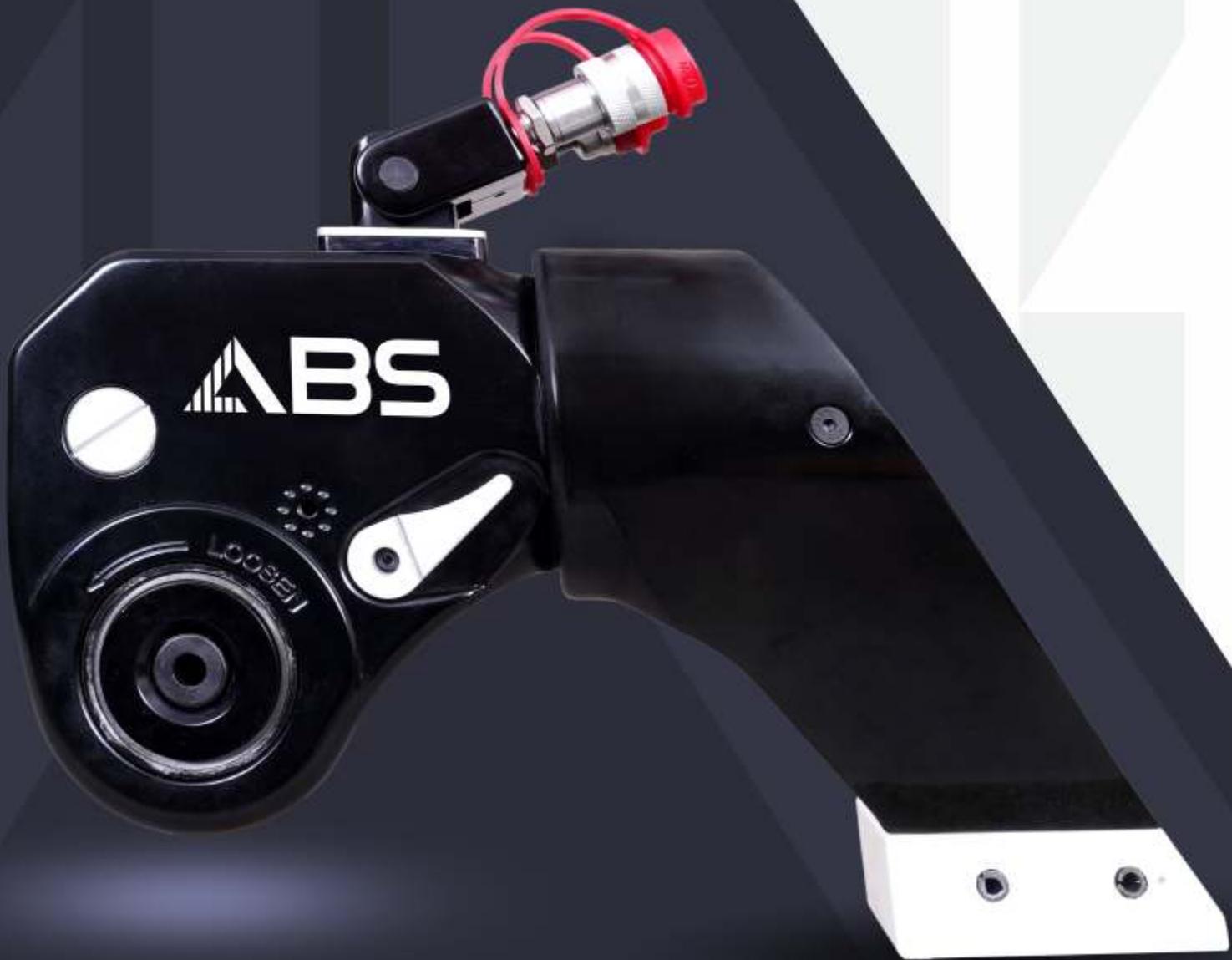


 **ABS**



**ENGINEERED FOR  
PERFORMANCE**

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# OUR STORY BEGAN WITH A VISION

Driven by the Make in India vision **ABS** is an extensive line of industrial bolting equipment renowned for unparalleled durability and reliability. Our cutting-edge in-house manufacturing facility, equipped with advanced CNC and VMC machines, reflects our commitment to precision and innovation.

Our commitment to quality begins with the selection of tested raw materials, carefully chosen to eliminate any potential challenges in the manufacturing process. One of the hallmarks of our production process is the implementation of the most rigorous in-house quality checks post-

assembly. This ensures that each tool undergoes thorough testing in robust environments, guaranteeing reliability and performance under the most demanding conditions.

With a global perspective, **ABS** ships top-notch tools worldwide, showcasing our dedication to customer satisfaction. Our flexibility shines as we customize tools to specific requirements, recognizing the uniqueness of each project.

**ABS** stands at the forefront of industrial bolting solutions, continually setting new benchmarks in durability, reliability, and customer satisfaction.



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## CNX SERIES HYDRAULIC TORQUE TOOL

**ABS CNX** is built to exceed the expectations of professionals seeking unmatched speed, durability, reliability, and user-friendliness in their bolting tasks. Constructed with high-strength aluminium. The **ABS CNX** boasts exceptional strength and resilience. We prioritise operator comfort and ease of use with an ergonomic design that minimises fatigue and strain, while intuitive controls ensure smooth operation and error-free tightening.

The **ABS CNX** series offers a versatile range of torque capacities and square drive sizes, effortlessly adapting to your specific needs.



TORQUE RANGE **200-52500 ft.lbs.**  
**271-71180 Nm**



### High Strength Aerospace Aluminium Material

Ensures exceptional durability and lightweight handling.



### One-Way Ratcheting Mechanism

Provides efficient fastening and accuracy.



### Ratchet Freeing Mechanism

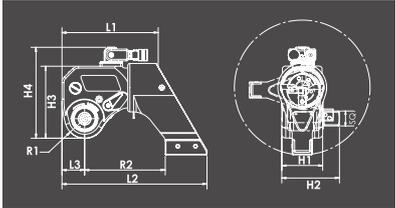
Allows for smooth and precise bolt loosening.



### Multi-Axis 360°-180° Swivel

Offers unmatched versatility and access in confined spaces.

# TORQUE TOOLS



MODEL	L1 (inch/ mm)	L2 (inch/ mm)	L3 (inch/ mm)	H1 (inch/ mm)	H2 (inch/ mm)	H3 (inch/ mm)	H4 (inch/ mm)	R1 (inch/ mm)	R2 (inch/ mm)	DRIVE SIZE	WEIGHT (lbs/ kg)	TORQUE (ft.lbs./Nm)	
												MIN.	MAX.
CNX-02	4.9 124	7.3 186.5	1.1 28.8	2.0 51.6	2.9 72.6	3.7 93.3	4.9 124.4	1.0 25	4.1 104.3	3/4"	4.41 2	200 271	1339 1816
CNX-04	6.4 161.9	9.7 245.5	1.5 39.1	2.7 68.8	3.7 94.4	4.8 121.2	6.4 162.1	1.3 33.3	5.3 135.2	1"	10.36 4.7	479 650	3228 4377
CNX-07	7.7 195.8	11.7 296.1	1.9 48.5	3.3 82.6	5.0 126.9	5.7 143.7	7.3 185.1	1.6 39.9	6.4 161.6	1 1/2"	18.08 8.2	834 1131	5587 7575
CNX-11	7.7 195.6	12.6 319.3	2.2 55.2	3.6" 90.7	5.1 129.3	6.5 165.1	8.5 215.9	1.7 44.7	6.9 176.8	1 1/2"	24.91 11.3	1200 1627	8000 10846
CNX-15	9.6 243	14.4 366.2	2.3 57.2	4.1 103.3	5.7 145.7	7.2 183.2	9.1 231.4	2.0 49.8	8.0 203.5	1 1/2"	33.07 15	1754 2378	11513 15610
CNX-20	10.54 267.8	15.5 392.9	2.5 63.3	4.4 113	7.1 180.6	8.1 206	10.2 258.7	2.2 55.5	8.8 223.8	2 1/2"	44.53 20.2	2012 2728	14082 19093
CNX-30	11.4 289.8	17.3 438.7	2.7 68.8	4.7 120.1	7.1 180.3	8.8 223	10.2 260.1	2.4 59.9	9.6 243.3	2 1/2"	43.43 19.7	2958 4011	19748 26775
CNX-35	11.8 299.7	18.5 470.4	3.1 78.4	5.2 133.3	7.5 190	9.6 243.8	11.5 292.1	2.6 66.0	10.2 260.3	2 1/2"	68.56 31.1	3883 5265	25890 35102
CNX-50	14.0 356.3	21.2 539.2	3.3 84.6	5.8 147.8	8.3 211.3	10.8 274.1	12.4 313.9	2.9 73.7	11.7 298.2	2 1/2"	77.60 35.2	5397 7317	37078 50271
CNX-72	15.5 393.7	23 584	3.7 94	6.6 166.9	9.4 237.7	11.0 279.4	12.8 325.1	3.3 82.6	12.8 325.6	2 1/2"	124.34 56.4	8999 59995	12201 81338

\*Minimum and maximum torque output data may vary.

## CNZ SERIES HYDRAULIC TORQUE TOOL

The CNZ hex drive torque wrench series, your ultimate allies in conquering the most challenging, space-restricted bolting tasks. Our sleek, compact design delivers unmatched accessibility, slipping into tight spaces where other tools simply can't reach. No more contorting yourself or compromising accuracy.

Just like the CNX series, the CNZ features a convenient release lever, simplifying tool disengagement and saving you time and effort. The secondary pawl accelerates tightening cycles while standing firm against unwanted rollback, ensuring efficient and reliable bolting. From delicate 329 Nm tasks to heavy-duty 41986 Nm applications, the CNZ series offers a diverse range of models to perfectly match your needs. Find the perfect fit for your toughest jobs.



### Secondary Pawl for Faster Tightening

Tighten bolts with blazing speed thanks to the secondary pawl that accelerates tightening cycles while simultaneously preventing unwanted rollback, ensuring both efficiency and reliability.

### 360° x 360° Hose Uniswivel

Experience unmatched maneuverability with the 360° x 360° hose uniswivel, granting you the freedom to reach any angle without compromising control.

### Ratchet Freeing Mechanism

Enjoy smooth and precise bolt loosening with the integrated ratchet freeing mechanism.

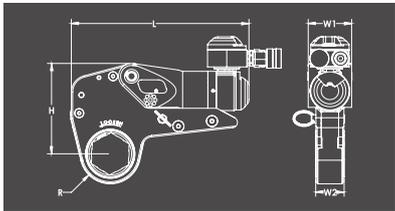
### Multipurpose Accessories

Enhance your versatility with a range of multipurpose accessories(not included) that cater to your specific bolting needs.

TORQUE RANGE **243-30967 ft.lbs.**

**329-41986 Nm**

# TORQUE TOOLS



MODEL	H (inch/ mm)	W1 (inch/ mm)	W2 (inch/ mm)	L (inch/ mm)	R (inch/ mm)	HEX (inch/mm)	WEIGHT (lbs/kg) (Without Link)	TORQUE (ft.lbs./Nm)	
								MIN.	MAX.
CNZ-02	4.02	1.97	1.25	7.5	0.95 - 1.79	3/4" - 2 3/8"	1.98	243	1686
	102.1	50	31.8	190.4	24.1 - 45.5	19 - 60	0.9	329	2286
CNZ-05	5.37	2.59	1.67	10.16	1.30 - 2.67	1 5/16" - 3 3/4"	4.41	580	3853
	136.4	65.8	42.4	258	33.1 - 68	34 - 95	2	786	5224
CNZ-10	6.7	3.23	2.09	12.29	1.78 - 2.90	2" - 3 7/8"	7.50	1142	8146
	170.3	82.15	53	312.1	45 - 73.9	50 - 100	3.4	1549	11045
CNZ-18	8.04	3.87	2.49	14.66	2.31 - 3.48	2 3/4" - 4 5/8"	12.13	2009	13392
	204.1	98.4	63.2	372.4	58.9 - 88.4	70 - 120	5.5	2724	18157
CNZ-25	9.09	4.41	2.83	16.57	2.47 - 4.21	2 3/4" - 5 3/4"	14.85	2790	19100
	231	112	72	421	62.8 - 107	70 - 145	6.7	3780	25881
CNZ-42	10.71	5.18	3.33	19.46	3.03 - 4.72	3 1/2" - 6 1/2"	24.03	4577	30967
	272.1	131.5	84.6	494.25	77 - 120	90 - 165	10.9	6205	41986

\*Minimum and maximum torque output data may vary.

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## CNO SERIES OFFSET SPANNER ATTACHMENTS

Experience zero-damage fastening with the innovative CNO Series! Its unique roller design eliminates scratches and dents, perfect for delicate applications like electronics and precision machinery. Save time and effort with the 3-in-1 convenience.



### Zero-Damage Guarantee

The CNO Series boasts a unique roller design that eliminates scratches and dents, making it ideal for intricate applications involving electronics, precision machinery, and other delicate surfaces.

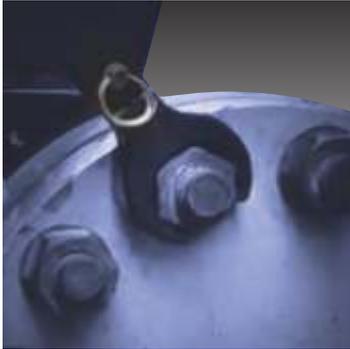
### Built to Last & Perform

Each CNO spanner is meticulously crafted from high-strength steel to ensure unwavering durability. Additionally, ergonomic handles provide exceptional comfort, minimizing fatigue during prolonged use.

### Unmatched Accuracy

Achieve flawless results with the CNO Series' precise fit and optional torque control mechanism (available on select models). This ensures you apply the exact amount of force required for each task, preventing over-tightening and potential damage.

# TORQUE TOOLS



## OPEN SPANNER

Ideal for accessing exposed nuts and bolts in tight spaces.



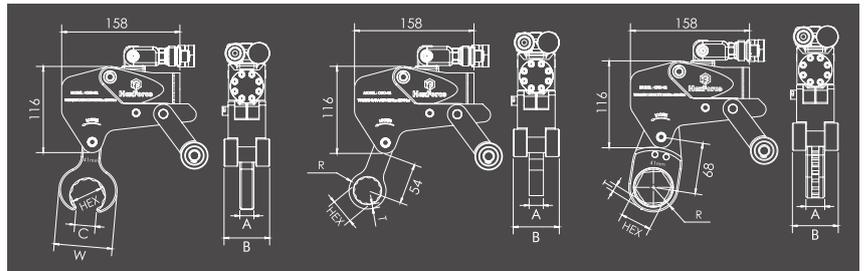
## RING SPANNER

Offers superior grip and torque for even the most stubborn fasteners.



## RATCHETING SPANNER

Enables fast, continuous operation, improving efficiency.



MODEL	HEX SIZE (mm)	TORQUE		OPEN SPANNER LINK (mm)				RING SPANNER LINK (mm)				RATCHET LINK (mm)			
		FT.LBS	NM	C	W	WIDTH		R	T	WIDTH		R	T	WIDTH	
						A	B			A	B			A	B
CNO-02	24	243 TO 1686	329 TO 2286	16.8	53.6	24	61	22.86	9.06	19	61	25.4	10.33	25.2	61
	27			18.8	58.05			22.86	7.34			25.4	9.88		
	32			22.9	64.8			24.65	6.25			27.43	9.03		
	36			24.9	71.5			27.43	6.73			29.97	9.27		
	41			27.9	79.8			31.24	7.67			32.77	9.20		
	46			30.7	93.5			34.8	8.35			35.56	9.11		
	50			36.8	94			38.61	9.29			41.15	11.83		
	55			37	109.8			38.61	6.99			41.15	9.53		
CNO-04	41	580 TO 3853	786 TO 5224	27.2	77.9	31	82.6	32.8	9.19	25.4	82.6	33.8	10.21	31	82.6
	46			30.2	92.9			35.6	9.11			36.8	10.32		
	50			33.5	90			38.4	9.60			39.2	10.44		
	55			36.1	108.9			41.1	9.52			42.3	10.63		
	60			39.9	108.9			45.0	10.46			45.5	10.98		
	65			55.60	114.00			46.7	9.36			48.7	11.35		
	75			49.50	132.80			52.1	8.94			54.7	11.56		
CNO-08	50	1142 TO 8146	1549 TO 11045	33.1	110.4	38	83	40.13	11.38	32	83	44.2	15.45	37.2	83
	55			36.1	115.4			42.93	11.3			46.99	15.37		
	60			39.1	120.4			45.72	11.22			49.78	15.28		
	65			43.7	127			48.51	11.14			52.58	15.2		
	70			46.7	133.6			51.31	11.06			55.37	15.12		
	75			49.7	146			54.36	11.23			58.42	15.3		
	80			53.3	152.6			57.15	11.15			61.21	15.21		
	85			58.1	162			60.2	11.32			64.26	15.39		
	90			61.5	163.3			62.99	11.24			67.06	15.31		
	95			65.3	172.4			66.04	11.42			70.1	15.48		
	100			65.3	178			68.58	11.08			72.9	15.4		
	105			69.1	188.9			71.48	11.4			75.8	15.5		

## CNZ LINK SELECTION HYDRAULIC TORQUE TOOL

- Improves reliability through longer arm
- Increased accuracy and ease-of-usage, since the wrench operates directly on the bolts/nuts
- 360° x 360° swivel allows for hassle free operations in confined areas

CNZ-02	HEX SIZE	
	IMPERIAL	METRIC
ZL-02-19	3/4"	19mm
ZL-02-20	13/16"	-
ZL-02-21	-	21mm
ZL-02-22	7/8"	22mm
ZL-02-23	15/16"	-
ZL-02-24	-	24mm
ZL-02-25	1"	-
ZL-02-27	1-1/16"	27mm
ZL-02-28	1-1/8"	-
ZL-02-30	1-3/16"	30mm
ZL-02-31	1-1/4"	-
ZL-02-32	-	32mm
ZL-02-33	1-5/16"	-
ZL-02-34	-	34mm
ZL-02-35	1-3/8"	35mm
ZL-02-36	-	36mm
ZL-02-37	1-7/16"	-
ZL-02-38	1-1/2"	38mm
ZL-02-39	1-9/16"	-
ZL-02-41	1-5/8"	41mm
ZL-02-42	1-11/16"	-
ZL-02-44	1-3/4"	-
ZL-02-46	1-13/16"	46mm
ZL-02-47	1-7/8"	-
ZL-02-49	1-15/16"	49mm
ZL-02-50	-	50mm
ZL-02-51	2"	-
ZL-02-52	2-1/16"	-
ZL-02-54	2-1/8"	-
ZL-02-55	2-3/16"	55mm
ZL-02-57	2-1/4"	-
ZL-02-59	2-5/16"	-
ZL-02-60	2-3/8"	60mm

CNZ-05	HEX SIZE	
	IMPERIAL	METRIC
ZL-05-33	1-5/16"	-
ZL-05-34	-	34mm
ZL-05-35	1-3/8"	-
ZL-05-36	-	36mm
ZL-05-37	1-7/16"	-
ZL-05-38	1-1/2"	38mm
ZL-05-39	1-9/16"	-
ZL-05-41	1-5/8"	41mm
ZL-05-42	1-11/16"	-
ZL-05-44	1-3/4"	-
ZL-05-46	1-13/16"	46mm
ZL-05-47	1-7/8"	-
ZL-05-49	1-15/16"	49mm
ZL-05-50	-	50mm
ZL-05-51	2"	-
ZL-05-52	2-1/16"	-
ZL-05-53	2-1/8"	-
ZL-05-55	2-3/16"	55mm
ZL-05-57	2-1/4"	-
ZL-05-58	2-5/16"	-
ZL-05-60	2-3/8"	60mm
ZL-05-61	2-7/16"	-
ZL-05-63	2-1/2"	-
ZL-05-65	2-9/16"	65mm
ZL-05-66	2-5/8"	-
ZL-05-68	2-11/16"	-
ZL-05-70	2-3/4"	70mm
ZL-05-71	2-13/16"	-
ZL-05-73	2-7/8"	-
ZL-05-75	2-15/16"	75mm
ZL-05-76	3"	-
ZL-05-77	3-1/16"	-
ZL-05-79	3-1/8"	-
ZL-05-80	-	80mm



