

Z46[®] SERIES

U.S. AND INTERNATIONAL PATENTS APPROVED AND PENDING

Z460[®]

Z600[®]

NORWOLF

3/4" Drive Output



Totally Enclosed Aircraft Aluminum Housing

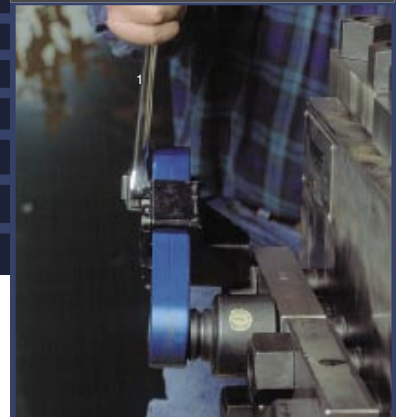
Optional Reaction Arm



1/2" Drive Input



Z460 at work using standard ratchet wrench.



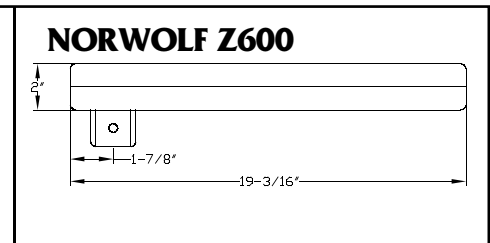
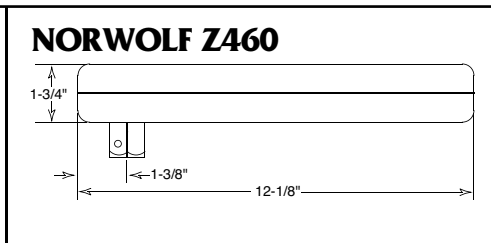
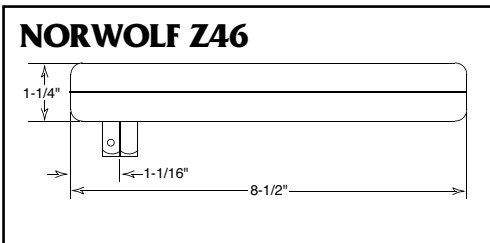
Z46 using the optional reaction arm.



Z46 fitting in tight spot.

Norwolf Tool Works introduces the world's first true torque multipliers—the **Z46, Z460 and the Z600**. This Norwolf innovation, with its thin, sleek design abandons conventional torque multiplier shortcomings.

- FEATURES AND BENEFITS OF THE NORWOLF Z46, Z460 & Z600**
- **Accurate—operates using levers, not gears**
 - **No overload pins to break—creates safer working environment**
 - **Uses ratchet or non-ratchet wrenches**
 - **Optional reaction arm** permits operator to react on the same plane
 - **Input force is same direction as reaction force** for maximum operator convenience



TOOL	INPUT DRIVE	OUTPUT DRIVE	MAX INPUT	MAX OUTPUT	EFFECTIVE MULTIPLIC.	ACCURACY	WEIGHT
NORWOLF Z46	1/2"	3/4"	300	1200 ft/lbs.	3.9:1	± 5½%	2.5 lbs.
NORWOLF Z460	3/4"	1"	600	2400 ft/lbs.	3.85:1	± 5%	9.5 lbs.
NORWOLF Z600	3/4"	1 1/2"	1000	6000 ft/lbs	6:1	± 7%	17 lbs.

TOOL DESCRIPTION	PART NO.
Z46 1,200 lb. Capacity Multiplier	Z46-001-0
Z46 Adjustable Reaction Arm	Z46-0RA-0
Z46 Set with above plus Fitted Case, (15) Impact Sockets 1 1/8"-2"x 1/16"	Z46-SET-0
1/2" Drive 250 ft/lbs. Torque Wrench	
1/2" Drive 24" Flex Wrench	

TOOL DESCRIPTION	PART NO.
Z460 2400 lb. Capacity Multiplier	Z460-001-0
Z460 Adjustable Reaction Arm	Z460-0RA-0
Z460 Set with above plus Fitted Case, (21) Impact Sockets 1 13/16"-3 1/8"	Z460-SET-0
3/4" Drive 24" Flex Wrench	
3/4" Drive 24" Ratchet	

TOOL DESCRIPTION	PART NO.
Z600 6000 ft./lb. Capacity Multiplier	Z600-001-0
Z600 Adjustable Reaction Arm	Z600-0RA-0

Norwolf Tool Works presents the
MISSING-LINK™

US AND INTERNATIONAL PATENTS APPROVED AND PENDING

Norwolf Tool Works is proud to introduce the most unique, efficient, economic, and dynamic bolting tool of the twenty-first century—the MISSING-LINK!

Industry has yearned for a tool to fit into tightly confined areas where sockets will not fit, but can be driven by any ratcheting or non-ratcheting hand wrench.

The Missing-Link is exactly what its name implies... Industry's connection from archaic bolting methods to the future!

