16	2 29/32	7/8	19/32	19 1/32
1 1/2	—	OEX48B	GOEX48B	2 5/32	3 1/16	7/8	5/8	20 1/16
1 9/16	—	OEX50B	GOEX50B	2 1/4	3 3/16	7/8	21/32	20 13/16
1 5/8	—	OEX52B	GOEX52B	2 11/32	3 11/32	7/8	11/16	21 9/16
1 11/16	—	OEX54A	—	2 7/16	3 13/32	7/8	23/32	22 9/32
1 3/4	—	OEX56A	GOEX56A	2 17/32	3 9/16	1 1/32	23/32	22 7/8
1 13/16	—	OEX58A	GOEX58A	2 5/8	3 21/32	1 1/32	3/4	23 15/32
1 7/8	—	OEX60A	GOEX60A	2 11/32	3 13/16	1 1/32	25/32	24 1/32
2	—	OEX64A	GOEX64A	2 7/8	4 1/16	1 1/32	27/32	25 1/4

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OEX32B thru OEX52B are full polish chrome. OEX54A thru OEX64A are satin finish chrome.

### 6-Point Chrome Sets:

**OSH711B 6-Point Set.** OSH12B thru OSH32B (11 pcs) (3/8" to 1") in storage tray.

**OSH707B 6-Point Set.** OSH12B thru OSH24B (7 pcs) (3/8" to 3/4") in storage tray.

### 12-Point Chrome Sets:

**OEX724K 12-Point Set.** OEX8B thru OEX52B (24 pcs) (1/4" to 1 5/8") in C2400A Kit Bag.

**OEX714K 12-Point Set.** OEX12B thru OEX40B (except OEX38B) (14 pcs) (3/8" to 1 1/4") in C1401 Kit Bag.

**OEX710 12-Point Set.** OEX10B thru OEX28B (10 pcs) (5/16" to 7/8") in storage tray.

**OEX709B 12-Point Set.** OEX12B thru OEX28B (9 pcs) (3/8" to 7/8") in storage tray.

**OEX707B 12-Point Set.** OEX12B thru OEX24B (7 pcs) (3/8" to 3/4") in storage tray.

### 12-Point Industrial Sets:

**GOEX722K 12-Point Set.** GOEX10B thru GOEX52B (22 pcs) (5/16" to 1 5/8") in C2200 Kit Bag.

**GOEX714K 12-Point Set.** GOEX12B thru GOEX40B (except GOEX38B) (14 pcs) (3/8" to 1 3/16") in C1401 Kit Bag.

**GOEX711B 12-Point Set.** GOEX12B thru GOEX32B (11 pcs) (3/8" to 1") in storage tray.

**GOEX707B 12-Point Set.** GOEX12B thru GOEX24B (7 pcs) (3/8" to 3/4") in storage tray.

# FLANK DRIVE® Combination Wrenches



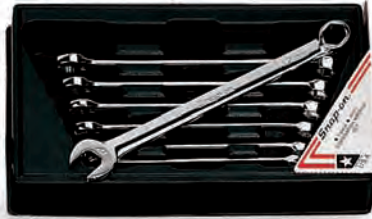
OSHM190B



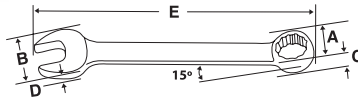
OEYM150B



GOEXM150B



OSHM707B



OEYM707B



OEYM710B



OSHM713



OEYM713B

## Standard Length

mm	6	12	12	A	B	C	D	E
7	OSHM70B	—	—	11	15	5	4	135
8	OSHM80B	OEYM80B	—	13	17	6	4	146
9	OSHM90B	OEYM90B	—	14	19	6	5	159
10	OSHM100B	OEYM100B	GOEXM100B	15	21	7	5	171
11	OSHM110B	OEYM110B	GOEXM110B	17	23	8	6	184
12	OSHM120B	OEYM120B	GOEXM120B	18	25	8	6	195
13	OSHM130B	OEYM130B	GOEXM130B	20	27	9	6	207
14	OSHM140B	OEYM140B	GOEXM140B	21	29	9	7	219
15	OSHM150B	OEYM150B	GOEXM150B	22	31	10	7	231
16	OSHM160B	OEYM160B	GOEXM160B	24	33	10	7	242
17	OSHM170B	OEYM170B	GOEXM170B	25	35	11	8	255
18	OSHM180B	OEYM180B	GOEXM180B	27	37	12	8	267
19	OSHM190B	OEYM190B	GOEXM190B	28	39	12	9	279
20	—	OEYM200B	GOEXM200B	30	41	13	9	292
21	—	OEYM210B	GOEXM210B	31	43	13	9	304
22	—	OEYM220B	GOEXM220B	33	46	14	10	318
23	—	OEYM230B	GOEXM230B	34	47	14	10	327
24	—	OEYM240B	GOEXM240B	35	49	15	11	337
25	—	OEYM250B	—	37	52	16	11	356
26	—	OEYM260B	—	38	53	16	11	363
27	—	OEYM270B	—	39	55	17	12	375
29	—	OEYM290B	—	42	58	18	12	394
30	—	OEYM300B	—	44	61	19	13	413
32	—	OEYM320B	—	46	65	19	14	432
34	—	OEYM340B	—	48	68	19	14	452
36	—	OEYM360B	—	53	74	22	15	489

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### 6-Point Chrome Sets:

**OSHM713 6-Point Set.** OSHM70B thru OSHM190B (13 pcs) (7 to 19mm).

**OSHM707B 6-Point Set.** OSHM100B thru OSHM170B (except OSHM160B) (7 pcs) (10 to 17mm) in storage tray.

### 12-Point Chrome Sets:

**OEXM725 12-Point Set.** OEXM80B thru OEXM360B (25 pcs) (8 to 36mm).

**OEXM723K 12-Point Set.** OEXM80B thru OEXM320B (23 pcs) (8 to 32mm) in C2301A Kit Bag.

**OEXM713B 12-Point Set.** OEXM100B thru OEXM220B (13 pcs) (10 to 22mm) in storage tray.

**OEXM710B 12-Point Set.** OEXM100B thru OEXM190B (10 pcs) (10 to 19mm) in storage tray.

**OEXM707B 12-Point Set.** OEXM100B thru OEXM170B (except OEXM160B) (7 pcs) (10 to 15mm, 17mm) in storage tray.

### 12-Point Industrial Set:

**GOEXM715 12-Point Set.** GOEXM100B thru GOEXM240B (15 pcs) (10 to 24mm).



**WARNING**  
• Read additional safety precautions on pages 534 to 537.



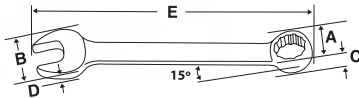
# Wrenches FLANK DRIVE® Combination



OEX240B



GOEX200B



OEXS715K

## Short Handle

11	12	12	A	B	C	D	E
1/4	OEX080B	GOEX080B	13/32	17/32	3/16	5/32	4 17/32
9/32	OEX090B	—	7/16	19/32	7/32	5/32	4 21/32
5/16	OEX100B	GOEX100B	1/2	21/32	7/32	5/32	4 27/32
11/32	OEX110B	GOEX110B	17/32	23/32	1/4	3/16	5
3/8	OEX120B	GOEX120B	19/32	25/32	1/4	3/16	5 1/8
7/16	OEX140B	GOEX140B	21/32	29/32	5/16	7/32	5 7/16
1/2	OEX160B	GOEX160B	3/4	1 1/16	11/32	1/4	5 3/4
9/16	OEX180B	GOEX180B	27/32	1 5/32	3/8	9/32	6 1/16
5/8	OEX200B	GOEX200B	15/16	1 5/16	13/32	9/32	6 11/32
11/16	OEX220B	GOEX220B	1 1/32	1 13/32	7/16	5/16	6 21/32
3/4	OEX240B	GOEX240B	1 1/8	1 9/16	15/32	11/32	6 31/32
13/16	OEX260B	GOEX260B	1 3/16	1 21/32	17/32	3/8	7 9/32
7/8	OEX280B	GOEX280B	1 9/32	1 13/16	9/16	3/8	7 9/16
15/16	OEX300B	GOEX300B	1 3/8	1 29/32	19/32	13/32	7 7/8
1	OEX320B	GOEX320B	1 15/32	2 1/32	5/8	7/16	8 3/16
1 1/16	OEX340B	GOEX340B	1 9/16	2 5/32	21/32	15/32	8 17/32
1 1/8	OEX360B	GOEX360B	1 5/8	2 5/16	11/16	1/2	8 27/32
1 3/16	OEX380B	—	1 23/32	2 13/32	23/32	1/2	9 1/8
1 1/4	OEX400B	—	1 13/16	2 9/16	3/4	17/32	9 7/16
1 5/16	OEX420B	—	1 29/32	2 21/32	3/4	9/16	9 3/4
1 3/8	OEX440B	—	2	2 13/16	3/4	19/32	10 1/16

OEXS721 12-Point Set. OEX080B thru OEX440B (21 pcs) (1/4" to 1 3/8").

OEXS715K 12-Point Set. OEX080B thru OEX320B (15 pcs) (1/4" to 1") in C1505 Kit Bag.

OEXS709B 12-Point Set. OEX100B thru OEX240B (9 pcs) (5/16" to 3/4") in storage tray.



OEXS709B



GOEXM17B



OEXM19B

## Short Handle

mm	12	12	A	B	C	D	E
6	OEXM6B	GOEXM6B	10	13	5	4	113
7	OEXM7B	GOEXM7B	11	15	5	4	118
8	OEXM8B	GOEXM8B	13	17	6	4	123
9	OEXM9B	GOEXM9B	14	19	6	5	128
10	OEXM10B	GOEXM10B	15	21	7	5	133
11	OEXM11B	GOEXM11B	17	23	8	6	138
12	OEXM12B	GOEXM12B	18	25	8	6	142
13	OEXM13B	GOEXM13B	20	27	9	6	148
14	OEXM14B	GOEXM14B	21	29	9	7	152
15	OEXM15B	GOEXM15B	22	31	10	7	157
16	OEXM16B	GOEXM16B	24	33	10	7	162
17	OEXM17B	GOEXM17B	25	35	11	8	167
18	OEXM18B	GOEXM18B	27	37	12	8	172
19	OEXM19B	GOEXM19B	28	39	12	9	177
20	OEXM20B	—	30	41	13	9	182
21	OEXM21B	—	31	43	13	9	186
22	OEXM22B	—	33	46	14	10	192
23	OEXM23B	—	34	47	14	10	197
24	OEXM24B	—	35	49	15	11	201

OEXSM719 12-Point Set. OEXM6B thru OEXM24B (19 pcs) (6 to 24mm).

OEXSM714K 12-Point Set. OEXM6B thru OEXM19B (14 pcs) (6 to 19mm) in C1402 Kit Bag.

OEXSM710B 12-Point Set. OEXM10B thru OEXM19B (10 pcs) (10 to 19mm) in storage tray.



OEXSM710B



# FLANK DRIVE® Combination Wrenches



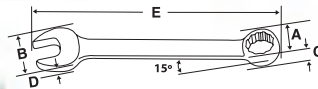
OEXL32B



OEXL18B



OEXL707B



OEXL710B

## Long Handle

11	12	A	B	C	D	E
3/8	OEXL12B	19/32	25/32	1/4	3/16	7
7/16	OEXL14B	21/32	29/32	5/16	7/32	8
1/2	OEXL16B	3/4	1 1/16	11/32	1/4	9
9/16	OEXL18B	27/32	1 5/32	3/8	9/32	10
5/8	OEXL20B	15/16	1 5/16	13/32	9/32	11
11/16	OEXL22B	1 1/32	1 13/32	7/16	5/16	12
3/4	OEXL24B	1 1/8	1 9/16	15/32	11/32	13
13/16	OEXL26B	1 3/16	1 21/32	17/32	3/8	14
7/8	OEXL28B	1 9/32	1 13/16	9/16	3/8	15
15/16	OEXL30B	1 3/8	1 29/32	19/32	13/32	16
1	OEXL32B	1 15/32	2 1/32	5/8	7/16	17

OEXL707B 12-Point Set. OEXL12B thru OEXL24B (7 pcs) (3/8" to 3/4") in storage tray.

## Long Handle

mm	12	A	B	C	D	E
10	OEXL10B	15	21	7	5	186
11	OEXL11B	17	23	8	6	203
12	OEXL12B	18	25	8	6	218
13	OEXL13B	20	27	9	6	234
14	OEXL14B	21	29	9	7	250
15	OEXL15B	22	31	10	7	266
16	OEXL16B	24	33	10	7	282
17	OEXL17B	25	35	11	8	298
18	OEXL18B	27	37	12	8	314
19	OEXL19B	28	39	12	9	330

OEXL710B 12-Point Set. OEXL10B thru OEXL19B (10 pcs) (10 to 19mm) in storage tray.



OXI12SB



OXI709SBK



OXIM5SB



OXI22B



OXI706B



OXIM14B



OXIM710B

## Midget

11	6	12	A	B	C	D	E
1/8	OXI4SB*	—	7/32	11/32	1/8	1/8	2 11/16
5/32	OXI5SB*	—	9/32	13/32	5/32	1/8	2 27/32
3/16	OXI6SB*	OXI6B*	5/16	7/16	5/32	1/8	2 31/32
7/32	OXI7SB	OXI7B	3/8	1/2	3/16	1/8	3 3/32
1/4	OXI8SB	OXI8B	13/32	17/32	3/16	5/32	3 7/32
9/32	OXI9SB	OXI9B	7/16	19/32	7/32	5/32	3 11/32
5/16	OXI10SB	OXI10B	1/2	21/32	7/32	5/32	3 1/2
11/32	OXI11SB	OXI11B	17/32	23/32	1/4	3/16	3 5/8
3/8	OXI12SB	OXI12B	19/32	25/32	1/4	3/16	3 3/4
7/16	—	OXI14B	21/32	29/32	5/16	7/32	4 1/32
1/2	—	OXI16B	3/4	1 1/16	11/32	1/4	4 9/32
9/16	—	OXI18B	27/32	1 5/32	3/8	9/32	4 17/32
5/8	—	OXI20B	15/16	1 5/16	13/32	9/32	4 13/16
11/16	—	OXI22B	1 1/32	1 13/32	7/16	5/16	5 1/16
3/4	—	OXI24B	1 1/8	1 9/16	15/32	11/32	5 11/32

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\*Conventional Hex

OXI709SBK 6-Point Set. OXI4SB thru OXI12SB (9 pcs) (1/8" to 3/8") in C0900A Kit Bag.

OXI707BK 12-Point Set. OXI6B thru OXI12B (7 pcs) (3/16" to 3/8") in C0700 Kit Bag.

OXI715 6/12-Point Set. OXI4SB and OXI5SB 6-Point Wrenches and OXI6B thru OXI24B 12-Point Wrenches (15 pcs) (1/8", 5/32", 3/16" to 3/4").

OXI706B 12-Point Set. OXI14B thru OXI24B (6 pcs) (7/16" to 3/4") in storage tray.

## Midget

mm	6	12	A	B	C	D	E
4	OXIM4SB*	—	7	10	4	3	72
5	OXIM5SB*	—	8	12	4	3	76
5.5	OXIM5.5SB	—	9	13	4	4	79
6	OXIM6SB	OXIM6B	10	13	5	4	81
7	OXIM7SB	OXIM7B	11	15	5	4	85
8	OXIM8SB	OXIM8B	13	17	6	4	89
9	OXIM9SB	OXIM9B	14	19	6	5	93
10	—	OXIM10B	15	21	7	5	98
11	—	OXIM11B	17	23	8	6	102
12	—	OXIM12B	18	25	8	6	106
13	—	OXIM13B	20	27	9	6	110
14	—	OXIM14B	21	29	9	7	115
15	—	OXIM15B	22	31	10	7	119
16	—	OXIM16B	24	33	10	7	122
17	—	OXIM17B	25	35	11	8	127
18	—	OXIM18B	27	37	12	8	131
19	—	OXIM19B	28	39	12	9	136

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\*Conventional Hex

OXIM717 6/12-Point Set. OXIM4SB thru OXIM5.5SB 6-Point Wrenches and OXIM6B thru OXIM19B 12-Point Wrenches (17 pcs) (4 to 5.5mm, 6 to 19mm).

OXIM707SBK 6-Point Set. OXIM4SB thru OXIM9SB (7 pcs) (4 to 9mm) in C0700 Kit Bag.

OXIM710B 12-Point Set. OXIM10B thru OXIM19B (10 pcs) (10 to 19mm) in storage tray.



• Read additional safety precautions on pages 534 to 537.



