

**M-ML &
XCE Link**

Manual Torque Multiplier



where sockets will not fit ...

alkitronic® Norwolf specialty products

The **alkitronic® Norwolf Missing Link™**, Model **M-ML** - the most revolutionary manual torque multiplier for applications where standard tools don't fit. The **alkitronic® Norwolf XCE Link™** is essentially a Missing Link™ with the ability to turn continuously.

M-ML

The **M-ML** torque multiplier fits into **tightly confined areas** where sockets will not fit.

The **M-ML**, has become standard in the wind industry for generator feet and yaw pucks.

Available in 4:1 or 6:1 ratios. It should be emphasized that despite a large gear ratio of **6:1**, the **M-ML** offers an ideal power-to-weight ratio.

Advantages

- **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**.

XCE Link

The **alkitronic® Norwolf XCE Link™** is the ultimate answer for gaining access where standard pneumatic multipliers are too tall or bulky to fit application. Available in 3:1 or 4:1 ratios.

There are two available styles. The standard style has a sliding pin with which to react with any standard torque multiplier. The hub style has a specific splined hub to match the input tool of choice.

Advantages

- Totally enclosed aluminum housing.
- **Available in two styles:** pin or hub reaction.
- Continuous rotation for use with any **alkitronic®** pneumatic or electric multiplier.
- Available in special configurations.
- Gearless internal design offers long service life.



Application Example: The **Missing Link™** when fitting a coupling in plant construction.

The Missing Link™ fits more applications than any other wrench.



XCE Link™ with hub style to match the input of all **alkitronic®** torque tools. Continuous rotation for use with any electric or pneumatic driven torque multiplier.

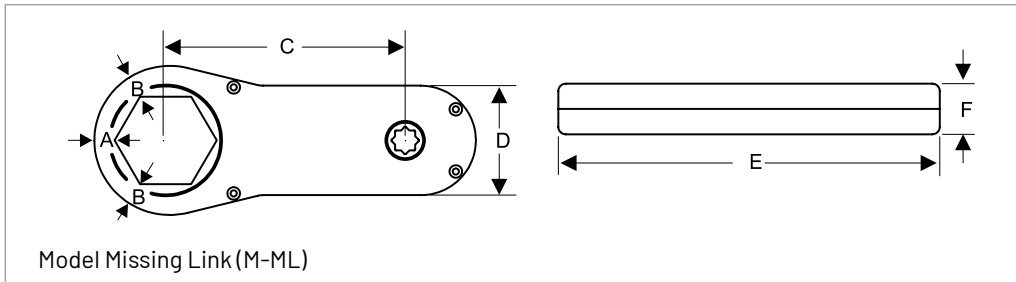


Missing Link™ - the manual torque multipliers are available with spanner sizes from 22 mm to max. 80 mm and ratios of 4:1, 6:1.

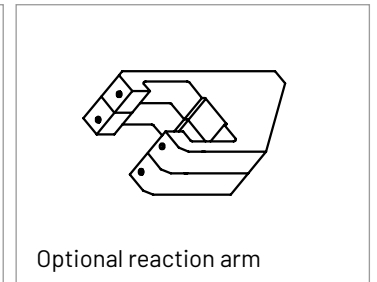
The Missing Link™, the most suitable multiplier for every bolting connection.

alkitronic® Missing Link (M-ML) and XCE Link

Technical Data



Model Missing Link (M-ML)



Optional reaction arm

Models alkitronic® M-ML 1/2", Ratio 4:1 - max. 340 Nm/250 ft.lbs input to 1,360 Nm/1,000 ft.lbs output

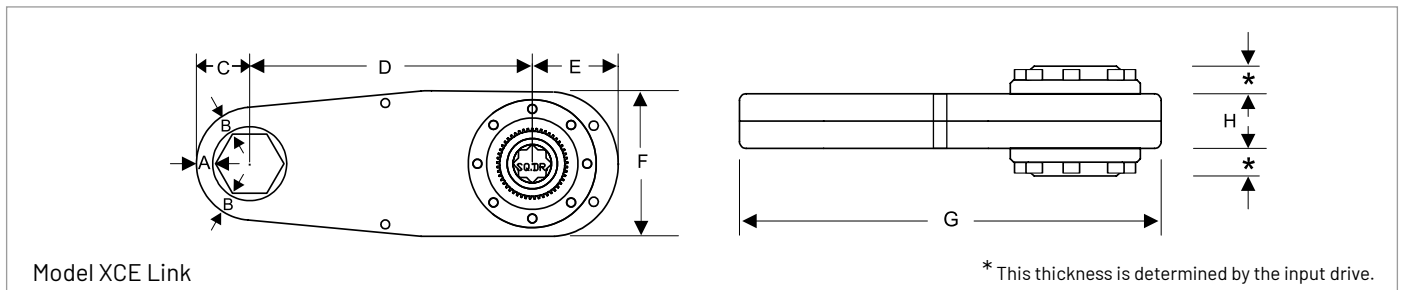
SW / AF	22	24	27	30	32	36	41	46	50	55	60	C	D	F
A mm	13,5	12	11,1	12	11,1	11,1	11,1	11,1	11,1	11,1	11,1	151 mm	70 mm	32 mm
B mm	15,1	13,5	12,7	13,5	12,7	12,7	12,7	12,7	12,7	12,7	12,7			
E mm	222	222	222	226	226	228	231	234	236	239	242			

