

Product Information

Specimen blanking machines for specimen preparation of metals

CTA: 46330 46355



M-Cut 65 hydraulic specimen blanking machine with side extension table option

Applications

Nowadays specimens from steel sheet and metal foils are produced economically and accurately by punching. Standards such as ISO 6892, ASTM A370 etc. stipulate that test results must not be influenced by any material change caused by work-hardening in the specimen edge zone.

Numerous structural examinations of steel sheet have shown that the work-hardened zone along the cutting line is generally a maximum of 10% of specimen thickness. This is achieved by a low cutting-speed and special blanking-tool design and offers substantial economic advantages in the event of subsequent grinding. In this way high specimen quality is ensured.

C-shaped specimen blanking machine (M-Cut 65)

The open design of the machine and the blanking tool (C-shape) allows removal of test pieces from sheets and foils also. If several blanking tools are in use, the side extension table (option) is recommended. This is in the form of a roller table and enables the blanking tools not currently required to be stored out of the way. Using the extension table, tool changes take about 20 seconds, offering significant time-savings in the event of frequent tool changes. The M-cut 65 specimen blanking machine (for 650kN compressive force) is suitable for material thicknesses from 0.04 to 6mm (depending on tensile strength and specimen shape).



RZ 100 hydraulic blanking machine

O-shaped specimen blanking machines (RZ 100/RZ 150)

The closed O-shape requires precut strips. These blanking machines are already equipped with a side extension table.

Blanking tools

Blanking tools can be produced exactly in line with customers' requirements. For example, tools were produced from a special steel and provided with additional guides to enable dumbbell specimens to be punched from foils with a thickness of 0.04 mm and a tensile strength of 2,150 MPa. Depending on the strength of the material, between 20,000 and 150, 000 specimens can be produced using the tools. They can then be re-ground.

Advantages and features

- Fast and cost-effective production of tensile specimens
- No technical personnel required; machine can be operated by anyone after brief instruction
- Finishing with grinder produces very high quality specimens
- Robust, easy-to-maintain machines
- Blanking tools have a long service life and are capable of repeated re-grinding.

PI 262 623

Product Information

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Technical data

Type Item No.	M-Cut 65 048979	
Compression force, max.	650	kN
Design	C-shaped	
Punch from	thin sheets	
Piston stroke	20	mm
Strokes per minute	5	
Specimen dimensions		
Length	300	mm
Electrical connection value	4	kVA
Dimensions		
Height	1615	mm
Width	760	mm
Depth	760	mm
Weight, approx.	1500	kg
Paint finish	RAL 7032	



NOTE

The M-Cut 65 specimen blanking machine requires that the customer supply a 400 V 5-wire connection.

Type Item No.	RZ 100 890735	RZ 150 890710	
Compression force, max.	1000	1500	kN
Drive system	Electro-hydraulic		
Design	O-shaped		
Punch from	Strips		
Piston stroke	40	40	mm
Strokes per minute	6		
Strip length, max.	270 ¹⁾	270 ¹⁾	mm
Strip width, max.	130 ¹⁾	130 ¹⁾	mm
Specimen dimensions			
Length	250	250	mm
Width	30	30	mm
Round specimen, Ø	140	140	mm
Dimensions (without hydraulic power pack):			
Width	1600	1600	mm
Height	1810	1810	mm
Depth	750	750	mm
Hydraulic power pack (included)			

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Type	RZ 100	RZ 150	
Item No.	890735	890710	
Dimensions			
Width	900	900	mm
Height	620	620	mm
Depth	1010	1010	mm
Weight, approx.	200	200	kg
Paint finish	RAL 7032	RAL 7032	
Operating pressure	210	300	bar
Flow rate	7.4	7.4	l/min
Power supply	400 V, 3Ph/PE	400 V, 3Ph/PE	
Power frequency	50	50	Hz
Noise emission level	<70	<70	dB
Power consumption (full load), approx.	8	8	kVA
Weight, approx.	2200	2200	kg
Weight, tool, approx.	140	140	kg
Paint finish	RAL 7021	RAL 7021	
Mains			
Voltage fluctuations	≤±10	≤±10	% with reference to the nominal power supply as quoted
Short term interference	≤20	≤20	ms
Frequency	±1	±1	% related to the nominal frequency as quoted
Ground	Ground resistance ≤5	Ground resistance ≤5	Ω

