

MAIN : 714-847-3346
FREE: 800-528-2580
FAX: 714-842-3846



17735 SAMPSON

HUNTINGTON BEACH,

CALIFORNIA

92647

Dear Sir or Madame:

Thank you for your request for literature on BMF Torque Wrench Co. hydraulic powered torque wrenches and related equipment. We are pleased to present the following data sheets which represent our most popular product lines.

If you find you require a custom wrench, socket driver or power supply, please do not hesitate to contact us to discuss your application. Our design team utilizes some of the most state of the art engineering software, enabling them to quickly develop a custom solution for your particular circumstance.

If you have any questions or need additional information, please don't hesitate to contact us. Thanks again for your interest in our products.

Best regards,

BMF Torque Wrench Co.



Ten facts about **OTHERS** Hydraulic Torque Wrenches

1. Other's Torque Wrench designs require 10,000 PSI (800 Bar) operating pressure that is dangerous to work around, not to mention much less reliable. Furthermore, hydraulic components for that pressure are 2-3 times more expensive.
BMF Torque Wrench designs need only 3000 PSI to produce full rated torque.
2. Other's Torque Wrench designs use aluminum alloy bodies with a little titanium added. The truth is, the strongest aluminum alloy part is less than 1/2 as strong as the same part that can be made from heat-treated alloy steel. Also, aluminum deflects 3 times as much as steel under the same load. That's a fact of metallurgy.
BMF Torque Wrenches are Made in America from heat-treated, chrome-moly Alloy Steel.
3. Other's cast aluminum unibody designs feature a "built-in" hydraulic cylinder. This may sound good at first, but when their aluminum cylinder scores or wears out, replacement or repair cost can be prohibitive.
BMF Torque Wrenches use a removable all-steel hydraulic cylinder for long life.
4. Other's aluminum cylinder burst pressure is less than 1.5 times the working pressure. A Safety Factor this low is far below industry standards and can be dangerous at high pressures. Aluminum also has a short fatigue life and fatigue can result in an unexpected catastrophic failure.
BMF Torque Wrench all steel hydraulic cylinders have a 4:1 safety factor for operator safety and long life.
5. Other's advertise a "light weight" wrench. In fact, many advertised weights don't include the reaction arm - an essential part! In fact, when sockets and reaction arms are included, there is little difference in working weights.
BMF Torque Wrench weights are accurate and our wrenches are designed with steel to last.
6. Other's sell Torque Wrenches only from factory-owned outlets and high prices are seldom discounted.
BMF Torque Wrench Co. IS the industry price leader.
7. Other's Hydraulic Power Units use a 2-stage pump that cuts the flow rate by 90% when pressure exceeds only 500 PSI. The result is slower torque wrench operation thru out **95%** of the operating range!
BMF Torque Wrenches use constant volume pumps with industrial rated motors for top performance.
8. Other's use an electrical wrench control pendant. Control pendants are known for electrical shorts, and cannot be made explosion proof. Often, two men are required: one to hold the wrench and one to actuate the pendant control.
BMF Torque Wrenches use an explosion-proof control valve mounted on the wrench so that the person holding the wrench is the one who controls it. A remote explosion-proof control valve is also available.
9. Other's offer only a standard line of Torque Wrenches with few options and a take-it-or-leave-it attitude.
BMF Torque Wrench Co. offers modular designs that can easily be modified to meet your special requirements, quickly, and at a reasonable price. Over half the wrenches we sell are modified in some way.
10. Other's Torque Gages are ordinary pressure gages with plastic overlays on the face. The super-imposed torque and pressure scales are difficult to read and prone to reading errors.
BMF Torque Wrenches use a very accurate stainless steel, liquid-filled Torque Gage calibrated in Ft-Lbs or any other units you prefer at no additional charge.