Models alkitronic® M-ML 3/4", Ratio 4:1 - max. 815 Nm/600 ft.lbs input to 3,260 Nm/2,405 ft.lbs output

SW / AF	22	24	27	30	32	36	41	46	50	55	60	65	70	75	80	C	D	F
A mm	21,3	20,3	18,8	17,3	16,3	14,3	14,3	14,3	14,3	14,3	14,3	14,3	14,3	14,3	14,3	212 mm	95 mm	45 mm
B mm	23,6	22,6	21,1	19,6	18,6	16,6	16,6	16,6	16,6	16,6	16,6	16,6	16,6	16,6	16,6			
E mm	309	309	309	309	309	309	312	315	317	320	323	325	328	331	334			

Models alkitronic® M-ML 3/4", Ratio 6:1 - max. 815 Nm/600 ft.lbs input to 4,890 Nm/3,605 ft.lbs output

SW / AF	32	36	41	46	50	55	60	65	70
A mm	23,3	21,3	18,8	16,3	14,3	14,3	14,3	14,3	14,3
B mm	25,6	23,6	21,1	18,6	16,6	16,6	16,6	16,6	16,6
E mm	476	476	476	476	476	479	481	484	487



Model XCE Link

* This thickness is determined by the input drive.

Models alkitronic® XCE Link - 3/4", Ratio 3:1 - max. 1,150 Nm/850 ft.lbs input to 3,450 Nm/2545 ft.lbs output

SW / AF	24	27	32	36	41	46	50	55	60	65	70	75	80	D	E	F	H
A mm	10	11	11	12	12	13	13	14	14	15	15	16	16	156 mm	60 mm	102 mm	38 mm
B mm	11	11	12	12	13	13	14	14	15	15	16	16	17				
C mm	25	27	30	33	36	40	42	46	49	53	56	59	63				
G mm	241	243	246	249	252	256	258	262	265	269	272	275	279				

Models alkitronic® XCE Link - 1", Ratio 3:1 - max. 2,440 Nm/1,800 ft.lbs input to 7,320 Nm/5,400 ft.lbs output

SW / AF	50	55	60	65	70	75	80	90	100	105	110	115	120	D	E	F	H
A mm	13	14	14	15	15	16	16	17	18	19	20	20	21	208 mm	80 mm	137 mm	51 mm
B mm	14	14	15	15	16	16	17	18	19	19	20	20	21				
C mm	42	46	49	53	56	59	63	70	76	80	83	87	90				
G mm	330	334	337	341	344	347	351	358	364	368	371	375	378				

Models alkitronic® XCE Link - 3/4", Ratio 4:1 - max. 1,150 Nm/850 ft.lbs input to 4,600 Nm/3,395 ft.lbs output

SW / AF	24	27	32	36	41	46	50	55	60	65	70	75	80	D	E	F	H
A mm	10	11	11	12	12	13	13	14	14	15	15	16	16	196 mm	60 mm	102 mm	38 mm
B mm	11	11	12	12	13	13	14	14	15	15	16	16	17				
C mm	25	27	30	33	36	40	42	46	49	53	56	59	63				
G mm	281	283	286	289	292	296	298	302	305	309	312	315	319				

Models alkitronic® XCE Link - 1", Ratio 4:1 - max. 2,440 Nm/1,800 ft.lbs input to 9,760 Nm/7,200 ft.lbs output

SW / AF	50	55	60	65	70	75	80	90	100	105	110	115	120	D	E	F	H
A mm	13	14	14	15	15	16	16	17	18	19	20	20	21	262 mm	80 mm	137 mm	51 mm
B mm	14	14	15	15	16	16	17	18	19	19	20	20	21				
C mm	42	46	49	53	56	59	63	70	76	80	83	87	90				
G mm	384	388	391	395	398	401	405	412	418	422	425	429	432				

YOUR PLUS FOR MORE PERFORMANCE

Increased quality

Premium production
Highest quality materials
Long product life cycles
Experience in bolting technology since 1984
Made in Germany – international patents

Increased precision

Precise, customer-specific torques
High repeatability
Reliability in permanent operation
Documentation of tightening results
Automatic shut-off

Increased productivity

Quicker tightening without reworking
No environmentally caused failures (IP54, ATEX)
High work safety
Easy to use: clear, simple instructions
Low maintenance and cost efficient

Better service

Technical advice on site
Training offers
Manufacturer's calibration and certification
Lifecycle support
Spare part and repair service

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