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PUNCHING TOOLS

PUNCHING/STAMPING/ELECTRIC BUS BAR PROCESSING UNIT

HP60-BL - Hand-operated hydraulic hole punching tool 60 kN

Suitable for punching round, square, and rectangular holes through materials up to a max. thickness of 3 mm

Technical characteristics:

- Light, compact, and rugged construction
- Head can be pivoted/rotated by 360°
- Hydraulic head made of high-strength aluminium
- Fast feed due to double-piston hydraulics
- Automatic pressure limiter
- Manual return possible in any position by turning the handle
- Application temperature range: -10°C / +40°C.
- Punching force: 60 kN
- Operating pressure: 700 bar

Punching capacity (max. sheet thicknesses):

- Up to Ø 63.5 mm: 3.0 mm steel / 2.5 mm stainless steel
- Up to Ø 68.0 x 68.0 mm: 3.0 mm steel / 1.5 mm stainless steel
- Up to Ø 92.0 x 92.0 mm: 2.5 mm steel / 1.5 mm stainless steel
- Larger than 92.0 x 92.0 mm, up to 138.0 x 138.0 mm 2 mm steel



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Order No.	Description	Dimensions	Weight
HP60-BL	Hand-operated hydraulic hole punching tool 60 kN	700 x 260 x 105 mm	4.2 kg

Set equipment:

- Hand-operated hydraulic hole punching tool
- 1 draw stud 9.5 x 19.0 mm
- 1 draw stud 19.0 x 125.0 mm
- 1 spacer sleeve
- 1 tube of anti-wear paste
- 1 HSS-E step drill
- Operating instructions, safety and maintenance instructions
- Carrying case for the tool and accessories as well as 8 pairs of round hole inserts

Dimensions:

- Tool alone 430 x 166 x 67 mm

Weight:

- Alone approx 2.8 kg
- As a set 4.2 kg

STILO-BL - Battery-operated hydraulic hole punching tool 18V

Suitable for punching round, square, and rectangular holes through materials up to a max. thickness of 3 mm.

Technical characteristics:

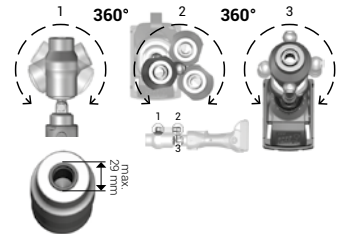
- Light, compact, and rugged construction
- Ergonomic 2-component handle allows fatigue-free working
- Head can be pivoted/rotated by 360°
- Hydraulic head made of high-strength aluminium
- Fast feed due to 3-stage axial piston pump
- Pressure monitored by an electronic pressure sensor
- Fast tool returns due to patented return valve
- Manual return possible in any position
- Automatic pressure limiter and monitor with pressure sensor
- Punch detection, automatic return after releasing the start switch when punching cycle complete
- Powerful Li-ion battery
- Fall protection provided by wrist strap
- Application temperature range: -10°C / +40°C.
- Punching force: 60 kN
- Battery voltage: 18V DC
- Battery capacity: 1.5 Ah (2.0 Ah)
- Battery charging time: approx. 30 - 40 min

Punching capacity (max. sheet thicknesses):

- Up to Ø 63.5 mm: 3.0 mm steel / 2.5 mm stainless steel
- Up to Ø 68.0 x 68.0 mm: 3.0 mm steel / 1.5 mm stainless steel
- Up to Ø 92.0 x 92.0 mm: 2.5 mm steel / 1.5 mm stainless steel
- Larger than 92.0 x 92.0 mm, up to 138.0 x 138.0 mm 2 mm steel



Pivoting/rotating head



Order No.	Description	Dimensions	Weight
Stilo-BL	Battery-operated hydraulic hole punching tool 18V	540 x 360 x 120 mm	6.3 kg

Set equipment:

- Battery-operated hydraulic hole punching tool
- Li-ion battery 18V - 1.5Ah
- Battery charger LG8
- 1 draw stud 9.5 x 19.0 mm
- 1 draw stud 19.0 x 125.0 mm
- 1 spacer sleeve
- 1 tube of anti-wear paste
- 1 HSS-E step drill
- USB cable
- CD-ROM (software)
- Operating instructions, safety and maintenance instructions
- Carrying case for the tool, spare batteries, charger, and 8 pairs of round hole inserts