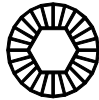
BMF Torque Wrench is the **Company** of choice when you need ---

Quality Wrenches for Industrial Size Bolts – Since 1984

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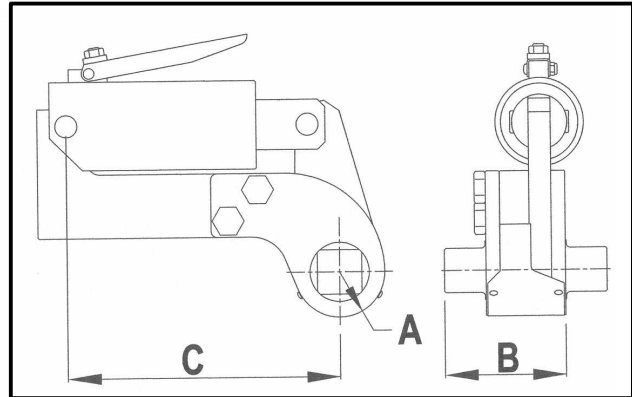
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BMF Torque Wrench Co.

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Model SD Hydraulic Powered Square Drive Ratcheting Torque Wrench



MODEL	SQUARE DRIVE	TORQUE OUTPUT		FOR BOLT DIAMETERS	BASIC DIMENSIONS			WEIGHT
		Ft-Lbs	N-m		A	B	C	
SD-1.5	3/4"	1500	2000	3/4 to 1-1/2	0.88	2.60	7.50	8
SD-3	1"	3000	4000	1" to 2.00	1.19	3.18	7.70	15
SD-6.5	1-1/2"	6500	8800	1-1/4 to 2-1/2	1.52	4.06	9.21	24
SD-10	1-1/2"	10,000	13500	1-1/2 to 3.00	1.80	4.75	10.63	34
SD-16	2-1/2"	16,000	21700	1-7/8 to 3-1/2	2.20	4.06	12.50	55
SD-25	2-1/2"	25,000	33900	2.00 to 4.00	2.50	6.63	14.00	75
SD-45	2-1/2"	45,000	61000	2-1/2 to 5.00	2.98	7.95	16.00	155
SD-100	3-1/2"	100,000	135000	3.00 to 6.00	3.75	10.75	18.00	205
SD-200	4-1/2"	200,000	270000	6.00 and Larger	5.00	14.00	21.00	325

In addition to the standard line of torque wrenches listed above, **BMF Torque Wrench Co.** offers custom designs that can torque bolts in access restricted areas, in sub sea operations and wrenches that can be remotely actuated. Also available, are Hex drivers that fit directly into Allen type cap

screws in place of the standard square drive on all wrenches up thru Model SD-10. Choose a BMF Torque Wrench when you want to safely, quickly, and reliably torque large nuts and bolts.

Visit our web site at: www.bmftorquewrench.com

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MODEL SD Hydraulic Powered Square Drive Torque Wrench.

Model SD torque wrenches use standard square drive power sockets* to help you torque industrial size bolts on heavy equipment. The offset drive head is designed with the smallest possible head radius for use on close clearance jobs such as API or ANSI flanges. Torque reaction is accomplished by placing the built-in steel reaction arm against any adjacent rigid structure. You'll save time and money using these versatile, compact tools to torque any bolt from 3/4" to 6.0" in diameter.

Operation is simple! One worker positions the wrench on a bolt head and pushes the control valve on the torque wrench. The cylinder rod strokes out and turns the fastener 15 degrees. Separate electrical control pendants are not used. When the control valve is released, the applied torque load is removed and the wrench mechanism ratchets. Another stroke can be taken at this time or the wrench can be removed. The torque wrench can never "hydraulically lock" on to a nut or bolt. To loosen bolts, the tool is simply turned over. From the Model SD-1.5 on up to the Model SD-200, you get **BMF** quality and engineering built-in. Torque output is accurate within 3%.

BMF Torque Wrenches are stronger. Our unique and simple ratchet design engages all 24 ratchet teeth at one time. Therefore, the torque load is distributed over all the ratchet teeth instead of high loading on 1 or 2 teeth as in other ratchet wrenches. There are no pins,

no pawls, and no levers in our ratchet to break or wear out. In fact, we warrant our ratchet mechanism for three years.

BMF Torque Wrenches are safer. Only the worker that positions the wrench on the bolt controls its operation. Nuts and bolts are made up quicker and more safely because the time and the risk of coordinating the efforts of a 2-man operation is eliminated. Most **BMF** wrenches need only 3000 PSI to produce maximum torque, instead of 10,000 PSI required by others.

