

Performance of tools according to VDI/VDE 2647

<i>General information</i>		
Testing date:	March 2021	
<i>General information about tool</i>		
Manufacturer:	Desoutter	
Machine type:	CVI3 Tool	
Model:	EFD43-30/ EFM43-30	
Part number:	6151662060 / 6151662220	
Square:	3/8	
Maximum speed:	1450 rpm	
Minimal torque:	9 Nm	6,6384 ft,lb
Nominal torque	30 Nm	22,128 ft,lb
Maximum torque:	32 Nm	23,6032 ft,lb
Weight	2,25 Kgs	4,96 lb
Length	311 mm	12,244 "
Serial number:	21A91135	
	21A91136	
	21A91137	
<i>Picture of tool</i>		
		



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Tightening at torque

<i>Value for the duration of break between cycles</i>					
30% soft:	5		30 % hard:		5
80% soft:	20		80 % hard:		20
100% soft:	45		100 % hard		45
<i>Number of tightenings for the test</i>					
30 % of the torque range:	100				
80 % of the torque range:	100				
100 % of the torque range:	100				
<i>Number of free speed</i>					
All torque range:	4				
<i>Torque test - test point specification</i>					
<i>Torque and torsion tested</i>					
P1: 30 % of the torque range:	15,3 N.m	Soft:	30°	Hard:	360°
P2: 80 % of the torque range:	25,8 N.m	Soft:	30°	Hard:	360°
P3: 100 % of the torque range:	30,0 N.m	Soft:	30°	Hard:	360°
<i>Revolutions per minute</i>					
<i>30 % of the torque range</i>					
Hard	Rundown speed (Rpm):	50 Rpm		Downshift speed (Rpm):	50 Rpm
Soft	Rundown speed (Rpm):	50 Rpm		Downshift speed (Rpm):	50 Rpm
<i>80 % of the torque range</i>					
Hard	Rundown speed (Rpm):	50 Rpm		Downshift speed (Rpm):	50 Rpm
Soft	Rundown speed (Rpm):	50 Rpm		Downshift speed (Rpm):	50 Rpm
<i>100 % of the torque range</i>					
Hard	Rundown speed (Rpm):	50 Rpm		Downshift speed (Rpm):	50 Rpm
Soft	Rundown speed (Rpm):	50 Rpm		Downshift speed (Rpm):	50 Rpm
<i>Torsion angle start moment (Angle threshold)</i>					
30 % of the torque range:	Soft:		7,65 Nm	Hard:	7,65 Nm
80 % of the torque range:	Soft:		12,90 Nm	Hard:	12,90 Nm
100 % of the torque range:	Soft:		15,00 Nm	Hard:	15,00 Nm
<i>Downshift torque</i>					
30 % of the torque range:	Soft:		1,2 Nm	Hard:	1,2 Nm
80 % of the torque range:	Soft:		2,1 Nm	Hard:	2,1 Nm
100 % of the torque range:	Soft:		2,4 Nm	Hard:	2,4 Nm
<i>Information for tightening with a battery tool</i>					
<i>Numbers of battery used for the tightening</i>					
30 % of the torque range:	Soft:		0	Hard:	0
80 % of the torque range:	Soft:		0	Hard:	0
100 % of the torque range:	Soft:		0	Hard:	0



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Tightening at angle

<i>Value for the duration of break between cycles</i>			
40°	10 s		
180°	20 s		
<i>Number of tightening for the test</i>			
Tightening hard	100		
Tightening soft	100		
<i>Number of free speed</i>			
All tightening:	4		
<i>Rotation angle test - test points specification</i>			
<i>Rotation angle</i>			
Hard of 50 at 100% of tightening	40°		
Soft of 50 at 100% of tightening	180°		
<i>Revolutions per minute</i>			
<i>40 °</i>			
Rundown speed (Rpm):	50 rpm		Downshift speed (Rpm): 50 Rpm
<i>180°</i>			
Rundown speed (Rpm):	50 rpm		Downshift speed (Rpm): 50 Rpm
<i>Torsion angle start moment (Angle threshold)</i>			
40° (20% of torque range)	6,0 Nm		
180° (20% of the torque range)	6,0 Nm		
<i>Target torque</i>			
40° (60 % of the torque range)	18,0 Nm		
180° (80 % of the torque range)	24,0 Nm		
<i>Information for tightening with a battery tool</i>			
<i>Numbers of battery used for the tightening</i>			
40°			
180°			



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Torque tightening test

Test point			30%		80%		100%	
Test torque			7,3 N.m		12,8 N.m		15 N.m	
Joints (of 50 at 100% of tightening)			hard (30°) (±5°)	soft (360°) (±15°)	hard (30°) (±5°)	soft (360°) (±15°)	hard (30°) (±5°)	soft (360°) (±15°)
Torque tolerance upper limit (Nm)			16,4	16,4	27,6	27,6	32,1	32,1
Torque tolerance lower limit (Nm)			14,2	14,2	24,0	24,0	27,9	27,9
Tolerance interval * (±)			7%	7%	7%	7%	7%	7%
Serial numbers	21A91135	Cm	7,16	10,44	6,38	11,15	7,25	12,20
		Cmk	5,47	9,04	4,74	9,90	5,55	10,88
	21A91136	Cm	6,77	9,12	7,68	10,52	7,85	11,96
		Cmk	4,02	6,48	4,45	7,34	4,40	8,36
	21A91137	Cm	4,77	8,37	5,62	11,45	5,44	10,46
		Cmk	3,20	6,99	3,86	9,67	3,73	8,71

Min Cm/Cmk	Cm	4,77	8,37	5,62	10,52	5,44	10,46
	Cmk	3,20	6,48	3,86	7,34	3,73	8,36

	Cm >2 *	Cmk >1,67 *	
Index Min Cm	4,77	/	Compliant
Index Min Cmk	/	3,20	Compliant

Angle tightening test

Angle tested (of 50 at 100% of tightening)			hard	soft
Target torque			18,0 N.m	24,0 N.m
Serial numbers	21A91135	IT (±) (torque)	1,3%	1,1%
		IT (±) (angle)	1,4 °	2,1 °
	21A91136	IT (±) (torque)	1,4%	1,1%
		IT (±) (angle)	1,0 °	2,4 °
	21A91137	IT (±) (torque)	1,6%	1,1%
		IT (±) (angle)	0,9 °	1,8 °

		hard 40°	soft 180°	hard 40°	soft 180°
Index IT (±) (torque)	Must be	< 7%*	< 7%*	Compliant	Compliant
	Max is	1,6%	1,1%		
Index IT (±) (angle)	Must be	Hard < 5° *	Soft < 15° *	Compliant	Compliant
	Max is	1,4 °	2,4 °		

(*) Informations for reference