Dimensions:

- Alone with battery 398 x 126 x 82 mm

Weight:

- With battery 2.3 kg
- Without battery 1.7 kg

PBL60 - Hydraulic hole punching tool 700 bar

Suitable for punching round, square, and rectangular holes through materials up to a max. thickness of 3 mm

Technical characteristics:

- Small, compact design
- Burnished surface
- Operating pressure: 700 bar
- The punch head can be operated with a hydraulic pump (maximum pressure 700 bar / 70 MPa), see pages 204-207, hydraulic pumps

Punching capacity (max. sheet thicknesses):

- Up to Ø 63.5 mm: 3.0 mm steel / 2.5 mm stainless steel
- Up to Ø 68.0 x 68.0 mm: 3.0 mm steel / 1.5 mm stainless steel
- Up to Ø 92.0 x 92.0 mm: 2.5 mm steel / 1.5 mm stainless steel
- Larger than 92.0 x 92.0 mm, up to 138.0 x 138.0 mm 2 mm steel

Dimensions:

- Tool alone 150 x 73 mm

Weight:

- Alone ca. 2.5 kg

Scope of delivery: Hydraulic cylinder (without draw bolts - see page 195-196).



Order No.	Description	Dimensions	Weight
PBL60	Hydraulic hole punching tool	150 x 73 mm	2.5 kg

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Keyway punch

Quick and simple punching of keyways 3.2 mm and 4.8 mm wide in max. 2.0 mm thick steel. Makes the time-consuming sawing and filing of the anti-twist keyways on pushbuttons unnecessary.

Order No.	Description	Dimensions	Weight
KNZ	Keyway punch	400 x 120 x 30 mm	1.4 kg



PUNCHING/STAMPING/ELECTRIC BUS BAR PROCESSING UNIT

TRE SPLIT hole punching tool

The splitter hole punching system TRE SPLIT for ST 37 sheet steel splits the slug into 3 parts. This prevents the slug from getting stuck on the draw bolt and/or in the die. This in turn enables fast and burr-free hole punching.



Max. ST steel thicknesses:

- 2 mm with 9.5 mm draw bolt/draw stud
- 3 mm with 19 mm draw bolt/draw stud

Technical characteristics:

- The hole punches are suitable for manual and hydraulic operation.
- Due to the special cutting geometry of the TRE SPLIT punch, the cutting pressure required is reduced, which means less force is required when manually punching with ball bearing draw studs. This also means less stress on the hydraulic tool
- The anti-wear paste protects against wear and seizing

Universal accessories / spare parts

- DB22 - Spacer sleeve 22 mm - short
- STB21 - HSS-E step drill \varnothing 9, 11, 12, 15, 17, 19, 21 mm
- AVP - Anti-wear paste

Hole dimensions		Order No.				
\varnothing of hole	Standard size	Set punch die Order No.	Hydraulic operation/ draw stud Order No.	Manual operation/ draw stud with ball bearing Order No.	Replacement punch Order No.	Thread / punch mm
16,2	M16	BLTM16	9,5x19 ZB9,5x19	9,5x50 ZSKL9,5x50	BLTM16S	9,5
20,4	M20	BLTM20	9,5x19 ZB9,5x19	9,5x50 ZSKL9,5x50	BLTM20S	9,5
25,4	M25	BLTM25	9,5x19 ZB9,5x19	9,5x50 ZSKL9,5x50	BLTM25S	9,5
32,5	M32	BLTM32	19x125 ZB19x125	19x55 ZSKL19x55	BLTM32S	19,0
40,5	M40	BLTM40	19x125 ZB19x125	19x55 ZSKL19x55	BLTM40S	19,0
50,5	M50	BLTM50	19x125 ZB19x125	19x75 ZSKL19x75	BLTM50S	19,0
63,5	M63	BLTM63	19x125 ZB19x125	19x75 ZSKL19x75	BLTM63S	19,0
15,2	PG9	BLTPG9	9,5x19 ZB9,5x19	9,5x50 ZSKL9,5x50	BLTPG9S	9,5
18,6	PG11	BLTPG11	9,5x19 ZB9,5x19	9,5x50 ZSKL9,5x50	BLTPG11S	9,5
20,4	PG13	BLTPG13	9,5x19 ZB9,5x19	9,5x50 ZSKL9,5x50	BLTPG13S	9,5
22,5	PG16	BLTPG16	9,5x19 ZB9,5x19	9,5x50 ZSKL9,5x50	BLTPG16S	9,5
28,3	PG21	BLTPG21	9,5x19 ZB9,5x19	9,5x50 ZSKL9,5x50	BLTPG21S	9,5
37,0	PG29	BLTPG29	19x125 ZB19x125	19x75 ZSKL19x75	BLTPG29S	19,0
47,0	PG36	BLTPG36	19x125 ZB19x125	19x75 ZSKL19x75	BLTPG36S	19,0
54,0	PG42	BLTPG42	19x125 ZB19x125	9,5x50 ZSKL9,5x50	BLTPG42S	19,0
60,0	PG48	BLTPG48	19x125 ZB19x125	19x75 ZSKL19x75	BLTPG48S	19,0
30,5	-	BLTN30,5	9,5x19 ZB9,5x19	9,5x50 ZSKL9,5x50	BLTN30,5S	9,5