# Wrenches British Standard



WOEX90B

## Short Handle Combination

BS	Decimal Equiv., inches	12	A	B	C	D	E
3/16	.338	WOEX6B	25/32	19/32	3/16	1/4	5 3/32
1/8	.365	WOEX70B	25/32	19/32	3/16	1/4	5 1/8
1/4	.413	WOEX80B	29/32	21/32	7/32	5/16	5 13/32
1/4	.445	WOEX90B	29/32	21/32	7/32	5/16	5 15/32
5/16	.525	WOEX100B	1 5/32	27/32	9/32	3/8	6 1/32
3/8	.600	WOEX110B	1 5/16	15/16	9/32	13/32	6 11/32
7/16	.710	WOEX120B	1 5/16	1 1/32	5/16	7/16	6 23/32

## Combination Wrenches



BLPCW12



BLPCWM14



BLPCWS711



BLPCWSM712

### Standard, inches

Size, inches	Stock No.	Length, inches
1/4	BLPCW14	5 1/32
5/16	BLPCW516	5 7/32
3/8	BLPCW38	6 9/16
7/16	BLPCW716	7 11/32
1/2	BLPCW12	8 1/16
9/16	BLPCW916	8 25/32
5/8	BLPCW58	9 9/16
11/16	BLPCW1116	10 5/16
3/4	BLPCW34	11 1/16
13/16	BLPCW1316	11 27/32
7/8	BLPCW78	12 9/16
15/16	BLPCW1516	13 11/32
1	BLPCW1	14 3/32

BLPCWS711 Combination Wrench Set. BLPCW38 thru BLPCW1 (11 pcs) (3/8" to 1") in storage tray.

### Standard, mm

Size, mm	Stock No.	Length, mm
8	BLPCWM8	148
9	BLPCWM9	160
10	BLPCWM10	167
11	BLPCWM11	186
12	BLPCWM12	196
13	BLPCWM13	205
14	BLPCWM14	223
15	BLPCWM15	233
16	BLPCWM16	243
17	BLPCWM17	262
18	BLPCWM18	272
19	BLPCWM19	281

BLPCWSM712 Metric Combination Wrench Set. BLPCWM8 thru BLPCWM19 (12 pcs) (8 to 19mm) in storage tray.

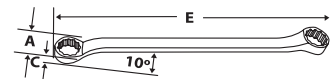
## FLANK DRIVE® Offset Box



XID1618A



XID604KA



### Midget, 10° Offset

#	12	A	C	E
3/16 - 13/64	XID1213A	5/16 - 11/32	1/8 - 5/32	2 13/16
7/32 - 15/64	XID1415A	3/8 - 3/8	5/32 - 5/32	3 1/16
1/4 - 9/32	XID1618A	13/32 - 7/16	5/32 - 3/16	3 13/32
5/16 - 11/32	XID2022A	15/32 - 1/2	3/16 - 7/32	3 31/32

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XID604KA 12-Point Set. XID1213 thru XID2022 (4 pcs) (3/16" to 11/32") in C41E Kit Bag.



#	A	C	E	
E5 - E6	XLE56	9/32 - 5/16	5/32 - 3/16	6 13/32
E7 - E8	XLE78	11/32 - 3/8	7/32 - 7/32	7 7/32
E10 - E12	XLE1012A	15/32 - 17/32	1/4 - 5/16	8 7/8
E14 - E16	XLE1416	5/8 - 23/32	11/32 - 11/32	10 7/16
E18 - E20	XLE1820	13/16 - 7/8	13/32 - 7/16	12 3/8

XLE605 TORX® Set. XLE56 thru XLE1820 (5 pcs) (E5 to E20) in storage tray.



XLE1820



XLE605

See page 202 for High Performance / Spline FLANK DRIVE® Wrenches

# FLANK DRIVE® Offset Box Wrenches



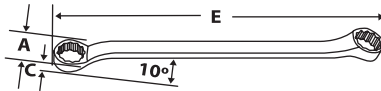
XB1820A



XBM1315SA



XB605A



XBM1315A



XBM605A

## Standard Length, 10° Offset

12	A	C	E
3/8 - 7/16	9/16 - 21/32	5/16 - 11/32	7 19/32
7/16 - 1/2	21/32 - 3/4	5/16 - 11/32	7 15/16
1/2 - 9/16	3/4 - 13/16	11/32 - 3/8	8 11/16
9/16 - 5/8	13/16 - 29/32	13/32 - 7/16	9 13/32
5/8 - 11/16	29/32 - 1	7/16 - 15/32	10 5/32
11/16 - 3/4	1 - 1 1/16	15/32 - 1/2	10 15/16
3/4 - 13/16	1 1/16 - 1 5/32	1/2 - 17/32	11 21/32
7/8 - 15/16	1 1/4 - 1 11/32	17/32 - 9/16	13 1/8
15/16 - 1	1 11/32 - 1 13/32	9/16 - 19/32	13 7/8
1 - 1 1/16	1 13/32 - 1 1/2	19/32 - 5/8	14 19/32
1 1/16 - 1 1/4	1 1/2 - 1 3/4	5/8 - 23/32	16 3/32
1 1/8 - 1 3/16	1 9/32 - 1 21/32	21/32 - 11/16	16 3/32
1 1/4 - 1 5/16	1 3/4 - 1 27/32	23/32 - 3/4	17 19/32
1 3/8 - 1 7/16	1 31/32 - 2 1/16	3/4 - 25/32	19 1/8
1 1/2 - 1 5/8	2 3/32 - 2 9/32	13/16 - 7/8	20 15/16

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**XB605A 12-Point Set.** XB1214A, XB1618A, XB2022A, XB2426A, and XB2830A (5 pcs) (3/8" to 15/16") in storage tray.

## Standard Length, 10° Offset

6	12	A	C	E	
8 - 10	—	XBM810A	12.3 - 15	6.7 - 7.7	185
10 - 11	—	XBM1011A	15 - 16.4	7.7 - 8.3	202
10 - 12	—	XBM1012A	15 - 17.7	7.7 - 8.8	208
11 - 13	—	XBM1113A	16.4 - 19.1	8.3 - 9.3	219
12 - 14	XBM1214SA	XBM1214A	17.7 - 20.4	8.8 - 9.7	230
13 - 15	XBM1315SA	XBM1315A	19.1 - 21.8	9.3 - 10.2	241
14 - 17	—	XBM1417A	20.4 - 24.5	9.8 - 11.4	248
16 - 18	—	XBM1618A	23.1 - 25.9	10.9 - 11.9	275
17 - 19	—	XBM1719A	24.5 - 27.2	11.4 - 12.3	286
18 - 21	—	XBM1821A	25.9 - 29.9	11.9 - 13.3	303
22 - 24	—	XBM2224A	31.3 - 34	13.7 - 14.7	342
27 - 30	—	XBM2730A	38.1 - 42.2	16 - 17.3	404

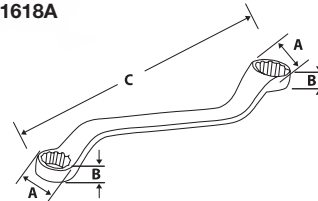
**XBM605A Metric 12-Point Set.** XBM1011A, XBM1214A, XBM1315A, XBM1618A, and XBM1719A (5 pcs) (10 to 19mm) in storage tray.



XS609A



XS1618A



XSM608A

## Short Handle, 10° Offset

12	A	B	C
3/16 - 7/32	5/16 - 11/32	7/32 - 7/32	3 27/32
1/4 - 5/16	13/32 - 15/32	1/4 - 9/32	4 1/4
5/16 - 3/8	15/32 - 9/16	9/32 - 5/16	4 9/16
3/8 - 7/16	9/16 - 21/32	9/16 - 11/32	4 29/32
7/16 - 1/2	21/32 - 3/4	11/32 - 11/32	5 3/16
1/2 - 9/16	3/4 - 13/16	3/8 - 3/8	5 17/32
9/16 - 5/8	13/16 - 29/32	13/32 - 7/16	5 7/8
5/8 - 3/4	29/32 - 1 1/16	7/16 - 1/2	6 3/8
11/16 - 13/16	1 - 1 5/32	15/32 - 17/32	6 23/32

**XS609A 12-Point Set.** XS67A thru XS2226A (9 pcs) (3/16" to 13/16") in storage tray.

## Short Handle, 10° Offset

12	A	B	C	
6 - 7	XSM67A	9.6 - 10.9	5.7 - 6.2	86
8 - 9	XSM89A	12.3 - 13.7	6.7 - 7.2	103
8 - 10	XSM810	12.3 - 15	6.7 - 7.7	107
9 - 10	XSM910A	13.7 - 15	7.2 - 7.7	112
11 - 12	XSM1112A	16.4 - 17.7	8.3 - 8.8	128
13 - 14	XSM1314A	19.1 - 20.4	9.3 - 9.8	146
15 - 16	XSM1516A	21.8 - 23.1	10.2 - 10.9	163
17 - 19	XSM1719A	24.5 - 27.2	11.4 - 12.3	185
18 - 20	XSM1820A	25.9 - 28.6	11.9 - 12.8	194

**XSM608A Metric 12-Point Set.** XSM67A thru XSM1820A (except XSM810) (8 pcs) (6 to 20mm) in storage tray.



**WARNING**

• Read additional safety precautions on pages 534 to 537.



# Wrenches FLANK DRIVE® Offset Box

Heads of XO, XOM, and XSO wrenches are deeply offset at 60° angle to the handles so recessed fasteners may be easily reached.



XO1820



XOM1719



XO605



XOM605

## Standard Length, Deep 60° Offset

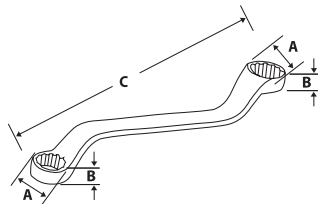
11	12	A	B	C
1/4 - 5/16	XO810	3/8	9/32 (1/4 - 9/32)	6 13/32
5/16 - 3/8	XO1012	15/32 - 9/16	9/32	7
3/8 - 7/16	XO1214	9/16 - 5/8	5/16	7 19/32
1/2 - 9/16	XO1618	23/32 - 13/16	11/32	8 25/32
9/16 - 5/8	XO1820	13/16 - 29/32	13/32	9 3/8
5/8 - 11/16	XO2022	29/32 - 1	13/32	9 15/16
5/8 - 3/4	XO2024	29/32 - 1 3/32	7/16	10 1/4
11/16 - 13/16	XO2226	1 - 1 5/32	15/32	10 27/32
3/4 - 7/8	XO2428	1 3/32 - 1 1/4	1/2	11 13/32
7/8 - 15/16	XO2830	1 1/4 - 1 11/32	17/32	12 31/32
15/16 - 1	XO3032	1 11/32 - 1 7/16	9/16	13 15/16

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XO605 12-Point Set. XO1214, XO1618, XO1820, XO2226, and XO2428 (5 pcs) (3/8" to 7/8") in storage tray.



XSO1618A



XSO605

## Standard Length, Deep 60° Offset

mm	12	A	B	C
8 - 10	XOM810	11.7 - 14.2	6.9 - 7.3	178.1
10 - 11	XOM1011	15 - 16.3	7.6	193.0
12 - 14	XOM1214	15 - 20.3	9.0	210.0
13 - 15	XOM1315	16.3 - 21.2	8.9	223.0
16 - 18	XOM1618	17.7 - 25.4	10.8	253.0
17 - 19	XOM1719	17.7 - 27.4	11.1	260.0
20 - 21	XOM2021	32.5 - 33.3	13.7	329.6
22 - 24	XOM2224	31.9 - 34.1	13.7	329.6

XOM605 Metric 12-Point Set. XOM1011 thru XOM1719 (5 pcs) (10 to 19mm) in storage tray.

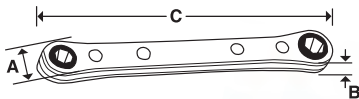
## Short Handle, Deep 60° Offset

11	12	A	B	C
1/4 - 5/16	XSO810A	3/8 - 7/16	3/16 - 7/32	4 5/32
3/8 - 7/16	XSO1214A	17/32 - 5/8	1/4 - 9/32	4 13/16
1/2 - 9/16	XSO1618A	23/32 - 25/32	5/16 - 11/32	5 1/2
5/8 - 3/4	XSO2024A	7/8 - 1 1/32	3/8 - 7/16	6 15/32
11/16 - 13/16	XSO2226A	31/32 - 1 1/8	13/32 - 15/32	7 1/32

ASME/ANSI B107.6-1994

XSO605 12-Point Set. XSO810A thru XSO2226A (5 pcs) (1/4" to 13/16") in storage tray.

## Ratcheting Box



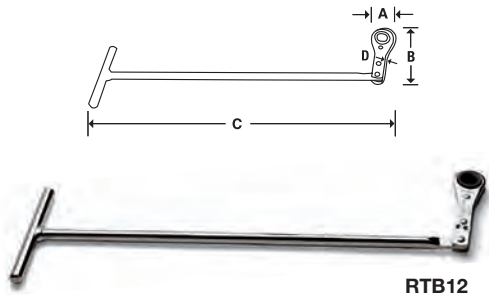
CRB1824

## Non-Conductive Composite

No conductive path to user. No insulation to puncture, tear or wear through. Strong as steel. Every tool is individually tested to ensure protection up to 1000VAC and 1500VDC. Only Snap-on® non-conductive tools are UL Classified assuring the customer compliance to IEC60900. This means UL inspects and audits to ensure complete compliance with IEC60900. Lifetime warranty for material and workmanship.

11	12	A	B	C
9/16 - 3/4	CRB1824	1 9/16 - 1 13/16	5/8 - 5/8	9 1/16

# Ratcheting Box Wrenches



RTB12



RTBM605



RTBM12

## T-Handle

$\Pi$	12	A	B	C	D
1/4	RTB8	11/16	2 13/16	12 3/32	3/8
5/16	RTB10	11/16	2 13/16	12 3/32	3/8
11/32	RTB11	29/32	3	12 3/32	3/8
3/8	RTB12	29/32	3	12 3/32	3/8
7/16	RTB14	29/32	3	12 3/32	3/8
1/2	RTB16	1 5/32	3 13/32	12 5/32	1/2
9/16	RTB18	1 5/32	3 13/32	12 5/32	1/2

RTB607 12-Point Set. RTB8 thru RTB18 (7 pcs) (1/4" to 9/16") in storage tray.

## T-Handle

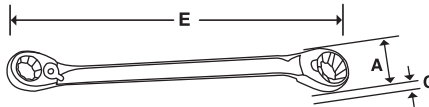
mm	12	A	B	C	D
8	RTBM8	17.5	71.4	307.2	9.5
10	RTBM10	23.0	76.2	307.2	9.5
12	RTBM12	29.4	86.5	308.8	12.7
13	RTBM13	29.4	86.5	308.8	12.7
14	RTBM14	29.4	86.5	308.8	12.7
15	RTBM15	36.8	98.6	308.8	12.7
16	RTBM16	36.8	98.6	308.8	12.7
17	RTBM17	36.8	98.6	308.8	12.7
18	RTBM18	36.8	98.6	308.8	12.7
19	RTBM19	36.8	98.6	308.8	12.7

RTBM605 Metric 12-Point Set. RTBM8 thru RTBM14 (5 pcs) (8 to 14mm) in storage tray.

RTBM505 Metric 12-Point Set. RTBM15 thru RTBM19 (5 pcs) (15 to 19mm) in storage tray.



BXOR1820



BXOR704



BXORM1617



BXORM706

## Standard Length, 25° Offset

$\Pi$	12	A	C	E
5/16 - 3/8	BXOR1012	23/32 - 7/8	1/4 - 5/16	7 1/2
7/16 - 1/2	BXOR1416	7/8 - 31/32	11/32 - 13/32	8 3/4
9/16 - 5/8	BXOR1820	1 1/16 - 7/32	13/32 - 7/16	9 3/4
11/16 - 3/4	BXOR2224	1 9/32 - 7/16	15/32 - 7/2	11

BXOR704 12-Point Set. BXOR1012 thru BXOR2224 (4 pcs) (5/16" to 3/4") in storage tray.

## Standard Length, 25° Offset

mm	12	A	C	E
8 - 9	BXORM89	18.0 - 19.3	6.4 - 7.6	184.2
10 - 11	BXORM1011	21.8 - 22.1	8.1 - 8.6	203.2
12 - 13	BXORM1213	23.6 - 26.6	8.9 - 10.2	222.3
14 - 15	BXORM1415	27.2 - 28.7	10.2 - 10.9	241.3
16 - 17	BXORM1617	31.0 - 32.0	10.9 - 11.9	260.4
18 - 19	BXORM1819	34.5 - 36.8	12.2 - 13.2	279.4

BXORM706 12-Point Set. BXORM89 thru BXORM1819 (6 pcs) (8 to 19mm) in storage tray.



### WARNING

- Frequently inspect, clean, and lubricate ratchet mechanism with light oil.
- Read additional safety precautions on pages 534 to 537.



