Desoutter

Industrial Tools

150,5
95.7°

151
95.7°

OK

MULTI CVIL II
Power Train approved

More Than Productivity

MULTICVIL II -
Main Features

MULTICHANNEL SYSTEM

Drive up to 32 fixtured spindles
One CVIL Master +
x times CVIL Slave

Programming
Through CVIPC2000 (to Master only)

Cycles Phases management
• 31 different cycles
• Combines up to 20 phases in a
  fastening cycle

Data collection
• CVIPC2000
• CVI-NET collector data base

Fieldbuses
• By additional modules
• By Ethernet ports
• Flexible mapping

**Isagraf, embedded PLC
software to manage:**
• Assembly station
• HMI

FIXTURED SPINDLES

• From 1 to 1900Nm
• EME straight
• EMEOF with Offset for close center
  distance application
• EMEL "L" shape reduces the height
  of the tool

Torque transducer
• High accuracy
• A10 class
• Digital communication between the
  tool and controller
• Memory chip with all characteristics
  of the tool: transducer sensitivity,
  gear ratio, maintenance info, etc…

**One of best TS (torque/speed)
ratio on the market**

**Resolver based long life
brushless motor**

50 or 60mm telescopic stroke

ONE CABLE

• **Motor power**

• **Digital connection of the
  transducer and memory
  device**

• **Up to 45 meters**

• **Design to be used in
  robot applications**

MultiPlus concept

Desoutter

FLEXIBILITY OF TIGHTENING PROCESS

EASY PROGRAMMING OF THE TIGHTENING SEQUENCE WITH FULL SYNCHRONIZATION

Run Down phase
Spindle 1-2-3-4-5-6-7-8-9-10

Final Speed phase
Spindle 1-2

Final Speed phase
Spindle 3-4-5-6
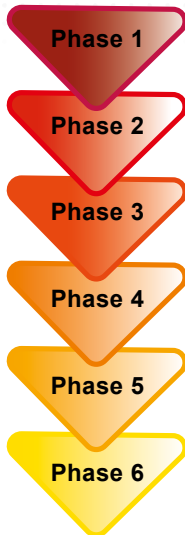
Final Speed phase
Spindle 7-8-9-10

Automatic Repair Action
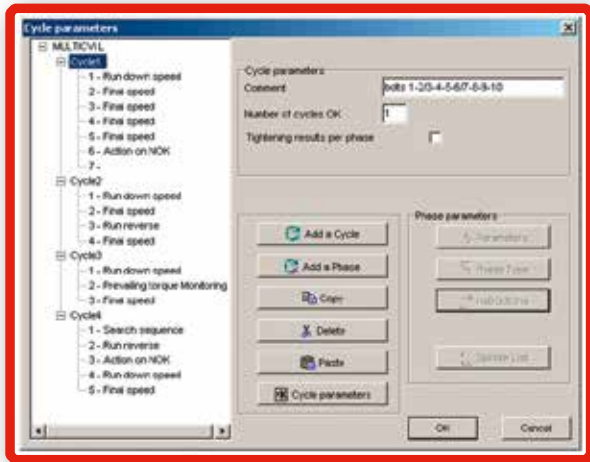**Reverse all spindles and retry once**
Jump to phase 2

End of the cycle
Reporting

Phase 1
Phase 2
Phase 3
Phase 4
Phase 5
Phase 6

CVIPC

FUNCTION	MultiCVIL II

Number of channels .... 2 to 32

Number of cycles.. 31
Number of phases 20
Batch count 999
Bar code reading via RS232 port

Tightening results

Torque + Angle + Date
+ Time + Report .... up to 32 000
Number of curves (per channel) 10

Tightening strategies

Torque control + angle monitoring .... ✓
Angle control + torque monitoring .... ✓
T control + (Angle + torque rate) monitoring. ✓
Angle control + (Torque + torque rate) monitoring . ✓
Yield point strategy .... ✓
Stall torque .... ✓
Prevailing torque.. ✓
Current monitoring .... ✓
Reverse at Angle control .... ✓