Bigger sizes with standard punching dies on request

VA SPLIT hole punching tool

This hole punching tool for stainless steel splits the slug into in 2 pieces. This prevents the slug from getting stuck on the draw bolt and/or in the die.

Max. ST steel thicknesses:

- 2 mm with 9.5 mm draw bolt/draw stud
- 3 mm with 19.0 mm draw bolt/draw stud

Technical characteristics:

- For manual and hydraulic operation
- We recommend the use of a hand-operated hydraulic tool
- Working with a ball bearing draw stud is possible, but is not recommended
- The used high-alloyed tool steel and the thermal treatment guarantee a long tool life

Universal accessories / spare parts

- DB22 - Spacer sleeve 22 mm - short
- STB21 - HSS-E step drill Ø 9, 11, 12, 15, 17, 19, 21 mm
- AVP - Anti-wear paste



Hole dimensions		Order No.				
Ø of hole	Standard size	Set Punch die Order No.	Hydraulic operation/draw stud Order No.	Manual operation/draw stud with ball bearing Order No.	Replacement punch Order No.	Thread / punch mm
16,2	M16	BLVAM16	11,1x19 ZB11,1x19		BLVAM16S	11,1
20,4	M20	BLVAM20	11,1x19 ZB11,1x19		BLVAM20S	11,1
25,5	M25	BLVAM25	11,1x19 ZB11,1x19		BLVAM25S	11,1
32,5	M32	BLVAM32	19x125 ZB19x125		BLVAM32S	19,0
40,5	M40	BLVAM40	19x125 ZB19x125		BLVAM40S	19,0
50,5	M50	BLVAM50	19x125 ZB19x125		BLVAM50S	19,0
63,5	M63	BLVAM63	19x125 ZB19x125		BLVAM63S	19,0
15,2	PG9	BLVAPG9	11,1x19 ZB11,1x19		BLVAPG9S	11,1
18,6	PG11	BLVAPG11	11,1x19 ZB11,1x19		BLVAPG11S	11,1
20,4	PG13	BLVAPG13	11,1x19 ZB11,1x19		BLVAPG13S	11,1
22,5	PG16	BLVAPG16	11,1x19 ZB11,1x19		BLVAPG16S	11,1
28,3	PG21	BLVAPG21	11,1x19 ZB11,1x19		BLVAPG21S	11,1
37,0	PG29	BLVAPG29	19x125 ZB19x125		BLVAPG29S	19,0
47,0	PG36	BLVAPG36	19x125 ZB19x125		BLVAPG36S	19,0
54,0	PG42	BLVAPG42	19x125 ZB19x125		BLVAPG42S	19,0
60,0	PG48	BLVAPG48	19x125 ZB19x125		BLVAPG48S	19,0
30,5	-	BLVAN30,5	11,1x19 ZB11,1x19		BLVAN30,5S	11,1

Draw bolt with ball bearing

To extend the life of the draw bolts we recommend to lubricate the draw bolts with our anti-wear paste AVP

