

*Desoutter*



**Industrial** Tools



## MODULAR MULTI- SPINDLE SOLUTION

Fastest for high torque  
High accuracy  
Full traceability

More Than Productivity



# MULTI BUILT WITH CUSTOMERS, FOR CUSTOMERS

DESOUTTER EC SYSTEM



## CONNECT

Place your CONNECT wherever you want at the station or anywhere in the plant using the dedicated CONNECT network.

## M-POWERBOX

The MULTI all-in-one and compact M-PowerBox:

- Can be connected to just one power source with a voltage level from 380V to 480V/3ph.
- Option to be on a daisy chain of up to several power boxes to synchronize up to 40 tools.

## M-SAFETYBOX

The M-SafetyBox is a core component for MULTI's safety management and the main connectivity point to the CONNECT and all your safety devices.

- 24VDC power supply output (Compatible with CONNECT)
  - Ethernet
- eStop (Cat.3 PL.e)
- Quick Stop



## M-DRIVE

The M-Drive can manage all Desoutter premium EFM fixtured spindles and can be installed and rebalanced in a matter of seconds.

- Restart in 30' for the shortest stop on the line.
- Optimised fanless cooling design for any production rate
- Easy access to install and rebalance - only one safety screw
- Direct front access to the tool cable
- Tool hot swap through tool changer within 6 seconds

## M-MODURACK

No more cables, the M-Modurack ensures the power distribution, communication, and safety between all the components of the solution.



## EFM - FIXTURED SPINDLE

Premium EFM fixtured spindles offer performance from 1 to 2000 Nm.

Designed for:

- Performance and durability
- Compactness (lightest and shortest tool on the market)
- Easy integration
- Optimised PCD (Pitch Cycle Diameter)
- High precision and repeatability

## BOOST YOUR FLEXIBILITY

- ▶ INTEGRATED THROUGH THE CONNECT TO THE DESOUTTER ECOSYSTEM
- ▶ HIGH COMPACTY FOR EASY INTEGRATION
- ▶ ADVANCED TIGHTENING STRATEGY TO MANAGE ALL TYPES OF APPLICATIONS

## BOOST YOUR UPTIME

- ▶ INSIGHT FROM DEMETER
- ▶ EASY MAINTENANCE WITH CHANNEL DIAGNOSTICS
- ▶ SERVICE CONTRACT TO GET THE BEST OF THE SOLUTION

## BOOST YOUR PRODUCTIVITY

- ▶ HIGH SPEED FOR HIGH TORQUE SPINDLE
- ▶ UP TO 40 SPINDLES
- ▶ HIGHLY ROBUST, RESISTANT TO VIBRATION, SHOCK, HEAT, HUMIDITY AND DUST

## KEY FACT ABOUT THE MULTI



**0.2 M<sup>2</sup>**

Compact

Less than 1m for  
40 spindles



**UP TO 40**

Modular

Choose from 1 to  
40 spindles



**30 sec.**

Fastest restart

Restart a station unit  
in 30'



