

APEX[®]

LEADING WITH INNOVATION

Redefining Performance

Iron Band[™]
I N N O V A T I O N

COOPER PowerTools

Innovative Design Tools

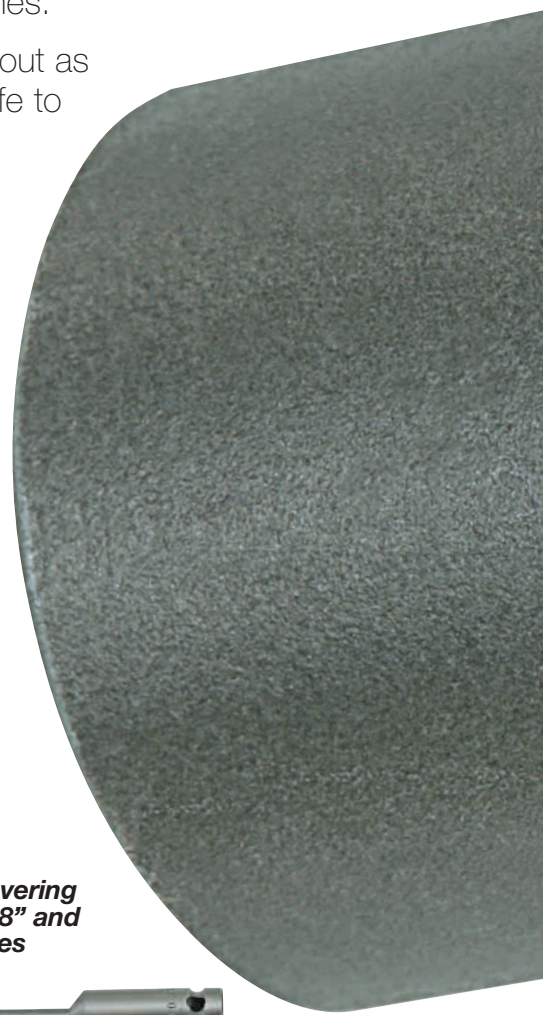
Apex has redesigned the ball and socket interface of universal wrench tools by adding a solid steel collar which acts as a shield to cover the pin and reduce the risk of catastrophic failure.

Since these tools are typically used in confined spaces, Apex engineers ensured that the new design would not increase the outer diameter of the socket, allowing them to be direct replacements of conventional universal wrenches.

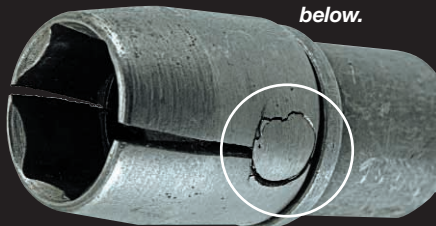
The new single-piece shank improves accuracy by reducing runout as much as 50%. The strength of the steel band allows operating life to often exceed older models.

Apex Universal Wrench Tools With IronBand™ Provide...

- **Shielding against tool failure** (see inset below)
- **Better ergonomics with 50% reduction in vibration**
- **Extended tool life**
- **Ability to access confined joints**



Universal wrenches utilize a ball and socket design concept with a swivel pin to lock the socket and shank together. Problems arise during extended operation as shown in a competitor's tool below.



Excessive vibration and stress can result in small fractures and sharp raised surfaces around the pin. Secondary operations, such as peening or welding have been used to guard against this condition, but are still susceptible to the same problems.

Solution: IronBand™

Apex offers a full line of tools covering both SAE and metric bolts for 3/8" and 1/2" female square drive sizes



o Drive Performance

*Solid steel band increases strength
and acts as protective shielding*

*Standard and Tension
styles available*

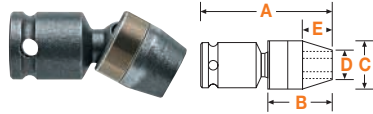
*Socket outer
diameter unchanged*

*Apex quality you've
come to expect*

APEX®
Iron Band™
I N N O V A T I O N

Universal Wrench Tools With Iron Band™

6 Point Universal Wrenches



Part Number	Hex Opening In.	Overall Length (A) In.	Socket Length (B) In.	Socket Diameter (C) In.	Nose End Diameter (D) In.	Clearance Depth (E) In.
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SAE, 3/8" Square Drive

SA-C-120	.31	1.83	.75	.75	.44	.31
SA-C-122	.38	1.89	.81	.75	.56	.38
SA-C-123	.44	2.02	.94	.75	.59	.50
SA-C-124	.50	2.08	1.0	.75	.75	.56
SA-C-205	.63	2.13	1.13	.88	.88	.59
SA-C-305	.69	2.31	1.25	1.00	1.00	.69
SA-C-306	.75	2.31	1.25	1.13	1.13	.69

SAE, 1/2" Square Drive

SA-C-216	.38	2.17	.88	.88	.56	.34
SA-C-217	.44	2.23	.94	.88	.63	.41
SA-C-218	.50	2.30	1.00	.88	.69	.47
SA-C-219	.56	2.36	1.06	.88	.75	.53
SA-C-221	.63	2.42	1.13	.88	.88	.59
SA-C-321	.69	2.58	1.25	1.00	1.00	.69
SA-C-322	.75	2.58	1.25	1.13	1.13	.69
SA-C-407	.88	2.89	1.38	1.19	1.31	.64
SA-C-409	.94	2.89	1.38	1.31	1.31	.64
SA-C-410	1.00	2.95	1.44	1.50	1.50	.70
SA-C-411	1.06	3.02	1.50	1.50	1.50	.77
SA-C-508	1.13	3.28	1.88	1.63	1.63	1.03
SA-C-510	1.25	3.41	2.00	1.75	1.75	1.16