Tightening connectivity

Input/Output... 8/8
RS232 port .... OK
Ethernet RJ45...................................... 8 sockets
Fieldbuses .... Optional module
Embeded PLC software............................... OK
IP54 .... Optional module
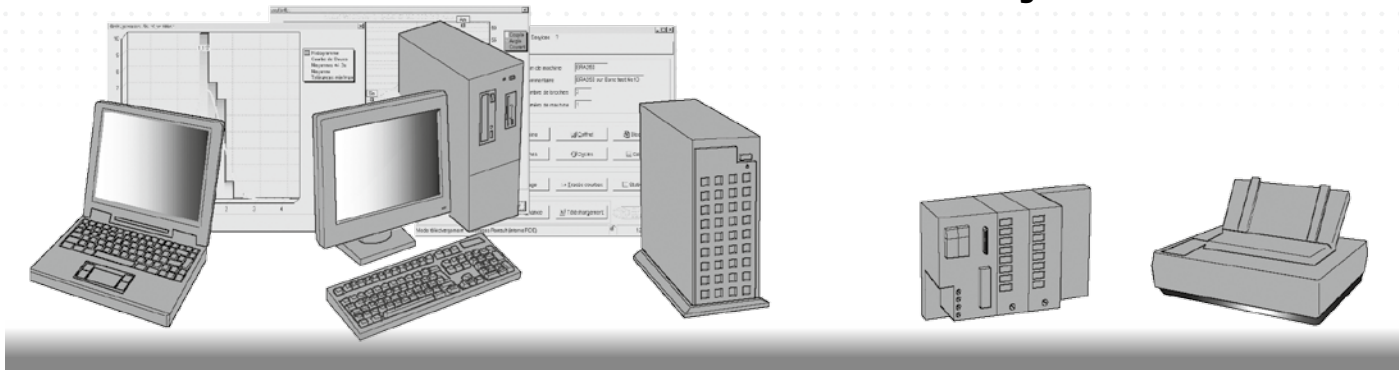Emergency stop.................................2 channels

////// **Multi display of tightening curves for joint analysis in real time**

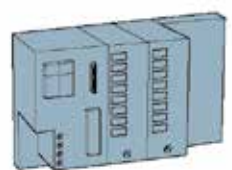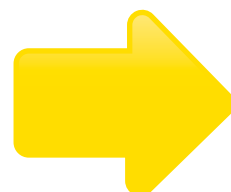**CVINET**
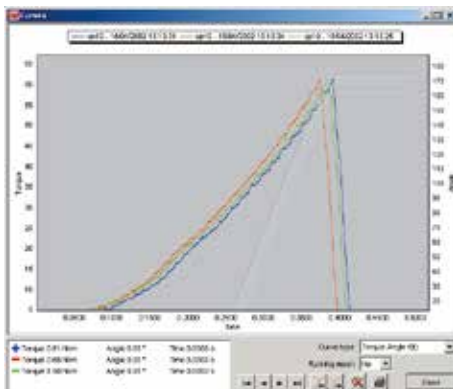
MULTICVIL II

Factory Networks

Only one IP address for the system

Master

Ethernet

Master
• Report I/O
• Ethernet TCP/IP
   - CVIPC2000 / CVINet
   - Customers protocols
   - Open protocol
• Integrate soft PLC to manage
  stations

• Option: IP54
• Can save up to 500 curves

Fieldbuses connections
• Profinet, Profibus
• Devicenet, Ethernet IP
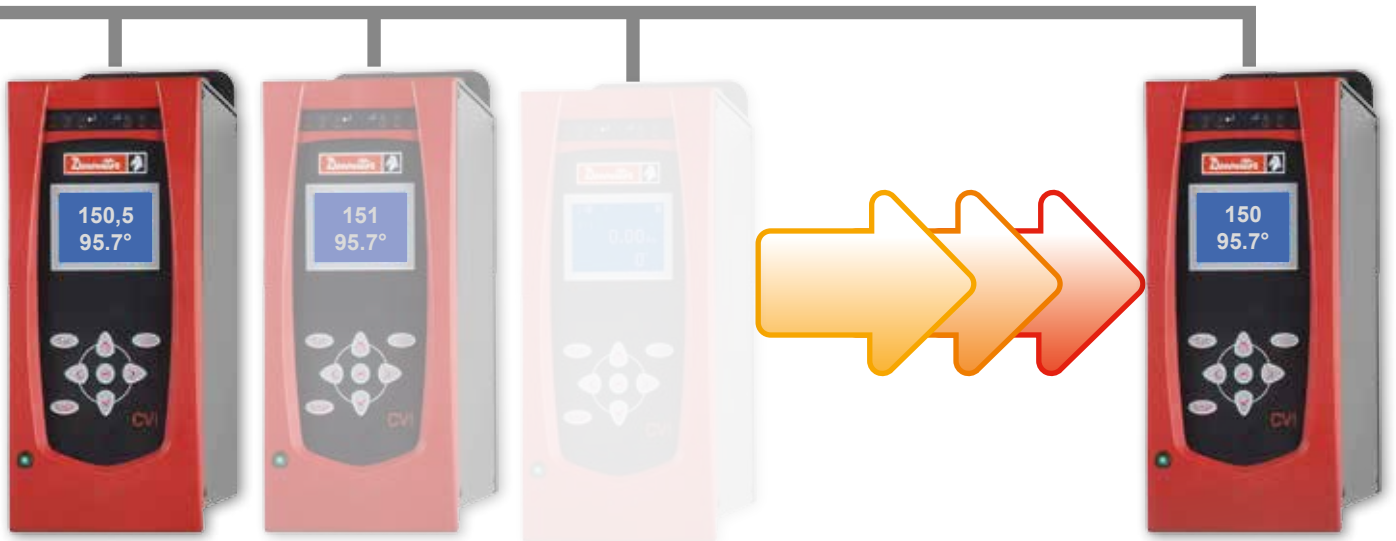• CC link
• etc...
   - Customers protocols