Order No.	Description	Dimensions	Weight
ZSKL19X55	Draw bold with ball bearing	19 x 55 mm	0,24 kg

Order No.	Description	Dimensions	Weight
ZSKL19xX75	Draw bold with ball bearing	19 x 75 mm	0,28 kg

Order No.	Description	Dimensions	Weight
ZSKL9,5X50	Draw bold with ball bearing	9,5 x 50 mm	0,06 kg



Draw stud for hydraulics

To extend the life of the draw bolts we recommend to lubricate the draw bolts with our anti-wear paste AVP

Order No.	Description	Ø	Weight
ZB11,1x19	Draw stud for hydraulics	11,1 X 19 mm	0,11 kg

Order No.	Description	Ø	Weight
ZB19x125	Draw stud for hydraulics	19 x 125 mm	0,26 kg

Order No.	Description	Ø	Weight
ZB9,5x19	Draw stud for hydraulics	9,5 x 19 mm	0,10 kg

Order No.	Description	Ø	Weight
ZB9,5x72	Draw stud for hydraulics	9,5 x 72 mm	0,04 kg





Set TRE SPLIT M16-M40

TRE SPLIT triple splitter hole punching tool for St steels 5 sizes. Delivered in a plastic case.

Equipment:

- 1 punch of each size: M 16 - M 20 - M 25 - M 32 - M 40
- 2 ball bearing draw studs 9.5 × 50.0 mm
- 1 ball bearing draw stud 19.0 × 55.0 mm
- 1 tube of anti-wear paste
- 1 HSS-Co pilot drill bit (multi-step drill)
- Plastic case with foam liner

Order No.	Description	Dimensions	Weight
SETBLTM40	Set TRE SPLIT M16-M40	340 x 275 mm	2.25 kg

Other accessories available on request



Set TRE SPLIT M16-M63

TRE SPLIT triple splitter hole punching tool for St steels 7 sizes. Delivered in a plastic case.

Equipment:

- 1 punch of each size: M 16 - M 20 - M 25 - M 32 - M 40 - M 50 - M 63
- 2 ball bearing draw studs 9.5 × 50.0 mm
- 1 ball bearing draw stud 19.0 × 55.0 mm
- 1 ball bearing draw stud 19.0 × 75.0 mm
- 1 tube of anti-wear paste
- 1 HSS-Co pilot drill bit (multi-step drill)
- Plastic case with foam liner

Order No.	Description	Dimensions	Weight
SETBLTM63	Set TRE SPLIT M16-M63	340 x 275 mm	3.85 kg

Other accessories available on request



Set TRE SPLIT M16-M40

VA SPLIT double splitter hole punching tool for VA steels 5 sizes. Delivered in a plastic case.

Equipment:

- 1 punch of each size: M 16 - M 20 - M 25 - M 32 - M 40
- 1 tube of anti-wear paste
- 1 HSS-Co pilot drill bit (multi-step drill)
- Plastic case with foam liner

Order No.	Description	Dimensions	Weight
SETBLVAM40	Set VA SPLIT M16-M40	340 x 275 mm	1.55 kg

Other accessories available on request

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PUNCHING/STAMPING/ELECTRIC BUS BAR PROCESSING UNIT



Set VA SPLIT M16-M63

VA SPLIT double splitter hole punching tool for VA steels 7 sizes. Delivered in a plastic case.

Equipment:

- 1 punch of each size: M 16 - M 20 - M 25 - M 32 - M 40 - M 50 - M 63
- 1 tube of anti-wear paste
- 1 HSS-Co pilot drill bit (multi-step drill)
- Plastic case with foam liner

Order No.	Description	Dimensions	Weight
SETBLVAM63	Set VA SPLIT M16-M63	340 x 275 mm	3.45 kg

Other accessories available on request



Rectangular/shaped hole punch tool for heavy connectors with 2 centering tips integrated into the die

Workable with St steels - equipped with centering tips integrated into the matrix for marking the mounting holes. Only for hydraulic operations.