# Wrenches Ratcheting Box



RB604C



R1618C



RBM1415C



RBM604C

## Standard Length, 0° Offset

Head Size	6	12	A	C	E
1/4 - 5/16	<b>RB10SC</b>	<b>R810C</b>	19/32 - 43/64	3/8	4 1/2
5/16 - 11/32	—	<b>R1011C</b>	5/8 - 3/4	11/32	5 3/8
5/16 - 3/8	—	<b>R1012C</b>	51/64 - 57/64	3/8	5 1/2
3/8 - 7/16	<b>R1214SC</b>	<b>R1214C</b>	51/64 - 57/64	3/8	5 1/2
1/2 - 9/16	<b>R1618SC</b>	<b>R1618C</b>	1 1/64 - 1 5/32	1/2	6 7/8
5/8 - 11/16	—	<b>R2022C</b>	1 19/64 - 1 7/16	1/2	8 1/8
5/8 - 3/4	—	<b>R2024C</b>	1 19/64 - 1 7/16	1/2	8 1/8
3/4 - 13/16	—	<b>R2426C</b>	1 13/32 - 1 37/64	1/2	9 1/4
3/4 - 7/8	—	<b>R2428C</b>	1 13/32 - 1 37/64	1/2	9 1/4
13/16 - 15/16	—	<b>R2630C</b>	1 13/32 - 1 37/64	1/2	9 1/4
7/8 - 15/16	—	<b>R2830C</b>	1 29/32 - 2 17/64	9/16	15
15/16 - 1	—	<b>R3032C</b>	1 29/32 - 2 17/64	9/16	15
1 1/16 - 1 1/8	—	<b>R3436A</b>	2 - 2	9/16	12 3/4
1 1/8 - 1 1/4	<b>R3640SA</b>	—	2 3/32 - 2 3/32	9/16	12 13/16
3/16 - 1 1/4	—	<b>R3840A</b>	2 - 2	9/16	12 3/4

**RB604C 12-Point Set.** R1214C, R1618C, R2022C, and R2428C (4 pcs) (3/8" to 7/8") in storage tray.

## Standard Length, 0° Offset

Head Size	6	12	A	C	E
7 - 8	<b>RBM78SC</b>	<b>RBM78C</b>	15.1 - 17.1	9.5	114.3
8 - 10	—	<b>RBM810C</b>	20.2 - 22.6	9.5	139.7
9 - 10	—	<b>RBM910C</b>	20.2 - 22.6	9.5	139.7
10 - 11	<b>RBM1011SC</b>	<b>RBM1011C</b>	25.8 - 29.4	12.7	174.6
10 - 12	—	<b>RBM1012C</b>	25.8 - 29.4	12.7	174.6
12 - 13	<b>RBM1213SC</b>	<b>RBM1213C</b>	25.8 - 29.4	12.7	174.6
12 - 14	—	<b>RBM1214C</b>	25.8 - 29.4	12.7	174.6
14 - 15	—	<b>RBM1415C</b>	32.9 - 36.5	12.7	206.4
16 - 18	—	<b>RBM1618C</b>	32.9 - 36.5	12.7	206.4
17 - 19	—	<b>RBM1719C</b>	32.9 - 36.5	12.7	206.4

**RBM604C Metric 12-Point Set.** RBM1011C, RBM1213C, RBM1415C, and RBM1719C (4 pcs) (10 to 19mm) in storage tray.



RBZ1618



RBZ605



RBZM1314



RBZM605

## Latch-On® Head, 0° Offset

Latch-On head keeps the wrench on the fastener. Ring prevents the nut/fastener head from sliding through the wrench.

Head Size	12	A	C	E
1/4 - 5/16	<b>RBZ810</b>	19/32 - 11/16	3/8	4 1/2
3/8 - 7/16	<b>RBZ1214</b>	13/16 - 29/32	3/8	5 1/2
1/2 - 9/16	<b>RBZ1618</b>	1 1/32 - 1 5/32	1/2	6 7/8
5/8 - 11/16	<b>RBZ2022</b>	1 5/16 - 1 7/16	1/2	8 1/8
3/4 - 7/8	<b>RBZ2428</b>	1 13/32 - 1 19/32	1/2	9 1/4
1/4 - 5/16	<b>RBZ605</b>	29/32 - 29/32	3/8	8

**RBZ605 12-Point Set.** RBZ810 thru RBZ2428 (5 pcs) (1/4"-5/16" to 3/4"-7/8") in storage tray.

## Latch-On® Head, 0° Offset

Latch-On head keeps the wrench on the fastener. Ring prevents the nut/fastener head from sliding through the wrench.

Head Size	12	A	C	E
7 - 8	<b>RBZM78</b>	15.1 - 17.1	9.5	114.3
9 - 10	<b>RBZM910</b>	20.4 - 22.6	9.5	140.3
11 - 12	<b>RBZM1112</b>	25.8 - 29.4	12.7	174.6
13 - 14	<b>RBZM1314</b>	25.8 - 29.4	12.7	174.6
15 - 17	<b>RBZM1517</b>	32.9 - 36.5	12.7	206.4
16 - 18	<b>RBZM1618</b>	32.9 - 36.5	12.7	206.4
19 - 21	<b>RBZM1921</b>	35.7 - 40.1	12.7	234.9

**RBZM605 Metric 12-Point Set.** RBZM78, RBZM910, RBZM1112, RBZM1314 and RBZM1517 (5 pcs) (7-8mm to 15-17mm) in storage tray.

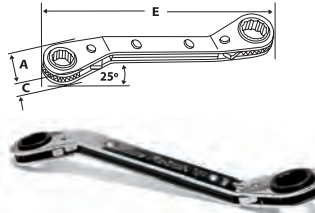
# Ratcheting Box Wrenches



RBYA605



RYA1618



RYAM1314



RBYAM605

## Standard Length, 25° Offset

mm	12	A	C	E
1/4 - 5/16	<b>RYA810</b>	9/16 - 5/8	11/32	4 9/32
5/16 - 11/32	<b>RYA1011</b>	19/32 - 11/16	3/8	4 1/32
3/8 - 7/16	<b>RYA1214</b>	3/4 - 7/8	11/32	6 5/32
1/2 - 9/16	<b>RYA1618</b>	15/16 - 1	13/32	6 31/32
5/8 - 11/16	<b>RYA2022</b>	1 1/8 - 1 1/4	13/32	7 27/32
3/4 - 7/8	<b>RYA2428</b>	1 3/8 - 1 1/2	7/16	8 5/8

**RBYA605 12-Point Set.** RYA810 thru RYA2428 (except RYA1011) (5 pcs) (1/4" to 7/8") in storage tray.

## Standard Length, 25° Offset

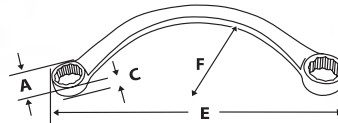
mm	12	A	C	E
7 - 8	<b>RYAM78</b>	15.5 - 16.3	9.5	105.2
9 - 10	<b>RYAM910</b>	19.8 - 22.6	9.5	134.5
11 - 12	<b>RYAM1112</b>	25.4 - 29	12.7	165.9
13 - 14	<b>RYAM1314</b>	25.4 - 29	12.7	165.9
15 - 17	<b>RYAM1517</b>	33 - 36.5	12.7	197.2
16 - 18	<b>RYAM1618</b>	33 - 36.5	12.7	197.2
19 - 21	<b>RYAM1921</b>	35.7 - 40.1	12.7	224.2

**RBYAM605 Metric 12-Point Set.** RYAM78 thru RYAM1517 (5 pcs) (7 to 17mm) in storage tray.

## FLANK DRIVE® Specialty Box



CX605



CX1416



CXM605



CXM1012

## Half Moon

mm	12	A	C	E	F
5/16 - 3/8	<b>CX1012</b>	15/32 - 9/16	3/16 - 5/16	4 5/8	2 1/16
7/16 - 1/2	<b>CX1416</b>	5/8 - 23/32	5/16 - 5/16	5	2 7/32
9/16 - 5/8	<b>CX1820</b>	13/16 - 7/8	11/32 - 3/8	6 1/2	2 9/16
5/8 - 3/4	<b>CX2024</b>	7/8 - 1 7/32	13/32 - 7/16	7 3/4	3 1/16
11/16 - 13/16	<b>CX2226</b>	31/32 - 1 9/32	13/32 - 15/32	8 1/2	3 1/2
7/8 - 15/16	<b>CX2830</b>	1 1/4 - 1 11/32	9/16 - 9/16	10	4 1/16

**CX605 12-Point Set.** CX1416 thru CX2830 (5 pcs) (7/16" to 15/16").

## Half Moon

mm	12	A	C	E	F
10 - 12	<b>CXM1012</b>	15 - 17	6 - 7	128	48
11 - 13	<b>CXM1113</b>	16 - 18	8 - 8	144	57
14 - 17	<b>CXM1417</b>	20 - 23	9 - 9	166	65
15 - 19	<b>CXM1519</b>	22 - 27	10 - 11	198	78
18 - 21	<b>CXM1821</b>	27 - 31	11 - 13	224	86

**CXM605 Metric 12-Point Set.** CXM1012 thru CXM1821 (5 pcs) (10 to 21mm).



### WARNING

- Use only moderate force on crowfoot and flare nut wrenches.
- Frequently inspect, clean, and lubricate ratchet mechanism with light oil.
- Read additional safety precautions on pages 534 to 537.



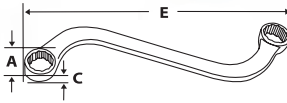
# Wrenches FLANK DRIVE® Specialty Box



SBX1820



SBXM1012



SBX605



SBXM605

## "S" Shaped

<b>11</b>	<b>12</b>	<b>A</b>	<b>C</b>	<b>E</b>
5/16 - 3/8	<b>SBX1012</b>	15/32 - 9/16	9/16 - 7/32	3 3/4
7/16 - 1/2	<b>SBX1416</b>	21/32 - 3/4	9/32 - 5/16	5 5/16
9/16 - 5/8	<b>SBX1820</b>	27/32 - 15/16	11/32 - 13/32	6 7/8
11/16 - 3/4	<b>SBX2224</b>	1 1/32 - 1 1/8	13/32 - 15/32	8 7/16
13/16 - 7/8	<b>SBX2628</b>	1 7/32 - 1 5/16	17/32 - 9/16	10

**SBX605 12-Point Set.** SBX1012 thru SBX2628 (5 pcs) (5/16" to 7/8") in storage tray.

## "S" Shaped

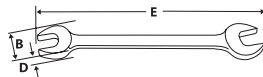
<b>mm</b>	<b>12</b>	<b>A</b>	<b>C</b>	<b>E</b>
10 - 12	<b>SBXM1012</b>	14 - 18	6 - 8	140
11 - 13	<b>SBXM1113</b>	16 - 19	7 - 8	155
14 - 15	<b>SBXM1415</b>	21 - 22	9 - 9	190
16 - 18	<b>SBXM1618</b>	24 - 27	10 - 11	173
17 - 19	<b>SBXM1719</b>	25 - 28	10 - 12	240

**SBXM605 Metric 12-Point Set.** SBXM1012 thru SBXM1719 (5 pcs) (7 to 17mm) in storage tray.

## Open End



LTA1618



LTA805K



LTAM811



LTAM1214

## Low Torque Slimline, 15° Offsets

<b>11</b>		<b>B</b>	<b>D</b>	<b>E</b>
3/8 - 7/16	<b>LTA1214</b>	25/32 - 29/32	3/32	9 1/2
7/16 - 1/2	<b>LTA1416</b>	29/32 - 1 1/32	5/32	9 1/2
1/2 - 9/16	<b>LTA1618</b>	1 1/32 - 1 5/32	5/32	9 1/2
5/8 - 11/16	<b>LTA2022</b>	1 9/32 - 1 13/32	5/32	9 1/2
3/4 - 13/16	<b>LTA2426</b>	1 17/32 - 1 11/16	5/32	9 1/2
3/4 - 7/8	<b>LTA2428</b>	1 17/32 - 1 25/32	5/32	9 1/2
15/16 - 1	<b>LTA3032</b>	1 29/32 - 2 1/32	5/32	9 1/2
1 1/16 - 1 1/8	<b>LTA3436</b>	2 5/32 - 2 9/32	1/4	12 1/4
1 1/4 - 1 5/16	<b>LTA4042</b>	2 17/32 - 2 21/32	1/4	12 1/4
1 3/8 - 1 7/16	<b>LTA4446</b>	2 25/32 - 2 29/32	1/4	12 1/4
1 1/2 - 1 5/8	<b>LTA4852</b>	3 1/16 - 3 9/32	9/32	14 1/4
1 11/16 - 1 7/8	<b>LTA5460</b>	3 13/32 - 3 17/32	9/32	14 1/4

**LTA812 Set.** LTA1214 thru LTA5460 (12 pcs) (3/8" to 1 7/8").

**LTA805K Set.** LTA1416 thru LTA3032 (except LTA2426) (5 pcs) (7/16" to 1") in C0507 Kit Bag.

## Low Torque Slimline, 15° Offsets

<b>mm</b>		<b>B</b>	<b>D</b>	<b>E</b>
6 - 7	<b>LTAM67</b>	13 - 15	3	165
8 - 10	<b>LTAM810</b>	17 - 21	3	165
10 - 11	<b>LTAM1011</b>	21 - 23	3	165
12 - 14	<b>LTAM1214</b>	25 - 29	4	241
13 - 15	<b>LTAM1315</b>	27 - 31	4	241
16 - 18	<b>LTAM1618</b>	33 - 37	4	241
17 - 19	<b>LTAM1719</b>	35 - 39	4	241
19 - 22	<b>LTAM1922</b>	39 - 45	4	241
21 - 24	<b>LTAM2124</b>	43 - 49	4	241
27 - 30	<b>LTAM2730</b>	55 - 61	6	311
32 - 36	<b>LTAM3236</b>	65 - 73	6	311

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**LTAM811 Metric Set.** LTAM67 thru LTAM3236 (11 pcs) (6 to 36mm).



# Open End Wrenches





VO1820B



VO806B

## Standard Length

		B	D	E
1/4 - 5/16	VO810B	17/32 - 21/32	5/32 - 5/32	4 1/16
5/16 - 3/8	VO1012B	21/32 - 25/32	5/32 - 3/16	4 21/32
3/8 - 7/16	VO1214B	25/32 - 29/32	3/16 - 7/32	5 5/16
7/16 - 1/2	VO1416B	29/32 - 1 1/16	7/32 - 1/4	5 15/16
1/2 - 9/16	VO1618B	1 1/16 - 1 5/32	1/4 - 9/32	6 19/32
9/16 - 5/8	VO1820B	1 5/32 - 1 5/16	9/32 - 9/32	7 9/32
5/8 - 11/16	VO2022B	1 5/16 - 1 13/32	9/32 - 5/16	7 15/16
5/8 - 3/4	VO2024B	1 5/16 - 1 9/16	9/32 - 11/32	8 9/32
11/16 - 3/4	VO2224B	1 13/32 - 1 9/16	5/16 - 11/32	8 5/8
3/4 - 13/16	VO2426B	1 9/16 - 1 21/32	11/32 - 3/8	9 11/32
3/4 - 7/8	VO2428B	1 9/16 - 1 13/16	11/32 - 3/8	9 21/32
13/16 - 7/8	VO2628B	1 21/32 - 1 13/16	3/8 - 3/8	10 1/32
7/8 - 15/16	VO2830B	1 13/16 - 1 29/32	3/8 - 13/32	10 3/4
15/16 - 1	VO3032B	1 29/32 - 2 1/32	13/32 - 13/32	11 15/32
1 11/16	VO3234B	2 1/32 - 2 5/32	13/32 - 7/16	12 7/32
1 1/16 - 1 1/4	VO3440B	2 5/32 - 2 17/32	7/16 - 1/2	12 15/16
1 1/8 - 1 3/16	VO3638B	2 5/16 - 2 13/32	7/16 - 15/32	13 23/32
1 1/4 - 1 5/16	VO4042B	2 17/32 - 2 21/32	1/2 - 1/2	15 1/4
1 3/8 - 1 7/16	VO4446B	2 13/16 - 2 29/32	17/32 - 17/32	16 7/8
1 1/2 - 1 5/8	VO4852B	3 1/16 - 3 5/16	9/16 - 19/32	18 29/32

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**VO820K Set.** VO810B thru VO4852B (except VO1922B) (20 pcs) (1/4" to 1 5/8") in C200 Kit Bag.

**VO806B Set.** VO810B, VO1214B, VO1618B, VO2022B, VO2426B, and VO2830B (6 pcs) (1/4" to 15/16") in storage tray.




DS1820A



DS809K

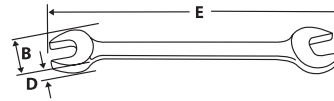
## Ignition, 15°/60° Offsets

A	B		C	D	E
1/8	1/8	DS88A	5/16 - 5/16	1/8	2 29/32
5/32	5/32	DS1010A	3/8 - 3/8	1/8	2 7/8
3/16	3/16	DS1212A	13/32 - 13/32	1/8	3 1/8
15/64	1/4	DS1516A	15/32 - 1/2	1/8	3 1/4
1/4	15/64	DS1615A	1/2 - 15/32	1/8	3 13/32
9/32	5/16	DS1820A	9/16 - 19/32	1/8	3 1/2
5/16	9/32	DS2018A	19/32 - 9/16	1/8	3 21/32
11/32	3/8	DS2224A	21/32 - 23/32	5/32	3 3/4
3/8	11/32	DS2422A	23/32 - 21/32	5/32	3 3/4

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**DS809K Set.** DS88A thru DS2422A (9 pcs) (1/8" to 3/8") in C0900A Kit Bag.

