



# WRENCHES

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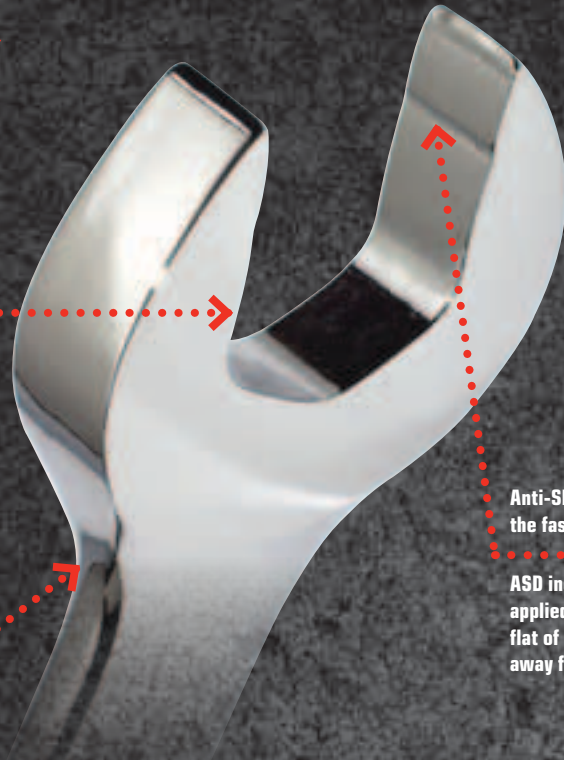
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# WRENCH SAFETY



Precision broached for tight tolerances.

Premium alloy steel for strength.

Anti-Slip design locks the fastener into place.

ASD increases the applied force to the flat of the fastener and away from corners.



The TorquePlus™ radius-corner socket design engages flats for better grip, improving the ability to turn worn or rounded fasteners. It also allows for higher torque and minimizes wear.

Elliptically-based geometry maximizes contact between wrench and fastener.

Larger cross-sectional area at lobes.



# WRENCH GUIDE



## CHECK NUT WRENCHES

15° head allows for a full 30° rotation by flipping wrench over.



## LOCKING FLEX-HEAD COMBINATION RATCHETING WRENCHES

Box end countersunk. Flexible spline end.



## STUBBY COMBINATION REVERSIBLE RATCHETING WRENCHES

Box end countersunk. Reversibles have an offset.



## ENGINEER WRENCHES

Long handle for extra leverage with hook eye.



## CROWFOOT WRENCHES

With locking extensions to reach around obstacles.



## PIPE WRENCHES

Available in aluminum and cast iron.



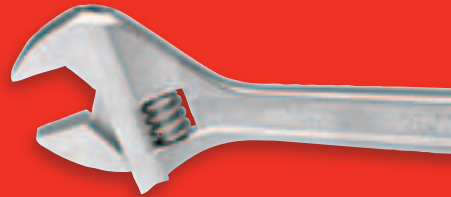
## BOX END SPUD WRENCHES

Box end with tapered spud end.



## ANGLED OPEN-SOCKET WRENCHES

Same sizes of two different types.



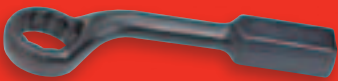
## ADJUSTABLE WRENCHES

Featuring Klik-Stop®. The wrench clicks at different sizings so you can feel your adjustments without looking.



## LEVERAGE WRENCHES

Safe alternative to striking wrenches.



## STRIKING WRENCHES

Hit them with a hammer. Available with flat or offset ends.



## ADJUSTABLE FACE SPANNER WRENCHES

Precision machined pins.



## INSULATED WRENCHES

Insulated to 1000V AC or 1500V DC.



## X-LARGE WRENCHES

For work on oversized equipment.



## SHORT COMBINATION WRENCHES

Same sizes of two different types.



## RATCHETING WRENCHES

Reversibles have an offset. Non-reversibles are flat.



## COMBINATION WRENCHES

Same sizes of two different types.



## DOUBLE BOX WRENCHES

Two different sizes of the same type.



## OPEN END WRENCHES

Two different sizes of the same type.

## FULL POLISH REVERSIBLE RATCHETING COMBINATION WRENCHES - SPLINE

- ▶ Anti-Slip Design (ASD) open end.
- ▶ 15° angled offset box end helps keep shank clear of obstructions.
- ▶ Offset open end offers 10-12° turning angle
- ▶ Smooth transition from head to shank.
- ▶ Industrial strength I-Beam shank provides broad bearing surface helping improve comfort and helping reduce hand fatigue.
- ▶ Protected switch lever helps prevent accidental reversal.
- ▶ Compact ratcheting head improves access.
- ▶ 72 teeth provide 5° ratcheting.



INCH	SPL	Throat Depth 1 (in)	Outside Head Width 1 (in)	Head Thickness 1 (in)	Outside Head Width 2 (in)	Head Thickness 2 (in)	Overall Length (in)	Weight (lbs)
1/4	JSCV08A	5/16	35/64	5/32	35/64	1/4	4-59/64	0.05
9/32	JSCV09A	5/16	39/64	11/64	43/64	1/4	5-5/32	0.07
5/16	JSCV10A	25/64	11/16	11/64	43/64	1/4	5-27/64	0.08
11/32	JSCV11A	13/32	25/32	9/32	3/4	17/64	5-43/64	0.10
3/8	JSCV12A	29/64	27/32	13/64	25/32	9/32	5-29/32	0.12
7/16	JSCV14A	1/2	15/16	5/16	55/64	19/64	6-29/32	0.16
1/2	JSCV16A	39/64	1-5/64	1/4	1	11/32	7-29/32	0.24
9/16	JSCV18A	11/16	1-13/64	3/8	1-5/64	23/64	8-49/64	0.30
5/8	JSCV20A	3/4	1-21/64	13/32	1-3/16	25/64	9-33/64	0.40
11/16	JSCV22A	53/64	1-7/16	5/16	1-1/4	13/32	10-17/64	0.49
3/4	JSCV24A	29/32	1-37/64	11/32	1-21/64	7/16	11-3/64	0.60
13/16	JSCV26A	31/32	1-23/32	17/32	1-37/64	33/64	11-13/16	0.80
7/8	JSCV28A	1-3/64	1-7/8	17/32	1-37/64	33/64	12-35/64	0.86
15/16	JSCV30A	1-1/8	1-31/32	19/32	1-53/64	37/64	13-5/16	1.09
1	JSCV32A	1-13/64	2-3/32	19/32	1-53/64	37/64	14-1/16	1.17
1-1/16	JSCV34A	1-9/32	2-7/32	5/8	2-3/64	39/64	14-15/16	1.44
1-1/8	JSCV36A	1-23/64	2-11/32	11/16	2-9/32	43/64	15-7/8	1.85
1-1/4	JSCV40A	1-1/2	2-19/32	35/64	2-15/32	11/16	16-59/64	2.29

### THE STORY BEHIND THE OFFSET OPEN END



A standard combination wrench gets stuck.



The Proto® Wrench with the Offset Open End still has 10 - 12° of turning angle.

Reaching a fastener behind an obstruction is frustrating, especially when you can reach it with the wrench, but you can't turn the wrench.

Rethinking the standard combination wrench allowed Proto® engineers to discover a better way reach and turn something in a difficult place.

By turning the open end to an angle, the patented Offset Open End has an improved angle of attack onto the fastener. It can squeeze an extra 10 to 12 degrees of turning angle when obstructions are nearby.





Versatile ratcheting spline drive is reversible.



Manufactured in Dallas.



Patented I-Beam removes weight and adds strength.



Open end is offset 13° more swing in tight places.




MM	SPL	Throat Depth 1 (in)	Outside Head Width 1 (in)	Head Thickness 1 (in)	Outside Head Width 2 (in)	Head Thickness 2 (in)	Overall Length (in)	Weight (lbs)
6	JSCVM06A	5/16	35/64	5/32	35/64	1/4	4-59/64	0.05
7	JSCVM07A	5/16	39/64	11/64	43/64	1/4	5-5/32	0.07
8	JSCVM08A	25/64	11/16	11/64	43/64	1/4	5-27/64	0.08
9	JSCVM09A	13/32	25/32	9/32	3/4	17/64	5-43/64	0.10
10	JSCVM10A	29/64	27/32	13/64	25/32	9/32	5-29/32	0.12
11	JSCVM11A	1/2	15/16	5/16	55/64	19/64	6-29/32	0.16
12	JSCVM12A	35/64	1-1/64	11/32	29/32	21/64	7-23/32	0.20
13	JSCVM13A	39/64	1-5/64	1/4	1	11/32	7-29/32	0.24
14	JSCVM14A	11/16	1-13/64	3/8	1-5/64	23/64	8-49/64	0.30
15	JSCVM15A	23/32	1-17/64	9/32	1-7/65	3/8	9-9/64	0.34
16	JSCVM16A	3/4	1-21/64	13/32	1-3/16	25/64	9-33/64	0.40
17	JSCVM17A	53/64	1-7/16	5/16	1-1/4	13/32	10-17/64	0.49
18	JSCVM18A	55/64	1-33/64	7/16	1-9/32	27/64	10-11/16	0.55
19	JSCVM19A	29/32	1-37/64	11/32	1-21/64	7/16	11-3/64	0.60
21	JSCVM21A	31/32	1-23/32	17/32	1-37/64	33/64	11-13/16	0.80
22	JSCVM22A	1-3/64	1-7/8	17/32	1-53/64	33/64	12-35/64	0.86
24	JSCVM24A	1-1/8	1-31/32	19/32	1-53/64	37/64	13-5/16	1.09
27	JSCVM27A	1-9/32	2-7/32	5/8	2-3/64	39/64	14-15/16	1.44
30	JSCVM30A	1-23/64	2-11/32	11/16	2-9/32	43/64	15-7/8	1.85
32	JSCVM32A	1-1/2	2-19/32	35/64	2-15/32	11/16	16-59/64	2.29



- FULL POLISH
- SATIN
- BLACK OXIDE
- BLACK CHROME
- INSULATED

## 18 PIECE FULL POLISH REVERSIBLE RATCHETING COMBINATION WRENCH SET - SPLINE

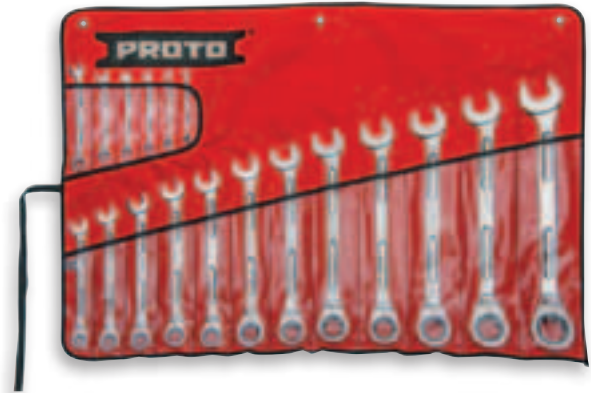
Product #: **JSCV-18SA**

	<b>INCH</b>	<b>Point Size</b>	<b>Overall Length (in)</b>
JSCV08A	1/4	Spline	4-59/64
JSCV09A	9/32	Spline	5-5/32
JSCV10A	5/16	Spline	5-27/64
JSCV11A	11/32	Spline	5-43/64
JSCV12A	3/8	Spline	5-29/32
JSCV14A	7/16	Spline	6-29/32
JSCV16A	1/2	Spline	7-29/32
JSCV18A	9/16	Spline	8-49/64
JSCV20A	5/8	Spline	9-33/64
JSCV22A	11/16	Spline	10-17/64
JSCV24A	3/4	Spline	11-3/64
JSCV26A	13/16	Spline	11-13/16
JSCV28A	7/8	Spline	12-35/64
JSCV30A	15/16	Spline	13-5/16
JSCV32A	1	Spline	14-1/16
JSCV34A	1-1/16	Spline	14-15/16
JSCV36A	1-1/8	Spline	15-7/8
JSCV40A	1-1/4	Spline	16-59/64
J25TR57C	Tool Roll		

Weight (lbs): 13.51




- › Full polish finish resists chipping and rust.
- › Box end is countersunk for easy application to the fastener.
- › Spline design was created for use with specialty spline bolts which are used when weight and size of bolt heads must be minimized.
- › The high contact surface area which is away from fastener points enables turning of highly rounded fasteners.

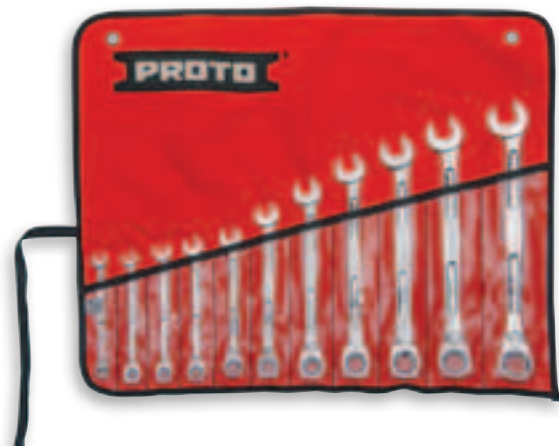


## 11 PIECE FULL POLISH REVERSIBLE RATCHETING COMBINATION WRENCH SET - SPLINE

Product #: **JSCV-11SA**

	<b>INCH</b>	<b>Point Size</b>	<b>Overall Length (in)</b>
JSCV08A	1/4	Spline	4-59/64
JSCV09A	9/32	Spline	5-5/32
JSCV10A	5/16	Spline	5-27/64
JSCV11A	11/32	Spline	5-43/64
JSCV12A	3/8	Spline	5-29/32
JSCV14A	7/16	Spline	6-29/32
JSCV16A	1/2	Spline	7-29/32
JSCV18A	9/16	Spline	8-49/64
JSCV20A	5/8	Spline	9-33/64
JSCV22A	11/16	Spline	10-17/64
JSCV24A	3/4	Spline	11-3/64
J25TR58C	Tool Roll		


Weight (lbs): 3.07



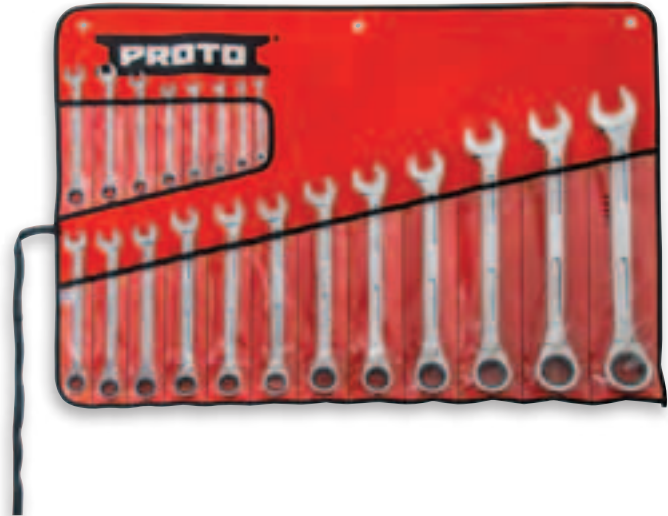


## 20 PIECE FULL POLISH METRIC REVERSIBLE RATCHETING COMBINATION WRENCH SET - SPLINE

Product #: **JSCVM-20SA**

Contents		Point Size	Overall Length (in)
JSCVM06A	6	Spline	4-59/64
JSCVM07A	7	Spline	5-5/32
JSCVM08A	8	Spline	5-27/64
JSCVM09A	9	Spline	5-43/64
JSCVM10A	10	Spline	5-29/32
JSCVM11A	11	Spline	6-29/32
JSCVM12A	12	Spline	7-23/32
JSCVM13A	13	Spline	7-29/32
JSCVM14A	14	Spline	8-49/64
JSCVM15A	15	Spline	9-9/64
JSCVM16A	16	Spline	9-33/64
JSCVM17A	17	Spline	10-17/64
JSCVM18A	18	Spline	10-11/16
JSCVM19A	19	Spline	11-3/64
JSCVM21A	21	Spline	11-13/16
JSCVM22A	22	Spline	12-35/64
JSCVM24A	24	Spline	13-5/16
JSCVM27A	27	Spline	14-15/16
JSCVM30A	30	Spline	15-7/8
JSCVM32A	32	Spline	16-59/64
J25TR59C	Tool Roll		


Weight (lbs): 13.74



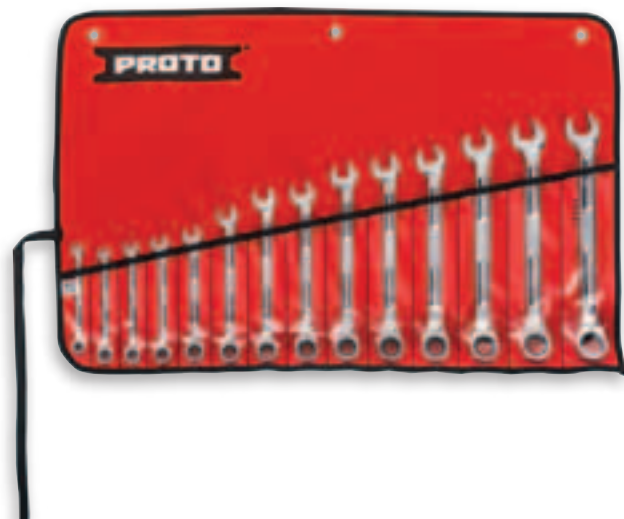
REVERSIBLE RATCHETING WRENCH SETS

## 14 PIECE FULL POLISH METRIC REVERSIBLE RATCHETING COMBINATION WRENCH SET - SPLINE

Product #: **JSCVM-14SA**

Contents		Point Size	Overall Length (in)
JSCVM06A	6	Spline	4-59/64
JSCVM07A	7	Spline	5-5/32
JSCVM08A	8	Spline	5-27/64
JSCVM09A	9	Spline	5-43/64
JSCVM10A	10	Spline	5-29/32
JSCVM11A	11	Spline	6-29/32
JSCVM12A	12	Spline	7-23/32
JSCVM13A	13	Spline	7-29/32
JSCVM14A	14	Spline	8-49/64
JSCVM15A	15	Spline	9-9/64
JSCVM16A	16	Spline	9-33/64
JSCVM17A	17	Spline	10-17/64
JSCVM18A	18	Spline	10-11/16
JSCVM19A	19	Spline	11-3/64
J25TR60	Tool Roll		

Weight (lbs): 4.48





-  FULL POLISH
-  SATIN
-  BLACK OXIDE
-  BLACK CHROME
-  INSULATED

## REVERSIBLE RATCHETING COMBINATION WRENCHES

- › Fractional spline wrenches can be used on fractional 4, 6, 12 point, spline and Torx® fasteners.
- › Metric Spline wrenches can be used on metric 4, 6, 12 point, spline and Torx® fasteners.
- › The chrome-vanadium switch lever allows for easy changes in turning direction which helps improve speed.
- › 15° angled offset box end helps keep shank clear of obstructions.
- › Anti-Slip Design (ASD) open end.
- › Black chrome finish is corrosion-resistant and visually distinctive.
- › Full polish finish provides corrosion resistance and easy to clean surfaces.
- › Box end is countersunk for easy application to the fastener.
- › Spline design was created for use with specialty spline bolts which are used when weight and size of bolt heads must be minimized.
- › Spline design enables the wrench to contact conventional fasteners away from the corners, which applies force over a larger area, reducing risk of fastener scoring and helps prevent rounding of the corners and other fasteners damage that could lead to Foreign Object Damage (FOD).
- › The high contact surface area which is away from fastener points enables turning of highly rounded fasteners.



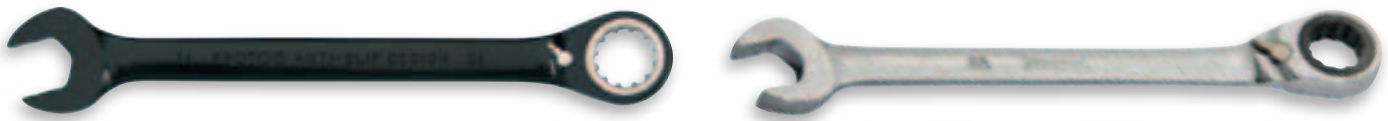
INCH			Outside Head Width 1 (in)	Head Thickness 1 (in)	Outside Head Width 2 (in)	Head Thickness 2 (in)	Overall Length (in)	Weight (lbs)
7/32	JSCV07	JSCV07T	9/16	1/8	35/64	1/8	5	0.06
1/4	JSCV08	JSCV08T	9/16	1/8	35/64	1/8	5	0.06
9/32	JSCV09	JSCV09T	11/16	1/8	21/32	1/8	5-1/2	0.07
5/16	JSCV10	JSCV10T	11/16	1/8	21/32	1/8	5-1/2	0.07
11/32	JSCV11	JSCV11T	3/4	1/8	23/32	1/8	5-15/16	0.09
3/8	JSCV12	JSCV12T	13/16	1/8	25/32	1/8	6-1/4	0.11
7/16	JSCV14	JSCV14T	15/16	1/8	55/64	1/8	6-1/2	0.14
1/2	JSCV16	JSCV16T	1-1/16	3/16	31/32	3/16	7	0.20
9/16	JSCV18	JSCV18T	1-1/8	3/16	1-1/16	3/16	7-1/2	0.22
5/8	JSCV20	JSCV20T	1-5/16	3/16	1-3/16	3/16	8-3/16	0.33
11/16	JSCV22	JSCV22T	1-3/8	3/16	1-1/4	3/16	8-7/8	0.37
3/4	JSCV24	JSCV24T	1-9/16	1/4	1-21/64	1/4	9-3/4	0.48
13/16	JSCV26	JSCV26T	1-13/16	1/4	1-37/64	1/4	11-7/16	0.77
7/8	JSCV28	JSCV28T	1-13/16	1/4	1-37/64	1/4	11-7/16	0.73
15/16	JSCV30	JSCV30T	2-1/16	1/4	1-13/16	1/4	12-3/4	1.02
1	JSCV32	JSCV32T	2-1/16	1/4	1-13/16	1/4	12-3/4	1.00
1-1/16	JSCV34	JSCV34T	2-1/4	5/16	2-1/16	5/16	14-1/8	1.45
1-1/8	JSCV36	JSCV36T	2-5/16	5/16	2-19/64	5/16	15-7/8	1.96
1-1/4	JSCV40	JSCV40T	2-1/2	5/16	2-29/64	5/16	16-3/4	2.30
1-1/2	JSCV48	JSCV48T	2-13/16	3/8	2-39/64	3/8	19-5/16	3.09







## REVERSIBLE RATCHETING COMBINATION WRENCHES (CONT'D)



REVERSIBLE RATCHETING WRENCHES

MM		12	Outside Head Width 1 (in)	Head Thickness 1 (in)	Outside Head Width 2 (in)	Head Thickness 2 (in)	Overall Length (in)	Weight (lbs)
6	JSCVM06	JSCVM06T	9/16	1/8	35/64	1/8	5	0.06
7	JSCVM07	JSCVM07T	11/16	1/8	21/32	1/8	5-1/2	0.07
8	JSCVM08	JSCVM08T	11/16	1/8	21/32	1/8	5-1/2	0.07
9	JSCVM09	JSCVM09T	3/4	1/8	23/32	1/8	5-15/16	0.09
10	JSCVM10	JSCVM10T	13/16	1/8	25/32	1/8	6-1/4	0.11
11	JSCVM11	JSCVM11T	15/16	1/8	55/64	1/8	6-9/16	0.14
12	JSCVM12	JSCVM12T	1	3/16	57/64	3/16	6-3/4	0.17
13	JSCVM13	JSCVM13T	1-11/16	3/16	31/32	3/16	7	0.20
14	JSCVM14	JSCVM14T	1-1/8	3/16	1-1/16	3/16	7-1/2	0.24
15	JSCVM15	JSCVM15T	1-1/4	3/16	1-7/64	3/16	7-7/8	0.28
16	JSCVM16	JSCVM16T	1-5/16	3/16	1-3/16	3/16	8-3/16	0.33
17	JSCVM17	JSCVM17T	1-3/8	3/16	1-1/4	3/16	8-7/8	0.39
18	JSCVM18	JSCVM18T	1-1/2	3/16	1-9/32	3/16	9-5/16	0.43
19	JSCVM19	JSCVM19T	1-9/16	1/4	1-21/64	1/4	9-3/4	0.50
21	JSCVM21	JSCVM21T	1-13/16	1/4	1-37/64	1/4	11-7/16	0.76
22	JSCVM22	JSCVM22T	1-13/16	1/4	1-37/64	1/4	11-7/16	0.76
24	JSCVM24	JSCVM24T	2-1/16	1/4	1-13/16	1/4	12-3/4	1.06
27	JSCVM27	JSCVM27T	2-1/4	5/16	2-1/16	5/16	14-1/8	1.42
30	JSCVM30	JSCVM30T	2-5/16	5/16	2-19/64	5/16	15-7/8	1.89
32	JSCVM32	JSCVM32T	2-1/2	5/16	2-29/64	5/16	16-3/4	2.32
34	JSCVM34	JSCVM34T	2-1/2	3/8	2-29/64	3/8	18-1/8	2.65
36	JSCVM36	JSCVM36T	2-13/16	3/8	2-39/64	3/8	19-5/16	3.09



## 8 PIECE FULL POLISH REVERSE RATCHETING WRENCH SET - 12 POINT

Product #: JSCVMT-8S

12	MM	Point Size	Overall Length (in)
JSCVM08T	8	12	5-1/2
JSCVM10T	10	12	6-1/4
JSCVM12T	12	12	6-3/4
JSCVM13T	13	12	7
JSCVM14T	14	12	7-1/2
JSCVM15T	15	12	7-7/8
JSCVM17T	17	12	8-7/8
JSCVM18T	18	12	9-5/16
J25TR61C	Tool Roll		

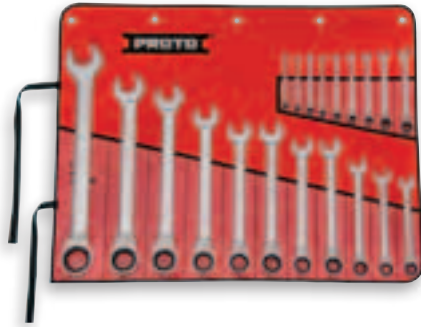
Weight (lbs): 2.15



- FULL POLISH
- SATIN
- BLACK OXIDE
- BLACK CHROME
- INSULATED

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## 20 PIECE REVERSIBLE RATCHETING COMBINATION WRENCH SETS



12



JSCVT-20S

JSCV-20S

INCH

Overall Length (in)

JSCV07T	JSCV07	7/32	5
JSCV08T	JSCV08	1/4	5
JSCV09T	JSCV09	9/32	5-1/2
JSCV10T	JSCV10	5/16	5-1/2
JSCV11T	JSCV11	11/32	5-15/16
JSCV12T	JSCV12	3/8	6-1/4
JSCV14T	JSCV14	7/16	6-1/2
JSCV16T	JSCV16	1/2	7
JSCV18T	JSCV18	9/16	7-1/2
JSCV20T	JSCV20	5/8	8-3/16
JSCV22T	JSCV22	11/16	8-7/8
JSCV24T	JSCV24	3/4	9-3/4
JSCV26T	JSCV26	13/16	11-7/16
JSCV28T	JSCV28	7/8	11-7/16
JSCV30T	JSCV30	15/16	12-3/4
JSCV32T	JSCV32	1	12-3/4
JSCV34T	JSCV34	1-1/16	14-1/8
JSCV36T	JSCV36	1-1/8	15-7/8
JSCV40T	JSCV40	1-1/4	16-3/4
JSCV48T	JSCV48	1-1/2	19-5/16
J25TR78C	JSCV20SP	Tool Roll	

Weight (lbs): 16.2

## 9 PIECE REVERSIBLE RATCHETING COMBINATION WRENCH SETS



12



JSCVT-9S

JSCV-9S

INCH

Overall Length (in)

JSCV09T	JSCV09	9/32	5-1/2
JSCV10T	JSCV10	5/16	5-1/2
JSCV12T	JSCV12	3/8	6-1/4
JSCV14T	JSCV14	7/16	6-1/2
JSCV16T	JSCV16	1/2	7
JSCV18T	JSCV18	9/16	7-1/2
JSCV20T	JSCV20	5/8	8-3/16
JSCV22T	JSCV22	11/16	8-7/8
JSCV24T	JSCV24	3/4	9-3/4
JSCV9SP	JSCV9SP	Tool Roll	

Weight (lbs): 1.90



6 POINT



8 POINT



12 POINT



SPLINE



HEX

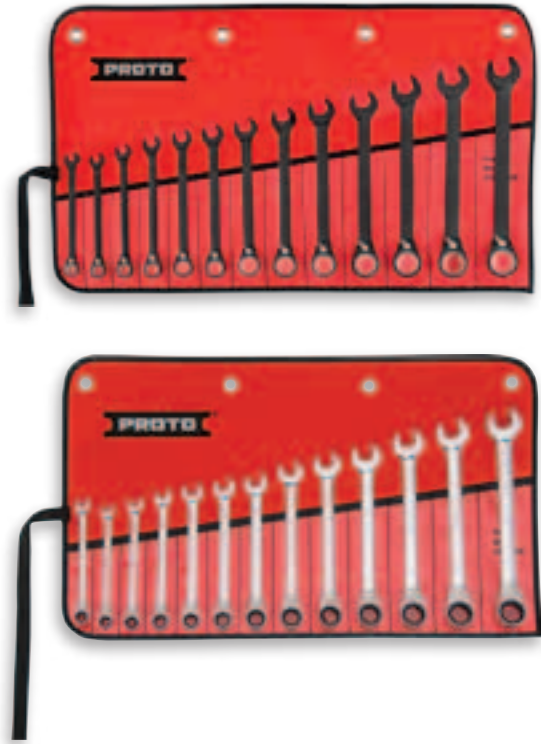
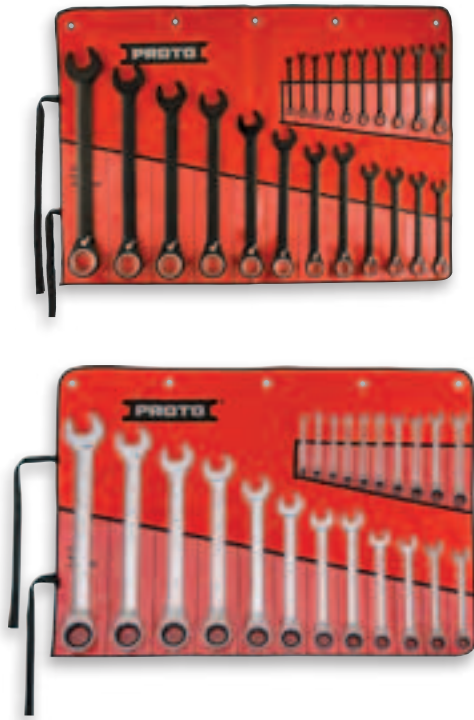


OPEN



## 22 PIECE REVERSIBLE RATCHETING COMBINATION WRENCH SETS

## 13 PIECE REVERSIBLE RATCHETING COMBINATION WRENCH SETS



REVERSIBLE RATCHETING WRENCH SETS

12



JSCVMT-22S	JSCVM-22S	MM	Overall Length (in)
JSCVM06T	JSCVM06	6	5
JSCVM07T	JSCVM07	7	5-1/2
JSCVM08T	JSCVM08	8	5-1/2
JSCVM09T	JSCVM09	9	5-15/16
JSCVM10T	JSCVM10	10	6-1/4
JSCVM11T	JSCVM11	11	6-9/16
JSCVM12T	JSCVM12	12	6-3/4
JSCVM13T	JSCVM13	13	7
JSCVM14T	JSCVM14	14	7-1/2
JSCVM15T	JSCVM15	15	7-7/8
JSCVM16T	JSCVM16	16	8-3/16
JSCVM17T	JSCVM17	17	8-7/8
JSCVM18T	JSCVM18	18	9-5/16
JSCVM19T	JSCVM19	19	9-3/4
JSCVM21T	JSCVM21	21	11-7/16
JSCVM22T	JSCVM22	22	11-7/16
JSCVM24T	JSCVM24	24	12-3/4
JSCVM27T	JSCVM27	27	14-1/8
JSCVM30T	JSCVM30	30	15-7/8
JSCVM32T	JSCVM32	32	16-3/4
JSCVM34T	JSCVM34	34	18-1/8
JSCVM36T	JSCVM36	36	19-5/16
J25TR80C	JSCVM22SP	Tool Roll	

Weight (lbs): 17.10



12



JSCVMT-13S	JSCVM-13S	MM	Overall Length (in)
JSCVM07T	JSCVM07	7	5-1/2
JSCVM08T	JSCVM08	8	5-1/2
JSCVM09T	JSCVM09	9	5-15/16
JSCVM10T	JSCVM10	10	6-1/4
JSCVM11T	JSCVM11	11	6-9/16
JSCVM12T	JSCVM12	12	6-3/4
JSCVM13T	JSCVM13	13	7
JSCVM14T	JSCVM14	14	7-1/2
JSCVM15T	JSCVM15	15	7-7/8
JSCVM16T	JSCVM16	16	8-3/16
JSCVM17T	JSCVM17	17	8-7/8
JSCVM18T	JSCVM18	18	9-5/16
JSCVM19T	JSCVM19	19	9-3/4
J25TR81C	JSCVM13SP	Tool Roll	



Weight (lbs): 3.02



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## NON-REVERSIBLE RATCHETING COMBINATION WRENCHES

- › Fractional spline wrenches can be used on fractional 4, 6, 12 point, spline and Torx® fasteners.
- › Metric Spline wrenches can be used on metric 4, 6, 12 point, spline and Torx® fasteners.
- › Chrome-vanadium box ends and switch levers provide high strength and durability.
- › Box end is countersunk for easy application to the fastener.
- › Spline design was created for use with specialty spline bolts which are used when weight and size of bolt heads must be minimized.
- › Spline design enables the wrench to contact conventional fasteners away from the corners, which applies force over a larger area, reducing risk of fastener scoring and helps prevent rounding of the corners and other fasteners damage that could lead to Foreign Object Damage (FOD).
- › The high contact surface area which is away from fastener points enables turning of highly rounded fasteners.
- › Anti-Slip Design (ASD) open end.
- › Black chrome finish is corrosion-resistant and visually distinctive.



INCH			Outside Head Width 1 (in)	Head Thickness 1 (in)	Outside Head Width 2 (in)	Head Thickness 2 (in)	Overall Length (in)	Weight (lbs)
1/4	JSCR08	JSCR08T	9/16	1/8	35/64	1/8	5	0.05
5/16	JSCR10	JSCR10T	11/16	1/8	21/32	1/8	5-1/2	0.06
11/32	JSCR11	JSCR11T	3/4	1/8	23/32	1/8	5-15/16	0.08
3/8	JSCR12	JSCR12T	13/16	1/8	25/32	1/8	6-1/4	0.10
7/16	JSCR14	JSCR14T	15/16	1/8	55/64	1/8	6-1/2	0.13
1/2	JSCR16	JSCR16T	1-1/16	3/16	31/32	3/16	7	0.18
9/16	JSCR18	JSCR18T	1-1/8	3/16	1-1/16	3/16	7-1/2	0.22
5/8	JSCR20	JSCR20T	1-5/16	3/16	1-3/16	3/16	8-3/16	0.32
11/16	JSCR22	JSCR22T	1-3/8	3/16	1-1/4	3/16	8-7/8	0.38
3/4	JSCR24	JSCR24T	1-9/16	1/4	1-21/64	1/4	9-3/4	0.47
13/16	JSCR26	JSCR26T	1-13/16	1/4	1-37/64	1/4	11-7/16	0.70
7/8	JSCR28	JSCR28T	1-13/16	1/4	1-37/64	1/4	11-7/16	0.70
15/16	JSCR30	JSCR30T	2-1/16	1/4	1-13/16	1/4	12-3/4	1.02
1	JSCR32	JSCR32T	2-1/16	1/4	1-13/16	1/4	12-3/4	1.02

MM			Outside Head Width 1 (in)	Head Thickness 1 (in)	Outside Head Width 2 (in)	Head Thickness 2 (in)	Overall Length (in)	Weight (lbs)
8	JSCRM08	JSCRM08T	11/16	1/8	21/32	1/8	5-1/2	0.06
9	JSCRM09	JSCRM09T	3/4	1/8	23/32	1/8	5-15/16	0.08
10	JSCRM10	JSCRM10T	13/16	1/8	25/32	1/8	6-1/4	0.10
11	JSCRM11	JSCRM11T	15/16	1/8	55/64	1/8	6-1/2	0.13
12	JSCRM12	JSCRM12T	1	1/8	57/64	1/8	6-3/4	0.16
13	JSCRM13	JSCRM13T	1-1/16	3/16	31/32	3/16	7	0.18
14	JSCRM14	JSCRM14T	1-1/8	3/16	1-1/16	3/16	7-1/2	0.22
15	JSCRM15	JSCRM15T	1-1/4	3/16	1-7/64	3/16	7-7/8	0.25
16	JSCRM16	JSCRM16T	1-5/16	3/16	1-3/16	3/16	8-3/16	0.32
17	JSCRM17	JSCRM17T	1-7/16	3/16	1-1/4	3/16	8-7/8	0.38
18	JSCRM18	JSCRM18T	1-1/2	3/16	1-9/32	3/16	9-5/16	0.46
19	JSCRM19	JSCRM19T	1-9/16	1/4	1-21/64	1/4	9-3/4	0.47



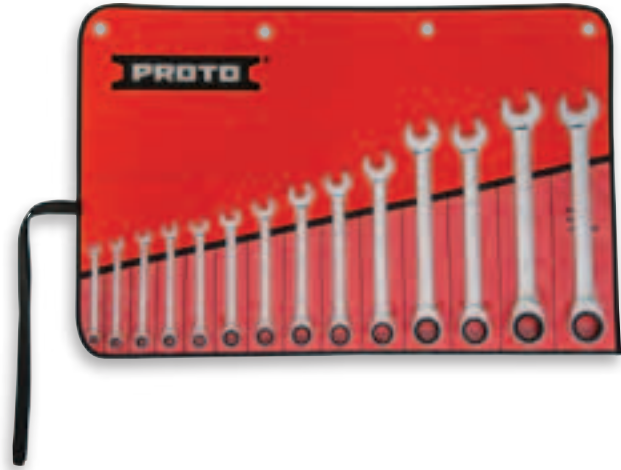
## 14 PIECE FULL POLISH NON-REVERSIBLE RATCHETING COMBINATION WRENCH SET - 12 POINT

**Product #: JSCRT-14S**

- ▶ 12 point box end allows for fine indexing, helping to improve speed and access. Fits 4, 6 and 12 point fasteners.
- ▶ Box end is countersunk for easy application to the fastener.
- ▶ Box ends incorporate the TorquePlus™ system.