# TORQUE TOOLS

CNZ-10	HEX SIZE	
	IMPERIAL	METRIC
ZL-10-41	1-5/8"	41mm
ZL-10-42	1-11/16"	-
ZL-10-44	1-3/4"	-
ZL-10-46	1-13/16"	46mm
ZL-10-47	1-7/8"	-
ZL-10-49	1-15/16"	49mm
ZL-10-50	-	50mm
ZL-10-51	2"	-
ZL-10-52	2-1/16"	-
ZL-10-54	2-1/8"	-
ZL-10-55	2-3/16"	55mm
ZL-10-57	2-1/4"	-
ZL-10-58	2-5/16"	-
ZL-10-60	2-3/8"	60mm
ZL-10-61	2-7/16"	-
ZL-10-63	2-1/2"	-
ZL-10-65	2-9/16"	65mm
ZL-10-66	2-5/8"	-
ZL-10-68	2-11/16"	-
ZL-10-70	2-3/4"	70mm
ZL-10-71	2-13/16"	-
ZL-10-73	2-7/8"	-
ZL-10-75	2-15/16"	75mm
ZL-10-76	3"	-
ZL-10-77	3-1/16"	-
ZL-10-79	3-1/8"	-
ZL-10-80	-	80mm
ZL-10-81	3-3/16"	-
ZL-10-82	3-1/4"	-
ZL-10-84	3-5/16"	-
ZL-10-85	-	85mm
ZL-10-86	3-3/8"	-
ZL-10-87	3-7/16"	-
ZL-10-88	3-1/2"	-
ZL-10-90	-	90mm
ZL-10-91	3-9/16"	-
ZL-10-92	3-5/8"	-
ZL-10-93	3-11/16"	-
ZL-10-95	3-3/4"	95mm
ZL-10-96	3-13/16"	-
ZL-10-98	3-7/8"	-
ZL-10-100	3-15/16"	100mm
ZL-10-101	4"	-
ZL-10-103	4-1/16"	-
ZL-10-105	4-1/8"	105mm

CNZ-18	HEX SIZE	
	IMPERIAL	METRIC
ZL-18-50	-	50mm
ZL-18-51	2"	-
ZL-18-52	2-1/16"	-
ZL-18-53	2-1/8"	-
ZL-18-55	2-3/16"	55mm
ZL-18-57	2-1/4"	-
ZL-18-58	2-5/16"	-
ZL-18-60	2-3/8"	60mm
ZL-18-62	2-7/16"	-
ZL-18-63	2-1/2"	-
ZL-18-65	2-9/16"	65mm
ZL-18-66	2-5/8"	-
ZL-18-68	2-11/16"	-
ZL-18-70	2-3/4"	70mm
ZL-18-71	2-13/16"	-
ZL-18-73	2-7/8"	-
ZL-18-75	2-15/16"	75mm
ZL-18-76	3"	-
ZL-18-77	3-1/16"	-
ZL-18-79	3-1/8"	-
ZL-18-80	-	80mm
ZL-18-81	3-3/16"	-
ZL-18-82	3-1/4"	-
ZL-18-84	3-5/16"	-
ZL-18-85	-	85mm
ZL-18-86	3-3/8"	-
ZL-18-87	3-7/16"	-
ZL-18-89	3-1/2"	-
ZL-18-90	-	90mm
ZL-18-91	3-9/16"	-
ZL-18-92	3-5/8"	-
ZL-18-93	3-11/16"	-
ZL-18-95	3-3/4"	95mm
ZL-18-96	3-13/16"	-
ZL-18-98	3-7/8"	-
ZL-18-100	3-15/16"	100mm
ZL-18-101	4"	-
ZL-18-104	4-1/6"	-
ZL-18-105	4-1/8"	105mm
ZL-18-106	4-3/16"	-
ZL-18-107	4-1/4"	-
ZL-18-109	4-5/16"	-
ZL-18-110	-	110mm
ZL-18-111	4-3/8"	-
ZL-18-112	4-7/16"	-
ZL-18-114	4-1/2"	-
ZL-18-115	-	115mm
ZL-18-117	-	117mm

CNZ-25	HEX SIZE	
	IMPERIAL	METRIC
ZL-25-75	2-15/16"	75mm
ZL-25-76	3"	-
ZL-25-77	3-1/16"	-
ZL-25-79	3-1/8"	-
ZL-25-80	-	80mm
ZL-25-81	3-3/16"	-
ZL-25-82	3-1/4"	-
ZL-25-84	3-5/16"	-
ZL-25-85	-	85mm
ZL-25-86	3-3/8"	-
ZL-25-87	3-7/16"	-
ZL-25-89	3-1/2"	-
ZL-25-90	-	90mm
ZL-25-91	3-9/16"	-
ZL-25-92	3-5/8"	-
ZL-25-93	3-11/16"	-
ZL-25-95	3-3/4"	95mm
ZL-25-96	3-13/16"	-
ZL-25-98	3-7/8"	-
ZL-25-100	3-15/16"	100mm
ZL-25-101	4"	-
ZL-25-104	4-1/6"	-
ZL-25-105	4-1/8"	105mm
ZL-25-106	4-3/16"	-
ZL-25-107	4-1/4"	-
ZL-25-109	4-5/16"	-
ZL-25-110	-	110mm
ZL-25-111	4-3/8"	-
ZL-25-112	4-7/16"	-
ZL-25-114	4-1/2"	-
ZL-25-115	-	115mm
ZL-25-117	-	117mm
ZL-25-108	4-1/4"	-
ZL-25-109	4-5/16"	-
ZL-25-110	-	110mm
ZL-25-111	4-3/8"	-
ZL-25-112	4-7/16"	-
ZL-25-114	4-1/2"	-
ZL-25-115	-	115mm
ZL-25-116	4-9/16"	-
ZL-25-117	4-5/8"	117mm
ZL-25-119	4-11/16"	-
ZL-25-120	-	120mm
ZL-25-121	4-3/4"	-
ZL-25-122	4-13/16"	-
ZL-25-123	4-7/8"	-
ZL-25-125	-	125mm
ZL-25-126	4-15/16"	-
ZL-25-127	5"	127mm
ZL-25-128	5-1/16"	-
ZL-25-130	5-1/8"	-
ZL-25-131	5-3/16"	-
ZL-25-133	5-1/4"	-
ZL-25-134	5-5/16"	135mm
ZL-25-136	5-3/8"	-
ZL-25-138	5-7/16"	-
ZL-25-140	5-1/2"	140mm
ZL-25-141	5-9/16"	-
ZL-25-142	5-5/8"	-
ZL-25-144	5-11/16"	-
ZL-25-145	-	145mm

CNZ-42	HEX SIZE	
	IMPERIAL	METRIC
ZL-42-108	4-1/4"	-
ZL-42-109	4-5/16"	-
ZL-42-110	-	110mm
ZL-42-111	4-3/8"	-
ZL-42-112	4-7/16"	-
ZL-42-114	4-1/2"	-
ZL-42-115	-	115mm
ZL-42-116	4-9/16"	-
ZL-42-117	4-5/8"	117mm
ZL-42-119	4-11/16"	-
ZL-42-120	-	120mm
ZL-42-121	4-3/4"	-
ZL-42-122	4-13/16"	-
ZL-42-123	4-7/8"	-
ZL-42-125	-	125mm
ZL-42-126	4-15/16"	-
ZL-42-127	5"	127mm
ZL-42-128	5-1/16"	-
ZL-42-130	5-1/8"	-
ZL-42-131	5-3/16"	-
ZL-42-133	5-1/4"	-
ZL-42-134	5-5/16"	135mm
ZL-42-136	5-3/8"	-
ZL-42-138	5-7/16"	-
ZL-42-140	5-1/2"	140mm
ZL-42-141	5-9/16"	-
ZL-42-142	5-5/8"	-
ZL-42-144	5-11/16"	-
ZL-42-145	-	145mm
ZL-42-146	5-3/4"	-
ZL-42-147	5-13/16"	-
ZL-42-149	5-7/8"	-
ZL-42-150	-	150mm
ZL-42-151	5-15/16"	-
ZL-42-152	6"	-
ZL-42-153	6-1/16"	-
ZL-42-155	-	155mm
ZL-42-156	6-1/8"	-
ZL-42-157	6-3/16"	-
ZL-42-158	6-1/4"	-
ZL-42-160	-	160mm
ZL-42-161	6-5/16"	-
ZL-42-162	6-3/8"	-
ZL-42-163	6-7/16"	-
ZL-42-165	6-1/2"	165mm
ZL-42-166	6-9/16"	-
ZL-42-168	6-5/8"	-
ZL-42-170	6-11/16"	170mm
ZL-42-171	6-3/4"	-
ZL-42-173	6-13/16"	-
ZL-42-174	6-7/8"	-
ZL-42-175	-	175mm

# HYDRAULIC PUMPS - ELECTRIC *for* TORQUE TOOLS

Available in various series of electrically operated power sources, **ABS** torquing pumps are specifically designed to simplify the process of tightening or loosening bolts, nuts, and other fasteners. Our pumps apply torque with precision and generate the necessary hydraulic pressure, serving as an integral component of torque wrench systems. We offer a wide range of distinct models that can be selected according to specific requirements.

SERIES	HFWE	
SOURCE V/bar	230V / 440V - 50Hz	700 Bar
POWER (kW)	0.55	
OIL FLOW (lpm)	6.5 (LP) x 1.8 (MP) x 0.7 (HP)	
WEIGHT (kg)	Without Oil: 25	
DIMENSIONS (cm)	40 (L) x 28 (W) x 40 (H)	
OIL COOLER	YES	



SERIES	HFEE		HFEE - EX 	
SOURCE V/bar	1-230V 50Hz	700 Bar	400 V, 50 Hz	700 Bar
POWER (kW)	1.1 kW		1.5 kW, 3 PH	
OIL FLOW (lpm)	0.97 lpm (up to 10000 psi) - 9.7 lpm (up to 1450 psi)		1.1 + 8.6 lpm (Radial Piston Pump)	
WEIGHT (kg)	Without Oil: 38		Without Oil: 47	
DIMENSIONS (cm)	58 (L) x 29 (W) x 51 (H)		761 (L) x 444 (W) x 585 (H)	
FLUID CAPACITY (Ltr)	6		20	
OIL COOLER	YES		YES	

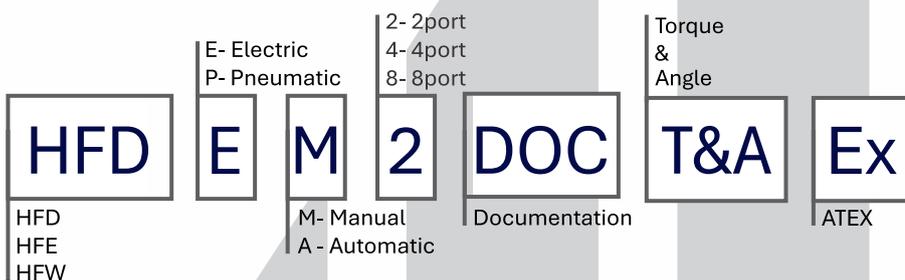


SERIES	HFDE
SOURCE V/bar	1-230V 50Hz
POWER (kW)	0.55
OIL FLOW (lpm)	6.5 (LP) x 1.8 (MP) x 0.7 (HP)
WEIGHT (kg)	Without Oil: 25
DIMENSIONS (cm)	40 (L) x 28 (W) x 40 (H) 700 Bar
FLUID CAPACITY (Ltr)	4
OIL COOLER	YES

*\*Made in Germany.*



## Nomenclature For Pump Model Selection



*\*115V variants available on request. | \*Specifications are subject to change without notice.*

# HYDRAULIC PUMPS - PNEUMATIC *for* TORQUE TOOLS

Available in various series of pneumatically operated power sources, **ABS** torquing pumps are specifically designed to simplify the process of tightening or loosening bolts, nuts, and other fasteners. Our pumps apply torque with precision and generate the necessary hydraulic pressure, serving as an integral component of torque wrench systems. We offer a wide range of distinct models that can be selected according to specific requirements.

SERIES	HFWP	
	SOURCE Air/Bar	5-10 Bar
POWER (kW)	2.8	
OIL FLOW (lpm)	7.5 (LP) x 2.5 (MP) x 0.9 (HP)	
WEIGHT (kg)	Without Oil: 26	
DIMENSIONS (cm)	50 (L) x 26 (W) x 38 (H)	



PNEUMATIC	HFDP		HFDP - EX	
	SOURCE Air/Bar	5-10 Bar	700 Bar	5-12 Bar
POWER (kW)	2.8		2.8	
OIL FLOW (lpm)	7.5 (LP) x 2.5 (MP) x 0.9 (HP)		7.5 (LP) x 2.5 (MP) x 0.9 (HP)	
WEIGHT (kg)	Without Oil: 27		Without Oil: 26	
DIMENSIONS (cm)	50 (L) x 27 (W) x 39 (H)		50 (L) x 27 (W) x 39 (H)	
FLUID CAPACITY (Ltr)	4		3.85	



*\*Made in Germany.*

# HYDRAULIC PUMPS - SPECIAL ELECTRIC *for* TORQUE TOOLS

SERIES	ECO2 CONTROL
SOURCE V/bar	1~230V 50Hz
POWER (kW)	1.5
OIL FLOW (lpm)	1.3
WEIGHT (kg)	Without Oil: 26.4 (depending on fittings)

*\*Made in Germany.*

- Electrical operated hydraulic power pack for torque wrench: 700 BAR/ 10000 PSI
- The pump is capable of offering three distinct programs:
  - a) Torque-controlled tightening.
  - b) Torque-controlled tightening with angle monitoring.
  - c) Torque and angle-controlled tightening.
- The pump has a two-stage pressure generation system, comprising a 1st gear pump and a 2nd radial piston pump.
- Remote control interface featuring an LCD display for easy torque setting.
- Designed for ergonomic mobility
- Noise emission limited to 79 dB for minimal disruption.
- IP 54, ensuring protection against dust and water ingress.
- Remote control should will display of torque and pressure.”



*\*Specifications are subject to change without notice.*

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## HFST SERIES STANDARD FIT TENSIONERS

Our standard tensioners operating at maximum pressure of 1500 bar are designed to fit most of ANSI B 16.5, 16.47, API flanges. Custom built tensioners for applications with space constraints or high load requirements are also available. These tools have suitable surface protection for long term use in arduous conditions and have a long operating life.

A comprehensive Health and Safety Operating and Instruction Manual is provided along with the tool, which provides clear and concise graphical illustrations of the equipment, its appropriate usage, maintenance, and operating pressure data.

Additionally, we are available to provide quick responses to any technical questions regarding the equipment and the applications. The tensioning tool comprises Hydraulic Cylinder, Socket, Bridge and Puller. The Adaptor Set comprises socket, bridge and puller.



**BOLT SIZE RANGE** **3/4" - 5 3/4"**

**M16 - M150**

### Safe & Reliable Design

Incorporating the latest safety features, these tensioners prioritize user safety during operation.

### Latest Seal Technology

Cutting-edge seals prevent leaks and ensure operational integrity, minimizing the risk of accidents and equipment failure.

### Long Stroke Design

Enables efficient and precise bolt tensioning across a wider range of applications.

# TENSIONERS



MODEL	BOLT SIZE		MAXIMUM TENSIONER LOAD		HYDRAULIC PRESSURE AREA mm <sup>2</sup>	MAX. PRESSURE bar	STROKE mm	DIMENSIONS (mm)					
	inch	mm	kN	tonf				A	B	C	D	E	F
HFST-11	-	M16	233	23.8	1555	1500	12	74	31	64	79.3	44	74
	3/4"	M20											
	7/8"	M22											
	1"	M24											
	1-1/8"	M27											
HFST-12	1-1/8"	M27	443	44.0	2884	1500	15	108	42	89	101.2	58.1	102.1
	-	M30											
	1-1/4"	M33											
	1-3/8"	M36											
HFST-13	1-1/2"	M39	791	80.0	5271	1500	15	136	54	89	116	58	132.47
	1-5/8"	M42											
	1-3/4"	M45											
	1-7/8"	M48											
	2"	M52											
HFST-14	2"	M52	1267	129.0	8445	1500	15	172	65.5	102	119.5	58	162
	2-1/4"	M56											
	2-1/2"	M64											
HFST-15	2-1/2"	M64	1830	186.0	12197	1500	15	200	76	98	131	64	187
	2-3/4"	M72											
	3"	M76											
HFST-16	3"	M76	2502	255	16682	1500	15	235	94	125	163	68	218
	3-1/4"	M80											
	3-1/2"	M90											
HFST-17	3-1/2"	M90	2629	268	17530	1500	15	245	102	125	148	66	245
	3-3/4"	M95											
	4"	M100											
HFST-18	4"	M100	3802	387.7	25349	1500	15	286	122	133	157	73	284
	4-1/2"	M110											
	5"	M125											
HFST-19	5"	M125	4903	500.0	32688	1500	15	335	143	165	191	78	325
	5-1/4"	M130											
	5-3/4"	M150											

\*2500 bar can also be provided on request.

\*Tool dimensions and load value are subject to design specification.

# HFST SERIES STANDARD FIT TENSIONERS

The auto return tensioner range has been designed to ensure fast, simple, safe and reliable operation. With a focus on productivity and a reduction in downtime we have implemented state of the art materials and technology resulting in significant time saving during operation.

## Durable

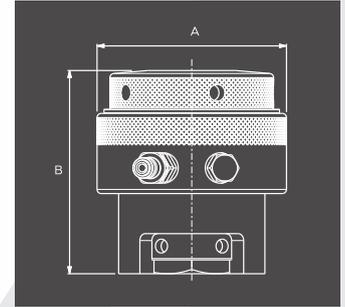
Operational performance does not degrade during the life of the tool. Extensive in-house tests at full stroke and full pressure have shown that it far out performs current HFSRT load cells.

## Increased Safety

HFSRT Load cells have a relief valve to prevent accidental overstroke of the tool. This safety mechanism prevents seal blow outs and the users exposure to ejected oil.

## Improved Seal Technology

Latest design eases seal changeouts and enhances general performance throughout high cycle usage.



MODEL	BOLT DIAMETER		MAXIMUM TENSIONER LOAD		HYDRAULIC PRESSURE AREA mm <sup>2</sup>	MAX. PRESSURE bar	STROKE		DIMENSIONS (mm)	
	inch	mm	kN	lbf			inch	mm	A	B
HFSRT-0*	3/4"	M20	160	35,970	1,070	1500	0.315"	8	66	93
	7/8"	M22								93
HFSRT-1	1"	M24	280	62,950	1,870	1500	0.375"	10	87	117
	1 1/8"	M27								117
HFSRT-2	—	—	450	101,160	3,000	1500	0.375"	10	103	120
	1"	M24								117
	1 1/8"	M27								117
	1 1/4"	M30								120
	1 3/8"	M33								123
HFSRT-3	—	M36	660	148,370	4,400	1500	0.375"	10	118	126
	1 1/4"	M33								123
	1 3/8"	M36								126
	1 1/2"	M39								130
HFSRT-4	1 5/8"	M42	1,000	224,810	6,670	1500	0.375"	10	141	133
	—	M42								132
	1 1/2"	M39								135
	1 5/8"	M42								139
	1 3/4"	M45								142
HFSRT-5	1 7/8"	M48	2,500	562,020	16,670	1500	0.375"	10	176	145
	2"	—								148
	2"	M52								154
	2 1/4"	M56								161
	2 1/2"	M60								161
HFSRT-6	2 3/4"	M64	3,200	719,390	21,340	1500	0.375"	10	219	167
	—	M68								167
	2 3/4"	M72								171
	3"	M76								180
	3 1/4"	M80								180
HFSRT-7	3 1/2"	M85	3,200	719,390	21,340	1500	0.375"	10	252	186
	—	M90								186
	3 1/2"	M90								186
	3 3/4"	M95								192
—	M100	199								

\*HFSRT-0 is not an auto return tensioner.