**DS806AK Set.** DS1516A thru DS2422A (6 pcs) (15/64" to 3/8") in C0605 Kit Bag.



VOM1214B

## Standard Length

		B	D	E
6 - 7	VOM67B	13 - 15	4 - 4	97
7 - 8	VOM78B	15 - 17	4 - 4	106
8 - 10	VOM810B	17 - 21	4 - 5	121
10 - 11	VOM1011B	21 - 23	5 - 6	136
11 - 13	VOM1113B	23 - 27	6 - 6	151
12 - 13	VOM1213B	25 - 27	6 - 6	157
12 - 14	VOM1214B	25 - 29	6 - 7	162
14 - 15	VOM1415B	29 - 31	7 - 7	178
16 - 18	VOM1618B	33 - 37	7 - 8	205
17 - 19	VOM1719B	35 - 38	8 - 9	216
19 - 22	VOM1922B	39 - 46	9 - 10	245
21 - 24	VOM124B	43 - 49	9 - 10	267
22 - 24	VOM2224B	46 - 49	10 - 10	273
27 - 30	VOM2730B	55 - 61	11 - 12	338
30 - 32	VOM3032B	61 - 65	12 - 12	368

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DSM89



DSM810K

## Ignition, 15°/60° Offsets

A	B		C	D	E
3.2	5.5	DSM3.25.5	8 - 11	3	74
5.5	3.2	DSM5.53.2	11 - 8	3	83
4	5	DSM45	9 - 11	3	77
5	4	DSM54	11 - 9	3	81
6	7	DSM67	12 - 14	3	85
7	6	DSM76	14 - 12	3	89
8	9	DSM89	15 - 17	3	93
9	8	DSM98	17 - 15	3	97
10	11	DSM1011	20 - 22	4	101
11	10	DSM1110	22 - 20	4	105

**DSM810K Set.** DSM3.25.5 thru DSM1110 (10 pcs) (3.2 to 11mm) in C1003A Kit Bag.



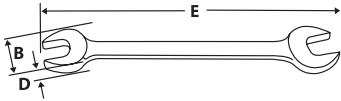
**WARNING**

• Read additional safety precautions on pages 534 to 537.



# Wrenches Open End

The ends on the Angle-Head Wrenches have been offset at 30° and 60° angles to the handle. Both ends are the same size to permit the use of one wrench in four different positions to gain additional turning angles.



VS24B



GVS24B



VSM5214B



VSM807B



VS807B



VSM814



VS828A



VS814A

## Four Way Angle Head

Head Size	Model	Head Type	B	D	E
1/4	VS8B	—	17/32	3/16	3 11/16
5/16	VS10B	—	21/32	3/16	4 1/4
11/32	VS11B	—	23/32	7/32	4 17/32
3/8	VS12B	—	25/32	7/32	4 27/32
7/16	VS14B	—	7/8	7/32	5 13/32
1/2	VS16B	GVS16B	1	1/4	5 31/32
9/16	VS18B	GVS18B	1 1/8	1/4	6 9/16
5/8	VS20B	GVS20B	1 1/4	9/32	7 1/8
11/16	VS22B	GVS22B	1 3/8	9/32	7 11/16
3/4	VS24B	GVS24B	1 15/32	9/32	8 9/32
13/16	VS26B	GVS26B	1 19/32	5/16	8 27/32
7/8	VS28B	GVS28B	1 23/32	5/16	9 13/32
15/16	VS30B	GVS30B	1 27/32	11/32	10
1	VS32B	GVS32B	1 31/32	11/32	10 9/16
1 1/16	VS34B	GVS34B	2 3/32	11/32	11 1/8
1 1/8	VS36B	—	2 3/16	3/8	11 23/32
1 3/16	VS38B	—	2 11/32	3/8	12 9/32
1 1/4	VS40B	GVS40B	2 7/16	13/32	12 7/8
1 5/16	VS42B	—	2 9/16	13/32	13 7/16
1 3/8	VS44B	—	2 11/16	13/32	14
1 7/16	VS46B	—	2 27/32	7/16	14 19/32
1 1/2	VS48B	—	2 15/16	7/16	15 5/32
1 5/8	VS52B	—	3 7/32	15/32	16 5/16
1 11/16	VS54B	—	3 11/32	1/2	16 7/8
1 3/4	VS56B	—	3 15/32	1/2	17 7/16
1 13/16	VS58B	—	2 19/32	1/2	18
1 7/8	VS60B	—	2 23/32	17/32	18 19/32
2	VS64B	—	2 31/32	9/16	19 3/4

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**VS828A Set.** VS8B thru VS64B (28 pcs) (1/4" to 2").

**VS814A Set.** VS12B thru VS40B (except VS38B) (14 pcs) (3/8" to 1 1/4").

**VS807B Set.** VS12B thru VS24B (7 pcs) (3/8" to 3/4") in storage tray.

## Four Way Angle Head

Head Size (mm)	Model	B	D	E
10	VSM5210B	20	6	127
11	VSM5211B	22	6	137
12	VSM5212B	24	6	145
13	VSM5213B	26	6	154
14	VSM5214B	28	6	164
15	VSM5215B	30	7	173
16	VSM5216B	31	7	181
17	VSM5217B	34	7	191
18	VSM5218B	36	7	200
19	VSM5219B	37	7	210
21	VSM5221B	41	8	228
22	VSM5222B	44	8	239
24	VSM5224B	47	8	254
27	VSM5227B	53	9	283

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**VSM814 Metric Set.** VSM5210B thru VSM5227B (14 pcs) (10 to 27mm).

**VSM807B Metric Set.** VSM5210B thru VSM5215B plus VSM5217B (7 pcs) (10 to 15mm plus 17mm) in storage tray.

# Open End Wrenches



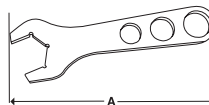
COE18



COEH



ANWR12



ANWR708

## Non-Conductive Composite Open End Heads

Each tool is individually tested to ensure protection up to 1000VAC and 1500VAC. Meets IEC 60900 and ASTM 1505 standards for insulating hand tools. Exceeds ASME/ANSI B107.10M strength requirements for standard steel tools. UL Classified.

#		A	B
3/8	COE12	25/32	5/32
7/16	COE14	29/32	5/32
1/2	COE16	1 1/16	5/32
9/16	COE18	1 1/16	5/32
5/8	COE20	1 5/16	5/32
11/16	COE22	1 7/16	5/32
3/4	COE24	1 19/32	5/32
13/16	COE26	1 23/32	3/8
7/8	COE28	1 23/32	3/8

**COEH Handle.** Use with COE Series interchangeable ball detent wrench heads only. DO NOT use handle with QJO Series Torque Wrench Heads with locking pin design. Features the comfort and control of a Snap-on® screwdriver style handle. Shank diameter of 1", overall length of 10 3/4".

## Aluminum Open End (for AN Fittings)

Securely tighten expensive "AN" fittings without damage in aircraft, marine, industrial applications as well as race and show cars. Machined from aluminum billet to exacting tolerances. Made from quality heat treated hardened aluminum. Corner reliefs on open end wrenches prevent rounding the corners of the fitting. Handle length designed to apply appropriate torque without over tightening. Open end wrenches are color coded and stamped for quick size identification.

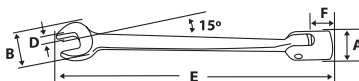
#		Color	A
No. 3	1/2	ANWR3 Silver	4 (101.6)
No. 4	9/16	ANWR4 Black	4 3/4 (120.7)
No. 6	11/16	ANWR6 Light Blue	5 3/4 (146.1)
No. 8	7/8	ANWR8 Pink	5 3/4 (146.1)
No. 10	1	ANWR10 Gold	7 1/8 (181.0)
No. 12	1 1/4	ANWR12 Red	7 1/2 (190.5)
No. 16	1 1/2	ANWR16 Brass	8 3/4 (222.3)
No. 20	1 13/16	ANWR20 Dark Blue	9 1/4 (237.0)

**ANWR708 Wrench Set.** ANWR3 thru ANWR20 (8 pcs) (No. 3 to No. 20) (1/2" to 1 13/16") in heavy gauge vinyl storage pouch.

## FLANK DRIVE® Flex Head



FHO18B



FHOM14B



FHO607B



FHO611B



FHOM612B



FHOM606B

## Flex Combination

#		A	B	D	E	F
1/4	FHO8B	3/8	17/32	1/8	4 15/16	7/32
5/16	FHO10B	15/32	21/32	3/16	5 31/32	1/4
3/8	FHO12B	9/16	17/32	7/32	6 1/2	1/4
7/16	FHO14B	5/8	29/32	7/32	7 1/8	9/32
1/2	FHO16B	23/32	1 1/16	1/4	7 13/16	11/32
9/16	FHO18B	25/32	1 3/16	9/32	8 3/8	11/32
5/8	FHO20B	29/32	1 5/16	9/32	9	3/8
11/16	FHO22B	1	1 7/16	9/32	9 11/16	13/32
3/4	FHO24B	1 1/32	1 1/2	5/16	10 1/4	15/32
13/16	FHO26B	1 1/32	1 23/32	5/16	10 5/16	1/2
7/8	FHO28B	1 3/16	1 27/32	5/16	10 15/32	9/16

**FHO611B 12-Point Set.** FHO8B thru FHO28B (11 pcs) (1/4" to 7/8").

**FHO607B 12-Point Set.** FHO12B thru FHO24B (7 pcs) (3/8" to 3/4") in storage tray.

## Flex Combination

mm		A	B	D	E	F
8	FHOM8B	12	17	5	146	6
9	FHOM9B	13	18	5	156	6
10	FHOM10B	14	20	5	166	6
11	FHOM11B	16	23	6	181	7
12	FHOM12B	17	30	6	198	9
13	FHOM13B	19	27	7	205	9
14	FHOM14B	20	30	7	213	9
15	FHOM15B	21	31	7	224	10
16	FHOM16B	23	33	7	229	10
17	FHOM17B	24	37	8	246	10
18	FHOM18B	24	38	8	254	11
19	FHOM19B	26	40	8	261	12

**FHOM612B Metric 12-Point Set.** FHOM8B thru FHOM19B (12 pcs) (8 to 19mm).

**FHOM606B Metric 12-Point Set.** FHOM10B, FHOM12B, FHOM13B, FHOM14B, FHOM15B, and FHOM17B (6 pcs) (10 to 17mm) in storage tray.

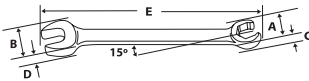


### WARNING

- Use only moderate force on slimline wrenches.
- Read additional safety precautions on pages 534 to 537.



# Wrenches FLANK DRIVE® Flare Nut



RXS605B



RXS20B



RXSM605B



RXSM14B

## Open End and Flare Nut

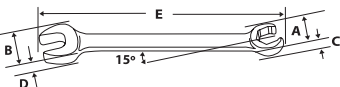
$\frac{11}{16}$	6	A	B	C	D	E
$\frac{3}{8}$	<b>RXS12B</b>	$\frac{3}{4}$	$\frac{25}{32}$	$\frac{5}{16}$	$\frac{5}{16}$	$5 \frac{27}{32}$
$\frac{7}{16}$	<b>RXS14B</b>	$\frac{27}{32}$	$\frac{29}{32}$	$\frac{11}{32}$	$\frac{11}{32}$	$6 \frac{3}{8}$
$\frac{1}{2}$	<b>RXS16B</b>	$\frac{29}{32}$	$1 \frac{1}{16}$	$\frac{3}{8}$	$\frac{3}{8}$	$6 \frac{7}{8}$
$\frac{9}{16}$	<b>RXS18B</b>	1	$1 \frac{5}{32}$	$\frac{13}{32}$	$\frac{13}{32}$	$7 \frac{13}{32}$
$\frac{5}{8}$	<b>RXS20B</b>	$1 \frac{3}{32}$	$1 \frac{5}{16}$	$\frac{7}{16}$	$\frac{7}{16}$	$7 \frac{15}{16}$

RXS605B 6-Point Set. RXS12B thru RXS20B (5 pcs) ( $\frac{3}{8}$ " to  $\frac{5}{8}$ " in storage tray.

## Open End and Flare Nut

mm	6	A	B	C	D	E
8	<b>RXSM8B</b>	17	17	7	7	135
9	<b>RXSM9B</b>	18	19	7	7	144
10	<b>RXSM10B</b>	20	21	8	8	152
11	<b>RXSM11B</b>	21	23	9	9	162
12	<b>RXSM12B</b>	22	25	9	9	169
13	<b>RXSM13B</b>	24	27	9	9	178
14	<b>RXSM14B</b>	25	29	10	10	186
15	<b>RXSM15B</b>	26	31	10	10	194
16	<b>RXSM16B</b>	27	33	11	11	202
17	<b>RXSM17B</b>	29	35	11	11	211
18	<b>RXSM18B</b>	30	37	12	12	219
19	<b>RXSM19B</b>	32	39	12	12	228
20	<b>RXSM20B</b>	33	41	14	14	235

RXSM605B Metric 6-Point Set. RXSM10B thru RXSM14B (5 pcs) (10 to 14mm) in storage tray.



RXFS605B



RXFS1618B



RXFMS606B



RXFMS1314B

## Double End

$\frac{11}{16}$	6	A	C	E
$\frac{1}{4} - \frac{5}{16}$	<b>RXFS810B</b>	$\frac{19}{32} - \frac{21}{32}$	$\frac{1}{4} - \frac{9}{32}$	$4 \frac{27}{32}$
$\frac{3}{8} - \frac{7}{16}$	<b>RXFS1214B</b>	$\frac{3}{4} - \frac{27}{32}$	$\frac{5}{16} - \frac{11}{32}$	$5 \frac{13}{16}$
$\frac{1}{2} - \frac{9}{16}$	<b>RXFS1618B</b>	$\frac{29}{32} - 1$	$\frac{3}{8} - \frac{13}{32}$	$6 \frac{13}{16}$
$\frac{5}{8} - \frac{11}{16}$	<b>RXFS2022B</b>	$1 \frac{3}{32} - 1 \frac{5}{32}$	$\frac{7}{16} - \frac{15}{32}$	$7 \frac{3}{4}$
$\frac{3}{4} - \frac{13}{16}$	<b>RXFS2426B</b>	$1 \frac{1}{4} - 1 \frac{5}{16}$	$\frac{1}{2} - \frac{17}{32}$	$8 \frac{25}{32}$
$\frac{3}{4} - 1$	<b>RXFS2432B</b>	$1 \frac{1}{4} - 1 \frac{9}{16}$	$\frac{1}{2} - \frac{9}{8}$	$9 \frac{1}{2}$
$\frac{7}{8} - 1 \frac{1}{8}$	<b>RXFS2836B</b>	$1 \frac{13}{32} - 1 \frac{3}{4}$	$\frac{9}{16} - \frac{11}{16}$	$10 \frac{1}{2}$

RXFS605B 6-Point Set. RXFS810B thru RXFS2426B (5 pcs) ( $\frac{1}{4}$ " to  $\frac{13}{16}$ " in storage tray.

## Double End

mm	6	A	C	E
9 - 11	<b>RXFMS911B</b>	18 - 21	7 - 8	145
10 - 12	<b>RXFMS1012B</b>	20 - 22	8 - 9	153
13 - 14	<b>RXFMS1314B</b>	24 - 25	9 - 10	173
15 - 17	<b>RXFMS1517B</b>	26 - 29	10 - 11	193
16 - 18	<b>RXFMS1618B</b>	28 - 30	11 - 12	200
19 - 21	<b>RXFMS1921B</b>	32 - 34	12 - 13	223

RXFMS606B Metric 6-Point Set. RXFMS911B thru RXFMS1921B (6 pcs) (9 to 21mm) in storage tray.

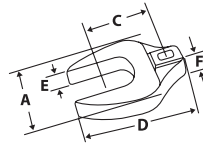
# 1/4" Drive Crowfoot Wrenches



TMC014



106TMCO



107TMCOM

## Open End

$\frac{11}{16}$		A	C	E	F	D
1/4	TMC08	17/32	17/32	1/4	1/4	31/32
5/16	TMC010	21/32	9/16	1/4	1/4	1 1/32
3/8	TMC012	25/32	19/32	1/4	1/4	1 3/32
7/16	TMC014	7/8	5/8	5/16	5/16	1 5/32
1/2	TMC016	1 1/32	21/32	5/16	5/16	1 1/4
9/16	TMC018	1 1/8	11/16	5/16	5/16	1 9/32

106TMCO Set. TMC08 thru TMC018 (6 pcs) (1/4" to 9/16") in storage tray.

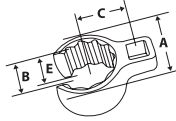
## Open End

mm		A	C	E	F	D
7	TMCOM7	13.5	13.2	6.6	6.6	24.4
8	TMCOM8	16.8	14.1	6.6	6.6	25.9
10	TMCOM10	19.8	14.6	6.6	6.6	27.5
11	TMCOM11	22.4	16.0	7.9	7.9	29.4
12	TMCOM12	24.4	16.5	7.9	7.9	30.6
13	TMCOM13	26.4	16.6	7.9	7.9	31.2
14	TMCOM14	29.0	17.7	7.9	7.9	32.9

107TMCOM Metric Set. TMCOM7 thru TMCOM14 (7 pcs) (7 to 14mm) in storage tray.