BMF Torque Wrenches are more reliable. We manufacture our wrenches from heat treated chrome-moly alloy steel rather than aluminum. Our wrenches and parts are at least twice as strong as parts made from aluminum. In addition, our low pressure hydraulic system is inherently more reliable than others requiring 3 times higher pressure.

All of these features combine to give you a hydraulic powered torque wrench that can safely, reliably, and easily torque industrial size bolts.

Model SD Torque Wrenches are available with Hex Drives to fit directly into Hex Socket Cap Screws.

Other options include a remote control valve and sub sea service.

***BMF** stocks large power sockets for any size inch or metric, 6 or 12-point bolt heads.

Visit our web site at: www.bmftorquewrench.com

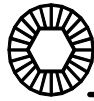
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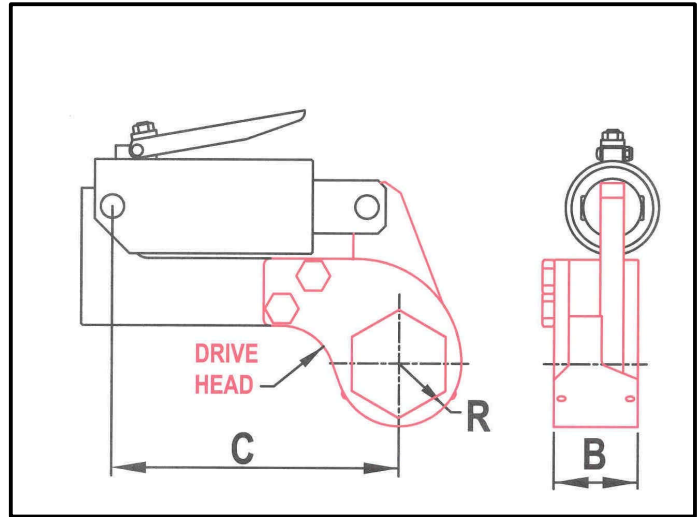
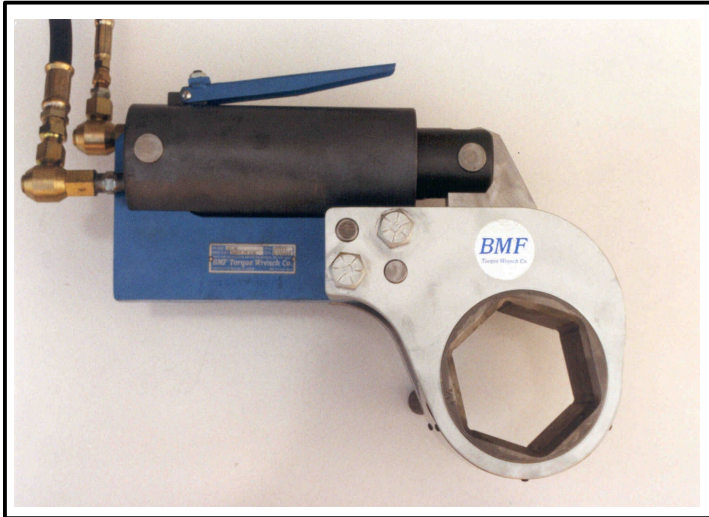


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Model Si Hydraulic Powered Ratcheting Box Type Torque Wrench



MODEL	HEX SOCKET SIZE RANGE	TORQUE OUTPUT		FOR BOLT DIAMETERS	BASIC DIMENSIONS			APPROX. WEIGHT * Lbs
		Ft-Lbs	N-m		R	B	C	
Si-1.5	1.00" to 2.00	1500	2000	3/4 to 1-1/4	See Drive Heads	7.50	7 to 11	
Si-4.5	1-1/2 to 2-3/4	4500	6100	1.00" to 1-3/4	See Drive Heads	9.00	11 to 20	
Si-8	1-7/8 to 3-1/2	8000	10800	1-1/4 to 2-1/4	See Drive Heads	10.75	24 to 28	
Si-16	2-3/8 to 4-1/4	16,000	21700	1-1/2 to 2-3/4	See Drive Heads	14.00	26 to 38	
Si-35	2-7/8 to 5-3/8	35,000	47500	1-7/8 to 3-1/2	See Drive Heads	14.00	34 to 55	
Si-50	3-1/2 to 6-1/8	50,000	67800	2-1/2 to 4.00	See Drive Heads	16.00	48 to 110	
Si-100	4-5/8 to 7-5/8	100,000	135000	3.00 to 5.00	See Drive Heads	16.00	155 to 155	
Si-150	6-1/8 to 9-1/8	150,000	203000	4.00 to 6.00	See Drive Heads	20.00	135 to 275	

*Total weights depend on Drive Head size selected.