## HFDF SERIES DIRECT FIT TENSIONERS

When space is tight and loads are heavy, our Direct Fit tensioners step up to conquer the challenge. This ingenious one-piece design delivers a perfect fit for confined environments, eliminating the need for bulky adapters and simplifying setup. Gone are the days of frequent maintenance hassles. The streamlined design minimises wear and tear, keeping your bolting operations running smoothly. Plus, its versatility allows for customisation to specific requirements, ensuring optimal performance for any task.

Don't let limited clearance hold you back. The compact design packs a powerful punch, tackling even the most demanding high-load applications with ease. Experience the freedom and efficiency of a tensioner that adapts to your space, not the other way around.

**BOLT SIZE RANGE** 3/4" - 4"

# M20 - M100



### Compact Design

Allows the operator easy usage and smooth process flow.

### Increased Safety & Speed

Designed to boost safety and speed for operators.

### Customizable Design

Can be customized to fit all applications.

### Hassle Free Operations

Preferred tool for confined spaces.



## HFMT SERIES MULTI STAGE TENSIONER

The **ABS** multi-stage bolt tensioners exemplify versatility and reliability, making them ideal hydraulic bolt tensioners for demanding applications, especially in high-load and confined-space scenarios. Designed for various applications, these hydraulic bolt tensioners are crafted to withstand prolonged usage while demanding minimal maintenance.

- **Minimal Maintenance:** Invest in reduced downtime and lower operating costs with the tensioner's minimal maintenance requirements.
- **User-Friendly Design:** Intuitive controls and a smooth operation ensure efficient and error-free bolting, minimizing user fatigue.
- **Handle the Toughest Jobs:** Engineered for exceptional strength and durability, these tensioners withstand demanding applications and prolonged use.

MODEL	BOLT DIA		MAX. LOAD		TENSIONER DIA		TENSIONER HEIGHT		TENSIONER STROKE	
	inch	mm	kN	lbf	inch	mm	inch	mm	inch	mm
HFMT-24	1"	M24	288	64,742	2.36	60	7.40	185	0.28	7
HFMT-27	1-1/8"	M27	375	84,300	2.60	66	7.62	193.5	0.28	7
HFMT-30	1-1/8"	M30	462	103,858	2.83	72	7.91	201	0.28	7
HFMT-33	1-1/4"	M33	572	128,586	3.07	78	8.50	216	0.31	8
HFMT-36	1-3/8"	M36	670	150,616	3.25	82.5	9.04	229.5	0.39	10
HFMT-39	1-1/2"	M39	802	180,290	3.62	92	10.31	263	0.39	10
HFMT-42	1-5/8"	M42	920.5	206,928	3.86	98	10.31	262	0.39	10
HFMT-45	1-3/4"	M45	1082	243,234	4.13	105	10.91	281.5	0.39	10
HFMT-48	1-7/8"	M48	1222	274,706	4.37	111	11.56	293.5	0.39	10
HFMT-52	2"	M52	1452	326,410	4.72	120	12.80	327	0.39	10
HFMT-56	2-1/4"	M56	1675	376,540	5.04	128	12.99	330	0.39	10
HFMT-64	2-1/2"	M64	2244	494,560	5.83	146	14.23	376	0.47	12

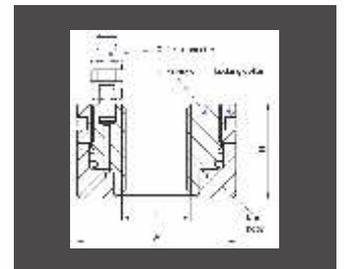
NOTE: 1) For low radial clearance applications

# HFHN SERIES HYDRAULIC NUT

**ABS** hydraulic nuts revolutionize large bolt tensioning, offering a safe, efficient, and precise solution. This nut features an internal jack with an external locking collar. Pressure creates a gap between the nut and collar due to joint compression, gasket presence (if applicable), and bolt elongation. The nut is pressurized above the desired pre-load, then the collar is tightened. Releasing pressure transfers the load to the collar, but some pre-load loss occurs due to collar thread settling. This loss is more significant with shorter bolts.



- **Even and accurate pre-load:** Achieved through controlled hydraulic pressure.
- **No flogging hammers or spanners:** Faster and safer tightening.
- **Single or multiple tightening:** Suitable for various applications.
- **Confined space friendly:** Compact design allows operation in tight areas.
- **Self-aligning and low load loss (shim type):** Minimizes installation challenges.
- **Eliminates thread damage:** Protects bolts from damage during tightening.



HFHN-15 RANGE - MAX 1500 BAR

PART NUMBER		BOLT THREAD SIZE		MAX. LOAD		Pressure Area HPA	NUT OD A	NUT HEIGHT H	NUT STROKE	WEIGHT
		T	F							
METRIC	IMPERIAL	METRIC	IMPERIAL	kN	tonf	mm <sup>2</sup>	mm	mm	mm	kg
HFHN-15-M22	HFHN-15-0875	M22	7/8"	152	15.2	1011	57	44	5	0.7
HFHN-15-M24	HFHN-15-1000	M24	1"	176	17.7	1175	60	45	5	0.8
HFHN-15-M27	HFHN-15-1125	M27	1 1/8"	230	23.1	1531	65	46	5	1.0
HFHN-15-M30	-	M30	-	280	28.1	1869	73	48	5	1.3
HFHN-15-M33	HFHN-15-1250	M33	1 1/4"	312	31.3	2081	78	52	6	1.6
HFHN-15-M36	HFHN-15-1375	M36	1 3/8"	368	36.9	2450	85	56	6	2.0
HFHN-15-M39	HFHN-15-1500	M39	1 1/2"	390	39.2	2602	88	58	6	2.2
HFHN-15-M42	HFHN-15-1625	M42	1 5/8"	448	45.0	2989	93	61	6	2.6
HFHN-15-M45	HFHN-15-1750	M45	1 3/4"	522	52.4	3483	101	64	6	3.2
HFHN-15-M48	HFHN-15-1875	M48	1 7/8"	589	59.1	3928	107	68	8	3.8
HFHN-15-M52	HFHN-15-2000	M52	2"	703	70.6	4688	116	70	8	4.6
HFHN-15-M56	HFHN-15-2250	M56	2 1/4"	812	81.5	5413	125	72	8	5.5
HFHN-15-M60	-	M60	-	945	94.8	6299	134	74	8	6.5
HFHN-15-M64	HFHN-15-1500	M64	2 1/2"	1070	107.4	7136	142	80	8	7.9
HFHN-15-M68	HFHN-15-2750	M68	2 3/4"	1222	122.7	8147	152	84	10	9.5
HFHN-15-M72	HFHN-15-3000	M72	3"	1384	138.9	9226	161	88	10	11.2
HFHN-15-M80	HFHN-15-3250	M80	3 1/4"	1738	174.4	11584	179	92	10	14.5
HFHN-15-M90	HFHN-15-3500	M90	3 1/2"	2236	224.4	14909	203	96	10	19.5
HFHN-15-M95	HFHN-15-3750	M95	3 3/4"	2509	251.8	16728	215	100	10	22.8
HFHN-15-M100	HFHN-15-4000	M100	4"	2798	280.8	18652	226	105	15	26.4
HFHN-15-M110	HFHN-15-4500	M110	4 1/2"	3422	343.5	22815	250	110	15	34.0
HFHN-15-M125	HFHN-15-5000	M125	5"	4477	449.3	29844	285	125	15	50.2
HFHN-15-M140	HFHN-15-5500	M140	5 1/2"	5672	569.3	37815	321	140	15	71.6
HFHN-15-M150	HFHN-15-6000	M150	6"	6548	657.2	43653	345	150	15	88.7

\*HFHN-25 Range - MAX 2500 bar pressure also available as per requirements.

# TENSIONING PUMPS

The **ABS** tensioning pumps revolutionize bolting applications by offering precise and controlled force. This capability ensures consistent and accurate bolt tensioning, effectively minimizing the risks of over- or under-tightening. Such precision plays a crucial role in averting joint failure or damage, setting **ABS** apart from traditional methods.

Our pumps go beyond conventional practices by enhancing safety and versatility in bolting operations. Unlike manual methods, these pumps eliminate the risk of injuries associated with excessive force or repetitive motions. Furthermore, their seamless compatibility with various hydraulic tensioners allows them to efficiently tackle a diverse range of bolt sizes and applications, contributing to both safety and operational efficiency.

## HYDRAULIC HAND PUMPS

- **CE Certified:** Complies with stringent safety and quality standards.
- **Precision Monitoring:** Equipped with a dual-scale (psi/bar) pressure gauge, ensuring clear and accurate pressure monitoring.
- **Efficient Design:** Two-stage operation for increased power and efficiency, requiring fewer pump strokes.
- **Variable Pressure Options:** Choose from **1500** and **2500** bar configurations based on your specific bolting needs.



Unwavering Reliability

Performance You Can Trust

## HYDRAULIC ELECTRIC PUMPS

- Withstands rough handling in workshops, mobile operations, and industrial settings.
- Input Supply of 230V / 50Hz.
- **Options: 1500 and 2500 Bar for specific bolting needs.**
- Precise Pressure Monitoring: a dual-scale gauge (Mpa gauge option).
- Safety Relief Valve to prevent exceeding safe pressure limits.

Built to Endure

Performance and Control

## HYDRAULIC PNEUMATIC PUMPS

- Specifically designed for efficient pressurization of hydraulic bolt tensioners, ensuring consistent and accurate bolt tightening.
- Input Air supply of 6-10 Bar
- FRL for clean, controlled and lubricated air supply.
- **Options: 1500 and 2500 Bar for specific bolting needs.**
- Precise Pressure Monitoring: a dual-scale gauge (Mpa gauge option).
- Safety Relief Valve to prevent exceeding safe pressure limits.

Engineered for Excellence

Built-in Safety and Control



\*Representative Image

# HYDRAULIC FLANGE SPREADER



HF-FS-15EK

HF-FS-25EMK

**ABS** Flange spreaders utilize a wedge mechanism inserted between the flanges. As the wedge is forced open, it applies controlled pressure to the flanges, separating them without damaging the components.

This allows for:

- Safe and controlled disassembly of flange connections, minimizing the risk of injury or equipment damage.
- Faster and more efficient separation compared to manual methods.
- Access to components behind the flanges for maintenance or inspection

MODEL	CAPACITY (TON)*	SPREAD (mm)		STROKE (mm)	WEIGHT (Kg)
		MIN.	MAX.		
HF-FS-15EK	15	5	15	25	3.3
HF-FS-15EMK	15 X 2	5	15	25	3.3
HF-FS-25EK	25	7	23	65	7.8
HF-FS-25EMK	25 X 2	7	23	65	7.8

# INTEGRAL HYDRAULIC FLANGE SPREADER



MODEL	CAPACITY (TON)*	SPREAD (mm)**	WEIGHT (Kg) WITH INTEGRAL HYDRAULIC PUMP CYLINDER
		MAX.	
HF-FSI-15	14.5	81	9

Range of application: All flanges with a minimum access gap of 6 mm.  
 \*With 700 bar (10,000 psi) hydraulic pressure applied: 14.5 Ton per tool.  
 It is recommended that tools are used in pairs giving:  
 2 x 14.5 Ton = 29 Ton  
 \*\*Stepped blocks is used in pairs to increase the spreading distance.

# MECHANICAL FLANGE SPREADER



MODEL	CAPACITY (TON)*	SPREAD (mm)**		WEIGHT (Kg)		
		MIN.	MAX.	TOOL	TORQUE WRENCH	SAFETY BLOCK
HF-FSM-9T	9.4	9	81	5.5	1.5	0.5

Range of application: All flanges with a minimum access gap of 6 mm.  
 \*With 203 Nm of torque applied.  
 It is recommended that tools are used in pairs giving:  
 2 x 9.4 Ton = 18.8 T  
 \*\*Stepped blocks is used in pairs to increase the spreading distance.

# FLANGE MAINTENANCE TOOLS

## HFNS SERIES NUT SPLITTER

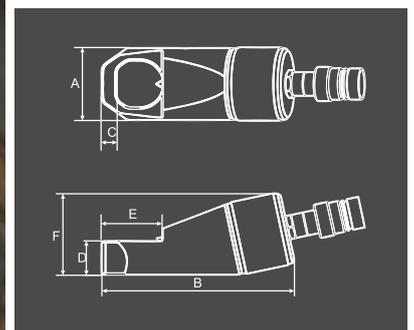
Tackle tough jobs even in tight corners with our sleek nut splitters. Crack through even the most stubborn rusted nuts with our powerful hydraulic cylinder, ensuring effortless splitting. Built to last, our one-piece cutting frame and heavy-duty construction mean you can depend on these splitters for years to come. Our specially angled cutter blade with radius resists wear and tear, ensuring long-lasting performance. Choose the perfect splitter for your needs with our variety of sizes available.

- Compact design used in confined space with enough force to split the rusted nuts.
- All models feature a rugged one-piece cutting frame coupled to heavy-duty hydraulic cylinder.
- Specially designed "tool steel" cutter blade cuts the nut to the precise point where it cracks.
- **Unique angled head design to keep full contact with the nut being penetrated.**
- Unique angled cutter blade with radius to have the greater resistance to cutting and breaking nuts.
- 5 popular models applicable to cover the most range of nuts.



**Heavy-Duty  
Hydraulic Cylinder**

**10-50 TON  
Capacity**



MODEL	HEXAGON NUT RANGE (mm)	BOLT RANGE (mm)	CAPACITY (TON)	OIL CAPACITY (c.c.)	A (mm)	B (mm)	C (mm)	D (mm)	E (mm)	F (mm)	WEIGHT (Kg)
HFNS-1924	19-24	M12-M16	10	18	60	171.5	10	25	40	68	2.2
HFNS-2432	24-32	M16-M22	15	40	70	192	13	30	52	79	3.3
HFNS-3241	32-41	M22-M27	20	68	80	230	16	36	65	92	4.4
HFNS-4150	41-50	M27-M33	35	150	100	286	21	45	76	116	8.2
HFNS-5060	50-60	M33-M39	50	250	117	321	24	54.5	92	134	11.7

\*The hardness of nut material must not exceed HRC-44. Should not be used on stainless steel nuts and/or square shape nuts.

# HFTW SERIES MANUAL TORQUE WRENCHES

**ABS** manual torque wrenches are specialized tools featuring a calibrated mechanism that allows you to apply controlled and measurable torque to a fastener. They typically consist of a handle, a body with a scale displaying torque values, and an attachment for sockets or other drives.



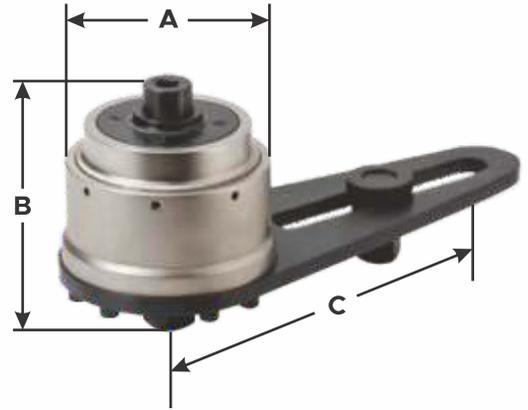
RATCHET TYPE	MODEL	TORQUE (Nm)		SQ. DRIVE (inch)	WEIGHT (kg)	OAL (mm)
		MIN.	MAX.			
	HFTW-8R	2.5	11	3/8	1.10	334
	HFTW-24R	5	33	3/8	1.60	443
	HFTW-50R	12	68	1/2	1.50	499
	HFTW-100R	25	135	1/2	1.80	555
	HFTW-160R	50	225	1/2	3.20	626
	HFTW-250R	70	330	1/2	3.80	840
	HFTW-410R	140	560	3/4	6.80	1210
	HFTW-500R	200	800	3/4	7.50	1261
	HFTW-700R	480	940	3/4	14.50	1471
	HFTW-1000R	540	1375	1	17.80	1505
	HFTW-1400R	1000	1900	1	20.50	1356
	HFTW-2000R	1350	2700	1	29.00	1498

NON RATCHET TYPE	MODEL	TORQUE (Nm)		SQ. DRIVE (inch)	WEIGHT (kg)	OAL (mm)
		MIN.	MAX.			
	HFTW-8	2.5	11	3/8	0.55	318
	HFTW-24	5	33	3/8	0.65	422
	HFTW-50	12	68	1/2	1.00	476
	HFTW-100	25	135	1/2	1.70	546
	HFTW-160	50	225	1/2	2.60	597
	HFTW-250	70	330	1/2	3.00	825
	HFTW-410	140	560	3/4	5.80	1130
	HFTW-500	200	810	3/4	6.50	1181
	HFTW-700	480	940	3/4	13.00	1397
	HFTW-1000	540	1375	1	16.00	1505
	HFTW-1400	1000	1900	1	20.20	1356
	HFTW-2000	1350	2700	1	28.00	1498

# MANUAL TORQUE WRENCHES

## STANDARD INDUSTRIAL TORQUE MULTIPLIER

- The ratio stated is the true torque multiplication factor.
- Accuracy better than  $\pm 5\%$ .
- Precision tightening and loosening of all heavy duty fasteners.
- Higher capacity multipliers are furnished with strong ratchets (Anti-wind up mechanism) allowing jobs to be performed easily, efficiently, and safely.
- Precision Manufacturing ensures long life and premier quality.
- A groove on output Square breaks if over loaded in excess of 20% of its capacity.



MODEL	GEAR RATIO	TORQUE OUTPUT CAPACITY (MAX.)			DIA. (mm)	HEIGHT (mm)	INPUT DRIVE FEMALE (inch)	OUTPUT DRIVE MALE (inch)	REQUIRED TORQUE WRENCH	WEIGHT (kg)
		ft. lbs.	Nm	Kgm						
HFTM-1	1:5	1250	1700	170	115	87	1/2"	3/4"	HFTW-250R	4.5
HFTM-2	1:5	1250	1700	170	115	90	3/4"	1"	HFTW-250R	5.0
HFTM-2/25	1:25	1250	1700	170	115	120	1/2"	1"	HFTW-50R	7.0
HFTM-5	1:5	2000	2700	275	136	91	3/4"	1"	HFTW-400R	8.0
HFTM-5/25	1:25	2000	2700	275	136	120	1/2"	1"	HFTW-100R	11.0
HFTM-6	1:5	2500	3400	345	136	91	3/4"	1 1/2"	HFTW-500R	9.0
HFTM-6/25	1:25	2500	3400	345	136	120	1/2"	1 1/2"	HFTW-160R	12.0
HFTM-7	1:5	4500	6000	622	168	115	3/4"	1 1/2"	HFTW-1000R	18.0
HFTM-7/25	1:25	4500	6000	622	168	190	1/2"	1 1/2"	HFTW-250R	22.0
HFTM-9/25	1:25	7000	9500	965	220	240	3/4"	2 1/2"	HFTW-400R	31.0
HFTM-11/25	1:25	12500	17000	1730	220	260	3/4"	2 1/2"	HFTW-500R	51.0
HFTM-11/125	1:125	12500	17000	1730	220	280	1/2"	2 1/2"	HFTW-160R	57.0



## COMPACT & LIGHT WEIGHT TORQUE MULTIPLIER

- Compact, Slim Body facilitates to be used in constrained areas.
- Strong, safe Anti Wind-Up Ratchet available on most models for safe and comfortable operation.
- A wide range of alternative reaction arms are available as per customers requirement, making the Torque Multiplier adaptable to many applications.

MODEL	GEAR RATIO	TORQUE OUTPUT CAPACITY (MAX.)		SUITABLE FOR BOLT SIZE	DIA. (mm)	HEIGHT (mm)	INPUT DRIVE FEMALE (inch)	OUTPUT DRIVE MALE (inch)	REQUIRED TORQUE WRENCH	WEIGHT (kg)
		ft. lbs.	Nm							
HFTMC-15	4:1	1250	1700	M16-M27	80	175	3/4"	1"	HFTW-410R	3.0
HFTMC-25	7:1	1700	2300	M20-M30	80	310	1/2"	1"	HFTW-250R	5.2
HFTMC-35	10:1	2660	3600	M20-M36	80	285	3/4"	1"	HFTW-410R	5.1
HFTMC-40	11:1	2960	4000	M20-M39	95	245	3/4"	1 1/2"	HFTW-410R	6.1
HFTMC-65	15:1	4590	6200	M27-M42	114	240	3/4"	1 1/2"	HFTW-410R	8.4
HFTMC-90	32:1	6370	8600	M33-M48	172	300	1/2"	1 1/2"	HFTW-250R	21.5

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# PIPE CUTTING & BEVELING MACHINE

## AB-CBM SERIES OD MOUNTED PIPE CUTTING & BEVELING MACHINE

The cold cutting machine is a portable machining tool featuring a split-frame design and dedicated cutting blades for pipe sectioning.

