







-  Conventional marking technology
-  Scribe, stylus and dot-peening marking technology
-  Type-wheel marking technology
-  Laser-marking technology
-  Traceability
-  Special-purpose machines

Built-in impact unit

Technical data sheet

- Can be used for almost all plastically deformable materials
- Applicable tools: pin stamps, steel types, engraved stamps or numbering heads
- Impact power infinitely adjustable
- Large usable stroke (from 22 to 150 mm available depending on the version)

Application area

The pneumatically-controlled BORRIES built-in impact units are suitable for use in transfer lines, rotary indexing machines and automatic testing machines among others. The large usable stroke allows workpieces of different heights to be stamped, without requiring any adjustment.

BM 12 PN

Smallest built-in impact unit with an impact power range from 2 kN to 6 kN*



BM 22 PN/BM 25 PN

Slim built-in impact units with an impact power range of 18 kN (BM 22 PN**) or 35 kN (BM 25 PN**)



BM 21 PN

High-performance built-in impact unit with an impact power range from 5 kN to 37 kN*



BM 35 PN







Powerful built-in impact unit with an impact power range from 30 kN to 113 kN*



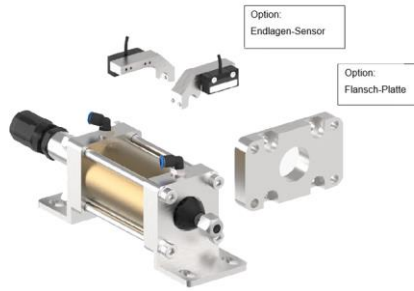
*Impact release by means of spring, force is dependent on the impact spring used

** Impact release via compressed air

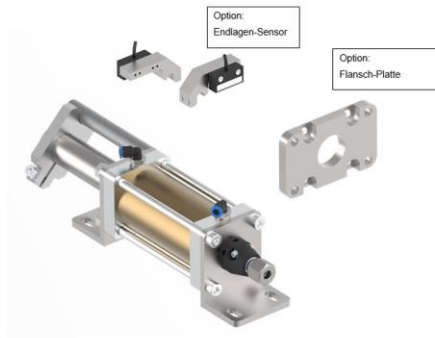
Example illustration

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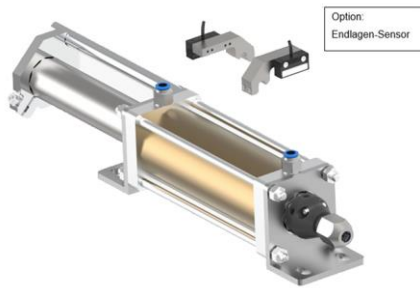
Examples and options



BM 12 PN**



BM 22 PN**



BM 25 PN*









BM 21 PN



BM 35 PN

*) Option for all built-in impact units with or without tool rotation protection mechanism, end position sensor
 **) Option: Flange plate



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Technical data

	BM 12 PN	BM 22 PN	BM 21 PN	BM 25 PN	BM 35 PN
Dimension of the tool shaft *	Ø 8 mm	Ø 10 mm	Ø 10 mm	Ø 10 mm	Ø 16 mm
Usable stroke	22 mm 50 mm 80 mm	32 mm 50 mm 80 mm 100 mm 150 mm	50 mm 100 mm	50 mm 150 mm	90 mm
Maximum pressure	5 bar	6 bar	5 bar	6 bar	5 bar
Air consumption per stamping approx.	0.5 l (oiled)	0.9 l (32 mm) 1.2 l (50 mm) 1.7 l (80 mm) 2.2 l (100 mm) 3.2 l (150 mm)	0.7 l (oiled)	1.2 l (50 mm) 3.2 l (150 mm)	2.7 l (oiled)
Max. impact sequence per hour, approx.	1,500	1,550	1,500	1,550	1,500
Impact force, approx.	2 kN to 6 kN**	18 kN	5 kN to 37 kN**	35 kN	30 kN to 113 kN**

*Pin stamps cannot be interchanged between the different built-in impact units.

**Depending on the impact spring used and the impact force set.

Stamping power (max. characters*)

Material to be marked**	BM 12 PN		BM 22 PN		BM 21 PN		BM 25 PN		BM 35 PN	
	Steel	Aluminium	Steel	Aluminium	Steel	Aluminium	Steel	Aluminium	Steel	Aluminium
Character height 1.5 mm	6	11	22	40	50	90	28	42	100	220
Character height 2.0 mm	6	8	12	18	36	65	14	22	85	180
Character height 3.0 mm	3	4	4	8	21	40	10	18	50	110
Character height 4.0 mm	2	3	3	5	17	30	8	15	38	80
Character height 5.0 mm	1	2	2	4	14	25	5	10	25	50
Character height 6.0 mm***	1	1	2	3	10	18	3	6	20	40

* These figures are approximate. Exact results can only be determined by a marking test.