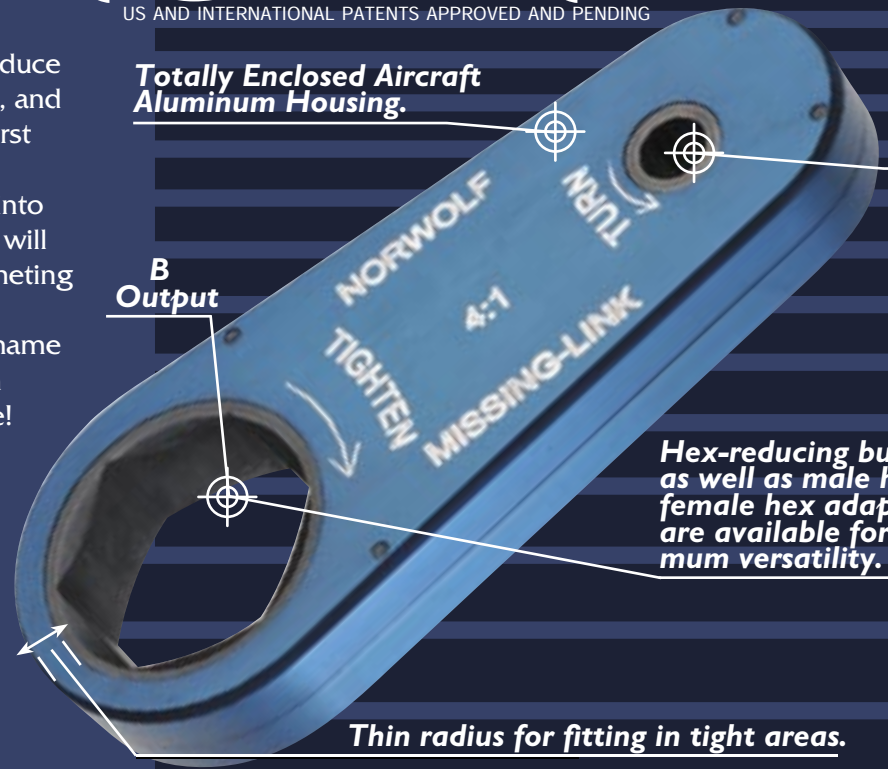
Totally Enclosed Aircraft Aluminum Housing.

A Input

B Output

Hex-reducing bushings, as well as male hex to female hex adapters, are available for maximum versatility.

Thin radius for fitting in tight areas.



WE CAN CUSTOM BUILD FOR ANY SIZE BOLT!



Use the MISSING-LINK with any bolting tool for limited clearance applications.

The MISSING LINK's Basic Concept

The Missing-Link is essentially a torque converter that permits a very **ACCURATE** transmission of torque from point A to point B as shown above **without any gears.**

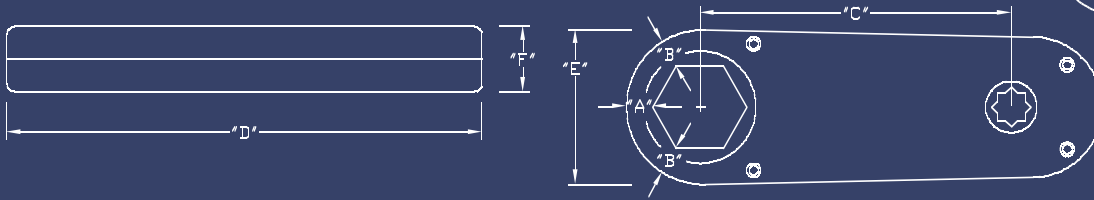
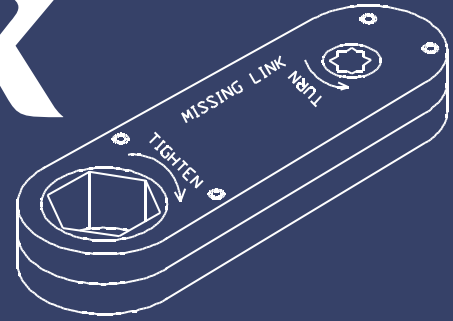
With ratios of 4:1 and 6:1 the Missing-Link multiplies torque as well.



*Special double sided missing-links available upon request.



MISSING-LINK DATA



1/2" DRIVE, 4:1 RATIO							
PART NO.	HEX	"A"	"B"	"C"	"D"	"E"	"F"
TC-050-4-1-087-S	7/8"	.347"	.377"	5.96"	8.57"	2.11"	1.25"
TC-050-4-1-106-S	1-1/16"	.347"	.377"	5.96"	8.68"	2.32"	1.25"
TC-050-4-1-125-S	1-1/4"	.347"	.377"	5.96"	8.79"	2.54"	1.25"
TC-050-4-1-143-S	1-7/16"	.347"	.377"	5.96"	8.89"	2.76"	1.25"
TC-050-4-1-162-S	1-5/8"	.347"	.377"	5.96"	9.00"	2.97"	1.25"
TC-050-4-1-181-S	1-13/16"	.347"	.377"	5.96"	9.11"	3.19"	1.25"
TC-050-4-1-200-S	2"	.347"	.377"	5.96"	9.22"	3.41"	1.25"
TC-050-4-1-218-S	2-3/16"	.347"	.377"	5.96"	9.33"	3.62"	1.25"
TC-050-4-1-237-S	2-3/8"	.347"	.377"	5.96"	9.44"	3.84"	1.25"

3/4" DRIVE, 4:1 RATIO							
PART NO.	HEX	"A"	"B"	"C"	"D"	"E"	"F"
TC-075-4-1-087-S	7/8"	.549"	.686"	8.34"	11.83"	2.11"	1.75"
TC-075-4-1-106-S	1-1/16"	.549"	.686"	8.34"	11.94"	2.32"	1.75"
TC-075-4-1-125-S	1-1/4"	.549"	.686"	8.34"	12.05"	2.54"	1.75"
TC-075-4-1-143-S	1-7/16"	.549"	.686"	8.34"	12.16"	2.76"	1.75"
TC-075-4-1-162-S	1-5/8"	.549"	.686"	8.34"	12.27"	2.97"	1.75"
TC-075-4-1-181-S	1-13/16"	.549"	.686"	8.34"	12.38"	3.19"	1.75"
TC-075-4-1-200-S	2"	.549"	.686"	8.34"	12.48"	3.41"	1.75"
TC-075-4-1-218-S	2-3/16"	.549"	.686"	8.34"	12.59"	3.62"	1.75"
TC-075-4-1-237-S	2-3/8"	.549"	.686"	8.34"	12.70"	3.84"	1.75"
TC-075-4-1-256-S	2-9/16"	.549"	.686"	8.34"	12.81"	4.06"	1.75"
TC-075-4-1-275-S	2-3/4"	.549"	.686"	8.34"	12.92"	4.27"	1.75"
TC-075-4-1-293-S	2-15/16"	.549"	.686"	8.34"	13.02"	4.49"	1.75"
TC-075-4-1-312-S	3-1/8"	.549"	.686"	8.34"	13.13"	4.70"	1.75"