Machine Functions: Cutting, Beveling, Facing, Counter boring, Shaft OD machining/Grinding

**Light Weight**

**Easy Installation**

**Fast & Precision Quality Operations**

**Heavy Thickness Cut**

### OTHER FEATURES:

- Lower axial and radial clearance, light weight suitable for working at narrow and complicated site
- Can separate to two half, it's easy for the pipe when two end not open.
- The machines do the cutting and beveling simultaneously
- The tool not only can process carbon steel, stainless steel and alloy pipe with U, V welding seam, also can process convex flange welded.

### APPLICATION RANGE:

- They are widely used in the fields of petroleum, chemical, natural gas, power supply construction, boiler and nuclear power

### DRIVING TYPE:

- Electric-OCE, Pneumatic-OCP, Hydraulic-OCH, Numerical Controller-OCS

### SAFETY:

- Eliminates Health Risks: No hazardous gas fumes or sparks are generated during operation.
- Enhanced Safety: Facilitates remote operation, minimizing operator exposure.

### EFFICIENCY:

- Streamlined Setup: Enables quick and effortless installation.
- Portability and Maneuverability: Lightweight and portable design for convenient transportation and jobsite use.
- Single-Step Completion: Achieves both cutting and beveling in one efficient pass.
- Superior Cutting Speed: Offers significantly faster cutting compared to gas cutting technology.
- Reduced Jobsite Transitions: Minimizes downtime associated with equipment relocation.

### COST-EFFECTIVENESS:



- Low Consumables: Requires minimal replacement parts, reducing operational costs.
- Reduced Maintenance Requirements: Streamlined maintenance procedures for optimal performance.
- Optimized Manpower Needs: Efficient operation minimizes required personnel.
- Sustainable Tooling: Utilizes re-grindable cutting tools, maximizing lifespan and minimizing waste.

### QUALITY:

- Precision Cutting: Delivers accurate and consistent cuts every time.
- Controlled Beveling: Enables precise bevel angles as specified by drawings.

# PIPE CUTTING & BEVELING MACHINE

## EM ELECTRIC

### OD-Mounted Electric Series:

- Power Supply: 220-240V 1PH 50-60HZ
- Motor Power: 1.5-2KW

### Electric (OCE):

- Motor Power: 1800W / 2000W
- Working Voltage: 220-240V
- Working Frequency: 50-60Hz
- Working Current: 8-10A



## PM PNEUMATIC

- Working Pressure: 0.8-1.0 mpa
- Working Air Consumption: 1000-2000 l/min
- Single/Double Motor Drive Available

## HM HYDRAULIC

- Working Power of Hydraulic Station: 5.5kW, 7.5kW, 11kW
- Working Voltage: 380V 3 Phase 5 Wire (Other Voltages can be Customized)
- Working Frequency: 50Hz
- Rated Pressure: 10MPa
- Rated Flow: 50-45 l/min (Stepless Speed Regulation)
- With 50 Meters Remote Control, PLC Control



## SM (CNC) NUMERICAL CONTROL (SERVO)

- Servo Motor Power: 2.3kW-4.0kW (Customizable Non-Standard)
- Working Voltage: 220V / 380V
- Working Frequency: 50-60Hz
- Equipped with Remote 50 Meter Remote Start Stop

# PIPE CUTTING & BEVELING MACHINE

## MACHINE USAGE APPLICATION

### FABRICATION YARDS & SHOPS:

- **Precise Pipe Length Cutting:** Achieve accurate cuts to exact specifications, eliminating material waste and ensuring proper pipe fitting during assembly.
- **Streamlined Joining Preparation:** Prepare pipe ends for welding, flanging, or other joining methods by creating smooth, clean surfaces for optimal joint integrity.

### HAZARDOUS AREAS:

- **Safe Cutting of Hazardous Materials:** Cut and bevel pipes containing flammable or toxic materials (crude oil, petrol, diesel, gas, chemicals) without generating sparks, minimizing the risk of explosions or fires. This ensures a safer work environment for personnel.
- **Spark-Free Beveling:** Create precise bevels on pipe ends for welding, even in environments with strict spark control requirements.

### VERSATILITY:

- **Broad Material Compatibility:** Cut and bevel a wide range of steel pipe materials used in various applications. This eliminates the need for specialized cutting equipment for different pipe types.

### ADDITIONAL CAPABILITIES:

- **Internal Machining:** Perform internal machining of pipe ends to achieve specific angles required for joining or other processes. This eliminates the need for separate machining equipment and streamlines the overall workflow.

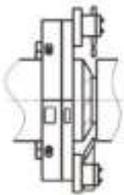
### HIGH CAPACITY:

- **Handles Thick Pipes:** The machine can handle pipes with wall thicknesses up to 110 mm using standard accessories. This eliminates the need for additional equipment or modifications for thicker pipes encountered in demanding applications.

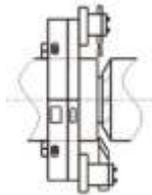
### PLANT SHUTDOWNS & PROJECT WORK:

- **High Wall Thickness Capability:** Effectively cut and bevel pipes with thick walls, commonly encountered during plant shutdowns and large-scale projects. This eliminates the need for slower, less efficient cutting methods like oxy-fuel cutting.
- **Reduced Downtime:** The machine's portability and quick setup minimize downtime associated with equipment mobilization and preparation, allowing for faster completion of cutting tasks on large projects.

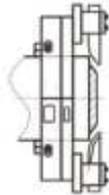
## PROCESSING DRAWING



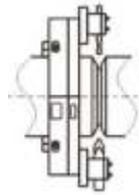
A - Cutting & Beveling (RH)



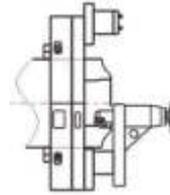
B - Cutting & Beveling (LH)



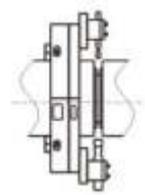
C - 37.5 & 10 Degree Compound Beveling



D - Double V Beveling



E - Counter Boring



F - Cold Cutting

## PROCESSING SCHEMATIC

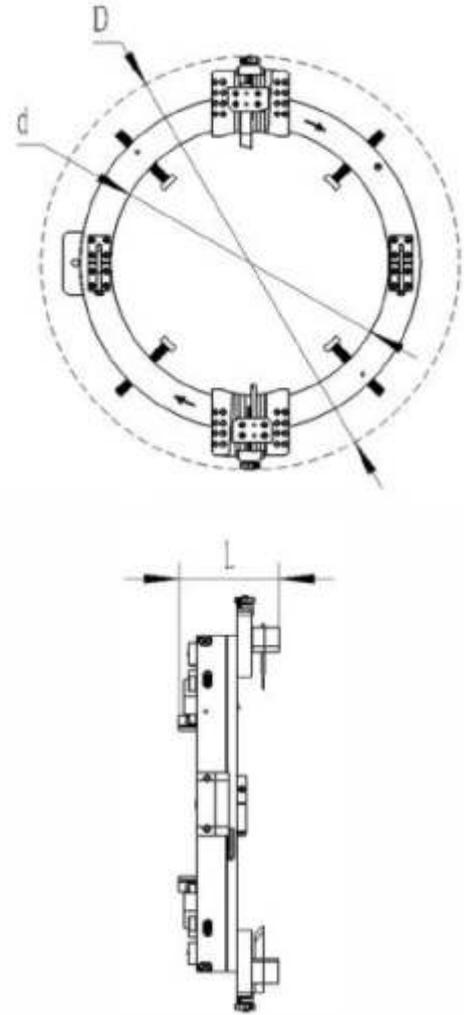
MODEL	SPECIFICATION	CAPACITY (OD)		WALL THICKNESS		ROTATION SPEED
		mm	in	STANDARD	HEAVY DUTY	
AB-CBM-106	89	25-89	1-3	≤30	-	42
AB-CBM-206	168	50-168	2-6	≤30	≤50	20
AB-CBM-308	230	80-230	3-8	≤30	≤50	15
AB-CBM-510	275	125-275	5-10	≤30	≤70	15
AB-CBM-610	305	150-305	6-10	≤30	≤110	13
AB-CBM-612	325	168-325	6-12	≤30	≤110	13
AB-CBM-814	377	219-377	8-14	≤30	≤110	13
AB-CBM-1016	426	273-426	10-16	≤30	≤110	12
AB-CBM-1218	457	300-457	12-18	≤30	≤110	12
AB-CBM-1420	508	355-508	14-20	≤30	≤110	11
AB-CBM-1622	560	400-560	16-22	≤30	≤110	11
AB-CBM-1824	610	457-610	18-24	≤30	≤110	11
AB-CBM-2024	630	480-630	20-24	≤30	≤110	11
AB-CBM-2026	660	508-660	20-26	≤30	≤110	11
AB-CBM-2228	715	560-715	22-28	≤30	≤110	10
AB-CBM-2430	762	610-762	24-30	≤30	≤110	10
AB-CBM-2632	830	660-830	26-32	≤30	≤110	10
AB-CBM-3036	914	762-914	30-36	≤30	≤110	10
AB-CBM-3642	1066	914-1066	36-42	≤30	≤110	9
AB-CBM-4248	1230	1066-1230	42-48	≤30	≤110	9
AB-CBM-4856	1430	1219-1430	48-56	≤30	≤110	8
AB-CBM-5664	1630	1422-1630	56-64	≤30	≤110	7
AB-CBM-6472	1830	1630-1830	64-72	≤30	≤110	6

Note: Non-standard machines are available according to customers requirement.

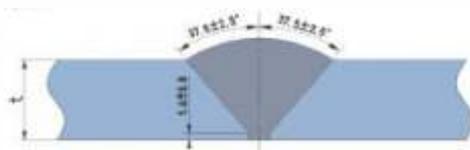
# PIPE CUTTING & BEVELING MACHINE

## OD MOUNTED PIPE CUTTING AND BEVELING MACHINE

MODEL SIZE	d (mm)	D (mm)	L (mm)
AB-CBM-106	95	300	160
AB-CBM-206	185	480	178
AB-CBM-308	236	535	178
AB-CBM-510	283	584	178
AB-CBM-610	316	608	178
AB-CBM-612	334	636	178
AB-CBM-814	386	690	178
AB-CBM-1016	438	744	180
AB-CBM-1218	466	772	180
AB-CBM-1420	518	828	190
AB-CBM-1622	570	878	190
AB-CBM-1824	620	928	190
AB-CBM-2024	643	965	190
AB-CBM-2026	670	978	190
AB-CBM-2228	720	1050	190
AB-CBM-2430	772	1110	190
AB-CBM-2632	840	1174	192
AB-CBM-3036	928	1260	212
AB-CBM-3642	1078	1513	212
AB-CBM-4248	1248	1584	212
AB-CBM-4856	1438	1784	220



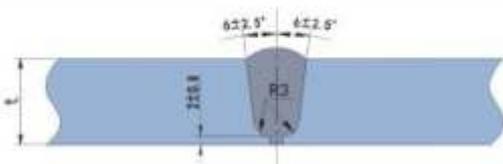
## WELDING ANGLE DIAGRAM



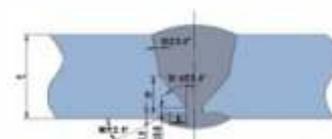
37.5 deg. V T Type Beveling with 1.6mm Root



30 deg. U Type Beveling with 1.6mm Root, R= 3mm



6 deg. U Type Beveling with 2mm Root, R= 5mm



Compound Beveling According to ASME B16.[1].25

# PIPE CUTTING & BEVELING MACHINE

## ACCESSORIES

### STANDARD TOOL SLIDE

**Applicable processing wall thickness  $\leq 30\text{mm}$**

Clamshell C/W the standard tool slide as standard supply with standard tool bits, achieve cut/bevel up to 30mm wall thickness in one pass.



### HEAVY WALL TOOL SLIDE

**Applicable processing wall thickness  $\leq 70\text{mm}$**

Special for heavy walled pipe, especially for power plant with special tool bits, achieve cut/bevel up to 70mm wall thickness in multi passes.



### BRIDGE TOOL SLIDE

**Suitable for ultra-thick pipe processing, maximum thickness not exceeding 110mm**

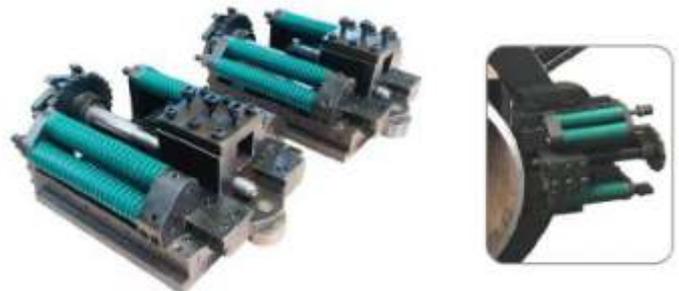
Complete with counterbore/I.D beveling tool, I.D beveling angle available for adjust. Special for heavy walled pipe, achieve cut/bevel up to 110mm wall thickness in multi passes also can process flange facing.



### TRACKING TOOL SLIDE

**Suitable for high-precision processing or deformed pipes with diameters greater than 700mm for foot length compensation**

O.D tracking slide compensate for out-of-round pipe travel along the OD makes the bevel face balanced Usually apply on large size diameter pipe.



### UNIVERSAL COUNTER BORING TOOL SLIDE

**Used for processing the inner wall of pipes**

Performs inside beveling and counter boring

Tool Feed: Manually

Max. Travel: 70mm.



### TOOL HOLDER FOR PIPE OUTER WALL MACHINING

**Used for trimming the outer wall of pipes and removing anti-corrosion layers**

Pipe outer wall axial processing tool post to removal of anti-corrosion layer and turning.



# PIPE CUTTING & BEVELING MACHINE

## SELECTION OF HYDRAULIC STATION

### PLC TYPE HYDRAULIC STATION

POWER SUPPLY	7.5kW
WORKING VOLTAGE	380V, 3 PH, 5 Lines
WORKING FREQUENCY	50Hz
RATED WORKING PRESSURE	10Mpa
RATED FLOWING	0-36 l/min
CONTROL SYSTEM	PLC Control
WORKING SPEED	Remote Control
CONTROL PANEL	Electronic Display
OPEN WAY	Manual/Remote Control
OIL LINE LENGTH	6m (Standard)
NET WEIGHT (KG)	239Kg



### EXPLOSION-PROOF HYDRAULIC STATION

POWER SUPPLY	7.5kW
WORKING VOLTAGE	380V, 3 PH, 5 Lines
WORKING FREQUENCY	50Hz
EXPLOSION-PROOF GRADE	BT4 / CT4
RATED WORKING PRESSURE	10Mpa
RATED FLOWING	36 l/min
OPEN WAY	Manual / Remote Control
OIL LINE LENGTH	6m (Standard)



### DIESEL POWER HYDRAULIC STATION

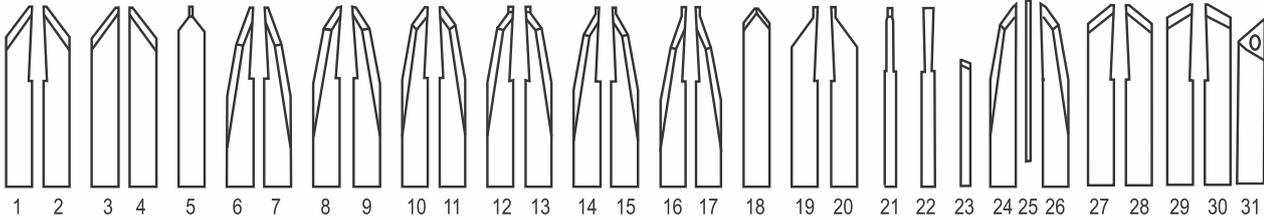
ENGINE POWER	22HP (15KW)
RATED WORKING PRESSURE	10Mpa
RATED FLOWING	50 l/min
OPEN WAY	Manual



Need other power, rated flowing, explosion-proof grade, etc., can be customized.

# PIPE CUTTING & BEVELING MACHINE

## STANDARD AB-CBM TOOLING



Item	DESCRIPTION
1	37° R.H. Bevel, 7-inch (178 mm)
1	37° R.H. Bevel, 3.5-inch (89 mm)
2	37° L.H. Bevel, 7-inch (178 mm)
	37° L.H. Bevel, 3.5-inch (89 mm)
3*	37° R.H. Double Bevel, 7-inch (178 mm)
3*	37° R.H. Double Bevel, 3.5-inch (89 mm)
4*	37° L.H. Double Bevel, 7-inch (178 mm)
4*	37° L.H. Double Bevel, 3.5-inch (89 mm)
5	37° Double Bevel Sever, 7-inch (178 mm)
5	37° Double Bevel Sever, 3.5-inch (89 mm)
6	20° - 10° R.H. Bevel, 7-inch (178 mm)
7	20° - 10° L.H. Bevel, 7-inch (178 mm)
8	30° - 10° R.H. Bevel, 7-inch (178 mm)
9	30° - 10° L.H. Bevel, 7-inch (178 mm)
10	37° - 10° R.H. Bevel, 7-inch (178 mm)
11	37° - 10° L.H. Bevel, 7-inch (178 mm)
12	37° - 10° R.H. Sever, 7-inch (178 mm)
13	37° - 10° L.H. Sever, 7-inch (178 mm)
14	30° - 10° R.H. Sever, 7-inch (178 mm)
15	30° - 10° L.H. Sever, 7-inch (178 mm)
16	20° - 10° R.H. Sever, 7-inch (178 mm)
17	20° - 10° L.H. Sever, 7-inch (178 mm)
	37° Double Bevel, 7-inch (178 mm)

Item	DESCRIPTION
19	37° R.H. Sever, 7-inch (178 mm)
19	37° R.H. Sever, 3.5-inch (89 mm)
20	37° L.H. Sever, 7-inch (178 mm)
20	37° L.H. Sever, 3.5"
21	1/4-inch (6.35 mm) Sever, 7-inch (178 mm)
21	1/4-inch (6.35 mm) Sever, 3.5-inch (89 mm)
22	3/8-inch (9.53 mm) Sever, 7-inch (178 mm)
22	3/8-inch (9.53 mm) Sever, 3.5-inch (89 mm)
23	10° Counter Bore, 2- inch (50.8 mm)
24*	37° - 10° R.H. Double Bevel, 7-inch (178 mm)
25*	1/8-inch (3.18 mm) Sever, 6-inch (152.4)
26*	37° - 10° L.H. Double Bevel, 7-inch (178 mm)
27	45° R.H. Bevel, 7-inch (178 mm)
27	45° R.H. Bevel, 3.5-inch (89 mm)
28	45° L.H. Bevel, 7-inch (178 mm)
28	45° L.H. Bevel, 3.5-inch (89 mm)
29	30° R.H. Bevel, 7-inch (178 mm)
29	30° R.H. Bevel, 3.5-inch (89 mm)
30	30° L.H. Bevel, 7-inch (178 mm)
30	30° L.H. Bevel, 3.5-inch (89 mm)

\* Blades used as a set. Carbide Insert

CARBIDE HOLDERS
<b>Max depth of cut/max wall capacity = 3.5-inches [89 mm]</b>
#4 Insert Holder
#6 Insert Holder
#8 Insert Holder
#10 Insert Holder
<b>37° Insert holder max wall capacity = 1.090" (27.7 mm)</b>
37° x 3.5-inch (89 mm) RH Insert Holder
37° x 3.5-inch (89 mm) LH Insert Holder
37° x 7-inch (178 mm) RH Insert Holder
37° x 7-inch (178 mm) LH Insert Holder
<b>30° Insert holder max wall capacity = 1.190" (30.2mm)</b>
30° x 3.5-inch (89 mm) RH Insert Holder
30° x 3.5-inch (89 mm) LH Insert Holder
30° x 7-inch (178 mm) RH Insert Holder
30° x 7-inch (178 mm) LH Insert Holder
<b>37° - 30° Max wall capacity = 3.180-inch (80.8 mm)</b>
37° - 30° x 7-inch (178 mm) RH Insert Holder
37° - 30° x 7-inch (178 mm) LH Insert Holder

CARBIDE INSERT
<b>Max depth of cut/max wall capacity = 3.5-inches [89 mm]</b>
#4 Insert
#6 Insert
#8 Insert (M5 X 0.80 X 20mm screw)
#10 Insert (M6 X 1.0 X 25mm screw)
<b>37° Insert holder max wall capacity = 1.090" (27.7 mm)</b>
RH Bevel Insert
LH Bevel Insert
M4 Torx screw
<b>30° Insert holder max wall capacity = 1.190" (30.2mm)</b>
RH Bevel Insert
LH Bevel Insert
M4 Torx screw
<b>37° - 30° Max wall capacity = 3.180-inch (80.8 mm)</b>
RH Bevel Insert
LH Bevel Insert
M4 Torx screw

Customize solution available on request.