TMRX12



AN85088B

## Shallow, FLANK DRIVE® Flare Nut

$\frac{11}{16}$	12	A	B	C	E	Maximum Recommended Working Torque, in. lb.
1/4	TMRX8	13/32	1/8	31/32	1/4	75
5/16	TMRX10	1/2	3/16	31/32	1/4	75
3/8	TMRX12	19/32	1/4	31/32	1/4	75

ASME/ANSI B107.21-1992

## Deep, FLANK DRIVE® Flare Nut

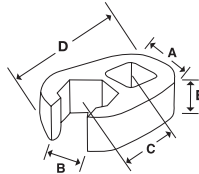
$\frac{11}{16}$	12	B	C	E	Maximum Recommended Working Torque, in. lb.
3/8	AN85086B	9/32	1/2	1/2	75
7/16	AN85087B	11/32	9/16	9/16	200
1/2	AN85088B	13/32	19/32	9/16	200
9/16	AN85089B	15/32	5/8	9/16	200

ASME/ANSI B107.21-1992

# 3/8" Drive Crowfoot



FRH160S



FRHM20



207SFRH



210FRHMA

## FLANK DRIVE® Flare Nut

$\frac{11}{16}$	6	A	B	C	D	E	Maximum Recommended Working Torque, in. lb.
3/8	FRH120S	13/32	1/4	9/16	1 11/32	3/8	150
7/16	FRH140S	29/32	5/16	9/16	1 13/32	3/8	200
1/2	FRH160S	1	1 1/32	9/16	1 7/16	3/8	250
9/16	FRH180S	1 1/8	3/8	3/4	1 5/8	7/16	300
5/8	FRH200S	1 1/8	7/16	3/4	1 5/8	7/16	375
11/16	FRH220S	1 5/16	1/2	13/16	1 25/32	1/2	450
3/4	FRH240S	1 5/16	9/16	13/16	1 25/32	1/2	525
13/16	FRH260S	1 5/8	5/8	7/8	1 31/32	9/16	600
7/8	FRH280S	1 5/8	23/32	7/8	1 31/32	9/16	675
15/16	FRH300S	1 7/8	11/16	15/16	2 3/16	5/8	750
1	FRH320S	1 7/8	3/4	15/16	2 3/16	5/8	825

207SFRH 6-Point Set. FRH120S thru FRH240S (7 pcs) (3/8" to 3/4") in storage tray.

## FLANK DRIVE® Flare Nut

mm	6	A	B	C	D	E	Maximum Recommended Working Torque, in. lb.
9	FRHM9	22.4	6.7	14.2	33.3	9.7	150
10	FRHM10	22.9	7.4	14.2	35.3	9.7	200
11	FRHM11	22.9	8.3	14.2	35.3	9.7	200
12	FRHM12	25.4	9.0	14.2	36.6	9.7	250
13	FRHM13	25.4	9.4	14.2	36.6	9.7	250
14	FRHM14	28.4	10.5	18.8	40.9	11.2	375
15	FRHM15	28.4	11.2	18.8	40.9	11.2	375
16	FRHM16	28.4	11.7	18.8	40.9	11.2	375
17	FRHM17	33.3	12.6	20.6	44.7	12.7	525
18	FRHM18	33.3	13.6	20.6	44.7	12.7	525
19	FRHM19	33.3	14.7	20.6	44.7	12.7	525
20	FRHM20	41.1	15.2	22.1	50.3	14.2	600
21	FRHM21	41.1	16.3	22.1	50.3	14.2	650
22	FRHM22	41.1	17.0	22.1	50.3	14.2	650

210FRHMA Set. FRHM10 thru FRHM19 (10 pcs) (10 to 19 mm) in storage tray.

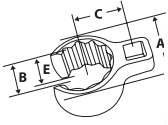


### WARNING



- Use only moderate force on crowfoot and flare nut wrenches.
- Read additional safety precautions on pages 534 to 537.

# Wrenches 3/8" Drive Crowfoot



208AN

## Deep, FLANK DRIVE® Flare Nut



12

		A	B	C	E	Maximum Recommended Working Torque, in. lb.
5/8	<b>AN850810B</b>	15/16	1/2	23/32	23/32	250
11/16	<b>AN850811B</b>	1 1/32	17/32	25/32	23/32	310
3/4	<b>AN850812B</b>	1 1/8	9/16	13/16	3/4	450
13/16	<b>AN850813B</b>	1 7/32	5/8	7/8	3/4	450
7/8	<b>AN850814B</b>	1 5/16	25/32	15/16	25/32	625
15/16	<b>AN850815B</b>	1 3/8	3/4	31/32	25/32	625
1	<b>AN850816B</b>	1 7/16	3/4	1	13/16	625
1 1/16	<b>AN850817B</b>	1 17/32	25/32	1 1/32	13/16	625

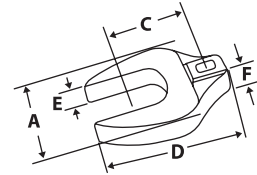
ASME/ANSI B107.21-1992

208AN Set. AN850810B thru AN850817B (8 pcs) (5/8" to 1 1/16").

## Open End



			A	C	E	F	D	Maximum Recommended Working Torque, in. lb.
3/8	<b>FC012A</b>	<b>GFC012A</b>	7/8	23/32	7/32	33/64	1 19/64	75
7/16	<b>FC014A</b>	<b>GFC014A</b>	7/8	41/64	7/32	33/64	1 17/64	75
1/2	<b>FC016A</b>	<b>GFC016A</b>	1 1/32	51/64	7/32	33/64	1 29/64	105
9/16	<b>FC018A</b>	<b>GFC018A</b>	1 1/4	59/64	7/32	33/64	1 5/8	105
5/8	<b>FC020A</b>	<b>GFC020A</b>	1 1/4	55/64	7/32	33/64	1 19/32	125
11/16	<b>FC022A</b>	<b>GFC022A</b>	1 9/16	1 3/32	7/32	33/64	1 59/64	150
3/4	<b>FC024A</b>	<b>GFC024A</b>	1 9/16	1 1/32	7/32	33/64	1 57/64	190
13/16	<b>FC026A</b>	<b>GFC026A</b>	1 23/32	1 3/32	9/32	19/32	2	245
7/8	<b>FC028A</b>	<b>GFC028A</b>	1 23/32	1 1/32	9/32	19/32	1 31/32	300
15/16	<b>FC030A</b>	<b>GFC030A</b>	2	1 5/32	11/32	21/32	2 1/8	360
1	<b>FC032A</b>	<b>GFC032A</b>	2	1 5/64	11/32	21/32	2 3/32	420
1 1/16	<b>FC34B</b>	—	1 23/32	1 3/64	3/8	39/64	—	465
1 1/8	<b>FC36A</b>	—	1 29/32	1 5/32	3/8	39/64	—	510
1 3/16	<b>FC38A</b>	—	1 29/32	1 13/64	3/8	39/64	—	510
1 1/4	<b>FC40A</b>	—	2 5/32	1 15/64	3/8	41/64	—	555
1 5/16	<b>FC42A</b>	—	2 5/32	1 17/64	3/8	41/64	—	600
1 3/8	<b>FC44A</b>	—	2 3/8	1 19/64	3/8	41/64	—	680
1 1/2	<b>FC46A</b>	—	2 3/8	1 11/32	3/8	41/64	—	760
1 5/8	<b>FC48A</b>	—	2 17/32	1 3/8	3/8	41/64	—	795
1 7/8	<b>FC50A</b>	—	2 17/32	1 13/32	3/8	41/64	—	795
1 9/8	<b>FC52A</b>	—	2 21/32	1 29/64	3/8	41/64	—	820
1 11/16	<b>FC54A</b>	—	2 21/32	1 31/64	3/8	41/64	—	860
1 3/4	<b>FC56A</b>	—	2 7/8	1 33/64	3/8	41/64	—	910
1 13/16	<b>FC58A</b>	—	2 7/8	1 35/64	3/8	41/64	—	960
1 7/8	<b>FC60A</b>	—	3 5/32	1 19/32	3/8	41/64	—	1040
1 15/16	<b>FC62A</b>	—	3 5/32	1 5/8	3/8	41/64	—	1040
2	<b>FC64A</b>	—	3 13/32	1 23/32	1/2	45/64	—	1115
2 1/16	<b>FC66A</b>	—	3 13/32	1 3/4	1/2	45/64	—	1190
2 1/8	<b>FC68A</b>	—	3 19/32	1 25/32	1/2	45/64	—	1190
2 3/16	<b>FC70A</b>	—	3 19/32	1 53/64	1/2	45/64	—	1275
2 1/4	<b>FC72A</b>	—	3 27/32	1 15/16	1/2	45/64	—	1370
2 5/16	<b>FC74A</b>	—	3 27/32	1 15/16	1/2	45/64	—	1370
2 3/8	<b>FC76A</b>	—	4 3/32	2 1/16	1/2	45/64	—	1450
2 7/16	<b>FC78A</b>	—	4 3/32	2 1/8	1/2	45/64	—	1555
2 1/2	<b>FC80A</b>	—	4 9/32	2 11/64	1/2	45/64	—	1555
2 9/16	<b>FC82A</b>	—	4 9/32	2 11/64	1/2	45/64	—	1660
2 5/8	<b>FC84A</b>	—	4 17/32	2 21/64	1/2	45/64	—	1760
2 11/16	<b>FC86A</b>	—	4 17/32	2 3/8	1/2	45/64	—	1760
2 3/4	<b>FC88A</b>	—	4 23/32	2 7/16	1/2	45/64	—	1900
2 13/16	<b>FC90A</b>	—	4 23/32	2 7/32	1/2	45/64	—	2075
2 7/8	<b>FC92A</b>	—	5 3/32	2 41/64	1/2	45/64	—	2075
2 15/16	<b>FC94A</b>	—	5 3/32	2 43/64	1/2	45/64	—	2200
3	<b>FC96A</b>	—	5 3/32	2 23/32	1/2	45/64	—	2200



FCO32A



GFCO32A

ASME/ANSI B107.21, Type 2, Class 2, Style A

### Chrome Sets:

**242FC Set.** FC014A thru FC96A (42 pcs) (7/16" to 3").

**226FC Set.** FC014A thru FC64A (26 pcs) (7/16" to 2").

**214FC Set.** FC014A thru FC40A (14 pcs) (7/16" to 1 1/4").

**211FCOA Set.** FC012A thru FCO32A (11 pcs) (3/8" to 1") in storage tray.

### Industrial Finish Set:

**211GFCO Industrial Set.** GFCO12A thru GFCO32A (11 pcs) (3/8" to 1").



214FC



211GFCO

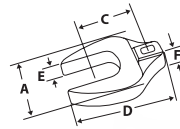
# 3/8" Drive Crowfoot Wrenches

## Open End

mm		A	C	E	F	D	Maximum Recommended Working Torque, in. lb.
9	FCOM9A	22.4	18.8	5.3	13.2	33.3	75
10	FCOM10A	22.4	17.6	5.3	13.2	33.0	75
11	FCOM11A	22.4	16.6	5.3	13.2	32.3	75
12	FCOM12A	26.2	21.0	5.3	13.2	37.3	105
13	FCOM13A	26.2	19.8	5.3	13.2	36.8	105
14	FCOM14A	26.2	18.6	5.3	13.2	36.1	105
15	FCOM15A	31.8	22.7	5.3	13.2	40.9	125
16	FCOM16A	31.8	21.7	5.3	13.2	40.4	125
17	FCOM17A	31.8	20.5	5.3	13.2	39.9	125
18	FCOM18A	38.4	27.2	6.4	13.2	48.5	170
19	FCOM19A	38.4	26.2	6.4	13.2	48.0	170
20	FCOM20A	38.4	25.0	6.4	13.2	48.0	170
21	FCOM21A	43.7	27.4	7.1	15.0	48.8	250
22	FCOM22A	43.7	26.4	7.1	15.0	50.0	250
23	FCOM23A	50.5	30.1	8.9	16.8	54.4	390
24	FCOM24A	50.5	28.8	8.9	16.8	53.8	400

**216FCOM Metric Set.** FCOM9A thru FCOM24A (16 pcs) (9 to 24mm).

**210FCOMA Metric Set.** FCOM10A thru FCOM19A (10 pcs) (10 to 19mm) in storage tray.



FCOM20A



210FCOMA



A277

**A277 Crowfoot Holder.** For 3/8" drive crowfoot wrenches. Conveniently organize and store your crowfoot wrenches on this holder. Two piece design snaps apart for access to desired size. 8 3/4" long. U.S. Patent No. 4,497,405.



ADCF8

## Adjustable

Stock No.	Drive Size	Maximum Recommended Working Torque, in. lb.
ADCF8	3/8	2,849

**ADCF8 Adjustable Crowfoot Wrench.** Features metric and fractional scales. Opening range from 0 to 1.14" (0 to 29mm). Lateral side nut designed to work on difficult access fasteners and minimize dirt accumulation.

## 3/8" Drive Ratcheting Crowfoot



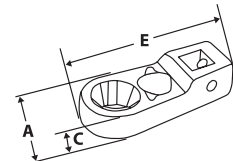
BFCR16A



BFCR708A



BFCRM712A



BFCRM14A

## Ratcheting

mm		A	C	E
5/16	BFCR10A	11/16	1/4	2
3/8	BFCR12A	27/32	5/16	2 1/8
7/16	BFCR14A	7/8	11/32	2 1/8
1/2	BFCR16A	31/32	13/32	2 1/4
9/16	BFCR18A	1 1/16	13/32	2 3/8
5/8	BFCR20A	1 3/16	7/16	2 5/8
11/16	BFCR22A	1 1/4	15/32	2 5/8
3/4	BFCR24A	1 7/16	1/2	2 7/8

**BFCR708A Crowfoot Wrench Set.** BFCR10A thru BFCR24A (8 pcs) (5/16" to 3/4").

## Ratcheting

mm		A	C	E
8	BFCRM8A	17.8	6.5	49.3
9	BFCRM9A	19.5	7.4	50.8
10	BFCRM10A	21.5	8.0	53.8
11	BFCRM11A	22.0	8.5	53.8
12	BFCRM12A	23.5	9.0	57.2
13	BFCRM13A	25.0	10.0	57.2
14	BFCRM14A	27.0	10.0	60.3
15	BFCRM15A	28.5	11.0	63.5
16	BFCRM16A	30.5	11.0	66.7
17	BFCRM17A	34.5	12.0	68.3
18	BFCRM18A	36.5	12.0	71.4
19	BFCRM19A	36.5	12.9	73.0

**BFCRM712A Metric Crowfoot Wrench Set.** BFCRM8A thru BFCRM19A (12 pcs) (8 to 19mm).




## WARNING

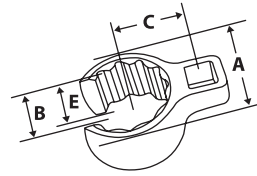
- Use only moderate force on crowfoot and flare nut wrenches.
- Read additional safety precautions on pages 534 to 537.



# Wrenches 1/2" Drive Crowfoot

## Deep, FLANK DRIVE® Flare Nut

		12					Maximum Recommended Working Torque, in. lb.
		A	B	C	E		
1 1/8	AN850818B	1 5/8	27/32	1 5/32	7/8		825
1 3/16	AN850819B	1 11/16	29/32	1 3/16	7/8		825
1 1/4	AN850820B	1 25/32	15/16	1 7/32	7/8		825
1 5/16	AN850821B	1 27/32	31/32	1 1/4	7/8		900
1 3/8	AN850822B	1 15/16	1 1/16	1 5/16	15/16		900
1 7/16	AN850823B	2	1 1/16	1 11/32	15/16		900
1 1/2	AN850824B	2 3/32	1 1/8	1 3/8	15/16		900
1 9/16	AN850825B	2 5/32	1 5/32	1 13/32	15/16		900
1 5/8	AN850826B	2 7/32	1 7/32	1 7/16	15/16		1100
1 11/16	AN850827B	2 5/16	1 5/16	1 1/2	1 1/32		1100
1 3/4	AN850828B	2 3/8	1 5/16	1 9/16	1 1/32		1150
1 13/16	AN850829B	2 15/32	1 11/32	1 19/32	1 1/32		1200
1 7/8	AN850830B	2 9/16	1 3/8	1 21/32	1 1/16		1200
1 15/16	AN850831B	2 5/8	1 7/16	1 11/16	1 1/16		1200
2	AN850832B	2 23/32	1 9/16	1 23/32	1 1/16		1400
2 1/8	AN850834B	2 7/8	1 9/16	1 13/16	1 1/8		1450
2 3/16	AN850835B	2 15/16	1 21/32	1 27/32	1 1/8		1500
2 1/4	AN850836B	3 1/32	1 11/16	1 7/8	1 1/8		1500
2 3/8	AN850838B	3 3/16	1 13/16	1 31/32	1 3/16		1600
2 7/16	AN850839B	3 1/4	1 13/16	2	1 3/16		1650
2 9/16	AN850841B	3 7/16	1 29/32	2 3/32	1 9/32		1750
2 5/8	AN850842B	3 1/2	2 1/16	2 1/8	1 9/32		1800
2 11/16	AN850843B	3 19/32	2 1/16	2 5/32	1 9/32		1800
2 3/4	AN850844B	3 21/32	2 1/16	2 7/32	1 9/32		1850
3 1/8	AN850850B	4 1/8	2 5/16	2 7/16	1 5/16		2000



AN850818B

ASME/ANSI B107.21-1992

315AN 12-Point Set. AN850818B thru AN850832B (15 pcs) (1 1/8" to 2").