<b>12</b>	<b>INCH</b>	<b>Point Size</b>	<b>Overall Length (in)</b>
JSCR08T	1/4	12	5
JSCR10T	5/16	12	5-1/2
JSCR11T	11/32	12	5-15/16
JSCR12T	3/8	12	6-1/4
JSCR14T	7/16	12	6-1/2
JSCR16T	1/2	12	7
JSCR18T	9/16	12	7-1/2
JSCR20T	5/8	12	8-3/16
JSCR22T	11/16	12	8-7/8
JSCR24T	3/4	12	9-3/4
JSCR26T	13/16	12	11-7/16
JSCR28T	7/8	12	11-7/16
JSCR30T	15/16	12	12-3/4
JSCR32T	1	12	12-3/4
J25TR76C	Tool Roll		

Weight (lbs): 6.36



NON-REVERSIBLE RATCHETING WRENCH SETS

## 9 PIECE BLACK CHROME NON-REVERSIBLE RATCHETING COMBINATION WRENCH SET - SPLINE

**Product #: JSCR-9S**

- ▶ Non-reversible ratcheting wrenches can be flipped over to turn the fastener in the opposite direction.
- ▶ Ratcheting spline box end is countersunk for easy application to the fastener.
- ▶ Fractional spline wrenches can be used on fractional 4, 6, 12 point, spline and Torx® fasteners.

<b>SPL</b>	<b>INCH</b>	<b>Point Size</b>	<b>Overall Length (in)</b>
JSCR08	1/4	Spline	5
JSCR10	5/16	Spline	5-1/2
JSCR12	3/8	Spline	6-1/4
JSCR14	7/16	Spline	6-1/2
JSCR16	1/2	Spline	7
JSCR18	9/16	Spline	7-1/2
JSCR20	5/8	Spline	8-3/16
JSCR22	11/16	Spline	8-7/8
JSCR24	3/4	Spline	9-3/4
JSCR9SP	Tool Roll		

Weight (lbs): 2.71



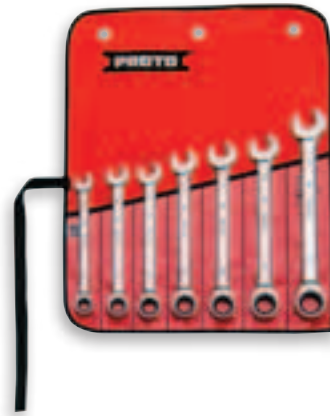
Torx® is a trademark of Acument Intellectual Properties, LLC

## 7 PIECE FULL POLISH METRIC NON-REVERSIBLE RATCHETING WRENCH SET- 12 POINT

Product #: **JSCRM7S**

<b>12</b>	<b>MM</b>	<b>Point Size</b>	<b>Overall Length (in)</b>
JSCRM10T	10	12	6-1/4
JSCRM12T	12	12	6-3/4
JSCRM13T	13	12	7
JSCRM14T	14	12	7-1/2
JSCRM15T	15	12	7-7/8
JSCRM16T	16	12	8-3/16
JSCRM18T	18	12	9-5/16
J25TR37C	Tool Roll		

Weight (lbs): 1.94



## 12 PIECE FULL POLISH METRIC NON-REVERSIBLE RATCHETING COMBINATION WRENCH SET - 12 POINT

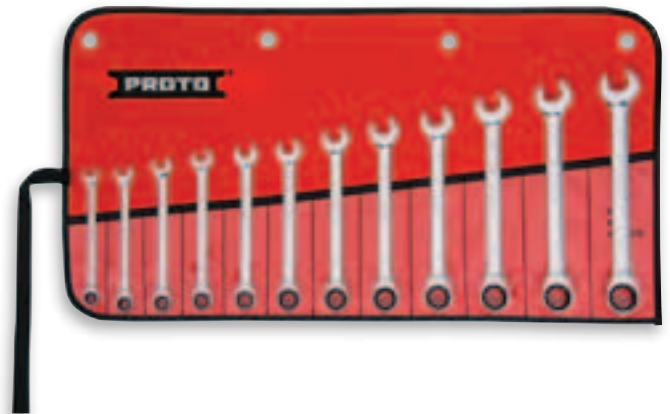


Product #: **JSCRM12S**

- ▶ 12 point box end allows for fine indexing, helping to improve speed and access. Fits 4, 6 and 12 point fasteners.
- ▶ Box end is countersunk for easy application to the fastener.
- ▶ Box ends incorporate the TorquePlus™ system.

<b>12</b>	<b>MM</b>	<b>Point Size</b>	<b>Overall Length (in)</b>
JSCRM08T	8	12	5-1/2
JSCRM09T	9	12	5-15/16
JSCRM10T	10	12	6-1/4
JSCRM11T	11	12	6-1/2
JSCRM12T	12	12	6-3/4
JSCRM13T	13	12	7
JSCRM14T	14	12	7-1/2
JSCRM15T	15	12	7-7/8
JSCRM16T	16	12	8-3/16
JSCRM17T	17	12	8-7/8
JSCRM18T	18	12	9-5/16
JSCRM19T	19	12	9-3/4
J25TR77C	Tool Roll		

Weight (lbs): 3.22



## 10 PIECE BLACK CHROME METRIC NON-REVERSIBLE RATCHETING COMBINATION WRENCH SET - SPLINE

Product #: **JSCRM-10S**

<b>SPL</b>	<b>MM</b>	<b>Point Size</b>	<b>Overall Length (in)</b>
JSCRM10	10	Spline	6-1/4
JSCRM11	11	Spline	6-1/2
JSCRM12	12	Spline	6-3/4
JSCRM13	13	Spline	7
JSCRM14	14	Spline	7-1/2
JSCRM15	15	Spline	7-7/8
JSCRM16	16	Spline	8-3/16
JSCRM17	17	Spline	8-7/8
JSCRM18	18	Spline	9-5/16
JSCRM19	19	Spline	9-3/4
JSCRM10SP	Tool Roll		

Weight (lbs): 2.71





## RATCHETING SPLINE DRIVE ENDS

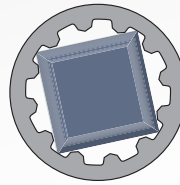
Spline fasteners were developed to service high tensile strength applications on military and commercial aircraft where heavy vibration was present. They are also present in automotive and industrial areas where high performance torque needs to be achieved.

The popularity of spline wrenches spread from just the high performance area because the wrench turned out to be versatile. The spline points could grip a number of fasteners, not just splines.

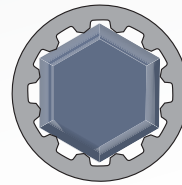
In addition, the grip was not on the edge of the fastener, but on the flat, giving the wrench a reputation for busting loose rounded nuts and bolts.

By moving the force load away from the corners, a wrench can be pulled with more torque to break free stubborn fasteners with less fear of stripping them.

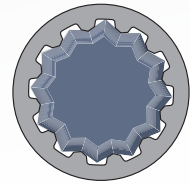
Proto® ships ratcheting spline box end wrenches in both full polish and black chrome, with and without the reversible lever. They all contain a 72-tooth design that results in a 5° arc-swing for minimal wrench movement in tight spaces.



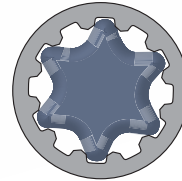
4 PT



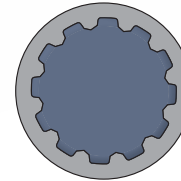
6 PT



12 PT



TORX®



SPLINE

NON-REVERSIBLE RATCHETING WRENCH SETS



Versatile usages on 4pt, 6pt, 12pt, spline, Torx®, and slightly rounded fasteners.


 FULL POLISH
  SATIN
  BLACK OXIDE
  BLACK CHROME


Torx® is a trademark of Acument Intellectual Properties, LLC

## LOCKING FLEX-HEAD COMBINATION RATCHETING WRENCHES - SPLINE

- ▶ 15° angled offset helps keep shank clear of obstructions.
- ▶ Box end is countersunk for easy application to the fastener.
- ▶ Spline design was created for use with specialty spline bolts which are used when weight and size of bolt heads must be minimized.
- ▶ Spline design enables the wrench to contact conventional fasteners away from the corners, which applies force over a larger area, reducing risk of fastener scoring and helps prevent rounding of the corners and other fasteners damage that could lead to Foreign Object Damage (FOD).
- ▶ The high contact surface area which is away from fastener points enables turning of highly rounded fastener.
- ▶ Anti-Slip Design (ASD) open end.
- ▶ Black chrome finish is corrosion-resistant and visually distinctive.
- ▶ 72-tooth ratcheting mechanism rotates fast with only 5 degrees of swing.
- ▶ Spline wrenches can be used on 4, 6, 12 point, spline and Torx® fasteners.
- ▶ 180 degree flexibility on box end.



INCH		Outside Head Width 1 (in)	Head Thickness 1 (in)	Outside Head Width 2 (in)	Head Thickness 2 (in)	Overall Length (in)	Weight (lbs)
5/16	<b>JSCV10F</b>	19/32	9/32	41/64	17/64	5	0.16
3/8	<b>JSCV12F</b>	13/16	13/64	7/8	9/32	5-3/8	0.17
7/16	<b>JSCV14F</b>	57/64	13/64	27/32	5/16	5-9/16	0.19
1/2	<b>JSCV16F</b>	1-1/16	1-15/64	1-3/32	11/32	6	0.2
9/16	<b>JSCV18F</b>	1-9/64	3/8	1-1/16	23/64	6-1/4	0.29
5/8	<b>JSCV20F</b>	1-5/16	13/32	1-3/16	25/64	7	0.33
11/16	<b>JSCV22F</b>	1-25/64	19/64	13/32	1-7/32	7-1/2	0.46
3/4	<b>JSCV24F</b>	1-35/64	11/32	1-21/64	7/16	8-1/2	0.57


MM		Outside Head Width 1 (in)	Head Thickness 1 (in)	Outside Head Width 2 (in)	Head Thickness 2 (in)	Overall Length (in)	Weight (lbs)
8	<b>JSCVM08F</b>	41/64	9/32	21/32	17/64	5	0.13
9	<b>JSCVM09F</b>	47/64	3/32	21/32	9/32	5-13/64	0.16
10	<b>JSCVM10F</b>	13/16	13/64	51/64	9/32	5-3/8	0.16
11	<b>JSCVM11F</b>	57/64	13/64	55/64	5/16	5-1/2	0.17
12	<b>JSCVM12F</b>	63/64	11/32	57/64	21/64	5-25/32	0.19
13	<b>JSCVM13F</b>	1-1/16	15/64	1	11/32	6	0.19
14	<b>JSCVM14F</b>	1-9/64	3/8	1-3/64	23/64	6-1/2	0.21
15	<b>JSCVM15F</b>	1-3/16	1/4	1-3/32	3/8	6-3/4	0.25
16	<b>JSCVM16F</b>	1-21/64	13/32	1-11/64	25/64	7	0.3
17	<b>JSCVM17F</b>	1-25/64	19/64	1-1/4	13/32	7-1/2	0.33
18	<b>JSCVM18F</b>	1-15/32	7/16	1-9/32	27/64	8	0.36
19	<b>JSCVM19F</b>	1-35/64	11/32	1-21/64	7/16	8-1/2	0.45





## 8 PIECE BLACK CHROME COMBINATION LOCKING FLEX-HEAD RATCHETING WRENCH SET - SPLINE

Product #: **JSCVF-8S**

	INCH	Point Size	Overall Length (in)
JSCV10F	5/16	Spline	5
JSCV12F	3/8	Spline	5-3/8
JSCV14F	7/16	Spline	5-9/16
JSCV16F	1/2	Spline	6
JSCV18F	9/16	Spline	6-1/4
JSCV20F	5/8	Spline	7
JSCV22F	11/16	Spline	7-1/2
JSCV24F	3/4	Spline	8-1/2
J25TR73C	Tool Roll		


Weight (lbs): 2.3



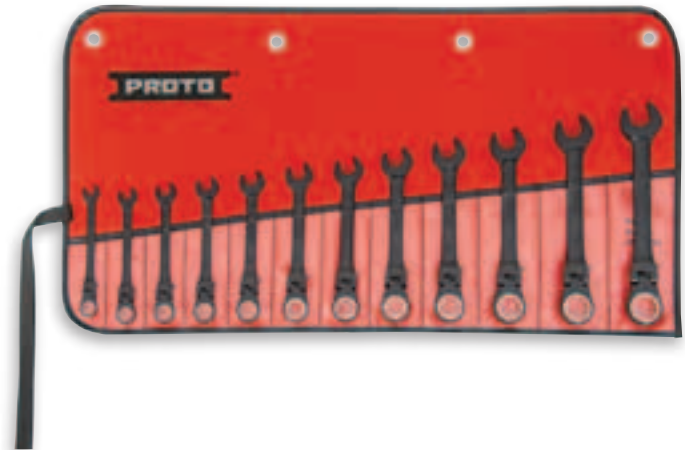
LOCKING FLEX-HEAD RATCHETING WRENCH SETS

## 12 PIECE BLACK CHROME METRIC COMBINATION LOCKING FLEX-HEAD RATCHETING WRENCH SET - SPLINE

Product #: **JSCVMF-12S**

	MM	Point Size	Overall Length (in)
JSCVM08F	8	Spline	5
JSCVM09F	9	Spline	5-13/64
JSCVM10F	10	Spline	5-3/8
JSCVM11F	11	Spline	5-1/2
JSCVM12F	12	Spline	5-25/32
JSCVM13F	13	Spline	6
JSCVM14F	14	Spline	6-1/2
JSCVM15F	15	Spline	6-3/4
JSCVM16F	16	Spline	7
JSCVM17F	17	Spline	7-1/2
JSCVM18F	18	Spline	8
JSCVM19F	19	Spline	8-1/2
J25TR74C	Tool Roll		

Weight (lbs): 3.28





Torx® is a trademark of Acument Intellectual Properties, LLC

## STUBBY COMBINATION REVERSIBLE RATCHETING WRENCHES - SPLINE

- › The chrome-vanadium switch lever allows for easy changes in turning direction which helps improve speed.
- › 15° angled offset helps keep shank clear of obstructions.
- › Box end is countersunk for easy application to the fastener.
- › Spline design was created for use with specialty spline bolts which are used when weight and size of bolt heads must be minimized.
- › Spline design enables the wrench to contact conventional fasteners away from the corners, which applies force over a larger area, reducing risk of fastener scoring and helps prevent rounding of the corners and other fasteners damage that could lead to Foreign Object Damage (FOD).
- › The high contact surface area which is away from fastener points enables turning of highly rounded fastener.
- › Anti-Slip Design (ASD) open end.
- › Black chrome finish is corrosion-resistant and visually distinctive.
- › Compact size allows you to work in tight spots.
- › 72-tooth ratcheting mechanism rotates fast with only 5 degrees of swing.
- › Spline wrenches can be used on 4, 6, 12 point, spline and Torx® fasteners.




INCH		Outside Head Width 1 (in)	Head Thickness 1 (in)	Outside Head Width 2 (in)	Head Thickness 2 (in)	Overall Length (in)	Weight (lbs)
1/4	<b>JSCV08S</b>	37/64	9/64	9/16	1/4	3-1/8	0.06
5/16	<b>JSCV10S</b>	41/64	5/32	21/32	1/4	3-1/2	0.08
3/8	<b>JSCV12S</b>	13/16	11/64	25/32	9/32	3-3/4	0.11
7/16	<b>JSCV14S</b>	29/32	5/16	55/64	19/64	4	0.12
1/2	<b>JSCV16S</b>	1-1/16	7/32	63/64	11/32	4-1/4	0.16
9/16	<b>JSCV18S</b>	1-9/64	3/8	1-1/32	23/64	4-1/2	0.18
5/8	<b>JSCV20S</b>	1-5/16	13/32	1-11/64	25/64	4-7/8	0.24
11/16	<b>JSCV22S</b>	1-13/32	17/64	1-15/64	13/32	5	0.27
3/4	<b>JSCV24S</b>	1-9/16	5/16	1-5/16	7/16	5-1/2	0.36

MM		Outside Head Width 1 (in)	Head Thickness 1 (in)	Outside Head Width 2 (in)	Head Thickness 2 (in)	Overall Length (in)	Weight (lbs)
6	<b>JSCVM06S</b>	37/64	9/64	9/16	1/4	3-1/2	0.06
8	<b>JSCVM08S</b>	41/64	9/32	21/32	17/64	3-1/2	0.08
9	<b>JSCVM09S</b>	23/32	9/32	47/64	17/64	3-3/4	0.09
10	<b>JSCVM10S</b>	13/16	3/16	51/64	9/32	3-3/4	0.10
11	<b>JSCVM11S</b>	29/32	5/16	55/64	19/64	4	0.14
12	<b>JSCVM12S</b>	31/32	11/32	29/32	21/64	4-1/4	0.15
13	<b>JSCVM13S</b>	1-1/16	7/32	63/64	11/32	4-1/4	0.18
14	<b>JSCVM14S</b>	1-9/64	3/8	1-1/32	23/64	4-1/2	0.21
15	<b>JSCVM15S</b>	1-7/32	1/4	1-3/32	3/8	4-11/16	0.24
16	<b>JSCVM16S</b>	1-5/16	13/32	1-5/32	25/64	4-7/8	0.33
17	<b>JSCVM17S</b>	1-13/32	15/64	1-1/4	13/32	5	0.38
18	<b>JSCVM18S</b>	1-7/16	5/16	1-1/4	7/16	5-5/32	0.41
19	<b>JSCVM19S</b>	1-9/16	5/16	1-5/16	7/16	5-1/2	0.47



## 9 PIECE BLACK CHROME COMBINATION STUBBY REVERSIBLE RATCHETING WRENCH SET - SPLINE

Product #: **JSCVS-9S**

 SPL	INCH	Point Size	Overall Length (in)
JSCV08S	1/4	Spline	3-1/8
JSCV10S	5/16	Spline	3-1/2
JSCV12S	3/8	Spline	3-3/4
JSCV14S	7/16	Spline	4
JSCV16S	1/2	Spline	4-1/4
JSCV18S	9/16	Spline	4-1/2
JSCV20S	5/8	Spline	4-7/8
JSCV22S	11/16	Spline	5
JSCV24S	3/4	Spline	5-1/2
J25TR71C	Tool Roll		


Weight (lbs): 1.63



STUBBY REVERSIBLE RATCHETING WRENCH SETS

## 13 PIECE BLACK CHROME METRIC COMBINATION STUBBY REVERSIBLE RATCHETING WRENCH SET - SPLINE

Product #: **JSCVMS-13S**

 SPL	MM	Point Size	Overall Length (in)
JSCVM06S	6	Spline	3-1/2
JSCVM08S	8	Spline	3-1/2
JSCVM09S	9	Spline	3-3/4
JSCVM10S	10	Spline	3-3/4
JSCVM11S	11	Spline	4
JSCVM12S	12	Spline	4-1/4
JSCVM13S	13	Spline	4-1/4
JSCVM14S	14	Spline	4-1/2
JSCVM15S	15	Spline	4-11/16
JSCVM16S	16	Spline	4-7/8
JSCVM17S	17	Spline	5
JSCVM18S	18	Spline	5-5/32
JSCVM19S	19	Spline	5-1/2
J25TR72C	Tool Roll		

Weight (lbs): 2.29




Torx® is a trademark of Acument Intellectual Properties, LLC

## DOUBLE BOX REVERSIBLE RATCHETING WRENCHES - SPLINE


- ▶ Black chrome finish is corrosion-resistant and visually distinctive.
- ▶ Ratcheting spline box end is countersunk for easy application to the fastener.
- ▶ Spline design was created for use with specialty spline bolts which are used when weight and size of bolt heads must be minimized.
- ▶ Spline design enables the wrench to contact conventional fasteners away from the corners, which help apply force over a large area helping to reduce risk of fastener rounding.
- ▶ Spline design also helps prevent rounding of corners and other fastener damage that could lead to Foreign Object Damage (FOD).
- ▶ The fractional spline wrenches can be used on fractional 4, 6, 12 point and spline fasteners.
- ▶ The high contact surface area which is away from fastener points enables turning of highly rounded fasteners.



INCH		Outside Head Width 1 (in)	Head Thickness 1 (in)	Outside Head Width 2 (in)	Head Thickness 2 (in)	Overall Length (in)	Weight (lbs)
7/32 x 9/32	<b>JSBV0709</b>	11/16	1/8	11/16	1/8	4-1/2	0.08
1/4 x 5/16	<b>JSBV0810</b>	11/16	1/8	11/16	1/8	4-1/2	0.08
3/8 x 7/16	<b>JSBV1214</b>	7/8	1/8	7/8	1/8	5-15/16	0.12
1/2 x 9/16	<b>JSBV1618</b>	1	3/16	1	3/16	7-1/16	0.23
5/8 x 11/16	<b>JSBV2022</b>	1-3/16	3/16	1-3/16	3/16	7-7/8	0.35
3/4 x 7/8	<b>JSBV2428</b>	1-5/8	1/4	1-5/8	1/4	9-5/8	0.63
13/16 x 15/16	<b>JSBV2630</b>	1-13/16	1/4	1-13/16	1/4	10-1/4	0.84
1 x 1-1/8	<b>JSBV3236</b>	2-5/16	5/16	2-5/16	5/16	11-5/8	0.95

## 8 PIECE BLACK CHROME DOUBLE BOX REVERSIBLE RATCHETING WRENCH SET - SPLINE

Product #: **JSBV-8S**

	INCH	Point Size	Overall Length (in)
JSBV0709	7/32 x 9/32	Spline	4-1/2
JSBV0810	1/4 x 5/16	Spline	4-1/2
JSBV1214	3/8 x 7/16	Spline	5-15/16
JSBV1618	1/2 x 9/16	Spline	7-1/16
JSBV2022	5/8 x 11/16	Spline	7-7/8
JSBV2428	3/4 x 7/8	Spline	9-5/8
JSBV2630	13/16 x 15/16	Spline	10-1/4
JSBV3236	1 x 1-1/8	Spline	11-5/8
JSBV8SP	Tool Roll		

Weight (lbs): 4.12





## 4 PIECE RATCHETING WRENCH ADAPTER SET - FRACTIONAL

**Product #: JHA4S**

- › Full polish finish provides corrosion resistance and easy-to-clean surfaces.
- › Converts ratcheting wrench into super-thin ratchets or ratcheting bit drivers.
- › Inserts into box end with a stable locking and release mechanism.
- › Converts:
  - 3/8" Ratcheting Wrench to 1/4" Drive Bit Adapter
  - 3/8" Ratcheting Wrench to 1/4" Drive Adapter
  - 1/2" Ratcheting Wrench to 3/8" Drive Adapter
  - 3/4" Ratcheting Wrench to 1/2" Drive Adapter
- › Weight (lbs): 0.21



## 4 PIECE RATCHETING WRENCH ADAPTER SET - METRIC

**Product #: JHAM4S**

- › Full polish finish provides corrosion resistance and easy-to-clean surfaces.
- › Converts ratcheting wrench into super-thin ratchets or ratcheting bit drivers.
- › Inserts into box end with a stable locking and release mechanism.
- › Easy to read markings.
- › Converts:
  - 10mm Ratcheting Wrench to 1/4" Drive Bit Adapter
  - 10mm Ratcheting Wrench to 1/4" Drive Adapter
  - 13mm Ratcheting Wrench to 3/8" Drive Adapter
  - 19mm Ratcheting Wrench to 1/2" Drive Adapter
- › Weight (lbs): 0.22



RATCHETING WRENCH ADAPTER SETS



### RATCHETING WRENCH ADAPTERS

This adapter converts a ratcheting wrench into a super-thin ratchet or ratcheting bit driver to reach into difficult spaces. It fits securely into the box end of the ratcheting wrench and accepts 1/4", 3/8" or 1/2" drive sockets and 1/4" bits, depending on the size of the adapter. A button on the top releases the socket or bit.



## OFFSET REVERSIBLE RATCHETING DOUBLE BOX WRENCHES

- › Full polish finish provides corrosion resistance and easy to clean surfaces.
- › 25° offset box end helps keep shank clear of obstructions.
- › Built in retaining ring in each ratchet wheel adds speed and convenience for greater accessibility.
- › Shorter length for access to confined work spaces.
- › 6 point box end allows larger wrench to fastener contact area which helps prevent rounding of the fastener.
- › 12 point box end allows for fine indexing.
- › Fits 4, 6 and 12 point fasteners.
- › Reversing switch lever allows for easy changes in turning direction which helps improve speed.
- › The wrench self-aligns with the fastener.



<b>INCH</b>	<b>6</b>	<b>12</b>	<b>Outside Head Width 1 (in)</b>	<b>Head Thickness 1 (in)</b>	<b>Outside Head Width 2 (in)</b>	<b>Head Thickness 2 (in)</b>	<b>Overall Length (in)</b>	<b>Weight (lbs)</b>
7/32 x 9/32	-	<b>J1179T</b>	19/32	3/8	43/64	3/8	4-1/4	0.15
1/4 x 5/16	<b>J1181-A</b>	<b>J1181T</b>	19/32	3/8	41/64	3/8	4-1/4	0.15
3/8 x 7/16	<b>J1182-A</b>	<b>J1182T</b>	25/32	3/8	7/8	3/8	5-7/16	0.21
1/2 x 9/16	<b>J1183-A</b>	<b>J1183T</b>	1	1/2	1-9/64	1/2	6-3/4	0.43
5/8 x 11/16	-	<b>J1184-A</b>	1-19/64	1/2	1-7/16	1/2	8	0.58
5/8 x 3/4	-	<b>J1186</b>	1-19/64	1/2	1-7/16	1/2	8	0.58
3/4 x 7/8	-	<b>J1185-A</b>	1-13/32	1/2	1-9/16	1/2	9-1/8	0.77

<b>MM</b>	<b>6</b>	<b>12</b>	<b>Outside Head Width 1 (in)</b>	<b>Head Thickness 1 (in)</b>	<b>Outside Head Width 2 (in)</b>	<b>Head Thickness 2 (in)</b>	<b>Overall Length (in)</b>	<b>Weight (lbs)</b>
7 x 8	<b>J1181M-A</b>	-	19/32	3/8	4-5/16	3/8	4-19/64	0.13
9 x 10	<b>J1182M-A</b>	-	25/32	3/8	5-17/32	3/8	5-33/64	0.22
11 x 13	<b>J1183MA-A</b>	-	1-1/64	1/2	1-5/32	1/2	6-17/32	0.32
12 x 14	<b>J1184MA-A</b>	-	1-1/64	1/2	1-5/32	1/2	6-17/32	0.32
15 x 17	-	<b>J1185M-A</b>	1-19/64	1/2	7-27/32	1/2	7-53/64	0.46
16 x 18	-	<b>J1186M-A</b>	1-19/64	1/2	7-27/32	1/2	7-53/64	0.46
19 x 21	-	<b>J1187M-A</b>	1-13/32	1/2	8-23/32	1/2	8-45/64	0.52





## 5 PIECE OFFSET REVERSIBLE RATCHETING BOX WRENCH SET - 6 AND 12 POINT

Product #: **J1180A**

<b>6</b> <b>12</b>	<b>INCH</b>	<b>Point Size</b>	<b>Overall Length (in)</b>
J1181-A	1/4 x 5/16	6	4-1/4
J1182-A	3/8 x 7/16	6	5-7/16
J1183-A	1/2 x 9/16	6	6-3/4
J1184-A	5/8 x 11/16	12	8
J1185-A	3/4 x 7/8	12	9-1/8
J25TR06C	Tool Roll		

Weight (lbs): 2.24



OFFSET DOUBLE BOX RATCHETING WRENCH SETS

## 7 PIECE OFFSET REVERSIBLE RATCHETING BOX WRENCH SET - 6 AND 12 POINT

Product #: **J1180MA**

<b>6</b> <b>12</b>	<b>MM</b>	<b>Point Size</b>	<b>Overall Length (in)</b>
J1181M-A	7 x 8	6	4-19/64
J1182M-A	9 x 10	6	5-33/64
J1183MA-A	11 x 13	6	6-17/32
J1184MA-A	12 x 14	6	6-17/32
J1185M-A	15 x 17	12	7-53/64
J1186M-A	16 x 18	12	7-53/64
J1187M-A	19 x 21	12	8-45/64
J25TR01C	Tool Roll		

Weight (lbs): 3.60



- FULL POLISH
- SATIN
- BLACK OXIDE
- BLACK CHROME
- INSULATED

## REVERSIBLE RATCHETING DOUBLE BOX WRENCHES - 12 POINT

- › Full polish finish provides corrosion resistance and easy to clean surfaces.
- › Built in retaining ring in each ratchet wheel adds speed and convenience for greater accessibility.
- › Shorter length for access to confined work spaces.
- › Reversing switch lever allows for easy changes in turning direction which helps improve speed.
- › The wrench self-aligns with the fastener.
- › 12 point box end allows for fine indexing.
- › Fits 4, 6 and 12 point fasteners.



<b>INCH</b>	<b>12</b>	<b>Overall Length (in)</b>	<b>Weight (lbs)</b>
1/4 x 5/16	<b>J1191LO</b>	4-1/2	0.15
3/8 x 7/16	<b>J1192LO</b>	5-1/2	0.21
1/2 x 9/16	<b>J1193LO</b>	6-7/8	0.31
5/8 x 11/16	<b>J1194LO</b>	8-1/8	0.58
3/4 x 7/8	<b>J1195LO</b>	9-1/4	0.67

<b>MM</b>	<b>12</b>	<b>Overall Length (in)</b>	<b>Weight (lbs)</b>
7 x 8	<b>J1191MLO</b>	4-1/2	0.16
9 x 10	<b>J1192MLO</b>	5-1/2	0.23
11 x 12	<b>J1193MLO</b>	6-7/8	0.33
13 x 14	<b>J1194MLO</b>	6-7/8	0.61
15 x 17	<b>J1195MLO</b>	8-1/8	0.7

## 5 PIECE METRIC REVERSIBLE RATCHETING BOX WRENCH SET - 12 POINT

Product #: **J1190MLO**

<b>12</b>	<b>MM</b>	<b>Point Size</b>	<b>Overall Length (in)</b>
J1191MLO	7 x 8	12	4-1/2
J1192MLO	9 x 10	12	5-1/2
J1193MLO	11 x 12	12	6-7/8
J1194MLO	13 x 14	12	6-7/8
J1195MLO	15 x 17	12	8-1/8
J25TR06C	Tool Roll		

Weight (lbs): 2.03



## 5 PIECE REVERSIBLE RATCHETING BOX WRENCH SET - 12 POINT

Product #: **J1190LO**

<b>12</b>	<b>INCH</b>	<b>Point Size</b>	<b>Overall Length (in)</b>
J1191LO	1/4 x 5/16	12	4-1/2
J1192LO	3/8 x 7/16	12	5-1/2
J1193LO	1/2 x 9/16	12	6-7/8
J1194LO	5/8 x 11/16	12	8-1/8
J1195LO	3/4 x 7/8	12	9-1/4
J25TR06C	Tool Roll		

Weight (lbs): 2.18







## RATCHETING DOUBLE BOX WRENCHES

- ▶ Full polish finish provides corrosion resistance and easy to clean surfaces.
- ▶ Built in retaining ring in each ratchet wheel adds speed and convenience for greater accessibility.
- ▶ Shorter length for access to confined workspaces.
- ▶ The wrench self-aligns with the fastener.
- ▶ 6 point box end allows for large wrench to fastener contact area which helps prevent fastener rounding.
- ▶ 12 point box end allows for fine indexing.
- ▶ Fits 4, 6 and 12 point fasteners.



DOUBLE BOX RATCHETING WRENCHES

INCH	12	Outside Head Width 1 (in)	Head Thickness 1 (in)	Outside Head Width 2 (in)	Head Thickness 2 (in)	Overall Length (in)	Weight (lbs)
1/4 x 5/16	J1191T-A	9/32	3/8	5/8	3/8	4-1/2	0.12
3/8 x 7/16	J1192T-A	3/4	3/8	7/8	3/8	5-1/2	0.17
1/2 x 9/16	J1193T-A	1	1/2	1-1/8	1/2	6-7/8	0.29
5/8 x 11/16	J1194-A	1-19/64	1/2	1-7/16	1/2	8-1/8	0.44
3/4 x 7/8	J1195-A	1-13/32	1/2	1-37/64	1/2	9-1/4	0.52
5/8 x 3/4	J1196-A	1-19/64	1/2	1-7/16	1/2	8-1/8	0.47
13/16 x 15/16	J1197-A	1-13/32	1/2	1-37/64	1/2	9-1/4	0.52
1 x 1-1/16	J1198	1-29/32	9/16	2-1/4	9/16	15	0.56
1-1/8 x 1-1/4	J1199	1-29/32	9/16	2-1/4	9/16	15	0.60



MM	6	12	Outside Head Width 1 (in)	Head Thickness 1 (in)	Outside Head Width 2 (in)	Head Thickness 2 (in)	Overall Length (in)	Weight (lbs)
7 x 8	J1191M-A	-	19/32	3/8	4-5/16	3/8	4-19/64	0.12
9 x 10	J1192M-A	-	25/32	3/8	5-17/32	3/8	5-33/64	0.17
11 x 13	J1193MA-A	-	1-1/64	1/2	1-5/32	1/2	6-13/16	0.31
12 x 14	J1194MA-A	-	1-1/64	1/2	1-5/32	1/2	9-1/4	0.39
15 x 17	-	J1195M-A	1-19/64	1/2	8-1/8	1/2	8-7/64	0.48
16 x 18	-	J1196M	1-19/64	1/2	8-1/8	1/2	8-7/64	0.48
19 x 21	-	J1197M	1-13/32	1/2	9-1/4	1/2	9-15/64	0.55



## REVERSIBLE RATCHETING BOX WRENCH - SPLINE

- ▶ Metric Spline wrenches can be used on metric 4, 6, 12 point, spline and Torx® fasteners.
- ▶ The chrome-vanadium switch lever allows for easy changes in turning direction which helps improve speed.
- ▶ 15° angled offset box end helps keep shank clear of obstructions.
- ▶ Chrome-vanadium box ends and switch levers provide high strength and durability.
- ▶ Box end is countersunk for easy application to the fastener.
- ▶ Spline design was created for use with specialty spline bolts which are used when weight and size of bolt heads must be minimized.
- ▶ Spline design enables the wrench to contact conventional fasteners away from the corners, which applies force over a larger area, reducing risk of fastener scoring and helps prevent rounding of the corners and other fasteners damage that could lead to Foreign Object Damage (FOD).
- ▶ The high contact surface area which is away from fastener points enables turning of highly rounded fasteners.
- ▶ Anti-Slip Design (ASD) open end.
- ▶ Black chrome finish is corrosion-resistant and visually distinctive.



INCH	SPL	Outside Head Width 1 (in)	Head Thickness 1 (in)	Outside Head Width 2 (in)	Head Thickness 2 (in)	Overall Length (in)	Weight (lbs)
3/8 x 7/16	J1192SPL	51/64	3/8	57/64	3/8	5-1/2	0.19



FULL POLISH	SATIN	BLACK OXIDE	BLACK CHROME	INSULATED
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Torx® is a trademark of Acument Intellectual Properties, LLC

## 5 PIECE RATCHETING BOX WRENCH SET - 6 AND 12 POINT

Product #: **J1190MA**

<b>6</b> <b>12</b>	<b>MM</b>	<b>Point Size</b>	<b>Overall Length (in)</b>
J1191M-A	7 x 8	6	4-19/64
J1192M-A	9 x 10	6	5-33/64
J1193MA-A	11 x 13	6	6-13/16
J1194MA-A	12 x 14	6	9-1/4
J1195M-A	15 x 17	12	8-7/64
J25TR06C	Tool Roll		

Weight (lbs): 1.55



## 5 PIECE RATCHETING BOX WRENCH SET - 12 POINT

Product #: **J1190A**

<b>12</b>	<b>INCH</b>	<b>Point Size</b>	<b>Overall Length (in)</b>
J1191T-A	1/4 x 5/16	12	4-1/2
J1192T-A	3/8 x 7/16	12	5-1/2
J1193T-A	1/2 x 9/16	12	6-7/8
J1194-A	5/8 x 11/16	12	8-1/8
J1195-A	3/4 x 7/8	12	9-1/4
J25TR06C	Tool Roll		

Weight (lbs): 1.72






## 3 PIECE RATCHETING BOX WRENCH SET - 12 POINT

Product #: **J1190B**

⑫	INCH	Point Size	Overall Length (in)
J1192T-A	3/8 x 7/16	12	5-1/2
J1193T-A	1/2 x 9/16	12	6-7/8
J1196-A	5/8 x 3/4	12	8-1/8
J25TR17C	Tool Roll		10

Weight (lbs): 1.10 




DOUBLE BOX WRENCHES

## REFRIGERATION WRENCHES

- › Full polish finish provides corrosion resistance and easy to clean surfaces.
- › Designed for servicing automotive, commercial, and residential air conditioners, refrigeration units and freezers.
- › Hex openings are used for packing gland fittings, mounting bolts, clutch bolts, tubing fittings, dust cap nuts and oil check plugs.
- › Square openings are used on male service valves, plug fittings, compressor valves and refrigerant charging tanks.
- › Reversing switch lever allows for easy changes in turning direction which helps improve speed.



INCH	Product #	Overall Length (in)	Weight (lbs)
1/4 x 3/16 (Square) & 9/16 x 1/2 (Hex)	<b>J1111</b>	6-3/4	0.35
1/4 x 3/8 (Square) & 3/16 x 5/16 (Square)	<b>J1112</b>	5-1/2	0.25



 FULL POLISH	 SATIN	 BLACK OXIDE	 BLACK CHROME	 INSULATED
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## RATCHETING FLARE NUT WRENCHES - 12 POINT

- › Designed for use on 6 and 12 point tube fittings, hydraulic lines, fasteners, valves, and compression fittings.
- › Distinct design only requires 30° rotation to engage ratcheting feature.
- › Carbon steel jaws snap open, then close around fastener.
- › Easy access to tight locations.
- › Non-reflective black oxide finish for use where non-plated products are required.
- › 12 point flare nut box end allows for fine indexing helping to improve speed and access.
- › Pivoting head allows user to place the wrench over the connected pipes to reach the fastener.