3/4" DRIVE, 6:1 RATIO							
PART NO.	HEX	"A"	"B"	"C"	"D"	"E"	"F"
TC-075-6-1-087-S	7/8"	.732"	.915"	13.98"	18.54"	2.47"	2"
TC-075-6-1-106-S	1-1/16"	.732"	.915"	13.98"	18.65"	2.69"	2"
TC-075-6-1-125-S	1-1/4"	.732"	.915"	13.98"	18.76"	2.91"	2"
TC-075-6-1-143-S	1-7/16"	.732"	.915"	13.98"	18.87"	3.12"	2"
TC-075-6-1-162-S	1-5/8"	.732"	.915"	13.98"	18.97"	3.34"	2"
TC-075-6-1-181-S	1-13/16"	.732"	.915"	13.98"	19.08"	3.56"	2"
TC-075-6-1-200-S	2"	.732"	.915"	13.98"	19.19"	3.77"	2"
TC-075-6-1-218-S	2-3/16"	.732"	.915"	13.98"	19.30"	3.99"	2"
TC-075-6-1-237-S	2-3/8"	.732"	.915"	13.98"	19.41"	4.20"	2"
TC-075-6-1-256-S	2-9/16"	.732"	.915"	13.98"	19.52"	4.42"	2"
TC-075-6-1-275-S	2-3/4"	.732"	.915"	13.98"	19.62"	4.64"	2"
TC-075-6-1-293-S	2-15/16"	.732"	.915"	13.98"	19.73"	4.85"	2"
TC-075-6-1-312-S	3-1/8"	.732"	.915"	13.98"	19.84"	5.07"	2"



If a size is needed which is not shown on this page, just add hex size.

For example, if a 2-1/2" hex, 4:1, 3/4" drive is needed, part number is TC-075-4-1-250. Also available in metric size and part number would match accordingly. For example, if a 60mm hex is needed, part number would be TC-075-4-1-60MM-S.

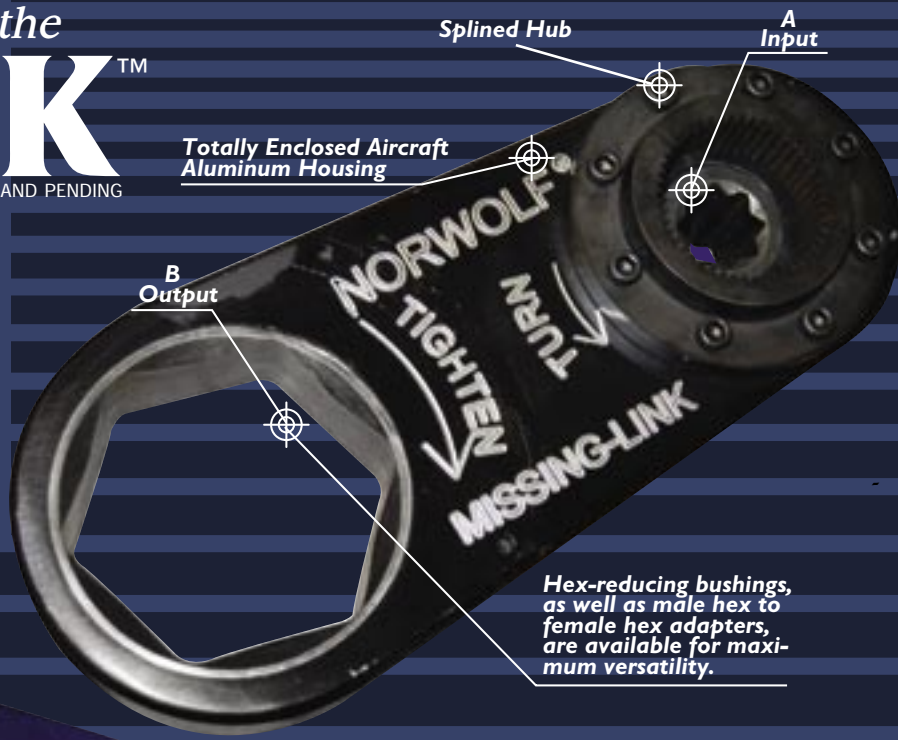
ALSO AVAILABLE:

- Double sided Missing Links
- Missing-Link sets
- Different configurations
- 1" and 1 1/2" drives

Norwolf Tool Works presents the
XCELINK™
 U.S. AND INTERNATIONAL PATENTS APPROVED AND PENDING

The Norwolf Xcelink is the ultimate answer for gaining access where standard pneumatic multipliers are too tall or bulky to fit application. The Norwolf Xcelink is essentially a Missing Link with the ability to turn continuously.

There are two available styles. The standard style has a sliding pin with which to react with any standard pneumatic torque wrench. The hub style has a specific splined hub to match the input tool of choice. All hubs can be interchanged for added versatility.