# PIPE CUTTING & BEVELING MACHINE

## T-TYPE BEVELING MACHINE

### PRODUCT DESCRIPTION

- Quick and easy ID mounting, self locates centre of the pipe.
- Beveling and grooving with high speed. Used for the welding preparation.
- Can process facing, flange, convex surface and seal groove.
- Cold cutting process will not influence the quality of the material of the pipe.
- High quality beveling tool, can process different grades of carbon steel, alloy steel, stainless steel and so on.
- Can process the U, V and J shape of pipe beveling according to the requirements.

### SPECIFICATIONS

#### HSDS SERIES ELECTRIC

Driven by low-energy consumption electric motor 110V or 220V optional, 50-60Hz

### SPECIFICATIONS

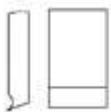
#### HTCM SERIES PNEUMATIC

Driven by pneumatic motor.  
Air working pressure: 0.6-0.8Mpa,  
Air consuming flux: 650-960L/min



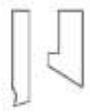
### BEVELING TYPES

- Other bevel angles for alloy steel, cast steel.



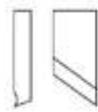
0°

CUTTING  
TOOL



30°

BEVELLING  
TOOL



37°

BEVELLING  
TOOL



15°

INSIDE BEVELLING  
TOOL



SDC/TCM-28T



SDC/TCM-80T



SDC/TCM-150T

MODEL SIZE	SIZE	WORKING RANGE (ID) mm	WALL THICKNESS mm	RATED POWER kW	ROTATING RATE rpm
Electric: HSDC	80T	28-76	≤15	0.9	53
	120T	45-93	≤20	1.43	34
Pneumatic: HTCM	150T	65-159	≤20	1.43	34
	350T	150-330	≤20	1.43	34

# EXTERNAL CARD FLANGE PROCESSING MACHINE

## Product introduction:

- Adapting the method of external card clamping the mechanism Supports high rigidity and can be used for the horizontal and vertical knife holders of the Lan Guang knife, as well as the feed handwheel with scale display. It is used for processing the inner holes of flanges and various forms of sealing surfaces (RF, RAT, etc.)



## Characteristic:

- The modular design concept enables quick installation and disassembly, meeting serious processing environments:
- The equipment adopts precision circular guide rails, with long service life and high stability.
- The machine operates smoothly without vibration
- High precision mechanical transmission mechanism ensures horizontal, inserted, and vertical installation of the machine
- The fixed method adjusts external card type multi-angle support, which is more stable in fixation
- The tool holder is rotatable to meet different processing environments.



## Specification

MODEL			CLAMPING RANGE	WORKING RANGE	TOOL TRAVEL	ROTATION
WFDP-610	WFDG-610	WFDH-610	Ø 150-610	Ø 0-610	95	0-24
WFDP-1000	WFDG-1000	WFDH-1000	Ø 500-1000	Ø 0-1000	95	0-20
WFDP-1500	WFDG-1500	WFDH-1500	Ø 1000-1500	Ø 0-1500	95	0-15
WFDP-2000	WFDG-2000	WFDH-2000	Ø 1500-2000	Ø 0-2000	95	0-13
WFDP-2500	WFDG-2500	WFDH-2500	Ø 2000-2500	Ø 0-2500	95	0-10
WFDP-3000	WFDG-3000	WFDH-3000	Ø 2500-3000	Ø 0-3000	95	0-8

Note: Non-Standard machines are available according to customer's requirement

# FLANGE FACING MACHINE - INTERNAL MOUNTED

## Main Performance:

- Flange Facer Machine are Multi-Function series machine. The Product make up with three parts, have four clamp support, Internal mounted small working radius The novel tool holder design can be rotated 360 degrees high efficiency. Suitable for all types of flange facing, seal groove machining, weld prep and counter boring. It special for pipe, valve, pump flanges etc.

## Feature:

- Compact structure Light weight, easy to carry out.
- Have scale of feed handwheel, improve feed accuracy
- Automatic feeding in the axial direction and the radial direction, high efficiency
- Horizontal, vertical, inverted, tilt etc, any direction both can processed.
- Can process flat face, water line, Continuous groove RTJ groove etc
- Driven Pneumatic Hydraulic, CNC



WFS-610



WFP-1000



WFS-2000

## Specification

MODEL	SPEC.	FACING RANGE (O.D)	MOUNTING RANGE (I.D)	TOOL FEED STROKE	TOOL HOLDER SWIVEL ANGLE	ROTATION SPEED
WFP	610	50-610 mm	50-508 mm	50 mm	+30°	0-42r/min
	1000	160-1000 mm	158-820 mm	102 mm	+360°	0-33r/min
WFH	1650	500-1650 mm	500-1500 mm	102 mm	+360°	0-22r/min
WFS	2000	690-2200 mm	690-2000 mm	102 mm	+360°	0-20r/min
	3000	1150-3000 mm	1120-2800 mm	102 mm	+360°	3-12r/min

Note: Non-Standard machines are available according to customer's requirement

# 1/2" IMPACT SOCKETS

ABS Sockets play a vital role in transmitting torque efficiently and securely. These versatile accessories seamlessly connect your tool to the fastener you're working with, ensuring a smooth and effective tightening or loosening process.

- We offer a wide impact sockets with square drives of 1/2" to 2-1/2" with multiple types of 6 point, 12 point, standard length and deep length.
- Sockets available in METRIC sizes ranging with A/F sizes from 8mm to 225mm whereas IMPERIAL range starts from A/F size of 9/16" which goes all the way up to 9-1/4".
- Allen key sockets available with square drives of 1/2" to 1-1/2" with A/F sizes as per standard and customer specific requirements.

We can provide customized solutions in all types of sockets to meet the customer's application.

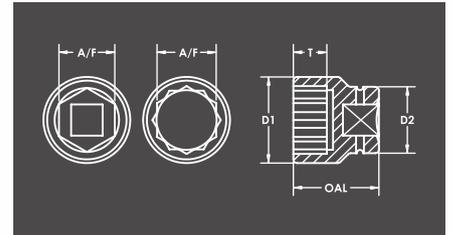


## Material

Typically made from chrome vanadium steel or other high-strength materials for durability and resistance to wear and tear.

## Size Markings

Clearly marked with their size for easy identification and selection.

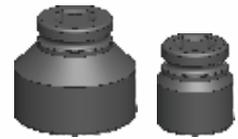


METRIC HEXAGON	A/F mm	D1 mm	D2 mm	T mm	OAL mm	WT. kg
	8	15	25	10	38	0.06
	10	17	25	10	38	0.09
	11	19	25	12	38	0.09
	12	20	25	12	38	0.09
	13	21	25	12	38	0.09
	14	22	25	13	38	0.09
	15	24	30	14	38	0.13
	16	25	30	14	38	0.13
	17	26	30	14	38	0.13
	18	27.5	30	14	38	0.13
	19	27.5	30	16	38	0.13
	20	30	30	16	38	0.13
	21	30	30	18	38	0.13
	22	32	30	18	38	0.14
	23	32	30	18	38	0.14
24	35	30	21	45	0.17	
27	38	30	23	50	0.26	
30	41	30	24	50	0.29	
32	44	30	26	50	0.30	
36	49	35	28	50	0.30	

IMPERIAL HEXAGON	A/F inch	D1 inch	D2 inch	T inch	OAL inch	WT. lbs
	5/16"	15	25	10	38	0.06
	3/8"	16	25	10	38	0.09
	7/16"	18	25	12	38	0.09
	1/2"	20	25	12	38	0.09
	9/16"	22	25	13	38	0.09
	5/8"	25	25	14	38	0.09
	11/16"	25	25	14	38	0.09
	3/4"	27.5	30	16	38	0.13
	13/16"	30	30	16	38	0.13
	7/8"	32	30	18	38	0.14
	15/16"	35	30	18	38	0.16
	1"	35	30	21	38	0.20
	1-1/16"	38	30	23	50	0.26
	1-1/8"	38	30	23	50	0.26
	1-3/16"	41	30	24	50	0.29
1-1/4"	44	35	24	50	0.29	
1-3/8"	49	38	28	50	0.30	

## 3/4" IMPACT SOCKETS

# TORQUING ACCESSORIES



METRIC HEXAGON	A/F mm	D1 mm	D2 mm	T mm	C mm	OAL mm	WT. kg
	17	30.0	42.0	12.0	21.0	45.0	0.303
	19	32.0	42.0	12.0	21.0	45.0	0.306
	21	36.0	42.0	13.0	24.0	48.0	0.336
	22	37.0	42.0	13.0	24.0	48.0	0.338
	23	39.0	42.0	13.0	24.0	48.0	0.348
	24	39.0	42.0	15.0	24.0	48.0	0.348
	26	41.0	44.0	15.0	24.0	48.0	0.376
	27	44.0	44.0	16.0	24.0	48.0	0.396
	28	44.0	44.0	16.0	24.0	48.0	0.388
	30	47.0	44.0	18.0	27.0	51.0	0.443
	32	49.0	44.0	18.0	27.0	51.0	0.453
	33	50.0	44.0	18.0	27.0	51.0	0.459
	34	52.0	44.0	20.0	30.0	54.0	0.509
	36	54.0	54.0	20.0	30.0	54.0	0.647
	38	57.0	54.0	23.0	35.0	59.0	0.754
	41	61.0	54.0	23.0	35.0	59.0	0.811
42	62.0	54.0	25.0	35.0	59.0	0.814	
43	63.0	54.0	25.0	38.0	62.0	0.862	
46	67.0	54.0	25.0	38.0	62.0	0.941	
50	70.0	54.0	28.0	41.0	65.0	0.968	

IMPERIAL HEXAGON	A/F inch	D1 inch	D2 inch	T inch	C inch	OAL inch	WT. lbs
	9/16	1.131	1.654	0.472	0.827	1.772	0.620
	5/8	1.181	1.654	0.472	0.827	1.772	0.670
	11/16	1.211	1.654	0.472	0.827	1.772	0.670
	3/4	1.260	1.654	0.472	0.827	1.772	0.670
	13/16	1.417	1.654	0.512	0.945	1.890	0.740
	7/8	1.535	1.654	0.512	0.945	1.890	0.770
	15/16	1.535	1.654	0.591	0.945	1.890	0.750
	1	1.614	1.732	0.591	0.945	1.890	0.830
	1.1/16	1.732	1.732	0.630	0.945	1.890	0.870
	1.1/8	1.850	1.732	0.709	1.063	2.008	0.970
	1.3/16	1.880	1.732	0.709	1.063	2.008	0.970
	1.1/4	1.929	1.732	0.709	1.063	2.008	1.000
	1.5/16	2.047	1.732	0.787	1.181	2.126	1.120
	1.3/8	2.076	2.126	0.787	1.181	2.126	1.400
	1.7/16	2.106	2.126	0.787	1.181	2.126	1.400
	1.1/2	2.344	2.126	0.906	1.378	2.323	1.660
	1.9/16	2.352	2.126	0.906	1.378	2.323	1.760
	1.5/8	2.441	2.126	0.984	1.378	2.323	1.790
	1.11/16	2.480	2.126	0.984	1.496	2.441	1.900
1.3/4	2.688	2.126	0.984	1.496	2.441	2.070	
1.13/16	2.688	2.126	0.984	1.496	2.441	2.070	

## 3/4" DEEP IMPACT SOCKETS

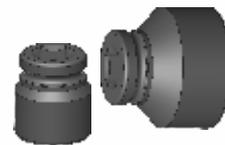


METRIC DEEP HEXAGON	A/F mm	D1 mm	D2 mm	T mm	C mm	OAL mm	WT. kg
	17	30.0	42.0	12.0	61.0	85.0	0.463
	19	32.0	42.0	12.0	61.0	85.0	0.479
	21	36.0	42.0	13.0	61.0	85.0	0.542
	22	37.0	42.0	13.0	61.0	85.0	0.551
	23	39.0	42.0	13.0	61.0	85.0	0.586
	24	40.0	42.0	15.0	61.0	85.0	0.595
	26	41.0	42.0	15.0	66.0	85.0	0.618
	27	43.0	43.0	16.0	66.0	90.0	0.674
	28	44.0	44.0	16.0	66.0	90.0	0.699
	30	47.0	44.0	18.0	66.0	90.0	0.769
	32	49.0	44.0	18.0	66.0	90.0	0.798
	33	50.0	44.0	18.0	66.0	90.0	0.812
	34	52.0	44.0	20.0	66.0	90.0	0.869
	36	54.0	54.0	20.0	66.0	90.0	1.034
	38	57.0	54.0	23.0	66.0	90.0	1.125
	41	61.0	54.0	23.0	66.0	90.0	1.229
42	62.0	54.0	25.0	66.0	90.0	1.241	
43	63.0	54.0	25.0	66.0	90.0	1.255	
46	67.0	54.0	25.0	76.0	100.0	1.563	
50	70.0	54.0	28.0	76.0	100.0	1.573	

IMPERIAL DEEP HEXAGON	A/F inch	D1 inch	D2 inch	T inch	C inch	OAL inch	WT. lbs
	9/16	1.131	1.654	0.472	2.402	3.346	0.970
	5/8	1.181	1.654	0.472	2.402	3.346	1.020
	11/16	1.211	1.654	0.472	2.402	3.346	1.040
	3/4	1.260	1.654	0.472	2.402	3.346	1.050
	13/16	1.417	1.654	0.512	2.402	3.346	1.190
	7/8	1.535	1.654	0.512	2.402	3.346	1.290
	15/16	1.575	1.654	0.591	2.402	3.346	1.310
	1	1.614	1.654	0.591	2.598	3.543	1.360
	1.1/16	1.693	1.693	0.630	2.598	3.543	1.480
	1.1/8	1.850	1.732	0.709	2.598	3.543	1.690
	1.3/16	1.880	1.732	0.709	2.598	3.543	1.710
	1.1/4	1.929	1.732	0.709	2.598	3.543	1.760
	1.5/16	2.047	1.732	0.787	2.598	3.543	1.910
	1.3/8	2.126	2.126	0.787	2.598	3.543	2.280
	1.7/16	2.156	2.126	0.787	2.598	3.543	2.300
	1.1/2	2.244	2.126	0.906	2.598	3.543	2.470
	1.9/16	2.402	2.126	0.906	2.598	3.543	2.700
	1.5/8	2.441	2.126	0.984	2.598	3.543	2.730
	1.11/16	2.480	2.126	0.984	2.598	3.543	2.760
1.3/4	2.638	2.126	0.984	2.992	3.937	3.440	
1.13/16	2.456	2.126	1.102	2.992	3.937	3.410	
1.7/8	2.456	2.126	1.102	2.992	3.937	3.410	
2	2.731	2.441	1.181	2.992	3.937	4.180	

\*Bihexagon socket available in all sizes.

# 1" IMPACT SOCKETS



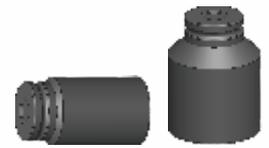
METRIC HEXAGON	A/F	D1	D2	T	C	OAL	WT.
	mm	mm	mm	mm	mm	mm	kg
17	36.0	51.0	14.0	25.0	55.0	0.51	
19	36.0	51.0	14.0	25.0	55.0	0.51	
20	36.0	51.0	14.0	25.0	55.0	0.50	
21	38.0	51.0	14.0	25.0	55.0	0.52	
22	40.0	51.0	14.0	25.0	55.0	0.53	
23	40.0	51.0	14.0	25.0	55.0	0.52	
24	42.0	51.0	16.0	27.0	57.0	0.55	
25	43.0	51.0	16.0	27.0	57.0	0.55	
26	45.0	51.0	16.0	27.0	57.0	0.56	
27	46.0	51.0	16.0	27.0	57.0	0.57	
28	47.0	51.0	16.0	27.0	57.0	0.57	
29	48.0	51.0	18.0	29.0	59.0	0.59	
30	49.0	54.0	18.0	29.0	59.0	0.66	
31	50.0	54.0	18.0	29.0	59.0	0.66	
32	52.0	54.0	18.0	29.0	59.0	0.68	
33	54.0	54.0	18.0	29.0	59.0	0.69	
34	54.0	54.0	20.0	31.0	61.0	0.70	
35	54.0	54.0	20.0	31.0	61.0	0.69	
36	57.0	54.0	20.0	31.0	61.0	0.78	
37	57.0	54.0	20.0	31.0	61.0	0.76	
38	59.0	54.0	22.0	34.0	64.0	0.84	
39	60.0	54.0	22.0	34.0	64.0	0.88	
40	60.0	54.0	22.0	34.0	64.0	0.85	
41	62.0	54.0	22.0	34.0	64.0	0.90	
42	64.0	54.0	24.0	36.0	66.0	0.97	
43	65.0	54.0	24.0	36.0	66.0	0.98	
44	66.0	54.0	24.0	36.0	66.0	0.98	
45	68.0	54.0	24.0	36.0	66.0	1.03	
46	68.0	54.0	26.0	38.0	68.0	1.02	
47	71.0	54.0	26.0	38.0	68.0	1.02	
48	71.0	54.0	26.0	38.0	68.0	1.08	
49	74.0	54.0	28.0	40.0	70.0	1.17	
50	74.0	54.0	28.0	40.0	70.0	1.17	
51	77.0	62.0	30.0	40.0	70.0	1.40	
52	77.0	62.0	30.0	40.0	70.0	1.40	
54	79.0	62.0	30.0	40.0	70.0	1.42	
55	79.0	62.0	30.0	44.0	74.0	1.45	
56	80.0	62.0	31.0	44.0	74.0	1.46	
57	84.0	62.0	32.0	44.0	74.0	1.59	
58	84.0	62.0	32.0	44.0	74.0	1.59	
59	87.0	62.0	33.0	47.0	77.0	1.75	
60	87.0	62.0	33.0	47.0	77.0	1.75	
62	90.0	62.0	34.0	49.0	79.0	1.89	
65	93.0	62.0	36.0	51.0	81.0	1.99	
70	99.0	86.0	38.0	54.0	84.0	2.81	
75	104.0	86.0	40.0	56.0	89.0	3.08	
80	112.0	86.0	43.0	58.0	91.0	3.54	
85	119.0	86.0	50.0	60.0	93.0	3.85	
90	122.0	86.0	50.0	62.0	95.0	3.84	
95	130.0	106.0	53.0	64.0	97.0	5.13	
100	134.0	106.0	56.0	66.0	99.0	5.20	
105	142.0	106.0	59.0	68.0	101.0	5.83	
110	147.0	106.0	62.0	72.0	105.0	6.00	
115	153.0	127.0	66.0	72.0	105.0	7.36	

