



M.W.A WELDING (THAILAND) CO.,LTD.

บริษัท เอ็ม.ดับบลิว.เอ. เวลดิ้ง (ประเทศไทย) จำกัด

**alkitronic®**

The Manuals

where sockets will not fit ...

Alkitronic M-ML & XCE Link

## 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.



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.



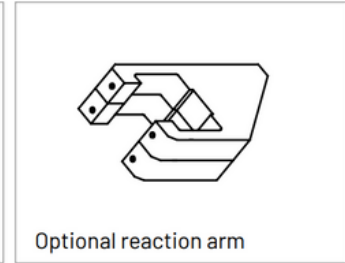
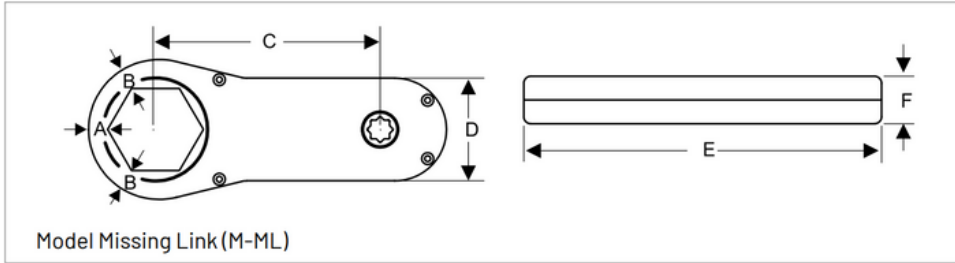
Application Example: The Missing Link™ when fitting a coupling in plant construction. The Missing Link™ fits more applications than any other wrench.



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.



Technical Data



**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**

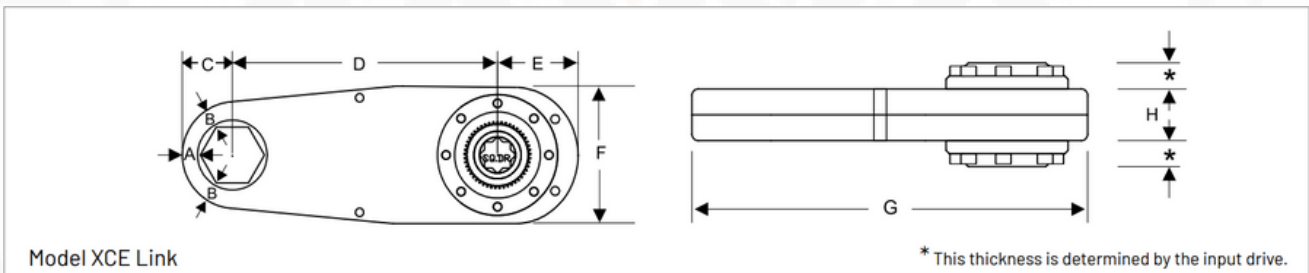
SW / AF	22	24	27	30	32	36	41	46	50	55	60	C	D	F
A mm	13.5	12	11.1	12	11.1	11.1	11.1	11.1	11.1	11.1	11.1	151 mm	70 mm	32 mm
B mm	15.1	13.5	12.7	13.5	12.7	12.7	12.7	12.7	12.7	12.7	12.7			
E mm	222	222	222	226	226	228	231	234	236	239	242			

**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	C	D	F
A mm	23.3	21.3	18.8	16.3	14.3	14.3	14.3	14.3	14.3	355 mm	102 mm	45 mm
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			



**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				