Hex-reducing bushings, as well as male hex to female hex adapters, are available for maximum versatility.



Slide Thru Pin

- ALSO AVAILABLE:
- Special Configurations
 - Special Reaction Arms Available
 - Box sockets and hex reducing bushings



Norwolf Xcelink with Hub shown in use with an air multiplier on a coal pulverizer application.



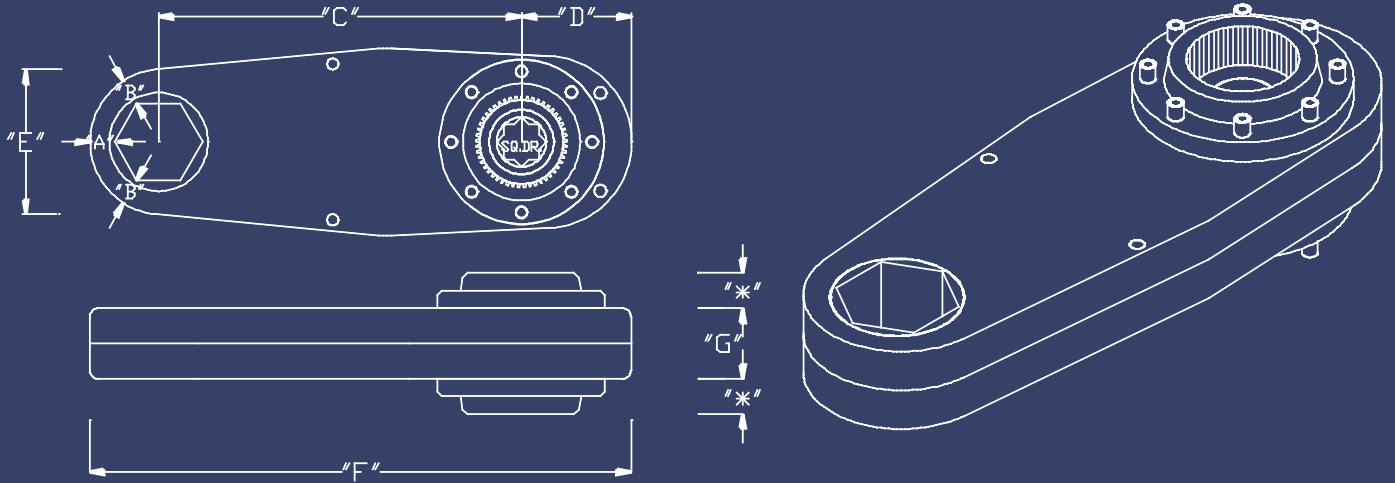
Pneumatic nut runner used with Pin style Xcelink.



Side view of Xcelink for coal pulverizer.

XCELINK DATA

Missing Link, Constant Rotation, Splined Hub Reaction



1/2" DRIVE, 3:1 RATIO, SPLINED HUB								
PART NO.	HEX	"A"	"B"	"C"	"D"	"E"	"F"	"G"
CTC-050-3-1-087-H	7/8"	.307"	.336"	4.08"	1.56"	1.62"	6.46"	1"
CTC-050-3-1-106-H	1-1/8"	.307"	.336"	4.08"	1.56"	1.84"	6.57"	1"
CTC-050-3-1-125-H	1-1/4"	.307"	.336"	4.08"	1.56"	2.06"	6.68"	1"
CTC-050-3-1-143-H	1-7/16"	.307"	.336"	4.08"	1.56"	2.27"	6.79"	1"
CTC-050-3-1-162-H	1-5/8"	.307"	.336"	4.08"	1.56"	2.49"	6.89"	1"
CTC-050-3-1-181-H	1-13/16"	.307"	.336"	4.08"	1.56"	2.71"	7.00"	1"
CTC-050-3-1-200-H	2"	.307"	.336"	4.08"	1.56"	2.92"	7.11"	1"
CTC-050-3-1-218-H	2-3/16"	.307"	.336"	4.08"	1.56"	3.14"	7.22"	1"
CTC-050-3-1-237-H	2-3/8"	.307"	.336"	4.08"	1.56"	3.36"	7.33"	1"

1/2" DRIVE, 4:1 RATIO, SPLINED HUB								
PART NO.	HEX	"A"	"B"	"C"	"D"	"E"	"F"	"G"
CTC-050-4-1-087-H	7/8"	.347"	.377"	5.15"	1.56"	1.70"	7.57"	1"
CTC-050-4-1-106-H	1-1/8"	.347"	.377"	5.15"	1.56"	1.92"	7.68"	1"
CTC-050-4-1-125-H	1-1/4"	.347"	.377"	5.15"	1.56"	2.14"	7.79"	1"
CTC-050-4-1-143-H	1-7/16"	.347"	.377"	5.15"	1.56"	2.35"	7.89"	1"
CTC-050-4-1-162-H	1-5/8"	.347"	.377"	5.15"	1.56"	2.57"	8"	1"
CTC-050-4-1-181-H	1-13/16"	.347"	.377"	5.15"	1.56"	2.79"	8.11"	1"
CTC-050-4-1-200-H	2"	.347"	.377"	5.15"	1.56"	3"	8.22"	1"
CTC-050-4-1-218-H	2-3/16"	.347"	.377"	5.15"	1.56"	3.22"	8.33"	1"
CTC-050-4-1-237-H	2-3/8"	.347"	.377"	5.15"	1.56"	3.43"	8.43"	1"