IMPERIAL HEXAGON	A/F	D1	D2	T	C	OAL	WT.
	inch	inch	inch	inch	inch	inch	lbs
11/16	1.417	2.008	0.551	0.984	2.165	1.13	
3/4	1.417	2.008	0.551	0.984	2.165	1.13	
13/16	1.496	2.008	0.551	0.984	2.165	1.13	
7/8	1.575	2.008	0.551	0.984	2.165	1.14	
15/16	1.654	2.008	0.630	1.063	2.244	1.20	
1	1.772	2.008	0.630	1.063	2.244	1.24	
1.1/16	1.811	2.008	0.630	1.063	2.244	1.25	
1.1/8	1.890	2.008	0.709	1.142	2.323	1.29	
1.3/16	1.969	2.126	0.709	1.142	2.323	1.45	
1.1/4	2.047	2.126	0.709	1.142	2.323	1.49	
1.5/16	2.126	2.126	0.787	1.220	2.402	1.54	
1.3/8	2.126	2.126	0.787	1.220	2.402	1.51	
1.7/16	2.244	2.126	0.787	1.220	2.402	1.68	
1.1/2	2.323	2.126	0.866	1.339	2.520	1.86	
1.9/16	2.362	2.126	0.866	1.339	2.520	1.88	
1.5/8	2.520	2.126	0.945	1.417	2.598	2.13	
1.11/16	2.569	2.126	0.945	1.417	2.598	2.15	
1.3/4	2.677	2.126	0.945	1.417	2.598	2.27	
1.13/16	2.677	2.126	1.024	1.496	2.677	2.30	
1.7/8	2.795	2.126	1.024	1.496	2.677	2.37	
1.15/16	2.795	2.126	1.024	1.496	2.677	2.37	
2	2.963	2.126	1.102	1.575	2.756	2.67	
2.1/16	2.963	2.126	1.102	1.575	2.756	2.67	
2.1/8	3.110	2.441	1.102	1.575	2.756	3.13	
2.3/16	3.150	2.441	1.181	1.732	2.913	3.21	
2.1/4	3.307	2.441	1.181	1.732	2.913	3.50	
2.5/16	3.307	2.441	1.181	1.732	2.913	3.50	
2.3/8	3.405	2.441	1.260	1.850	3.031	3.77	
2.7/16	3.543	2.441	1.339	1.929	3.110	4.17	
2.1/2	3.543	2.441	1.339	1.929	3.110	4.17	
2.9/16	3.711	2.441	1.417	2.008	3.189	4.38	
2.5/8	3.711	2.441	1.417	2.008	3.189	4.38	
2.11/16	3.898	3.386	1.496	2.126	3.307	6.19	
2.3/4	3.898	3.386	1.496	2.126	3.307	6.19	
2.13/16	3.898	3.386	1.496	2.126	3.307	6.19	
2.7/8	4.094	3.386	1.575	2.205	3.504	6.77	
2.15/16	4.094	3.386	1.575	2.205	3.504	6.77	
3	4.094	3.386	1.575	2.205	3.504	6.77	
3.1/16	4.425	3.386	1.654	2.283	3.583	7.80	
3.1/8	4.425	3.386	1.654	2.283	3.583	7.80	
3.3/16	4.425	3.386	1.654	2.283	3.583	7.80	
3.1/4	4.651	3.386	1.732	2.362	3.661	8.13	
3.5/16	4.742	3.386	1.732	2.362	3.661	8.40	
3.3/8	4.742	3.386	1.732	2.362	3.661	8.40	
3.7/16	4.803	3.386	1.811	2.441	3.740	8.44	
3.1/2	4.803	3.386	1.811	2.441	3.740	8.44	
3.5/8	5.118	4.173	1.890	2.520	3.819	11.29	
3.3/4	5.118	4.173	1.890	2.520	3.819	11.29	
3.7/8	5.276	4.173	1.969	2.598	3.898	11.44	
4	5.591	4.173	2.047	2.677	3.976	12.82	
4.1/8	5.591	4.173	2.047	2.677	3.976	12.82	
4.1/4	5.727	4.173	2.126	2.835	4.134	13.05	
4.3/8	6.024	5.000	2.205	2.835	4.134	16.20	
4.1/2	6.024	5.000	2.205	2.835	4.134	16.20	

\*Bihexagon socket available in all sizes.

# 1" DEEP IMPACT SOCKETS

# TORQUING ACCESSORIES

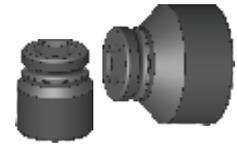


METRIC DEEP HEXAGON	A/F	D1	D2	T	C	OAL	WT.
	mm	mm	mm	mm	mm	mm	kg
17	36.0	51.0	14.0	72.0	102.0	0.79	
19	36.0	51.0	14.0	72.0	102.0	0.79	
20	36.0	51.0	14.0	72.0	102.0	0.76	
21	38.0	51.0	14.0	72.0	102.0	0.81	
22	40.0	51.0	14.0	72.0	102.0	0.86	
23	40.0	51.0	14.0	72.0	102.0	0.84	
24	42.0	51.0	16.0	72.0	102.0	0.89	
25	43.0	51.0	16.0	72.0	102.0	0.90	
26	45.0	51.0	16.0	72.0	102.0	0.95	
27	46.0	51.0	16.0	72.0	102.0	0.97	
28	47.0	51.0	16.0	72.0	102.0	0.98	
29	48.0	51.0	18.0	72.0	102.0	0.99	
30	49.0	54.0	18.0	72.0	102.0	1.07	
31	50.0	54.0	18.0	72.0	102.0	1.09	
32	52.0	54.0	18.0	72.0	102.0	1.14	
33	54.0	54.0	18.0	72.0	102.0	1.19	
34	54.0	54.0	20.0	72.0	102.0	1.16	
35	54.0	54.0	20.0	72.0	102.0	1.13	
36	57.0	54.0	20.0	69.0	102.0	1.31	
37	57.0	54.0	20.0	69.0	102.0	1.28	
38	59.0	54.0	22.0	69.0	102.0	1.38	
39	60.0	54.0	22.0	69.0	102.0	1.41	
40	60.0	54.0	22.0	69.0	102.0	1.37	
41	62.0	54.0	22.0	69.0	102.0	1.45	
42	64.0	54.0	24.0	69.0	102.0	1.53	
43	66.0	54.0	24.0	69.0	102.0	1.61	
44	66.0	54.0	24.0	69.0	102.0	1.56	
45	68.0	54.0	24.0	69.0	102.0	1.65	
46	68.0	54.0	26.0	69.0	102.0	1.59	
47	71.0	54.0	26.0	67.0	102.0	1.73	
48	71.0	54.0	26.0	67.0	102.0	1.68	
49	74.0	54.0	28.0	80.0	110.0	1.96	
50	74.0	54.0	28.0	80.0	110.0	1.96	
51	77.0	62.0	30	75.0	110.0	2.23	
52	77.0	62.0	30	75.0	110.0	2.23	
54	79.0	62.0	30	75.0	110.0	2.26	
55	79.0	62.0	30.0	75.0	110.0	2.19	
56	80.0	62.0	31	75.0	110.0	2.21	
57	84.0	62.0	32	75.0	110.0	2.42	
58	84.0	62.0	32	75.0	110.0	2.42	
59	87.0	62.0	33	80.0	115.0	2.71	
60	87.0	62.0	33	80.0	115.0	2.71	
62	90.0	62.0	34.0	80.0	115.0	2.86	
65	93.0	62.0	36.0	80.0	115.0	2.90	
70	99.0	62.0	38.0	85.0	120.0	3.28	
75	104.0	86.0	40	85.0	120.0	4.17	
80	112.0	86.0	43	85.0	120.0	4.73	
85	119.0	86.0	50	90.0	125.0	5.27	
90	122.0	86.0	50	90.0	125.0	5.15	
95	130.0	106.0	53	95.0	130.0	6.91	
100	134.0	106.0	56	95.0	130.0	6.88	
105	142.0	106.0	59	95.0	130.0	7.58	
110	147.0	106.0	62	105.0	140.0	8.38	
115	153.0	127.0	66	105.0	140.0	9.81	

IMPERIAL DEEP HEXAGON	A/F	D1	D2	T	C	OAL	WT.
	inch	inch	inch	inch	inch	inch	lbs
11/16	1.417	2.008	0.551	2.835	4.016	1.73	
3/4	1.417	2.008	0.551	2.835	4.016	1.73	
13/16	1.496	2.008	0.551	2.835	4.016	1.78	
7/8	1.575	2.008	0.551	2.835	4.016	1.85	
15/16	1.654	2.008	0.630	2.835	4.016	1.95	
1	1.772	2.008	0.630	2.835	4.016	2.10	
1.1/16	1.811	2.008	0.630	2.835	4.016	2.13	
1.1/8	1.890	2.008	0.709	2.835	4.016	2.18	
1.3/16	1.969	2.126	0.709	2.835	4.016	2.39	
1.1/4	2.047	2.126	0.709	2.835	4.016	2.51	
1.5/16	2.126	2.126	0.787	2.835	4.016	2.56	
1.3/8	2.126	2.126	0.787	2.835	4.016	2.49	
1.7/16	2.244	2.126	0.787	2.717	4.016	2.82	
1.1/2	2.323	2.126	0.866	2.717	4.016	3.03	
1.9/16	2.362	2.126	0.866	2.717	4.016	3.03	
1.5/8	2.520	2.126	0.945	2.717	4.016	3.36	
1.11/16	2.569	2.126	0.945	2.717	4.016	3.53	
1.3/4	2.677	2.126	0.945	2.717	4.016	3.62	
1.13/16	2.677	2.126	1.024	2.717	4.016	3.62	
1.7/8	2.795	2.126	1.024	2.638	4.016	3.69	
1.15/16	2.795	2.126	1.024	2.638	4.016	3.69	
2	2.963	2.126	1.102	3.150	4.331	4.41	
2.1/16	2.923	2.126	1.102	3.150	4.331	4.41	
2.1/8	3.110	2.441	1.181	2.953	4.331	4.81	
2.3/16	3.150	2.441	1.181	2.953	4.331	4.85	
2.1/4	3.307	2.441	1.181	2.953	4.331	4.85	
2.5/16	3.307	2.126	0.945	2.717	4.331	4.85	
2.3/8	3.405	2.441	1.260	3.150	4.528	6.04	
2.7/16	3.543	2.441	1.260	3.150	4.528	6.30	
2.1/2	3.543	2.126	1.024	2.638	4.528	6.30	
2.9/16	3.711	2.441	1.339	3.150	4.528	6.38	
2.5/8	3.711	2.441	1.339	3.150	4.528	6.38	
2.11/16	3.031	2.441	1.102	2.953	4.528	6.38	
2.3/4	3.898	2.441	1.417	3.346	4.724	7.22	
2.13/16	3.898	2.441	1.417	3.346	4.724	7.22	
2.7/8	4.094	3.386	1.496	3.346	4.724	9.18	
2.15/16	4.094	3.386	1.496	3.346	4.724	9.18	
3	4.094	3.386	1.496	3.346	4.724	9.18	
3.1/16	4.425	3.386	1.575	3.346	4.724	10.40	
3.1/8	4.425	3.386	1.575	3.346	4.724	10.40	
3.3/16	4.425	3.386	1.575	3.346	4.724	10.40	
3.1/4	4.651	3.386	1.654	3.543	4.921	10.84	
3.5/16	4.742	3.386	1.654	3.543	4.921	11.60	
3.3/8	4.742	3.386	1.654	3.543	4.921	11.60	
3.7/16	4.803	3.386	1.732	3.543	4.921	11.60	
3.1/2	4.803	3.386	1.732	3.543	4.921	11.60	
3.5/8	5.118	4.173	1.811	3.740	5.118	15.20	
3.3/4	5.118	4.173	1.811	3.740	5.118	15.20	
3.7/8	5.276	4.173	1.890	3.740	5.118	15.20	
4	5.591	4.173	1.969	3.740	5.118	16.68	
4.1/8	5.591	4.173	1.969	3.740	5.118	16.68	
4.1/4	5.727	4.173	2.047	4.134	5.512	18.58	
4.3/8	6.024	5.000	2.126	4.134	5.512	21.59	
4.1/2	6.024	5.000	2.126	4.134	5.512	21.59	

\*Bihexagon socket available in all sizes.

# 1 1/2" IMPACT SOCKETS



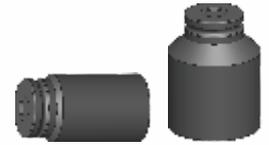
METRIC HEXAGON	A/F mm	D1 mm	D2 mm	T mm	C mm	OAL mm	WT. kg
	30	58.0	82.0	19.0	33.0	75.0	1.91
	32	58.0	82.0	19.0	33.0	75.0	1.91
	33	59.0	82.0	19.0	33.0	75.0	1.91
	34	60.0	82.0	20.0	33.0	75.0	1.91
	35	62.0	82.0	21.0	35.0	77.0	1.97
	36	63.0	82.0	21.0	35.0	77.0	1.97
	37	64.0	82.0	21.0	35.0	77.0	1.97
	38	65.0	84.0	22.0	35.0	77.0	2.07
	39	67.0	84.0	22.0	36.0	78.0	2.12
40	68.0	84.0	23.0	36.0	78.0	2.13	
41	69.0	84.0	23.0	37.0	79.0	2.14	
42	70.0	84.0	24.0	37.0	79.0	2.15	
43	71.0	84.0	24.0	38.0	80.0	2.17	
44	73.0	84.0	25.0	38.0	80.0	2.20	
45	74.0	84.0	25.0	39.0	81.0	2.22	
46	75.0	86.0	26.0	40.0	82.0	2.35	
47	77.0	86.0	27.0	40.0	82.0	2.38	
48	78.0	86.0	27.0	40.0	82.0	2.39	
49	79.0	86.0	27.0	41.0	83.0	2.41	
50	80.0	86.0	28.0	41.0	83.0	2.42	
51	81.0	86.0	30.0	41.0	83.0	2.42	
52	82.0	86.0	30.0	42.0	84.0	2.45	
54	84.0	86.0	30.0	42.0	84.0	2.47	
55	86.0	86.0	30.0	43.0	85.0	2.52	
56	88.0	86.0	31.0	43.0	85.0	2.71	
57	88.0	86.0	32.0	43.0	85.0	2.71	
58	90.0	86.0	32.0	44.0	86.0	2.78	
59	90.0	86.0	33.0	46.0	88.0	2.78	
60	90.0	86.0	33.0	46.0	88.0	2.78	
61	94.0	86.0	34.0	46.0	88.0	2.92	
62	94.0	86.0	35.0	46.0	88.0	2.92	
65	98.0	86.0	35.0	48.0	90.0	3.09	
67	101.0	86.0	37.0	50.0	92.0	3.26	
70	104.0	86.0	38.0	53.0	95.0	3.40	
73	108.0	86.0	40.0	55.0	97.0	3.71	
75	111.0	86.0	42.0	59.0	101.0	4.04	
76	118.0	86.0	44.0	61.0	103.0	4.41	
80	118.0	86.0	44.0	61.0	103.0	4.41	
85	124.0	86.0	48.0	66.0	108.0	4.88	
86	124.0	86.0	50.0	68.0	110.0	4.82	
90	130.0	106.0	53.0	71.0	113.0	6.24	
95	135.0	106.0	56.0	74.0	116.0	6.56	
100	143.0	106.0	59.0	77.0	119.0	7.48	
105	148.0	106.0	62.0	82.0	124.0	7.93	
110	154.0	106.0	65.0	85.0	127.0	8.51	
115	161.0	127.0	68.0	88.0	130.0	10.48	
120	168.0	127.0	71.0	91.0	133.0	11.38	
125	174.0	127.0	74.0	96.0	138.0	12.31	
130	180.0	127.0	77.0	99.0	141.0	13.09	

IMPERIAL HEXAGON	A/F inch	D1 inch	D2 inch	T inch	C inch	OAL inch	WT. lbs
	1.3/8	2.441	3.228	0.827	1.378	3.031	4.30
	1.7/16	2.520	3.228	0.827	1.378	3.031	4.30
	1.1/2	2.559	3.307	0.827	1.378	3.031	4.60
	1.9/16	2.677	3.307	0.866	1.417	3.071	4.70
	1.5/8	2.717	3.307	0.906	1.457	3.110	4.70
	1.11/16	2.795	3.307	0.945	1.496	3.150	4.80
	1.3/4	2.913	3.307	0.984	1.535	3.189	4.90
	1.13/16	2.953	3.386	1.024	1.575	3.228	5.20
	1.7/8	3.071	3.386	1.024	1.575	3.228	5.30
1.15/16	3.110	3.386	1.063	1.614	3.268	5.30	
2	3.189	3.386	1.063	1.614	3.268	5.30	
2.1/16	3.228	3.386	1.102	1.654	3.307	5.40	
2.1/8	3.307	3.386	1.102	1.654	3.307	5.40	
2.3/16	3.465	3.386	1.142	1.693	3.346	6.00	
2.1/4	3.465	3.386	1.142	1.693	3.346	5.90	
2.5/16	3.543	3.386	1.181	1.732	3.386	6.10	
2.3/8	3.543	3.386	1.260	1.811	3.465	6.10	
2.7/16	3.701	3.386	1.260	1.811	3.465	6.40	
2.1/2	3.751	3.386	1.260	1.811	3.465	7.30	
2.9/16	3.858	3.386	1.339	1.890	3.543	6.80	
2.5/8	3.976	3.386	1.417	1.969	3.622	7.20	
2.11/16	4.026	3.386	1.417	1.969	3.622	7.40	
2.3/4	4.094	3.386	1.496	2.087	3.740	7.50	
2.13/16	4.144	3.386	1.496	2.087	3.740	8.30	
2.7/8	4.252	3.386	1.575	2.165	3.819	8.20	
2.15/16	4.372	3.386	1.654	2.323	3.976	8.90	
3	4.420	3.386	1.654	2.323	3.976	9.70	
3.1/16	4.646	3.386	1.732	2.402	4.055	9.70	
3.1/8	4.646	3.386	1.732	2.402	4.055	9.70	
3.3/16	4.716	3.386	1.732	2.402	4.055	10.70	
3.1/4	4.716	3.386	1.732	2.402	4.055	10.70	
3.5/16	4.882	3.386	1.969	2.677	4.331	10.70	
3.3/8	4.882	3.386	1.969	2.677	4.331	10.70	
3.7/16	5.118	4.173	2.087	2.795	4.449	13.70	
3.1/2	5.118	4.173	2.087	2.795	4.449	13.70	
3.9/16	5.193	4.173	2.087	2.795	4.449	13.80	
3.5/8	5.193	4.173	2.087	2.795	4.449	13.80	
3.11/16	5.315	4.173	2.205	2.913	4.567	17.00	
3.3/4	5.315	4.173	2.205	2.913	4.567	17.00	
3.13/16	5.670	4.173	2.323	3.031	4.685	17.00	
3.7/8	5.670	4.173	2.323	3.031	4.685	17.00	
3.15/16	5.745	4.173	2.323	3.031	4.685	17.90	
4	5.745	4.173	2.323	3.031	4.685	17.90	
4.1/16	5.827	4.173	2.441	3.228	4.882	17.90	
4.1/8	5.827	4.173	2.441	3.228	4.882	17.90	
4.3/16	6.103	4.173	2.559	3.346	5.000	18.70	
4.1/4	6.103	4.173	2.559	3.346	5.000	18.70	
4.3/8	6.193	4.173	2.559	3.346	5.000	19.70	
4.1/2	6.339	5.000	2.677	3.465	5.118	23.00	
4.5/8	6.419	5.000	2.677	3.465	5.118	24.20	
4.3/4	6.614	5.000	2.795	3.583	5.236	25.00	
5	6.930	5.000	2.913	3.780	5.433	28.30	
5.1/8	7.087	5.000	3.031	3.898	5.551	28.80	

\*Bihexagon socket available in all sizes.