**1**

Single Platform

One common platform  
to manage all assets

## THEY TRUST US

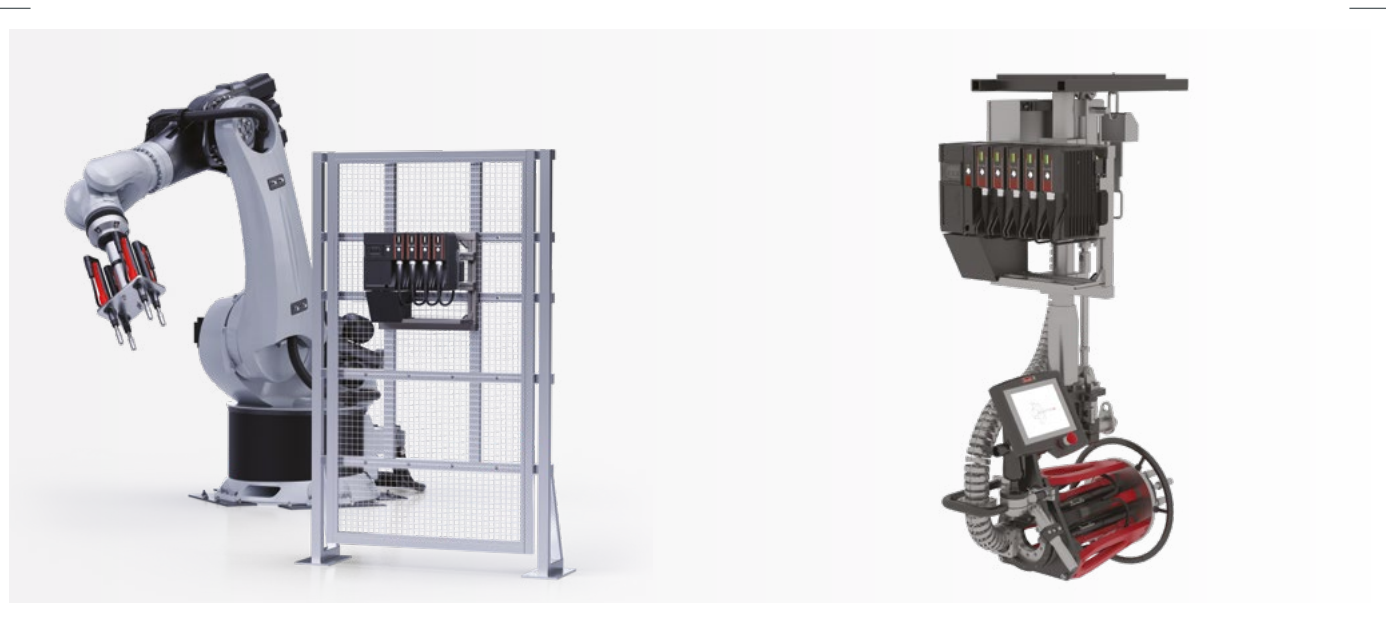
### APPLICATION IN POWERTRAIN

Desoutter's MULTI system is **extremely compact, occupies a small space, and it's light-weight**. In addition to meeting customer's own standards, its simple maintenance, good cable management, easy integration, easy installation and other advantages compare favorably with similar products on the market.

Also The MULTI is in line with customer's digital production and intelligent manufacturing development planning needs.

### TIGHTENING MANAGER - AGRICULTURAL VEHICLE MANUFACTURE

The **improvements in speed and accuracy**, coupled with the **additional benefits of full traceability** and improved operator safety, have enabled us to take productivity to the next level.



## SELECT YOUR MULTI

### TENSION

#### What three-phase power supply do you use?

The MULTI all-in-one and compact M-PowerBox can be connected to just one power source with a voltage level from 380V to 480V/3ph. This means it is quick and easy to install.

### SAFETY

#### Do you need to meet specific safety requirements?

The M-SafetyBox is a core component for MULTI's safety management and the main connectivity point to the CONNECT and all your safety devices.

### BOLTS / SCREWS

#### How many bolts or screws require simultaneous tightening?

To meet the varied demands of factory production, the MULTI can manage up to 40 tools, synchronised or not. The M-Drives are managed by the M-ModuRack, the backbone of the system. Cables and firmware are not required, but just a simple plug-and-play system.

### TORQUE

#### What is the maximum torque your application requires?

Check the torque needs according to your application. Premium EFM fixtured spindles offer performance from 1 to 2000 Nm.

### CABLE LENGTH

#### What is the distance between your tightening station and the Drive?

The MULTI compact modules are designed to be mounted on the tightening unit, which requires less floor space, and fewer cables. Less cable management means a leaner, simpler, and faster installation.

### GET IN TOUCH

Our team will be happy to answer every question about the **Modular Multi-Spindle Solution** by Desoutter.



## SET-UP YOUR MULTI WITH FEATURE MANAGEMENT

Feature Management is a **scalable solution** that allows you to get the features that you need.

With its HIGH LEVEL OF FLEXIBILITY, you can **add new features to your MULTI** (working mode, protocols, PSET, assembly process, and advanced tightening strategies) whenever your production line requirements change. Just **activate the feature**, and off you go!