3/4" DRIVE, 3:1 RATIO, SPLINED HUB								
PART NO.	HEX	"A"	"B"	"C"	"D"	"E"	"F"	"G"
CTC-075-3-1-087-H	7/8"	.461"	.505"	6.13"	2.35"	1.93"	9.44"	1.5"
CTC-075-3-1-106-H	1-1/16"	.461"	.505"	6.13"	2.35"	2.15"	9.55"	1.5"
CTC-075-3-1-125-H	1-1/4"	.461"	.505"	6.13"	2.35"	2.36"	9.66"	1.5"
CTC-075-3-1-143-H	1-7/16"	.461"	.505"	6.13"	2.35"	2.58"	9.77"	1.5"
CTC-075-3-1-162-H	1-5/8"	.461"	.505"	6.13"	2.35"	2.80"	9.88"	1.5"
CTC-075-3-1-181-H	1-13/16"	.461"	.505"	6.13"	2.35"	3.01"	9.98"	1.5"
CTC-075-3-1-200-H	2"	.461"	.505"	6.13"	2.35"	3.23"	10.09"	1.5"
CTC-075-3-1-218-H	2-3/16"	.461"	.505"	6.13"	2.35"	3.45"	10.20"	1.5"
CTC-075-3-1-237-H	2-3/8"	.461"	.505"	6.13"	2.35"	3.66"	10.31"	1.5"
CTC-075-3-1-256-H	2-9/16"	.461"	.505"	6.13"	2.35"	3.88"	10.42"	1.5"
CTC-075-3-1-275-H	2-3/4"	.461"	.505"	6.13"	2.35"	4.10"	10.52"	1.5"
CTC-075-3-1-293-H	2-15/16"	.461"	.505"	6.13"	2.35"	4.31"	10.63"	1.5"
CTC-075-3-1-312-H	3-1/8"	.461"	.505"	6.13"	2.35"	4.53"	10.74"	1.5"

3/4" DRIVE, 4:1 RATIO, SPLINED HUB								
PART NO.	HEX	"A"	"B"	"C"	"D"	"E"	"F"	"G"
CTC-075-4-1-087-H	7/8"	.521"	.566"	7.73"	2.35"	2.05"	11.10"	1.5"
CTC-075-4-1-106-H	1-1/16"	.521"	.566"	7.73"	2.35"	2.27"	11.21"	1.5"
CTC-075-4-1-125-H	1-1/4"	.521"	.566"	7.73"	2.35"	2.48"	11.32"	1.5"
CTC-075-4-1-143-H	1-7/16"	.521"	.566"	7.73"	2.35"	2.70"	11.43"	1.5"
CTC-075-4-1-162-H	1-5/8"	.521"	.566"	7.73"	2.35"	2.92"	11.54"	1.5"
CTC-075-4-1-181-H	1-13/16"	.521"	.566"	7.73"	2.35"	3.13"	11.64"	1.5"
CTC-075-4-1-200-H	2"	.521"	.566"	7.73"	2.35"	3.35"	11.75"	1.5"
CTC-075-4-1-218-H	2-3/16"	.521"	.566"	7.73"	2.35"	3.57"	11.86"	1.5"
CTC-075-4-1-237-H	2-3/8"	.521"	.566"	7.73"	2.35"	3.78"	11.97"	1.5"
CTC-075-4-1-256-H	2-9/16"	.521"	.566"	7.73"	2.35"	4"	12.08"	1.5"
CTC-075-4-1-275-H	2-3/4"	.521"	.566"	7.73"	2.35"	4.22"	12.18"	1.5"
CTC-075-4-1-293-H	2-15/16"	.521"	.566"	7.73"	2.35"	4.43"	12.29"	1.5"
CTC-075-4-1-312-S	3-1/8"	.521"	.566"	7.73"	2.35"	4.65"	12.40"	1.5"

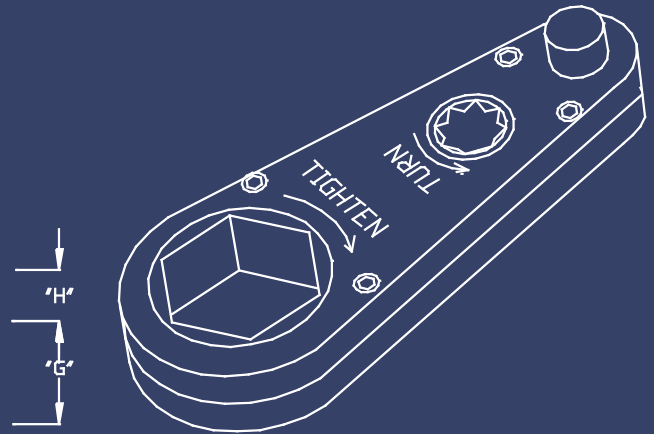
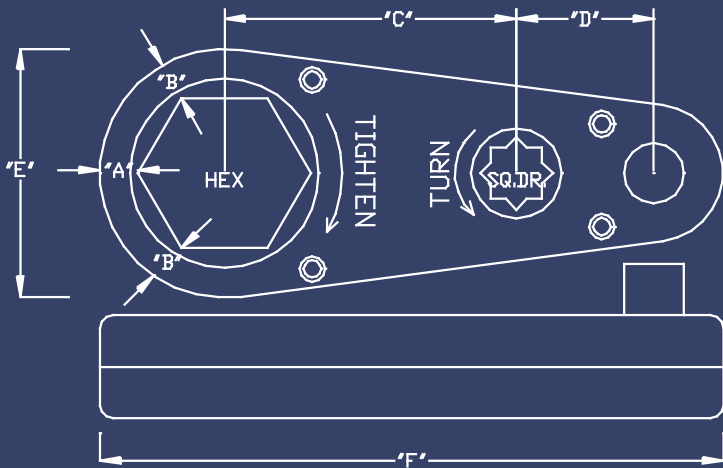
1" DRIVE, 3:1 RATIO, SPLINED HUB								
PART NO.	HEX	"A"	"B"	"C"	"D"	"E"	"F"	"G"
CTC-100-3-1-200-H	2"	.614"	.673"	8.17"	3.13"	3.54"	13.07"	2"
CTC-100-3-1-218-H	2-3/16"	.614"	.673"	8.17"	3.13"	3.75"	13.18"	2"
CTC-100-3-1-237-H	2-3/8"	.614"	.673"	8.17"	3.13"	3.97"	13.28"	2"
CTC-100-3-1-256-H	2-9/16"	.614"	.673"	8.17"	3.13"	4.19"	13.39"	2"
CTC-100-3-1-275-H	2-3/4"	.614"	.673"	8.17"	3.13"	4.40"	13.50"	2"
CTC-100-3-1-293-H	2-15/16"	.614"	.673"	8.17"	3.13"	4.62"	13.61"	2"
CTC-100-3-1-312-H	3-1/8"	.614"	.673"	8.17"	3.13"	4.84"	13.72"	2"
CTC-100-3-1-350-H	3-1/2"	.614"	.673"	8.17"	3.13"	5.27"	13.93"	2"
CTC-100-3-1-387-H	3-7/8"	.614"	.673"	8.17"	3.13"	5.70"	14.15"	2"
CTC-100-3-1-425-H	4-1/4"	.614"	.673"	8.17"	3.13"	6.13"	14.37"	2"
CTC-100-3-1-462-H	4-5/8"	.614"	.673"	8.17"	3.13"	6.57"	14.58"	2"