<b>INCH</b>	<b>12</b>	<b>Outside Head Width 1 (in)</b>	<b>Head Thickness 1 (in)</b>	<b>Overall Length (in)</b>	<b>Weight (lbs)</b>
3/8	<b>J3812</b>	1	9/32	5-7/16	0.17
7/16	<b>J3814</b>	1	9/32	5-7/16	0.17
1/2	<b>J3816</b>	1	9/32	5-7/16	0.17
9/16	<b>J3818</b>	1-5/16	3/8	7-1/4	0.31
5/8	<b>J3820</b>	1-5/16	3/8	7-1/4	0.31
11/16	<b>J3822</b>	1-5/16	3/8	7-1/4	0.31
3/4	<b>J3824</b>	1-5/16	3/8	7-1/4	0.31
13/16	<b>J3826</b>	1-11/16	7/16	9-3/8	0.58
7/8	<b>J3828</b>	1-11/16	7/16	9-3/8	0.58
15/16	<b>J3830</b>	1-11/16	1/2	9-3/8	0.58
1	<b>J3832</b>	1-11/16	1/2	9-3/8	0.58



<b>MM</b>	<b>12</b>	<b>Outside Head Width 1 (in)</b>	<b>Head Thickness 1 (in)</b>	<b>Overall Length (in)</b>	<b>Weight (lbs)</b>
10	<b>J3810M</b>	1	9/32	5-7/16	0.18
11	<b>J3811M</b>	1	9/32	5-7/16	0.16
12	<b>J3812M</b>	1	9/32	5-7/16	0.16
13	<b>J3813M</b>	1	9/32	5-7/16	0.17
14	<b>J3814M</b>	1-5/16	3/8	7-1/4	0.31
15	<b>J3815M</b>	1-5/16	3/8	7-1/4	0.31
16	<b>J3816M</b>	1-5/16	3/8	7-1/4	0.31
17	<b>J3817M</b>	1-5/16	3/8	7-1/4	0.3
18	<b>J3818M</b>	1-5/16	3/8	7-1/4	0.29
19	<b>J3819M</b>	1-5/16	3/8	7-1/4	0.29





## 7 PIECE RATCHETING FLARE NUT WRENCH SET - 12 POINT

Product #: **J3800A**

<b>12</b>	<b>INCH</b>	<b>Point Size</b>	<b>Overall Length (in)</b>
J3812	3/8	12	5-7/16
J3814	7/16	12	5-7/16
J3816	1/2	12	5-7/16
J3818	9/16	12	7-1/4
J3820	5/8	12	7-1/4
J3822	11/16	12	7-1/4
J3824	3/4	12	7-1/4
J25TR03C	Tool Roll		

Weight (lbs): 1.93



RATCHETING FLARE NUT WRENCH SETS

## 10 PIECE METRIC RATCHETING FLARE NUT WRENCH SET - 12 POINT

Product #: **J3800M**

<b>12</b>	<b>MM</b>	<b>Point Size</b>	<b>Overall Length (in)</b>
J3810M	10	12	5-7/16
J3811M	11	12	5-7/16
J3812M	12	12	5-7/16
J3813M	13	12	5-7/16
J3814M	14	12	7-1/4
J3815M	15	12	7-1/4
J3816M	16	12	7-1/4
J3817M	17	12	7-1/4
J3818M	18	12	7-1/4
J3819M	19	12	7-1/4
J25TR39C	Tool Roll		

Weight (lbs): 2.77



- FULL POLISH
- SATIN
- BLACK OXIDE
- BLACK CHROME
- INSULATED

# COMBINATION WRENCHES



- ▶ Anti-Slip Design (ASD) open end.
- ▶ Fractional sizes 11/32" and smaller and sizes 1-5/16" and larger do not have the ASD feature.
- ▶ Box ends incorporate the TorquePlus™ system.
- ▶ Box end is countersunk for easy application to the fastener.

COMBINATION WRENCHES

INCH	6	6	12	12	12	Throat Depth (in) (B)	Outside Head Width (in) (C)	Head Thickness (in) (D)	Outside Head Width (in) (C1)	Head Thickness (in) (D1)	Overall Length (in)	Weight (lbs)
1/4	J1208H-T500	J1208HA	J1208-T500	J1208A	J1208BA	19/64	39/64	1/4	27/64	15/64	4-7/8	0.04
9/32	-	-	J1209-T500	J1209A	-	23/64	41/64	3/16	29/64	7/32	5-5/32	0.06
5/16	J1210H-T500	J1210HA	J1210-T500	J1210A	J1210BA	3/8	45/64	9/32	33/64	17/64	5-3/8	0.08
11/32	J1211H-T500	J1211HA	J1211-T500	J1211A	J1211BA	13/32	25/32	3/16	17/32	7/32	5-5/8	0.08
3/8	J1212H-T500	J1212HASD	J1212-T500	J1212ASD	J1212BASD	13/32	13/16	3/16	39/64	5/16	6	0.11
7/16	J1214H-T500	J1214HASD	J1214-T500	J1214ASD	J1214BASD	17/32	15/16	11/32	43/64	21/64	7	0.14
1/2	J1216H-T500	J1216HASD	J1216-T500	J1216ASD	J1216BASD	39/64	1-5/16	1/4	49/64	11/32	8	0.18
9/16	J1218H-T500	J1218HASD	J1218-T500	J1218ASD	J1218BASD	11/16	1-3/16	3/8	3/4	23/64	8-7/8	0.21
5/8	J1220H-T500	J1220HASD	J1220-T500	J1220ASD	J1220BASD	3/4	1-21/64	19/64	15/16	13/32	9-1/2	0.29
11/16	J1222H-T500	J1222HASD	J1222-T500	J1222ASD	J1222BASD	13/16	1-29/64	5/16	1-1/64	7/16	10-1/4	0.35
3/4	J1224H-T500	J1224HASD	J1224-T500	J1224ASD	J1224BASD	57/64	1-37/64	11/32	1-3/32	15/32	11	0.41
13/16	J1226H-T500	J1226HASD	J1226-T500	J1226ASD	J1226BASD	31/32	1-11/16	23/64	1-11/64	1/2	11-7/8	0.54
7/8	J1228H-T500	J1228HASD	J1228-T500	J1228ASD	J1228BASD	1-1/16	1-13/16	17/32	1-1/4	33/64	12-1/2	0.65
15/16	J1230H-T500	J1230HASD	J1230-T500	J1230ASD	J1230BASD	1-1/8	1-29/32	19/32	1-27/64	37/64	13-1/4	0.74
1	J1232H-T500	J1232HASD	J1232-T500	J1232ASD	J1232BASD	1-13/64	2-1/64	19/32	1-13/32	37/64	14	0.95
1-1/16	J1234H-T500	J1234HASD	J1234-T500	J1234ASD	J1234BASD	1-9/32	2-9/64	5/8	1-31/64	39/64	15-1/4	1.13
1-1/8	J1236H-T500	J1236HASD	J1236-T500	J1236ASD	J1236BASD	1-23/64	2-17/64	21/32	1-21/32	41/64	15-7/8	1.38
1-3/16	J1238H-T500	J1238HASD	-	J1238ASD	-	1-23/64	2-25/64	3/4	1-21/32	21/32	15-7/8	1.54
1-1/4	J1240H-T500	J1240HASD	J1240-T500	J1240ASD	J1240BASD	1-1/2	2-33/64	23/32	1-3/4	45/64	16-7/8	1.89
1-5/16	-	-	-	J1242	J1242B	1-37/64	2-41/64	3/4	1-27/32	47/64	17-5/8	2.15
1-3/8	-	-	-	J1244	J1244B	1-21/32	2-49/64	35/64	1-15/16	25/32	18-1/2	2.34
1-7/16	-	-	-	J1246	J1246B	1-47/64	2-57/64	13/16	2-3/64	51/64	19-3/8	2.67
1-1/2	-	-	-	J1248	J1248B	1-51/64	3-1/64	27/32	2-1/8	53/64	20-1/4	3.18
1-9/16	-	-	-	J1250	-	2-59/64	3	53/64	2-1/8	53/64	21	3.10
1-5/8	-	-	-	J1252	J1252B	1-63/64	3-25/64	21/32	2-13/32	29/32	23	4.64
1-11/16	-	-	-	J1254	J1254B	1-63/64	3-25/64	21/32	2-13/32	29/32	23	4.74
1-3/4	-	-	-	J1256	J1256B	2-11/64	3-41/64	45/64	2-39/64	31/32	25	5.64
1-13/16	-	-	-	J1258	J1258B	2-11/64	3-41/64	45/64	2-39/64	31/32	25	5.64
1-7/8	-	-	-	J1260	J1260B	2-25/64	4-1/64	49/64	2-57/64	1-1/16	28	7.46
2	-	-	-	J1264	J1264B	2-25/64	4-1/64	49/64	2-57/64	11/16	28	7.35
2-1/16	-	-	-	J1266	-	2-45/64	4-33/64	27/32	3-1/4	13/16	29-1/2	9.88
2-1/8	-	-	-	J1268	-	2-45/64	4-33/64	27/32	3-1/4	13/16	29-1/2	9.74
2-3/16	-	-	-	J1270	-	2-45/64	4-33/64	27/32	3-1/4	1-3/16	29-1/2	9.45
2-1/4	-	-	-	J1272	-	2-45/64	4-33/64	27/32	3-1/4	1-3/16	29-1/2	8.25
2-3/8	-	-	-	J1276	-	2-55/64	5	31/32	3-5/8	1-5/16	31-1/2	13.12
2-1/2	-	-	-	J1280	-	3	5	31/32	3-5/8	1-5/16	31-1/2	12.49
2-9/16	-	-	-	J1282	-	2-1/2	4-1/2	1	3-5/8	1-1/2	29-3/4	13.00
2-5/8	-	-	-	J1284	-	2-5/8	4-3/4	1	3-3/4	1-11/16	29-3/4	13.00
2-3/4	-	-	-	J1288	-	2-9/16	4-3/4	1	3-3/4	1-11/16	29-3/4	13.00
2-13/16	-	-	-	-	J1290	2-15/16	5-1/2	1-1/8	4-1/4	1-1/2	34	18
2-7/8	-	-	-	-	J1292	2-7/8	5-1/2	1-1/8	4-3/4	1-7/16	34	18
2-15/16	-	-	-	-	J1294	2-15/16	5-1/2	1-1/8	4-3/4	1-1/2	34	18
3	-	-	-	-	J1296	2-15/16	5-1/2	1-1/8	4-3/4	1-1/2	34	18
3-1/8	-	-	-	-	J12100	2-7/8	5-1/2	1-1/8	4-3/4	1-1/2	34	18
3-1/4	-	-	-	-	J12104	4	7	1-11/16	5-1/2	2	37	35
3-1/2	-	-	-	-	J12112	3-7/8	7	1-5/8	5-7/8	2-1/8	37	35
3-3/4	-	-	-	-	J12120	3-3/4	7	1-3/4	6-1/8	2-1/4	37	35
3-7/8	-	-	-	-	J12124	3-3/4	7	1-5/8	6-1/8	2-1/4	37	35

AS 954 ASME B107.100





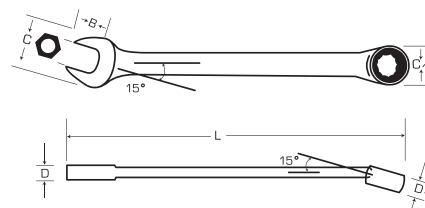
## METRIC COMBINATION WRENCHES

► Metric sizes 9mm and smaller and sizes 36 mm and larger do not have the ASD feature.

COMBINATION WRENCHES

MM	6	6	12	12	12	Throat Depth (in) (B)	Outside Head Width (in) (C)	Head Thickness (in) (D)	Outside Head Width (in) (C1)	Head Thickness (in) (D1)	Length (in)	Overall Length (in)	Weight (lbs)
6	J1206MH-T500	J1206MHA	J1206M-T500	J1206MA	J1206MBA	19/64	35/64	5/32	25/64	5/32	4-29/32	4-29/32	0.05
7	J1207MH-T500	J1207MHA	J1207M-T500	J1207MA	J1207MBA	5/16	19/32	1/4	13/32	15/64	5-5/32	5-5/32	0.06
8	J1208MH-T500	J1208MHA	J1208M-T500	J1208MA	J1208MBA	25/64	11/16	9/32	1/2	17/64	5-13/32	5-13/32	0.07
9	J1209MH-T500	J1209MHA	J1209M-T500	J1209MA	J1209MBA	13/32	3/4	9/32	35/64	17/64	5-21/32	5-21/32	0.08
10	J1210MH-T500	J1210MHASD	J1210M-T500	J1210MASD	J1210MBASD	31/64	7/8	7/32	21/32	5/16	5-29/32	5-29/32	0.11
11	J1211MH-T500	J1211MHASD	J1211M-T500	J1211MASD	J1211MBASD	33/64	59/64	11/32	11/16	21/64	6-29/32	6-29/32	0.15
12	J1212MH-T500	J1212MHASD	J1212M-T500	J1212MASD	J1212MBASD	9/16	1	1/4	47/64	11/32	7-45/64	7-45/64	0.18
13	J1213MH-T500	J1213MHASD	J1213M-T500	J1213MASD	J1213MBASD	39/64	1-1/32	1/4	25/32	11/32	7-29/32	7-29/32	0.21
14	J1214MH-T500	J1214MHASD	J1214M-T500	J1214MASD	J1214MBASD	11/16	1-3/16	3/8	55/64	23/64	8-13/16	8-13/16	0.29
15	J1215MH-T500	J1215MHASD	J1215M-T500	J1215MASD	J1215MBASD	3/4	1-1/4	3/8	7/8	23/64	9-5/32	9-5/32	0.25
16	J1216MH-T500	J1216MHASD	J1216M-T500	J1216MASD	J1216MBASD	3/4	1-21/64	5/16	15/16	13/32	9-35/64	9-35/64	0.26
17	J1217MH-T500	J1217MHASD	J1217M-T500	J1217MASD	J1217MBASD	53/64	1-25/64	21/64	1-1/32	7/16	10-9/32	10-9/32	0.38
18	J1218MH-T500	J1218MHASD	J1218M-T500	J1218MASD	J1218MBASD	55/64	1-33/64	15/32	1-1/16	29/64	10-11/16	10-11/16	0.41
19	J1219MH-T500	J1219MHASD	J1219M-T500	J1219MASD	J1219MBASD	29/32	1-37/64	11/32	1-7/64	15/32	11-1/32	11-1/32	0.46
20	-	-	J1220M-T500	J1220MASD	J1220MBASD	63/64	1-11/16	1/2	1-3/16	31/64	11-27/64	11-27/64	0.55
21	-	-	J1221M-T500	J1221MASD	J1221MBASD	63/64	1-11/16	1/2	1-3/16	31/64	11-13/16	11-13/16	0.54
22	-	-	J1222M-T500	J1222MASD	J1222MBASD	1-3/64	1-25/32	3/8	1-17/64	1/2	12-17/32	12-17/32	0.62
23	-	-	J1223M-T500	J1223MASD	J1223MBASD	1-1/8	1-57/64	9/16	1-11/32	35/64	12-59/64	12-59/64	0.77
24	-	-	J1224M-T500	J1224MASD	J1224MBASD	1-1/8	1-57/64	9/16	1-11/32	35/64	13-5/16	13-5/16	0.77
25	-	-	J1225M-T500	J1225MASD	J1225MBASD	1-13/64	2	27/64	1-27/64	19/32	14-1/16	14-1/16	0.85
26	-	-	J1226M-T500	J1226MASD	J1226MBASD	1-13/64	2-1/64	27/64	1-27/64	19/32	14-41/64	14-41/64	0.97
27	-	-	J1227M-T500	J1227MASD	J1227MBASD	1-7/32	2-9/64	5/8	1-31/64	39/64	15-15/64	15-15/64	1.17
28	-	-	J1228M-T500	J1228MASD	J1228MBASD	1-23/64	2-17/64	21/32	1-21/32	41/64	15-35/64	15-35/64	1.37
29	-	-	-	J1229MASD	-	1-23/64	2-17/64	21/32	1-49/64	41/64	15-55/64	15-55/64	1.39
30	-	-	J1230M-T500	J1230MASD	J1230MBASD	1-23/64	2-17/64	21/32	2-3/64	41/64	15-55/64	15-55/64	1.41
32	-	-	J1232M-T500	J1232MASD	J1232MBASD	1-1/2	2-33/64	23/32	2-27/64	45/64	16-59/64	16-59/64	1.82
36	-	-	-	J1236M	-	1-47/64	2-57/64	13/16	2-3/64	51/64	19-3/8	19-3/8	2.77
41	-	-	-	J1241M	-	2-1/64	3-25/64	15/16	2-27/64	59/64	23	23	4.34
46	-	-	-	J1246M	-	2-11/64	3-41/64	43/64	2-39/64	31/32	25	25	5.5
50	-	-	-	J1250M	-	2-25/64	4-1/64	47/64	2-57/64	1-1/16	28	28	6.97
55	-	-	-	J1255M	-	2-9/16	4-1/4	1	3-1/4	1-3/16	28-3/4	28-3/4	10.00
60	-	-	-	J1260M	-	2-13/32	4-1/2	1	3-5/8	1-1/2	29-3/4	29-3/4	13.00
65	-	-	-	J1265M	-	2-3/8	4-1/2	1	3-5/8	1-1/2	29-3/4	29-3/4	13.00
70	-	-	-	J1270M	-	2-9/16	4-3/4	1	3-3/4	1-5/8	29-3/4	29-3/4	13.00
75	-	-	-	-	J1275M	2-15/16	5-1/2	1-1/8	4-3/4	1-1/2	34	34	18
80	-	-	-	-	J1280M	2-7/8	5-1/2	1-1/8	4-3/4	1-9/16	34	34	18

ASME B107.100



- FULL POLISH
- SATIN
- BLACK OXIDE
- BLACK CHROME
- INSULATED

## FULL POLISH COMBINATION WRENCHES - SPLINE

- › Proto Spline Tools are designed to service high tensile strength fasteners used widely on military and commercial aircraft and in heavy machinery applications where vibration is prevalent. They are also used in automotive and industrial areas where high performance torque needs to be achieved.
- › Spline fasteners help tighten high strength bolts to high torque loads.
- › They help lower the force required to turn standard fasteners by allowing the torque load to be moved away from the corners, helping prevent fastener rounding. They also turn fasteners with damaged corners.
- › Spline helps reduce foreign object debris (FOD) by having a precise fit between the fastening tool and its fastener.
- › Full polish finish provides corrosion resistance and an easy to clean surface.
- › Anti-Slip Design (ASD) open end.



INCH	SPL	Throat Depth 1 (in)	Outside Head Width 1 (in)	Head Thickness 1 (in)	Outside Head Width 2 (in)	Head Thickness 2 (in)	Overall Length (in)	Weight (lbs)
1/4	J1208SPL	17/64	35/64	3/16	25/64	11/64	4-29/32	0.06
9/32	J1209SPL	19/64	39/64	3/16	7/16	11/64	5-5/32	0.07
5/16	J1210SPL	21/64	11/16	11/64	31/64	3/16	5-27/64	0.08
11/32	J1211SPL	23/64	25/32	3/16	35/64	7/32	5-21/32	0.09
3/8	J1212SPL	13/32	27/32	1/4	37/64	15/64	5-59/62	0.10
7/16	J1214SPL	15/32	15/16	9/32	43/64	17/64	6-29/32	0.14
1/2	J1216SPL	17/32	1-5/64	1/4	47/64	5/16	7-29/32	0.20
9/16	J1218SPL	19/32	1-13/64	9/32	13/16	11/32	8-53/64	0.26
5/8	J1220SPL	43/64	1-21/64	19/64	57/64	3/8	9-35/64	0.34
11/16	J1222SPL	47/64	1-7/16	5/16	63/64	13/32	10-19/64	0.42
3/4	J1224SPL	51/64	1-37/64	11/32	1-5/64	15/32	11-3/64	0.50
13/16	J1226SPL	55/64	1-23/32	17/32	1-3/16	33/64	11-53/64	0.59
7/8	J1228SPL	15/16	1-27/32	3/8	1-1/4	17/32	12-17/32	0.73
15/16	J1230SPL	1	1-31/32	19/32	1-23/64	37/64	13-5/16	0.90
1	J1232SPL	1-1/16	2-3/32	19/32	1-29/64	37/64	14-1/16	1.10

## 15 PIECE FULL POLISH COMBINATION WRENCH SET- SPLINE

Product #: J1200SPL

SPL	INCH	Overall Length (in)
J1208SPL	1/4	3-1/32
J1209SPL	9/32	3-1/32
J1210SPL	5/16	3-7/32
J1211SPL	11/32	3-5/16
J1212SPL	3/8	3-17/32
J1214SPL	7/16	3-17/32
J1216SPL	1/2	3-19/32
J1218SPL	9/16	3-27/32
J1220SPL	5/8	4-1/16
J1222SPL	11/16	4-9/32
J1224SPL	3/4	5
J1226SPL	13/16	5-9/16
J1228SPL	7/8	5-25/32
J1230SPL	15/16	5-31/32
J1232SPL	1	6-7/32

Weight (lbs): 6.63







## 31 PIECE SATIN COMBINATION ASD WRENCH SET - 12 POINT

Product #: **J1200-90ASD**



12

	<b>INCH</b>	<b>Point Size</b>	<b>Overall Length (in)</b>
J1210A	5/16	12	5-3/8
J1212ASD	3/8	12	6
J1214ASD	7/16	12	7
J1216ASD	1/2	12	8
J1218ASD	9/16	12	8-7/8
J1220ASD	5/8	12	9-1/2
J1222ASD	11/16	12	10-1/4
J1224ASD	3/4	12	11
J1226ASD	13/16	12	11-7/8
J1228ASD	7/8	12	12-1/2
J1230ASD	15/16	12	13-1/4
J1232ASD	1	12	14
J1234ASD	1-1/16	12	15-1/4
J1236ASD	1-1/8	12	15-7/8
J1240ASD	1-1/4	12	16-7/8
J1242	1-5/16	12	17-5/8
J1244	1-3/8	12	18-1/2
J1246	1-7/16	12	19-3/8
J1248	1-1/2	12	20-1/4
J1252	1-5/8	12	23
J1254	1-11/16	12	23
J1256	1-3/4	12	25
J1258	1-13/16	12	25
J1260	1-7/8	12	28
J1264	2	12	28
J1266	2-1/16	12	29-1/2
J1268	2-1/8	12	29-1/2
J1270	2-3/16	12	29-1/2
J1272	2-1/4	12	29-1/2
J1276	2-3/8	12	31-1/2
J1280	2-1/2	12	31-1/2

J25TR34C Tool Roll

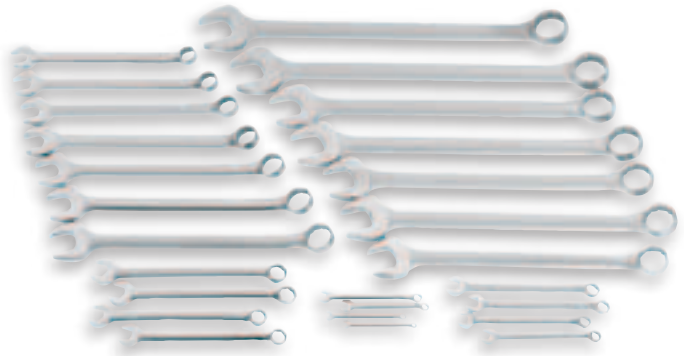
Weight (lbs): 124

ASME B107.100

- FULL POLISH
- SATIN
- BLACK OXIDE
- BLACK CHROME
- INSULATED

## 26 PIECE SATIN COMBINATION ASD WRENCH SET - 12 POINT

Product #: **J1200-80ASD**



12

	<b>INCH</b>	<b>Point Size</b>	<b>Overall Length (in)</b>
J1208A	1/4	12	4-7/8
J1210A	5/16	12	5-3/8
J1212ASD	3/8	12	6
J1214ASD	7/16	12	7
J1216ASD	1/2	12	8
J1218ASD	9/16	12	8-7/8
J1220ASD	5/8	12	9-1/2
J1222ASD	11/16	12	10-1/4
J1224ASD	3/4	12	11
J1226ASD	13/16	12	11-7/8
J1228ASD	7/8	12	12-1/2
J1230ASD	15/16	12	13-1/4
J1232ASD	1	12	14
J1234ASD	1-1/16	12	15-1/4
J1236ASD	1-1/8	12	15-7/8
J1240ASD	1-1/4	12	16-7/8
J1242	1-5/16	12	17-5/8
J1244	1-3/8	12	18-1/2
J1246	1-7/16	12	19-3/8
J1248	1-1/2	12	20-1/4
J1252	1-5/8	12	23
J1254	1-11/16	12	23
J1256	1-3/4	12	25
J1258	1-13/16	12	25
J1260	1-7/8	12	28
J1264	2	12	28

Weight (lbs): 57.42

ASME B107.100

COMBINATION WRENCH SETS

## 16 PIECE SATIN COMBINATION WRENCH SET - 12 POINT

Product #: **J1200F-HD**

<b>12</b>	<b>INCH</b>	<b>Point Size</b>	<b>Overall Length (in)</b>
J1242	1-5/16	12	17-5/8
J1244	1-3/8	12	18-1/2
J1246	1-7/16	12	19-3/8
J1248	1-1/2	12	20-1/4
J1252	1-5/8	12	23
J1254	1-11/16	12	23
J1256	1-3/4	12	25
J1258	1-13/16	12	25
J1260	1-7/8	12	28
J1264	2	12	28
J1266	2-1/16	12	29-1/2
J1268	2-1/8	12	29-1/2
J1270	2-3/16	12	29-1/2
J1272	2-1/4	12	29-1/2
J1276	2-3/8	12	31-1/2
J1280	2-1/2	12	31-1/2

Weight (lbs): 113.5

 ASME B107.100



## 15 PIECE COMBINATION ASD WRENCH SETS - 12 POINT

<b>12</b>	<b>12</b>	<b>INCH</b>	<b>Point Size</b>	<b>Overall Length (in)</b>
J1200F-T500	J1210A	5/16	12	5-3/8
J1212-T500	J1212ASD	3/8	12	6
J1214-T500	J1214ASD	7/16	12	7
J1216-T500	J1216ASD	1/2	12	8
J1218-T500	J1218ASD	9/16	12	8-7/8
J1220-T500	J1220ASD	5/8	12	9-1/2
J1222-T500	J1222ASD	11/16	12	10-1/4
J1224-T500	J1224ASD	3/4	12	11
J1226-T500	J1226ASD	13/16	12	11-7/8
J1228-T500	J1228ASD	7/8	12	12-1/2
J1230-T500	J1230ASD	15/16	12	13-1/4
J1232-T500	J1232ASD	1	12	14
J1234-T500	J1234ASD	1-1/16	12	15-1/4
J1236-T500	J1236ASD	1-1/8	12	15-7/8
J1240-T500	J1240ASD	1-1/4	12	16-7/8
J25TR34C	J25TR34C	Tool Roll		

Weight (lbs): 9.75

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## 14 PIECE BLACK OXIDE COMBINATION ASD WRENCH SET - 12 POINT

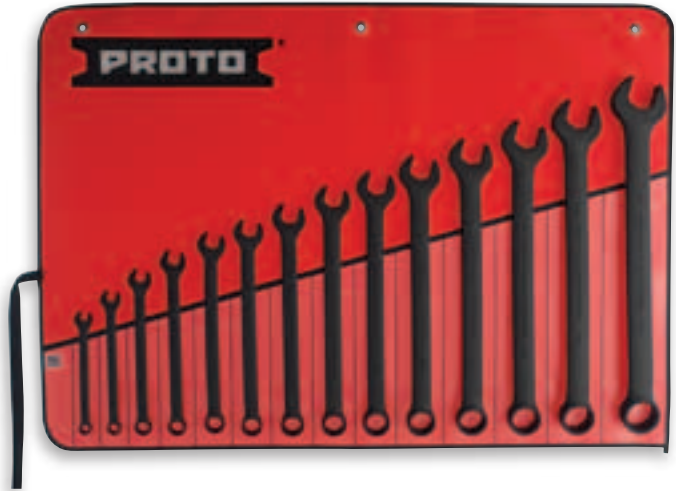
Product #: **J1200FBASD**

- ▶ Non-reflective black oxide finish for use where non-plated products are required.

12	INCH	Point Size	Overall Length (in)
J1212BASD	3/8	12	6
J1214BASD	7/16	12	7
J1216BASD	1/2	12	8-7/8
J1218BASD	9/16	12	8-7/8
J1220BASD	5/8	12	9-1/2
J1222BASD	11/16	12	10-1/4
J1224BASD	3/4	12	11
J1226BASD	13/16	12	11-7/8
J1228BASD	7/8	12	12-1/2
J1230BASD	15/16	12	13-1/4
J1232BASD	1	12	14
J1234BASD	1-1/16	12	15-1/4
J1236BASD	1-1/8	12	15-7/8
J1240BASD	1-1/4	12	16-7/8
J25TR41C	Tool Roll		

Weight (lbs): 9.70

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COMBINATION WRENCH SETS

## 11 PIECE COMBINATION ASD WRENCH SETS - 12 POINT

12	12	INCH	Point Size	Overall Length (in)
J1200H11T5	J1208A	1/4	12	4-7/8
J1212-T500	J1212ASD	3/8	12	6
J1214-T500	J1214ASD	7/16	12	7
J1216-T500	J1216ASD	1/2	12	8
J1218-T500	J1218ASD	9/16	12	8-7/8
J1220-T500	J1220ASD	5/8	12	9-1/2
J1222-T500	J1222ASD	11/16	12	10-1/4
J1224-T500	J1224ASD	3/4	12	11
J1226-T500	J1226ASD	13/16	12	11-7/8
J1228-T500	J1228ASD	7/8	12	12-1/2
J1230-T500	J1230ASD	15/16	12	13-1/4
J1232-T500	-	1	12	
-	Tool Roll			

Weight (lbs): 12.5

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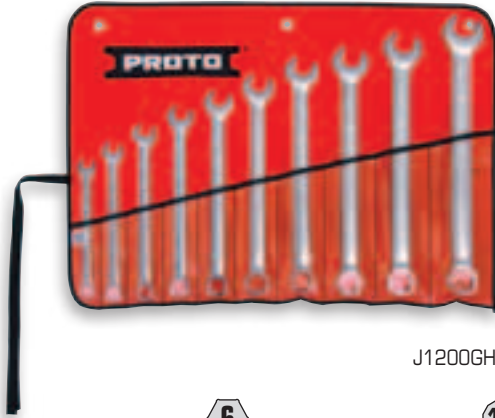
J1200H11T5



J1200GASD11

- FULL POLISH
- SATIN
- BLACK OXIDE
- BLACK CHROME
- INSULATED

## 10 PIECE COMBINATION ASD WRENCH SETS



J1200GHASD-T500



J1200GASD

6

**J1200GHASDT500**

6

**J1200GHASD**

12

**J1200GASD**

**INCH**

**Overall Length (in)**

J1214HASD-T500	J1214HASD	J1214ASD	7/16	7
J1216HASD-T500	J1216HASD	J1216ASD	1/2	8
J1218HASD-T500	J1218HASD	J1218ASD	9/16	8-7/8
J1220HASD-T500	J1220HASD	J1220ASD	5/8	9-1/2
J1222HASD-T500	J1222HASD	J1222ASD	11/16	10-1/4
J1224HASD-T500	J1224HASD	J1224ASD	3/4	11
J1226HASD-T500	J1226HASD	J1226ASD	13/16	11-7/8
J1228HASD-T500	J1228HASD	J1228ASD	7/8	12-1/2
J1230HASD-T500	J1230HASD	J1230ASD	15/16	13-1/4
J1232HASD-T500	J1232HASD	J1232ASD	1	14
J25TR05C	J25TR05C	J25TR05C	Tool Roll	

Weight (lbs): 4.88

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## 7 PIECE COMBINATION ASD WRENCH SETS - 12 POINT



J1200HASD



J1200HBASD

12

**J1200H-T500**

12

**J1200HASD**

12

**J1200HBASD**

**INCH**

**Point Size**

**Overall Length (in)**

J1212-T500	J1212ASD	J1212BASD	3/8	12	6
J1214-T500	J1214ASD	J1214BASD	7/16	12	7
J1216-T500	J1216ASD	J1216BASD	1/2	12	8
J1218-T500	J1218ASD	J1218BASD	9/16	12	8-7/8
J1220-T500	J1220ASD	J1220BASD	5/8	12	9-1/2
J1222-T500	J1222ASD	J1222BASD	11/16	12	10-1/4
J1224-T500	J1224ASD	J1224BASD	3/4	12	11
J25TR33C	J25TR37C	J25TR37C	Tool Roll		

Weight (lbs): 2.40

ASME B107.100

6 6 POINT  
 8 8 POINT  
 12 12 POINT  
 SPL SPLINE  
 HEX HEX  
 OPEN OPEN



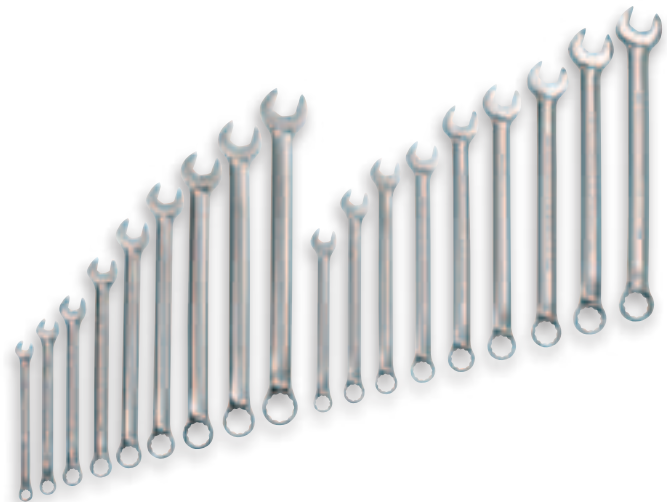
## 18 PIECE SATIN COMBINATION ASD WRENCH SET- 12 POINT

Product #: **J1200CS**

12	INCH	MM	Point Size	Overall Length (in)
J1208A	1/4		12	5-5/32
J1210A	5/16		12	5-13/32
J1212ASD	3/8		12	6-29/32
J1214ASD	7/16		12	8-13/16
J1216ASD	1/2		12	10-9/32
J1218ASD	9/16		12	9-5/32
J1220ASD	5/8		12	10-9/32
J1222ASD	11/16		12	10-11/16
J1224ASD	3/4		12	11
J1210MASD	10mm		12	5-21/32
J1211MASD	11mm		12	5-29/32
J1212MASD	12mm		12	7-45/64
J1213MASD	13mm		12	7-29/32
J1214MASD	14mm		12	9-5/32
J1215MASD	15mm		12	9-35/64
J1216MASD	16mm		12	10-11/16
J1217MASD	17mm		12	8-13/16
J1218MASD	18mm		12	9-35/64

Weight (lbs): 4.72

ASME B107.100



COMBINATION WRENCH SETS

## 18 PIECE SATIN METRIC COMBINATION ASD WRENCH SET - 12 POINT

Product #: **J1200R-MASD**

12	MM	Point Size	Overall Length (in)
J1207MA	7	12	5-5/32
J1208MA	8	12	5-13/32
J1209MA	9	12	5-21/32
J1210MASD	10	12	5-29/32
J1211MASD	11	12	6-29/32
J1212MASD	12	12	7-45/64
J1213MASD	13	12	7-29/32
J1214MASD	14	12	8-13/16
J1215MASD	15	12	9-5/32
J1216MASD	16	12	9-35/64
J1217MASD	17	12	10-9/32
J1218MASD	18	12	10-11/16
J1219MASD	19	12	11-1/32
J1220MASD	20	12	11-27/64
J1221MASD	21	12	11-13/16
J1222MASD	22	12	12-17/32
J1223MASD	23	12	12-59/64
J1224MASD	24	12	13-5/16
J25TR42C	Tool Roll		

Weight (lbs): 8.10

ASME B107.100



- FULL POLISH
- SATIN
- BLACK OXIDE
- BLACK CHROME
- INSULATED

**17 PIECE FULL POLISH METRIC COMBINATION WRENCH SET - 12 POINT****Product #: J1200RM-T500**

<b>12</b>	<b>MM</b>	<b>Point Size</b>	<b>Overall Length (in)</b>
J1207M-T500	7	12	5-5/32
J1208M-T500	8	12	5-13/32
J1209M-T500	9	12	5-21/32
J1210M-T500	10	12	5-29/32
J1211M-T500	11	12	6-29/32
J1212M-T500	12	12	7-45/64
J1213M-T500	13	12	7-29/32
J1214M-T500	14	12	8-13/16
J1215M-T500	15	12	9-5/32
J1216M-T500	16	12	9-35/64
J1217M-T500	17	12	10-9/32
J1218M-T500	18	12	10-11/16
J1219M-T500	19	12	11-1/32
J1220M-T500	20	12	11-27/64
J1221M-T500	21	12	11-13/16
J1222M-T500	22	12	12-17/32
J1224M-T500	24	12	13-5/16
J25TR36C	Tool Roll		

Weight (lbs): 6.92

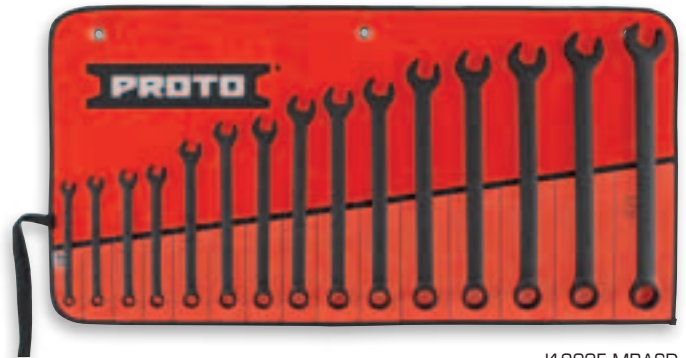
ASME B107.100

**15 PIECE METRIC COMBINATION ASD WRENCH SETS - 12 POINT**

<b>12</b>	<b>12</b>	<b>MM</b>	<b>Point Size</b>	<b>Overall Length (in)</b>
J1207MA	J1207MBA	7	12	5-5/32
J1208MA	J1208MBA	8	12	5-13/32
J1209MA	J1209MBA	9	12	5-21/32
J1210MASD	J1210MBASD	10	12	5-29/32
J1211MASD	J1211MBASD	11	12	6-29/32
J1212MASD	J1212MBASD	12	12	7-45/64
J1213MASD	J1213MBASD	13	12	7-29/32
J1214MASD	J1214MBASD	14	12	8-13/16
J1215MASD	J1215MBASD	15	12	9-5/32
J1216MASD	J1216MBASD	16	12	9-35/64
J1217MASD	J1217MBASD	17	12	10-9/32
J1218MASD	J1218MBASD	18	12	10-11/16
J1219MASD	J1219MBASD	19	12	11-1/32
J1220MASD	J1220MBASD	20	12	11-27/64
J1221MASD	J1221MBASD	21	12	11-13/16
J25TR41C	J25TR41C	Tool Roll		