** Steel: St37K (material: 1.0254), aluminium: AlCuMgPb (material: 3.1645)

*** on request (special solution)

Conventional marking technology

Scribe, stylus and dot-peening marking technology

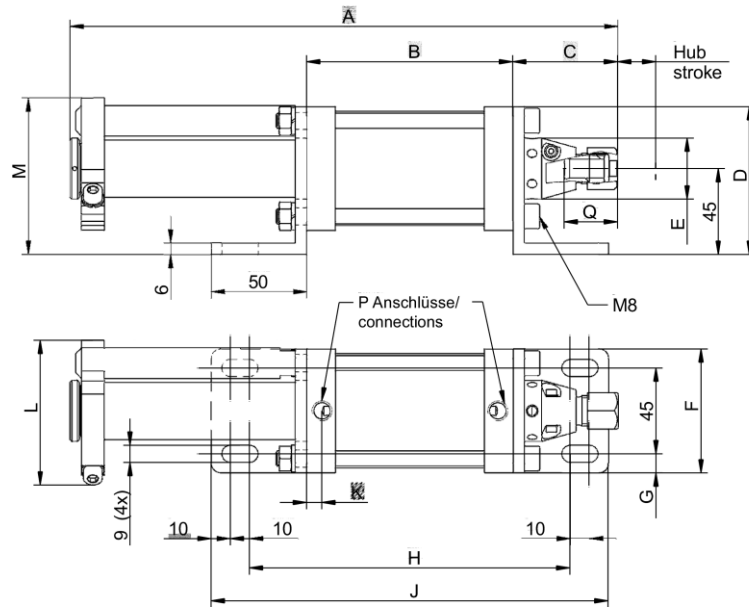
Type-wheel marking technology

Laser-marking technology

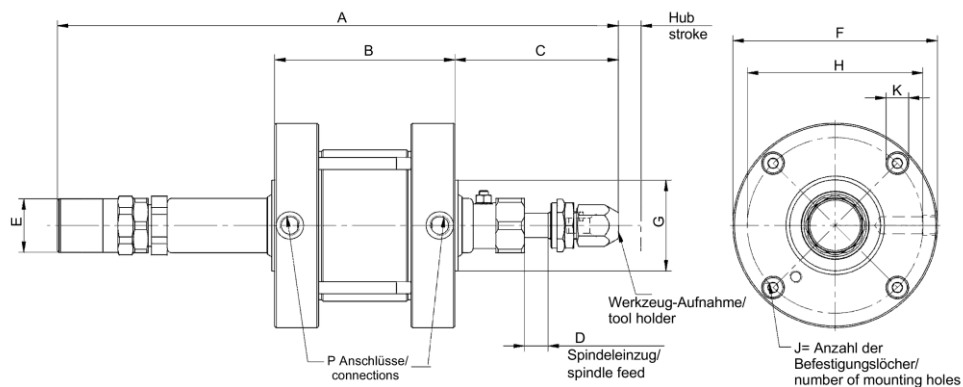
Traceability

Special-purpose machines

Dimensions



Type	A	B	C	D	E	F	G	H	J	K	L	M	P	Q
BM 12 PN (22 mm stroke)	218	88	44	77.5	Ø 29.5	65	10	148	188	7	-	-	R 1/8"	~ 30
BM 22 PN (32 mm stroke)	251	90	55	77.5	Ø 32	65	10	150	190	8	74.5	82	R 1/8"	~ 29
BM 25 PN (50 mm stroke)	298	108	68	82.5	Ø 40	75	15	168	208	7.5	76.4	-	R 1/4"	~ 34.5



Type	A	B	C	D	E	F	G	H	J	K	P	Q
BM 21 PN (50 mm stroke)	403	119	110	15	Ø 39	Ø 135	Ø 60	Ø 116	4	M 8	R 1/4"	~ 35
BM 35 PN (90 mm stroke)	700	194	130	25	Ø 124	Ø 184	Ø 90	Ø 162	4	M 8	R 1/4"	~ 39

Subject to technical changes.