1) Punch from strips

Side extension table

Description	ArticleNumber
Side extension table for 2 blanking tools in total For fast blanking-tool change	048982
Side extension table for 5 blanking tools in total For storing blanking tools not required for use	048985

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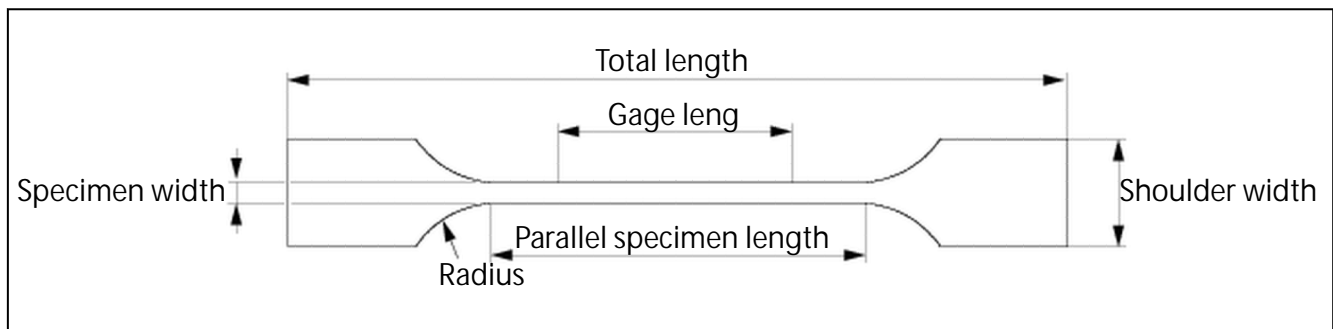
CTA: 46322



Fast blanking-tool change with side extension table for M-Cut 65

Specimen dimensions:

CTA: 135580



Blanking tools for M-Cut 65 (1x required)

Blanking tools with open design and special top edge grind. Punch head profile with 3mm radius for increased tool service life.

Standard	Sheet thickness range [mm]	Blanking clearance [mm]	Punch head profile [mm]	Item No.
EN 10002-1 / EN ISO 6892-1, Type 2	0.2 to 1.2	0.2	3	1065181
EN 10002-1 / EN ISO 6892-1, Type 2	1.2 to 3.0	0.2	3	1065182

Blanking tools for RZ 100 specimen blanking machine (1 x required)

Blanking tools in enclosed design

Standard	Sheet thickness range [mm]	Blanking clearance [mm]	Item No.
EN ISO 6892, Type 1	0.2 to 1.2	0.2	017388
EN ISO 6892, Type 1	0.2 to 1.2	2	017390
EN ISO 6892, Type 1	1.2 to 3	0.3	017391
EN ISO 6892, Type 1	1.2 to 3	2	017392
EN ISO 6892, Type 1	3 to 6	0.6	017393

All data at ambient temperature.

Subject to change in the course of further development.

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Standard	Sheet thickness range [mm]	Blanking clearance [mm]	Item No.
EN ISO 6892, Type 1	3 to 6	2	017394
EN ISO 6892, Type 2	0.2 to 1.2	0.2	017395
EN ISO 6892, Type 2	0.2 to 1.2	2	017396
EN ISO 6892, Type 2	1.2 to 3	0.3	017398
EN ISO 6892, Type 2	1.2 to 3	2	017399
EN ISO 6892, Type 2	3 to 6	0.6	017400
EN ISO 6892, Type 2	3 to 6	2	017401



NOTE

ASTM A 370 sheet-type tools and JIS Z 2241, type tools on request

Blanking tools for RZ 150 specimen blanking machine (1 x required)

Blanking tools in enclosed design

Additional blanking tools available on application.

Standard	Sheet thickness range [mm]	Blanking clearance [mm]	Item No.
EN ISO 6892, Type 2	0.2 to 1.2	0.2 per side	017515
EN ISO 6892, Type 2	0.2 to 1.2	2 per side	017516
EN ISO 6892, Type 2	1.2 to 3	0.3 per side	017517
EN ISO 6892, Type 2	1.2 to 3	2 per side	017518
DIN EN ISO 6892, Type 2	3 to 6	0.2 per side	017520