1" DRIVE, 4:1 RATIO, SPLINED HUB								
PART NO.	HEX	"A"	"B"	"C"	"D"	"E"	"F"	"G"
CTC-100-4-1-200-H	2"	.694"	.754"	10.30"	3.13"	3.70"	15.28"	2"
CTC-100-4-1-218-H	2-3/16"	.694"	.754"	10.30"	3.13"	3.91"	15.39"	2"
CTC-100-4-1-237-H	2-3/8"	.694"	.754"	10.30"	3.13"	4.13"	15.50"	2"
CTC-100-4-1-256-H	2-9/16"	.694"	.754"	10.30"	3.13"	4.35"	15.60"	2"
CTC-100-4-1-275-H	2-3/4"	.694"	.754"	10.30"	3.13"	4.56"	15.71"	2"
CTC-100-4-1-293-H	2-15/16"	.694"	.754"	10.30"	3.13"	4.78"	15.82"	2"
CTC-100-4-1-312-H	3-1/8"	.694"	.754"	10.30"	3.13"	4.99"	15.93"	2"
CTC-100-4-1-350-H	3-1/2"	.694"	.754"	10.30"	3.13"	5.43"	16.15"	2"
CTC-100-4-1-387-H	3-7/8"	.694"	.754"	10.30"	3.13"	5.86"	16.36"	2"
CTC-100-4-1-425-H	4-1/4"	.694"	.754"	10.30"	3.13"	6.29"	16.58"	2"
CTC-100-4-1-462-H	4-5/8"	.694"	.754"	10.30"	3.13"	6.73"	16.79"	2"

"*" This thickness is determined by the input drive.

XCELINK DATA

Missing Link, Constant Rotation, Standard Pin Reaction



1/2" DRIVE, 3:1 RATIO, STANDARD PIN									
PART NO.	HEX	"A"	"B"	"C"	"D"	"E"	"F"	"G"	"H"
CTC-050-3-1-087-S	7/8"	.366"	.458"	2.72"	1.33"	1.75"	5.59"	1.25"	.50"
CTC-050-3-1-106-S	1-1/16"	.366"	.458"	2.72"	1.33"	1.96"	5.70"	1.25"	.50"
CTC-050-3-1-125-S	1-1/4"	.366"	.458"	2.72"	1.33"	2.18"	5.80"	1.25"	.50"
CTC-050-3-1-143-S	1-7/16"	.366"	.458"	2.72"	1.33"	2.39"	5.91"	1.25"	.50"
CTC-050-3-1-162-S	1-5/8"	.366"	.458"	2.72"	1.33"	2.61"	6.01"	1.25"	.50"
CTC-050-3-1-181-S	1-13/16"	.366"	.458"	2.72"	1.33"	2.82"	6.13"	1.25"	.50"
CTC-050-3-1-200-S	2"	.366"	.458"	2.72"	1.33"	3.04"	6.24"	1.25"	.50"
CTC-050-3-1-218-S	2-3/16"	.366"	.458"	2.72"	1.33"	3.25"	6.34"	1.25"	.50"
CTC-050-3-1-237-S	2-3/8"	.366"	.458"	2.72"	1.33"	3.47"	6.45"	1.25"	.50"

1/2" DRIVE, 4:1 RATIO, STANDARD PIN									
PART NO.	HEX	"A"	"B"	"C"	"D"	"E"	"F"	"G"	"H"
CTC-050-4-1-087-S	7/8"	.366"	.458"	3.43"	1.33"	1.75"	6.30"	1.25"	.50"
CTC-050-4-1-106-S	1-1/16"	.366"	.458"	3.43"	1.33"	1.96"	6.41"	1.25"	.50"
CTC-050-4-1-125-S	1-1/4"	.366"	.458"	3.43"	1.33"	2.18"	6.51"	1.25"	.50"
CTC-050-4-1-143-S	1-7/16"	.366"	.458"	3.43"	1.33"	2.39"	6.62"	1.25"	.50"
CTC-050-4-1-162-S	1-5/8"	.366"	.458"	3.43"	1.33"	2.61"	6.73"	1.25"	.50"
CTC-050-4-1-181-S	1-13/16"	.366"	.458"	3.43"	1.33"	2.82"	6.84"	1.25"	.50"
CTC-050-4-1-200-S	2"	.366"	.458"	3.43"	1.33"	3.04"	6.95"	1.25"	.50"
CTC-050-4-1-218-S	2-3/16"	.366"	.458"	3.43"	1.33"	3.25"	7.05"	1.25"	.50"
CTC-050-4-1-237-S	2-3/8"	.366"	.458"	3.43"	1.33"	3.47"	7.16"	1.25"	.50"