315AN





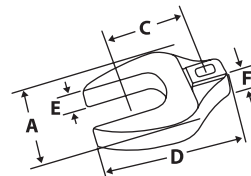
SC034



314SCO

## Open End

							Maximum Recommended Working Torque, in. lb.
		A	C	E	F		
1 1/16	SC034	2 3/32	1 3/4	3/8	5/8		2000
1 1/8	SC036	2 7/32	1 3/4	3/8	5/8		2100
1 3/16	SC038	2 11/32	1 3/4	13/32	5/8		2200
1 1/4	SC040	2 15/32	2	13/32	5/8		2300
1 5/16	SC042	2 19/32	2	7/16	5/8		2400
1 3/8	SC044	2 23/32	2	7/16	5/8		2500
1 7/16	SC046	2 27/32	2	7/16	5/8		2600
1 1/2	SC048	3 31/32	2	15/32	5/8		2900
1 5/8	SC052	3 7/32	1 31/32	1/2	5/8		3400
1 11/16	SC054	3 11/32	2 3/16	1/2	5/8		3700
1 3/4	SC056	3 15/32	2 3/16	17/32	5/8		3900
1 13/16	SC058	3 19/32	2 3/16	17/32	5/8		4100
1 7/8	SC060	3 23/32	2 3/16	9/16	5/8		4300
2	SC064	3 31/32	2 7/32	9/16	5/8		5000



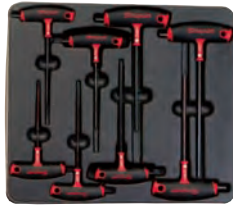
314SCO Set. SC034 thru SC064 (14 pcs) (1 1/16" to 2").



# Combination T and L-Shape Wrenches **Wrenches**



AWSG12



AWSG800

## Hex

Hex	Red Handle	T-Length, inches	Length, inches
3/32	AWSG06	3 7/8	6
7/64	AWSG07	3 7/8	6
1/8	AWSG08	3 7/8	6
9/64	AWSG09	3 7/8	6
5/32	AWSG10	3 7/8	7 3/8
3/16	AWSG12	4 3/4	7 3/4
7/32	AWSG14	4 3/4	7 3/4
1/4	AWSG16	4 3/4	9 5/8
5/16	AWSG20	4 3/4	9 5/8
3/8	AWSG24	4 3/4	9 5/8

**AWSG800 Set.** AWSG06 thru AWSG16 (8 pcs) (3/32" to 1/4") in storage tray.



AWBSG12



AWBSG800

## Ball Hex

Ball Hex	Red Handle	T-Length, inches	Length, inches
3/32	AWBSG06	3 7/8	6
7/64	AWBSG07	3 7/8	6
1/8	AWBSG08	3 7/8	6
9/64	AWBSG09	3 7/8	6
5/32	AWBSG10	3 7/8	7 3/8
3/16	AWBSG12	4 3/4	7 3/4
7/32	AWBSG14	4 3/4	7 3/4
1/4	AWBSG16	4 3/4	9 5/8
5/16	AWBSG20	4 3/4	9 5/8
3/8	AWBSG24	4 3/4	9 5/8

**AWBSG800 T and L-Shape Ball Hex Wrench Set.** AWBSG06 thru AWBSG16 (8 pcs) (3/32" to 1/4") in storage tray.

## TORX®

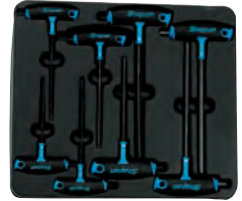
TORX®	Green Handle	T-Length, inches	Length, inches
T6	AWSGT6	3 7/8	6
T7	AWSGT7	3 7/8	6
T8	AWSGT8	3 7/8	6
T9	AWSGT9	3 7/8	6
T10	AWSGT10	3 7/8	6
T15	AWSGT15	3 7/8	7 3/8
T20	AWSGT20	3 7/8	7 3/8
T25	AWSGT25	4 3/4	7 5/8
T27	AWSGT27	4 3/4	7 5/8
T30	AWSGT30	4 3/4	9 5/8
T40	AWSGT40	4 3/4	9 5/8
T45	AWSGT45	4 3/4	9 3/4
T50	AWSGT50	4 3/4	9 3/4

**AWSGT800 TORX® Set.** AWSGT10 thru AWSGT45 (8 pcs) (T10 to T45) in storage tray.

Ergonomic, Soft Grip handle - provides comfort during repetitive tasks, delivers superior turning power, and allows maximum pressure to be applied when loosening difficult fasteners with both "T" and "L" applications. Blades are constructed from high-strength steel and hardened for durability, chrome plated for easy cleanup and resistance to corrosion. Blade tips are black oxide coated to prevent chipping and to help maintain a secure fastener engagement. Short Blade provides maximum torque for tight quarters. Long Blade promotes quick fastener turning in difficult access situations. Hole in Handle for hanging tool or tether. Color coded handles identify tool configuration at a glance.



AWSGM5



AWSGM800

## Hex

Hex	Blue Handle	T-Length, mm	Length, mm
2	AWSGM2	95	152
2.5	AWSGM2.5	95	152
3	AWSGM3	98	152
4	AWSGM4	98	187
5	AWSGM5	117	187
6	AWSGM6	117	246
8	AWSGM8	117	246
10	AWSGM10	124	248

**AWSGM800 Metric Set.** AWSGM2 thru AWSGM10 (8 pcs) (2 to 10mm) in storage tray.



AWBSGM6



AWBSGM800

## Ball Hex

Ball Hex	Blue Handle	T-Length, mm	Length, mm
2	AWBSGM2	95	152
2.5	AWBSGM2.5	95	152
3	AWBSGM3	98	152
4	AWBSGM4	98	187
5	AWBSGM5	117	187
6	AWBSGM6	117	246
8	AWBSGM8	117	246
10	AWBSGM10	124	248

**AWBSGM800 Metric T and L-Shape Ball Hex Wrench Set.** AWBSGM2 thru AWBSGM10 (8 pcs) (2 to 10mm) in storage tray.



AWSGT20



AWSGT800

## WARNING

- Use only moderate force on crowfoot and flare nut wrenches.
- Frequently inspect, clean, and lubricate ratchet mechanism with light oil.
- Read additional safety precautions on pages 534 to 537.

# Wrenches T-Shaped

Coated grip handle provides extra comfort during repetitive tasks while allowing maximum pressure to be applied. Blades are constructed from high-strength steel and hardened for durability. Black oxide coating helps prevent chipping and maintain a secure fastener engagement. Blade length of 9" for quick fastener turning and easier reach to limited access fasteners.



## Ball Hex / T-Handle, inches

Hex Size	Stock No.	Handle	Length, inches
3/32	AWBCG1606	Red	9
7/64	AWBCG1607	Red	9
1/8	AWBCG1608	Red	9
9/64	AWBCG1609	Red	9
5/32	AWBCG1610	Red	9
3/16	AWBCG1612	Red	9
7/32	AWBCG1614	Red	9
1/4	AWBCG1616	Red	9
5/16	AWBCG1620	Red	9
3/8	AWBCG1624	Red	9

**AWBCG1600 T-Handle Ball Hex Wrench Set.** AWBCG1606 thru AWBCG1616 (8 pcs.) (3/32" to 1/4").



Hex Size	Hex	
	Standard Handle 9" Length	Red Handle 6" Length
3/32	GAW1906	AWCG1606B
7/64	GAW1907	AWCG1607B
1/8	GAW1908	AWCG1608B
9/64	GAW1909	AWCG1609B
5/32	GAW1910	AWCG1610B
3/16	GAW1912	AWCG1612B
7/32	GAW1914	AWCG1614B
1/4	GAW1916	AWCG1616B
5/16	GAW1920	AWCG1620B
3/8	GAW1924	AWCG1624B

**GAW1900A Set.** GAW1906 thru GAW1916 (8 pcs) (3/32" to 1/4") in a plastic pouch.

**AWCG1600B T-Shape Hex Wrench Set.** AWCG1606B thru AWCG1616B (8 pcs) (3/32" to 1/4") in a plastic pouch.



Tools not included with AWSTAND

AWSTAND

## Wrench Stand

**AWSTAND Wrench Stand.** Mounting holes on top and bottom of stand provide for many different mounting locations. Another AWSTAND can be added on either side for increased storage options. Stands can mount to a Slots-N-Dots Plus™ Personal Work Center or lie flat on top of tool box. Stand hold the following combinations of wrench styles:

- L or T-shaped Fractional Hex 1/16" to 3/8"
- L or T-shaped Metric Hex 2 to 10mm
- L or T-shaped Torx T6 to T50
- Metric or Torx® on one stand
- Fractional and Metric on one stand
- Metric and Fractional Ball Wrenches

## Ball Hex / T-Handle, mm

Hex Size (mm)	Stock No.	Handle	Length, inches
2	AWBMCG1602	Blue	9
2.5	AWBMCG16025	Blue	9
3	AWBMCG1603	Blue	9
4	AWBMCG1604	Blue	9
5	AWBMCG1605	Blue	9
6	AWBMCG1606	Blue	9
8	AWBMCG1608	Blue	9
10	AWBMCG1610	Blue	9

**AWBMCG1600 Metric T-Handle Ball Hex Wrench Set.** Includes AWBMCG1602 thru AWBMCG1610 (8 pcs.) (2 to 10mm).

## Hex

Hex Size (mm)	Blue Handle 152.4mm Length
2	AWMCG1602B
2.5	AWMCG16025B
3	AWMCG1603B
4	AWMCG1604B
5	AWMCG1605B
6	AWMCG1606B
8	AWMCG1608B
10	AWMCG1610B

**AWMCG1600B Metric Set.** AWMCG1602B thru AWMCG1610 (8 pcs) (2 to 10mm) in a plastic pouch.

## TORX®

Hex Size (#)	Green Handle 6" Length
T7	AWCGT7
T8	AWCGT8
T10	AWCGT10
T15	AWCGT15
T20	AWCGT20
T25	AWCGT25
T30	AWCGT30
T40	AWCGT40
T45	AWCGT45

**AWCGT500 TORX® Set.** AWCGT8 thru AWCGT25 (5 pcs) (T8 to T25).



AWMCGR1608

**AWMCGR1608 Metric T-Shape Hex Wrench.** Applications include fasteners on Yamaha Rhino doors and aftermarket license plate holders with 8mm tamperproof hex security fasteners. Permits maximum pressure application when loosening difficult fasteners. Manufactured from hardened high strength steel for maximum durability.

# Folding Sets Wrenches



AWEF6K



AWEF9K



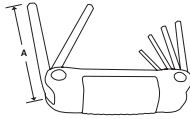
AWEFBH9K



AWTEF8K

## Hex

AWEF6K		AWEF9K	
Hex	A	Hex	A
5/32	2.7	.050	1.8
3/16	3.3	1/16	1.9
7/32	3.5	5/64	2.0
1/4	3.7	3/32	2.1
5/16	4.8	7/64	2.3
3/8	5.1	1/8	2.4
		9/64	2.6
		5/32	2.7
		3/16	2.9



### AWCPEF16K Combination Set.

Set includes AWEF9K Hex Set and AWMEF7K Metric Hex Set.



AWMEF8K



AWMEF6K

## Hex

AWMEF7K		AWMEF8K		AWMEF6K	
mm	A	mm	A	mm	A
1.5	45.7	2	50.8	3	83.8
2	50.8	2.5	55.9	4	88.9
2.5	55.9	3	61.0	5	96.5
3	61.0	4	66.0	6	101.6
4	66.0	5	78.7	8	121.9
5	78.7	6	96.5	10	129.5
6	83.8	7	106.7		
		8	121.9		

## Ball Hex

AWEFBH9K	
Hex	A
5/64	2.0
3/32	2.1
7/64	2.3
1/8	2.4
9/64	2.6
5/32	2.7
3/16	2.9
7/32	3.5
1/4	3.7

## TORX®

AWTEF8K	
TORX®	A
T8	2.4
T10	2.7
T15	3.0
T20	3.2
T25	3.4
T27	3.5
T30	3.7
T40	3.9



AWHD8K

### Combination Set:

**AWHD8K Hex/TORX® Set.** Includes two TORX® sizes (T27, T40) and six hex sizes (5/32", 3/16", 7/32", 1/4", 5/16" and 3/8"). Fits a wide range of Harley-Davidson® motorcycles.

## L-Shaped



### Ball Hex Sets

#### Industrial Finish L-Shaped Ball Hex Wrench Sets:

Ball hex allows up to 25° angle entry. Made from high torque steel.

##### Standard Sets:

**BHS7A Ball Hex Set.** Set includes 5/64", 3/32", 7/64", 1/8", 9/64", 5/32" and 3/16" sizes (7 pcs) (5/64" to 3/16") in plastic index.

**BHS13A Ball Hex Set.** Set includes 0.05", 1/16", 5/64", 3/32", 7/64", 1/8", 9/64", 5/32", 3/16", 7/32", 1/4", 5/16" and 3/8" sizes (13 pcs) (.050" to 3/8") in plastic index.

**AWBPH13 Ball Hex Set.** Screw holding tip holds fastener to tool for delicate installations. Set includes 0.05", 1/16", 5/64", 3/32", 7/64", 1/8", 9/64", 5/32", 3/16", 7/32", 1/4", 5/16" and 3/8" sizes (13 pcs) (.050" to 3/8") in plastic index.

**AWBS13 Stubby Ball Hex Set.** Stubby length for access to tight quarters. Set includes 0.05", 1/16", 5/64", 3/32", 7/64", 1/8", 9/64", 5/32", 3/16", 7/32", 1/4", 5/16" and 3/8" sizes (13 pcs) (.050" to 3/8") in plastic index.

##### Metric Sets:

**BHM9A Metric Ball Hex Set.** Set includes 1.5, 2, 2.5, 3, 4, 5, 6, 8 and 10mm sizes (9 pcs) (1.5 to 10mm) in plastic index.

**AWMBPH9 Metric Ball Hex Set.** Screw holding tip holds fastener to tool for delicate installations. Set includes 1.5, 2, 2.5, 3, 4, 5, 6, 8 and 10mm sizes (9 pcs) (1.5 to 10mm) in plastic index.

**AWMBS9 Metric Stubby Ball Hex Set.** Stubby length for access in tight quarters. Set includes 1.5, 2, 2.5, 3, 4, 5, 6, 8 and 10mm sizes (9 pcs) (1.5 to 10mm) in plastic index.

#### Patented Screw Holding Tip\*

Holds fastener to tool for delicate installations

\* AWBPH13, AWMBPH9, AWTPH8 only



AWBPH13



AWMBPH9



BHS13A



BHM9A



BHS7A

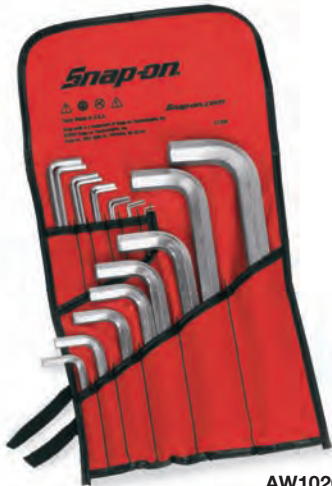


### WARNING

• Read additional safety precautions on pages 534 to 537.