Model Si Torque Wrenches fit directly on to nuts and bolts and apply torque in the plane of the bolt head. This design eliminates the tendency to twist the wrench off bolt heads when torque is applied. By removing two bolts and a clevis pin the operator can quickly and easily change the Drive Heads.

In addition to the standard line of Model Si Torque Wrenches listed here, **BMF Torque Wrench Co.** offers custom designs that can torque bolts in pockets and other access-restricted areas.

Also available, are 12-point hex drives, octagon drives, spline drives and square drive adapters to fit standard power sockets.

Choose a Model Si Torque Wrench when you want to safely, quickly, and reliably torque large nuts and bolts.

For data on individual Drive Heads see our brochure titled: "Model DH-xx Drive Heads".

Visit our web site at: www.bmftorquewrench.com

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MODEL Si Hydraulic Powered Ratcheting Box Torque Wrench

Model Si torque wrenches use a quick-change Drive Head with a double-ended socket to help you torque industrial size bolts on heavy equipment. Each low profile, offset Drive Head* is designed with the smallest possible head radius to fit any size API or ANSI flange or other big bolt application. Torque reaction is in the plane of the hex nut or bolt, thereby eliminating the tendency of the wrench to twist off the nut when torque is applied.

Operation is simple! One worker positions the wrench on a bolt head and pushes the control valve on the torque wrench. The cylinder rod strokes out and turns the fastener 15 degrees. Separate electrical control pendants are not used. When the control valve is released, the applied torque load is removed and the wrench mechanism ratchets. Another stroke can be taken at this time or the wrench can be removed. The Model Si torque wrench can never "hydraulically lock" on to a nut or bolt. To loosen bolts, the tool is simply turned over. From the Model Si-1.5 on up to the Model Si-150, you get **BMF** quality and engineering built-in. Torque output is accurate within 3%.

BMF Torque Wrenches are stronger.

Our unique and simple ratchet design engages all 24 ratchet teeth at one time. Therefore, the torque load is distributed over all the ratchet teeth instead of high loading on 1 or 2 teeth as in other ratchet wrenches. There are no pins,

no pawls, and no levers in our ratchet to break or wear out. In fact, we warrant our ratchet mechanism for three full years.

BMF Torque Wrenches are safer.

Only the worker that positions the wrench on the bolt controls its operation. Nuts and bolts are made up quicker and more safely because the time and the risk of coordinating the efforts of a 2-man operation is eliminated. Most BMF wrenches need only 3000 PSI to produce maximum torque, instead of 10,000 PSI required by others.

BMF Torque Wrenches are more reliable.

We manufacture our wrenches from heat treated chrome-moly alloy steel rather than aluminum. Our wrenches and parts are at least twice as strong as wrenches made from aluminum. In addition, our low pressure hydraulic system is inherently more reliable than others requiring 3 times higher pressure.

All of these features combine to give you a hydraulic powered torque wrench that can safely, reliably, and quickly torque industrial size bolts.

Model Si Torque Wrenches are available with any size or shape socket, in inch or metric sizes, from 1" to 9-1/8" (25mm to 232mm).

*Each Drive Head is a complete ratcheting box wrench and is easily changed by removing two bolts and a clevis pin. Individual sockets are also available.