3/4" DRIVE, 3:1 RATIO, STANDARD PIN									
PART NO.	HEX	"A"	"B"	"C"	"D"	"E"	"F"	"G"	"H"
CTC-075-3-1-087-S	7/8"	.549"	.686"	4.08"	2"	2.11"	8.13"	1.5"	.75"
CTC-075-3-1-106-S	1-1/16"	.549"	.686"	4.08"	2"	2.32"	8.24"	1.5"	.75"
CTC-075-3-1-125-S	1-1/4"	.549"	.686"	4.08"	2"	2.54"	8.35"	1.5"	.75"
CTC-075-3-1-143-S	1-7/16"	.549"	.686"	4.08"	2"	2.75"	8.46"	1.5"	.75"
CTC-075-3-1-162-S	1-5/8"	.549"	.686"	4.08"	2"	2.97"	8.57"	1.5"	.75"
CTC-075-3-1-181-S	1-13/16"	.549"	.686"	4.08"	2"	3.19"	8.67"	1.5"	.75"
CTC-075-3-1-200-S	2"	.549"	.686"	4.08"	2"	3.41"	8.78"	1.5"	.75"
CTC-075-3-1-218-S	2-3/16"	.549"	.686"	4.08"	2"	3.62"	8.89"	1.5"	.75"
CTC-075-3-1-237-S	2-3/8"	.549"	.686"	4.08"	2"	3.84"	9"	1.5"	.75"
CTC-075-3-1-256-S	2-9/16"	.549"	.686"	4.08"	2"	4.06"	9.11"	1.5"	.75"
CTC-075-3-1-275-S	2-3/4"	.549"	.686"	4.08"	2"	4.27"	9.22"	1.5"	.75"
CTC-075-3-1-293-S	2-15/16"	.549"	.686"	4.08"	2"	4.49"	9.32"	1.5"	.75"
CTC-075-3-1-312-S	3-1/8"	.549"	.686"	4.08"	2"	4.71"	9.43"	1.5"	.75"

3/4" DRIVE, 4:1 RATIO, STANDARD PIN									
PART NO.	HEX	"A"	"B"	"C"	"D"	"E"	"F"	"G"	"H"
CTC-075-4-1-087-S	7/8"	.549"	.686"	5.14"	2"	2.11"	9.19"	1.5"	.75"
CTC-075-4-1-106-S	1-1/16"	.549"	.686"	5.14"	2"	2.32"	9.30"	1.5"	.75"
CTC-075-4-1-125-S	1-1/4"	.549"	.686"	5.14"	2"	2.54"	9.41"	1.5"	.75"
CTC-075-4-1-143-S	1-7/16"	.549"	.686"	5.14"	2"	2.75"	9.52"	1.5"	.75"
CTC-075-4-1-162-S	1-5/8"	.549"	.686"	5.14"	2"	2.97"	9.62"	1.5"	.75"
CTC-075-4-1-181-S	1-13/16"	.549"	.686"	5.14"	2"	3.19"	9.73"	1.5"	.75"
CTC-075-4-1-200-S	2"	.549"	.686"	5.14"	2"	3.41"	9.84"	1.5"	.75"
CTC-075-4-1-218-S	2-3/16"	.549"	.686"	5.14"	2"	3.62"	9.95"	1.5"	.75"
CTC-075-4-1-237-S	2-3/8"	.549"	.686"	5.14"	2"	3.84"	10.05"	1.5"	.75"
CTC-075-4-1-256-S	2-9/16"	.549"	.686"	5.14"	2"	4.06"	10.16"	1.5"	.75"
CTC-075-4-1-275-S	2-3/4"	.549"	.686"	5.14"	2"	4.27"	10.27"	1.5"	.75"
CTC-075-4-1-293-S	2-15/16"	.549"	.686"	5.14"	2"	4.49"	10.37"	1.5"	.75"
CTC-075-4-1-312-S	3-1/8"	.549"	.686"	5.14"	2"	4.71"	10.49"	1.5"	.75"

1" DRIVE, 3:1 RATIO, STANDARD PIN									
PART NO.	HEX	"A"	"B"	"C"	"D"	"E"	"F"	"G"	"H"
CTC-100-3-1-200-S	2"	.732"	.915"	5.44"	2.66"	3.77"	11.32"	2"	1"
CTC-100-3-1-218-S	2-3/16"	.732"	.915"	5.44"	2.66"	3.99"	11.43"	2"	1"
CTC-100-3-1-237-S	2-3/8"	.732"	.915"	5.44"	2.66"	4.21"	11.54"	2"	1"
CTC-100-3-1-256-S	2-9/16"	.732"	.915"	5.44"	2.66"	4.42"	11.64"	2"	1"
CTC-100-3-1-275-S	2-3/4"	.732"	.915"	5.44"	2.66"	4.64"	11.75"	2"	1"
CTC-100-3-1-293-S	2-15/16"	.732"	.915"	5.44"	2.66"	4.85"	11.86"	2"	1"
CTC-100-3-1-312-S	3-1/8"	.732"	.915"	5.44"	2.66"	5.07"	11.97"	2"	1"
CTC-100-3-1-350-S	3-1/2"	.732"	.915"	5.44"	2.66"	5.50"	12.18"	2"	1"
CTC-100-3-1-387-S	3-7/8"	.732"	.915"	5.44"	2.66"	5.94"	12.40"	2"	1"
CTC-100-3-1-425-S	4-1/4"	.732"	.915"	5.44"	2.66"	6.37"	12.62"	2"	1"
CTC-100-3-1-462-S	4-5/8"	.732"	.915"	5.44"	2.66"	6.80"	12.83"	2"	1"