# 1 1/2" DEEP IMPACT SOCKETS

# TORQUING ACCESSORIES

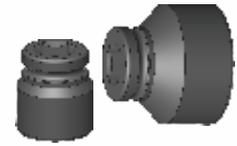


METRIC DEEP HEXAGON	A/F mm	D1 mm	D2 mm	T mm	C mm	OAL mm	WT. kg
	30	58.0	82.0	19.0	78.0	120.0	2.55
	32	58.0	82.0	19.0	78.0	120.0	2.55
	33	59.0	82.0	19.0	78.0	120.0	2.57
	34	60.0	82.0	20.0	78.0	120.0	2.58
	35	62.0	82.0	21.0	78.0	120.0	2.65
	36	63.0	82.0	21.0	78.0	120.0	2.67
	37	64.0	82.0	21.0	78.0	120.0	2.69
	38	65.0	84.0	22.0	78.0	120.0	2.70
	39	67.0	84.0	22.0	78.0	120.0	2.91
	40	68.0	84.0	23.0	78.0	120.0	2.92
	41	69.0	84.0	23.0	83.0	125.0	3.03
	42	70.0	84.0	24.0	83.0	125.0	3.05
	43	71.0	84.0	24.0	83.0	125.0	3.07
	44	73.0	84.0	25.0	83.0	125.0	3.16
45	74.0	84.0	25.0	83.0	125.0	3.17	
46	75.0	86.0	26.0	83.0	125.0	3.30	
47	77.0	86.0	27.0	83.0	125.0	3.39	
48	78.0	86.0	27.0	83.0	125.0	3.41	
49	79.0	86.0	27.0	83.0	125.0	3.42	
50	80.0	86.0	28.0	83.0	125.0	3.44	
51	81.0	86.0	30.0	83.0	125.0	3.46	
52	82.0	86.0	30.0	88.0	130.0	3.64	
54	84.0	86.0	30.0	88.0	130.0	3.67	
55	86.0	86.0	30.0	88.0	130.0	3.80	
56	88.0	86.0	31.0	88.0	130.0	4.12	
57	88.0	86.0	32.0	88.0	130.0	4.05	
58	90.0	86.0	32.0	88.0	130.0	4.20	
59	90.0	86.0	33.0	88.0	130.0	4.20	
60	90.0	86.0	33.0	88.0	130.0	4.20	
61	94.0	86.0	34.0	88.0	130.0	4.35	
62	94.0	86.0	35.0	88.0	130.0	4.35	
65	98.0	86.0	35.0	98.0	140.0	5.05	
67	101.0	86.0	37.0	98.0	140.0	5.11	
70	104.0	86.0	38.0	98.0	140.0	5.23	
73	108.0	86.0	40.0	98.0	140.0	5.73	
75	111.0	86.0	42.0	108.0	150.0	6.27	
76	118.0	86.0	44.0	108.0	150.0	6.82	
80	118.0	86.0	44.0	108.0	150.0	6.82	
85	124.0	86.0	48.0	118.0	160.0	7.79	
86	124.0	86.0	50.0	118.0	160.0	7.79	
90	130.0	106.0	53.0	128.0	170.0	9.68	
95	135.0	106.0	56.0	128.0	170.0	9.97	
100	143.0	106.0	59.0	128.0	170.0	11.03	
105	148.0	106.0	62.0	138.0	180.0	11.99	
110	154.0	106.0	65.0	138.0	180.0	12.61	
115	161.0	127.0	68.0	138.0	180.0	14.69	
120	168.0	127.0	71.0	148.0	190.0	16.25	
125	174.0	127.0	74.0	148.0	190.0	17.35	
130	180.0	127.0	77.0	148.0	190.0	18.11	

IMPERIAL DEEP HEXAGON	A/F inch	D1 inch	D2 inch	T inch	C inch	OAL inch	WT. lbs
	1.3/8	2.441	3.228	0.827	3.071	4.724	5.80
	1.7/16	2.520	3.228	0.827	3.071	4.724	5.90
	1.1/2	2.559	3.228	0.827	3.071	4.724	5.90
	1.9/16	2.677	3.307	0.866	3.071	4.724	6.40
	1.5/8	2.717	3.307	0.906	3.268	4.921	6.70
	1.11/16	2.795	3.307	0.945	3.268	4.921	6.80
	1.3/4	2.913	3.307	0.984	3.268	4.921	7.00
	1.13/16	2.953	3.386	1.024	3.268	4.921	7.30
	1.7/8	3.071	3.386	1.024	3.268	4.921	7.50
	1.15/16	3.110	3.386	1.063	3.268	4.921	7.50
	2	3.189	3.386	1.063	3.268	4.921	7.60
	2.1/16	3.228	3.386	1.102	3.465	5.118	8.00
	2.1/8	3.307	3.386	1.102	3.465	5.118	8.10
	2.3/16	3.465	3.386	1.142	3.465	5.118	8.10
2.1/4	3.465	3.386	1.142	3.465	5.118	8.90	
2.5/16	3.543	3.386	1.181	3.465	5.118	9.20	
2.3/8	3.543	3.386	1.260	3.465	5.118	9.20	
2.7/16	3.701	3.386	1.260	3.465	5.118	9.60	
2.1/2	3.751	3.386	1.260	3.465	5.118	10.50	
2.9/16	3.858	3.386	1.339	3.858	5.512	11.10	
2.5/8	3.976	3.386	1.417	3.858	5.512	11.20	
2.11/16	4.026	3.386	1.417	3.858	5.512	11.40	
2.3/4	4.094	3.386	1.496	3.858	5.512	11.50	
2.13/16	4.144	3.386	1.496	3.858	5.512	12.30	
2.7/8	4.25	3.386	1.575	3.858	5.512	12.60	
2.15/16	4.370	3.386	1.654	4.252	5.906	13.80	
3	4.420	3.386	1.654	4.252	5.906	14.70	
3.1/16	4.646	3.386	1.732	4.252	5.906	15.00	
3.1/8	4.646	3.386	1.732	4.252	5.906	15.00	
3.3/16	4.716	3.386	1.732	4.252	5.906	16.00	
3.1/4	4.716	3.386	1.732	4.252	5.906	16.00	
3.5/16	4.882	3.386	1.969	4.646	6.299	16.70	
3.3/8	4.882	3.386	1.969	4.646	6.299	16.70	
3.7/16	5.118	4.173	2.087	5.039	6.693	21.30	
3.1/2	5.118	4.173	2.087	5.039	6.693	21.30	
3.9/16	5.193	4.173	2.087	5.039	6.693	21.40	
3.5/8	5.193	4.173	2.087	5.039	6.693	21.40	
3.11/16	5.315	4.173	2.205	5.039	6.693	21.90	
3.3/4	5.315	4.173	2.205	5.039	6.693	21.90	
3.13/16	5.670	4.173	2.323	5.039	6.693	24.90	
3.7/8	5.670	4.173	2.323	5.039	6.693	24.90	
3.15/16	5.745	4.173	2.323	5.039	6.693	25.80	
4	5.745	4.173	2.323	5.039	6.693	25.80	
4.1/16	5.827	4.173	2.441	5.433	7.087	26.40	
4.1/8	5.827	4.173	2.441	5.433	7.087	26.40	
4.3/16	6.103	4.173	2.559	5.433	7.087	27.70	
4.1/4	6.103	4.173	2.559	5.433	7.087	27.70	
4.3/8	6.193	4.173	2.559	5.433	7.087	28.70	
4.1/2	6.339	5.000	2.677	5.433	7.087	32.30	
4.5/8	6.419	5.000	2.795	5.827	7.480	35.70	
4.3/4	6.614	5.000	2.795	5.827	7.480	35.70	
5	6.930	5.000	2.913	5.827	7.480	39.40	
5.1/8	7.087	5.000	3.031	5.827	7.480	39.90	

\*Bi-hexagon socket available in all sizes.

# 2 1/2" IMPACT SOCKETS



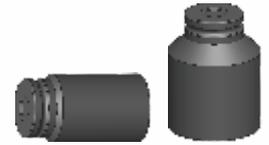
A/F mm	D1 mm	D2 mm	T mm	C mm	OAL mm	WT. kg
43	86.0	116.0	28.0	46.0	104.0	4.97
44	86.0	116.0	28.0	46.0	104.0	4.97
45	86.0	116.0	28.0	46.0	104.0	4.97
46	86.0	116.0	28.0	46.0	104.0	4.97
47	86.0	116.0	28.0	46.0	104.0	4.97
48	86.0	116.0	28.0	46.0	104.0	4.97
49	86.0	116.0	28.0	46.0	104.0	4.92
50	86.0	116.0	28.0	46.0	104.0	5.07
51	90.0	116.0	29.0	46.0	104.0	5.07
52	90.0	116.0	29.0	46.0	104.0	5.87
54	92.5	124.0	30.0	46.0	104.0	6.08
55	93.8	124.0	32.0	52.0	110.0	6.10
56	95.0	124.0	32.0	52.0	110.0	6.12
57	96.3	124.0	32.0	52.0	110.0	6.14
58	97.5	124.0	32.0	52.0	110.0	6.55
59	98.8	127.0	34.0	54.0	112.0	6.64
60	100.0	127.0	36.0	56.0	114.0	6.69
62	103.0	127.0	36.0	56.0	114.0	6.83
65	106.0	127.0	38.0	58.0	116.0	6.89
67	109.0	127.0	38.0	58.0	116.0	7.05
70	113.0	127.0	40.0	60.0	118.0	7.13
73	116.0	127.0	40.0	60.0	118.0	7.38
75	119.0	127.0	42.0	64.0	122.0	7.39
76	120.0	127.0	44.0	64.0	122.0	7.50
80	125.0	127.0	44.0	64.0	122.0	8.06
85	129.0	127.0	48.0	68.0	126.0	8.59
86	132.0	127.0	50.0	68.0	129.0	8.87
90	136.0	127.0	52.0	70.0	130.0	9.37
95	142.0	127.0	54.0	72.0	132.0	10.20
100	148.0	127.0	56.0	78.0	138.0	10.99
105	154.0	127.0	60.0	82.0	142.0	11.89
110	161.0	127.0	64.0	86.0	146.0	12.19
115	165.0	127.0	67.0	89.0	149.0	13.30
120	173.0	127.0	70.0	92.0	152.0	13.68
125	179.0	127.0	73.0	95.0	153.0	14.52
130	185.0	127.0	76.0	98.0	156.0	18.37
135	192.0	152.0	79.0	103.0	161.0	18.58
140	196.0	152.0	82.0	106.0	164.0	20.22
145	204.0	152.0	85.0	109.0	167.0	21.37
150	211.0	152.0	88.0	112.0	170.0	22.04
155	215.0	152.0	91.0	117.0	175.0	23.92
160	223.0	152.0	94.0	120.0	178.0	27.19
165	229.0	175.0	96.0	122.0	180.0	28.93
170	235.0	175.0	98.0	126.0	184.0	30.20
175	242.0	175.0	100.0	128.0	186.0	30.28
180	246.0	175.0	103.0	131.0	189.0	32.54
185	254.0	175.0	106.0	134.0	192.0	34.04
190	261.0	175.0	109.0	137.0	195.0	34.80
195	265.0	175.0	112.0	142.0	200.0	37.49
200	273.0	175.0	115.0	145.0	203.0	39.91
210	285.0	175.0	120.0	150.0	208.0	41.94
215	292.0	175.0	123.0	153.0	211.0	45.71
225	304.0	175.0	130.0	160.0	218.0	4.97

A/F inch	D1 inch	D2 inch	T inch	C inch	OAL inch	WT. lbs
1.5/8	3.386	4.567	1.102	1.811	4.094	11.30
1.3/4	3.386	4.567	1.102	1.811	4.094	11.30
1.7/8	3.386	4.567	1.102	1.811	4.094	11.30
2	3.543	4.567	1.142	1.811	4.094	11.30
2.1/8	3.642	4.882	1.181	1.811	4.094	12.90
2.1/4	3.789	4.882	1.260	2.047	4.331	13.50
2.3/8	3.937	5.000	1.417	2.205	4.488	14.60
2.1/2	4.133	5.000	1.496	2.283	4.567	15.00
2.5/8	4.281	5.000	1.496	2.283	4.567	15.20
2.3/4	4.429	5.000	1.575	2.362	4.646	15.50
2.7/8	4.577	5.000	1.575	2.362	4.646	15.70
2.15/16	4.675	5.000	1.654	2.520	4.803	16.20
3	4.774	5.000	1.732	2.520	4.803	16.40
3.1/8	4.921	5.000	1.732	2.520	4.803	16.50
3.1/4	4.999	5.000	1.890	2.677	4.961	16.70
3.3/8	5.00	5.000	1.969	2.677	5.079	18.90
3.1/2	5.00	5.000	2.047	2.756	5.118	19.50
3.5/8	5.197	5.000	2.047	2.756	5.118	20.40
3.3/4	5.554	5.000	2.126	2.835	5.197	20.60
3.7/8	5.394	5.000	2.205	3.071	5.433	21.60
4	5.827	5.000	2.205	3.071	5.433	22.40
4.1/8	6.063	5.000	2.362	3.228	5.591	24.20
4.1/4	6.299	5.000	2.520	3.386	5.748	25.50
4.3/8	6.379	5.000	2.520	3.386	5.748	26.40
4.1/2	6.496	5.000	2.638	3.504	5.866	26.80
4.5/8	6.536	5.000	2.638	3.504	5.866	28.00
4.7/8	7.047	5.000	2.874	3.740	6.024	30.10
5	7.163	5.000	2.992	3.858	6.142	31.00
5.1/8	7.203	5.000	2.992	3.858	6.142	32.10
5.1/4	7.203	5.000	2.992	3.858	6.142	32.10
5.3/8	7.609	5.984	3.110	4.055	6.339	41.10
5.1/2	7.717	5.984	3.228	4.173	6.457	41.10
5.5/8	7.757	5.984	3.228	4.173	6.457	41.70
5.3/4	8.081	5.984	3.346	4.291	6.575	45.20
6.1/8	9.016	6.890	3.780	4.803	7.087	59.80
6.1/2	9.016	6.890	3.780	4.803	7.087	59.80
6.7/8	9.528	6.890	3.937	5.039	7.323	66.40
7	9.685	6.890	4.055	5.157	7.441	66.60
7.1/4	10.000	6.890	4.173	5.276	7.559	71.60
7.1/2	10.276	6.890	4.291	5.394	7.677	74.90
7.5/8	10.433	6.890	4.409	5.591	7.874	76.60
7.3/4	10.433	6.890	4.409	5.591	7.874	76.60
7.7/8	10.748	6.890	4.528	5.709	7.992	82.50
8	10.748	6.890	4.528	5.709	7.992	83.60
8.1/8	11.220	6.890	4.724	5.906	8.189	87.80
8.1/4	11.220	6.890	4.724	5.906	8.189	87.80
8.3/8	11.225	6.890	4.724	5.906	8.189	88.70
8.1/2	11.496	6.890	4.843	6.024	8.307	92.30
9	12.029	6.890	5.118	6.299	8.583	101.80
9.1/4	12.029	6.890	5.118	6.299	8.583	101.80

\*Bihexagon socket available in all sizes.

# 2 1/2" DEEP IMPACT SOCKETS

# TORQUING ACCESSORIES



METRIC DEEP HEXAGON	A/F mm	D1 mm	D2 mm	T mm	C mm	OAL mm	WT. kg
	43	86.0	116.0	28.0	110.0	168.0	6.43
	44	86.0	116.0	28.0	110.0	168.0	6.43
	45	86.0	116.0	28.0	110.0	168.0	6.43
	46	86.0	116.0	28.0	110.0	168.0	6.43
	47	86.0	116.0	28.0	110.0	168.0	6.43
	48	86.0	116.0	28.0	110.0	168.0	7.03
	49	86.0	116.0	28.0	110.0	168.0	7.03
	50	86.0	116.0	28.0	110.0	168.0	7.03
	51	90.0	116.0	29.0	110.0	168.0	7.24
	52	90.0	116.0	29.0	110.0	168.0	7.24
	54	92.5	124.0	30.0	110.0	168.0	8.11
	55	93.8	124.0	32.0	110.0	168.0	8.18
	56	95.0	124.0	32.0	117.0	175.0	8.51
	57	96.3	124.0	32.0	117.0	175.0	8.58
	58	97.5	124.0	32.0	117.0	175.0	8.65
	59	98.8	127.0	34.0	117.0	175.0	9.04
	60	100.0	127.0	36.0	117.0	175.0	9.10
	62	103.0	127.0	36.0	127.0	185.0	9.66
	65	106.0	127.0	38.0	127.0	185.0	9.90
67	109.0	127.0	38.0	127.0	185.0	10.13	
70	113.0	127.0	40.0	127.0	185.0	10.37	
73	116.0	127.0	40.0	127.0	185.0	10.62	
75	119.0	127.0	42.0	127.0	185.0	10.78	
76	120.0	127.0	44.0	127.0	185.0	10.85	
80	125.0	127.0	44.0	127.0	185.0	11.20	
85	129.0	127.0	48.0	127.0	195.0	12.42	
86	132.0	127.0	50.0	134.0	195.0	13.03	
90	136.0	127.0	52.0	135.0	195.0	13.40	
95	142.0	127.0	54.0	139.0	199.0	14.47	
100	148.0	127.0	56.0	135.0	195.0	15.07	
105	154.0	127.0	60.0	145.0	205.0	16.33	
110	161.0	127.0	64.0	149.0	209.0	17.67	
115	165.0	127.0	67.0	150.0	210.0	17.72	
120	173.0	127.0	70.0	150.0	210.0	19.23	
125	179.0	127.0	73.0	157.0	215.0	20.57	
130	185.0	127.0	76.0	157.0	215.0	21.44	
135	192.0	152.0	79.0	162.0	220.0	25.67	
140	196.0	152.0	82.0	167.0	225.0	26.22	
145	204.0	152.0	85.0	172.0	230.0	28.82	
150	211.0	152.0	88.0	172.0	230.0	30.38	
155	215.0	152.0	91.0	177.0	235.0	30.97	
160	223.0	152.0	94.0	177.0	235.0	33.49	
165	229.0	175.0	96.0	182.0	240.0	37.53	
170	235.0	175.0	98.0	182.0	240.0	39.22	
175	242.0	175.0	100.0	182.0	240.0	40.86	
180	246.0	175.0	103.0	187.0	245.0	41.63	
185	254.0	175.0	106.0	192.0	250.0	45.61	
190	261.0	175.0	109.0	192.0	250.0	46.93	
195	265.0	175.0	112.0	199.0	257.0	48.28	
200	273.0	175.0	115.0	202.0	260.0	51.89	
210	285.0	175.0	120.0	202.0	260.0	54.71	
215	292.0	175.0	123.0	212.0	270.0	59.42	
225	304.0	175.0	130.0	220.0	270.0	62.42	

IMPERIAL DEEP HEXAGON	A/F inch	D1 inch	D2 inch	T inch	C inch	OAL inch	WT. lbs
	1.5/8	3.386	4.567	1.024	4.331	6.614	13.80
	1.3/4	3.386	4.567	1.024	4.331	6.614	13.80
	1.7/8	3.386	4.567	1.102	4.331	6.614	13.80
	2	3.543	4.567	1.142	4.331	6.614	15.90
	2.1/8	3.642	4.882	1.181	4.331	6.614	17.80
	2.1/4	3.789	4.882	1.260	4.606	6.890	18.90
	2.3/8	3.937	5.000	1.417	4.606	6.890	20.00
	2.1/2	4.133	5.000	1.496	5.000	7.283	21.80
	2.5/8	4.281	5.000	1.496	5.000	7.283	22.80
	2.3/4	4.429	5.000	1.575	5.000	7.283	22.80
	2.7/8	4.577	5.000	1.575	5.000	7.283	23.40
	2.15/16	4.675	5.000	1.654	5.000	7.283	23.40
	3	4.774	5.000	1.732	5.000	7.283	24.10
	3.1/8	4.921	5.000	1.732	5.000	7.283	24.60
	3.1/4	4.999	5.000	1.890	5.276	7.677	26.60
	3.3/8	5.197	5.000	1.969	5.276	7.677	28.70
	3.1/2	5.354	5.000	2.047	5.315	7.677	29.50
	3.5/8	5.354	5.000	2.047	5.315	7.677	30.40
	3.3/4	5.354	5.000	2.126	5.472	7.677	31.80
3.7/8	5.394	5.000	2.205	5.472	7.677	32.40	
4	5.827	5.000	2.205	5.472	7.677	33.20	
4.1/8	6.063	5.000	2.362	5.709	8.071	35.90	
4.1/4	6.299	5.000	2.520	5.866	8.228	38.20	
4.3/8	6.379	5.000	2.520	5.866	8.228	39.10	
4.1/2	6.496	5.000	2.638	5.906	8.268	39.10	
4.5/8	6.536	5.000	2.638	5.906	8.268	40.20	
4.7/8	7.047	5.000	2.874	6.181	8.465	45.30	
5	7.163	5.000	2.992	6.181	8.465	47.20	
5.1/8	7.203	5.000	2.992	6.181	8.465	48.30	
5.1/4	7.203	5.000	2.992	6.181	8.465	48.30	
5.3/8	7.609	5.984	3.110	6.378	8.661	57.20	
5.1/2	7.717	5.984	3.228	6.575	8.858	57.70	
5.5/8	7.757	5.984	3.228	6.575	8.858	58.50	
5.3/4	8.081	5.984	3.346	6.772	9.055	64.10	
6.1/8	9.016	6.890	3.780	7.165	9.449	82.60	
6.1/2	9.016	6.890	3.780	7.165	9.449	82.60	
6.7/8	9.528	6.890	3.397	7.165	9.449	89.90	
7	9.685	6.890	4.055	7.362	9.646	91.60	
7.1/4	10.000	6.890	4.173	7.559	9.843	100.30	
7.1/2	10.276	6.890	4.291	7.559	9.843	103.20	
7.5/8	10.433	6.890	4.409	7.835	10.118	106.20	
7.3/4	10.433	6.890	4.409	7.835	10.118	106.20	
7.7/8	10.748	6.890	4.528	7.953	10.236	114.20	
8	10.748	6.890	4.528	7.953	10.236	115.30	
8.1/8	11.220	6.890	4.724	7.953	10.236	120.40	
8.1/4	11.220	6.890	4.724	7.953	10.236	120.40	
8.3/8	11.225	6.890	4.724	7.953	10.236	121.30	
8.1/2	11.496	6.890	4.843	8.346	10.630	130.70	
9	12.029	6.890	5.118	8.661	10.630	138.50	
9.1/4	12.029	6.890	5.118	8.661	10.630	138.50	

\*Bihexagon socket available in all sizes.

