Cold Bend Testing Machine
Type SBM

Designed for bending and straightening (re-bend)

This rebar bend and re-bend unit is designed to verify the bend resistance of reinforcing steel bars in accordance with EN 15603-1, ISO 7438, ASTM A615&A615M, EN 10080, BS4449 and other international standards.

As most reinforcing steel will require bending before it is installed into the concrete structure standards requires to perform bend test with specified minimum mandrel diameters and taking into consideration the effect of minimum temperatures and/or aging. Certain standards additionally require a re-bend test.

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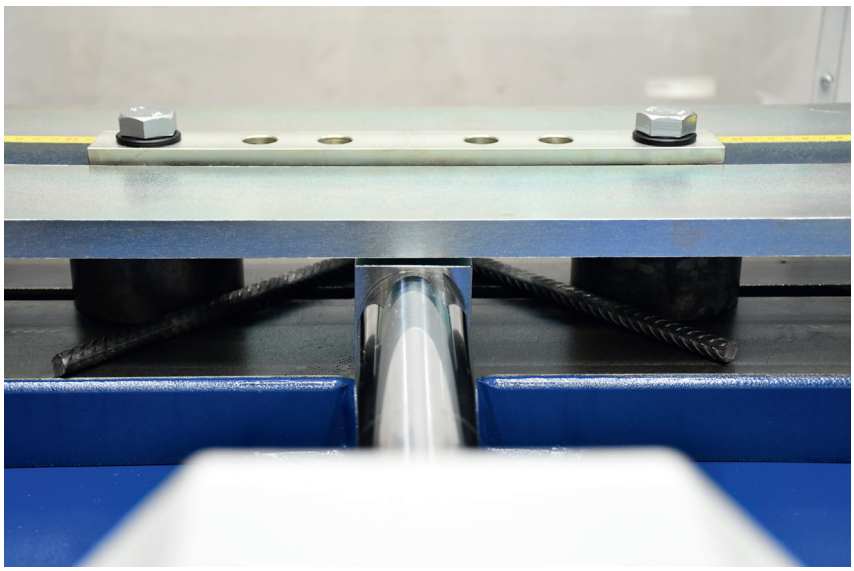

The SBM hydraulic bending machines are designed to carry out bending tests on steel bars for reinforced concrete.

The test consists in bending the bar up to 180° or to bend the same at 90° and then straighten (re-bend) if of at least 20°.

The horizontal design makes specimen loading and machine operation easy.

The machine is easy to operate. Beside of the main switch the hydraulic pump can be started and stopped by pressing the relevant bottoms. The manual operated valve allows to move the cylinder forward or backward by simple stir the handle in direction the cylinder shall move.
The piston speed can be adjusted at the throttle valve.
The hydraulic power supply with its components is integrated in the machine base. The base also offers storage space for the different mandrels, brackets and working tools.

The safety guard that covers the work-space protects the operator in accordance with the 89/392/CEE Directive.
The Protection device is supported by gas springs that make the opening and closing easier. The transparent top of the protection device enables the operator to have a good view to the unit during the test. The protection device is electrically monitored.

The mandrels with different diameters are easy to change and the support rollers easy and stepless adjustable in accordance with relevant standard. This unit is suitable for specimen diameters between 5 and 40 mm.

A device prevents the unlocking of the bar under test from the relevant rollers and the contrasting mandrel both during the bending and the straightening operation.
The mandrels and the mandrel-holders are not included in the standard supply and have to be ordered separately

Technical Data	
Max. piston load	160 kN (16.000 Kg)
Max. piston stroke	550 mm
Support rollers (ASTM requires Ø100 mm only)	Ø50 mm & Ø100 mm
Power supply	400V, 3 phases, 50 Hz 1500W
Dimensions W x D x H	1540 x 800 1300 mm
Weight	350 kg