Weight (lbs): 4.25

ASME B107.100



J1200F-MBASD



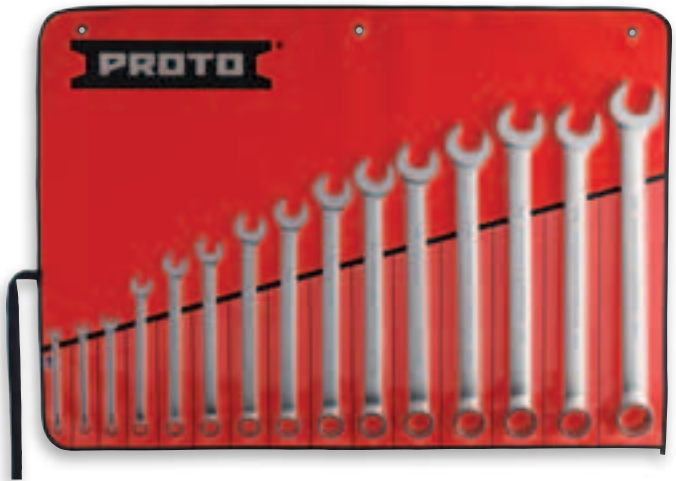
## 15 PIECE SATIN METRIC COMBINATION ASD WRENCH SET - 12 POINT

Product #: **J1200P-MASD**

12	MM	Point Size	Overall Length (in)
J1207MA	7	12	5-5/32
J1208MA	8	12	5-13/32
J1210MASD	10	12	5-29/32
J1212MASD	12	12	7-45/64
J1214MASD	14	12	8-13/16
J1216MASD	16	12	9-35/64
J1218MASD	18	12	10-11/16
J1220MASD	20	12	11-27/64
J1222MASD	22	12	12-17/32
J1224MASD	24	12	13-5/16
J1226MASD	26	12	14-41/64
J1228MASD	28	12	15-35/64
J1229MASD	29	12	15-55/64
J1230MASD	30	12	15-55/64
J1232MASD	32	12	16-59/64
J25TR41C	Tool Roll		

Weight (lbs): 4.25

ASME B107.100



COMBINATION WRENCH SETS

## 14 PIECE FULL POLISH METRIC COMBINATION WRENCH SET- 12 POINT

Product #: **J1200HM14T5**

12	MM	Point Size	Overall Length (in)
J1207M-T500	7	12	5-5/32
J1208M-T500	8	12	5-13/32
J1209M-T500	9	12	5-21/32
J1210M-T500	10	12	5-29/32
J1211M-T500	11	12	6-29/32
J1212M-T500	12	12	7-45/64
J1213M-T500	13	12	7-29/32
J1214M-T500	14	12	8-13/16
J1215M-T500	15	12	9-5/32
J1216M-T500	16	12	9-35/64
J1217M-T500	17	12	10-9/32
J1218M-T500	18	12	10-11/16
J1219M-T500	19	12	11-1/32
J1220M-T500	20	12	11-27/64

Weight (lbs): 3.77

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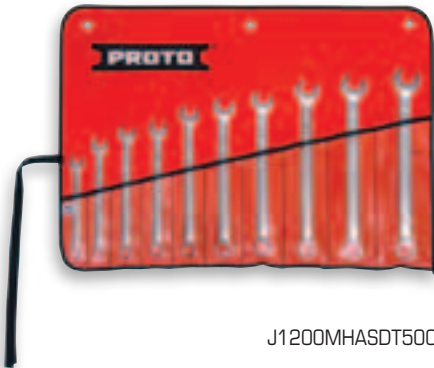
- FULL POLISH
- SATIN
- BLACK OXIDE
- BLACK CHROME
- INSULATED

**11 PIECE FULL POLISH METRIC COMBINATION WRENCH SET - 12 POINT**Product #: **J1200HM11T5**

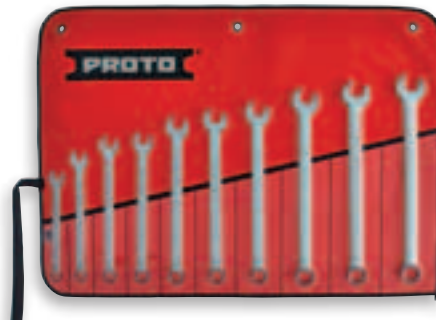
<b>12</b>	<b>MM</b>	<b>Point Size</b>	<b>Overall Length (in)</b>
J1207M-T500	7	12	5-5/32
J1209M-T500	9	12	5-21/32
J1210M-T500	10	12	5-29/32
J1211M-T500	11	12	6-29/32
J1212M-T500	12	12	7-45/64
J1213M-T500	13	12	7-29/32
J1214M-T500	14	12	8-13/16
J1215M-T500	15	12	9-5/32
J1217M-T500	17	12	10-9/32
J1218M-T500	18	12	10-11/16
J1219M-T500	19	12	11-1/32

Weight (lbs): 2.89

ASME B107.100

**10 PIECE METRIC COMBINATION ASD WRENCH SETS**

J1200MHASDT500



J1200MHASD



J1200K-MASD

<b>6</b>	<b>6</b>	<b>12</b>	<b>MM</b>	<b>Overall Length (in)</b>
<b>J1200MHASDT500</b>	<b>J1200MHASD</b>	<b>J1200K-MASD</b>		
J1210MHASDT500	J1210MHASD	J1210MASD	10	5-29/32
J1211MHASDT500	J1211MHASD	J1211MASD	11	6-29/32
J1212MHASDT500	J1212MHASD	J1212MASD	12	7-45/64
J1213MHASDT500	J1213MHASD	J1213MASD	13	7-29/32
J1214MHASDT500	J1214MHASD	J1214MASD	14	8-13/16
J1215MHASDT500	J1215MHASD	J1215MASD	15	9-5/32
J1216MHASDT500	J1216MHASD	J1216MASD	16	9-35/64
J1217MHASDT500	J1217MHASD	J1217MASD	17	10-9/32
J1218MHASDT500	J1218MHASD	J1218MASD	18	10-11/16
J1219MHASDT500	J1219MHASD	J1219MASD	19	11-1/32
J25TR39C	J25TR39C	J25TR39C	Toll Roll	

Weight (lbs): 2.71

ASME B107.100





## 9 PIECE METRIC COMBINATION ASD WRENCH SETS - 12 POINT

<b>12</b>	<b>12</b>	<b>MM</b>	<b>Point Size</b>	<b>Overall Length (in)</b>
<b>J1200HM-T500</b>	<b>J1200H-MASD</b>			
J1207M-T500	J1207MA	7	12	5-5/32
J1208M-T500	J1208MA	8	12	5-13/32
J1209M-T500	J1209MA	9	12	5-21/32
J1210M-T500	J1210MASD	10	12	5-29/32
J1211M-T500	J1211MASD	11	12	6-29/32
J1212M-T500	J1212MASD	12	12	7-45/64
J1213M-T500	J1213MASD	13	12	7-29/32
J1214M-T500	J1214MASD	14	12	8-13/16
J1215M-T500	J1215MASD	15	12	9-5/32
J25TR35C	J25TR38C	Tool Roll		

Weight (lbs): 1.43

ASME B107.100



COMBINATION WRENCH SETS

## 9 PIECE METRIC COMBINATION WRENCH SETS - 12 POINT

<b>12</b>	<b>12</b>	<b>MM</b>	<b>Point Size</b>	<b>Overall Length (in)</b>
<b>J1200M9T5</b>	<b>J1200MB9</b>			
J1210M-T500	J1210MBASD	10	12	5-29/32
J1211M-T500	J1211MBASD	11	12	6-29/32
J1212M-T500	J1212MBASD	12	12	7-45/64
J1213M-T500	J1213MBASD	13	12	7-29/32
J1214M-T500	J1214MBASD	14	12	8-13/16
J1215M-T500	J1215MBASD	15	12	9-5/32
J1216M-T500	J1216MBASD	16	12	9-35/64
J1217M-T500	J1217MBASD	17	12	10-9/32
J1218M-T500	J1218MBASD	18	12	10-11/16

Weight (lbs): 2.47



FULL POLISH
 SATIN
 BLACK OXIDE
 BLACK CHROME
 INSULATED

**7 PIECE SATIN METRIC COMBINATION ASD WRENCH SET - 12 POINT****Product #: J1200MHASD8**

<b>12</b>	<b>MM</b>	<b>Point Size</b>	<b>Overall Length (in)</b>
J1208MA	8	12	5-13/32
J1209MA	9	12	5-21/32
J1210MASD	10	12	5-29/32
J1211MASD	11	12	6-29/32
J1212MASD	12	12	7-45/64
J1214MASD	14	12	8-13/16
J1217MASD	17	12	8-13/16

Weight (lbs): 1.85

**6 PIECE BLACK OXIDE METRIC COMBINATION WRENCH SET - 12 POINT****Product #: J1200MB6**

<b>12</b>	<b>MM</b>	<b>Point Size</b>	<b>Overall Length (in)</b>
J1210MBASD	10	12	5-29/32
J1211MBASD	11	12	6-29/32
J1212MBASD	12	12	7-45/64
J1213MBASD	13	12	7-29/32
J1214MBASD	14	12	8-13/16
J1215MBASD	15	12	9-5/32

Weight (lbs): 1.25





## SHORT COMBINATION WRENCHES - 12 POINT



- ▶ 12 point box end allows for fine indexing, helping to improve speed and access. Fits 4, 6 and 12 point fasteners.
- ▶ The wrench self aligns with the fastener.
- ▶ Full polish finish provides corrosion resistance and easy to clean surfaces.
- ▶ The box end is countersunk for easy application to the fastener.
- ▶ 15° angled offset helps keep shank clear of obstructions.
- ▶ Anti-Slip Design (ASD) open end.
- ▶ Box ends incorporate the TorquePlus™ system.



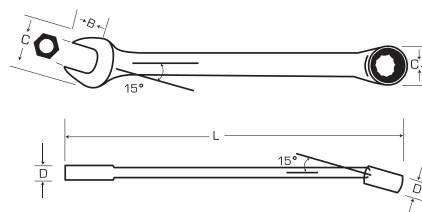
SHORT COMBINATION WRENCHES

INCH	12	12	Throat Depth 1 (in) (B)	Outside Head Width 1 (in) (C)	Head Thickness 1 (in) (D)	Outside Head Width 2 (in) (C1)	Head Thickness 2 (in) (D1)	Overall Length (in)	Weight (lbs)
1/4	J1208ES	J1208ESB	19/64	19/32	11/64	7/16	3/16	3-1/4	0.03
9/32	J1209ES	J1209ESB	19/64	41/64	3/16	29/64	7/32	3-3/8	0.04
5/16	J1210ES	J1210ESB	3/8	47/64	1/4	33/64	15/64	3-1/2	0.04
11/32	J1211ES	J1211ESB	13/32	13/16	13/64	9/16	1/4	3-5/8	0.05
3/8	J1212ES	J1212ESB	7/16	7/8	7/32	39/64	9/32	3-3/4	0.07
7/16	J1214ES	J1214ESB	31/64	63/64	5/16	43/64	19/64	3-15/16	0.08
1/2	J1216ES	J1216ESB	37/64	1-7/64	3/8	51/64	23/64	4-5/16	0.12
9/16	J1218ES	J1218ESB	43/64	1-1/4	19/64	57/64	3/8	4-1/2	0.15
5/8	J1220ES	J1220ESB	47/64	1-23/64	7/16	63/64	27/64	4-7/8	0.2
11/16	J1222ES	J1222ESB	13/16	1-31/64	15/32	1-3/64	29/64	5-1/16	0.23
3/4	J1224ES	J1224ESB	57/64	1-5/8	1/2	1-1/8	31/64	5-7/16	0.29

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MM	12	12	Throat Depth 1 (in) (B)	Outside Head Width 1 (in) (C)	Head Thickness 1 (in) (D)	Outside Head Width 2 (in) (C1)	Head Thickness 2 (in) (D1)	Overall Length (in)	Weight (lbs)
6	J1206MES	J1206MESB	19/64	19/32	11/64	7/16	3/16	3-1/4	0.03
7	J1207MES	J1207MESB	19/64	41/64	3/16	29/64	7/32	3-3/8	0.04
8	J1208MES	J1208MESB	3/8	47/64	1/4	33/64	15/64	3-1/2	0.04
9	J1209MES	J1209MESB	13/32	13/16	13/64	9/16	1/4	3-5/8	0.05
10	J1210MES	J1210MESB	7/16	7/8	7/32	39/64	9/32	3-3/4	0.07
11	J1211MES	J1211MESB	31/64	63/64	5/16	43/64	19/64	3-15/16	0.08
12	J1212MES	J1212MESB	17/32	1-1/16	11/32	47/64	21/64	4-1/8	0.1
13	J1213MES	J1213MESB	37/64	1-7/64	3/8	51/64	23/64	4-5/16	0.12
14	J1214MES	J1214MESB	43/64	1-1/4	19/64	57/64	3/8	4-1/2	0.15
15	J1215MES	J1215MESB	45/64	1-5/16	13/32	29/32	25/64	4-11/16	0.17
16	J1216MES	J1216MESB	47/64	1-23/64	7/16	63/64	27/64	4-7/8	0.2
17	J1217MES	J1217MESB	13/16	1-31/64	15/32	1-3/64	29/64	5-1/16	0.24
18	J1218MES	J1218MESB	27/32	1-35/64	11/32	1-5/64	15/32	5-1/4	0.27
19	J1219MES	J1219MESB	57/64	1-5/8	1/2	1-1/8	31/64	5-7/16	0.29

AS 955 ASME B107.100-2021




- FULL POLISH
- SATIN
- BLACK OXIDE
- BLACK CHROME
- INSULATED

### 11 PIECE SHORT COMBINATION WRENCH SETS - 12 POINT

<b>12</b>	<b>12</b>	<b>INCH</b>	<b>Point Size</b>	<b>Overall Length (in)</b>
<b>J1200ES-11</b>	<b>J1200ESB-11</b>			
J1208ES	J1208ESB	1/4	12	3-1/4
J1209ES	J1209ESB	9/32	12	3-3/8
J1210ES	J1210ESB	5/16	12	3-1/2
J1211ES	J1211ESB	11/32	12	3-5/8
J1212ES	J1212ESB	3/8	12	3-3/4
J1214ES	J1214ESB	7/16	12	3-15/16
J1216ES	J1216ESB	1/2	12	4-5/16
J1218ES	J1218ESB	9/16	12	4-1/2
J1220ES	J1220ESB	5/8	12	4-7/8
J1222ES	J1222ESB	11/16	12	5-1/16
J1224ES	J1224ESB	3/4	12	5-7/16
J25TR69C	J25TR69C	Tool Roll		

Weight (lbs): 1.55

 ASME B107.100-2035

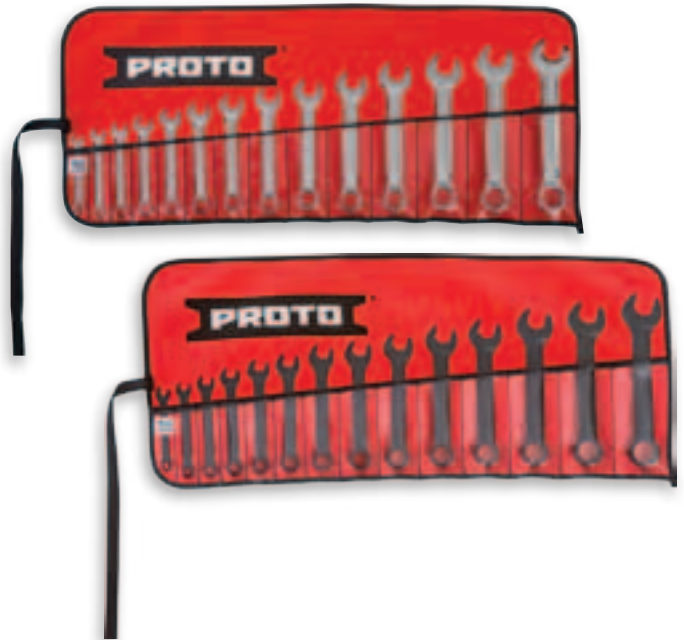


### 14 PIECE METRIC SHORT COMBINATION WRENCH SETS - 12 POINT

<b>12</b>	<b>12</b>	<b>MM</b>	<b>Point Size</b>	<b>Overall Length (in)</b>
<b>J1200MES-14</b>	<b>J1200MESB-14</b>			
J1206MES	J1206MESB	6	12	3-1/4
J1207MES	J1207MESB	7	12	3-3/8
J1208MES	J1208MESB	8	12	3-1/2
J1209MES	J1209MESB	9	12	3-5/8
J1210MES	J1210MESB	10	12	3-3/4
J1211MES	J1211MESB	11	12	3-15/16
J1212MES	J1212MESB	12	12	4-1/8
J1213MES	J1213MESB	13	12	4-5/16
J1214MES	J1214MESB	14	12	4-1/2
J1215MES	J1215MESB	15	12	4-11/16
J1216MES	J1216MESB	16	12	4-7/8
J1217MES	J1217MESB	17	12	5-1/16
J1218MES	J1218MESB	18	12	5-1/4
J1219MES	J1219MESB	19	12	5-7/16
J25TR70C	J25TR70C	Tool Roll		

Weight (lbs): 2.14

 ASME B107.100-2036





## SHORT SATIN COMBINATION WRENCHES - 6 POINT

- › Satin finish provides corrosion resistance and a slip-resistance grip
- › 6 point box end allows for large wrench to fastener contact area which helps prevent rounding of the fastener
- › Compact shank design and short length for access in confined spaces
- › 15° angled offset box end helps keep shank clear of obstructions
- › Standard open end.



INCH	6	Throat Depth 1 (in)	Outside Head Width 1 (in)	Head Thickness 1 (in)	Outside Head Width 2 (in)	Head Thickness 2 (in)	Overall Length (in)	Weight (lbs)
1/8	J1204EFS	3/16	23/64	7/64	19/64	7/64	2-29/32	0.01
5/32	J1205EFS	7/32	27/64	9/64	5/16	9/64	2-29/32	0.01
3/16	J1206EFS	15/64	35/64	9/64	3/8	9/64	3-3/32	0.02
7/32	J1207EFS	17/64	9/16	9/64	13/32	9/64	3-3/32	0.02
1/4	J1208EFS	19/64	19/32	11/64	31/64	11/64	3-9/64	0.03
9/32	J1209EFS	21/64	19/32	11/64	1/2	11/64	3-13/32	0.04
5/16	J1210EFS	25/64	3/4	3/16	37/64	3/16	3-7/16	0.04
11/32	J1211EFS	13/32	3/4	3/16	19/32	3/16	3-1/2	0.05
3/8	J1212EFS	7/16	27/32	13/64	39/64	13/64	4-19/64	0.07

SHORT COMBINATION WRENCH SETS

## 8 PIECE SHORT COMBINATION WRENCH SET- 6 POINT

Product #: J1200EFS

- › 6 point box end allows for large wrench to fastener contact area which helps prevent rounding of the fastener.
- › Compact shank design and short length for access in confined spaces.
- › Standard open end

6	INCH	Point Size	Overall Length (in)
J1204EFS	1/8	6	2-49/64
J1205EFS	5/32	6	2-57/64
J1206EFS	3/26	6	3-1/4
J1208EFS	1/4	6	3-17/64
J1209EFS	9/32	6	3-7/16
J1210EFS	5/16	6	4-1/8
J1211EFS	11/32	6	4-7/16
J1212EFS	3/8	6	4-5/8
J25TR12C	Tool Roll		

Weight (lbs): 0.35



FULL POLISH
 SATIN
 BLACK OXIDE
 BLACK CHROME
 INSULATED

## FACOM® SHORT SATIN METRIC COMBINATION WRENCHES



- › Short shank and compact heads help improve access to tight spots.
- › Box end angled at 15°.
- › Satin finish provides corrosion resistance and a slip resistant grip.



MM	Product #	Outside Head Width 1 (in)	Head Thickness 1 (in)	Outside Head Width 2 (in)	Head Thickness 2 (in)	Overall Length (in)	Weight (lbs)
3.2	<b>FM-39.3.2H</b>	25/64	1/8	9/32	1/8	3-1/32	0.02
4	<b>FM-39.4H</b>	25/64	1/8	5/16	1/8	3-1/32	0.01
5	<b>FM-39.5H</b>	15/32	5/32	23/64	5/32	3-7/32	0.02
5.5	<b>FM-39.5.5H</b>	15/32	5/32	3/8	5/32	3-5/16	0.02

## FACOM® 16 PIECE SHORT SATIN METRIC COMBINATION WRENCH SET - 6 & 12 POINT



Product #: **FM-39.JE16T**



MM	Point Size	Overall Length (in)	
FM-39.3.2H	3.2	6	3-1/32
FM-39.4H	4	6	3-1/32
FM-39.5H	5	6	3-7/32
FM-39.5.5H	5.5	6	3-5/16
FM-39.6	6	12	3-17/32
FM-39.7	7	12	3-17/32
FM-39.8	8	12	3-19/32
FM-39.9	9	12	3-27/32
FM-39.10	10	12	4-1/16
FM-39.11	11	12	4-9/32
FM-39.12	12	12	5
FM-39.13	13	12	5-9/16
FM-39.14	14	12	5-25/32
FM-39.15	15	12	5-31/32
FM-39.16	16	12	6-7/32
FM-39.17	17	12	6-1/2

Weight (lbs): 1.58





## SATIN COMBINATION FLEX HEAD WRENCHES - 12 POINT



- › Satin finish provides corrosion resistance and a slip resistant grip.
- › 12 point box end allows for fine indexing, helping to improve speed and access. Fits 4, 6 and 12 point fasteners.
- › Use the swiveling box end to break or cinch bolts in difficult locations.
- › Heat-treated alloy steels produce a shank with high leverage.
- › Box ends incorporate the TorquePlus™ system.



FLEX-HEAD WRENCH SETS

INCH	12	Throat Depth 1 (in)	Outside Head Width 1 (in)	Head Thickness 1 (in)	Overall Length (in)	Weight (lbs)
3/8	J1270-12	27/64	55/64	15/64	6	0.14
7/16	J1270-14	1/2	1	1/4	6-7/8	0.20
1/2	J1270-16	37/64	1-3/32	9/32	7-3/4	0.25
9/16	J1270-18	21/32	1-15/64	5/16	8-5/8	0.36
5/8	J1270-20	23/32	1-23/32	21/64	9-1/2	0.46
11/16	J1270-22	51/64	1-1/2	11/32	10-3/8	0.58
3/4	J1270-24	7/8	1-41/64	23/64	11-1/4	0.46
7/8	J1270-28	1-1/64	1-27/32	13/32	13	0.93



## 7 PIECE FLEX-HEAD WRENCH SET - 12 POINT



Product #: J1270A

- › Satin finish provides corrosion resistance and a slip resistant grip.
- › Box ends incorporate the TorquePlus™ system.

12	INCH	Point Size	Overall Length (in)
J1270-12	3/8	12	6
J1270-14	7/16	12	6-7/8
J1270-16	1/2	12	7-3/4
J1270-18	9/16	12	8-5/8
J1270-20	5/8	12	9-1/2
J1270-22	11/16	12	10-3/8
J1270-24	3/4	12	11-1/4
J25TR01C	Tool Roll		

Weight (lbs): 2.91



## 4 PIECE FLEX-HEAD WRENCH SET - 12 POINT

Product #: **J1270B**

<b>12</b>	<b>INCH</b>	<b>Point Size</b>	<b>Overall Length (in)</b>
J1270-14	7/16	12	6-7/8
J1270-16	1/2	12	7-3/4
J1270-18	9/16	12	8-5/8
J1270-20	5/8	12	9-1/2
J25TR18C	Tool Roll		

Weight (lbs): 0.88



### FLEX-HEAD WRENCHES

The versatility of these wrenches allows you to apply torque to a variety of unusual angles to loosen nuts and bolts. They perform extremely well in tight situations such as working on machinery where you need to go over or under obstructions.



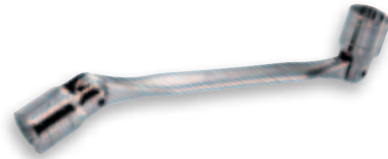




## FACOM® SATIN DOUBLE FLEX-HEAD SOCKET WRENCHES - 12 POINT



- › Satin chrome finish.
- › Spring-steadied pivoting 12 point socket.
- › Strength to ISO 1711-1, DIN 899, NF ISO 1711-1.



INCH	12	Outside Head Width 1 (in)	Outside Head Width 2 (in)	Overall Length (in)	Weight (lbs)
1/2 x 9/16	<b>FF-66A.1/2X9/1</b>	3/4	13/16	9-1/4	0.47
3/8 x 7/16	<b>FF-66A.3/8X7/1</b>	19/32	21/32	6-1/2	0.26
5/8 x 3/4	<b>FF-66A.5/8X3/4</b>	29/32	1-1/32	11-1/4	0.82

MM	12	Outside Head Width 1 (in)	Outside Head Width 2 (in)	Overall Length (in)	Weight (lbs)
6 X 7	<b>FM-66A.6X7</b>	19/32	29/64	7-11/16	0.20
8 X 9	<b>FM-66A.8X9</b>	19/32	35/64	7-11/16	0.21
10 X 11	<b>FM-66A.10X11</b>	45/64	21/32	7-7/8	0.24
12 X 13	<b>FM-66A.12X13</b>	53/64	3/4	9-1/4	0.42
14 X 15	<b>FM-66A.14X15</b>	29/32	55/64	9-1/4	0.44
16 X 17	<b>FM-66A.16X17</b>	29/32	15/16	9-7/16	0.49
18 X 19	<b>FM-66A.18X19</b>	63/64	1-1/32	11-7/32	0.77
20 X 22	<b>FM-66A.20X22</b>	1-5/64	1-13/64	11-7/32	0.76
21 X 23	<b>FM-66A.21X23</b>	1-1/8	1-15/64	11-13/32	0.82
24 X 27	<b>FM-66A.24X27</b>	1-19/64	1-7/16	13-3/16	1.15
30 X 32	<b>FM-66A.30X32</b>	1-19/32	1-11/16	13-1/8	1.32

DOUBLE FLEX-HEAD WRENCHES

## FACOM® 3 PIECE DOUBLE FLEX-HEAD SOCKET WRENCH SET



Product #: **FF-66A.JU3**

12	INCH	Point Size	Overall Length (in)
FF-66A.1/2X9/1	1/2 x 9/16	12	9-1/4
FF-66A.3/8X7/1	3/8 x 7/16	12	6-1/2
FF-66A.5/8X3/4	5/8 x 3/4	12	11-1/4

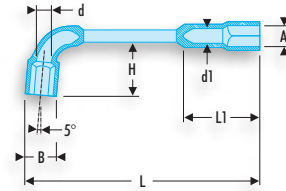
Weight (lbs): 1.55



## FACOM® SATIN ANGLED OPEN-SOCKET WRENCHES



- › Satin finish.
- › Angle and through-hole design helps accommodate threaded rods or a bar for extra leverage, without affecting wrench strength.
- › Deep recess at one end and open-end socket at the other fit over protruding studs.



INCH	6 x 6	A (in)	B (in)	d (in)	d1 (in)	H (in)	L (in)	L1 (in)	Weight (lbs)
1/4	<b>FF-75.1/4</b>	1/4	25/64	11/64	11/64	19/32	4-1/64	53/64	0.07
5/16	<b>FF-75.5/16</b>	5/16	31/64	9/32	15/64	3/4	4-31/64	63/64	0.13
3/8	<b>FF-75.3/8</b>	3/8	19/32	5/16	9/32	15/16	5-5/64	1-7/64	0.20
7/16	<b>FF-75.7/16</b>	7/16	21/32	5/16	9/32	63/64	5-23/64	1-3/16	0.25
1/2	<b>FF-75.1/2</b>	1/2	49/64	23/64	5/16	1-3/16	5-63/64	1-1/2	0.38
9/16	<b>FF-75.9/16</b>	9/16	57/64	13/32	25/64	1-11/32	6-21/32	1-21/32	0.49
5/8	<b>FF-75.5/8</b>	5/8	15/16	33/64	15/32	1-29/64	7-1/64	1-13/16	0.62
11/16	<b>FF-75.11/16</b>	11/16	1-3/64	33/64	15/32	1-37/64	7-43/64	1-31/32	0.80
3/4	<b>FF-75.3/4</b>	3/4	1-1/8	19/32	15/32	1-39/64	8-1/32	2-1/64	0.94
13/16	<b>FF-75.13/16</b>	13/16	1-13/64	19/32	35/64	1-13/16	8-45/64	2-11/64	1.08
7/8	<b>FF-75.7/8</b>	7/8	1-5/16	45/64	19/32	2-1/64	9-29/64	2-33/64	1.38
15/16	<b>FF-75.15/16</b>	15/16	1-23/64	45/64	5/8	2-1/8	9-27/32	2-41/64	1.45
1	<b>FF-75.1</b>	1	1-29/64	25/32	43/64	2-1/4	10-5/8	2-3/4	1.75





MM	12 x 6	A (mm)	B (mm)	d (in)	d1 (in)	H (in)	L (in)	L1 (in)	Weight (lbs)
6	FM-76.6	6	10	11/64	11/64	5/8	4-1/64	53/64	0.07
7	FM-76.7	7	11	11/64	11/64	43/64	4-11/64	55/64	0.09
8	FM-76.8	8	12.5	9/32	15/64	3/4	4-31/64	63/64	0.13
9	FM-76.9	9	13.5	9/32	15/64	25/32	4-51/64	1-1/32	0.14
10	FM-76.10	10	15	5/16	9/32	15/16	5-5/64	1-7/64	0.21
11	FM-76.11	11	16.5	5/16	9/32	63/64	5-23/64	1-3/16	0.25
12	FM-76.12	12	18	23/64	5/16	1-7/64	5-43/64	1-27/64	0.34
13	FM-76.13	13	19.5	23/64	5/16	1-3/16	5-63/64	1-1/2	0.39
14	FM-76.14	14	21	13/32	23/64	1-17/64	6-19/64	1-37/64	0.44
15	FM-76.15	15	22.5	13/32	25/64	1-11/32	6-21/32	1-21/32	0.5
16	FM-76.16	16	24	33/64	15/32	1-29/64	7-1/64	1-13/16	0.63
17	FM-76.17	17	25.5	33/64	15/32	1-17/32	7-23/64	1-57/64	0.69
18	FM-76.18	18	2.5	33/64	15/32	1-37/64	7-43/64	1-31/32	0.8
19	FM-76.19	19	28.5	19/32	15/32	1-39/64	8-1/32	2-1/64	0.95
20	FM-76.20	20	29.5	19/32	33/64	1-11/16	8-11/32	2-3/32	0.97
21	FM-76.21	21	30.5	19/32	35/64	1-13/16	8-45/64	2-11/64	1.08
22	FM-76.22	22	32	19/32	35/64	1-57/64	9-1/16	2-1/4	1.18
23	FM-76.23	23	33.5	45/64	19/32	2-1/64	9-29/64	2-33/64	1.38
24	FM-76.24	24	34.5	45/64	5/8	2-1/8	9-27/32	2-41/64	1.46
25	FM-76.25	25	36	25/32	43/64	2-13/64	10-15/64	2-23/32	1.73
26	FM-76.26	26	37	25/32	43/64	2-1/4	10-5/8	2-3/4	1.75
27	FM-76.27	27	38	55/64	3/4	2-9/32	11-1/32	2-7/8	2.09
28	FM-76.28	28	39.5	55/64	3/4	2-23/64	11-27/64	2-61/64	2.09
29	FM-76.29	29	41	55/64	3/4	2-7/16	11-13/16	2-63/64	2.31
30	FM-76.30	30	42	15/16	53/64	2-33/64	12-13/64	3-17/64	2.87
31	FM-76.31	31	43.5	15/16	57/64	2-3/4	12-19/32	3-25/64	3.05
32	FM-76.32	32	44.5	15/16	57/64	2-29/32	12-63/64	3-15/32	3.09
33	FM-76.33	33	46	1-1/16	15/16	3-7/64	13-25/64	3-5/8	3.26
34	FM-76.34	34	47	1-1/16	15/16	3-5/32	13-25/32	3-47/64	3.42
35	FM-76.35	35	48.5	1-1/16	15/16	3-3/16	14-11/64	3-25/32	3.59
36	FM-76.36	36	49.5	1-1/16	15/16	3-15/64	14-9/16	3-13/16	3.75
38	FM-76.38	38	52	1-7/64	63/64	3-11/32	15-23/64	3-57/64	4.59



## FACOM® 10 PIECE ANGLED SOCKET WRENCH SET - 6 POINT



Product #: **FF-75.JU10**

<b>6</b>	<b>INCH</b>	<b>Point Size</b>	<b>Overall Length (in)</b>
FF-75.5/16	5/16	6	4-31/64
FF-75.3/8	3/8	6	5-5/64
FF-75.7/16	7/16	6	5-23/64
FF-75.1/2	1/2	6	5-63/64
FF-75.9/16	9/16	6	6-21/32
FF-75.5/8	5/8	6	7-1/64
FF-75.11/16	11/16	6	7-43/64
FF-75.3/4	3/4	6	8-1/32
FF-75.13/16	13/16	6	8-45/64
FF-75.7/8	7/8	6	9-29/64

Weight (lbs): 6.08



## FACOM® FULL POLISH METRIC DOUBLE BOX WRENCHES - 12 POINT



- › Slim rings and short shank for clearance.
- › 12 point box ends allow for fine indexing, helping to improve speed and access.
- › Straight pattern.
- › Fits 4, 6 and 12 point fasteners.



<b>MM</b>	<b>12</b>	<b>Outside Head Width 1 (in)</b>	<b>Head Thickness 1 (in)</b>	<b>Outside Head Width 2 (in)</b>	<b>Head Thickness 2 (in)</b>	<b>Overall Length (in)</b>	<b>Weight (lbs)</b>
6 X 7	<b>FM-59.6X7</b>	25/64	3/16	7/16	3/16	3-15/16	0.05
8 X 9	<b>FM-59.8X9</b>	31/64	7/32	35/64	13/64	4-17/32	0.07
10 x 11	<b>FM-59.10X11</b>	39/64	1/4	5-1/16	1/4	5-3/64	0.11
12 x 13	<b>FM-59.12X13</b>	47/64	9/32	13/16	9/32	5-5/8	0.16
14 x 15	<b>FM-59.14X15</b>	53/64	9/32	57/64	9/32	6-3/16	0.21
16 x 17	<b>FM-59.16X17</b>	59/64	11/32	6-5/8	21/64	6-39/64	0.26
18 x 19	<b>FM-59.18X19</b>	1-1/32	3/8	1-5/64	23/64	7-7/16	0.32
21 x 23	<b>FM-59.21X23</b>	1-15/64	15/32	8-9/16	29/64	8-35/64	0.52
22 X 24	<b>FM-59.22X24</b>	1-15/64	15/32	8-9/16	29/64	8-35/64	0.51
26 X 28	<b>FM-59.26X28</b>	1-7/16	15/32	1-19/32	15/32	10-7/16	0.95
27 X 29	<b>FM-59.27X29</b>	1-17/32	1/2	1-45/64	1/2	11-7/32	0.92
30 X 32	<b>FM-59.30X32</b>	1-43/64	1/2	1-49/64	1/2	11-7/32	1.14



## FULL POLISH DOUBLE BOX WRENCHES - SPLINE

- ▶ Proto Spline Tools are designed to service high tensile strength fasteners used widely on military and commercial aircraft and in heavy machinery applications where vibration is prevalent. They are also used in automotive and industrial areas where high performance torque needs to be achieved.
- ▶ Spline fasteners help tighten high strength bolts to high torque loads.
- ▶ They help lower the force required to turn standard fasteners by allowing the torque load to be moved away from the corners, helping prevent fastener rounding. They also turn fasteners with damaged corners.
- ▶ Spline helps reduce foreign object debris (FOD) by having a precise fit between the fastening tool and its fastener.
- ▶ Full polish finish provides corrosion resistance and an easy to clean surface.



INCH	SPL	Outside Head Width 1 (in)	Head Thickness 1 (in)	Outside Head Width 2 (in)	Head Thickness 2 (in)	Overall Length (in)	Weight (lbs)
1/4 x 5/16	J1118SPL	31/64	1/4	25/64	15/64	7-1/4	0.12
3/8 x 7/16	J1122SPL	43/64	11/32	37/64	21/64	8-1/4	0.18
1/2 x 9/16	J1126SPL	53/64	3/8	3/4	23/64	9-3/16	0.34
9/16 x 5/8	J1130SPL	59/64	13/32	53/64	25/64	9-3/4	0.4
11/16 x 3/4	J1135SPL	1-5/64	33/64	63/64	1/2	11	0.75
13/16 x 15/16	J1142SPL	1-23/64	37/64	1-5/32	17/32	12-3/4	1.03
7/8 x 1	J1144SPL	1-29/64	9/16	1-1/4	35/64	13-1/4	1.08



DOUBLE BOX WRENCHES

## 7 PIECE FULL POLISH DOUBLE BOX WRENCH SET - SPLINE

Product #: J1100SPL

- ▶ Proto Spline Tools are designed to service high tensile strength fasteners used widely on military and commercial aircraft and in heavy machinery applications where vibration is prevalent. They are also used in automotive and industrial areas where high performance torque needs to be achieved.
- ▶ Spline fasteners help tighten high strength bolts to high torque loads.
- ▶ They help lower the force required to turn standard fasteners by allowing the torque load to be moved away from the corners, helping prevent fastener rounding. They also turn fasteners with damaged corners.
- ▶ Spline helps reduce foreign object debris (FOD) by having a precise fit between the fastening tool and its fastener.
- ▶ Full polish finish provides corrosion resistance and an easy to clean surface.



SPL	INCH	Overall Length (in)
J1118SPL	1/4 x 5/16	7-1/4
J1122SPL	3/8 x 7/16	8-1/4
J1126SPL	1/2 x 9/16	9-3/16
J1130SPL	9/16 x 5/8	9-3/4
J1135SPL	11/16 x 3/4	11
J1142SPL	13/16 x 15/16	12-3/4
J1144SPL	7/8 x 1	13-1/4

Weight (lbs): 3.99



## DOUBLE BOX WRENCHES - 12 POINT

- › Non-reflective black oxide finish for use where non-plated products are required.
- › 12 point box end allows for fine indexing, helping to improve speed and access. Fits 4, 6 and 12 point fasteners.
- › Box ends incorporate the TorquePlus™ system.



