



Technical Report No. 028-7130 95685-050
of 22.02.2017

Client: Lukas Hydraulik GmbH
Weinstraße 39
D-91058 Erlangen

Mr. Sauerbier

Manufacturing location: Lukas Hydraulik GmbH
Weinstraße 39
D-91058 Erlangen

Object of evaluation: eDraulic rescue equipment

Cutters	S 311 E2; S312E2; S 700 E2
Combination Tool	SC 250 E2; SC 357 E2; SC 358 E2; SC 757 E2
Spreaders	SP 333 E2; SP 555 E2; SP 777 E2;
Rescue Rams	R 411 E2; R 421 E2

Test specification: DIN EN 13204: 2016-12
Double acting hydraulic rescue tools for fire and rescue service

Purpose of the evaluation: Testing in accordance with the test specification

Test result: The presented hydraulic tools conforms the safety and performance requirements of the test specification.

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1 Description of the test subject

1.1 Function

-Cutter: hydraulic rescue tool able to perform a cutting function with the aid of one or more blade(s).

-Combi tool: hydraulic rescue tool able to perform a minimum of at least three functions namely: spreading, squeezing and cutting without exchange of removable parts.

-Spreader: hydraulic rescue tool able to perform a minimum of three functions namely: spreading, pulling and squeezing, without exchange of removable parts, pulling attachments excluded.

-Ram: hydraulic rescue tool able to perform a pushing function with the aid of removable or integral feet at both ends of the tool operated by a single, double or telescopic piston(s).

Technical Data

See attachment 1 - 12

2 Order

2.1 Date of the order, sign of the client

27.10.2016

2.2 Test sample receipt, location

On-site testing

2.3 Date of the testing

20.02.2017 – 22.02.2017

2.4 Location of the testing

LUKAS Hydraulik GmbH
Weinstraße 39
D-91058 Erlangen

2.5 Variation or exemption of the test procedure

None

3 Test results

The presented tools meet the demands the safety- and performance requirements of the DIN EN13204: 2016-12

4 Remark

The operating instruction has been checked according to the minimum standards described in the product standard. The producer is responsible for the correctness of all other content as well as and the layout.

4.1 Remark for manufacturing

The setup of the tool must correspond with the documentation. Before safety-relevant changes of the product will be transfer into the current manufacturing, these require a check for evaluation, for the admission in the documentation and if necessary actualization of the certificate.

5 Summary

The presented tools meet the demands of the safety- and performance requirements of the DIN EN 13204: 2016-12. The Norm is covering only systems with "a separate power pack". Therefore a full certification is not possible.


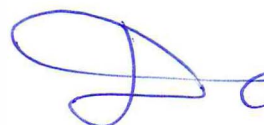
TÜV SÜD

Test Engineer



i.A. Uwe Beck
AS BWS-FG

Checked by



Gerhard David
PS SL



Attachment 1 Technical data
Order number 028-7130 95685-050

Parameter

Type:	Cutter S 311 E2
Art. No.:	90-20-22
Technical data	
Width of opening:	151 mm
Nominal Cutter opening:	151 mm
EN-Cutting category:	G
Cutting performance:	1H – 2H – 3G – 4H – 5H
Dimension:	
Length:	847 mm
Width:	225 mm
Height:	262 mm
Nominal voltage:	25,2 V DC
Battery:	25,2 V DC / 2,6 or 5,0 Ah
Current consumption:	12 - 42 A
Total Weight:	17,7 kg without battery
Nominal pressure:	75 MPa
Noise pressure level:	77 dB(A)
Degree of protection:	IP54



Attachment 2 Technical data
Order number 028-7130 95685-050

Parameter

Type:	Cutter S 312 E2
Art. No.:	90-20-32
Technical data	
Width of opening:	160 mm
Nominal Cutter opening:	160 mm
EN-Cutting category:	I
Cutting performance:	1I – 2I – 3I – 4J – 5J
Dimension:	
Length:	905 mm
Width:	237 mm
Height:	281 mm
Nominal voltage:	25,2 V DC
Battery:	25,2 V DC / 2,6 or 5,0 Ah
Current consumption:	12 - 40 A
Total Weight:	18,5 kg without battery
Nominal pressure:	70 MPa
Noise pressure level:	77 dB(A)
Degree of protection:	IP54