# Wrenches L-Shaped



AW1020DK

**AW1020DK U.S. Set (Zinc Plated).**  
AW028D thru AW24D (20 pcs) (.028" to 3/4")  
in C1209 Kit Bag.



AWL1010DK

**AWL1010DK U.S. Long Set (Zinc Plated).**  
AWL3D thru AWL12D (10 pcs) (3/32" to 3/8")  
in C15B Kit Bag.

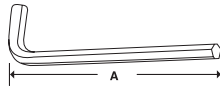


AWL1010DHK


**AWL1010DHK U.S. Long Set (Zinc Plated).**  
AWL3D thru AWL12D (10 pcs) (3/32" to 3/8")  
in BHK10 Metal Index.



AWL8D



## L-Shaped Hex

		A
<i>Std. Length</i>		
<b>AW028D</b>	0.028	1 1/4
<b>AW035D</b>	0.035	1 5/16
<b>AW050D</b>	0.050	1 3/4
<b>AW2D</b>	1/16	1 3/4
<b>AW2-1/2D</b>	5/64	1 7/8
<b>AW3D</b>	3/32	2
<b>AW3-1/2D</b>	7/64	2 1/8
<b>AW4D</b>	1/8	2 1/4
<b>AW4-1/2D</b>	9/64	2 3/8
<b>AW5D</b>	5/32	2 1/2
<b>AW6D</b>	3/16	2 3/4
<b>AW7D</b>	7/32	3
<b>AW8D</b>	1/4	3 1/4
<b>AW10D</b>	5/16	3 3/4
<b>AW12D</b>	3/8	4 1/4
<b>AW14D</b>	7/16	4 3/4
<b>AW18D</b>	9/16	5 3/4
<b>AW20D</b>	5/8	6 1/4
<b>AW24D</b>	3/4	7 1/4
<i>Long</i>		
<b>AWL3D</b>	3/32	3 1/8
<b>AWL3-1/2D</b>	7/64	3 1/2
<b>AWL4D</b>	1/8	3 3/4
<b>AWL4-1/2D</b>	9/64	4
<b>AWL5D</b>	5/32	4 1/8
<b>AWL6D</b>	3/16	4 1/2
<b>AWL7D</b>	7/32	4 7/8
<b>AWL8D</b>	1/4	5 1/4
<b>AWL10D</b>	5/16	6
<b>AWL12D</b>	3/8	6 3/4
<b>AWL14D</b>	7/16	7 1/2
<b>AWL16D</b>	1/2	8 1/4
<b>AWL18D</b>	9/16	9
<b>AWL20D</b>	5/8	9 3/4



AW6D



AW1015DK

**AW1015DK U.S. Set (Zinc Plated).**  
AW028 thru AW12 (15 pcs) (.028" to 3/8")  
in C154 Kit Bag.



AW1013DK

**AW1013DK U.S. Set (Zinc Plated).**  
AW050D thru AW12D (13 pcs) (.050" to 3/8")  
in C1102 Kit Bag.



AW1015DHK

**AW1015DHK U.S. Set (Zinc Plated).**  
AW028D thru AW12D (15 pcs) (.028" to 3/8")  
in BHK15 Metal Index.

# L-Shaped Wrenches



AWML8D



AWM4C



AWM140DK



Hex

	mm	A
<i>Standard Length</i>		
AWM2D	2	47.7
AWM2-1/2D	2.5	52.0
AWM3D	3	58.6
AWM4D	4	65.6
AWM5D	5	75.6
AWM6D	6	82.2
AWM7D	7	92.4
AWM8D	8	99.2
AWM9D	9	105.1
AWM10D	10	111.4
AWM12D	12	139.3
AWM14D	14	138.8
AWM17D	17	167.2
AWM19D	19	193.6
<i>Long</i>		
AWML1.5D	1.5	77.7
AWML2D	2	83.0
AWML2.5D	2.5	89.9
AWML3D	3	100.0
AWML4D	4	107.0
AWML5D	5	118.5
AWML6D	6	141.0
AWML8D	8	161.5
AWML10D	10	172.0
AWML12D	12	193.6



AWM110DHK

**AWM140DK Metric Set.** AWM2D thru AWM19D (14 pcs) (2 to 19mm) in C1209 Kit Bag.

**AWM110DK Metric Set.** AWM2D thru AWM12D (11 pcs) (2 to 12mm) in C15B Kit Bag.

**AWM110DHK Metric Set.** AWM2D thru AWM12D (11 pcs) (2 to 12mm) in BHK11 Metal Index.



AWT20A



AWTPH8



	#	A	B
AWT8A	T8	.137	1 7/8
AWT9A	T9	.148	1 7/8
AWT10A	T10	.162	2
AWT15A	T15	.194	2 1/8
AWT20A	T20	.228	2 1/4
AWT25A	T25	.262	2 3/8
AWT27A	T27	.295	2 1/2
AWT30A	T30	.218	2 3/4
AWT40A	T40	.262	3
AWT45A	T45	.430	3 5/8
AWT50A	T50	.348	3 3/4
AWT55A	T55	.442	4 1/4



AWT100KA

**AWT100KA TORX® Set.** AWT10A thru AWT55A (10 pcs) (T10 to T55) in a plastic pouch.

**AWTPH8 TORX® Set.** T9, T10, T15, T20, T25, T27, T30 and T40 sizes (8 pcs) (T9 to T40) in plastic index. Made from high torque steel.

## Multi-Spline

	A	B
MS2A	4	.033
MS3A	4	.048
MS4A	6	.060
MS5A	4	.069
MS6A	4	.076
MS7A	6	.072
MS8A	6	.096
MS10A	6	.110
MS16A	6	.144
MS20A	6	.183
MS24A	6	.216
MS28A	6	.251
MS32A	6	.291
MS40A	6	.372
MS48A	6	.454



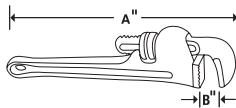
MS32A



MS1015KA

**MS1015KA Set.** MS2A thru MS48A (15 pcs) (.033" to .454") in C16 Kit Bag.

## Pipe

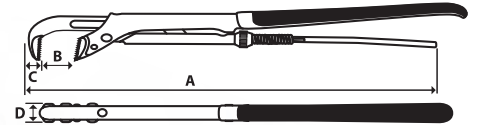


### External Pipe Wrenches

Aluminum	Handle	A	B
PW6C	—	6	3/4
PW8C	—	8	1
PW10C	PWA10A	10	1 1/2
PW12C	—	12	2
PW14C	PWA14A	14	2
PW18C	PWA18A	18	2 1/2
PW24C	PWA24A	24	3
PW36C	PWA36A	36	5
—	PWA48A	48	6



PW10C

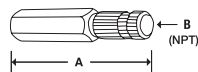


PWA10A



PWZ1

### Internal Pipe Wrenches



	A	B
PWN12B	3 3/4	3/8
PWN16B	3 3/4	1/2
PWN24B	3 3/4	3/4
PWN32B	3 3/4	1

**PWN904B Set.** PWN12B thru PWN32B (4 pcs) (3/8" to 1") in plastic pouch.



PWN16B

### Pliers Wrench

Features inwardly angled teeth (fine teeth at back of jaws, larger teeth at front of jaws) for a stronger, more secure grip on object. Quick adjustment of grip width. Built-in guard against unthreading. Soft, warm to the touch, high friction handle surfaces with a strong, stable core.

	A	B	C	D	Weight, oz.
PWZ1	12 5/8	1 3/4	1/2	3/4	21 1/2
PWZ2	17	2 1/2	5/8	1 3/16	39

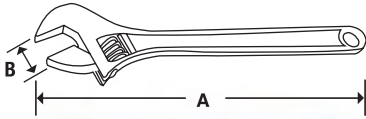


**WARNING**

• Read additional safety precautions on pages 534 to 537.



# Wrenches Adjustable



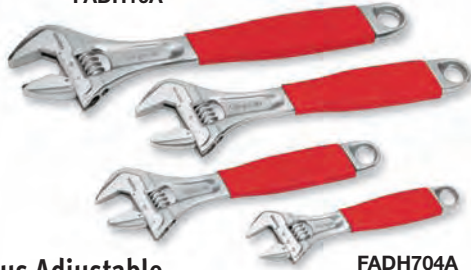
**FLANK DRIVE® Plus Adjustable Wrenches with Serrated Jaws** feature our patented **FLANK DRIVE® Plus** wrenching system for more turning power than ever from an adjustable wrench. Precision made wrenches feature fractional and metric scales for size reference. Elastomer handle surface is soft yet provides a non-slip gripping surface even for greasy and oily hands. Cushion handle insulates against cold temperatures.



FADH10A



AD10A



FADH704A

## FLANK DRIVE® Plus Adjustable Wrenches/Cushion Handles

	A	B
FADH6A	6 (152)	3/4 (19)
FADH8A	8 (203)	15/16 (24)
FADH10A	10 (254)	1 1/8 (29)
FADH12A	12 (304)	1 5/16 (33)

**FADH704A Set.** FADH6 thru FADH12 (4 pcs) (6" to 12") in storage tray.



ADHW8

## Wide Mouth Adjustable/Cushion Handles

Wide mouth design opens larger than standard adjustable wrench. Longer jaws and slimline design for greater reach. Features metric and fractional scales for quick observation. Adjustable moving jaw does not fall out even at maximum opening. Elastomer handle surface is soft yet provides a non-slip gripping surface even for greasy and oily hands. Cushion handle insulates against cold temperatures. ADHW6 opens as wide as an 8" adjustable wrench. ADHW8 opens as wide as a 10" adjustable wrench.

Stock No.	A	B
ADHW6	6 (152)	1 1/4 (32)
ADHW8	8 (203)	1 1/2 (38)



BADJC10



BADJC703



## Composite Handle Adjustable Wrenches

Stock No.	A	B
BADJC6	6 7/16	1
BADJC8	8 9/16	1 3/16
BADJC10	10 1/2	1 3/8

**BADJC703 Adjustable Wrench Set.** BADJC6, BADJC8 and BADJC10 (6", 8", 10") (3 pcs) in storage tray.

## Adjustable Wrenches

Opposing fractional and metric quick sizing scales are provided for convenience. High strength steel alloy is machined to exacting specifications and precision heat treated for wrench strength and durability. Nickel-chromium plating and improved finish provide a smart looking tool, helps protect against corrosion and speeds clean up.

Stock No.	A	B
AD6A	6 (155)	25/32 (20)
AD8A	8 (205)	1 1/16 (27)
AD10A	10 (255)	1 3/16 (30)
AD12A	12 (305)	1 11/32 (34)

### AD704A Adjustable Wrench Set

AD6A thru AD12A (4 pcs) (6" to 12") in storage tray.



GAJS30A



GAJ12A



BLPADJ703



BLPADJ404



## Adjustable Wrenches

	A	B
GAJ4A	4 (102)	1/2 (13)
GAJ6A	6 (152)	3/4 (19)
GAJ8A	8 (203)	15/16 (24)
GAJ10A	10 (254)	1 1/8 (29)
GAJ12A	12 (304)	1 5/16 (33)
GAJ15A	15 (381)	1 21/32 (42)
GAJ18A	18 (457)	2 5/32 (55)
GAJ24A	24 (610)	2 7/16 (62)
GAJS30A*	30 (762)	3 (77)

B107.8M-1996

\*SAE and Metric Scales on fixed jaw indicate wrench opening. Fixed jaw and handle are forged in one piece to ensure maximum strength. Wrench is balanced to minimize wrist stress. Hole at handle end for tether or hanging.

**BLPADJ404 Adjustable Wrench Set.** GAJ6A (6"), GAJ8A (8"), GAJ10A (10") and GAJ12A (12") Adjustable Wrenches in storage tray.


**BLPADJ703 Adjustable Wrench Set.** Includes GAJ15A (15"), GAJ18A (18") and GAJ24A (24") Adjustable Wrenches in storage tray.

# Adjustable Wrenches



## Aluminum Adjustable Wrenches

Securely tighten expensive "AN" fittings without damage in aircraft, marine, industrial applications as well as race and show cars. Machined from aluminum billet to exacting tolerances. Made from quality heat treated hardened aluminum. Corner reliefs on open end wrenches prevent rounding the corners of the fitting.

	Color	A	B
ANADJ8	Red	8 (203)	AN #10 (1")
ANADJ10	Red	10 (254)	AN #20 (1 13/16")



ANADJ8

## Special Application




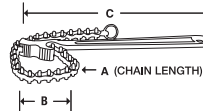
CW12



VGP18110

## Chain Wrenches

	A	B	C
CW12	16	4	12
CW15	19	5	15
CW24	23	6	24



**VGP18110 Locking Chain Wrench.** Wraps around and holds irregular shaped objects like oil filters and mufflers quickly and easily. Chain Capacity: up to 6 9/32" (160mm). Handle Length: 9 27/32" (250mm).

**VGP181101 Replacement Chain.** Replacement chain for VGP18110.



YA826A

## Strap Wrench

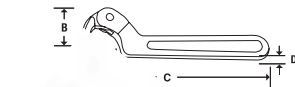
**YA826A Strap Wrench.** For irregularly shaped objects 1" to 5" in diameter. 22" long. 1" wide. Urethane coated nylon strap has a tensile strength of 1,300 lbs. 2" handle.



N6893B

## Valve Persuader (Special order only.)

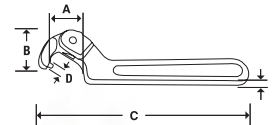
**N6893B Valve Persuader Wrench.** A "persuader" end provides extra leverage on valve wheels. Hooks around valve stems and protrudes through spokes. 15" long.



AHS300B



304AHSK




APS351B



304APSK

## Adjustable Hook Spanners

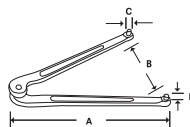
Serves collars, rings, and bearings. Single jaw and roll pin construction with an industrial finish. When using, make sure jaw hook is properly positioned.

	A	B	C	D
AHS300B	3/4-2	1/8	6 3/8	11/32
AHS301B	1 1/4-3	5/32	8 1/8	13/32
AHS304B	2-4 3/4	3/16	11 3/8	15/32
AHS307B	4 1/2-6 1/2	1/4	12 1/8	15/32

**304AHSK Set.** AHS300B thru AHS307B (4 pcs) (3/4" to 6 1/2") in C0412 Kit Bag.




AFS482B




## Adjustable Face Pin Spanners

For servicing seal and packing nuts on hydraulic cylinders.

	A	B	C	D
AFS482B	6 3/8	2	3/16	5/32
AFS483B	8 1/4	3	1/4	3/16
AFS484B	10 3/8	4	5/16	1/4

## Adjustable Pin Spanners

Removes rings, collars, and lock nuts. When using, make sure jaw hook is properly aligned.

	A	B	C	D	E
APS351B	3/4-2	1/8	6 3/8	1/8	11/32
APS357B	1 1/4-3	3/16	8 1/8	3/16	11/32
APS363B	2-4 3/4	1/4	11 3/8	1/4	15/32
APS366B	4 1/2-6 1/4	1/4	12 1/8	3/8	15/32

**304APSK Set.** APS351B thru APS366B (4 pcs) (3/4" to 6 1/4") in C0412 Kit Bag.



### WARNING

- When using adjustable wrenches, make sure jaw is properly tightened. Always pull wrench in direction of fixed jaw.
- Read additional safety precautions on pages 534 to 537.



# High Performance / Spline

Snap-on® spline wrenching tools have been developed to service high tensile strength spline nuts and bolts widely used on both military and commercial aircraft.

Precise, radial spline teeth engage the fastener teeth over a wider area to minimize stress, and allow application of high torque without damage to the fastener or to the tool.

Chrome tools comply with Military Spec. MS-33787 and MIL-W-8983. (Industrial finish tools comply with performance specifications and differ only in finish.) The unique patented spline wrenching configuration can also be used on ordinary 6 and 12-point fasteners with an advantage similar to the Snap-on® FLANK DRIVE® wrenching system. U.S. Patent No 3.675.516 and Canadian Patent No. 826,412 apply.