- › Radius-corner socket design
- › Engages flats for better grip
- › Improves the ability to turn worn or rounded fasteners



INCH	12	12	12	Outside Head Width 1 (in)	Head Thickness 1 (in)	Outside Head Width 2 (in)	Head Thickness 2 (in)	Overall Length (in)	Weight (lbs)
5/16 x 3/8	<b>J1170</b>	-	<b>J1120LB</b>	37/64	1/4	15/32	15/64	6-15/16	0.15
7/16 x 1/2	<b>J1171</b>	-	<b>J1125LB</b>	3/4	5/16	21/32	19/64	8-1/16	0.18
1/2 x 9/16	<b>J1126L</b>	-	<b>J1126LB</b>	57/64	23/64	13/16	3/8	8-7/16	0.24
9/16 x 5/8	<b>J1172</b>	-	<b>J1130LB</b>	15/16	3/8	27/32	23/64	9-7/16	0.28
11/16 x 3/4	<b>J1173</b>	-	<b>J1135B</b>	1-7/64	7/16	1-1/64	27/64	11-1/4	0.48
3/4 x 7/8	<b>J1139</b>	-	<b>J1139B</b>	1-1/4	17/32	1-1/8	33/64	13-1/8	0.65
13/16 x 7/8	<b>J1174</b>	-	<b>J1140B</b>	1-19/64	1/2	1-3/16	31/64	13-7/8	0.69
15/16 x 1	<b>J1175</b>	-	<b>J1145B</b>	1-29/64	9/16	1-3/8	35/64	15-1/2	0.99
1-1/16 x 1-1/8	<b>J1176</b>	-	<b>J1150B</b>	1-39/64	5/8	1-1/2	19/32	17-1/4	1.50
1-1/16 x 1-1/4	-	<b>J1151</b>	<b>J1151B</b>	1-3/4	23/32	1-1/2	45/64	18-1/4	1.82
1-1/4 x 1-5/16	-	<b>J1155</b>	-	1-7/8	47/64	1-3/4	3/4	19-1/4	1.97
1-1/4 x 1-3/8	-	<b>J1160</b>	-	1-15/16	3/4	1-3/4	3/4	20-1/4	2.22
1-7/16 x 1-1/2	-	<b>J1162</b>	-	2-1/8	13/16	2-3/64	51/64	22-1/4	2.98
1-5/8 x 1-11/16	-	<b>J1164</b>	-	2-3/8	29/32	2-13/32	29/32	24-1/2	3.74

AS954E S3.8.1

## 7 PIECE BOX WRENCH SET - 12 POINT

Product #: **J1100R**

- › Full polish finish provides corrosion resistance and easy-to-clean surfaces.
- › Box ends incorporate the TorquePlus™ system.



- › Radius-corner socket design
- › Engages flats for better grip
- › Improves the ability to turn worn or rounded fasteners

12	INCH	Point Size	Overall Length (in)
J1170	5/16 x 3/8	12	6-15/16
J1171	7/16 x 1/2	12	8-1/16
J1172	9/16 x 5/8	12	9-7/16
J1173	11/16 x 3/4	12	11-1/8
J1174	13/16 x 7/8	12	13-1/8
J1175	15/16 x 1	12	15-1/8
J1176	1-1/16 x 1-1/8	12	17-1/2
J25TR32C	Tool Roll		

Weight (lbs): 4.23

ASME B107.100





## 8 PIECE BLACK OXIDE BOX WRENCH SET - 12 POINT

Product #: **J1100MB**

- ▶ Non-reflective black oxide finish for use where non-plated products are required.

12	INCH	Point Size	Overall Length (in)
J1120LB	5/16 x 3/8	12	6-15/16
J1125LB	7/16 x 1/2	12	8-1/16
J1130LB	9/16 x 5/8	12	9-7/16
J1135B	11/16 x 3/4	12	11-1/4
J1140B	13/16 x 7/8	12	13-7/8
J1145B	15/16 x 1	12	15-1/2
J1150B	1-1/16 x 1-1/8	12	17-1/4
J1151B	1-1/16 x 1-1/4	12	18-1/4
J25TR27C	Tool Roll		

Weight (lbs): 5.39



DOUBLE BOX WRENCH SETS

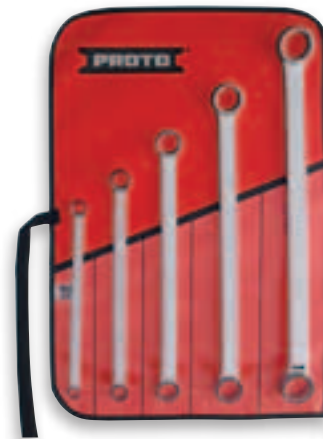
## 5 PIECE FULL POLISH BOX WRENCH SET - 12 POINT

Product #: **J1100G**

12	INCH	Point Size	Overall Length (in)
J1170	5/16 x 3/8	12	6-15/16
J1171	7/16 x 1/2	12	8-1/16
J1172	9/16 x 5/8	12	9-7/16
J1173	11/16 x 3/4	12	11-1/8
J1174	13/16 x 7/8	12	13-1/8
J25TR04C	Tool Roll		

Weight (lbs): 2.20

ASME B107.100



FULL POLISH
 SATIN
 BLACK OXIDE
 BLACK CHROME
 INSULATED

## FULL POLISH OFFSET BOX WRENCHES - 12 POINT



- ▶ Full polish finish provides corrosion resistance and easy to clean surfaces.
- ▶ 12 point box end allows for fine indexing, helping to improve speed and access. Fits 4, 6 and 12 point fasteners.
- ▶ Offset box end allows access to recessed fasteners and keeps hands clear of obstructions.
- ▶ Box ends incorporate the TorquePlus™ system.



INCH	12	Outside Head Width 1 (in)	Head Thickness 1 (in)	Outside Head Width 2 (in)	Head Thickness 2 (in)	Overall Length (in)	Weight (lbs)
3/8 x 7/16	J1012-500	21/32	5/16	37/64	19/64	7-3/4	0.11
1/2 x 9/16	J1016-500	53/64	23/64	3/4	11/32	8-7/8	0.20
9/16 x 5/8	J1018-500	59/64	3/8	53/64	23/64	9-1/2	0.27
11/16 x 3/4	J1022-500	1-3/32	15/32	1-1/64	29/64	11-3/16	0.40
13/16 x 7/8	J1026-500	1-1/4	1/2	1-11/64	31/64	12-11/16	0.67
15/16 x 1	J1030-500	1-13/32	9/16	1-21/64	35/64	14-3/8	0.88
1-1/16 x 1-1/8	J1034-500	1-9/16	21/32	1-31/64	41/64	16-3/4	1.15

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MM	12	Outside Head Width 1 (in)	Head Thickness 1 (in)	Outside Head Width 2 (in)	Head Thickness 2 (in)	Overall Length (in)	Weight (lbs)
6 x 7	J1050M	29/64	7/32	13/32	15/64	5-49/64	0.09
8 x 9	J1051M	35/64	1/4	31/64	9/32	6-49/64	0.11
10 x 11	J1053M	21/32	19/64	39/64	5/16	7-31/32	0.19
12 x 13	J1057M	3/4	21/64	45/64	11/32	8-55/64	0.28
12 x 14	J1058M	13/16	21/64	45/64	23/64	9-1/16	0.42
14 x 15	J1061M	7/8	23/64	13/16	25/64	9-45/64	0.39
16 x 18	J1064M	1-1/32	13/32	29/32	29/64	10-11/16	0.45
17 x 19	J1065M	1-5/64	29/64	63/64	31/64	11-23/64	0.59
19 x 21	J1068M	1-3/16	31/64	1-5/64	35/64	12-15/32	0.70
19 x 22	J1069M	1-17/64	31/64	1-5/64	35/64	12-15/32	0.70
21 x 24	J1072M	1-11/32	35/64	1-3/16	37/64	13-25/64	0.99
22 x 24	J1073M	1-11/32	35/64	1-17/64	37/64	13-45/64	0.94
27 x 30	J1077M	1-43/64	5/8	1-33/64	43/64	15-59/64	1.42
30 x 32	J1079M	1-25/32	43/64	1-43/64	23/32	17-13/64	1.76

AS954E S3.8.1 ASME B107.100

## SATIN DEEP OFFSET BOX WRENCHES - 12 POINT



- ▶ Satin finish provides corrosion resistance and a slip resistant grip.
- ▶ 12 point box end allows for fine indexing, helping to improve speed and access. Fits 4, 6 and 12 point fasteners.
- ▶ 60° deep offset helps improve access to deeply recessed fasteners.
- ▶ Offset handle helps keep knuckles clear of obstruction to help save time.
- ▶ Box ends incorporate the TorquePlus™ system.



INCH	12	Outside Head Width 1 (in)	Head Thickness 1 (in)	Outside Head Width 2 (in)	Head Thickness 2 (in)	Overall Length (in)	Weight (lbs)
3/8 x 7/16	J8180	39/64	5/16	45/64	11/32	7-3/4	0.19
1/2 x 9/16	J8181	51/64	3/8	57/64	23/64	9	0.32
5/8 x 11/16	J8182	31/32	13/32	1-1/32	7/16	10-1/4	0.44
11/16 x 13/16	J8183A	1-3/16	1/2	1-1/4	1/2	11-1/2	0.54
3/4 x 7/8	J8184	1-1/8	1/2	1-1/4	17/32	12-3/4	0.74
15/16 x 1	J8185	1-11/32	5/8	1-13/32	5/8	14	1.10

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## 7 PIECE FULL POLISH OFFSET BOX WRENCH SET - 12 POINT

Product #: **J1000G-500**

12	INCH	Point Size	Overall Length (in)
J1012-500	3/8 x 7/16	12	7-3/4
J1016-500	1/2 x 9/16	12	8-7/8
J1018-500	9/16 x 5/8	12	9-1/2
J1022-500	11/16 x 3/4	12	11-3/16
J1026-500	13/16 x 7/8	12	12-11/16
J1030-500	15/16 x 1	12	14-3/8
J1034-500	1-1/16 x 1-1/8	12	16-3/4
J25TR32C	Tool Roll		

Weight (lbs): 3.84  ASME B107.100




OFFSET BOX WRENCH SETS

## 11 PIECE FULL POLISH METRIC BOX WRENCH SET - 12 POINT

Product #: **J1100S-M**

12	MM	Point Size	Overall Length (in)
J1050M	6 x 7	12	5-49/64
J1051M	8 x 9	12	6-49/64
J1053M	10 x 11	12	7-31/32
J1057M	12 x 13	12	8-55/64
J1061M	14 x 15	12	9-45/64
J1064M	16 x 18	12	10-11/16
J1065M	17 x 19	12	11-23/64
J1072M	21 x 24	12	13-25/64
J1073M	22 x 24	12	13-45/64
J1077M	27 x 30	12	15-59/64
J1079M	30 x 32	12	17-13/64
J25TR44C	Tool Roll		

Weight (lbs): 7.40  ASME B107.100



 FULL POLISH 
  SATIN 
  BLACK OXIDE 
  BLACK CHROME 
  INSULATED

## 7 PIECE METRIC FULL POLISH BOX WRENCH SET - 12 POINT

Product #: **J1100D-M**

<b>12</b>	<b>MM</b>	<b>Point Size</b>	<b>Overall Length (in)</b>
J1050M	6 x 7	12	5-49/64
J1051M	8 x 9	12	6-49/64
J1053M	10 x 11	12	7-31/32
J1057M	12 x 13	12	8-55/64
J1061M	14 x 15	12	9-45/64
J1064M	16 x 18	12	10-11/16
J1065M	17 x 19	12	11-23/64
J25TR43C	Tool Roll		

Weight (lbs): 2.04 ASME B107.100



## 6 PIECE SATIN DEEP OFFSET BOX WRENCH SET - 12 POINT

Product #: **J8100C**

<b>12</b>	<b>INCH</b>	<b>Point Size</b>	<b>Overall Length (in)</b>
J8180	3/8 x 7/16	12	7-3/4
J8181	1/2 x 9/16	12	9
J8182	5/8 x 11/16	12	10-1/4
J8183A	11/16 x 13/16	12	11-1/2
J8184	3/4 x 7/8	12	12-3/4
J8185	15/16 x 1	12	14
J25TR19C	Tool Roll		

Weight (lbs): 3.33 ASME B107.100



## SHORT SATIN DOUBLE BOX WRENCHES - 12 POINT



- ▶ Satin finish provides corrosion resistance and a slip resistant grip.
- ▶ 12 point box end allows for fine indexing, helping to improve speed and access. Fits 4, 6 and 12 point fasteners.
- ▶ Box ends incorporate the TorquePlus™ system.



<b>INCH</b>	<b>12</b>	<b>Outside Head Width 1 (in)</b>	<b>Head Thickness 1 (in)</b>	<b>Outside Head Width 2 (in)</b>	<b>Head Thickness 2 (in)</b>	<b>Overall Length (in)</b>	<b>Weight (lbs)</b>
5/16 x 3/8	<b>J1120</b>	33/64	5/16	37/64	19/64	4-1/4	0.07
3/8 x 7/16	<b>J1122</b>	37/64	11/32	43/64	21/64	4-5/8	0.09
1/2 x 9/16	<b>J1126</b>	43/64	3/8	55/64	23/64	5-3/8	0.12
5/8 x 3/4	<b>J1131</b>	1-27/32	13/32	1-3/32	15/32	6-1/8	0.25

AS954E S3.8.1 ASME B107.100





## SATIN OBSTRUCTION BOX WRENCHES - 12 POINT



- › Satin chrome finish provides corrosion resistance and a slip resistant grip.
- › Made of forged steel then heat-treated.
- › Curved half-moon shape helps improve access to hidden, difficult to reach locations.
- › 12 point box end allows for fine indexing, helping to improve speed and access. Fits 4, 6 and 12 point fasteners.
- › Box ends incorporate the TorquePlus™ system.



INCH	12	Outside Head Width 1 (in)	Outside Head Width 2 (in)	Overall Length (in)	Weight (lbs)
7/16 x 1/2	<b>J1725</b>	5/8	5/8	5-3/4	0.17
9/16 x 5/8	<b>J1730</b>	25/32	25/32	6-5/8	0.23
5/8 x 3/4	<b>J1731</b>	27/32	27/32	7-1/4	0.39

AS954E S3.8.1 ASME B107.100

## FACOM® SATIN METRIC OBSTRUCTION BOX WRENCHES - 12 POINT



- › Satin finish provides corrosion resistance and a slip resistant grip.
- › Half-moon shape helps improve access to hidden, difficult to reach locations.
- › 12 point box end allows for fine indexing, helping to improve speed and access.
- › Fits 4, 6 and 12 point fasteners.



MM	12	Outside Head Width 1 (in)	Head Thickness 1 (in)	Outside Head Width 2 (in)	Head Thickness 2 (in)	Overall Length (in)	Weight (lbs)
10 x 12	<b>FM-57.10X12</b>	43/64	5/16	49/64	5/16	5-5/8	0.15
11 x 13	<b>FM-57.11X13</b>	43/64	5/16	49/64	5/16	6-1/2	0.24
13 x 15	<b>FM-57.13X15</b>	25/32	3/8	29/32	23/64	7-15/32	0.35
14 x 16	<b>FM-57.14X16</b>	57/64	23/64	31/32	3/8	7-7/16	0.35
14 x 17	<b>FM-57.14X17</b>	57/64	23/64	31/32	3/8	7-17/32	0.34
15 x 17	<b>FM-57.15X17</b>	57/64	23/64	31/32	3/8	8-3/4	0.46
16 x 18	<b>FM-57.16X18</b>	15/16	13/32	1-1/16	25/64	8-3/4	0.45
19 x 22	<b>FM-57.19X22</b>	1-1/8	25/64	1-9/32	7/16	9-31/32	0.62



## FACOM® 5 PIECE SATIN METRIC OBSTRUCTION BOX WRENCH SET



Product #: **FM-57.JE5**



<b>12</b>	<b>MM</b>	<b>Point Size</b>	<b>Overall Length (in)</b>
FM-57.10X12	10 x 12	12	5-5/8
FM-57.11X13	11 x 13	12	6-1/2
FM-57.14X17	14 x 17	12	7-17/32
FM-57.16X18	16 x 18	12	8-3/4
FM-57.19X22	19 x 22	12	9-31/32

Weight (lbs): 1.80

## FACOM® INSULATED BOX WRENCHES - 12 POINT



- › Insulated to 1000V or 1500 DC.
- › 2 color warning handle insulation - color changes from orange to yellow if insulation integrity compromised.
- › 12 point box end allows for fine indexing, helping to improve speed and access.
- › Fits 4, 6 and 12 point fasteners.



<b>MM</b>	<b>12</b>	<b>Outside Head Width 1 (in)</b>	<b>Head Thickness 1 (in)</b>	<b>Offset Height (in)</b>	<b>Overall Length (in)</b>	<b>Weight (lbs)</b>
8	<b>FM-55.8AVSE</b>	5/8	5/16	5/8	6-1/32	0.12
9	<b>FM-55.9AVSE</b>	43/64	23/64	43/64	6-1/2	0.13
10	<b>FM-55.10AVSE</b>	3/4	23/64	43/64	6-5/16	0.12
11	<b>FM-55.11AVSE</b>	25/32	25/64	3/4	6-11/16	0.15
12	<b>FM-55.12AVSE</b>	53/64	7/16	25/32	6-7/8	0.23
13	<b>FM-55.13AVSE</b>	29/32	15/32	25/32	7-3/32	0.22
14	<b>FM-55.14AVSE</b>	63/64	15/32	53/64	7-15/32	0.27
15	<b>FM-55.15AVSE</b>	1-1/32	15/32	53/64	7-11/16	0.29
16	<b>FM-55.16AVSE</b>	1-1/16	33/64	1-1/32	8-1/16	0.34
17	<b>FM-55.17AVSE</b>	1-3/16	35/64	1-1/16	7-7/8	0.34
18	<b>FM-55.18AVSE</b>	1-3/16	35/64	1-1/16	8-7/8	0.46
19	<b>FM-55.19AVSE</b>	1-17/64	35/64	1-1/16	9-1/4	0.49
21	<b>FM-55.21AVSE</b>	1-3/8	5/8	1-7/32	10-1/32	0.75



## OPEN END WRENCHES

- › 15° angle heads.
- › Special heat-treated alloy steel permits slim shanks for strength and durability.
- › Standard open end configuration.



OPEN END WRENCHES

INCH			Throat Depth 1 (in)	Outside Head Width 1 (in)	Head Thickness 1 (in)	Outside Head Width 2 (in)	Head Thickness 2 (in)	Overall Length (in)	Weight (lbs)
3/16 x 1/4	<b>J3016</b>	-	17/64	1/2	5/32	7/16	5/32	3-7/8	0.04
1/4 x 5/16	<b>J3018</b>	-	3/8	21/32	3/16	4-1/2	5/32	4-31/64	0.07
5/16 x 3/8	<b>J3020</b>	<b>J3020B</b>	7/16	25/32	7/32	41/64	13/64	5-1/8	0.09
3/8 x 7/16	<b>J3021</b>	<b>J3021B</b>	23/64	29/32	7/22	25/32	7/32	5-3/4	0.12
7/16 x 1/2	<b>J3025</b>	<b>J3025B</b>	19/32	1-1/32	1/4	29/32	1/4	6-3/8	0.19
1/2 x 9/16	<b>J3026</b>	<b>J3026B</b>	43/64	1-3/16	9/32	1-1/32	17/64	7	0.23
9/16 x 5/8	<b>J3030</b>	<b>J3030B</b>	3/4	1-17/64	9/32	1-5/32	9/32	7-5/8	0.28
5/8 x 3/4	<b>J3031</b>	<b>J3031B</b>	29/32	1-37/64	5/16	1-5/32	5/16	8-9/16	0.39
5/8 x 11/16	<b>J3034</b>	-	53/64	11701	5/16	1-9/32	5/16	8-1/4	0.35
11/16 x 3/4	<b>J3035</b>	<b>J3035B</b>	29/32	1-37/64	11/32	1-13/32	21/64	8-7/8	0.47
11/16 x 25/32	<b>J3037</b>	-	57/64	1-37/64	11/32	1-13/32	21/64	8-7/8	0.46
3/4 x 7/8	<b>J3039</b>	<b>J3039B</b>	1-1/16	1-25/32	11/32	1-37/64	11/32	9-1/2	0.6
13/16 x 7/8	<b>J3040</b>	<b>J3040B</b>	1-3/64	1-25/32	3/8	1-21/32	23/64	10-1/8	0.62
15/16 x 1	<b>J3045</b>	<b>J3045B</b>	1-13/64	2-1/64	13/32	1-29/32	13/32	11-1/2	0.92
1-1/16 x 1-1/8	<b>J3050</b>	<b>J3050B</b>	1-23/64	2-17/64	15/32	2-5/32	29/64	12-5/8	1.24
1-1/16 x 1-1/4	<b>J3051</b>	<b>J3051B</b>	1-31/64	2-33/64	15/32	2-5/32	15/32	13-9/16	1.47
1-1/4 x 1-5/16	<b>J3055</b>	<b>J3055B</b>	1-9/16	2-21/32	17/32	2-33/64	33/64	14-1/2	1.87
1-3/8 x 1-7/16	<b>J3060</b>	<b>J3060B</b>	1-23/32	2-57/64	9/16	2-23/32	35/64	15-3/4	2.59
1-1/2 x 1-5/8	<b>J3070</b>	<b>J3070B</b>	1-15/16	3-17/64	5/8	2-61/64	39/64	17	3.31
1-11/16 x 1-13/16	<b>J3075</b>	-	2-3/16	3-41/64	23/32	3-25/64	45/64	18-1/2	4.71
1-7/8 x 2	<b>J3080</b>	-	2-3/8	4-1/32	23/32	3-41/64	45/64	20	6.38

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MM			Throat Depth 1 (in)	Outside Head Width 1 (in)	Head Thickness 1 (in)	Outside Head Width 2 (in)	Head Thickness 2 (in)	Overall Length (in)	Weight (lbs)
6 x 7	<b>J30607</b>	-	3/8	41/64	3/16	1/2	11/64	4-1/2	0.06
8 x 9	<b>J30809</b>	-	7/16	25/32	3/16	21/32	3/16	5-1/8	0.09
10 x 11	<b>J31011</b>	-	17/32	29/32	7/32	25/32	7/32	5-3/4	0.13
12 x 13	<b>J31213</b>	-	19/32	1-1/32	1/4	29/32	1/4	6-3/8	0.17
14 x 15	<b>J31415</b>	-	3/4	1-9/32	9/32	1-9/64	9/32	7-19/32	0.3
16 x 17	<b>J31617</b>	-	57/64	1-13/32	5/16	8-1/4	19/64	8-15/64	0.33
18 x 19	<b>J31819</b>	-	29/32	1-37/64	11/32	8-7/8	21/64	8-55/64	0.48
20 x 22	<b>J32022</b>	-	1-3/64	1-13/16	11/32	9-1/2	11/32	9-31/64	0.58
21 x 23	<b>J32123</b>	-	1-3/64	1-25/32	3/8	1-21/32	23/64	10-1/8	0.61
24 x 26	<b>J32426</b>	-	1-13/64	2-1/64	13/32	1-29/32	13/32	11-3/8	0.88

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- FULL POLISH
- SATIN
- BLACK OXIDE
- BLACK CHROME
- INSULATED

## 10 PIECE SATIN OPEN-END WRENCH SET

Product #: **J3000H**



	<b>INCH</b>	<b>Overall Length (in)</b>
J3018	1/4 x 5/16	4-31/64
J3020	5/16 x 3/8	5-1/8
J3025	7/16 x 1/2	6-3/8
J3026	1/2 x 9/16	7
J3030	9/16 x 5/8	7-5/8
J3031	5/8 x 3/4	8-9/16
J3035	11/16 x 3/4	8-7/8
J3040	13/16 x 7/8	10-1/8
J3045	15/16 x 1	11-1/2
J3050	1-1/16 x 1-1/8	12-5/8
J25TR05C	Tool Roll	

Weight (lbs): 4.82



## 10 PIECE BLACK OXIDE OPEN-END WRENCH SET

Product #: **J3000HB**



	<b>INCH</b>	<b>Overall Length (in)</b>
J3020B	5/16 x 3/8	5-1/4
J3025B	7/16 x 1/2	6-7/16
J3030B	9/16 x 5/8	7-47/64
J3035B	11/16 x 3/4	8-63/64
J3040B	13/16 x 7/8	10-15/64
J3045B	15/16 x 1	11-31/64
J3050B	1-1/16 x 1-1/8	12-3/8
J3055B	1-1/4 x 1-5/16	14-5/8
J3060B	1-3/8 x 1-7/16	15-7/8
J3070B	1-1/2 x 1-5/8	17-1/16
J25TR20C	Tool Roll	


Weight (lbs): 12.62






## 10 PIECE SATIN METRIC OPEN-END WRENCH SET

Product #: **J3000A**

	<b>MM</b>	Overall Length (in)
J30607	6 x 7	4-1/2
J30809	8 x 9	5-1/8
J31011	10 x 11	5-3/4
J31213	12 x 13	6-3/8
J31415	14 x 15	7-19/32
J31617	16 x 17	8-15/64
J31819	18 x 19	8-55/64
J32022	20 x 22	9-31/64
J32123	21 x 23	10-1/8
J32426	24 x 26	11-3/8
J25TR28C	Tool Roll	


Weight (lbs): 3.93  ASME B107.100




OPEN END WRENCH SETS

## 5 PIECE SATIN OPEN-END WRENCH SET

Product #: **J3000N**

	<b>INCH</b>	Overall Length (in)
J3021	3/8 x 7/16	5-3/4
J3026	1/2 x 9/16	7
J3030	9/16 x 5/8	7-5/8
J3035	11/16 x 3/4	8-7/8
J3040	13/16 x 7/8	10-1/8
J25TR06C	Tool Roll	

Weight (lbs): 1.66  ASME B107.100



-  FULL POLISH
-  SATIN
-  BLACK OXIDE
-  BLACK CHROME
-  INSULATED

## 6 PIECE SATIN METRIC OPEN-END WRENCH SET

Product #: **J30000R**



	<b>MM</b>	<b>Overall Length (in)</b>
J30809	8 x 9	5-1/8
J31011	10 x 11	5-3/4
J31213	12 x 13	6-3/8
J31415	14 x 15	7-19/32
J31617	16 x 17	8-15/64
J31819	18 x 19	8-55/64
J25TR25C	Tool Roll	

Weight (lbs): 1.63

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## 5 PIECE SATIN METRIC OPEN-END WRENCH SET

Product #: **J30000P-M**

- › Special heat-treated alloy steel permits slim shanks for strength and durability.
- › 15° angled heads.
- › Standard open-end configuration.



	<b>MM</b>	<b>Overall Length (in)</b>
J31011	10 x 11	5-3/4
J31213	12 x 13	6-3/8
J31415	14 x 15	7-19/32
J31819	18 x 19	8-55/64
J32123	21 x 23	10-1/8
J25TR06C	Tool Roll	

Weight (lbs): 1.92

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## EXTRA THIN SATIN OPEN END WRENCHES

- › Satin finish provides corrosion resistance and a slip resistant grip.
- › Ultra-thin profile and long handle produce improved access to hard-to-reach fasteners.
- › Use when high leverage or distance from a hot assembly is required.
- › Opening is designed to cover tappets, screws and lock nuts without excessive overhang which improves access.



INCH		Throat Depth 1 (in)	Outside Head Width 1 (in)	Head Thickness 1 (in)	Outside Head Width 2 (in)	Head Thickness 2 (in)	Overall Length (in)	Weight (lbs)
7/16 x 1/2	<b>J3425</b>	19/32	1-3/32	3/16	1-1/64	11/64	10	0.16
1/2 x 9/16	<b>J3426</b>	43/64	1-13/64	3/16	1-9/64	11/64	10	0.16
9/16 x 5/8	<b>J3430</b>	47/64	1-21/64	3/16	1-1/4	11/64	10	0.21
11/16 x 3/4	<b>J3435</b>	57/64	1-7/16	7/32	1-11/32	13/64	10	0.26
13/16 x 7/8	<b>J3440</b>	1-1/32	1-49/64	7/32	1-11/16	13/64	10	0.33



OPEN END WRENCHES

## FACOM® SHORT SATIN OPEN END WRENCHES



- › Satin finish provides corrosion resistance and a slip resistant grip.
- › Short shank and slim heads for access in confined spaces.
- › Standard open end configuration.



INCH		Outside Head Width 1 (in)	Head Thickness 1 (in)	Outside Head Width 2 (in)	Head Thickness 2 (in)	Overall Length (in)	Weight (lbs)
3/16 x 1/4	<b>FF-22.3/16X1/4</b>	35/64	1/8	5/8	1/8	3-11/32	0.03
7/32 x 9/32	<b>FF-22.7/32X9/32</b>	35/64	1/8	5/8	1/8	3-11/32	0.03
5/16 x 3/8	<b>FF-22.5/16X3/8</b>	45/64	1/8	25/32	1/8	3-17/32	0.03
11/32 x 7/16	<b>FF-22.11/32X7/16</b>	53/64	1/8	29/32	1/8	3-15/16	0.05
1/2 x 9/16	<b>FF-22.1/2X9/16</b>	1-1/32	3/32	1-7/64	3/32	4-11/32	0.08

MM		Outside Head Width 1 (in)	Head Thickness 1 (in)	Outside Head Width 2 (in)	Head Thickness 2 (in)	Overall Length (in)	Weight (lbs)
3.2 x 5.5	<b>FM-22.3.2X5.5</b>	25/64	3/32	33/64	3/32	2-9/32	0.01
4 x 5	<b>FM-22.4X5</b>	25/64	3/32	33/64	3/32	2-9/32	0.02
6 x 7	<b>FM-22.6X7</b>	35/64	3/32	5/8	3/32	3-5/16	0.03
8 x 9	<b>FM-22.8X9</b>	45/64	1/8	25/32	1/8	3-1/2	0.04
10 x 11	<b>FM-22.10X11</b>	53/64	1/8	29/32	1/8	3-7/8	0.05
12 x 13	<b>FM-22.12X13</b>	1-1/32	1/8	1-7/64	1/8	4-5/16	0.08



## FACOM® 5 PIECE FULL POLISH SHORT OPEN-END WRENCH SET

Product #: **FF-22.JU5T**

- ▶ Short shank and slim heads for access in confined spaces.



	<b>INCH</b>	<b>Overall Length (in)</b>
FF-22.1/2X9/16	1/2 x 9/16	4-11/32
FF-22.11/32X7/16	11/32 x 7/16	3-15/16
FF-22.3/16X1/4	3/16 x 1/4	3-11/32
FF-22.5/16X3/8	5/16 x 3/8	3-17/32
FF-22.7/32X9/32	7/32 x 9/32	3-11/32

Weight (lbs): 0.22



## FACOM® 6 PIECE FULL POLISH SHORT METRIC OPEN-END WRENCH SET

Product #: **FM-22.JE6T**

- ▶ Short shank and slim heads for access in confined spaces.



	<b>MM</b>	<b>Overall Length (in)</b>
FM-22.3.2X5.5	3.2 x 5.5	2-9/32
FM-22.4X5	4 x 5	2-9/32
FM-22.6X7	6 x 7	3-5/16
FM-22.8X9	8 x 9	3-1/2
FM-22.10X11	10 x 11	3-7/8
FM-22.12X13	12 x 13	4-5/16

Weight (lbs): 0.23





## FULL POLISH ANGLE OPEN END WRENCHES

- › Full polish finish provides corrosion and easy-to-clean surfaces.
- › Double nickel strike for rust resistance and prolonged life.
- › 15° and 60° angle heads combined with the same size opening on both ends allow wrench to be used in four different turning angles for greater access in tight work areas.



ANGLE OPEN END WRENCHES

INCH		Throat Depth 1 (in)	Outside Head Width 1 (in)	Head Thickness 1 (in)	Outside Head Width 2 (in)	Head Thickness 2 (in)	Overall Length (in)	Weight (lbs)
3/8	<b>J3112</b>	13/32	3/4	7/32	3/4	13/64	4-3/4	0.06
7/16	<b>J3114</b>	15/32	7/8	7/32	7/8	13/64	5	0.08
1/2	<b>J3116</b>	35/64	1	1/4	1	15/64	5-1/4	0.10
9/16	<b>J3118</b>	39/64	1-7/64	1/4	1-7/64	15/64	5-5/8	0.14
5/8	<b>J3120</b>	21/32	1-7/32	9/32	1-7/32	17/64	6	0.17
11/16	<b>J3122</b>	23/32	1-21/64	9/32	1-21/64	17/64	6-1/2	0.21
3/4	<b>J3124</b>	25/32	1-7/16	9/32	1-7/16	9/32	7	0.26
13/16	<b>J3126</b>	27/32	1-9/16	5/16	1-9/16	19/64	7-1/2	0.50
7/8	<b>J3128</b>	57/64	1-21/32	5/16	1-21/32	5/16	8	0.61
15/16	<b>J3130</b>	31/32	1-25/32	11/32	1-25/32	21/64	8-3/4	0.71
1	<b>J3132</b>	1-1/32	1-59/64	11/32	1-59/64	11/32	9-1/2	0.88
1-1/16	<b>J3134</b>	1-1/16	2-1/64	3/8	2-1/64	23/64	10-1/4	1.04
1-1/8	<b>J3136</b>	1-1/8	2-1/8	3/8	2-1/8	3/8	11	1.20
1-1/4	<b>J3140</b>	1-1/4	2-11/32	13/32	2-11/32	13/32	12-1/4	1.47
1-5/16	<b>J3142</b>	1-5/16	2-29/64	7/16	2-29/64	27/64	13-1/8	1.87
1-3/8	<b>J3144</b>	1-13/32	2-37/64	7/16	2-37/64	7/16	13-3/4	2.17
1-7/16	<b>J3146</b>	1-13/32	2-5/8	15/32	2-5/8	29/64	14	2.48
1-1/2	<b>J3148</b>	1-31/64	2-3/4	15/32	2-3/4	15/32	14-1/2	2.77
1-5/8	<b>J3152</b>	1-43/64	3-1/64	1/2	3-1/64	1/2	15	3.07
1-3/4	<b>J3156</b>	1-31/32	3-31/64	17/32	3-31/64	33/64	17	3.81
1-13/16	<b>J3158</b>	1-63/64	3-31/64	17/32	3-31/64	33/64	18-3/8	4.56
1-7/8	<b>J3160</b>	2-7/32	3-29/32	21/32	3-29/32	21/32	19-3/4	5.24
2	<b>J3164</b>	2-9/32	3-29/32	21/32	3-29/32	21/32	21-1/4	5.92

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MM		Throat Depth 1 (in)	Outside Head Width 1 (in)	Head Thickness 1 (in)	Outside Head Width 2 (in)	Head Thickness 2 (in)	Overall Length (in)	Weight (lbs)
9	<b>J3109M</b>	13/32	49/64	7/32	49/64	13/64	4-3/4	0.06
10	<b>J3110M</b>	7/16	13/16	7/32	13/16	13/64	4-7/8	0.07
11	<b>J3111M</b>	15/32	7/8	7/32	7/8	7/32	5	0.08
12	<b>J3112M</b>	1/2	59/64	1/4	59/64	15/64	5-1/4	0.10
13	<b>J3113M</b>	17/32	63/64	1/4	63/64	15/64	5-1/2	0.13
14	<b>J3114M</b>	39/64	1-7/64	1/4	1-7/64	1/4	5-5/8	0.14
15	<b>J3115M</b>	5/8	1-5/32	9/32	1-5/32	17/64	5-15/16	0.16
16	<b>J3116M</b>	21/32	1-7/32	9/32	1-7/32	17/64	6-1/8	0.19
17	<b>J3117M</b>	47/64	1-11/32	9/32	1-11/32	9/32	6-1/2	0.21
18	<b>J3118M</b>	23/32	1-11/32	9/32	1-11/32	9/32	6-3/4	0.24
19	<b>J3119M</b>	25/32	1-7/16	9/32	1-7/16	9/32	7	0.26


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## 14 PIECE FULL POLISH ANGLE OPEN-END WRENCH SET

Product #: **J3100B**



	<b>INCH</b>	<b>Overall Length (in)</b>
J3112	3/8	4-3/4
J3114	7/16	5
J3116	1/2	5-1/4
J3118	9/16	5-5/8
J3120	5/8	6
J3122	11/16	6-1/2
J3124	3/4	7
J3126	13/16	7-1/2
J3128	7/8	8
J3130	15/16	8-3/4
J3132	1	9-1/2
J3134	1-1/16	10-1/4
J3136	1-1/8	11
J3140	1-1/4	12-1/4
J25TRO8C	Tool Roll	


Weight (lbs): 5.58

 ASME B107.100

## 7 PIECE FULL POLISH ANGLE OPEN-END WRENCH SET

Product #: **J3100A**



	<b>INCH</b>	<b>Overall Length (in)</b>
J3112	3/8	4-3/4
J3114	7/16	5
J3116	1/2	5-1/4
J3118	9/16	5-5/8
J3120	5/8	6
J3122	11/16	6-1/2
J3124	3/4	7
J25TRO7C	Tool Roll	

Weight (lbs): 1.02

 ASME B107.100



## 11 PIECE FULL POLISH METRIC ANGLE OPEN-END WRENCH SET

Product #: **J3100M**



	<b>MM</b>	<b>Overall Length (in)</b>
J3109M	9	4-3/4
J3110M	10	4-7/8
J3111M	11	5
J3112M	12	5-1/4
J3113M	13	5-1/2
J3114M	14	5-5/8
J3115M	15	5-15/16
J3116M	16	6-1/8
J3117M	17	6-1/2
J3118M	18	6-3/4
J3119M	19	7
J25TR13C	Tool Roll	

Weight (lbs): 1.79

ASME B107.100



ANGLE OPEN END WRENCHES

## SHORT SATIN ANGLE OPEN END WRENCHES

- › Satin finish provides corrosion resistance and a slip resistant grip.
- › 15° and 75° angle heads allow wrench to be used in four different turning angles for greater access in tight work spaces.
- › Compact shank design and short length for access in confined spaces.
- › Standard open end configuration.



<b>INCH</b>		<b>Throat Depth 1 (in)</b>	<b>Outside Head Width 1 (in)</b>	<b>Head Thickness 1 (in)</b>	<b>Outside Head Width 2 (in)</b>	<b>Head Thickness 2 (in)</b>	<b>Overall Length (in)</b>	<b>Weight (lbs)</b>
7/32	<b>J3314</b>	11/64	1/2	1/8	1/2	7/64	3	0.03
15/64	<b>J3315</b>	11/64	1/2	1/8	1/2	7/64	3	0.03
1/4	<b>J3316</b>	11/64	1/2	1/8	1/2	7/64	3	0.03
9/32	<b>J3318</b>	3/16	19/32	5/32	19/32	5/32	3-1/2	0.04
5/16	<b>J3320</b>	3/16	19/32	5/32	19/32	5/32	3-1/2	0.04
11/32	<b>J3322</b>	1/4	3/4	5/32	3/4	5/32	3-3/4	0.05
3/8	<b>J3324</b>	1/4	3/4	5/32	3/4	5/32	3-3/4	0.05
7/16	<b>J3328</b>	11/32	1	3/16	1	11/64	4-7/16	0.08
1/2	<b>J3332</b>	11/32	1	3/16	1	11/64	4-7/16	0.08
9/16	<b>J3336</b>	13/32	1-5/32	3/16	1-5/32	3/16	5-3/4	0.10
5/8	<b>J3340</b>	13/32	1-5/32	3/16	1-5/32	3/16	5-3/4	0.10

ASME B107.100

- FULL POLISH
- SATIN
- BLACK OXIDE
- BLACK CHROME
- INSULATED

## FACOM® SHORT SATIN METRIC ANGLE OPEN END WRENCHES



- › Satin finish provides corrosion resistance and slip resistant grip.
- › 15° and 75° angled heads for fasteners out of standard tool reach.
- › Short shanks and slim heads.
- › Standard open end configuration.