Attachment 3 Technical data
Order number 028-7130 95685-050

Parameter

Type:	Cutter S 700 E2
Art. No.:	90-20-72
Technical data	
Width of opening:	192 mm
Nominal Cutter opening:	180 mm
EN-Cutting category:	J
Cutting performance:	1J – 2K – 3K – 4K – 5K
Dimension:	
Length:	920 mm
Width:	296 mm
Height:	262 mm
Nominal voltage:	25,2 V DC
Battery:	25,2 V DC / 2,6 or 5,0 Ah
Current consumption:	12 - 45 A
Total Weight:	21,8 kg without battery
Nominal pressure:	80 MPa
Noise pressure level:	77 dB(A)
Degree of protection:	IP54



Attachment 4 Technical data
Order number 028-7130 95685-050

Parameter

Type:	Combi-Tool SC 250 E2
Art. No.:	90-30-12
Technical data	
Spreading distance:	320 mm
Pulling distance with KSV8/50:	330 mm
Cutting width of opening:	231 mm
EN-Cutting category:	F
Cutting performance:	1F – 2F – 3F – 4F – 5G
Spreading force (25mm from tips):	
1 - Highest spreading force	37,0 kN
2 - Lowest spreading force	32,0 kN
Pulling force with KSV 8/50:	
1 - Highest pulling force	34,0 kN
2 - Lowest pulling force	30,0 kN
Dimension:	
Length:	849 mm
Width:	215 mm
Height:	262 mm
Nominal voltage:	25,2 V DC
Battery:	25,2 V DC / 2,6 or 5,0 Ah
Current consumption:	12 - 40 A
Total Weight:	15,6 kg without battery
Nominal pressure:	70 MPa
Noise pressure level:	77 dB(A)
Degree of protection:	IP 54



Attachment 5 Technical data
Order number 028-7130 95685-050

Parameter

Type:	Combi-Tool SC 357 E2
Art. No.:	90-30-22
Technical data	
Spreading distance:	368 mm
Pulling distance with KSV 8/50:	380 mm
Cutting width of opening:	274 mm
EN-Cutting category:	I
Cutting performance:	1I – 2J – 3I – 4I – 5J
Spreading force (25mm from tips):	
1 - Highest spreading force	48,0 kN
2 - Lowest spreading force	38,0 kN
Pulling force with KSV 8/50:	
1 - Highest pulling force	48,0 kN
2 - Lowest pulling force	41,0 kN
Dimension:	
Length:	929 mm
Width:	225 mm
Height:	262 mm
Nominal voltage:	25,2 V DC
Battery:	25,2 V DC / 2,6 or 5,0 Ah
Current consumption:	12 - 40 A
Total Weight:	18,8 kg without battery
Nominal pressure:	70 MPa
Noise pressure level:	77 dB(A)
Degree of protection:	IP 54

Attachment 6 Technical data
Order number 028-7130 95685-050

Parameter

Type:	Combi-Tool SC 358 E2
Art. No.:	90-30-23
Technical data	
Spreading distance:	368 mm
Pulling distance with KSV 11:	382 mm
Cutting width of opening:	309 mm
EN-Cutting category:	I
Cutting performance:	1I – 2J – 3I – 4J – 5J
Spreading force (25mm from tips):	
1 - Highest spreading force	49,0 kN
2 - Lowest spreading force	38,0 kN
Pulling force with KSV 8/50:	
1 - Highest pulling force	61,0 kN
2 - Lowest pulling force	46,0 kN
Dimension:	
Length:	956 mm
Width:	237 mm
Height:	278 mm
Nominal voltage:	25,2 V DC
Battery:	25,2 V DC / 2,6 or 5,0 Ah
Current consumption:	12 - 40 A
Total Weight:	18,8 kg without battery
Nominal pressure:	70 MPa
Noise pressure level:	77 dB(A)
Degree of protection:	IP 54



Attachment 7 Technical data
Order number 028-7130 95685-050

Parameter

Type:	Combi-Tool SC 757 E2
Art. No.:	90-30-32
Technical data	
Spreading distance:	450 mm
Pulling distance with KSV 13:	297 mm
Cutting width of opening:	369 mm
EN-Cutting category:	J
Cutting performance:	1J – 2K – 3J – 4K – 5K
Spreading force (25mm from tips):	
1 - Highest spreading force	53,0 kN
2 - Lowest spreading force	41,0 kN
Pulling force with KSV 13:	
1 - Highest pulling force	98,0 kN
2 - Lowest pulling force	69,0 kN
Dimension:	
Length:	1033 mm
Width:	294 mm
Height:	285 mm
Nominal voltage:	25,2 V DC
Battery:	25,2 V DC / 2,6 or 5,0 Ah
Current consumption:	12 - 42 A
Total Weight:	24,0 kg without battery
Nominal pressure:	75 MPa
Noise pressure level:	77 dB(A)
Degree of protection:	IP 54