Remote HMI

EASY INTEGRATION IN A PRODUCTION LINE

Slave ////// **up to 32 channels**

• Screen keypad on each channel
- easy to install
- display final report + T&A
- clear messages for maintenance

150,5
95.7°

151
95.7°

150
95.7°

FIXTURED
electric spindles

High durability of EME tools
- Long life gear boxes
- Brushless motor for a maintenance free
- High sensitivity torque transducer for a larger torque range

MODEL	PART NO.	TORQUE RANGE		ROTATIONAL SPEED	MIN. CENTRE DISTANCE	
		Nm	ft.lb	rpm	mm	in.
EME35-10J	615 165 423 0	1-8	0.7-5.9	2067	43.2	1.7
EME35-20J	615 165 424 0	4-15	2.1-11	2067	43.2	1.7
EME38-10J	615 165 425 0	9-30	6.6-22	1287	43.2	1.7
EME38-20J	615 165 426 0	10-45	7.4-33	1092	43.2	1.7
EME51-10J	615 165 427 0	20-70	15-52	650	51.2	2.0
EME51-20J	615 165 428 0	30-135	22-99	403	51.2	2.0
EME60-10J	615 165 429 0	20-95	15-70	923	60.2	2.4
EME60-20J	615 165 430 0	50-175	37-129	507	60.2	2.4
EME60-30J	615 165 431 0	70-250	52-184	299	60.2	2.4
EME80-10J	615 165 432 0	80-300	59-221	286	80.2	3.2
EME80-20J	615 165 433 0	120-450	88-221	195	80.2	3.2
EME80-30J	615 165 434 0	180-650	133-479	130	80.2	3.2
EME80-40J	615 165 435 0	220-800	162-590	91	80.2	3.2
EME80-50J	615 165 436 0	220-1000	162-737	72	80.2	3.2
EME106-10J	615 165 437 0	430-1500	317-1105	52	106.2	4.2
EME106-20J	615 165 438 0	540-1900	398-1400	39	106.2	4.2

EMEL shape for close access
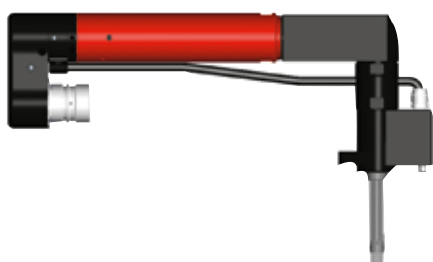
MODEL	PART NO.	TORQUE RANGE		ROTATIONAL SPEED	MIN. CENTRE DISTANCE	
		Nm	ft.lb	rpm	mm	in.
EMEL38-20J	615 165 517 0	10-45	7.4-33.2	1092	43.2	1.7
EMEL51-20J	615 165 518 0	30-135	22-99.5	403	51.2	2.0
EMEL60-20J	615 165 519 0	50-175	37-129	481	60.2	2.4
EMEL60-30J	615 165 520 0	70-250	52-184	312	60.2	2.4
EMEL80-40J	615 165 521 0	220-800	162-590	91	80.2	3.2

EME Offset with torque transducer
in line with the output shaft
Increase access by using smallest CC distances offered