### STANDARD PACK For 1 Tightening Unit Cord

	CORD TRANSDUCERIZED TOOL APPLICATIONS	CORD TRANSDUCERIZED TOOL APPLICATIONS
	Tightening Unit Premium	Tightening Unit Essential
<b>Number of Pset</b>	10	6
<b>Number of Assembly Process</b>	10	6
<b>Live Results</b>	Torque, angle, curve	Torque, angle, curve
<b>Result Transfer/storage</b>	Torque, angle, curve	OK/NOK
<b>Tightening strategy</b>	Torque and/or angle control	Torque control, Angle monitoring
<b>Protocol</b>	Open protocol	Open protocol

### EXTRA FEATURES

WORKING MODE	PSET & ASSEMBLY PROCESS	ADVANCED TIGHTENING STRATEGY	PROTOCOLS
Workgroup* - [MULTI : from 2 to 40 Spindles]	Additional PSET up to 50 PSET	Yield point	Desoutter protocol
Automation control with CVI LOGIX	Additional PSET up to 250 PSET	Zero torque angle	Curves by Open protocol
	Additional AP up to 50 AP	Seating detection	VW protocol
	Additional AP up to 250 AP		IPM protocol
			PFCS protocol
			FORD Protocol
			TOYOTA GLOBAL POKA YOKE



Analyze your Multi data with ease!  
The DeMeter uses robust analytics to process and transform raw data into meaningful results through:

- Relevant KPIs to assess your performance
- Intuitive dashboards for clear visualization of your data
- Detailed graphs and reports for in-depth analysis
- Real-time notifications to keep you informed of critical changes



INSTALLATION SHOULD NEVER BE AN AFTERTHOUGHT!



### Discover Smart Start for MULTI

An investment was made in a highly technical product, and you want it to be fully operational immediately, right? Benefit from the Smart Start service package for your MULTI and ensure your installation is set up correctly the first time:

**WHAT DOES SMART START INCLUDE?**

Installation, programming, functional tests, tool calibration, station back-up, capability tests, operator training, and production monitoring.



### Avoid production disruptions and extend the life of your tool by up to 30%

Discover Tool Care for MULTI. Safeguard MULTI reliability with our preventive maintenance solution, so you can increase your uptime:

- ☑ Service plan
- ☑ Calibration

Three levels of assistance tailored to your needs: Basic Care, Smart Care, Peace of Mind.



### Get on-site support and training for higher productivity!

Discover Production Boost for MULTI.

Customers that use on demand Production Boost services benefit from:

- ☑ On-site support to help with problem analysis and resolution, and implementation of tightening data analytics
- ☑ Expert training on tightening strategies, set-up, and programming, and essential maintenance



## MULTI



A



B



C



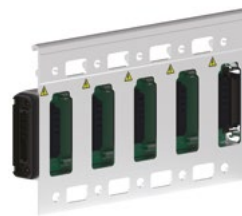
D



E



F



G



H

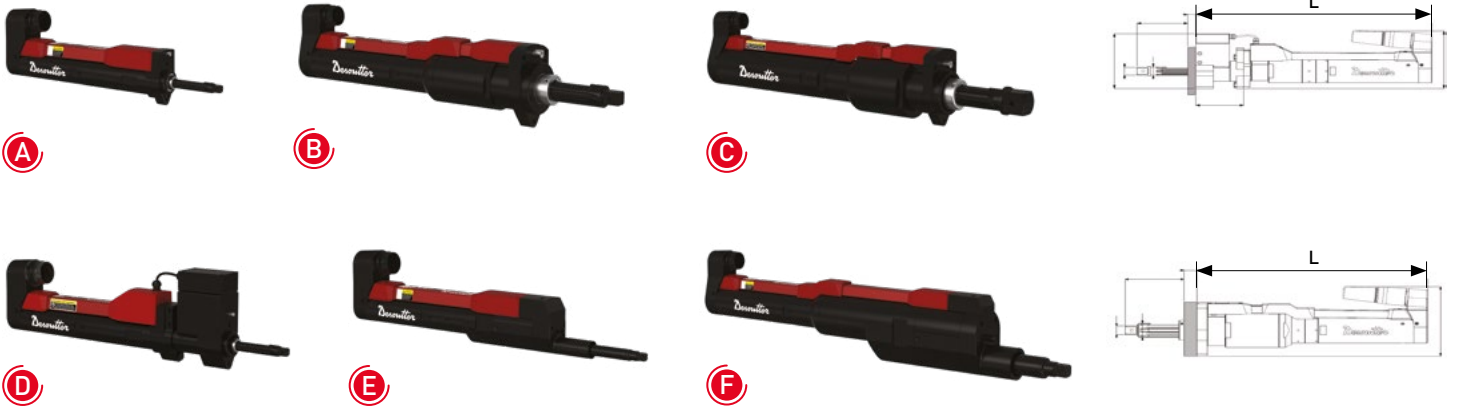
PIC	MODEL	PART NUMBER	AMBIENT STORAGE TEMP.		AMBIENT OPERATING TEMPERATURE				POWER CONSUMPTION	WEIGHT		POWER SUPPLY
			MAX °C	MAX °F	MIN. °C	MAX. °C	MIN. °F	MAX. °F		Kg	lb	
A	M-POWERBOX	615 932 751 0	70	158	0	40	32	104	32	6	13.2	380 - 480
B	M-SAFETYBOX	615 932 752 0	70	158	0	40	32	104	2	2.5	5.51	24
C	M-DRIVE	615 932 763 0	70	158	0	40	32	104	3	3.5	7.72	520
D	M-PROTECKTRACK	615 932 755 0	70	158	0	40	32	104	-	3.5	7.72	-
E	M-MODURACK2	615 932 756 0	70	158	0	40	32	104	32	0.5	1.1	-
F	M-MODURACK3	615 932 757 0	70	158	0	40	32	104	32	0.7	1.54	-
G	M-MODURACK5	615 932 758 0	70	158	0	40	32	104	32	1.2	2.65	-
H	M-RACKPLUG	615 932 759 0	-	-	-	-	-	-	-	-	-	-