Attachment 8 Technical data
Order number 028-7130 95685-050

Parameter

Type:	Spreader SP 333 E2
Art. No.:	90-10-13
Technical data	
Width of opening:	600 mm
Pulling distance with KSV11:	440 mm
Spreading force (25mm from tips):	
1 - Highest spreading force	83,0 KN
2 - Lowest spreading force	42,0 KN
Pulling force with KSV11:	
1 - Highest pulling force	56,0 KN
2 - Lowest pulling force	31,0 KN
Dimension:	
Length:	905 mm
Width:	255 mm
Height:	285 mm
Nominal voltage:	25,2 V DC
Battery:	25,2 V DC / 2,6 or 5,0 Ah
Current consumption:	12 - 40 A
Total Weight:	17,3 kg without battery
Nominal pressure:	70 MPa
Noise pressure level:	77 dB(A)
Degree of protection:	IP 54



Attachment 9 Technical data
Order number 028-7130 95685-050

Parameter

Type: Spreader
SP 555 E2

Art. No.: 90-10-23

Technical data

Width of opening: 730 mm
Pulling distance with KSV11: 569 mm

Spreading force (25mm from tips):
1 - Highest spreading force 91,0 KN
2 - Lowest spreading force 52,0 KN

Pulling force with KSV11:
1 - Highest pulling force 58,0 KN
2 - Lowest pulling force 35,0 KN

Dimension:
Length: 1002 mm
Width: 265 mm
Height: 280 mm

Nominal voltage: 25,2 V DC
Battery: 25,2 V DC / 2,6 or 5,0 Ah
Current consumption: 12 - 40 A

Total Weight: 20,0 kg without battery

Nominal pressure: 70 MPa

Noise pressure level: 77 dB(A)
Degree of protection: IP 54



Attachment 10 Technical data
Order number 028-7130 95685-050

Parameter

Type:	Spreader SP 777 E2
Art. No.:	90-10-31
Technical data	
Width of opening:	813 mm
Pulling distance with KSV11:	655 mm
Spreading force (25mm from tips):	
1 - Highest spreading force	105,0 KN
2 - Lowest spreading force	63,0 KN
Pulling force with KSV11:	
1 - Highest pulling force	60,0 KN
2 - Lowest pulling force	38,0 KN
Dimension:	
Length:	1080 mm
Width:	309 mm
Height:	285 mm
Nominal voltage:	25,2 V DC
Battery:	25,2 V DC / 2,6 or 5,0 Ah
Current consumption:	12 - 40 A
Total Weight:	23,6 kg without battery
Nominal pressure:	70 MPa
Noise pressure level:	77 dB(A)
Degree of protection:	IP 54



Attachment 11 Technical data
Order number 028-7130 95685-050

Parameter

Type: Ram
R 411 E2

Art. No.: 90-40-11

Technical data

Length extended: 984 mm
Length retracted: 597 mm

Stroke: 387 mm

Pushing force: 127,0 KN

Dimension:

Width: 135 mm without battery
Height: 313 mm

Nominal voltage: 25,2 V DC
Battery: 25,2 V DC / 2,6 or 5,0 Ah
Current consumption: 12 - 42 A

Total Weight: 16,9 kg without battery

Nominal pressure: 70 MPa

Noise pressure level: 77 dB(A)

Degree of protection: IP 54



Attachment 12 Technical data
Order number 028-7130 95685-050

Parameter

Type:	Telescopic-Ram R 421 E2
Art. No.:	90-40-12
Technical data	
Length extended:	1347 mm
Length retracted:	597 mm
Stroke:	750 (387+363) mm
Pushing force:	127,0/60,0 KN
Dimension:	
Width:	135 mm without battery
Height:	313 mm
Nominal voltage:	25,2 V DC
Battery:	25,2 V DC / 2,6 or 5,0 Ah
Current consumption:	12 - 42 A
Total Weight:	19,0 kg without battery
Nominal pressure:	50 MPa
Noise pressure level:	77 dB(A)
Degree of protection:	IP 54