Equipment:

- Shaped hole punch
- Draw stud
- Locknut
- Plastic case with foam inlay

Size mm	Max. sheet thickness	Order No.	Pole	Axle	Weight
24,0 x 42,0	3,0 mm	BLF24x42	6	B	0,85 kg
24,0 x 65,0	3,0 mm	BLF24x65	10	B	1,81 kg
24,0 x 86,0	3,0 mm	BLF24x86	16	B	1,87 kg
24,0 x 112,0	3,0 mm	BLF24x112	24	B	2,52 kg

Other sizes available on request

Universal accessories / spare parts see page xxx

Accessories / spare parts:

Draw stud 19 mm flattened on two sides for shaped hole punch



Order No.	Description	Dimensions	Weight
ZA19X14X120	Draw stud 19 mm	14 x 120 mm	0,24 kg

Locknut for shaped hole punch

Order No.	Description	Ø	Weight
KM19	Locknut	19 mm	0,13 kg





Square / shape punch for St steels

Very long service life of the tool due to special protective gas hardening. The CAD-optimized cutting geometry of the punch reduces the need for cutting pressure and thus the effort of work. When using a hand-held hydraulic device, the reduced pressure requirement reduces the pressure on the seals.

- Equipment:**
- Shaped hole punch
 - Draw stud
 - Locknut
 - Plastic case with foam liner

Size mm	Max. sheet thickness mm	Order No.		Weight
45,0 x 45,0	3,0	BLF45x45	✓	2,30 kg
46,0 x 46,0	3,0	BLF46x46	✓	2,30 kg
68,0 x 68,0	3,0	BLF68x68	✓	3,35 kg
92,0 x 92,0	3,0	BLF92x92	✓	5,05 kg

Other sizes available on request
 Universal accessories / spare parts see page 196



Rectangular/shaped hole punch tool for heavy connectors with 4 centering tips integrated into the die

For St steels - equipped with centering tips integrated into the matrix for marking the mounting holes. Only for hydraulic operations.

- Equipment:**
- Shaped hole punch
 - Draw stud
 - Locknut
 - Plastic case with foam liner

Size mm	Max. sheet thickness	Order No.		Pole	Axle	Weight
36,0 x 52,0	3,0 mm	BLF36x52	✓	6	B	1,78 kg
36,0 x 65,0	3,0 mm	BLF36x65	✓	10	B	2,14 kg
36,0 x 86,0	3,0 mm	BLF36x86	✓	16	B	2,55 kg
36,0 x 112,0	3,0 mm	BLF36x112	✓	24	B	3,05 kg

Other sizes available on request
 Universal accessories / spare parts see page 196

Accessories / spare parts:

Draw stud 25 mm flattened on two sides for shaped hole punch

Order No.	Description	Dimensions	Weight
ZA25X21X150	Draw stud 25 mm	21 x 150 mm	0,38 kg

Locknut for shaped hole punch

Order No.	Description	Ø	Weight
KM19	Locknut	19 mm	0,13 kg



PUNCHING/STAMPING/ELECTRIC BUS BAR PROCESSING UNIT



Rectangular/shaped hole punching tool for St steels

Very long service life of the tool due to special protective gas hardening. The CAD-optimized cutting geometry of the punch reduces the need for cutting pressure and thus the effort of work. When using a hand-held hydraulic device, the reduced pressure requirement reduces the pressure on the seals.

Equipment:

- Shaped hole punch
- Draw stud
- Locknut
- Ball bearing pressure nut
- Adapter
- Plastic case with foam inlay

Size mm	Max. sheet thickness mm	Order No.			Weight
22,0 x 42,0	2,0	BLF22x42	✓	✓	0,73 kg
22,0 x 45,0	2,0	BLF22x45	✓	✓	0,73 kg

Other sizes available on request
 Universal accessories / spare parts see page 196

Accessories / spare parts:

Draw stud 13 mm flattened on one side for shaped hole punch



Order No.	Description	Dimensions	Weight
ZA13X11X105	Draw stud 13 mm	11 x 105 mm	0,09 kg

Locknut for shaped hole punch



Order No.	Description	Ø	Weight
KM12,7	Locknut	12,7 mm	0,02 kg

Ball bearing pressure nut for hole punch (manual operation)



Order No.	Description	Ø	Weight
KMKL12,7	Ball bearing pressure	12,7 mm	0,10 kg



Universal accessories / spare parts:



Adapter for hydraulics Ø 19,0 x 48 mm

Order No.	Description	Inside thread Ø	Weight
ZBA19x9,5	Adapter Ø 19,0 x 48 mm	9,5 mm	0,07 kg



Spacer sleeve 22 mm - short

Order No.	Description	Lenght	Weight
DB22	Spacer sleeve - short	22 mm	0,16 kg



HSS-E step drill

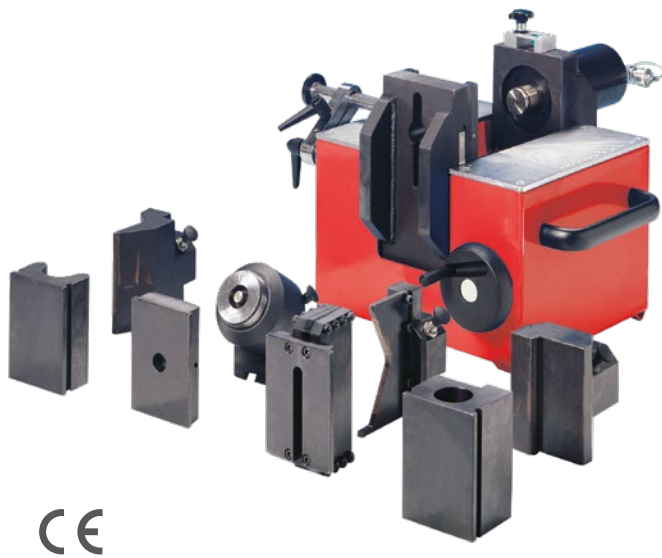
Order No.	Description	Ø mm	Weight
STB21	HSS-E step drill	9, 11, 12, 15, 17, 19, 21	0,05 kg



Anti-wear paste

Order No.	Description	Weight
AVP	Anti-wear paste	0,01 kg

PUNCHING/STAMPING/ELECTRIC BUS BAR PROCESSING UNIT



BLS120 - Power rail work station

Designed to bend, punch, cut and crimp bus bars in copper or aluminium up to 120 x 12 mm. The work station must be combined with a hydraulic pump (max. pressure 700bar/70MPa). (s. pages 201-208, Hydraulic Pumps)

Technical characteristics:

- Sturdy and compact, suitable for use in workshops and on construction sites
- Composed of a base unit and a variety of work tools, interchangeable tools depending on the task being performed
- Simple and quick tool changing
- The electrical proximity switch guarantees 100% bending repeatability
- The work bench adjusts in height with a side stop to make holes without tracing and measuring
- Quick automatic-lock connection of hydraulics and undetachable dust cap
- Cutting tool for clean burr-free cuts due to special shape of the blade
- Exact dimensional bending of bow in one operation
- Perforates and cuts laminated power rails and earthing strips

Force generated: max. 185 kN
 Operating pressure: 700bar (70 MPa)
 Bus bar width: up to 120 mm
 Bus bar thickness: up to 12 mm

Order No.	Description	Dimensions	Weight
BLS-120	Power rail work station	480x500x360 mm	53 kg

Accessories:

Order No.	Description	Power rail dimensions	Weight
BLS-M	Bending female die	bis 120 x 12 mm	3,3 kg

Order No.	Description	Bending radius	Bending angle	Weight
BLS-R5	Bending tool	R5 mm	bis 110°	4 kg
BLS-R8	Bending tool	R8 mm	bis 110°	4,1 kg
BLS-R10	Bending tool	R10 mm	bis 110°	4,4 kg
BLS-R20	Bending tool	R20 mm	bis 110°	5 kg
BLS-R	Back pending die			3,8 kg

Attention: The necessary bending female die BLS-M must be ordered separately

Order No.	Description	Power rail dimensions	Weight
BLS-S	Cutting tool for massive power rails	bis 120 x 12 mm	5,8 kg

Order No.	Description	Power rail dimensions	Weight
BLS-SL	Cutting tool for laminated power rails	bis 120 x 12 mm	9,0 kg

Order No.	Description	Power rail dimensions	Weight
BLS-K	Offset shaping tool	bis 120 x 12 mm	11,0 kg