## READY FOR YOUR TRANSFORMATION

- Innovative modular solution for multi-spindle applications
- Optimized design for various production environments
- Customized station solution from your actual assembly requirements
- Zero-error assembly with advanced tightening strategies & production monitoring

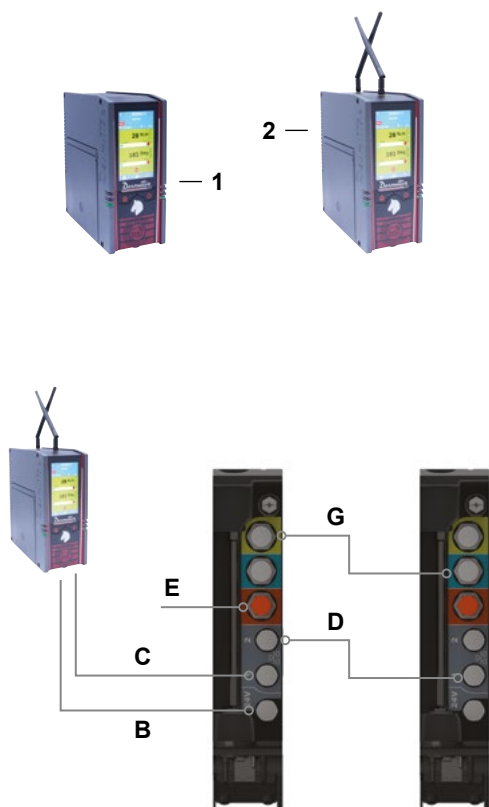


EFM / EFM-TA / EFMO



PIC	MODEL	PART NUMBER	OUTPUT DRIVE	STROKE	TORQUE						FREE SPEED	C-C DISTANCE		TOOL LENGTH L		WEIGHT	
					MIN.	RECOM-MENDED	MAX.	MIN.	RECOM-MENDED	MAX.		mm	in.	mm	in.	kg	lb
			in.	mm	Nm	Nm	Nm	ft.lb	ft.lb	ft.lb	rpm	mm	in.	mm	in.	kg	lb
<b>EFM</b>																	
A	EFM43-8	615 166 220 0	3/8	50	0.8	8	10	0.6	5.9	7.4	2000	43	1.69	286	11.26	1.85	4.08
A	EFM43-15	615 166 221 0	3/8	50	1.5	15	17	1.1	11.1	12.5	2000	43	1.69	286	11.26	1.85	4.08
A	EFM43-30	615 166 222 0	3/8	50	3	30	32	2.2	22.1	23.6	1454	43	1.69	322	12.68	2.3	5.07
A	EFM43-45	615 166 223 0	3/8	50	4.5	45	50	3.3	33.2	36.9	1112	43	1.69	322	12.68	2.3	5.07
A	EFM51-70	615 166 224 0	1/2	50	7	70	80	5.2	51.6	59	816	51	2.01	367	14.45	3.95	8.71
A	EFM51-135	615 166 225 0	1/2	50	13.5	135	150	10	99.6	111	463	51	2.01	367	14.45	3.95	8.71
A	EFM60-175	615 166 227 0	3/4	50	18	175	190	13.3	129	140	575	60	2.36	383	15.08	5.3	11.7
A	EFM60-250	615 166 228 0	3/4	50	25	250	280	18.4	184	207	409	60	2.36	383	15.08	5.3	11.7
B	EFM80-330	615 166 229 0	3/4	60	33	330	360	24.3	243	266	299	80	3.15	445	17.52	9.9	21.8
B	EFM80-450	615 166 230 0	3/4	60	45	450	500	33.2	332	369	218	80	3.15	445	17.52	9.9	21.8
B	EFM80-680	615 166 231 0	1	60	68	680	750	50.2	502	553	145	80	3.15	445	17.52	9.9	21.8
B	EFM80-950	615 166 233 0	1	60	90	950	1050	66.4	701	774	190	80	3.15	488	19.21	13.3	29.4
C	EFM106-1400	615 166 234 0	1-1/2	60	140	1400	1470	103	1030	1080	130	106	4.17	531	20.91	18.5	40.8
C	EFM106-1900	615 166 235 0	1-1/2	60	190	1900	2000	140	1400	1480	100	106	4.17	531	20.91	18.5	40.8
<b>EFM-TA</b>																	
D	EFM51-70-TA	615 166 269 0	1/2	50	20	70	80	14.8	51.6	59	816	51	2.01	465	18.31	5.7	12.5
D	EFM51-135-TA	615 166 270 0	1/2	50	20	135	150	14.8	99.6	111	463	51	2.01	465	18.31	5.7	12.5
D	EFM60-175-TA	615 166 271 0	3/4	50	30	175	190	22.1	129	140	409	60	2.36	481	18.94	7.9	17.4
D	EFM60-250-TA	615 166 272 0	3/4	50	50	250	280	36.9	184	207	299	60	2.36	481	18.94	7.9	17.4
<b>EFMO</b>																	
E	EFMO24-20	615 166 159 0	3/8	50	2	20	22	1.5	14.8	16.2	1940	24	0.94	351	13.82	3.1	6.83
E	EFMO30-80	615 166 160 0	1/2	50	8	80	90	5.9	59	66.4	900	30	1.18	456	17.95	5.5	12.1
E	EFMO40-180	615 166 161 0	3/4	50	18	180	200	13.3	133	148	560	40	1.57	504	19.84	8.8	19.4
F	EFMO54-450	615 166 162 0	3/4	50	45	450	480	33.2	332	354	230	54	2.13	617	24.29	17.2	37.9