MM		Outside Head Width 1 (in)	Head Thickness 1 (in)	Outside Head Width 2 (in)	Head Thickness 2 (in)	Overall Length (in)	Weight (lbs)
3.2	<b>FM-34.3.2</b>	25/64	3/32	25/64	3/32	2-3/4	0.01
4	<b>FM-34.4</b>	25/64	3/32	25/64	3/32	2-3/4	0.01
5	<b>FM-34.5</b>	33/64	3/32	33/64	3/32	2-61/64	0.02
5.5	<b>FM-34.5.5</b>	33/64	1/8	33/64	7/64	2-61/64	0.02
6	<b>FM-34.6</b>	19/32	1/8	19/32	7/64	3-5/32	0.02
7	<b>FM-34.7</b>	19/32	1/8	19/32	1/8	3-5/32	0.02
8	<b>FM-34.8</b>	47/64	1/8	47/64	1/8	3-35/64	0.04
9	<b>FM-34.9</b>	47/64	1/8	47/64	1/8	3-35/64	0.04
10	<b>FM-34.10</b>	55/64	1/8	55/64	1/8	3-15/16	0.05
11	<b>FM-34.11</b>	55/64	1/8	55/64	1/8	3-15/16	0.05
12	<b>FM-34.12</b>	1-1/16	5/32	1-1/16	9/64	3-15/16	0.08
13	<b>FM-34.13</b>	1-1/16	5/32	1-1/16	9/64	4-23/32	0.08
14	<b>FM-34.14</b>	1-1/16	5/32	1-1/16	9/64	4-23/32	0.08
15	<b>FM-34.15</b>	1-19/64	3/16	1-19/64	11/64	5-33/64	0.15
16	<b>FM-34.16</b>	1-19/64	3/16	1-19/64	11/64	5-33/64	0.14
17	<b>FM-34.17</b>	1-19/64	3/16	1-19/64	11/64	5-33/64	0.14

## 9 PIECE SATIN SHORT ANGLE OPEN-END WRENCH SET

Product #: **J3300A**

	INCH	Overall Length (in)
J3314	7/32	3
J3315	15/64	3
J3316	1/4	3
J3318	9/32	3-1/2
J3320	5/16	3-1/2
J3322	11/32	3-3/4
J3324	3/8	3-3/4
J3328	7/16	4-7/16
J3332	1/2	4-7/16
J25TR26C	Tool Roll	

Weight (lbs): 0.46

ASME B107.100





## FACOM® 16 PIECE SHORT SATIN METRIC ANGLE OPEN-END WRENCH SET



Product #: **FM-34.JL16T**

- › Satin finish provides corrosion resistance and a slip resistant grip.
- › 15° and 75° angled heads for fasteners out of standard-tool reach.
- › Short shanks and slim heads.
- › Standard open end configuration.



	MM	Overall Length (in)
FM-34.3.2	3.2	2-3/4
FM-34.4	4	2-3/4
FM-34.5	5	2-61/64
FM-34.5.5	5.5	2-61/64
FM-34.6	6	3-5/32
FM-34.7	7	3-5/32
FM-34.8	8	3-35/64
FM-34.9	9	3-35/64
FM-34.10	10	3-15/16
FM-34.11	11	3-15/16
FM-34.12	12	3-15/16
FM-34.13	13	4-23/32
FM-34.14	14	4-23/32
FM-34.15	15	5-33/64
FM-34.16	16	5-33/64
FM-34.17	17	5-33/64

Weight (lbs): 1.12



ANGLE OPEN END WRENCHES

## FACOM® SATIN METRIC TAPPET OPEN END WRENCHES



- › Satin finish provides corrosion resistance and a slip resistant grip.
- › Used to tighten collars, lock nut rings and help seal packing nuts on hydraulic cylinders.
- › Ultra thin profile for use in close quarters.
- › Openings designed to cover tappets, screws and lock nuts with excessive overhang which helps improve access.
- › For use in low torque applications.
- › Standard open end configuration.



MM		Outside Head Width 1 (in)	Head Thickness 1 (in)	Outside Head Width 2 (in)	Head Thickness 2 (in)	Overall Length (in)	Weight (lbs)
6 x 7	<b>FM-31.6X7</b>	5/8	3/32	5-27/32	3/32	5-53/64	0.06
8 x 9	<b>FM-31.8X9</b>	25/32	3/32	6-29/32	3/32	6-57/64	0.08
10 x 11	<b>FM-31.10X11</b>	25/32	3/32	6-29/32	3/32	6-57/64	0.08
12 x 13	<b>FM-31.12X13</b>	1-7/64	9/64	8-9/32	9/64	8-17/64	0.17
14 x 15	<b>FM-31.14X15</b>	1-9/64	9/64	8-9/32	9/64	8-17/64	0.17
16 x 17	<b>FM-31.16X17</b>	1-33/64	11/64	1-11/16	11/64	9-27/32	0.31
18 x 19	<b>FM-31.18X19</b>	1-33/64	11/64	1-11/16	11/64	9-27/32	0.30




## FACOM® 6 PIECE METRIC TAPPET WRENCH SET



Product #: FM-31.JE6T




	MM	Overall Length (in)
FM-31.8X9	8 x 9	6-57/64
FM-31.10X11	10 x 11	6-57/64
FM-31.12X13	12 x 13	8-17/64
FM-31.14X15	14 x 15	8-17/64
FM-31.16X17	16 x 17	9-27/32
FM-31.18X19	18 x 19	9-27/32

Weight (lbs): 1.63

## IGNITION WRENCHES

- › Satin finish provides corrosion resistance and a slip resistant grip.
- › 15° and 60° angle heads.
- › Standard open end configuration.



INCH		Throat Depth 1 (in)	Outside Head Width 1 (in)	Head Thickness 1 (in)	Outside Head Width 2 (in)	Head Thickness 2 (in)	Overall Length (in)	Weight (lbs)
13/64 x 15/64	<b>J3210</b>	15/64	1/2	1/8	1/2	7/64	3	0.02
15/64 x 13/64	<b>J3211</b>	15/64	1/2	1/8	1/2	7/64	3	0.02
7/32 x 1/4	<b>J3215</b>	15/64	1/2	1/8	1/2	7/64	3	0.02
1/4 x 7/32	<b>J3216</b>	15/64	1/2	1/8	1/2	7/64	3	0.02
9/32 x 5/16	<b>J3220</b>	5/16	19/32	5/32	19/32	5/32	3-1/2	0.03
5/16 x 9/32	<b>J3221</b>	5/16	19/32	5/32	19/32	5/32	3-1/2	0.03
11/32 x 3/8	<b>J3225</b>	3/8	3/4	5/32	47/64	5/32	3-3/4	0.05
3/8 x 11/32	<b>J3226</b>	3/8	3/4	5/32	3/4	5/32	3-3/4	0.05







## 13 PIECE IGNITION WRENCH SET

Product #: **J3200C**



	<b>INCH</b>	<b>Overall Length (in)</b>
J3210	13/64 x 15/64	3
J3211	15/64 x 13/64	3
J3215	7/32 x 1/4	3
J3216	1/4 x 7/32	3
J3220	9/32 x 5/16	3-1/2
J3221	5/16 x 9/32	3-1/2
J3225	11/32 x 3/8	3-3/4
J3226	3/8 x 11/32	3-3/4
J0000	Ignition Feeler Gauge	
J235	Ignition Pliers	5-1/4
J2302	Ignition Point File	5-1/4
J9853	Screw Start	5-5/8
66-101	Pocket Screwdriver	1/8 x 2
J25TR10C	Tool Roll	

Weight (lbs): 0.67



IGNITION WRENCH SETS

## 9 PIECE IGNITION WRENCH SET

Product #: **J3200D**



	<b>INCH</b>	<b>Overall Length (in)</b>
J3210	13/64 x 15/64	3
J3211	15/64 x 13/64	3
J3215	7/32 x 1/4	3
J3216	1/4 x 7/32	3
J3220	9/32 x 5/16	3-1/2
J3221	5/16 x 9/32	3-1/2
J3225	11/32 x 3/8	3-3/4
J3226	3/8 x 11/32	3-3/4
J235	Ignition Pliers	5-1/4
J25TR09C	Tool Roll	

Weight (lbs): 0.47




- FULL POLISH
- SATIN
- BLACK OXIDE
- BLACK CHROME
- INSULATED

## BLACK OXIDE CHECK NUT WRENCHES

- ▶ Use check nut wrenches to tighten jam nuts, check nuts or lock nuts.
- ▶ In confined spaces, the 15° head allows for a full 30° rotation by flipping wrench over.
- ▶ Ultra thin profile improves access in close quarters.
- ▶ Non-reflective black oxide finish for use where non-plated products are required.



INCH		Outside Head Width 1 (in)	Head Thickness 1 (in)	Overall Length (in)	Weight (lbs)
7/16	<b>JKE14</b>	1	7/32	4	0.05
1/2	<b>JKE16</b>	1	7/32	4	0.05
9/16	<b>JKE18</b>	1-9/32	7/32	4-1/2	0.11
19/32	<b>JKE19</b>	1-9/32	7/32	4-1/2	0.11
5/8	<b>JKE20</b>	1-1/2	7/32	5-1/8	0.13
11/16	<b>JKE22</b>	1-1/2	7/32	5-1/8	0.13
3/4	<b>JKE24</b>	1-23/32	9/32	6-1/8	0.19
13/16	<b>JKE26</b>	2	9/32	6-5/8	0.28
7/8	<b>JKE28</b>	1-25/32	9/32	6-5/8	0.28
15/16	<b>JKE30</b>	2	9/32	7-1/2	0.36
1	<b>JKE32</b>	2	9/32	7-1/2	0.35
1-1/16	<b>JKE34</b>	2-13/32	9/32	8-1/2	0.66
1-1/8	<b>JKE36</b>	2-13/32	9/32	8-1/2	0.65
1-1/4	<b>JKE40</b>	2-23/32	13/32	10	1.12
1-5/16	<b>JKE42</b>	2-23/32	13/32	10	1.12
1-1/2	<b>JKE48</b>	3-7/32	13/32	11-3/8	1.50
1-5/8	<b>JKE52</b>	3-1/2	13/32	13	2.30
1-11/16	<b>JKE54</b>	3-7/16	1/2	13	2.20



## CHECK NUT WRENCHES



The check nut wrench tightens fasteners (sometimes called lock nuts or jam nuts) that lock other fasteners in place. The thin profile is used to squeeze into a tight space, or to rotate a fastener without moving the one next to it.

Check nut wrenches approach the fastener almost straight-on. The slight angle makes it easier for both left and right-handed work.



## SATIN SERVICE WRENCHES

- ▶ Satin finish provides corrosion resistance and a slip resistant grip.
- ▶ 30° angle head allows access to difficult to reach fasteners.
- ▶ Thin pattern for use on jam nuts, check nuts or lock nuts.
- ▶ Short shank allows for use in confined spaces.



SERVICE WRENCHES

INCH		Throat Depth 1 (in)	Outside Head Width 1 (in)	Head Thickness 1 (in)	Overall Length (in)	Weight (lbs)
3/4	J3524	7/32	1-11/16	1/4	6-1/4	0.22
13/16	J3526	7/32	1-11/16	1/4	6-1/4	0.22
7/8	J3528	7/32	1-11/16	1/4	6-1/4	0.22
15/16	J3530	1/4	1-7/8	1/4	6-7/8	0.25
1	J3532	1/4	1-7/8	1/4	6-7/8	0.25
1-1/16	J3534	1/4	1-7/8	1/4	6-7/8	0.25
1-1/8	J3536	5/16	2-1/16	1/4	7	0.31
1-3/16	J3538	5/16	2-1/16	1/4	7	0.31
1-1/4	J3540	19/64	2-1/16	1/4	7	0.45
1-5/16	J3542	29/64	2-1/2	9/32	7-5/8	0.44
1-3/8	J3544	7/16	2-1/2	9/32	7-5/8	0.43
1-7/16	J3546	7/16	2-1/2	9/32	7-5/8	0.42
1-1/2	J3548	27/64	2-1/2	9/32	7-5/8	0.43
1-9/16	J3550	7/16	2-5/8	9/32	7-5/8	0.43
1-5/8	J3552	7/16	2-5/8	9/32	7-5/8	0.42
1-11/16	J3554	27/64	2-5/8	9/32	7-5/8	0.7
1-3/4	J3556	45/64	3-1/8	5/16	8-1/2	0.69
1-13/16	J3558	11/16	3-1/8	5/16	8-1/2	0.69
1-7/8	J3560	11/16	3-1/8	5/16	8-1/2	0.68
1-15/16	J3562	11/16	3-1/8	5/16	8-1/2	0.68
2	J3564	21/32	3-1/2	5/16	8-1/2	0.66
2-1/8	J3568	21/32	3-1/2	5/16	8-1/2	0.65
2-1/4	J3572	39/64	3-1/2	5/16	8-1/2	0.61
2-3/8	J3576	39/64	3-1/2	5/16	8-1/2	0.61
2-1/2	J3580	19/32	3-1/2	5/16	8-1/2	0.59
2-9/16	J3582	9/16	3-1/2	5/16	8-1/2	0.57

MM		Outside Head Width 1 (in)	Head Thickness 1 (in)	Overall Length (in)	Weight (lbs)
19	J3519M	1-11/16	1/4	6-1/4	0.22
21	J3521M	1-11/16	1/4	6-1/4	0.22
22	J3522M	1-11/16	1/4	6-1/4	0.22
24	J3524M	1-7/8	1/4	6-7/8	0.25
27	J3527M	1-7/8	1/4	6-7/8	0.25
30	J3530M	2-1/16	1/4	7	0.31
32	J3532M	2-1/16	1/4	7	0.30
36	J3536M	2-1/2	1/4	7-5/8	0.45
37	J3537M	2-1/2	9/32	7-5/8	0.43
38	J3538M	2-1/2	9/32	7-5/8	0.42
40	J3540M	2-5/8	9/32	7-5/8	0.43
41	J3541M	2-5/8	9/32	7-5/8	0.43
42	J3542M	2-5/8	9/32	7-5/8	0.43
44	J3544M	2-5/8	9/32	7-5/8	0.43
46	J3546M	3-1/8	9/32	7-5/8	0.70
48	J3548M	3-1/8	5/16	8-1/2	0.70
50	J3550M	3-1/8	5/16	8-1/2	0.68
52	J3552M	3-1/2	5/16	8-1/2	0.66
55	J3555M	3-1/2	5/16	8-1/2	0.66
60	J3560M	3-1/2	5/16	8-1/2	0.61
65	J3565M	3-1/2	5/16	8-1/2	0.57

FULL POLISH
 SATIN
 BLACK OXIDE
 BLACK CHROME
 INSULATED

## FACOM® INSULATED VSE METRIC OPEN END WRENCHES



- › 2 color warning handle insulation - color changes from orange to yellow if insulation integrity compromised.
- › Specific heat treatment and oiled quenching achieve core hardness without embrittlement or distortion.
- › Size tolerances applied by Facom® exceed standard specifications.



MM		Outside Head Width 1 (in)	Head Thickness 1 (in)	Overall Length (in)	Weight (lbs)
8	<b>FM-46.8AVSE</b>	55/64	5/16	4-23/32	0.07
9	<b>FM-46.9AVSE</b>	15/16	23/64	4-29/32	0.09
10	<b>FM-46.10AVSE</b>	63/64	23/64	5-1/8	0.11
11	<b>FM-46.11AVSE</b>	1-9/64	25/64	5-5/16	0.12
12	<b>FM-46.12AVSE</b>	1-3/16	25/64	5-5/16	0.14
13	<b>FM-46.13AVSE</b>	1-17/64	7/16	5-29/32	0.17
14	<b>FM-46.14AVSE</b>	1-11/32	7/16	6-5/16	0.20
15	<b>FM-46.15AVSE</b>	1-27/64	7/16	6-5/16	0.20
16	<b>FM-46.16AVSE</b>	1-1/2	15/32	6-11/16	0.26
17	<b>FM-46.17AVSE</b>	1-39/64	15/32	7-3/32	0.29
18	<b>FM-46.18AVSE</b>	1-21/32	15/32	7-3/32	0.33
19	<b>FM-46.19AVSE</b>	1-49/64	15/32	7-11/16	0.34
21	<b>FM-46.21AVSE</b>	1-31/32	35/64	7-9/32	0.40

## 1/4" DRIVE FULL POLISH CROWFOOT WRENCHES

- › Crowfoot wrenches are used in hard to reach, restricted access situations where a standard wrench or ratchet cannot reach.
- › Anti-Slip Design open end (ASD).
- › The arched surfaces are designed to spread the contact forces over a greater area and they keep the loads off the corners of the fastener which helps prevent fastener rounding.
- › Broad size range ensures the right tool for the application will be available.
- › Typically used in lower torque applications.
- › Full polish finish provides corrosion resistance and easy to clean surfaces.



INCH		Overall Length (in)	Weight (lbs)
1/4	<b>J4708CF</b>	15/16	0.02
5/16	<b>J4710CF</b>	1	0.03
3/8	<b>J4712CF</b>	1-1/16	0.03
7/16	<b>J4714CF</b>	1-5/32	0.04
1/2	<b>J4716CF</b>	1-3/16	0.05
9/16	<b>J4718CF</b>	1-9/32	0.05

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MM		Overall Length (in)	Weight (lbs)
7	<b>J4707MCF</b>	15/16	0.02
8	<b>J4708MCF</b>	31/32	0.02
9	<b>J4709MCF</b>	1	0.04
10	<b>J4710MCF</b>	1-1/16	0.03
11	<b>J4711MCF</b>	1-1/8	0.04
12	<b>J4712MCF</b>	1-5/32	0.04
13	<b>J4713MCF</b>	1-3/16	0.05
14	<b>J4714MCF</b>	1-1/4	0.05

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## 3/8" DRIVE FULL POLISH CROWFOOT WRENCHES

INCH		Overall Length (in)	Weight (lbs)
3/8	J4912CF	1-13/64	0.06
7/16	J4914CF	1-3/16	0.06
1/2	J4916CF	1-5/16	0.07
9/16	J4918CF	1-9/32	0.07
5/8	J4920CF	1-1/2	0.09
11/16	J4922CF	1-31/64	0.09
3/4	J4924CF	1-41/64	0.11
13/16	J4926CF	1-5/8	0.11
7/8	J4928CF	1-19/32	0.12
15/16	J4930CF	1-5/8	0.13
1	J4932CF	1-49/64	0.13
1-1/16	J4934CF	2-3/16	0.24
1-1/8	J4936CF	2-7/32	0.24
1-3/16	J4938CF	2-9/32	0.24
1-1/4	J4940CF	2-5/32	0.21
1-5/16	J4942CF	2-1/2	0.25
1-3/8	J4944CF	2-1/2	0.29
1-7/16	J4946CF	2-5/8	0.29
1-1/2	J4948CF	2-11/16	0.33
1-9/16	J4950CF	2-3/4	0.34
1-5/8	J4952CF	2-13/16	0.38
1-11/16	J4954CF	2-15/16	0.36
1-3/4	J4956CF	2-15/16	0.39
1-13/16	J4958CF	3-1/16	0.40
1-7/8	J4960CF	3-1/8	0.45
1-15/16	J4962CF	3-1/4	0.49
2	J4964CF	3-3/8	0.73
2-1/16	J4966CF	3-7/16	0.71
2-1/8	J4968CF	3-7/16	0.74
2-3/16	J4970CF	3-5/8	0.78
2-1/4	J4972CF	3-11/16	0.89
2-5/16	J4974CF	3-3/4	0.90
2-3/8	J4976CF	3-15/16	1.01
2-7/16	J4978CF	4-1/4	1.03
2-1/2	J4980CF	4-1/4	1.10
2-9/16	J4982CF	4-5/16	1.11
2-5/8	J4984CF	4-1/2	1.27
2-11/16	J4986CF	4-9/16	1.34
2-3/4	J4988CF	4-11/16	1.37
2-13/16	J4990CF	4-13/16	1.38
2-7/8	J4992CF	4-15/16	1.52
2-15/16	J4994CF	4-15/16	1.58
3	J4996CF	5	1.55



CROWFOOT WRENCHES

- › Crowfoot wrenches are used in hard to reach, restricted access situations where a standard wrench or ratchet cannot reach.
- › Anti-Slip Design open end (ASD).
- › The arched surfaces are designed to spread the contact forces over a greater area and they keep the loads off the corners of the fastener which helps prevent fastener rounding.
- › Broad size range ensures the right tool for the application will be available.
- › Typically used in lower torque applications.
- › Full polish finish provides corrosion resistance and easy to clean surfaces.
- › Locking hole feature helps keep the crowfoot wrench engaged on the extension during use reducing downtime due to detachment of crowfoot in awkward spaces.
- › Use with locking extensions to reach into spaces too small for a mechanic's arm or where the fastener is out of site.
- › Locking hole on 3/8" drive crowfoot wrenches available on fractional openings 1" and larger.

MM		Overall Length (in)	Weight (lbs)
9	J4909MCF	1-5/6	0.05
10	J4910MCF	1-11/32	0.05
11	J4911MCF	1-3/8	0.07
12	J4912MCF	1-15/32	0.07
13	J4913MCF	1-1/2	0.06
14	J4914MCF	1-1/2	0.07
15	J4915MCF	1-5/8	0.10
16	J4916MCF	1-21/32	0.09
17	J4917MCF	1-23/32	0.10
18	J4918MCF	1-15/16	0.13
19	J4919MCF	1-15/16	0.13
20	J4920MCF	2-1/16	0.13
21	J4921MCF	2-3/32	0.14
22	J4922MCF	2-7/32	0.15
23	J4923MCF	2-11/32	0.19
24	J4924MCF	2-13/32	0.19



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## 1/2" DRIVE FULL POLISH CROWFOOT WRENCHES

- › Crowfoot wrenches are used in hard to reach, restricted access situations where a standard wrench or ratchet cannot reach.
- › Anti-Slip Design open end (ASD).
- › The arched surfaces are designed to spread the contact forces over a greater area and they keep the loads off the corners of the fastener which helps prevent fastener rounding.
- › Broad size range ensures the right tool for the application will be available.
- › Typically used in lower torque applications.
- › Full polish finish provides corrosion resistance and easy to clean surfaces.
- › Locking hole feature helps keep the crowfoot wrench engaged on the extension during use reducing downtime due to detachment of crowfoot in awkward spaces.
- › Use with locking extensions to reach into spaces too small for a mechanic's arm or where the fastener is out of site.



INCH		Overall Length (in)	Weight (lbs)	MM		Overall Length (in)	Weight (lbs)
15/16	<b>J5330CF</b>	2-13/16	0.47	20	<b>J5320MCF</b>	2-19/32	0.43
1	<b>J5332CF</b>	2-13/16	0.46	21	<b>J5321MCF</b>	2-37/64	0.43
1-1/16	<b>J5334CF</b>	2-7/8	0.51	22	<b>J5322MCF</b>	2-13/16	0.45
1-1/8	<b>J5336CF</b>	3	0.54	23	<b>J5323MCF</b>	2-13/16	0.47
1-3/16	<b>J5338CF</b>	3	0.58	24	<b>J5324MCF</b>	2-51/64	0.47
1-1/4	<b>J5340CF</b>	3-5/16	0.66	25	<b>J5325MCF</b>	2-27/32	0.48
1-5/16	<b>J5342CF</b>	3-5/16	0.66	26	<b>J5326MCF</b>	2-29/32	0.49
1-3/8	<b>J5344CF</b>	3-3/8	0.72	27	<b>J5327MCF</b>	2-29/32	0.51
1-7/16	<b>J5346CF</b>	3-3/8	0.75	28	<b>J5328MCF</b>	3	0.54
1-1/2	<b>J5348CF</b>	3-7/16	0.77	29	<b>J5329MCF</b>	3-1/32	0.58
1-9/16	<b>J5350CF</b>	3-1/2	0.80	30	<b>J5330MCF</b>	3-1/32	0.66
1-5/8	<b>J5352CF</b>	3-1/2	0.83	32	<b>J5332MCF</b>	3-19/64	0.66
1-11/16	<b>J5354CF</b>	3-13/16	0.95	35	<b>J5335MCF</b>	3-23/64	0.72
1-3/4	<b>J5356CF</b>	3-13/16	0.98	36	<b>J5336MCF</b>	3-13/32	0.75
1-13/16	<b>J5358CF</b>	3-7/8	1.01	38	<b>J5338MCF</b>	3-7/16	0.77
1-7/8	<b>J5360CF</b>	3-7/8	1.05	41	<b>J5341MCF</b>	3-1/2	0.83
2	<b>J5364CF</b>	3-15/16	1.10	42	<b>J5342MCF</b>	3-51/64	0.95
2-1/8	<b>J5368CF</b>	4-1/16	1.09	46	<b>J5346MCF</b>	3-55/64	1.01
2-1/4	<b>J5372CF</b>	4-3/8	1.27				
2-3/8	<b>J5376CF</b>	4-7/16	1.29				
2-7/16	<b>J5378CF</b>	4-7/16	1.28				
2-1/2	<b>J5380CF</b>	4-1/2	1.25				

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## 1/4" DRIVE 8 PIECE CROWFOOT WRENCH SET

Product #: **J4700CFL**



	<b>INCH</b>	<b>Overall Length (in)</b>
J4708CF	1/4	15/16
J4710CF	5/16	1
J4712CF	3/8	1-1/16
J4714CF	7/16	1-5/32
J4716CF	1/2	1-3/16
J4718CF	9/16	1-9/32
J4759L	Extension, Locking 2"	
J4761L	Extension, Locking 6"	

Weight (lbs): 0.63



CROWFOOT WRENCH SETS

## 1/4" DRIVE 7 PIECE METRIC CROWFOOT WRENCH SET

Product #: **J4700MCF**



	<b>MM</b>	<b>Overall Length (in)</b>
J4707MCF	7	15/16
J4708MCF	8	31/32
J4710MCF	10	1-1/16
J4711MCF	11	1-1/8
J4712MCF	12	1-5/32
J4713MCF	13	1-3/16
J4713MCF	14	1-1/4

Weight (lbs): 0.47



## 1/4" DRIVE 6 PIECE CROWFOOT WRENCH SET

Product #: **J4700CF**





	<b>INCH</b>	<b>Overall Length (in)</b>
J4708CF	1/4	15/16
J4710CF	5/16	1
J4712CF	3/8	1-1/16
J4714CF	7/16	1-5/32
J4716CF	1/2	1-3/16
J4718CF	9/16	1-9/32

Weight (lbs): 0.41



- FULL POLISH
- SATIN
- BLACK OXIDE
- BLACK CHROME
- INSULATED

**3/8" DRIVE 53 PIECE CROWFOOT WRENCH SET**Product #: **J49000CFL**

	<b>INCH</b>	<b>Point Size</b>	<b>Overall Length (in)</b>		<b>INCH</b>	<b>Point Size</b>	<b>Overall Length (in)</b>
J4912CF	3/8	-	1-13/64	J4966CF	2-1/16	-	3-7/16
J4914CF	7/16	-	1-3/16	J4968CF	2-1/8	-	3-7/16
J4916CF	1/2	-	1-5/16	J4970CF	2-3/16	-	3-5/8
J4918CF	9/16	-	1-9/32	J4972CF	2-1/4	-	3-11/16
J4920CF	5/8	-	1-1/2	J4974CF	2-5/16	-	3-3/4
J4922CF	11/16	-	1-31/64	J4976CF	2-3/8	-	3-15/16
J4924CF	3/4	-	1-41/64	J4978CF	2-7/16	-	4-1/4
J4926CF	13/16	-	1-5/8	J4980CF	2-1/2	-	4-1/4
J4928CF	7/8	-	1-19/32	J4982CF	2-9/16	-	4-5/16
J4930CF	15/16	-	1-5/8	J4984CF	2-5/8	-	4-1/2
J4932CF	1	-	1-49/64	J4986CF	2-11/16	-	4-9/16
J4934CF	1-1/16	-	2-3/16	J4988CF	2-3/4	-	4-11/16
J4936CF	1-1/8	-	2-7/32	J4990CF	2-13/16	-	4-13/16
J4938CF	1-3/16	-	2-9/32	J4992CF	2-7/8	-	4-15/16
J4940CF	1-1/4	-	2-5/32	J4994CF	2-15/16	-	4-15/16
J4942CF	1-5/16	-	2-1/2	J4996CF	3	-	5
J4944CF	1-3/8	-	2-1/2	J4920FL	5/8	12	-
J4946CF	1-7/16	-	2-5/8	J4922FL	11/16	12	-
J4948CF	1-1/2	-	2-11/16	J4924FL	3/4	12	-
J4950CF	1-9/16	-	2-3/4	J4926FL	13/16	12	-
J4952CF	1-5/8	-	2-13/16	J4928FL	7/8	12	-
J4954CF	1-11/16	-	2-15/16	J4930FL	15/16	12	-
J4956CF	1-3/4	-	2-15/16	J4932FL	1	12	-
J4958CF	1-13/16	-	3-1/16	J4934FL	1-1/16	12	-
J4960CF	1-7/8	-	3-1/8	J5262L	Locking Extension	-	12
J4962CF	1-15/16	-	3-1/4	J5260-06L	Locking Extension	-	6
J4964CF	2	-	3-3/8				

Weight (lbs): 26.14



 6 POINT
  8 POINT
  12 POINT
  SPLINE
  HEX
  OPEN





## 3/8" DRIVE 43 PIECE CROWFOOT WRENCH SET

Product #: J49001CF



CROWFOOT WRENCH SETS



	<b>INCH</b>	<b>Overall Length (in)</b>
J4912CF	3/8	1-13/64
J4914CF	7/16	1-3/16
J4916CF	1/2	1-5/16
J4918CF	9/16	1-9/32
J4920CF	5/8	1-1/2
J4922CF	11/16	1-31/64
J4924CF	3/4	1-41/64
J4926CF	13/16	1-5/8
J4928CF	7/8	1-19/32
J4930CF	15/16	1-5/8
J4932CF	1	1-49/64
J4934CF	1-1/16	2-3/16
J4936CF	1-1/8	2-7/32
J4938CF	1-3/16	2-9/32
J4940CF	1-1/4	2-5/32
J4942CF	1-5/16	2-1/2
J4944CF	1-3/8	2-1/2
J4946CF	1-7/16	2-5/8
J4948CF	1-1/2	2-11/16
J4950CF	1-9/16	2-3/4
J4952CF	1-5/8	2-13/16
J4954CF	1-11/16	2-15/16



	<b>INCH</b>	<b>Overall Length (in)</b>
J4956CF	1-3/4	2-15/16
J4958CF	1-13/16	3-1/16
J4960CF	1-7/8	3-1/8
J4962CF	1-15/16	3-1/4
J4964CF	2	3-3/8
J4966CF	2-1/16	3-7/16
J4968CF	2-1/8	3-7/16
J4970CF	2-3/16	3-5/8
J4972CF	2-1/4	3-11/16
J4974CF	2-5/16	3-3/4
J4976CF	2-3/8	3-15/16
J4978CF	2-7/16	4-1/4
J4980CF	2-1/2	4-1/4
J4982CF	2-9/16	4-5/16
J4984CF	2-5/8	4-1/2
J4986CF	2-11/16	4-9/16
J4988CF	2-3/4	4-11/16
J4990CF	2-13/16	4-13/16
J4992CF	2-7/8	4-15/16
J4994CF	2-15/16	4-15/16
J4996CF	3	5

Weight (lbs): 23.92

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**3/8" DRIVE 27 PIECE CROWFOOT WRENCH SET**Product #: **J49002CF**

	<b>INCH</b>	<b>Overall Length (in)</b>
J4912CF	3/8	1-13/64
J4914CF	7/16	1-3/16
J4916CF	1/2	1-5/16
J4918CF	9/16	1-9/32
J4920CF	5/8	1-1/2
J4922CF	11/16	1-31/64
J4924CF	3/4	1-41/64
J4926CF	13/16	1-5/8
J4928CF	7/8	1-19/32
J4930CF	15/16	1-5/8
J4932CF	1	1-49/64
J4934CF	1-1/16	2-3/16
J4936CF	1-1/8	2-7/32
J4938CF	1-3/16	2-9/32



	<b>INCH</b>	<b>Overall Length (in)</b>
J4940CF	1-1/4	2-5/32
J4942CF	1-5/16	2-1/2
J4944CF	1-3/8	2-1/2
J4946CF	1-7/16	2-5/8
J4948CF	1-1/2	2-11/16
J4950CF	1-9/16	2-3/4
J4952CF	1-5/8	2-13/16
J4954CF	1-11/16	2-15/16
J4956CF	1-3/4	2-15/16
J4958CF	1-13/16	3-1/16
J4960CF	1-7/8	3-1/8
J4962CF	1-15/16	3-1/4
J4964CF	2	3-3/8

Weight (lbs): 6.74

ASME B107.21



## 3/8" DRIVE 15 PIECE CROWFOOT WRENCH SET

Product #: J49003CF



	INCH	Overall Length (in)
J4912CF	3/8	1-13/64
J4914CF	7/16	1-3/16
J4916CF	1/2	1-5/16
J4918CF	9/16	1-9/32
J4920CF	5/8	1-1/2
J4922CF	11/16	1-31/64
J4924CF	3/4	1-41/64
J4926CF	13/16	1-5/8
J4928CF	7/8	1-19/32
J4930CF	15/16	1-5/8
J4932CF	1	1-49/64
J4934CF	1-1/16	2-3/16
J4936CF	1-1/8	2-7/32
J4938CF	1-3/16	2-9/32
J4940CF	1-1/4	2-5/32

Weight (lbs): 2.07

ASME B107.21

## 3/8" DRIVE 16 PIECE METRIC CROWFOOT WRENCH SET

Product #: J49000MCF



	MM	Overall Length (in)
J4909MCF	9	1-5/6
J4910MCF	10	1-11/32
J4911MCF	11	1-3/8
J4912MCF	12	1-15/32
J4913MCF	13	1-1/2
J4914MCF	14	1-1/2
J4915MCF	15	1-5/8
J4916MCF	16	1-21/32
J4917MCF	17	1-23/32
J4918MCF	18	1-15/16
J4919MCF	19	1-15/16
J4920MCF	20	2-1/16
J4921MCF	21	2-3/32
J4922MCF	22	2-7/32
J4923MCF	23	2-11/32
J4924MCF	24	2-13/32

Weight (lbs): 2.59

ASME B107.21

CROWFOOT WRENCH SETS

## 3/8" DRIVE 9 PIECE CROWFOOT WRENCH SET

Product #: J49004CF



	INCH	Overall Length (in)
J4912CF	3/8	1-13/64
J4914CF	7/16	1-3/16
J4916CF	1/2	1-5/16
J4918CF	9/16	1-9/32
J4920CF	5/8	1-1/2
J4922CF	11/16	1-31/64
J4924CF	3/4	1-41/64
J4926CF	13/16	1-5/8
J4928CF	7/8	1-19/32

Weight (lbs): 0.83

ASME B107.21





FULL POLISH
 SATIN
 BLACK OXIDE
 BLACK CHROME
 INSULATED

# 1/2" DRIVE 39 PIECE FLARE NUT CROWFOOT WRENCH SET

Product #: **J5300CFLFN**



	<b>INCH</b>	Point Size	Overall Length (in)		<b>INCH</b>	Point Size	Overall Length (in)
J5330CF	15/16	–	2-13/16	J5378CF	2-7/16	–	4-7/16
J5332CF	1	–	2-13/16	J5380CF	2-1/2	–	4-1/2
J5334CF	1-1/16	–	2-7/8	J5336FL	1-1/8	12	2-13/16
J5336CF	1-1/8	–	3	J5338FL	1-3/16	12	2-7/8
J5338CF	1-3/16	–	3	J5340FL	1-1/4	12	3
J5340CF	1-1/4	–	3-5/16	J5342FL	1-5/16	12	3-1/16
J5342CF	1-5/16	–	3-5/16	J5344FL	1-3/8	12	3-5/16
J5344CF	1-3/8	–	3-3/8	J5346FL	1-7/16	12	3-3/8
J5346CF	1-7/16	–	3-3/8	J5348FL	1-1/2	12	3-7/16
J5348CF	1-1/2	–	3-7/16	J5350FL	1-9/16	12	3-9/16
J5350CF	1-9/16	–	3-1/2	J5352FL	1-5/8	12	3-3/4
J5352CF	1-5/8	–	3-1/2	J5354FL	1-11/16	12	3-13/16
J5354CF	1-11/16	–	3-13/16	J5356FL	1-3/4	12	3-7/8
J5356CF	1-3/4	–	3-13/16	J5358FL	1-13/16	12	4
J5358CF	1-13/16	–	3-7/8	J5360FL	1-7/8	12	4-1/4
J5360CF	1-7/8	–	3-7/8	J5362FL	1-15/16	12	4-5/16
J5364CF	2	–	3-15/16	J5364FL	2	12	4-7/16
J5368CF	2-1/8	–	4-1/16	J5461L	Locking Extension	–	5
J5372CF	2-1/4	–	4-3/8	J5463L	Locking Extension	–	10
J5376CF	2-3/8	–	4-7/16				

Weight (lbs): 23.80





## 1/2" DRIVE 22 PIECE CROWFOOT WRENCH SET

Product #: J53000CF



## 1/2" DRIVE 15 PIECE CROWFOOT WRENCH SET

Product #: J53001CF



CROWFOOT WRENCH SETS



	<b>INCH</b>	<b>Overall Length (in)</b>
J5330CF	15/16	2-13/16
J5332CF	1	2-13/16
J5334CF	1-1/16	2-7/8
J5336CF	1-1/8	3
J5338CF	1-3/16	3
J5340CF	1-1/4	3-5/16
J5342CF	1-5/16	3-5/16
J5344CF	1-3/8	3-3/8
J5346CF	1-7/16	3-3/8
J5348CF	1-1/2	3-7/16
J5350CF	1-9/16	3-1/2
J5352CF	1-5/8	3-1/2
J5354CF	1-11/16	3-13/16
J5356CF	1-3/4	3-13/16
J5358CF	1-13/16	3-7/8
J5360CF	1-7/8	3-7/8
J5364CF	2	3-15/16
J5368CF	2-1/8	4-1/16
J5372CF	2-1/4	4-3/8
J5376CF	2-3/8	4-7/16
J5378CF	2-7/16	4-7/16
J5380CF	2-1/2	4-1/2

Weight (lbs): 16.35

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	<b>INCH</b>	<b>Overall Length (in)</b>
J5334CF	1-1/16	2-7/8
J5336CF	1-1/8	3
J5338CF	1-3/16	3
J5340CF	1-1/4	3-5/16
J5342CF	1-5/16	3-5/16
J5344CF	1-3/8	3-3/8
J5346CF	1-7/16	3-3/8
J5348CF	1-1/2	3-7/16
J5350CF	1-9/16	3-1/2
J5352CF	1-5/8	3-1/2
J5354CF	1-11/16	3-13/16
J5356CF	1-3/4	3-13/16
J5358CF	1-13/16	3-7/8
J5360CF	1-7/8	3-7/8
J5364CF	2	3-15/16

Weight (lbs): 9.88

ASME B107.21

- FULL POLISH
- SATIN
- BLACK OXIDE
- BLACK CHROME
- INSULATED

### 3/8" DRIVE FULL POLISH FLARE NUT CROWFOOT WRENCHES - 6 POINT

- › Flare Nut Crowfoot wrenches are used in hard to reach or restricted access situations where a standard flare nut wrench cannot reach.
- › The flare nut slot opening is used to slide over hydraulic lines or other hoses which allows for easy access to hex connectors at ends.
- › Typically used in low torque applications.
- › Full polish finish provides corrosion resistance and easy to clean surfaces.
- › Locking hole feature helps keep the crowfoot engaged on the extension during use, helping to reduce downtime and improve working efficiency.
- › Use with locking extensions to reach into small spaces where the fastener is out of sight.