PUNCHING/STAMPING/ELECTRIC BUS BAR PROCESSING UNIT



Technical characteristics:

- For solid and laminated bus bars
- Perforation near the isolation possible (min. 5 mm) by step in the tool
- Round hole: \varnothing 6.5 to 21.0 mm
- Longitudinal slot: 6.5 x 13 to 17 x 20 mm

Order No.	Description	Power rail dimensions	Weight
BLS-L4	Perforation tool IV for laminated and solid rails	up to 120 x 12 mm	4,3 kg



Description	\varnothing	Female die	Punch	Stripper
Round hole punch and female dies for laminated and solid bus bars	6,5 mm	LS4R06,5M	LS4R06,5S	LS4R06,5N
	7,0 mm	LS4R07,0M	LS4R07,0S	LS4R07,0N
	8,5 mm	LS4R08,5M	LS4R08,5S	LS4R08,5N
	9,0 mm	LS4R09,0M	LS4R09,0S	LS4R09,0N
	10,0 mm	LS4R10,0M	LS4R10,0S	LS4R10,0N
	10,5 mm	LS4R10,5M	LS4R10,5S	LS4R10,5N
	11,0 mm	LS4R11,0M	LS4R11,0S	LS4R11,0N
	12,0 mm	LS4R12,0M	LS4R12,0S	LS4R12,0N
	13,0 mm	LS4R13,0M	LS4R13,0S	LS4R13,0N
	14,0 mm	LS4R14,0M	LS4R14,0S	LS4R14,0N
	14,5 mm	LS4R14,5M	LS4R14,5S	LS4R14,5N
	15,0 mm	LS4R15,0M	LS4R15,0S	LS4R15,0N
	17,0 mm	LS4R17,0M	LS4R17,0S	LS4R17,0N
	18,0 mm	LS4R18,0M	LS4R18,0S	LS4R18,0N
	19,0 mm	LS4R19,0M	LS4R19,0S	LS4R19,0N
	21,0 mm	LS4R21,0M	LS4R21,0S	LS4R21,0N

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Description	\varnothing	Female die	Punch	Stripper
Long hole punch and female dies for laminated and solid bus bars on request	6,5x13,0	LS4L06,5x13,0M	LS4L06,5x13,0S	LS4L06,5x13,0N
	10,5x13,0	LS4L10,5x13,0M	LS4L10,5x13,0S	LS4L10,5x13,0N
	8,5x16,0	LS4L08,5x16,0M	LS4L08,5x16,0S	LS4L08,5x16,0N
	6,5x21,0	LS4L06,5x21,0M	LS4L06,5x21,0S	LS4L06,5x21,0N
	8,0x20,0	LS4L08,0x20,0M	LS4L08,0x20,0S	LS4L08,0x20,0N
	9,0x20,0	LS4L09,0x20,0M	LS4L09,0x20,0S	LS4L09,0x20,0N
	13,0x20,0	LS4L13,0x17,0M	LS4L13,0x17,0S	LS4L13,0x17,0N
	11,0x20,0	LS4L11,0x20,0M	LS4L11,0x20,0S	LS4L11,0x20,0N
	13,0x20,0	LS4L13,0x20,0M	LS4L13,0x20,0S	LS4L13,0x20,0N
	14,0x20,0	LS4L14,0x20,0M	LS4L14,0x20,0S	LS4L14,0x20,0N
	17,0x20,0	LS4L17,0x20,0M	LS4L17,0x20,0S	LS4L17,0x20,0N



Plastic case for BLS tools and dies (Accessories)

Accessories:

Description	Order No.	Dimensions	Weight
Trolley for BLS	BLS-W	800x500x750 mm	ca. 45 kg
Trestle for BLS	BLS-B	800x440 mm	ca. 5 kg
Plastic case for BLS	ACBLSWZG	400x250x250	6,5 kg
Spray Metalflox	SPRAY-M	400 ml	ca. 450 g