MODEL	PART NO.	TORQUE RANGE		ROTATIONAL SPEED	MIN. CENTRE DISTANCE	
		Nm	ft.lb	rpm	mm	in.
EME24-20 OF	615 165 512 0	4-20	2.9-15	1225	24	0.95
EME26-50 OF	615 165 513 0	7-50	5.2-40	985	26	1.02
EME30-80 OF	615 165 514 0	10-80	7.4-59	580	30	1.18
EME36-140 OF	615 165 515 0	19-140	14-103	375	36	1.42
EME40-180 OF	615 165 516 0	25-180	18-133	475	40	1.57
EME44-350 OF	615 165 602 0	80-350	59-258	217	45	1.77
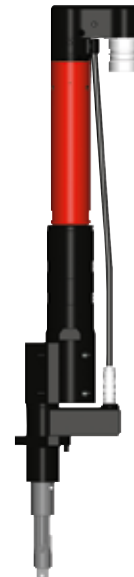
HOW TO ORDER

MODEL	PART NUMBER	CONSUMPTION (CURRENT)		MAINS SUPPLY	DIMENSIONS WIDTH		HEIGHT		DEPTH		WEIGHT	
		115V	230V	50/60 hertz	mm	in.	mm	in.	mm	in.	kg	lb.
MULTICVIL II controllers (Literature included)												
CVIL II M (Master)	615 932 682 0	4A	2A	Single phase	130	5.1	278	10.9	291	11.5	5.9	13
CVIL II S (Slave)	615 932 683 0	4A	2A	Single phase	130	5.1	278	10.9	291	11.5	5.9	13
Multicombox	615 929 044 0											
CVIL II controller (Literature included)												
CVIL II	615 932 680 0	4A	2A	Single phase	130	5.1	278	10.9	291	11.5	5.9	13

Optional Accessories

MODEL	PART NO.
PC cable length 2 m (78.7")	615 917 047 0
37 pin D-Sub female I/O adapter	615 919 003 0
Shelf support - Aluminium profile	615 397 403 5
IP54 option	615 932 684 0

"For any Desoutter software and licenses, please refer to our general catalogue"

Fieldbus Module

MODEL	PART NO.
Ethernet IP Module	615 927 594 0
Profi bus DP Module	615 927 595 0
Profi net Module	615 927 596 0
Devicenet Module	615 927 599 0
CC-Link Module	615 927 598 0
MODBUS TCP Slave	615 927 615 0

Power cord
to be ordered with the controller

PLUG	DESCRIPTION	PART NO.
A	European	615 917 201 0
B	UK	615 917 202 0
C	Chinese	615 917 206 0

Cable for EME tools - Multi CVIL II & CVIL II

CABLE LENGTH	5m (16.4ft)	10m (32.8ft)	15m (49.1ft)	20m (65.6ft)	25m (82ft)	30m (98.4ft)
Tool cable	615 917 541 0	615 917 542 0	615 917 543 0			
Extension cable	615 917 083 0	615 917 084 0	615 917 085 0	615 917 086 0	615 917 087 0	615 917 088 0

Kit version

One CVIL-Master   n.CVIL-Slaves   Software CVIPC 2000 + Power cord   Multicombox

Contact your Desoutter representative for assistance

Also available: Specially designed a frame to secure controllers and ensure safe and tidy wiring

Turn Key Solution

One CVIL-Master   n.CVIL-Slaves   Software CVIPC 2000 + Network cables & Power cord   One power box supply with E Stop - Ethernet switches Multicombox - Circuit breakers
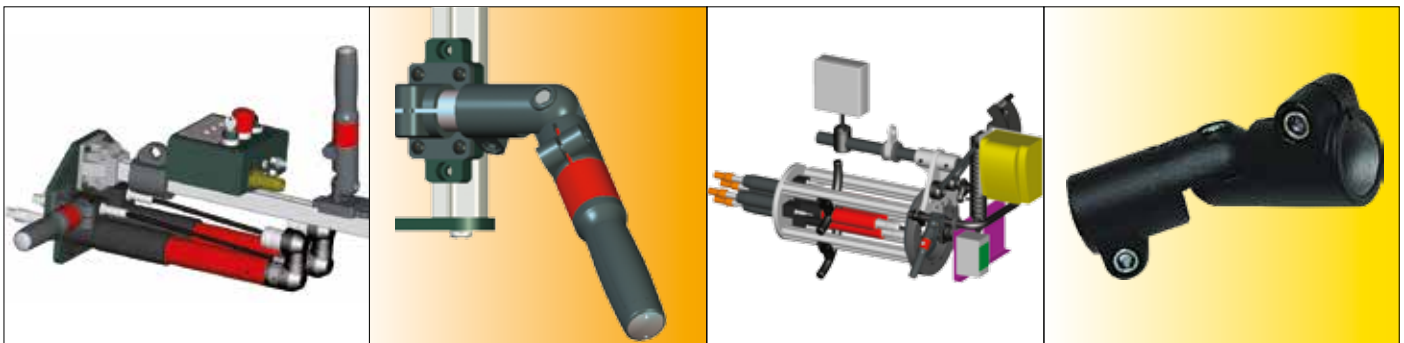
Powerbox depending on power supply