## REDUCERS ACCESSORIES

To reduce the female hexagon A/F size of the CNZ hex drive series, our customized low clearance hex insert offers convenient and optimum solution.

Low Clearance Hex Insert is customisable as per the requirement.

METRIC HEXAGON REDUCER	OUTSIDE A/F SIZE	INSIDE A/F SIZE	CNZ-02	CNZ-05	CNZ-10
			MODEL NUMBER	MODEL NUMBER	MODEL NUMBER
	30	24	HXHR-02-30-24		
	32	24	HXHR-02-32-24		
	32	27	HXHR-02-32-27		
	36	30	HXHR-02-36-30		
	41	36	HXHR-02-41-36	HXHR-05-41-36	
	46	36	HXHR-02-46-36	HXHR-05-46-36	
	46	41	HXHR-02-46-41	HXHR-05-46-41	HXHR-10-46-41
	50	41	HXHR-02-50-41	HXHR-05-50-41	HXHR-10-50-41
	50	46	HXHR-02-50-46	HXHR-05-50-46	HXHR-10-50-46
	55	41	HXHR-02-55-41	HXHR-05-55-41	HXHR-10-55-41
	55	46	HXHR-02-55-46	HXHR-05-55-46	HXHR-10-55-46
	55	50	HXHR-02-55-50	HXHR-05-55-50	HXHR-10-55-50
	60	46	HXHR-02-60-46	HXHR-05-60-46	HXHR-10-60-46
	60	50		HXHR-05-60-50	HXHR-10-60-50
	60	55		HXHR-05-60-55	HXHR-10-60-55
	65	50		HXHR-05-65-50	HXHR-10-65-50
	65	55		HXHR-05-65-55	HXHR-10-65-55
	65	60		HXHR-05-65-60	HXHR-10-65-60
	70	55		HXHR-05-70-55	HXHR-10-70-55
	70	60		HXHR-05-70-60	HXHR-10-70-60
	70	65		HXHR-05-70-65	HXHR-10-70-65
	75	60		HXHR-05-75-60	HXHR-10-75-60
	75	65		HXHR-05-75-65	HXHR-10-75-65
	75	70		HXHR-05-75-70	HXHR-10-75-70
	80	65		HXHR-05-80-65	HXHR-10-80-65
	80	70		HXHR-05-80-70	HXHR-10-80-70
	80	75		HXHR-05-80-75	HXHR-10-80-75
	85	70			HXHR-10-85-70
	85	75			HXHR-10-85-75
	85	80			HXHR-10-85-80
	90	75			HXHR-10-90-75
	90	80			HXHR-10-90-80
	90	85			HXHR-10-90-85
	95	80			HXHR-10-95-80
	95	85			HXHR-10-95-85
	95	90			HXHR-10-95-90
	100	85			HXHR-10-100-85
	100	90			HXHR-10-100-90
	100	95			HXHR-10-100-95
	105	90			HXHR-10-105-90
	105	95			HXHR-10-105-95
	105	100			HXHR-10-105-100

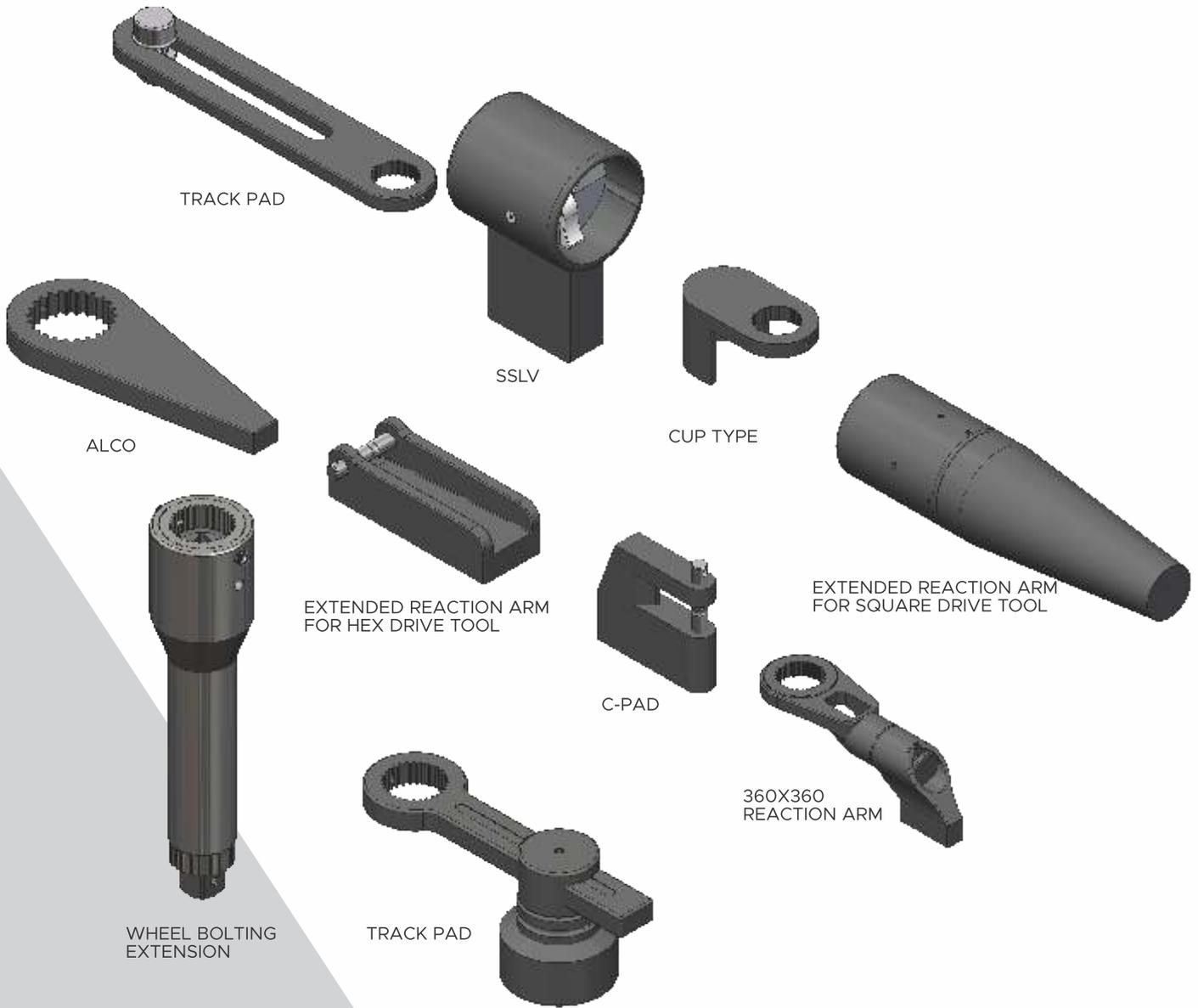
# TORQUING ACCESSORIES



IMPERIAL HEXAGON REDUCER	OUTSIDE A/F SIZE	INSIDE A/F SIZE	CNZ-02	CNZ-05	CNZ-10
			HEIGHT- 1.25"	HEIGHT- 1.625"	HEIGHT- 2.1"
			MODEL NUMBER	MODEL NUMBER	MODEL NUMBER
1 1/4"	1 1/16"	HXHR-02-125-106	HXHR-05-125-106		
1 7/16"	1 1/16"	HXHR-02-143-106	HXHR-05-143-106		
1 7/16"	1 1/4"	HXHR-02-143-125	HXHR-05-143-125		
1 5/8"	1 1/4"	HXHR-02-162-125	HXHR-05-162-125		
1 5/8"	1 7/16"	HXHR-02-162-143	HXHR-05-162-143		
1 13/16"	1 7/16"	HXHR-02-181-143	HXHR-05-181-143		
1 13/16"	1 5/8"	HXHR-02-181-162	HXHR-05-181-162	HXHR-10-181-162	
2"	1 5/8"	HXHR-02-200-162	HXHR-05-200-162	HXHR-10-200-162	
2"	1 13/16"	HXHR-02-200-181	HXHR-05-200-181	HXHR-10-200-181	
2 3/16"	1 5/8"	HXHR-02-218-162	HXHR-05-218-162	HXHR-10-218-162	
2 3/16"	1 13/16"	HXHR-02-218-181	HXHR-05-218-181	HXHR-10-218-181	
2 3/16"	2"	HXHR-02-218-200	HXHR-05-218-200	HXHR-10-218-200	
2 3/8"	1 13/16"	HXHR-02-237-181	HXHR-05-237-181	HXHR-10-237-181	
2 3/8"	2"	HXHR-02-237-200	HXHR-05-237-200	HXHR-10-237-200	
2 3/8"	2 3/16"	HXHR-02-237-218	HXHR-05-237-218	HXHR-10-237-218	
2 9/16"	2"		HXHR-05-256-200	HXHR-10-256-200	
2 9/16"	2 3/16"		HXHR-05-256-218	HXHR-10-256-218	
2 9/16"	2 3/8"		HXHR-05-256-237	HXHR-10-256-237	
2 3/4"	2 3/16"		HXHR-05-275-218	HXHR-10-275-218	
2 3/4"	2 3/8"		HXHR-05-275-237	HXHR-10-275-237	
2 3/4"	2 9/16"		HXHR-05-275-256	HXHR-10-275-256	
2 15/16"	2 3/8"		HXHR-05-293-237	HXHR-10-293-237	
2 15/16"	2 9/16"		HXHR-05-293-256	HXHR-10-293-256	
2 15/16"	2 3/4"		HXHR-05-293-275	HXHR-10-293-275	
3 1/8"	2 9/16"		HXHR-05-312-256	HXHR-10-312-256	
3 1/8"	2 3/4"		HXHR-05-312-275	HXHR-10-312-275	
3 1/8"	2 15/16"		HXHR-05-312-293	HXHR-10-312-293	
3 1/2"	2 15/16"			HXHR-10-350-293	
3 1/2"	3 1/8"			HXHR-10-350-312	
3 7/8"	3 1/8"			HXHR-10-387-312	
3 7/8"	3 1/2"			HXHR-10-387-350	
4 1/8"	3 1/2"			HXHR-10-412-350	
4 1/8"	3 7/8"			HXHR-10-412-387	

# REACTION ARM

**ABS** Reaction arms designed to counteract the reaction force generated when applying high torque to a fastener with a power tool. Constructed from high-strength materials, they feature a stable base that is securely mounted to a fixed point, such as the floor or a nearby structure.



## Improved Ergonomics

Our reaction arms decrease the physical strain on the operator by eliminating the need to resist the reaction force. This allows for more comfortable and fatigue-free operation, especially during prolonged bolting tasks.

## Improved Ergonomics

By preventing tool movement, our reaction arms contribute to more precise and consistent torque application, ensuring the integrity and proper function of the bolted joint.

## Safety

By absorbing the reaction force, our reaction arms significantly reduce the risk of injuries to the operator, such as muscle strain or joint damage. They also minimize the risk of tool movement or instability, which could potentially lead to equipment damage or inaccurate torque application.

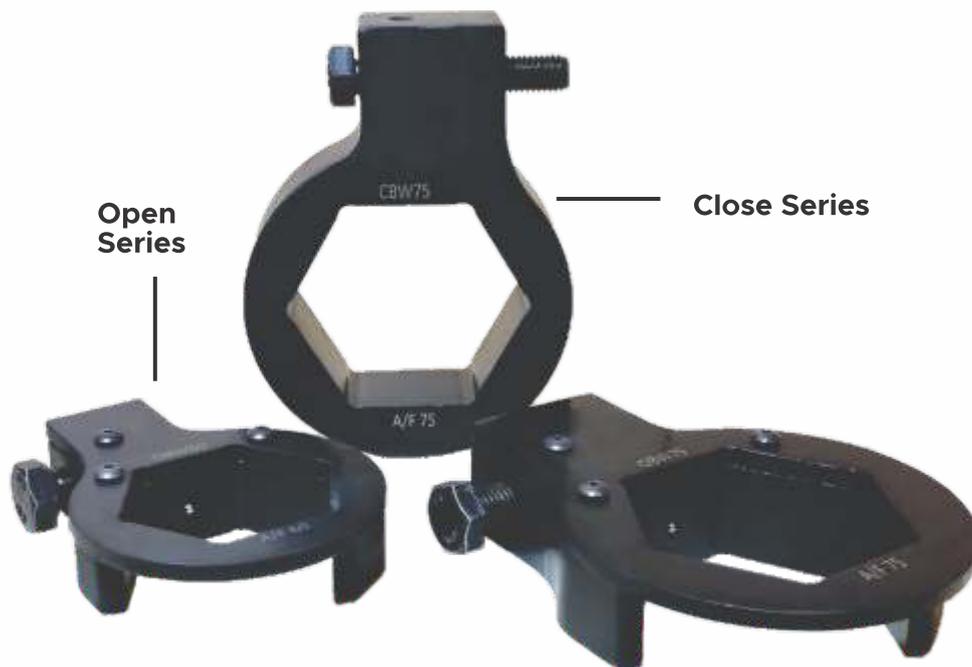
## HFBW SERIES BACKUP WRENCHES

# TORQUING ACCESSORIES

**ABS** backup wrenches are designed to hold the stationary nut or fitting while a tensioner or torque wrench tightens the opposing fastener. They come in various sizes and styles to fit different nut and bolt configurations.

### Why are they important?

- **Safety:** Backup wrenches prevent the stationary component from rotating during the tightening process. This is essential to ensure proper tensioning and avoid potential damage to the threads, surrounding components, or even personal injury.
- **Efficiency:** By preventing rotation, backup wrenches allow the tensioner or torque wrench to focus solely on applying the required torque without needing to counteract any opposing force. This translates to faster and more efficient completion of the bolting task.
- **Joint Integrity:** Maintaining the stationary component's position ensures that the joint is assembled correctly, contributing to optimal performance and longevity.



MODEL NO. (OPEN/CLOSE)	ACROSS FLAT		LOAD LIMITS	
	mm	inch	ft. lbs.	Nm
HFBW104	30	1-1/4"	2400	3254
HFBW107	36	1-7/16"	2500	3390
HFBW110	41	1-5/8"	3500	4745
HFBW113	46	1-13/16"	3500	4745
HFBW200	50	2"	4100	5559
HFBW203	55	2-3/16"	4200	5694
HFBW204	57	2-1/4"	4300	5830
HFBW206	60	2-3/8"	4300	5830
HFBW209	65	2-9/16"	4550	6169
HFBW212	70	2-3/4"	5600	7592
HFBW218	75	2-15/16"	6300	8542
HFBW302	80	3-1/8"	7000	9491
HFBW308	85	3-1/2"	7200	9762
HFBW311	90	3-11/16"	7300	9897
HFBW314	95	3-7/8"	9000	12202
HFBW400	100	4"	24000	32539
HFBW402	105	4-1/8"	24000	32539
HFBW404	110	4-1/4"	24000	32539
HFBW408	115	4-1/2"	25000	33895
HFBW410	120	4-5/8"	27000	36607
HFBW500	130	5"	27000	36607
HFBW506	135	5-3/8"	27000	36607
HFBW512	145	5-3/4"	28000	37962

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## STANDARD SLUGGING WRENCHES

Our robust Slugging wrenches, also known as striking wrenches or podger wrenches, are designed to withstand the impact of a hammer blow for loosening or tightening stubborn nuts and bolts. Unlike standard wrenches, they are built with thicker walls and heavier materials to handle the added stress of being struck.

### Key features of slugging wrenches:

- Heavy-duty construction: Made from high-strength steel or forged iron for superior durability.
- Open-ended design: Provides access to nuts and bolts from various angles.
- Larger size: Compared to standard wrenches, they offer increased leverage and torque.
- Variety of sizes: Available in various sizes to fit different nut and bolt diameters.



**RING TYPE  
SLUGGING WRENCH**  
22 mm - 230 mm A/F



**OFFSET  
SLUGGING WRENCH**  
24 mm - 130 mm A/F



**OPEN JAW  
SLUGGING WRENCH**  
24 mm - 230 mm A/F

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## NON-SPARKING SLUGGING WRENCHES

Within industries where flammable materials pose safety concerns, standard tools can present significant risks. **ABS** non-sparking slugging wrenches provide a vital solution, offering both the requisite safety and the robust performance demanded by demanding applications.

### Crafted with Safety in Mind:

Constructed from non-ferrous metals, such as beryllium copper or aluminum bronze, **ABS** slugging wrenches eliminate the potential for sparking, mitigating the risk of ignition in hazardous environments.- Their heavy-duty design enables them to withstand the forceful impact of hammer blows, making them ideal for loosening stubborn nuts and bolts.

### Engineered for Optimal Performance:

Open-ended construction allows for versatile access from various angles, ensuring maneuverability even in tight spaces.- Available in a diverse range of sizes, non-sparking slugging wrenches can adapt to a wide variety of fastening needs.



**RING TYPE  
SLUGGING WRENCH**  
22 mm - 230 mm A/F



**OFFSET  
SLUGGING WRENCH**  
24 mm - 130 mm A/F



**OPEN JAW  
SLUGGING WRENCH**  
24 mm - 230 mm A/F

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## NON-SPARKING SAFETY TOOLS

ABS non-sparking tools are indispensable in environments with flammable materials, vapors, or dust, as the sparks generated by traditional metal tools can pose severe safety risks, leading to fires or explosions.

These specialized tools, crafted from non-ferrous metals like beryllium copper, aluminum bronze, or special alloys, do not produce sparks when struck, ensuring safety in various applications such as chemical plants, refineries, oil and gas rigs, mining operations, paint booths, aerospace manufacturing, and military settings.



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### SOCKET & IMPACT SOCKET

**Sockets:**

1/4", 3/8", 1/2", 3/4"

**Impact Sockets:**

3/8", 1/2", 3/4", 1"

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### SLEDGE HAMMER

\*Sizes available as per  
requirement

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### BALL PEEN HAMMER

\*Sizes available as per  
requirement

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### DOUBLE ENDED RING SPANNER

**Metric:**

5.5 mm x 7 mm - 60 mm x 70 mm

**Imperial:**

1/4" x 5/16" - 2 3/8" x 2 3/4"

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### DOUBLE ENDED OPEN SPANNER

**Metric:**

5.5 mm x 7 mm - 65 mm x 70 mm

**Imperial:**

1/4" x 5/16" - 2 3/8" x 2 9/16"

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### COMBINATION SPANNER

**Metric:**

6 mm - 70 mm

**Imperial:**

1/4" - 1 3/8"

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# ABS

**ABS OIL & GAS SOLUTION LLC.**

PO Box: 91959, D8, Plot-103, Sector-MW5,  
Mussafah Industrial Area,  
Abu Dhabi-UAE.

Phone: +971-54-465-6191

Email: [marketing@aogsgulf.com](mailto:marketing@aogsgulf.com)

Website: [www.aogsgulf.com](http://www.aogsgulf.com)