## CONNECT



ITEM		PART NUMBER
1	CONNECT-X	615 932 722 0
2	CONNECT-W	615 932 723 0

### ADDITIONAL ACCESSORIES

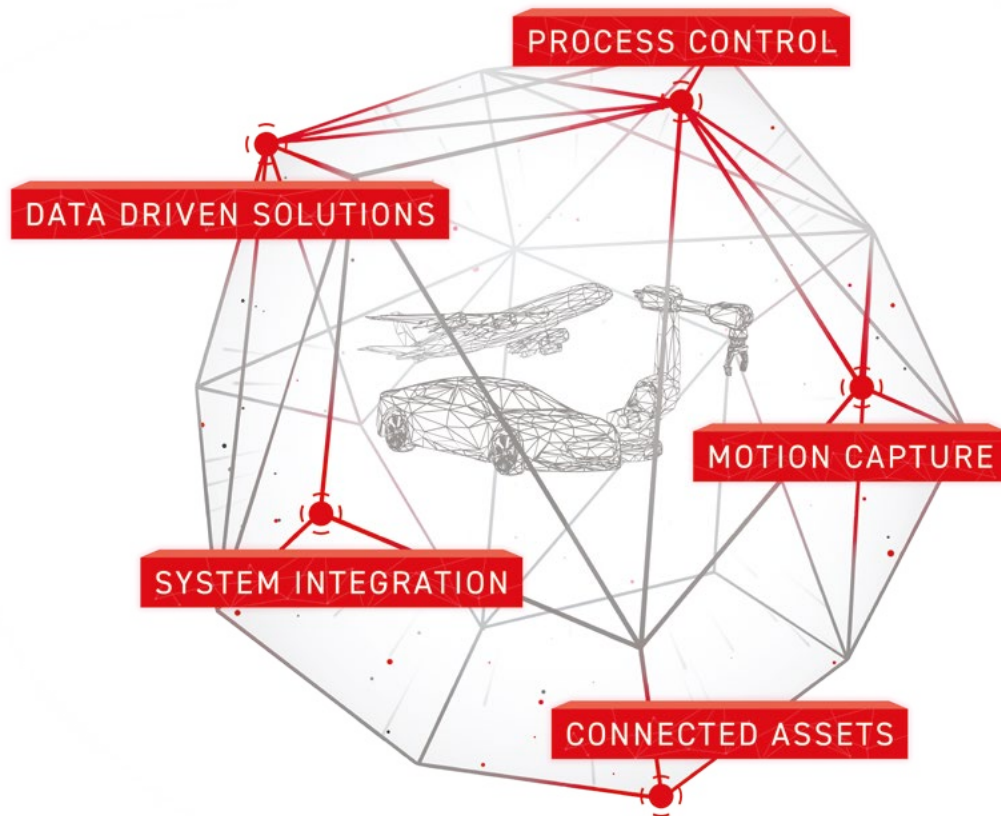
ITEM		PART NUMBER
•	Support for CONNECT	615 932 762 0
B	M12/M12 CONNECT/M-SAFETYBOX Power cable 2m (6.56ft)	615 917 753 0
B	M12/M12 CONNECT/M-SAFETYBOX Power cable 5m (16ft)	615 917 754 0
C	RJ45/M12X CONNECT/M-SAFETYBOX Ethernet cable 2m (6.56ft)	615 917 756 0
C	RJ45/M12X CONNECT/M-SAFETYBOX Ethernet cable 5m (16ft)	615 917 757 0
D	M12X/M12X SAFETYBOX/SAFETYBOX Ethernet cable 2m (6.56ft)	615 917 760 0
D	M12X/M12X SAFETYBOX/SAFETYBOX Ethernet cable 5m (16ft)	615 917 761 0
G	M12/M12 SAFETYBOX/SAFETYBOX Emergency stop cable 2m (6.56ft)	615 917 763 0
G	M12/M12 SAFETYBOX/SAFETYBOX Emergency stop cable 5m (16ft)	615 917 764 0
E	OPEN WIRES Emergency stop cable 5m (16ft)	615 917 766 0

### CABLES

•	Tool cable 2.5m (8.20ft)	615 917 651 0
•	Tool cable 5m (16ft)	615 917 652 0
•	Tool cable 10m (32.8ft)	615 917 654 0
•	Tool cable 15m (49.2ft)	615 917 655 0
•	Tool extension cable 8m (26.2ft)	615 917 581 0
•	Tool extension cable 16m (52.5ft)	615 917 584 0
•	Tool extension cable 32m (105ft)	615 917 587 0

TELESCOPIC MODULES (OPTION)	PART NUMBER	LENGTH		WEIGHT	
		mm	in	kg	lb
TELESCOPIC MODULE 3/8" EFX43 IP54	615 397 013 5	165	6.50	0.75	1.65
TELESCOPIC MODULE 1/2" EFX51 IP54	615 397 017 5	183	7.20	1.55	3.42
TELESCOPIC MODULE 3/4" EFX60 IP54	615 397 014 5	203	7.99	1.95	4.3
TELESCOPIC MODULE 3/4" EFX80 IP54	615 399 267 0	398	15.67	9.6	21.16
TELESCOPIC MODULE 1" EFX80 IP54	615 399 268 0	406	15.98	9.6	21.16
TELESCOPIC MODULE 1" EFX106 IP54	615 399 296 0	446	17.56	14.1	31.08
TELESCOPIC MODULE 1 1/2" EFX106 IP54	615 399 270 0	467	18.39	14.1	31.08

 DESOUTTER ECOSYSTEM



# More Than Productivity