1" DRIVE, 4:1 RATIO, STANDARD PIN									
PART NO.	HEX	"A"	"B"	"C"	"D"	"E"	"F"	"G"	"H"
CTC-100-4-1-200-S	2"	.732"	.915"	6.85"	2.66"	3.77"	12.73"	2"	1"
CTC-100-4-1-218-S	2-3/16"	.732"	.915"	6.85"	2.66"	3.99"	12.84"	2"	1"
CTC-100-4-1-237-S	2-3/8"	.732"	.915"	6.85"	2.66"	4.21"	12.95"	2"	1"
CTC-100-4-1-256-S	2-9/16"	.732"	.915"	6.85"	2.66"	4.42"	13.05"	2"	1"
CTC-100-4-1-275-S	2-3/4"	.732"	.915"	6.85"	2.66"	4.64"	13.16"	2"	1"
CTC-100-4-1-293-S	2-15/16"	.732"	.915"	6.85"	2.66"	4.85"	13.27"	2"	1"
CTC-100-4-1-312-S	3-1/8"	.732"	.915"	6.85"	2.66"	5.07"	13.38"	2"	1"
CTC-100-4-1-350-S	3-1/2"	.732"	.915"	6.85"	2.66"	5.50"	13.59"	2"	1"
CTC-100-4-1-387-S	3-7/8"	.732"	.915"	6.85"	2.66"	5.94"	13.81"	2"	1"
CTC-100-4-1-425-S	4-1/4"	.732"	.915"	6.85"	2.66"	6.37"	14.03"	2"	1"
CTC-100-4-1-462-S	4-5/8"	.732"	.915"	6.85"	2.66"	6.80"	14.24"	2"	1"

The "Hydraulic Missing Link"

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U.S. AND INTERNATIONAL PATENTS APPROVED AND PENDING

TBQ
TBX

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Norwulf[®] Tool Works is proud to announce the world's first true hydraulic torque multiplier[™]—the TRIBECA[®]. Finally, industry has a tool that can handle virtually any bolt, any time, any place via remote control or with standard torque wrenches!

TRIBECAs are not to be confused with other complex "uni-purpose" "L" shaped hydraulic bolting tools that are used for specific applications at specific times in specific conditions.



TBQ-6 with special reaction arm on compressor nut.



TBX working in confined area.



FEATURES AND BENEFITS OF THE NORWOLF TRIBECA[®]

- **MULTI-PURPOSE:** Works with an impact, torque wrenches, or any hydraulic pump, including the popular portapower.
- **REACTION:** Can use standard "knocker" wrenches for 360° reaction capabilities.
- **ACCURACY:** Built in multiplier 2:1 ratio, hydraulic accuracy plus or minus 5%.
- **SPLIT CASING DESIGN:** Design permits reaction off of body. No torsional strain as with other "L" shaped tools.



TBQ fitting where no other hydraulic tool can.

MODEL	OUTPUT DRIVE	INPUT DRIVE	MAX OUTPUT	EFFECTIVE MULTI.	REACTION ARM HEX	ACCURACY	RADIUS	WEIGHT (lbs.)
TBQ - 4	1/2"	3/8"	380 ft/lbs.	2:1	7/8"	± 5%	11/16"	3.0
TBQ - 6	3/4"	1/2"	1360 ft/lbs.	2:1	1-1/4"	± 5%	1-1/16"	6.0
TBQ - 20	1"	3/4"	3100 ft/lbs.	2:1	1-5/8"	± 5%	1-3/8"	16.0
TBQ - 60	1-1/2"	1"	6150 ft/lbs.	2:1	2"	± 5%	1-5/8"	23.0
TBQ - 80	1-1/2"	1"	10300 ft/lbs.	2:1	2-1/2"	± 5%	2-1/8"	46.0
TBQ - 200	2-1/2"	1-1/2"	25500 ft/lbs.	2:1	3-1/4"	± 5%	2-3/4"	94.0
TBQ - 400	2-1/2"	1-1/2"	50800 ft/lbs.	2:1	4"	± 5%	3-1/4"	129.0

MODEL	OUTPUT HEX	INPUT DRIVE	MAX OUTPUT	EFFECTIVE MULTI.	REACTION ARM HEX	ACCURACY	THICKNESS	WEIGHT (lbs.)
TBX - 50	3/4"- 2-3/8"	1/2"	1480 ft/lbs.	2:1	1-1/4"	± 5%	1-1/2"	8.0
TBX - 75	1-1/4"- 3-1/8"	3/4"	3550 ft/lbs.	2:1	1-5/8"	± 5%	2"	19.0
TBX - 12	1-7/8"- 4-1/4"	1"	6800 ft/lbs.	2:1	2"	± 5%	2-1/2"	26.0
TBX - 10	2-3/8"- 5"	1"	13450 ft/lbs.	2:1	2-1/2"	± 5%	3"	53.0

LARGER SIZES AVAILABLE UPON REQUEST.