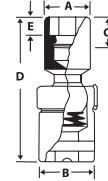
## 1/4" Drive High Performance FLANK DRIVE® Sockets

### Universal

	12	A	B	D	E
1/4	<b>TDHU81A</b>	3/8	1/2	1 15/64	1/4
5/16	<b>TDHU101A</b>	29/64	1/2	1 23/64	9/32
3/8	<b>TDHU121A</b>	17/32	1/2	1 15/32	11/32



TDHU101A



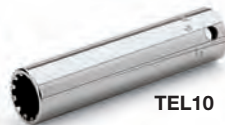
## 1/4" Drive Spline Sockets



TES10

### Shallow

			A	B	C	D	E
#7	7/32	<b>TES7</b>	11/32	27/64	29/64	59/64	7/32
#8	1/4	<b>TES8</b>	3/8	27/64	29/64	59/64	17/64
#9	9/32	<b>TES9</b>	7/16	3/16	37/64	59/64	19/64
#10	5/16	<b>TES10</b>	29/64	29/64	19/32	59/64	21/64
#12	3/8	<b>TES12</b>	39/64	35/64	19/32	59/64	23/64
#14	7/16	<b>TES14</b>	5/8	39/64	23/32	1 3/64	7/16



TEL10

### Deep

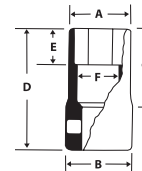
			A	B	C	D	E
#7	7/32	<b>TEL7</b>	11/32	27/64	1 43/64	2	7/32
#8	1/4	<b>TEL8</b>	3/8	7/16	1 43/64	2	17/64
#10	5/16	<b>TEL10</b>	29/64	29/64	1 43/64	2	21/64

### Universal — Shallow

			A	B	D	E
#8	1/4	<b>TESU8</b>	3/8	1/2	1 15/64	17/64
#10	5/16	<b>TESU10</b>	29/64	1/2	1 23/64	21/64



TESU10



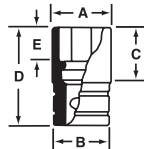
### Deep

	mm		A	B	C	D	E
#7	7	<b>TELM7A</b>	10.4	10.9	36.3	50.8	7.3
#8	8	<b>TELM8A</b>	11.7	11.7	36.3	50.8	8.8

## 3/8" Drive Spline Sockets



FES200



FEL200

### Shallow

			A	B	C	D	E
#12	3/8	<b>FES120</b>	35/64	21/32	19/32	1 3/64	23/64
#14	7/16	<b>FES140</b>	5/8	11/16	5/8	1 7/64	7/16
#16	1/2	<b>FES160</b>	23/32	3/4	39/64	1 7/64	29/64
#18	9/16	<b>FES180</b>	53/64	53/64	39/64	1 7/64	15/32
#20	5/8	<b>FES200</b>	57/64	57/64	45/64	1 15/64	35/64

### Deep

			A	B	C	D	E
#12	3/8	<b>FEL120</b>	35/64	5/8	1 41/64	2 1/8	23/64
#14	7/16	<b>FEL140</b>	41/64	43/64	1 3/4	2 1/8	7/16
#16	9/16	<b>FEL160</b>	23/32	23/32	1 55/64	2 1/4	15/32
#18	9/16	<b>FEL180</b>	53/64	53/64	1 55/64	2 3/8	15/32
#20	5/8	<b>FEL200</b>	57/64	57/64	1 27/32	2 3/8	35/64



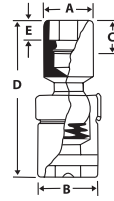
# 3/8" Drive Spline Sockets High Performance / Spline



FELM10A

## Deep

#10	10	FELM10A	A	B	C	D	E
			14.5	16.8	40.4	54.0	10.0



FESU180

## Shallow Universal

#12	3/8	FESU120	A	B	D	E
#14	7/16	FESU140	5/8	3/4	2 3/64	7/16
#16	1/2	FESU160	23/32	3/4	2 5/64	29/64
#18	9/16	FESU180	53/64	3/4	2 1/8	15/32

SAE Spec. MA1547A



IMFES14

## Shallow Impact

#14	7/16	IMFES14	A	B	C	D	E
			3/4	3/4	5/8	1 7/64	7/16

## 1/2" Drive Spline Sockets

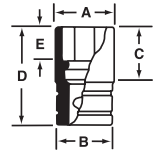
### Shallow

#16	1/2	SES161	A	B	C	D	E
#18	9/16	SES181	53/64	55/64	5/8	1 19/64	15/32
#20	5/8	SES201	57/64	57/64	55/64	1 35/64	35/64
#22	11/16	SES221	31/32	31/32	27/32	1 35/64	37/64
#24	3/4	SES241	1 3/64	31/32	53/64	1 35/64	37/64
#26	13/16	SES261	1 1/8	1 1/8	13/16	—	37/64
#28	7/8	SES281	1 3/16	1 1/8	51/64	1 35/64	37/64
#30	15/16	SES301	1 17/64	1 17/64	49/64	1 35/64	37/64

308SES Shallow Set. SES161 thru SES301 (8 pcs) (1/2" to 15/16").



SES181



## 3/4" Drive Spline Sockets



LES302

### Shallow

#24	3/4	LES242	A	B	C	D	E
#30	15/16	LES302	1 3/64	1 3/8	1	1 51/64	41/64
#34	1 1/16	LES342	1 3/8	1 3/8	1 7/64	1 59/64	51/64
#36	1 1/16	LES362	1 35/64	1 35/64	1 35/64	1 35/64	1 35/64

## 1" Drive Spline Sockets

### Shallow

#32	1	LES323	A	B	C	D	E
#34	1 1/16	LES343	1 29/64	1 55/64	1 35/64	2 7/16	53/64
#38	1 3/16	LES383	1 35/64	1 59/64	1 37/64	2 39/64	57/64



LES323

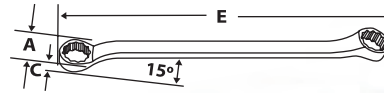


### WARNING

- Do not use chrome or industrial finish hand tools with power drivers.
- Read additional safety precautions on pages 534 to 537.



# High Performance / Spline High Performance FLANK DRIVE® Wrenches



## 15° Offset Heads, Box

$\frac{11}{16}$	12	12	A	C	E
$\frac{7}{32}$ - $\frac{1}{4}$	<b>XDH78A</b>	<b>GXDH78A</b>	$\frac{11}{32}$ - $\frac{3}{8}$	$\frac{13}{64}$ - $\frac{15}{64}$	$7 \frac{15}{64}$
$\frac{1}{4}$ - $\frac{5}{16}$	<b>XDH810B</b>	<b>GXDH810B</b>	$\frac{3}{8}$ - $\frac{29}{64}$	$\frac{1}{4}$ - $\frac{1}{4}$	$8 \frac{3}{64}$
$\frac{5}{16}$ - $\frac{3}{8}$	<b>XDH1012B</b>	<b>GXDH1012B</b>	$\frac{29}{64}$ - $\frac{35}{64}$	$\frac{1}{4}$ - $\frac{19}{64}$	$8 \frac{7}{8}$
$\frac{3}{8}$ - $\frac{7}{16}$	<b>XDH1214A</b>	<b>GXDH1214A</b>	$\frac{35}{64}$ - $\frac{5}{8}$	$\frac{19}{64}$ - $\frac{11}{32}$	$9 \frac{11}{16}$
$\frac{7}{16}$ - $\frac{1}{2}$	<b>XDH1416A</b>	<b>GXDH1416A</b>	$\frac{11}{32}$ - $\frac{3}{4}$	$\frac{11}{32}$ - $\frac{23}{64}$	$10 \frac{7}{16}$
$\frac{1}{2}$ - $\frac{9}{16}$	<b>XDH1618A</b>	—	$\frac{23}{32}$ - $\frac{13}{16}$	$\frac{23}{64}$ - $\frac{13}{32}$	$11 \frac{7}{16}$
$\frac{5}{8}$ - $\frac{3}{4}$	<b>XDH2024</b>	—	$\frac{57}{64}$ - $1 \frac{3}{64}$	$\frac{7}{16}$ - $\frac{31}{64}$	$13 \frac{9}{32}$
$\frac{11}{16}$ - $\frac{13}{16}$	<b>XDH2226A</b>	—	$\frac{63}{64}$ - $1 \frac{9}{64}$	$\frac{31}{64}$ - $\frac{17}{32}$	$15 \frac{5}{32}$
$\frac{25}{32}$ - $\frac{7}{8}$	<b>XDH2528</b>	—	$1 \frac{5}{64}$ - $1 \frac{13}{64}$	$\frac{35}{64}$ - $\frac{37}{64}$	$16 \frac{5}{64}$

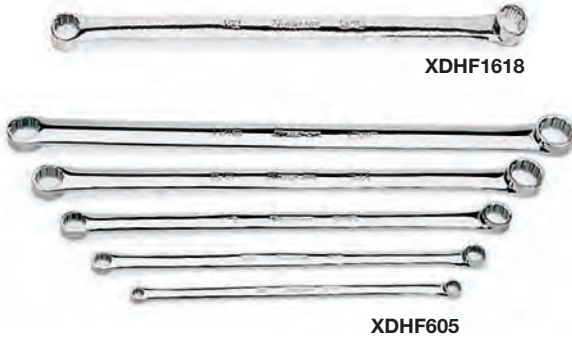
Aerospace Spec. AS954E

**XDH605 12-Point Set.** XDH810B, XDH1214A, XDH1618A, XDH2024A, and XDH2226A (5 pcs) (1/4" to 13/16") in a storage tray.

## 15° Offset Heads, Box

mm	12	A	C	E
8-9	<b>XDHM89</b>	11.6-13.0	5.8-6.2	219.2
8-10	<b>XDHM810</b>	11.6-14.4	6.2-7.6	225.6
10-11	<b>XDHM1011</b>	14.4-15.6	7.6-8.5	246.3
10-12	<b>XDHM1012</b>	14.4-17.1	7.6-9.0	264.0
12-13	<b>XDHM1213</b>	17.1-18.7	9.0-9.0	277.6
12-14	<b>XDHM1214</b>	17.1-20.1	9.0-10.2	289.6
14-15	<b>XDHM1415</b>	20.1-21.5	9.8-10.9	313.1
14-17	<b>XDHM1417</b>	20.1-23.7	9.8-11.3	334.7
15-16	<b>XDHM1516</b>	21.5-22.6	10.9-0.9	334.8
17-19	<b>XDHM1719</b>	23.7-26.3	11.3-2.1	360.1
18-20	<b>XDHM1820</b>	24.9-27.3	12.1-3.6	384.0

**XDHM606 Metric 12-Point Set.** XDHM89, XDHM1011, XDHM1213, XDHM1415, XDHM1719, and XDHM1820 (6 pcs) (8 to 20mm) in a storage tray.



XDH1618

XDH605



XDHFM1213

## 0° Offset Heads, Box

$\frac{11}{16}$	12	A	C	E
$\frac{1}{4}$ - $\frac{5}{16}$	<b>XDHF810</b>	$\frac{13}{32}$ - $\frac{15}{32}$	$\frac{7}{32}$ - $\frac{1}{4}$	$8 \frac{5}{16}$
$\frac{3}{8}$ - $\frac{7}{16}$	<b>XDHF1214</b>	$\frac{17}{32}$ - $\frac{5}{8}$	$\frac{5}{16}$ - $\frac{11}{32}$	$10 \frac{1}{16}$
$\frac{1}{2}$ - $\frac{9}{16}$	<b>XDHF1618</b>	$\frac{23}{32}$ - $\frac{13}{16}$	$\frac{11}{32}$ - $\frac{13}{32}$	$11 \frac{3}{4}$
$\frac{5}{8}$ - $\frac{3}{4}$	<b>XDHF2024</b>	$\frac{7}{8}$ - $1 \frac{1}{32}$	$\frac{7}{16}$ - $\frac{15}{32}$	$13 \frac{5}{8}$
$\frac{11}{16}$ - $\frac{13}{16}$	<b>XDHF2226</b>	$\frac{31}{32}$ - $1 \frac{5}{32}$	$\frac{15}{32}$ - $\frac{17}{32}$	$15 \frac{5}{8}$

**XDHF605 12-Point Set.** XDHF810 thru XDHF2226 (5 pcs) (1/4" to 13/16").



XDHFSM1214

## 0° Offset Heads, Box

mm	12	A	C	E
8-9	<b>XDHFM89</b>	11.6-13.0	5.8-6.2	226.1
8-10	<b>XDHFM810</b>	11.6-14.4	6.2-7.6	232.7
10-11	<b>XDHFM1011</b>	14.4-15.6	7.6-8.5	253.7
10-12	<b>XDHFM1012</b>	14.4-17.1	8.5-9.0	272.2
12-13	<b>XDHFM1213</b>	17.1-18.7	9.0-9.0	286.2
12-14	<b>XDHFM1214</b>	17.1-20.1	9.0-10.2	298.4
13-14	<b>XDHFM1314</b>	18.7-20.1	9.0-9.7	299.2
14-15	<b>XDHFM1415</b>	20.1-21.5	9.8-10.9	323.5
14-17	<b>XDHFM1417</b>	20.1-23.7	9.8-11.3	345.0
15-16	<b>XDHFM1516</b>	21.5-22.6	10.9-0.9	347.5
17-19	<b>XDHFM1719</b>	23.8-26.3	11.3-2.1	372.1
18-20	<b>XDHFM1820</b>	25.0-27.3	12.1-3.6	395.7
21-22	<b>XDHFM2122</b>	28.8-30.6	13.7-4.6	421.2
22-24	<b>XDHFM2224</b>	30.6-33.1	14.0-4.9	445.2

**XDHFM606 12-Point Set.** XDHFM1011, XDHFM1213, XDHFM1415, XDHFM1516, XDHFM1719 and XDHFM1820 (6 pcs) (10 to 20mm).

## 0° Offset Heads, Short Handle Box

mm	12	A	C	E
8-10	<b>XDHSFM810</b>	12.1-14.9	6.2-7.6	162.9
10-12	<b>XDHSFM1012</b>	14.4-17.1	7.6-9.0	190.5
12-14	<b>XDHSFM1214</b>	17.1-20.1	8.5-10.2	208.8
17-19	<b>XDHSFM1719</b>	23.8-26.3	11.3-12.1	260.3

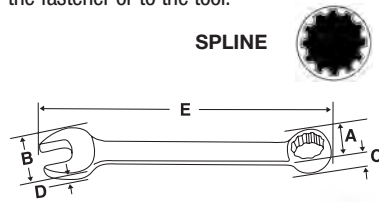


# Spline Wrenches High Performance / Spline

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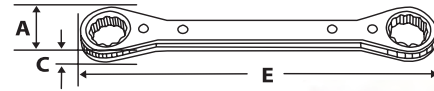
6-POINT



12-POINT



OES18B



RES2630C

## Combination—Short Handle

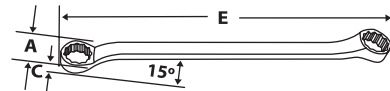
#	Drive	Part No.	A	B	C	D	E
#8	1/4	OES8B	13/32	17/32	1/8	5/32	4 1/2
#10	5/16	OES10B	15/32	21/32	11/64	15/64	4 55/64
#12	3/8	OES12B	17/32	25/32	13/64	17/64	5 7/32
#14	7/16	OES14B	5/8	29/32	15/64	5/16	5 27/64
#16	1/2	OES16B	23/32	1 1/16	1/4	5/16	5 47/64
#18	9/16	OES18B	13/16	1 3/16	17/64	21/64	6 1/32
#20	5/8	OES20B	7/8	1 5/16	9/32	11/32	6 5/16
#22	11/16	OES22B	31/32	1 7/16	19/64	23/64	6 39/64
#24	3/4	OES24B	1 1/16	1 9/16	5/16	3/8	6 29/32

## Ratcheting Box

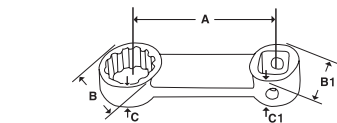
#	Drive	Part No.	A	C	E	Range
#8-#10	1/4-5/16	RES810C	9/16-5/8	11/32	4 11/16	16-18
#12-#14	3/8-7/16	RES1214C	3/4-7/8	11/32	6 5/32	20-22
#18-#20	9/16-5/8	RES1820C	1 1/8-1 1/4	13/32	7 27/32	20-22
#26-#30	13/16-15/16	RES2630C	1 1/2-1 9/16	7/16	9 25/32	22-22

## 15° Offset Heads

#	Drive	Part No.	A	C	E
#7-#9	7/32-9/32	XDES79A	11/32-7/16	11/64-13/64	7 1/4
#8-#10	1/4-5/16	XDES810A	3/8-15/32	3/16-7/32	8 1/16
#12-#14	3/8-7/16	XDES1214A	35/64-41/64	5/16-11/32	9 3/4
#16-#18	1/2-9/16	XDES1618A	3/4-13/16	3/8-3/8	11 7/16
#18-#20	9/16-5/8	XDES1820A	13/16-57/64	25/64-13/32	12 3/8
#22-#24	11/16-3/4	XDES2224A	31/32-1 5/64	7/16-5/64	14 1/4
#26-#30	13/16-15/16	XDES2630A	1 5/32-1 5/16	1/2-9/16	16 3/16
#28-#32	7/8-1	XDES2832A	1 1/4-1 7/16	17/32-37/64	17



XDES1618A



FRES10

## RELATED ITEMS

Torque Wrenches, pgs 292-300

## Spline—3/8" Drive

#	Drive	Part No.	A	B-B1	C-C1
#7	7/32	FRES7	2	.375-.750	1/4-7/16
#8	1/4	FRES8	2	.400-.750	1/4-7/16
#9	9/32	FRES9	2	.445-.750	1/4-7/16
#10	5/16	FRES10	2	.490-.750	1/4-7/16
#12	3/8	FRES12	2	.590-.750	5/16-7/16
#14	7/16	FRES14	2	.680-.750	5/16-7/16
#16	1/2	FRES16	2	.745-.750	5/16-7/16
#18	9/16	FRES18	2	.825-.750	3/8-7/16
#20	5/8	FRES20	2	.895-.750	3/8-7/16
#22	11/16	FRES22	2	.997-.750	1/2-7/16
#24	3/4	FRES24	2	1.08-.750	9/16-7/16

## Spline—1/2" Drive

#	Drive	Part No.	A	B-B1	C-C1
#18	9/16	SRES18	3	.818-1.04	13/32-1/2
#20	5/8	SRES20	3	.900-1.04	1/2-1/2
#22	11/16	SRES22	3	.989-1.04	1/2-1/2
#24	3/4	SRES24	3	1.08-1.04	1/2-1/2
#26	13/16	SRES26	3	1.16-1.04	1/2-1/2
#28	7/8	SRES28	3	1.26-1.04	1/2-1/2
#30	15/16	SRES30A	3	1.26-1.04	37/64-37/64

SRES306 Set. SRES18 thru SRES28 (6 pcs) (9/16" to 7/8").

## WARNING

- Do not use chrome or industrial finish hand tools with power drivers.
- Frequently inspect, clean, and lubricate ratchet mechanism with light oil.
- Read additional safety precautions on pages 534 to 537.