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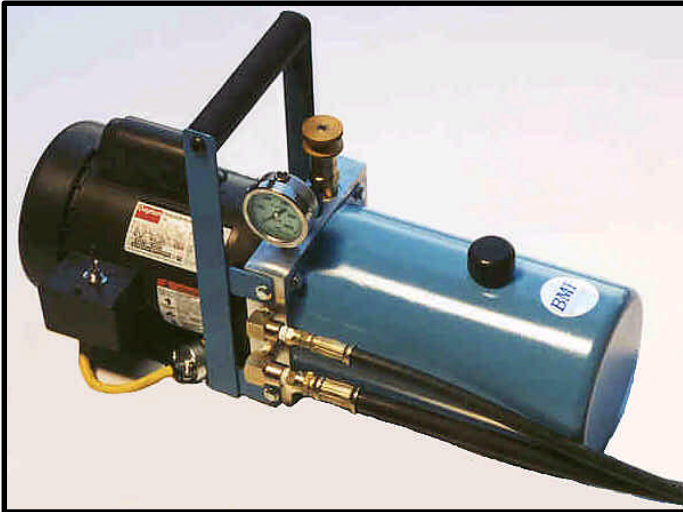
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Model HP-1 Hydraulic Power Supply



**Full POWER
at any torque!**

MODEL	TANK	OUTPUT	STD. MOTOR	Lgth. X Wd. X Ht.	WEIGHT
<u>Electric motors for North American usage</u>					
HP-1	1.5 Gal.	0.5 GPM	1-HP 110VAC 60Hz. 1-Ph.	23" X 9" X 13	54 Lbs.
HP-1V	1.5 Gal.	1.0 GPM	2-HP 110VAC 60Hz. 1-Ph.	25" X 9" X 13	65 Lbs.
<u>Electric motors for use in other countries</u>					
HP-1Y	1.5 Gal.	0.8 GPM	1.5-HP 220VAC 50Hz. 1-Ph.	23" X 9" X 13	65 Lbs.
HP-1U	1.5 Gal.	0.8 GPM	1.5-HP 380VAC 50Hz. 3-Ph.	23" X 9" X 13	65 Lbs.
HP-1UV	1.5 Gal.	1.5 GPM	3.0-HP 380VAC 50Hz. 3-Ph.	23" X 9" X 13	65 Lbs.

At **BMF Torque Wrench Co.** we manufacture our own hydraulic power supplies to ensure maximum performance and full compatibility with our torque wrenches. HP-1 power supplies are simple, lightweight, portable units which deliver required fluid power to any BMF Torque Wrench rated at up to 10,000 Ft-Lbs.

Operation is very simple! Just connect the hoses and turn the unit on, then dial in the exact torque desired. The individual holding the wrench then controls its operation by a valve on the wrench (no separate electrical control pendant is required). When the preset torque value is reached, the wrench stops turning the bolt. Actual torque being applied is displayed on a torque gage mounted on the power supply.

The basic accessories to connect and operate a BMF Torque Wrench are always included with each Model HP-1 Hydraulic Power Supply. These include a Stainless Steel torque gage with direct readings in Ft-Lbs (or N-m) and two 15 Ft long hydraulic hoses with live swivels at both ends. Power supplies are normally shipped full of hydraulic fluid, so they are ready to run right out of the box. The gold Torque Control Valve has a knurled knob with a lock for setting and maintaining precise torque output. All of the Model HP-1 power supplies listed here are rated at 300 to 3000 PSI for safe and reliable operation.

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Revised: 09/20/02

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Square Drive Power Sockets



SQUARE DRIVE SIZE	INCH HEX SIZE ACROSS FLATS	METRIC HEX SIZE ACROSS FLATS
3/4" 1"	1/2" to 2-1/2" 3/4" to 5-1/2"	13mm to 64mm 19mm to 140mm
1-1/2" 2-1/2"	1-1/4" to 6-1/8" 1-5/8" to 9-1/4"	32mm to 156mm 41mm to 235mm
3-1/2" 4-1/2"	3-7/8" to 12-1/4" 6-1/2" to 12-1/4"	98mm to 317mm 165mm to 317mm

BMF Torque Wrench Co. has the big power sockets you need for heavy duty industrial size bolts. Our sockets are made from heat-treated alloy steel and meet or exceed government and industrial specifications. Finish is Black Oxide. These sockets are suitable for use with either impact or power wrenches.

Standard sockets are 6-point hex and regular length. Also available are 12-point hex and deep length sockets for applications where a stud extends above the top of the nut being tightened.

Special configurations such as non-standard hex sizes, square sockets, thin wall, or extra deep can be produced on short notice to meet your requirements.

BMF produces sockets in all Inch and Metric sizes within the ranges shown in the table. All of our sockets carry a lifetime warranty against defects in material or workmanship.

Visit our web site at: www.bmftorquewrench.com

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