Part Number	Hex Opening mm	Overall Length (A) mm	Socket Length (B) mm	Socket Diameter (C) mm	Nose End Diameter (D) mm	Clearance Depth (E) mm
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Metric, 3/8" Square Drive

SA-C-36-10M	10	48	20.6	19.1	15.1	9.5
SA-C-37-12M	12	51	23.8	22.2	17.5	10.3
SA-C-37-13M	13	52	25.4	22.2	17.5	11.9
SA-C-37-14M	14	54	27.0	22.2	19.1	13.5
SA-C-38-15M	15	56	28.6	25.4	19.8	14.3
SA-C-38-17M	17	59	31.8	25.4	25.4	17.5
SA-C-38-18M	18	59	31.8	25.4	25.4	17.5

Metric, 1/2" Square Drive

SA-C-57-13m	13	58	25.4	22.2	17.5	11.9
SA-C-57-14m	14	60	27.0	22.2	19.1	13.5
SA-C-58-15m	15	62	28.6	25.4	19.8	14.3
SA-C-58-16m	16	64	30.2	25.4	21.4	15.9
SA-C-58-17m	17	66	31.8	25.4	25.4	17.5
SA-C-58-18m	18	66	31.8	25.4	25.4	17.5
SA-C-510-21m	21	73	34.9	31.8	28.6	16.3
SA-C-510-22m	22	73	34.9	31.8	31.8	16.3

Universal wrenches must not be used with impact drivers.
Maximum operating angle is 30°.

6 Point Universal Wrenches – Extension



Part Number Standard	Part Number Tension	Hex Open. In.	OA L. (A) In.	Soc. L. (B) In.	Soc. Dia. (C) In.	Nose End Dia. (D) In.	Clear. Depth (E) In.
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SAE, 3/8" Square Drive

KAW-C-43-6	KDW-C-43-6	.38	6	.81	.63	.53	.44
KAW-C-44-6	KDW-C-44-6	.44	6	.88	.63	.63	.50
KAW-C-45-6	KDW-C-45-6	.50	6	.88	.69	.69	.50
KAW-C-104-9		.50	9	1.00	.75	.75	.56
	KDW-C-104-12	.50	12	1.00	.75	.75	.56
KAW-C-105-6	KDW-C-105-6	.56	6	1.00	.81	.81	.56

SAE, 1/2" Square Drive

KHW-C-43-6	KNW-C-43-6	.38	6	.81	.63	.53	.44
KHW-C-44-6	KNW-C-44-6	.44	6	.88	.63	.63	.50
KHW-C-45-6	KNW-C-45-6	.50	6	.88	.69	.69	.50
KHW-C-105-6	KNW-C-105-6	.56	6	1.00	.81	.81	.56
KHW-C-105-12	KNW-C-105-12	.56	12	1.00	.81	.81	.56
KHW-C-205-6	KNW-C-205-6	.63	6	1.13	.88	.88	.59
KHW-C-205-12	KNW-C-205-12	.63	12	1.13	.88	.88	.59
KHW-C-322-6	KNW-C-322-6	.75	6	1.25	1.13	1.13	.69
	KNW-C-322-12	.75	12	1.25	1.13	1.13	.69
KHW-C-409-6		.94	6	1.38	1.31	1.31	.64

Part Number Standard	Part Number Tension	Hex Open. mm	OA L. (A) mm	Soc. L. (B) mm	Soc. Dia. (C) mm	Nose End Dia. (D) mm	Clear. Depth (E) mm
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Metric, 3/8" Square Drive

KAW-C-6-10m-6	KDW-C-6-10m-6	10	152	20.6	19.1	15.1	9.5
KAW-C-6-10m-9	KDW-C-6-10m-9	10	229	20.6	19.1	15.1	9.5
KAW-C-7-12m-6	KDW-C-7-12m-6	12	152	23.8	22.2	17.5	10.3
KAW-C-7-12m-12	KDW-C-7-12m-12	12	305	23.8	22.2	17.5	10.3
KAW-C-7-13m-6	KDW-C-7-13m-6	13	152	25.4	22.2	17.5	11.9
KAW-C-7-13m-12	KDW-C-7-13m-12	13	305	25.4	22.2	17.5	11.9
KAW-C-7-14m-6	KDW-C-7-14m-6	14	152	27.0	22.2	19.1	13.5
KAW-C-8-15m-9	KDW-C-8-15m-9	15	229	28.6	25.4	19.8	14.3

Metric, 1/2" Square Drive

KHW-C-7-13m-6	KNW-C-7-13m-6	13	152	25.4	22.2	17.5	11.9
KHW-C-7-13m-9	KNW-C-7-13m-9	13	229	25.4	22.2	17.5	11.9
KHW-C-7-14m-6	KNW-C-7-14m-6	14	152	27.0	22.2	19.1	13.5
KHW-C-8-15m-6	KNW-C-8-15m-6	15	152	28.6	25.4	19.8	14.3
KHW-C-8-15m-9		15	229	28.6	25.4	19.8	14.3
	KNW-C-8-15m-12	15	305	28.6	25.4	19.8	14.3
KHW-C-8-16m-9	KNW-C-8-16m-9	16	229	30.2	25.4	21.4	15.9
KHW-C-8-17m-6	KNW-C-8-17m-6	17	152	31.8	25.4	25.4	17.5
KHW-C-8-17m-9	KNW-C-8-17m-9	17	229	31.8	25.4	25.4	17.5
KHW-C-8-18m-6	KNW-C-8-18m-6	18	152	31.8	25.4	25.4	17.5
KHW-C-8-18m-9	KNW-C-8-18m-9	18	229	31.8	25.4	25.4	17.5

Universal wrenches must not be used with impact drivers.
Maximum operating angle is 30°.

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