7

MULTIPLUS: standard solutions adapted to your needs

MultiPlus

The concept is easy - 4S
• **S**treamlined processes for quote, design and build
• **S**tandardized library of designs
• **S**imple to change and adapt
• **S**hipped 5 weeks from order

The HMI combines several functions
  - Display Final Torque and Angle results
 - Display the tightening report «accept» or «reject»

• In case of «reject» several options are offered to the operator:
  - reverse
  - reverse and rework the joint
  - cancel the complete operation

• Guarantee that all bolts have been tightened at the right Torque and Angle

• Associated with the SFP software, much more advanced functions are available
  - provide a solution to guide the operator to follow a route or sequence in the assembly process
  - positionning system X-Y-Z (with overview or detailed pictures)
  - selection of different jobs through a barcode

HMI

WE PROVIDE EFFICIENT SOLUTIONS

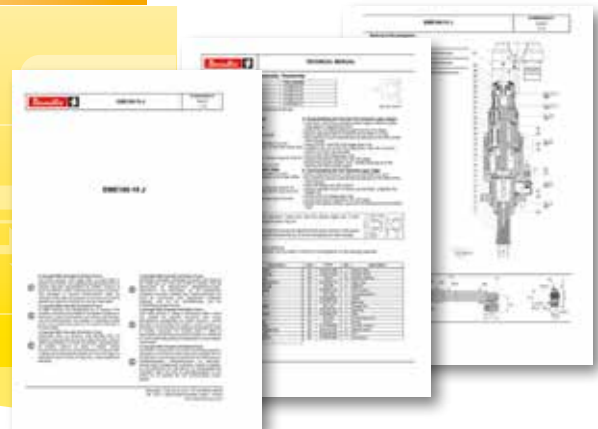## Download all 3D models of tools
• Via desouttertools.com/cadfiles
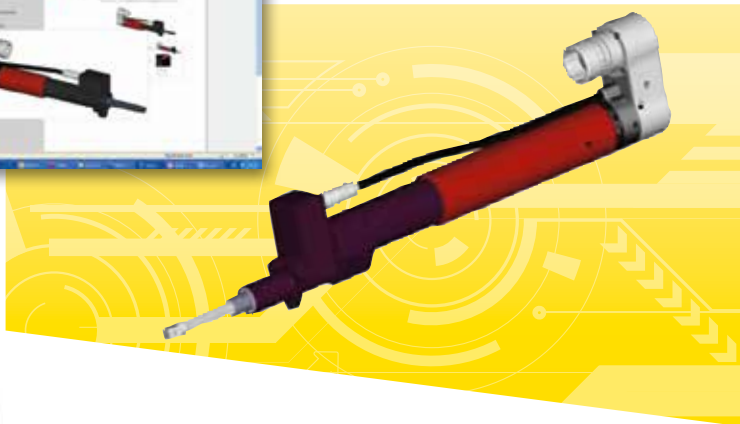
• Select your image format
TIF, CATPart, DXF, IGS, PRT, STP