Specimen ø mm	Material	Surface	ø mm	Mandrel Mod.	Bracket Mod.
5	Fe 22 B	L	10	066-01	068-11
	Fe 32 B	L	15	066-03	068-12
	Fe 38 B	AD	15	066-03	068-12
	Fe 44 B	AD	20	066-06	068-13
6	Fe 22 B	L	12	066-02	068-12
	Fe 32 B	L	18	066-05	068-14
	Fe 38 B	AD	18	066-05	068-14
	Fe 44 B	AD	24	066-07	068-16
8	Fe 22 B	L	16	066-04	068-15
	Fe 32 B	L	24	066-07	068-17
	Fe 38 B	AD	24	066-07	068-17
	Fe 44 B	AD	32	066-10	068-19
10	Fe 22 B	L	20	066-06	068-18
	Fe 32 B	L	30	066-09	068-20
	Fe 38 B	AD	30	066-09	068-20
	Fe 44 B	AD	40	066-12	068-21
12	Fe 22 B	L	24	066-07	068-11
	Fe 32 B	L	36	066-11	068-13
	Fe 38 B	AD	36	066-11	068-13
	Fe 44 B	AD	48	066-15	068-15
14	Fe 22 B	L	28	066-08	068-12
	Fe 32 B	L	42	066-13	068-15
	Fe 38 B	AD	84	066-23	068-19
	Fe 44 B	AD	112	066-28	068-21
16	Fe 22 B	L	32	066-10	068-14
	Fe 32 B	L	48	066-15	068-17
	Fe 38 B	AD	96	066-24	068-20
	Fe 44 B	AD	128	066-30	068-12
18	Fe 22 B	L	36	066-11	068-16
	Fe 32 B	L	54	066-17	068-18
	Fe 38 B	AD	108	066-26	068-11
	Fe 44 B	AD	144	066-33	068-13
20	Fe 22 B	L	40	066-12	068-01
	Fe 32 B	L	60	066-19	068-03
	Fe 38 B	AD	160	066-35	068-09
	Fe 44 B	AD	200	066-38	068-06
22	Fe 22 B	L	44	066-14	068-02
	Fe 32 B	L	66	066-21	068-05
	Fe 38 B	AD	176	066-36	068-05
	Fe 44 B	AD	220	066-39	068-10
24	Fe 22 B	L	48	066-15	068-03
	Fe 32 B	L	72	066-48	068-07
	Fe 38 B	AD	192	066-49	068-07
	Fe 44 B	AD	240	066-50	068-01
25	Fe 22 B	L	50	066-16	068-04
	Fe 32 B	L	75	066-22	068-08
	Fe 38 B	AD	200	066-38	068-08
	Fe 44 B	AD	250	066-41	068-02

Specimen ø mm	Material	Surface	ø mm	Mandrel Mod.	Bracket Mod.
26	Fe 22 B	L	52	066-51	068-09
	Fe 32 B	L	78	066-52	068-10
	Fe 38 B	AD	260	066-53	068-03
	Fe 44 B	AD	312	066-54	068-09
28	Fe 22 B	L	56	066-18	068-06
	Fe 32 B	L	84	066-23	068-02
	Fe 38 B	AD	280	066-43	068-04
	Fe 44 B	AD	336	066-46	068-06
30	Fe 22 B	L	60	066-19	068-08
	Fe 32 B	L	90	066-55	068-03
	Fe 38 B	AD	300	066-56	068-09
	Fe 44 B	AD	360	066-57	068-07
32	Fe 22 B	L	64	066-20	068-01
	Fe 32 B	L	96	066-24	068-04
	Fe 38 B	AD	320	066-45	068-05
	Fe 44 B	AD	384	066-47	068-08
34		AD	340	066-58	068-22
36		AD	360	066-57	068-23
38		AD	380	066-59	068-22
40		AD	400	066-60	068-23

Surface: L plain
AD adherence

All mandrels have been produced from quality steel and cadmium plated for rust protection, and from Ø 10 mm up to 96 mm included have been hardened to make them wear proof.

Mandrel Holders

Model-Nr.		
067-01	Mandrel-Holder	Ø 10 to 12 mm
067-02	Mandrel-Holder	Ø 15 to 20 mm
067-03	Mandrel-Holder	Ø 24 to 50 mm
067-04	Mandrel-Holder	Ø 54 to 96 mm

From ø 100 to 400 mm the mandrel is directly fitted to the piston without using a mandrel-holder.

Mandrels and brackets for steel bars to ASTM standards are available upon request.

S:\Prospektblätter w+b\02 Anwendungen_Uebersichten etc. ab 2016\03 Product Informations\Steel Bending\SBM Product Information\SBM Product Information_E

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