INCH	6	Overall Length (in)	Weight (lbs)
3/8	J4912HFL	1-13/16	0.07
7/16	J4914HFL	1-1/2	0.08
1/2	J4916HFL	1-5/8	0.10
9/16	J4918HFL	1-5/8	0.11
5/8	J4920HFL	1-3/4	0.13
11/16	J4922HFL	1-13/16	0.13
3/4	J4924HFL	1-15/16	0.16
13/16	J4926HFL	2	0.18

ASME B107.21

MM	6	Overall Length (in)	Weight (lbs)
9	J4909MHFL	1-5/16	0.07
10	J4910MHFL	1-3/8	0.07
11	J4911MHFL	1-1/2	0.08
12	J4912MHFL	1-1/2	0.08
13	J4913MHFL	1-9/16	0.09
14	J4914MHFL	1-5/8	0.11
15	J4915MHFL	1-11/16	0.11
16	J4916MHFL	1-3/4	0.12
17	J4917MHFL	1-3/4	0.13
18	J4918MHFL	1-13/16	0.14

ASME B107.21

### FLARE NUT CROWFOOT WRENCHES

Used in conjunction with a handle, crowfoot wrenches reach into places other wrenches can't get. Flare nut crowfeet close the gap on the open side, so they will not slip out of place like an open-end crowfoot wrench.

#### 12PT FLARE NUT

- › Locking hole on the side.
- › Wrench extends past the head.
- › Thinner walls.
- › Wrench end is straight, not offset.



#### 6PT FLARE NUT

- › Locking hole in the back.
- › Wrench is flush with the head.
- › Thicker walls.
- › Wrench end is offset 15°.





## 3/8" DRIVE FULL POLISH FLARE NUT CROWFOOT WRENCH SET - 12 POINT

Product #: **J4900FL**

- › Designed for speed and safety.
- › Special heat-treated alloy steel helps increase strength and durability.
- › 12 point box end allows for fine indexing, helping to improve speed and access. Fits 4, 6 and 12 point fasteners.
- › Full polish finish provides corrosion resistance and easy to clean surfaces.
- › Locking hole helps hold crowfoot in place during use.
- › Use with a locking extension to help prevent tool loss in awkward locations.



12

**INCH**

J4920FL	5/8
J4922FL	11/16
J4924FL	3/4
J4926FL	13/16
J4928FL	7/8
J4930FL	15/16
J4932FL	1
J4934FL	1-1/16

ASME B107.21

FLARE NUT CROWFOOT WRENCHES

## 1/2" DRIVE FULL POLISH FLARE NUT CROWFOOT WRENCHES - 12 POINT

- › Designed for speed and safety.
- › Special heat-treated alloy steel helps increase strength and durability.
- › 12 point Box end allows for fine indexing, helping to improve speed and access. Fits 4, 6 and 12 point fasteners.
- › Full polish finish provides corrosion resistance and easy to clean surfaces.



**INCH**

12

**Overall Length (in)**

**Weight (lbs)**

1-1/8	<b>J5336FL</b>	2-13/16	0.19
1-3/16	<b>J5338FL</b>	2-7/8	0.19
1-1/4	<b>J5340FL</b>	3	0.19
1-5/16	<b>J5342FL</b>	3-1/16	0.19
1-3/8	<b>J5344FL</b>	3-5/16	0.25
1-7/16	<b>J5346FL</b>	3-3/8	0.25
1-1/2	<b>J5348FL</b>	3-7/16	0.25
1-9/16	<b>J5350FL</b>	3-9/16	0.31
1-5/8	<b>J5352FL</b>	3-3/4	0.31
1-11/16	<b>J5354FL</b>	3-13/16	0.31
1-3/4	<b>J5356FL</b>	3-7/8	0.38
1-13/16	<b>J5358FL</b>	4	0.38
1-7/8	<b>J5360FL</b>	4-1/4	0.45
1-15/16	<b>J5362FL</b>	4-5/16	0.50
2	<b>J5364FL</b>	4-7/16	0.50

ASME B107.21

FULL POLISH
 SATIN
 BLACK OXIDE
 BLACK CHROME
 INSULATED

**1/2" DRIVE 15 PIECE CROWFOOT FLARE NUT WRENCH SET - 12 POINT**Product #: **J53000CFFN**

<b>12</b>	<b>INCH</b>	<b>Overall Length (in)</b>
J5336FL	1-1/8	2-13/16
J5338FL	1-3/16	2-7/8
J5340FL	1-1/4	3
J5342FL	1-5/16	3-1/16
J5344FL	1-3/8	3-5/16
J5346FL	1-7/16	3-3/8
J5348FL	1-1/2	3-7/16
J5350FL	1-9/16	3-9/16
J5352FL	1-5/8	3-3/4
J5354FL	1-11/16	3-13/16
J5356FL	1-3/4	3-7/8
J5358FL	1-13/16	4
J5360FL	1-7/8	4-1/4
J5362FL	1-15/16	4-5/16
J5364FL	2	4-7/16

Weight (lbs): 5.86

**FLARE NUT COMBINATION WRENCHES**

- ▶ Satin finish provides corrosion resistance and a slip resistant grip.
- ▶ Flare nut box end incorporates the TorquePlus™ system.



<b>INCH</b>	<b>6</b>	<b>12</b>	<b>Throat Depth 1 (in)</b>	<b>Outside Head Width 1 (in)</b>	<b>Head Thickness 1 (in)</b>	<b>Outside Head Width 2 (in)</b>	<b>Head Thickness 2 (in)</b>	<b>Overall Length (in)</b>	<b>Weight (lbs)</b>
3/8	<b>J3751</b>	<b>J3751T</b>	7/16	25/32	11/32	51/64	3/8	5-11/16	0.13
1/2	<b>J3752</b>	<b>J3752T</b>	33/64	7/8	3/8	29/32	13/32	6-1/32	0.18
7/16	<b>J3753</b>	<b>J3753T</b>	19/32	31/32	3/8	1-1/32	13/32	6-7/16	0.19
9/16	<b>J3754</b>	<b>J3754T</b>	43/64	1-3/64	7/16	1-3/64	15/32	6-15/16	0.25
5/8	<b>J3755</b>	<b>J3755T</b>	47/64	1-3/32	7/16	1-19/64	15/32	7-5/8	0.32
11/16	<b>J3756</b>	<b>J3756T</b>	51/64	1-3/16	1/2	1-13/32	17/32	8-11/16	0.42
3/4	<b>J3757</b>	<b>J3757T</b>	57/64	1-7/32	1/2	1-9/16	17/32	9-3/16	0.46

ASME B107.100





## 7 PIECE COMBINATION FLARE NUT WRENCH SETS

<b>6</b>	<b>12</b>	<b>INCH</b>	<b>Overall Length (in)</b>
<b>J3700A</b>	<b>J3700AT</b>		
J3751	J3751T	3/8	5-11/16
J3752	J3752T	1/2	6-1/32
J3753	J3753T	7/16	6-7/16
J3754	J3754T	9/16	6-15/16
J3755	J3755T	5/8	7-5/8
J3756	J3756T	11/16	8-11/16
J3757	J3757T	3/4	9-3/16
J25TR03C	J25TR03C	Tool Roll	

Weight (lbs): 2.24



DOUBLE END FLARE NUT WRENCHES

## SATIN DOUBLE END FLARE NUT WRENCHES



- ▶ Satin finish provides corrosion resistance and a slip resistant grip.
- ▶ Flare nut box ends incorporate the TorquePlus™ system.



<b>INCH</b>	<b>6</b>	<b>12</b>	<b>Mouth Width 1 (in)</b>	<b>Outside Head Width 1 (in)</b>	<b>Head Thickness 1 (in)</b>	<b>Mouth Width 2 (in)</b>	<b>Outside Head Width 2 (in)</b>	<b>Head Thickness 2 (in)</b>	<b>Overall Length (in)</b>	<b>Weight (lbs)</b>
3/8 x 7/16	<b>J3764</b>	<b>J3764T</b>	19/64	51/64	11/32	23/64	57/64	3/8	6-1/4	0.18
1/2 x 9/16	<b>J3768</b>	<b>J3768T</b>	25/64	31/32	3/8	13/32	1-1/16	7/16	7-1/2	0.27
5/8 x 11/16	<b>J3772</b>	<b>J3772T</b>	33/64	1-7/64	1/2	37/64	1-13/64	31/64	8-3/4	0.38
3/4 x 7/8	<b>J3776H</b>	-	9/16	1-15/64	1/2	21/32	1-13/32	9/16	9-1/2	0.61

ASME B107.100

<b>MM</b>	<b>6</b>	<b>12</b>	<b>Mouth Width 1 (in)</b>	<b>Outside Head Width 1 (in)</b>	<b>Head Thickness 1 (in)</b>	<b>Mouth Width 2 (in)</b>	<b>Outside Head Width 2 (in)</b>	<b>Head Thickness 2 (in)</b>	<b>Overall Length (in)</b>	<b>Weight (lbs)</b>
7 x 8	<b>J3707M</b>	<b>J3707MT</b>	7/32	43/64	11/32	15/64	3/4	21/64	5-11/16	0.11
9 x 11	<b>J3709M</b>	<b>J3709MT</b>	9/32	13/16	13/32	11/32	29/32	25/64	6-5/16	0.16
10 x 12	<b>J3710M</b>	<b>J3710MT</b>	9/32	55/64	13/32	11/32	61/64	25/64	6-15/16	0.21
13 x 14	<b>J3713M</b>	<b>J3713MT</b>	3/8	1-1/64	15/32	7/16	1-3/32	29/64	7-9/16	0.24
15 x 17	<b>J3715M</b>	<b>J3715MT</b>	7/16	1-7/64	1/2	1/2	8	31/64	7-63/64	0.33
16 x 18	<b>J3716M</b>	<b>J3716MT</b>	1/2	1-9/64	17/32	37/64	1-15/64	33/64	8-13/16	0.36
19 x 21	<b>J3719M</b>	<b>J3719MT</b>	37/64	1-9/32	19/32	5/8	1-3/8	37/64	9-7/16	0.39

ASME B107.100

FULL POLISH	SATIN	BLACK OXIDE	BLACK CHROME	INSULATED
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### 3 PIECE DOUBLE END FLARE NUT WRENCH SETS

Product #: **J3760**

Product #: **J3760T**

- › 60° deep offset helps improve access to deeply recessed fasteners.
- › Offset handle helps keep knuckles clear of obstruction to help save time.
- › Box ends incorporate the TorquePlus™ system.



<b>6</b>	<b>INCH</b>	<b>Overall Length (in)</b>
J3764	3/8 x 7/16	6-1/4
J3768	1/2 x 9/16	7-1/2
J3772	5/8 x 11/16	8-3/4
J25TR17C	Tool Roll	

Weight (lbs): 0.97

<b>12</b>	<b>INCH</b>	<b>Overall Length (in)</b>
J3764T	3/8 x 7/16	6-1/4
J3768T	1/2 x 9/16	7-1/2
J3772T	5/8 x 11/16	8-3/4
J25TR17C	Tool Roll	

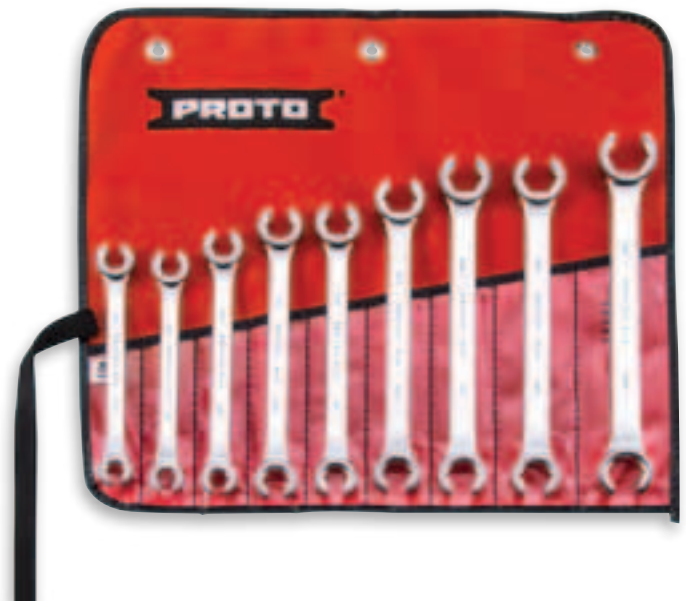
Weight (lbs): 0.97

### 9 PIECE DOUBLE END FLARE NUT WRENCH SET – 6 POINT

Product #: **J3740**

<b>6</b>	<b>MM</b>	<b>INCH</b>	<b>Overall Length (in)</b>
J3709M	9 x 11 mm		6-15/16
J3710M	10 x 12 mm		6-15/16
J3713M	13 x 14 mm		7-9/16
J3715M	15 x 17 mm		7-63/64
J3716M	16 x 18 mm		8-13/16
J3719M	19 x 21 mm		9-3/8
J3764	3/8" x 7/16"		6-1/4
J3768	1/2" x 9/16"		7-1/2
J3772	5/8" x 11/16"		8-3/4
J25TR35C	Tool Roll		

Weight (lbs):





## 5 PIECE METRIC DOUBLE END FLARE NUT WRENCH SETS



Product #: **J3700M**

Product #: **J3700MT**

- › 12-point box end allows for fine indexing, helping to improve speed and access. Fits 4, 6 and 12 point fasteners.
- › 60° deep offset helps improve access to deeply recessed fasteners.
- › Offset handle helps keep knuckles clear of obstruction to help save time.
- › Box ends incorporate the TorquePlus™ system.



DOUBLE END FLARE NUT WRENCH SETS

**6**

	<b>MM</b>	<b>Overall Length (in)</b>
J3707M	7 x 8	5-11/16
J3709M	9 x 11	6-5/16
J3710M	10 x 12	6-15/16
J3713M	13 x 14	7-9/16
J3715M	15 x 17	7-63/64
J25TR06C	Tool Roll	

Weight (lbs): 1.29

**12**

	<b>MM</b>	<b>Overall Length (in)</b>
J3707MT	7 x 8	5-11/16
J3709MT	9 x 11	6-5/16
J3710MT	10 x 12	6-15/16
J3713MT	13 x 14	7-9/16
J3715MT	15 x 17	7-63/64
J25TR06C	Tool Roll	

Weight (lbs): 1.29

FULL POLISH
 SATIN
 BLACK OXIDE
 BLACK CHROME
 INSULATED

## RATCHETING FLARE NUT WRENCHES - 12 POINT

- ▶ Designed for use on 6 and 12 point tube fittings, hydraulic lines, fasteners, valves, and compression fittings.
- ▶ Distinct design only requires 30° rotation to engage ratcheting feature.
- ▶ Carbon steel jaws snap open, then close around fastener.
- ▶ Easy access to tight locations.
- ▶ Non-reflective black oxide finish for use where non-plated products are required.
- ▶ 12 point flare nut box end allows for fine indexing helping to improve speed and access.
- ▶ Pivoting head allows user to place the wrench over the connected pipes to reach the fastener.



INCH	12	Outside Head Width 1 (in)	Head Thickness 1 (in)	Overall Length (in)	Weight (lbs)
3/8	J3812	1	9/32	5-7/16	0.17
7/16	J3814	1	9/32	5-7/16	0.17
1/2	J3816	1	9/32	5-7/16	0.17
9/16	J3818	1-5/16	3/8	7-1/4	0.31
5/8	J3820	1-5/16	3/8	7-1/4	0.31
11/16	J3822	1-5/16	3/8	7-1/4	0.31
3/4	J3824	1-5/16	3/8	7-1/4	0.31
13/16	J3826	1-11/16	7/16	9-3/8	0.58
7/8	J3828	1-11/16	7/16	9-3/8	0.58
15/16	J3830	1-11/16	1/2	9-3/8	0.58
1	J3832	1-11/16	1/2	9-3/8	0.58



MM	12	Outside Head Width 1 (in)	Head Thickness 1 (in)	Overall Length (in)	Weight (lbs)
10	J3810M	1	9/32	5-7/16	0.18
11	J3811M	1	9/32	5-7/16	0.16
12	J3812M	1	9/32	5-7/16	0.16
13	J3813M	1	9/32	5-7/16	0.17
14	J3814M	1-5/16	3/8	7-1/4	0.31
15	J3815M	1-5/16	3/8	7-1/4	0.31
16	J3816M	1-5/16	3/8	7-1/4	0.31
17	J3817M	1-5/16	3/8	7-1/4	0.3
18	J3818M	1-5/16	3/8	7-1/4	0.29
19	J3819M	1-5/16	3/8	7-1/4	0.29



## 7 PIECE RATCHETING FLARE NUT WRENCH SET - 12 POINT

Product #: J3800A

12	INCH	Point Size	Overall Length (in)
J3812	3/8	12	5-7/16
J3814	7/16	12	5-7/16
J3816	1/2	12	5-7/16
J3818	9/16	12	7-1/4
J3820	5/8	12	7-1/4
J3822	11/16	12	7-1/4
J3824	3/4	12	7-1/4
J25TR03C			10

Weight (lbs): 1.93



6 6 POINT
8 8 POINT
12 12 POINT
SPL SPLINE
HEX HEX
OPEN



## 10 PIECE METRIC RATCHETING FLARE NUT WRENCH SET - 12 POINT

Product #: **J3800M**

<b>12</b>	<b>MM</b>	<b>Point Size</b>	<b>Overall Length (in)</b>
J3810M	10	12	5-7/16
J3811M	11	12	5-7/16
J3812M	12	12	5-7/16
J3813M	13	12	5-7/16
J3814M	14	12	7-1/4
J3815M	15	12	7-1/4
J3816M	16	12	7-1/4
J3817M	17	12	7-1/4
J3818M	18	12	7-1/4
J3819M	19	12	7-1/4

Weight (lbs): 2.77



SPUD WRENCHES

## BLACK OXIDE BOX END SPUD WRENCHES - 12 POINT

- › Non-reflective black oxide finish for use where non-plated products are required.
- › Ideal for heavy construction and field service work.
- › High leverage handle and strong box end designed to turn stubborn nuts and bolts.
- › Tapered spud end aligns flange holes.
- › 12 point box end allows for fine indexing helping to improve speed and access. Fits 4, 6 and 12 point fasteners.



<b>INCH</b>	<b>12</b>	<b>Outside Head Width 1 (in)</b>	<b>Head Thickness 1 (in)</b>	<b>Offset Height (in)</b>	<b>Overall Length (in)</b>	<b>Weight (lbs)</b>
13/16	<b>J2613</b>	1-11/32	5/8	1-3/32	12	1.25
7/8	<b>J2614</b>	1-11/32	5/8	1-3/32	12	0.85
15/16	<b>J2615</b>	1-11/32	5/8	1-3/32	13	1.25
1	<b>J2616</b>	1-9/16	11/16	1-5/16	13	1.22
1-1/16	<b>J2617</b>	1-19/32	11/16	1-5/16	15	1.57
1-1/8	<b>J2618</b>	1-45/64	13/16	1-1/16	15	1.50
1-1/4	<b>J2620</b>	1-25/32	13/16	1-1/16	17	2.38
1-5/16	<b>J2621</b>	2-1/8	15/16	1-3/8	17	2.19
1-7/16	<b>J2623</b>	2-1/8	15/16	1-3/8	19	3.10
1-1/2	<b>J2624</b>	2-3/16	1	1-1/2	19	3.05
1-5/8	<b>J2626</b>	2-15/32	1-1/8	1-1/2	21	4.70
1-11/16	<b>J2627</b>	2-15/32	1-1/8	1-1/2	21	4.91
1-13/16	<b>J2629</b>	2-29/32	1-3/16	1-9/16	22	5.84
1-7/8	<b>J2630</b>	2-29/32	1-3/16	1-9/16	22	5.99
2	<b>J2632</b>	3-5/32	1-7/16	1-21/32	24	7.04
2-3/16	<b>J2635</b>	3-15/32	1-9/16	1-7/8	26	8.93
2-3/8	<b>J2638</b>	3-23/32	1-1/2	2	28	9.96
2-9/16	<b>J2641</b>	4	1-1/2	2-1/4	29	11.24
2-3/4	<b>J2644</b>	4	1-1/2	2-1/4	30	14.34




FULL POLISH	SATIN	BLACK OXIDE	BLACK CHROME	INSULATED
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## BLACK OXIDE OPEN END SPUD WRENCHES - OFFSET HEAD

- › Non-reflective black oxide finish for use where non-plated products are required.
- › Long offset handle provides greater leverage and clearance for knuckles and obstructions.
- › Hardened tapered handle aligns bolt and rivet holes.
- › Openings are precision broached for proper fit.



INCH		Outside Head Width 1 (in)	Head Thickness 1 (in)	Offset Height (in)	Overall Length (in)	Weight (lbs)
3/4	JC901B	1-7/8	7/16	3/4	11-13/16	0.76
11/16	JC903	1-9/16	7/16	3/4	11-13/16	0.77
5/8	JC903A	1-9/16	7/16	3/4	12	0.76
3/4	JC904A	1-7/8	7/16	3/4	11-13/16	0.76
13/16	JC905A	2	9/16	7/8	14-1/2	1.29
7/8	JC905	2-3/16	9/16	7/8	14-1/2	1.23
15/16	JC906C	2-3/16	9/16	7/8	14-1/2	1.30
1	JC906B	2-3/16	9/16	7/8	14-3/16	1.29
1-1/16	JC907	2-7/16	21/32	1	17-3/16	1.88
1-1/8	JC907A	2-7/16	21/32	1	16-11/16	1.79
1-1/4	JC908	2-3/4	13/16	1-1/4	190	2.78
1-5/16	JC908A	2-3/4	13/16	1-1/4	19-3/32	2.79
1-7/16	JC909	3-1/8	13/16	1-1/4	20	3.54
1-1/2	JC909A	3-1/8	13/16	1-1/4	20	3.79
1-5/8	JC910	3-1/8	13/16	1-5/8	23	5.68
1-11/16	JC910A	3-5/8	13/16	1-5/8	22-13/16	5.41
1-13/16	JC911	4-1/8	13/16	1-5/8	24	7.35
1-7/8	JC911A	4-1/8	13/16	1-5/8	24	7.23
2	JC912	4-7/16	13/16	1-5/8	24	7.50



## BLACK OXIDE ADJUSTABLE SPUD WRENCH

- › Non-reflective black oxide finish for use where none plated products are required.
- › Large jaw opening fits all nuts and bolts up to 1-1/2 inches.
- › Square jaw opening provides strength and tight fit.
- › Eliminates the need for carrying several fixed size wrenches.
- › Hardened taper handle aligns bolt and rivet holes.



	Maximum Opening (in)	Overall Length (in)	Weight (lbs)
J712SC	1-1/2	16-3/32	2.45



## BLACK OXIDE SPUD HANDLE 1/2" DRIVE PEAR HEAD RATCHET

- › Tapered handle for aligning bolt holes.
- › Spring loaded pellet in male drive plug.
- › Black oxide finish.
- › 24-tooth ratcheting mechanism.



Product #	Overall Length (in)	Weight (lbs)
J5449-148L	14	2.03

 ASME B107.10M





## BLACK OXIDE HEAVY DUTY STRIKING WRENCHES - 12 POINT

- › Non-reflective black oxide finish for use where non-plated products are required.
- › 12 point box end allows for fine indexing, helping improve speed and access.
- › Fits most 4, 6 and 12 point fasteners.
- › Large striking surface for surer blow contact and more efficient transmittal of force to fastener.
- › Short handle permits use in close quarters.
- › Box opening designed to remain on fastener when wrench is struck.
- › For use where extreme force is necessary to loosen or set large fasteners.
- › Heavy box walls provide greater torque transmission.
- › Straight handle design helps prevent the wrench from cocking when struck.



INCH	12	Outside Head Width 1 (in)	Head Thickness 1 (in)	Overall Length (in)	Weight (lbs)
1	<b>JSN16</b>	1-25/32	5/8	9-7/8	1.90
1-1/16	<b>JSN17</b>	1-25/32	5/8	9-7/8	1.90
1-1/8	<b>JSN18</b>	1-25/32	5/8	9-7/8	1.90
1-3/16	<b>JSN19</b>	2	3/4	10-1/4	2.10
1-1/4	<b>JSN20</b>	2	3/4	10-1/4	2.10



## BLACK OXIDE HEAVY DUTY STRIKING WRENCHES - 6 POINT

- › Non-reflective black oxide finish for use where non-plated products are required.
- › Large striking surface for surer blow contact and more efficient transmittal of force to fastener.
- › Short handle permits use in close quarters.
- › Box opening designed to remain on fastener when wrench is struck.
- › For use where extreme force is necessary to loosen or set large fasteners.
- › Heavy box walls provide greater torque transmission.
- › Straight handle design helps prevent the wrench from cocking when struck.



INCH	6	Outside Head Width 1 (in)	Head Thickness 1 (in)	Overall Length (in)	Weight (lbs)
1-1/16	<b>J2717SW</b>	1-25/32	5/8	9-7/8	1.62
1-1/4	<b>J2720SW</b>	2	23/32	10-1/4	1.72
1-7/16	<b>J2723SW</b>	2-17/64	7/8	10-19/32	2.49
1-5/8	<b>J2726SW</b>	2-31/64	61/64	10-15/16	3.17
1-13/16	<b>J2729SW</b>	2-21/32	63/64	11-5/16	3.49
2	<b>J2732SW</b>	3-1/32	1-7/32	11-21/32	4.73
2-3/16	<b>J2735SW</b>	3-9/32	1-15/64	11-5/16	5.33
2-3/8	<b>J2738SW</b>	3-13/32	1-7/16	12-3/8	5.63
2-9/16	<b>J2741SW</b>	3-3/4	1-17/32	12-11/16	6.47
2-3/4	<b>J2744SW</b>	4-11/64	1-17/32	12-13/16	7.56
2-15/16	<b>J2747SW</b>	4-23/64	1-17/32	13-5/16	7.81
3-1/8	<b>J2750SW</b>	4-31/64	1-41/64	13-11/16	9.50
3-1/2	<b>J2756SW</b>	4-31/32	1-23/32	13-29/32	10.54
3-7/8	<b>J2762SW</b>	5-35/64	1-23/32	14-13/32	12.76



FULL POLISH	SATIN	BLACK OXIDE	BLACK CHROME	INSULATED
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## BLACK OXIDE HEAVY DUTY OFFSET STRIKING WRENCHES - 12 POINT

- › Black oxide finish.
- › Large striking surface for surer blow contact and more efficient transmittal of force to fastener.
- › Short handle permits use in close quarters.
- › Box opening designed to remain on fastener when wrench is struck.
- › For use where extreme force is necessary to loosen or set large fasteners.
- › Heavy box walls provide greater torque transmission.
- › Offset handle clears obstructions.



INCH	MM	12	Outside Head Width 1 (in)	Head Thickness 1 (in)	Offset Height (in)	Overall Length (in)	Weight (lbs)
1		<b>J2616SW</b>	1-25/32	5/8	15/16	8-1/2	1.84
1-1/16	27	<b>J2617SW</b>	1-11/16	5/8	15/16	8-1/2	1.84
1-1/8		<b>J2618SW</b>	1-11/16	5/8	15/16	11	1.79
1-3/16	30	<b>J2619SW</b>	2-1/16	13/16	13/16	10-3/4	2.55
1-1/4		<b>J2620SW</b>	1-7/8	13/16	13/16	10-3/4	2.58
1-5/16		<b>J2621SW</b>	1-7/8	13/16	13/16	11-1/2	2.59
1-3/8	35	<b>J2622SW</b>	2-25/64	1	1-1/2	12	3.40
1-7/16		<b>J2623SW</b>	2-3/16	1	1-1/2	12	3.29
1-1/2	38	<b>J2624SW</b>	2-3/16	1	1-1/2	12	3.35
1-9/16		<b>J2625SW</b>	2-21/32	1-1/8	1-7/16	12-1/4	3.89
1-5/8		<b>J2626SW</b>	2-13/32	1-1/8	1-1/2	12-1/4	4.00
1-11/16	43	<b>J2627SW</b>	2-13/32	1-1/8	1-1/2	13-7/16	3.88
1-3/4		<b>J2628SW</b>	2-19/32	1-3/16	1-9/16	13-7/16	3.90
1-13/16		<b>J2629SW</b>	2-21/32	1-3/16	1-9/16	13-7/16	5.30
1-7/8		<b>J2630SW</b>	2-27/32	1-1/4	1-21/32	13-7/16	5.24
1-15/16		<b>J2631SW</b>	2-27/32	1-1/4	1-7/8	13-7/16	5.20
2	51	<b>J2632SW</b>	2-27/32	1-1/4	1-21/32	13-7/16	5.16
2-1/16		<b>J2633SW</b>	3-1/8	1-1/4	2	13-1/2	6.82
2-1/8	54	<b>J2634SW</b>	3-1/8	1-1/2	2	13-7/8	6.71
2-3/16		<b>J2635SW</b>	3-3/8	1-1/2	2	13-1/2	6.78
2-1/4	57	<b>J2636SW</b>	3-3/8	1-1/2	2	13-1/2	6.30
2-5/16		<b>J2637SW</b>	3-3/8	1-1/2	2	13-1/2	7.94
2-3/8		<b>J2638SW</b>	3-3/8	1-1/2	2	13-1/2	7.86
2-7/16		<b>J2639SW</b>	3-13/16	1-1/2	2-1/4	13-1/2	7.67
2-1/2	64	<b>J2640SW</b>	4	1-1/2	2-1/4	13-1/2	7.62
2-9/16		<b>J2641SW</b>	4	1-1/2	2-1/4	13-1/2	13.43
2-5/8		<b>J2642SW</b>	4	1-1/2	2-1/4	13-1/2	10.42
2-11/16		<b>J2643SW</b>	4-7/32	1-1/2	2-1/4	13-1/2	10.25
2-3/4		<b>J2644SW</b>	4-7/32	1-1/2	2-1/4	13-1/2	10.18
2-7/8	73	<b>J2646SW</b>	4-25/32	1-7/8	2-5/8	16	13.84
2-15/16		<b>J2647SW</b>	4-7/16	1-7/8	2-5/8	16	13.6
3		<b>J2648SW</b>	4-7/16	1-7/8	2-5/8	16	13.44
3-1/16		<b>J2649SW</b>	4-25/32	1-7/8	2-5/8	16	13.37
3-1/8		<b>J2650SW</b>	4-7/16	1-7/8	2-5/8	16	13.18
3-3/8		<b>J2654SW</b>	6-1/4	2-3/8	3-5/8	18	26.88
3-1/2		<b>J2656SW</b>	6-1/4	2-3/8	3-5/8	18	26.37
3-3/4		<b>J2660SW</b>	6-1/4	2-3/8	3-5/8	18	25.03
3-7/8		<b>J2662SW</b>	6-1/4	2-3/8	3-5/8	18	24.58
4-1/8		<b>J2666SW</b>	6-1/4	2-3/8	3-5/8	18	23.47
4-1/4		<b>J2668SW</b>	6-1/4	2-3/8	3-5/8	18	22.75







## BLACK OXIDE HEAVY DUTY METRIC OFFSET STRIKING WRENCHES - 12 POINT

- › Non-reflective black oxide finish for use where non-plated products are required.
- › 12 point box end allows for fine indexing, helping improve speed and access.
- › Fits most 4, 6 and 12 point fasteners.
- › Large striking surface for surer blow contact and more efficient transmittal of force to fastener.
- › Short handle permits use in close quarters.
- › Box opening designed to remain on fastener when wrench is struck.
- › For use where extreme force is necessary to loosen or set large fasteners.
- › Heavy box walls provide greater torque transmission.
- › Offset handle clears obstructions.



MM	12	Outside Head Width 1 (in)	Head Thickness 1 (in)	Offset Height (in)	Overall Length (in)	Weight (lbs)
32	<b>J2632SWM</b>	1-57/64	53/64	1-3/16	10-3/4	0.88
36	<b>J2636SWM</b>	2-13/64	63/64	1-1/2	12-1/64	2.13
41	<b>J2641SWM</b>	2-13/32	1-7/64	1-1/2	12-1/4	2.37
46	<b>J2646SWM</b>	2-43/64	1-3/16	1-37/64	13-27/64	2.81
50	<b>J2650SWM</b>	2-53/64	1-17/64	1-21/32	13-27/64	6.36
55	<b>J2655SWM</b>	3-25/64	1-1/2	2-1/64	13-1/2	6.58
60	<b>J2660SWM</b>	3-25/64	1-1/2	2-1/64	13-1/2	9.19
65	<b>J2665SWM</b>	4-1/64	1-1/2	2-1/4	13-1/2	12.61
70	<b>J2670SWM</b>	4-1/64	1-1/2	2-1/4	13-1/2	12.11
75	<b>J2675SWM</b>	4-29/64	1-57/64	2-41/64	16-1/4	13.53
80	<b>J2680SWM</b>	4-29/64	1-57/64	2-41/64	15-63/64	13.16

OFFSET STRIKING WRENCHES

## BLACK OXIDE OFFSET STRIKING DUAL DIMENSION WRENCHES - 12 POINT

- › Black oxide finish.
- › Large striking surface for surer blow contact and more efficient transmittal of force to fastener.
- › Short handle permits use in close quarters.
- › Box opening designed to remain on fastener when wrench is struck.
- › For use where extreme force is necessary to loosen or set large fasteners.
- › Heavy box walls provide greater torque transmission.
- › Offset handle clears obstructions.



INCH	MM	12	Outside Head Width 1 (in)	Head Thickness 1 (in)	Offset Height (in)	Overall Length (in)	Weight (lbs)
1-1/16	27	<b>J2617SW</b>	1-11/16	5/8	15/16	8-1/2	1.84
1-3/16	30	<b>J2619SW</b>	2-1/16	13/16	13/16	10-3/4	2.55
1-3/8	35	<b>J2622SW</b>	2-25/64	1	1-1/2	12	3.40
1-1/2	38	<b>J2624SW</b>	2-3/16	1	1-1/2	12	3.35
1-11/16	43	<b>J2627SW</b>	2-13/32	1-1/8	1-1/2	13-7/16	3.88
2	51	<b>J2632SW</b>	2-27/32	1-1/4	1-21/32	13-7/16	5.16
2-1/8	54	<b>J2634SW</b>	3-1/8	1-1/2	2	13-7/8	6.71
2-1/4	57	<b>J2636SW</b>	3-3/8	1-1/2	2	13-1/2	6.30
2-1/2	64	<b>J2640SW</b>	4	1-1/2	2-1/4	13-1/2	7.62
2-7/8	73	<b>J2646SW</b>	4-25/32	1-7/8	2-5/8	16	13.84



## BLACK OXIDE OFFSET SLUGGING WRENCHES SUPER HEAVY DUTY - 12 POINT



- › Non-reflective black oxide finish for use where non-plated products are required.
- › 12 point box end allows for fine indexing, helping improve speed and access.
- › Designed for heavy use in close quarters where hammer or sledge is required to loosen frozen nuts or set large fasteners.
- › High strength rectangular design withstands heavy sledging; transmits power more effectively to fastener.
- › Box opening designed to remain in place on fastener when wrench is struck.
- › Heavy box walls provide greater transmission of torque to fastener.
- › Straighter handle design than striking wrenches resists springing, nut turns easier.