Download documentation

Via desouttertools.com/cadfiles

CVIL II -
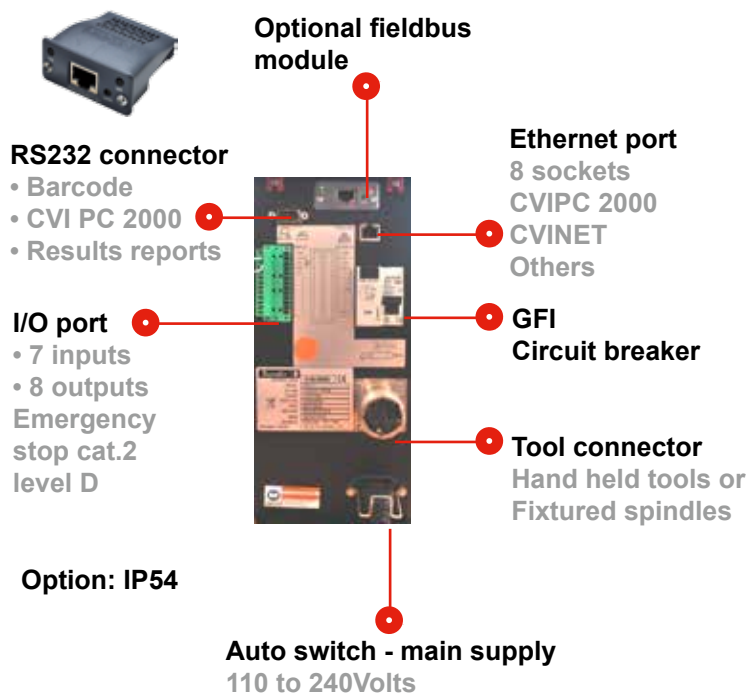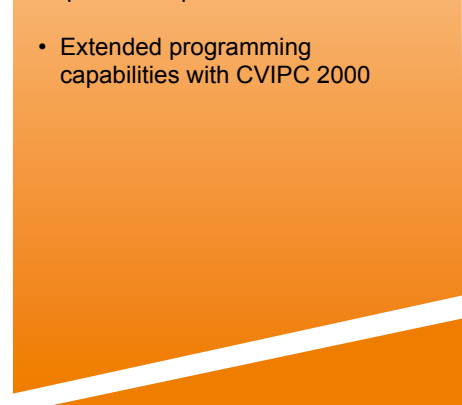# A lean controller

FLEXIBLE INTEGRATION

- Small controller with LCD/LED display
- Fully controlled by the production line process
- From a simple connection 7 inputs/8 outputs/RS232C up to a Fieldbus communication

FULL TRACEABILITY

- CVI NET
- CVIPC
- Ethernet network
- Store results and graphs

RAPID AND EASY TO START

- On board tool memory and digital communication eliminates risk of connecting wrong tool to the controller

- Simply connect the tool and the controller will read all tool features in the tool memory

- Intuitive programming from the keypad / display Enter the torque value and the controller will calculate and optimize all parameters

- Extended programming capabilities with CVIPC 2000

Optional fieldbus module

RS232 connector
- Barcode
- CVI PC 2000
- Results reports

I/O port
- 7 inputs
- 8 outputs
Emergency stop cat.2 level D

Option: IP54

Ethernet port
8 sockets
CVIPC 2000
CVINET
Others

GFI
Circuit breaker

Tool connector
Hand held tools or
Fixtured spindles

Auto switch - main supply
110 to 240Volts

MAIN FUNCTIONS

Number of channels 1
Number of cycles 50
Number of phases 15
Batch count 999
Bar code reading via RS232 port

Tightening results
Batch count + Angle + Date + Time
+ Report + VIN number ....up to 10 000
Number of curves (flexibility with OK and NOK)...10

Tightening strategies
Torque control + angle monitoring ....✓
Angle control + torque monitoring ....✓
Stall torque ....✓
Prevailing torque, self tapping ....✓
Seating detection ....✓
Current monitoring ....✓
Reverse at angle control ....✓

Desoutter

FOR YOUR SAFETY CRITICAL APPLICATIONS

- Brushless motor + resolver = maintenance free

- Long lasting gears + spiral cut angle heads = optimum accuracy and repeatablity

- Wide torque range per tool = fewer tools needed to cover multi torque applications

TITANIUM series   HANDHELD TOOLS

ERAL
Torque range: 2-480Nm

ERDL
Torque range: 0.5-250Nm

ERP
Torque range: 0.3-40Nm

OFFSET CROWFOOT & OFFSET TUBE NUT

FLUSH SOCKET

HOLD & DRIVE

ERF
Torque range: 0.3-40Nm

FIXTURED SPINDLES

EME
Torque range: 1-1900Nm

EMEL
Torque range: 10-800Nm

EME-OFFSET
Torque range: 4-350Nm

More Than Productivity

Applifast.

![A]

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