Spray for cutting and punching



Trolley/Trestle for positioning the Bus Bar Work Station in ergonomic high

LSK120 - Hydraulic punching head

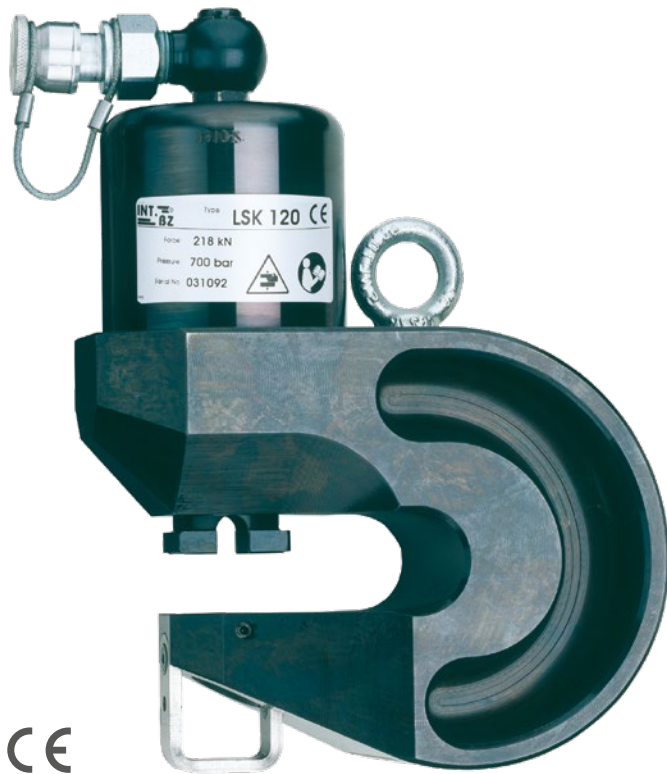
Designed to punch bus bars rails (dimensions up to 120 x 12mm) made of copper, aluminium or steel with tensile strength up to 470N/mm². The hydraulic punching head must be combined with a hydraulic pump (Maximum pressure 700bar/70MPa) (s. pages 201-208, Hydraulic Pumps)

Technical characteristics:

- Strong and compact structure
- "C" head for easy positioning of the power rails
- Easy insertion of inserts (die and punch)
- Also useable on mounted bus bars without disassembly
- Quick automatic-lock connection and undetachable dust cap
- Centrally punched holes in bars up to 120 mm wide
- Functional range for the following bars:

12 mm Cu/Al max. Ø 21,0 mm
 8 mm steel max. Ø 21,0 mm
 9 mm steel max. Ø 19,5 mm
 12 mm steel max. Ø 14,0 mm
 Punching force: max. 218 kN
 Operating pressure: 700bar (70MPa)

Description	Order No.	Dimensions	Weight
Hydraulic punching head	LSK120	234x174x88 mm	ca. 9,3 kg
Rigid case	KKLSK120	400x365x135 mm	ca. 1,8 kg



CE



Description	Ø	Punch	Stripper
Round hole punch and female dies for solid rails	6,0 mm	LSR06,0M	LSR06,0S
	6,5 mm	LSR06,5M	LSR06,5S
	7,0 mm	LSR07,0M	LSR07,0S
	8,0 mm	LSR08,0M	LSR08,0S
	8,5 mm	LSR08,5M	LSR08,5S
	9,0 mm	LSR09,0M	LSR09,0S
	10,0 mm	LSR10,0M	LSR10,0S
	10,5 mm	LSR10,5M	LSR10,5S
	11,0 mm	LSR11,0M	LSR11,0S
	12,0 mm	LSR12,0M	LSR12,0S
	12,5 mm	LSR12,5M	LSR12,5S
	13,0 mm	LSR13,0M	LSR13,0S
	13,5 mm	LSR13,5M	LSR13,5S
	14,0 mm	LSR14,0M	LSR14,0S
	14,5 mm	LSR14,5M	LSR14,5S
	15,0 mm	LSR15,0M	LSR15,0S
	16,0 mm	LSR16,0M	LSR16,0S
	17,0 mm	LSR17,0M	LSR17,0S
	18,0 mm	LSR18,0M	LSR18,0S
	18,5 mm	LSR18,5M	LSR18,5S
	19,0 mm	LSR19,0M	LSR19,0S
19,5 mm	LSR19,5M	LSR19,5S	
20,0 mm	LSR20,0M	LSR20,0S	
21,0 mm	LSR21,0M	LSR21,0S	

Already fan of *intercable* ?