INCH	12	Outside Head Width 1 (in)	Head Thickness 1 (in)	Offset Height (in)	Overall Length (in)	Weight (lbs)
1-5/16	JUSN321	2-3/8	7/8	11/16	8-3/8	2.03
1-3/8	JUSN322	2-3/8	7/8	11/16	8-3/8	2.00
1-7/16	JUSN323	2-3/8	7/8	11/16	8-3/8	1.95
1-1/2	JUSN324	2-3/4	1-1/8	1	10	3.54
1-5/8	JUSN326	2-3/4	1-1/8	1	10-1/8	3.41
1-11/16	JUSN327	2-3/4	1-1/8	1	10-1/8	3.31
1-3/4	JUSN328	2-3/4	1-1/8	1	10-1/8	3.36
1-13/16	JUSN329	2-3/4	1-1/8	1	10-1/8	3.2
1-7/8	JUSN330	3	1-1/4	1-1/8	10-3/4	3.92
2	JUSN332	3	1-5/16	1-1/8	10-13/16	3.71
2-1/16	JUSN333	3	1-5/16	1-1/8	11	4.21
2-1/8	JUSN334	3	1-5/16	1-1/8	11	4.74
2-3/16	JUSN335	3-9/16	1-3/8	1-1/4	11	5.11
2-1/4	JUSN336	3-9/16	1-3/8	1-1/4	11	4.86
2-3/8	JUSN338	4-1/8	1-5/8	1-1/2	14-1/2	8.75
2-7/16	JUSN339	4-1/8	1-5/8	1-1/2	14-1/2	8.86
2-1/2	JUSN340	4-1/8	1-5/8	1-1/2	14-13/32	8.46
2-9/16	JUSN341	4-1/8	1-5/8	1-1/2	14-1/2	8.37
2-5/8	JUSN342	4-1/8	1-5/8	1-1/2	14-13/32	8.35
2-3/4	JUSN344	4-1/8	1-5/8	1-1/2	14-1/2	7.80
2-13/16	JUSN345	4-5/8	1-7/8	1-3/4	15-13/16	9.06
2-15/16	JUSN347	4-5/8	1-7/8	1-3/4	15-1/2	12.17
3	JUSN348	4-5/8	1-7/8	1-3/4	15-1/2	12.14
3-1/8	JUSN350	4-5/8	1-7/8	1-7/8	15-19/32	11.29
3-3/8	JUSN354	5-1/4	2	1-7/8	17-1/2	15.41
3-1/2	JUSN356	5-1/4	2	1-7/8	17-13/32	15.79
3-3/4	JUSN360	5-1/2	2-1/2	1-7/8	18-3/16	22.74
3-7/8	JUSN362	5-1/2	2-1/2	1-7/8	18	22.11
4-1/8	JUSN366	6-1/8	2-7/8	1-7/8	18-3/16	27.92
4-1/4	JUSN368	6-1/8	2-7/8	1-7/8	18-3/16	26.83
4-1/2	JUSN372	6-5/8	3	1-7/8	20	32.06
4-5/8	JUSN374	6-5/8	3	1-7/8	20-3/16	30.54





## BLACK OXIDE METRIC OFFSET SLUGGING WRENCHES SUPER HEAVY DUTY - 12 POINT

- › Non-reflective black oxide finish for use where non-plated products are required.
- › 12 point box end allows for fine indexing, helping improve speed and access.
- › Fits most 4, 6 and 12 point fasteners.
- › Designed for heavy use in close quarters where hammer or sledge is required to loosen frozen nuts or set large fasteners.
- › High strength rectangular design withstands heavy sledging.
- › Box opening designed to remain in place on fastener when wrench is struck.
- › Heavy box walls provide greater transmission of torque to fastener.
- › Straighter handle design than striking wrenches resists springing, nut turns easier.



OFFSET SLUGGING WRENCHES

MM	12	Outside Head Width 1 (in)	Head Thickness 1 (in)	Offset Height (in)	Overall Length (in)	Weight (lbs)
32	JHD032M	2-23/64	55/64	43/64	8-25/64	1.27
36	JHD036M	2-23/64	55/64	43/64	8-25/64	1.27
41	JHD041M	2-3/4	1-9/64	63/64	10-1/8	1.36
46	JHD046M	2-3/4	1-9/64	63/64	10-1/8	1.31
50	JHD050M	2-63/64	1-17/64	1-7/64	10-3/4	1.80
55	JHD055M	3-37/64	1-3/8	1-17/64	10-63/64	2.27
60	JHD060M	4-9/64	1-39/64	1-1/2	14-31/64	3.63
65	JHD065M	4-9/64	1-39/64	1-1/2	14-31/64	3.50
70	JHD070M	4-9/64	1-39/64	1-1/2	14-31/64	3.36
75	JHD075M	4-41/64	1-57/64	1-47/64	15-3/4	12.15
80	JHD080M	5-15/64	2-1/64	1-27/32	17-23/64	11.35
85	JHD085M	5-15/64	2-1/64	1-27/32	17-23/64	16.96
90	JHD090M	5-33/64	2-33/64	1-57/64	17-3/4	15.16
95	JHD095M	5-33/64	2-33/64	1-57/64	17-3/4	22.75
100	JHD100M	5-63/64	2-7/8	1-31/32	17-63/64	28.51
105	JHD105M	5-63/64	2-7/8	1-31/32	17-63/64	27.26
110	JHD110M	6-1/2	2-63/64	2-3/64	17-63/64	33.22
115	JHD115M	6-1/2	2-63/64	2-3/64	19-49/64	31.89



## FACOM® BLACK OXIDE ENGINEER WRENCHES



- › Forged in carbon steel and hardened to high torque applications.
- › Hook eye.
- › Black oxide finish.
- › Long handle for extra leverage.



MM	12	Outside Head Width 1 (in)	Head Thickness 1 (in)	Overall Length (in)	Weight (lbs)
30	FM-45.30	2-7/16	7/16	10-1/4	0.75
32	FM-45.32	2-19/32	15/32	11-7/32	0.92
34	FM-45.34	2-19/32	15/32	12-5/32	1.29
36	FM-45.36	2-29/32	1/2	12-13/32	1.28
38	FM-45.38	2-29/32	1/2	12-19/32	1.63
41	FM-45.41	3-23/64	17/32	13-3/8	1.93
46	FM-45.46	3-49/64	5/8	15-9/16	2.39
50	FM-45.50	4-1/64	5/8	16-23/32	3.05
55	FM-45.55	4-27/64	5/8	16-23/32	3.04
60	FM-45.60	4-53/64	23/32	18-1/2	5.45
65	FM-45.65	5-9/64	23/32	18-1/2	5.43
70	FM-45.70	5-5/8	25/32	19-11/16	7.51
75	FM-45.75	5-15/16	13/16	19-11/16	7.47



## GOODBYE CHEATER BAR LEVERAGE WRENCHES

Never use cheater bars on wrenches. Use the wrench with an extra leverage bar, specifically designed for those large, stubborn fasteners that need extra distance to break free.

← .....  
Extra large offset to reach into recessed areas and keep hands clear of obstructions.

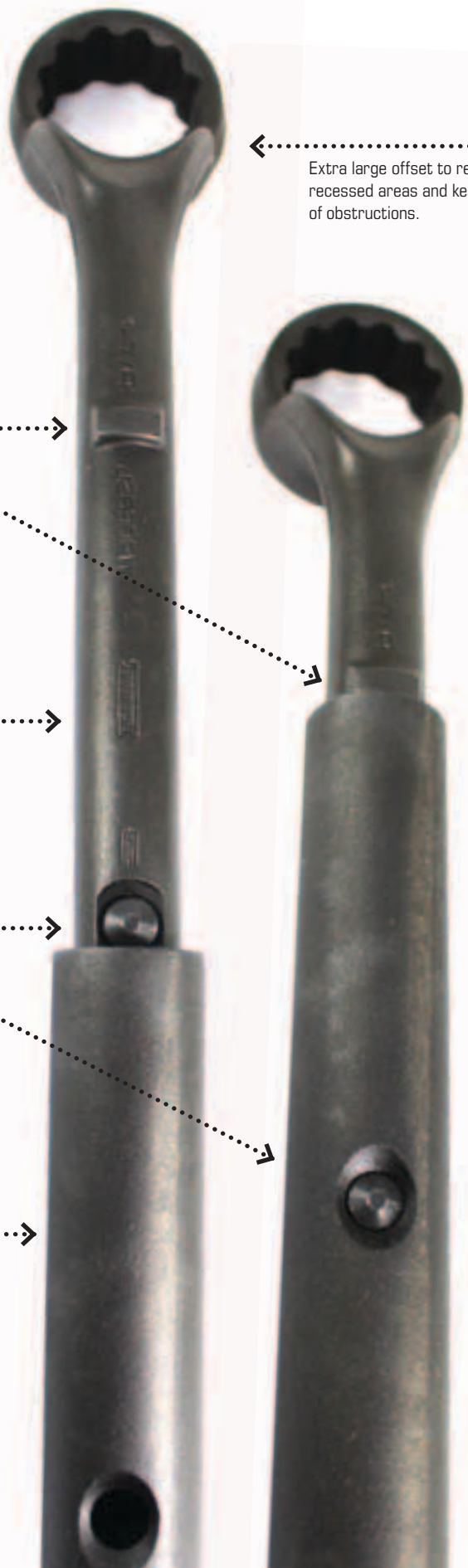
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Bar stop stops the leverage handle and helps to align the locking button with the locking hole.

Also prevents the handle bar from slipping down the wrench any further.

.....>  
Wrench can be used without the handle.

.....>  
.....>  
Locking button and hole locks the leverage bar into place. The click tells you the bar is secure and ready to use.

.....>  
Wrench handles are available in two lengths — two feet for smaller wrenches and three feet for larger wrenches.





## BLACK OXIDE LEVERAGE WRENCHES

- › Provides safe alternative to striking wrenches in confined spaces and on applications that prohibit sparking.
- › Offset box wrench head offers access to recessed fasteners and keeps hands clear of obstructions.
- › Ergonomic design allows wrenches to be used conventionally without the handle.
- › The handle can be attached to provide increased leverage for final tightening.
- › Bar Stop on the wrench shaft helps to align locking button with handle hole.
- › Ideal for Oil and Gas Industries.



LEVERAGE WRENCHES

INCH	12	Outside Head Width 1 (in)	Head Thickness 1 (in)	Overall Length (in)	Weight (lbs)	Use Handle
1-1/16	J2617PW	1-11/16	5/8	10-37/64	1.80	J26HAN24
1-1/8	J2618PW	1-15/16	3/4	10-11/16	2.10	J26HAN24
1-3/16	J2619PW	1-15/16	3/4	10-11/16	2.10	J26HAN24
1-1/4	J2620PW	1-15/16	3/4	10-11/16	2.10	J26HAN24
1-5/16	J2621PW	2-3/16	7/8	10-13/16	2.30	J26HAN24
1-3/8	J2622PW	2-3/16	7/8	10-13/16	2.13	J26HAN24
1-7/16	J2623PW	2-3/16	7/8	10-13/16	2.30	J26HAN24
1-1/2	J2624PW	2-7/16	1	10-15/16	2.40	J26HAN24
1-5/8	J2626PW	2-7/16	1	10-15/16	2.44	J26HAN24
1-11/16	J2627PW	2-11/16	1-1/8	13-9/32	4.17	J26HAN36
1-3/4	J2628PW	2-11/16	1-1/8	13-9/32	4.17	J26HAN36
1-13/16	J2629PW	2-11/16	1-1/8	13-3/8	4.27	J26HAN36
1-7/8	J2630PW	2-15/16	1-1/4	13-3/8	4.27	J26HAN36
1-15/16	J2631PW	2-15/16	1-1/4	13-1/2	4.80	J26HAN36
2	J2632PW	2-15/16	1-1/4	13-1/2	4.80	J26HAN36
2-1/8	J2634PW	3-3/16	1-5/16	13-11/16	5.25	J26HAN36
2-3/16	J2635PW	3-3/16	1-5/16	13-11/16	5.25	J26HAN36
2-1/4	J2636PW	3-7/16	1-7/16	13-11/16	5.25	J26HAN36
2-5/16	J2637PW	3-7/16	1-7/16	13-49/64	5.55	J26HAN36
2-3/8	J2638PW	3-7/16	1-7/16	13-49/64	5.54	J26HAN36
2-1/2	J2640PW	3-15/16	1-5/8	13-57/64	6.25	J26HAN36
2-9/16	J2641PW	3-15/16	1-5/8	13-57/64	6.25	J26HAN36
2-5/8	J2642PW	3-15/16	1-5/8	13-57/64	6.30	J26HAN36
2-3/4	J2644PW	3-15/16	1-5/8	14-19/64	7.12	J26HAN36
2-7/8	J2646PW	4-7/16	1-3/4	14-5/32	7.75	J26HAN36
2-15/16	J2647PW	4-7/16	1-3/4	14-5/32	7.75	J26HAN36
3	J2648PW	4-7/16	1-3/4	14-5/32	7.80	J26HAN36
3-1/8	J2650PW	4-7/16	1-3/4	14-19/64	9.13	J26HAN36



## BLACK OXIDE LEVERAGE WRENCH HANDLES

Product #	Overall Length (in)	Weight (lbs)
J26HAN24	24	2.60
J26HAN36	36	8.00



- FULL POLISH
- SATIN
- BLACK OXIDE
- BLACK CHROME
- INSULATED

## FACOM® SATIN LEVERAGE WRENCHES



- › Satin finish provides corrosion resistance and a slip resistant grip.
- › Separate removable handle used when extra leverage is needed.
- › 12 point, box end allows for fine indexing, helping to improve speed and access.
- › 30° offset handle helps clear obstructions.



MM	12	Outside Head Width 1 (in)	Head Thickness 1 (in)	Overall Length (in)	Weight (lbs)	Use Handle
24	<b>FM-54A.24</b>	1-1/2	21/32	7-3/32	0.89	FM-54.M1B
30	<b>FM-54A.30</b>	1-57/64	23/32	8-9/32	1.09	FM-54.M1B
32	<b>FM-54A.32</b>	1-59/64	23/32	9-7/16	1.60	FM-54.M2B
36	<b>FM-54A.36</b>	2-1/8	25/32	9-27/32	1.71	FM-54.M2B
41	<b>FM-54A.41</b>	2-7/16	7/8	10-5/8	2.05	FM-54.M2B
46	<b>FM-54A.46</b>	2-23/32	29/32	11-1/32	2.61	FM-54.M3B
50	<b>FM-54A.50</b>	2-63/64	1	11-5/8	3.11	FM-54.M3B
55	<b>FM-54A.55</b>	3-3/16	1-1/8	11-11/16	3.27	FM-54.M3B
60	<b>FM-54A.60</b>	3-35/64	1-3/16	13-25/32	4.95	FM-54.M4B
65	<b>FM-54A.65</b>	3-55/64	1-5/16	14-3/8	5.39	FM-54.M4B
70	<b>FM-54A.70</b>	4-9/64	1-13/32	14-3/8	6.05	FM-54.M4B

## FACOM® SATIN LEVERAGE WRENCH HANDLES



- › Satin finish provides corrosion resistance and a slip resistant grip.

Product #	Overall Length (in)	Weight (lbs)
<b>FM-54.M1B</b>	18	1.35
<b>FM-54.M2B</b>	23-1/2	2.44
<b>FM-54.M3B</b>	30	4.73
<b>FM-54.M4B</b>	33-9/32	6.31



## FACOM® 11 PIECE METRIC LEVERAGE WRENCHES & HANDLES SET

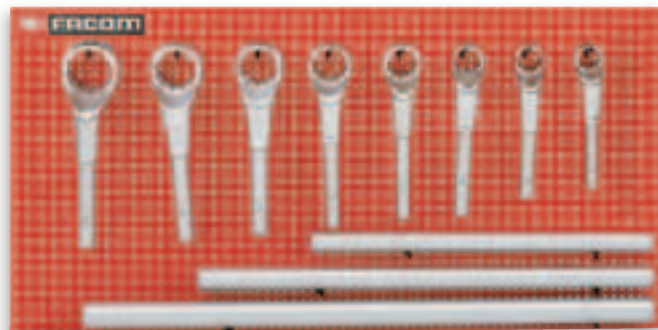


Product #: **FM-54.P9M**

- › Satin finish provides corrosion resistance and a slip resistant grip.
- › Separate removable handle used when extra leverage is needed.
- › 12 point, box end allows for fine indexing, helping to improve speed and access.
- › 30° offset handle helps clear obstructions.

12	MM	Overall Length (in)
FM-54A.24	24	7-3/32
FM-54A.30	30	8-9/32
FM-54A.32	32	9-7/16
FM-54A.36	36	9-27/32
FM-54A.41	41	10-5/8
FM-54A.46	46	11-1/32
FM-54A.50	50	11-5/8
FM-54A.55	55	11-11/16
FM-54.M1B	Handle	18
FM-54.M2B	Handle	23-1/2
FM-54.M3B	Handle	30

Weight (lbs): 29.76






## FACOM® INSULATED ADJUSTABLE WRENCHES



- › Finger stops help keep hands safe.
- › 2 color warning handle insulation - color changes from orange to yellow if insulation integrity is compromised.
- › Graduated head, 15° angle.
- › Burnished finish.
- › Thumbwheel rotates counterclockwise.



ADJUSTABLE WRENCHES

	Maximum Opening (in)	Overall Length (in)	Weight (lbs)
<b>FA-113.8TAVSE</b>	1-1/16	8-15/32	0.83
<b>FA-113.10TAVSE</b>	1-3/16	10-7/16	1.37
<b>FA-113.12TAVSE</b>	1-11/32	12-19/32	1.93
<b>FA-113.15TAVSE</b>	1-47/64	15-9/16	3.12

## BLACK OXIDE SPUD HANDLE ADJUSTABLE WRENCH

- › Non-reflective black oxide finish for use where none plated products are required.
- › Large jaw opening fits all nuts and bolts up to 1-1/2 inches.
- › Square jaw opening provides strength and tight fit.
- › Eliminates the need for carrying several fixed size wrenches.
- › Hardened taper handle aligns bolt and rivet holes.

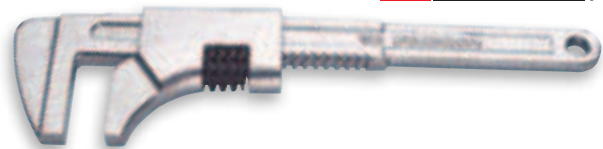


	Maximum Opening (in)	Overall Length (in)	Weight (lbs)
<b>J712SC</b>	1-1/2	16-3/32	2.45

## FACOM® SATIN MONKEY WRENCHES



- › Satin finish provides corrosion resistance and a slip resistant grip.
- › Sturdy, wide-opening tools for heavy-duty work on farms and building sites.
- › Fixed jaw/handle and worm gear made from hardened steel.
- › Smooth jaw faces help prevent marring of fastener surfaces.





INCH	Product #	Maximum Opening (in)	Jaw Depth (in)	Jaw Thickness (in)	Height (in)	Overall Length (in)	Weight (lbs)
2-3/8	<b>FA-105.230</b>	2-3/8	1-25/32	25/32	19/32	9-1/16	1.15
2-3/4	<b>FA-105.280</b>	2-3/4	1-11/32	21/32	25/32	11-1/32	1.79
3-1/8	<b>FA-105.375</b>	3-1/8	1-25/32	7/8	7/8	14-23/32	3.36



## CLIK-STOP® ADJUSTABLE WRENCHES

- › Satin finish provides corrosion resistance and a slip resistant grip.
- › Extra wide jaw capacity.
- › Square jaw opening provides strength and tight fit.
- › Clik-Stop® locking design holds the moving jaw of an adjustable wrench in place when the wrench is in use.

		Maximum Opening (in)	Overall Length (in)	Weight (lbs)
<b>J704L</b>	<b>J704SL</b>	11/16	4	0.13
<b>J706L</b>	<b>J706SL</b>	15/16	6	0.34
<b>J708L</b>	<b>J708SL</b>	1-1/8	8	0.57
<b>J710L</b>	<b>J710SL</b>	1-5/16	10	0.95
<b>J712L</b>	<b>J712SL</b>	1-1/2	12	1.54
<b>J715L</b>	<b>J715SL</b>	1-11/16	15	3.13
<b>J718L</b>	<b>J718SL</b>	2-1/16	18	5.73
<b>J724L</b>	-	2-7/16	24	8.84




 ASME B107.8



## ADJUSTABLE WRENCHES

- › Satin finish provides corrosion resistance and a slip resistant grip.
- › Extra wide jaw capacity.
- › Square jaw opening provides strength and tight fit.
- › Rugged I-beam style handle and reinforced stress areas; radius corner design.



		 Cushion Grip	Maximum Opening (in)	Overall Length (in)	Weight (lbs)
<b>J704</b>	<b>J704S</b>	<b>J704G</b>	11/16	4	0.17
<b>J706</b>	<b>J706S</b>	<b>J706G</b>	15/16	6	0.28
<b>J708</b>	<b>J708S</b>	<b>J708G</b>	1-1/8	8	0.58
<b>J710</b>	<b>J710S</b>	<b>J710G</b>	1-5/16	10	0.90
<b>J712</b>	<b>J712S</b>	<b>J712G</b>	1-1/2	12	1.58
<b>J715</b>	<b>J715S</b>	-	1-11/16	15	3.00
<b>J718</b>	<b>J718S</b>	-	2-1/16	18	4.26
<b>J724</b>	<b>J724S</b>	-	2-7/16	24	6.41

 ASME B107.8







## 3 PIECE CLIK-STOP® ADJUSTABLE WRENCH SET

Product #: **J790**

- › Clik-Stop® locking design holds the moving jaw of an adjustable wrench in place when the wrench is in use.
- › Satin finish provides corrosion resistance and a slip resistant grip.
- › Extra wide jaw capacity.
- › Square jaw opening provides strength and tight fit.



ADJUSTABLE WRENCH SETS



	Max. Opening (in)	Overall Length (in)
J708L	1-1/8	8
J710L	1-5/16	10
J712L	1-1/2	12
J25TR22C	Tool Roll	

Weight (lbs): 3.08

 ASME B107.8

## 3 PIECE ADJUSTABLE WRENCH SETS

Product #: **J795**

- › Satin finish provides corrosion resistance and a slip resistant grip.
- › Extra wide jaw capacity.
- › Square jaw opening provides strength and tight fit.
- › Rugged I-beam style handle and reinforced stress areas; radius corner design.



	Max. Opening (in)	Overall Length (in)
J708	1-1/8	8
J710	1-5/16	10
J712	1-1/2	12
J25TR22C	Tool Roll	

Weight (lbs): 2.60

Product #: **J795S**



	Max. Opening (in)	Overall Length (in)
J708S	1-1/8	8
J710S	1-5/16	10
J712S	1-1/2	12

Weight (lbs): 2.60

 FULL POLISH 
  SATIN 
  BLACK OXIDE 
  BLACK CHROME 
  INSULATED

## CUSHION GRIP ADJUSTABLE WRENCH SETS

- › Soft cushion grip for additional comfort.
- › Extra wide jaw capacity.
- › Square jaw opening provides strength and tight fit.



Contents	Max. Opening (in)			Overall Length (in)
		J794G	J795G	
J706G	15/16	•		6
J708G	1-1/8		•	8
J710G	1-5/16	•	•	10
J712G	1-1/2		•	12
Weight (lbs):		1.05	3.00	ASME B107.100

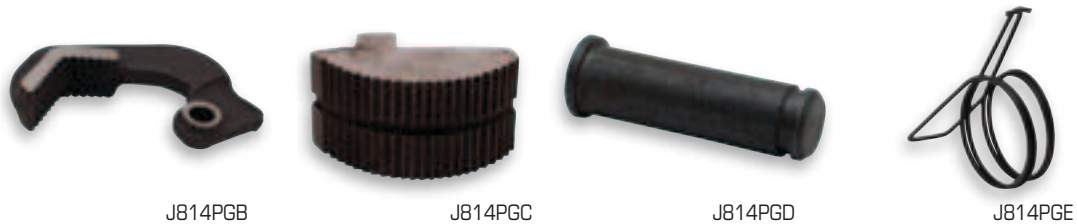
## PROTO-GRIP™ CAST IRON PIPE WRENCHES

- › Gripping jaw teeth and spring loaded hook jaw; allow one-hand operation or hands free option along with a ratcheting action for job speed.
- › Standard handle lengths with wide gripping surface for increased comfort on all jobs.
- › Forged steel jaw provides outstanding strength.
- › Heel Jaw designed to work in both directions.
- › Spring hook jaw provides a ratcheting function making threaded pipe fitting efficient.
- › Hanging hole for storage.
- › Field repairable by removing the rivet pin located on the bottom side of the jaw.
- › Replacement parts available.

Product #	Maximum Opening (in)	Overall Length (in)	Weight (lbs)
J810PG	1-1/2	10	1.98
J814PG	2	14	3.64



## PROTO-GRIP™ REPLACEMENT PARTS



Parts For	Hook Jaw	Weight (lbs)	Heel Jaw	Weight (lbs)	Pin	Weight (lbs)	Spring	Weight (lbs)
J810PG	J810PGB	.60	J810PGC	0.31	J810PGD	0.04	J810PGE	0.01
J814PG	J814PGB	.84	J814PGC	0.29	J814PGD	0.08	J814PGE	0.01





## ALUMINUM PIPE WRENCHES

- › Light weight aluminum for less job fatigue.
- › Standard handle lengths with wide gripping surface for increased comfort and one hand operation.
- › Forged steel jaw provides outstanding strength.
- › Large knurl and power threads provide fast, positive jaw adjustment.
- › Graduation markings on hook jaw show approximate opening for pipe sizes.
- › Riveted jaw pin for safety.
- › Hanging hole for storage.
- › Field repairable by removing the rivet pin located on the bottom side of the jaw.
- › Replacement parts available.



PIPE WRENCHES

Product #	Maximum Opening (in)	Height (in)	Overall Length (in)	Weight (lbs)
<b>J810A</b>	1-1/2	3	10	1.10
<b>J812A</b>	2	3	12	1.72
<b>J814A</b>	2	3	14	2.15
<b>J818A</b>	3-1/2	3	18	3.60
<b>J824A</b>	4	4	24	5.65
<b>J836A</b>	5	5	36	10.60
<b>J848A</b>	6	6	48	17.00

## ALUMINUM PIPE WRENCH REPLACEMENT PARTS



J814B

J814C

J814D

J814E

Parts For	Hook Jaw	Weight (lbs)	Heel Jaw and Pin	Weight (lbs)	Spring	Weight (lbs)	Knurl	Weight (lbs)
<b>J810A</b>	J810B	0.45	J810C	0.08	J810E	0.01	J810D	0.07
<b>J812A</b>	J812B	0.68	J812C	0.15	J812E	0.02	J812D	0.09
<b>J814A</b>	J814B	0.97	J814C	0.15	J814E	0.03	J814D	0.11
<b>J818A</b>	J818B	1.57	J818C	0.23	J818E	0.04	J818D	0.18
<b>J824A</b>	J824B	2.36	J824C	0.32	J824E	0.06	J824D	0.31
<b>J836A</b>	J836B	4.37	J836C	0.58	J836E	0.07	J836D	0.47
<b>J848A</b>	J848B	7.31	J848C	0.72	J848E	0.11	J848D	0.68



## HEAVY-DUTY CAST IRON PIPE WRENCHES

- ▶ Forged steel jaw provides outstanding strength.
- ▶ Full floating hook jaw, provides instant grip, easy release.
- ▶ Large knurl and power threads provide fast, positive jaw adjustment.



Product #	Maximum Opening (in)	Overall Length (in)	Weight (lbs)
J806HD	3/4	6	0.45
J808HD	1	8	0.8
J810HD	1-1/2	10	1.76
J812HD	2	12	2.66
J814HD	2	14	3.76
J818HD	3-1/2	18	5.82
J824HD	4	24	9.58
J836HD	5	36	19.32
J848HD	6	48	35.36
J860HD	8	60	41.4

## HEAVY-DUTY CAST IRON PIPE WRENCH REPLACEMENT PARTS



J814



J814B



J814C



J814D



J814E



J814H



J814PGB



J814PGC



J814PGD



J814PGE

Parts For	Handle, Heel Jaw, and Pin		Heel Jaw and Pin				Knurl		Flat Spring	
	Assemble	Weight (lbs)	Hook Jaw	Weight (lbs)	Pin	Weight (lbs)	Knurl	Weight (lbs)	Flat Spring	Weight (lbs)
J806HD	J806H	0.33	J806B	0.11	J806C	0.02	J806D	0.03	J806E	0.01
J808HD	J808H	0.61	J808B	0.23	J808C	0.04	J808D	0.03	J808E	0.01
J810HD	J810H	1.20	J810B	0.45	J810C	0.08	J810D	0.07	J810E	0.01
J812HD	J812H	1.97	J812B	0.68	J812C	0.15	J812D	0.09	J812E	0.02
J814HD	J814H	2.79	J814B	0.97	J814C	0.15	J814D	0.11	J814E	0.03
J818HD	J818H	4.09	J818B	1.57	J818C	0.23	J818D	0.18	J818E	0.04
J824HD	J824H	7.35	J824B	2.36	J824C	0.32	J824D	0.31	J824E	0.06
J836HD	J836H	14.40	J836B	4.37	J836C	0.58	J836D	0.47	J836E	0.07
J848HD	-	-	J848B	7.31	J848C	0.72	J848D	0.68	J848E	0.11
J860HD	-	-	J860B	12.50	J860C	1.50	J860D	0.85	J860E	0.08





## INTERNAL PIPE WRENCHES

- › Ideal for removing broken threaded pipe ends pipe plugs and fittings.
- › Installation and removal without thread damage.
- › Eccentric cam action engages wrench against the walls of the pipe.
- › Hex body allows for use of adjustable wrench for added torque.
- › Made from hardened steel and plated to help prevent rust.



INCH	Product #	Overall Length (in)	Weight (lbs)
3/8	<b>J140-38</b>	3	0.21
1/2	<b>J140-12</b>	3	0.32
3/4	<b>J140-34</b>	3	0.49
1	<b>J140-1</b>	3	0.85



## 4 PIECE INTERNAL PIPE WRENCH SET

Product #: **J140SET**

- › Ideal for removing broken threaded pipe ends, plugs and fittings.
- › Installation and removal without thread damage.
- › Eccentric cam action engages wrench against the walls of the pipe.
- › Hex body allows for use of adjustable wrench for added torque.
- › Made from hardened steel and plated to help prevent rust.



Contents	INCH	Overall Length (in)
J140-38	3/8	3
J140-12	1/2	3
J140-34	3/4	3
J140-1	1	3

Weight (lbs): 1.95



## UNIVERSAL CHAIN WRENCH

- › Fits any shape pipe.
- › Forged steel handle has deep milled teeth.
- › Chain capacity rating: 6,200 lbs.



Product #	Capacity Range	Overall Length (in)	Weight (lbs)
<b>J801</b>	7/8 to 4	16-1/2	2.33



FULL POLISH	SATIN	BLACK OXIDE	BLACK CHROME	INSULATED
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## BLACK OXIDE ADJUSTABLE FACE SPANNER WRENCHES

- › Non-reflective black oxide finish for use where non-plated products are required.
- › Precision machined pins provide engagement with holes or slots on the face of a bearing or nut.
- › Used to tighten collars, lock nut rings and seal/packing nuts on hydraulic cylinders.



Product #	Maximum Opening (in)	Pin Diameter (in)	Pin Length (in)	Overall Length (in)	Weight (lbs)
JC482	2	3/16	1/4	6-3/8	0.31
JC483	3	1/4	1/4	8-1/4	0.52
JC484	4	5/16	1/2	10-3/8	1.02

## FACOM® SATIN FACE SPANNER - ROUND PIN



- › Satin finish provides corrosion resistance and a slip resistant grip.
- › Each double-ended, round interchangeable pin has two diameters for a variety of applications.



Product #	Maximum Opening (in)	Height (in)	Overall Length (in)	Weight (lbs)
FA-117.B	4	1-25/32	10-5/8	1.45

## FACOM® SATIN PIN REPLACEMENTS - ROUND



- › Satin finish provides corrosion resistance and a slip-resistant grip.
- › Each double-ended, round interchangeable pin has two diameters for a variety of applications.

MM	Product #	Pin Diameter (in)	Height (in)	Weight (lbs)
2.5 - 4	FA-117.E1	3/32 & 5/32	19/32	0.03
6 - 8	FA-117.E2	1/4 & 5/16	19/32	0.05
3 - 5	FA-117.E3	1/8 & 3/16	19/32	0.03
7 - 9	FA-117.E4	9/32 & 11/32	19/32	0.06

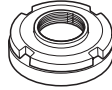




## FACOM® SATIN FACE SPANNER - SQUARE PIN



- › Satin finish provides corrosion resistance and a slip resistant grip.
- › Interchangeable pins are easy to swap out.



Product #	Maximum Opening (in)	Height (in)	Overall Length (in)	Weight (lbs)
<b>FA-118A</b>	4	1-25/32	10-5/8	1.41

SPANNER WRENCHES

## FACOM® SATIN PIN REPLACEMENTS - SQUARE



- › Satin finish provides corrosion resistance and a slip-resistant grip.
- › Interchangeable pins are easy to swap out.

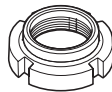


MM	Product #	Pin Diameter (in)	Height (in)	Weight (lbs)
4	<b>FA-118.EC4</b>	5/32	19/32	0.02
5	<b>FA-118.EC5</b>	6/32	3/8	0.02
8	<b>FA-118.EC8</b>	10/32	3/8	0.03

## FACOM® HINGED HOOK SPANNER WRENCHES



- › Joint fitted with a spring washer for smooth, reliable operation.



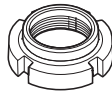
MM	Product #	Maximum Opening (in)	Head Thickness 1 (in)	Hook Thickness (in)	Height (in)	Overall Length (in)	Weight (lbs)
15-35	<b>FA-125A.35</b>	1-1/2	13/64	1/8	5/16	6-39/64	0.17
35-50	<b>FA-125A.50</b>	1-31/32	15/64	5/32	7/16	7-61/64	0.37
50-80	<b>FA-125A.80</b>	3-5/32	5/16	13/64	7/16	11-1/32	0.83
80-120	<b>FA-125A.120</b>	4-23/32	23/64	7/32	15/32	13-37/64	1.54
120-180	<b>FA-125A.180</b>	7-3/32	7/16	19/64	15-15/16	19-3/8	3.26



## FACOM® HEAVY DUTY HOOK SPANNER WRENCHES



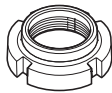
- › 11-hole adjustment.
- › Forged hook, hardened to 44 HRc.



MM	Product #	Hook Thickness (in)	Overall Length (in)	Weight (lbs)
120-224	<b>FA-119.3/8</b>	24	6.96	7.28
220-324	<b>FA-119.3/4</b>	26	13.01	12.27

## ADJUSTABLE HOOK SPANNER WRENCHES

- › Non-reflective black oxide finish for use where non-plated products are required.
- › Use to tighten side slot nuts on collars, lock nuts and bearings.

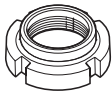


Product #	Capacity Range	Hook Thickness (in)	Hook Depth (in)	Overall Length (in)	Weight (lbs)
<b>JC471</b>	3/4 to 2	11/32	1/8	6-3/8	0.23
<b>JC472</b>	1-1/4 to 3	13/32	5/32	8-1/8	0.43
<b>JC474</b>	2 to 4-3/4	15/32	3/16	11-3/8	1.03
<b>JC474A</b>	4-1/2 to 6-1/4	15/32	1/4	12-1/8	1.07
<b>JC474B</b>	6-1/8 to 8-3/4	15/32	5/16	13-3/4	1.40

## FACOM® ADJUSTABLE HEAVY DUTY HOOK WRENCHES



- › Satin finish provides corrosion resistance and a slip-resistant grip.
- › Hook design is used to tighten side slots on collars, lock nuts and bearings.
- › Worm gear design allows for precision adjustments.



Product #	Maximum Opening (in)	Height (in)	Overall Length (in)	Weight (lbs)
<b>FA-115A.50</b>	1-31/32	31/32	20-7/8	0.83
<b>FA-115A.100</b>	3-15/16	25/32	8-15/32	1.96
<b>FA-115A.200</b>	7-7/8	25/32	14-3/8	4.57

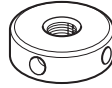






## ADJUSTABLE PIN SPANNER WRENCHES

- › Non-reflective black oxide finish for use where non-plated products are required.
- › Precision machined pins provide engagement with side holes or slots.
- › Used to tighten side slot nuts on collars, lock nuts and bearings.

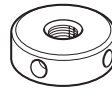


Product #	Capacity Range	Pin Diameter (in)	Pin Length (in)	Hook Thickness (in)	Overall Length (in)	Weight (lbs)
JC491	3/4 to 2	1/8	1/8	11/32	6-3/8	0.23
JC492	3/4 to 2	3/16	5/32	11/32	6-3/8	0.23
JC494	1-1/4 to 3	3/16	3/16	13/32	8-1/8	0.42
JC495	1-1/4 to 3	1/4	7/32	13/32	8-1/8	0.42
JC497	2 to 4-3/4	1/4	1/4	15/32	11-3/8	0.99
JC499	4-1/2 to 6-1/4	3/8	1/4	15/32	12-1/8	1.08

## FACOM® PRECISION ADJUSTABLE PIN SPANNER WRENCHES



- › Satin finish provides corrosion resistance and a slip resistant grip.
- › Sliding jaw moves easily along the shank and is designed to be self-locking on to the nut.
- › Precision machined pins provide engagement with holes on the sides of collars and nuts.
- › Interchangeable pins are easy to swap out.



INCH	Product #	Maximum Opening (in)	Height (in)	Overall Length (in)	Weight (lbs)
1	FA-116.50	1-31/32	31/32	8-15/32	0.86
3	FA-116.100	3-15/16	31/32	14-1/4	1.99
7	FA-116.200	7-7/8	1-3/16	20-3/4	4.76



## FACOM® PIN REPLACEMENTS FOR FA-116 SERIES



- › Replacement pins for Facom® FA-116.50, FA-116.100 and FA-116.200 Precision Adjustable Pin Spanner Wrenches.
- › Precision machined pins provide engagement with holes on the sides of collars and nuts.
- › Interchangeable pins are easy to swap out.

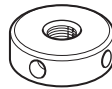


Product #	Pin Diameter (in)	Pin Height (in)	Overall Length (in)	Weight (lbs)
<b>FA-116.100E1</b>	5/32	19/32	31/32	0.03
<b>FA-116.100E2</b>	1/4	19/32	31/32	0.03
<b>FA-116.200E1</b>	1/4	19/32	1-3/16	0.08
<b>FA-116.200E2</b>	5/16	19/32	1-3/16	0.08
<b>FA-116.50E1</b>	3/32	3/8	25/32	0.01
<b>FA-116.50E2</b>	5/32	3/8	25/32	0.01

## FACOM® HINGED PIN SPANNER WRENCHES



- › Pins hardened to 40 HRc.



MM	Product #	Maximum Opening (in)	Pin Diameter (in)	Hook Thickness (in)	Height (in)	Overall Length (in)	Weight (lbs)
15-35	<b>FA-126A.35</b>	1-2/4	1/8	25/64	19/32	6-39/64	0.17
35-50	<b>FA-126A.50</b>	1-31/32	5/32	15/32	15/32	7-61/64	0.37
50-80	<b>FA-126A.80</b>	3-5/32	13/64	35/64	15/32	11-1/34	0.79
80-120	<b>FA-126A.120</b>	4-23/32	15/64	45/64	21/32	13-37/64	1.54
120-180	<b>FA-126A.180</b>	7-3/32	5/16	25/32	23/32	19-3/8	3.17

## FACOM® PIN REPLACEMENTS FOR FA-126A SERIES



- › Satin finish provides corrosion resistance and a slip-resistant grip.
- › Replacement pins for Facom® FA-126A.35, FA-126A.50, FA-126A.80, FA-126A.120 and FA-126A.
- › 180 Hinged Pin Spanner Wrenches.

Product #	Pin Diameter (in)	Pin Height (in)	Weight (lbs)
<b>FA-126.E120</b>	8/32	19/32	0.04
<b>FA-126.E180</b>	10/32	25/32	0.07
<b>FA-126.E35</b>	4/32	3/8	0.01
<b>FA-126.E50</b>	5/32	3/8	0.01
<b>FA-126.E80</b>	6/32	3/8	0.01

