



Bar holding magnets



Function

Bar holding magnets are powerful and flexible handling tools that are used across all industry sectors for the transportation, tensioning, fixation, assembly and lifting of ferrous work pieces.

These magnets are strong cylindrical magnet systems with one exposed adhesion side and the other sides shielded by a steel or brass cylinder. This design allows the magnetic forces to concentrate on the adhesive side, which gives the bar holding magnet a much more powerful adhesion force than a single magnet.

Use

While strong bar holding magnets are usually distinguished by great heights, flat holding magnets or so-called pot magnets serve a similar function and are used in applications that require a larger diameter. The choice between these two magnet systems ultimately depends on the specific application, the available space and the handling requirements.

Product range

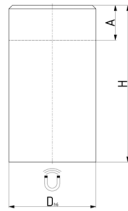
Our following product range comprises a wide selection of different types of bar holding magnets made of neodymium-iron-boron (NdFeB), samarium-cobalt (SmCo) or aluminium-nickel-cobalt (AlNiCo). We also develop individual magnetic solutions for your custom application and new ideas.



Product range

Bar holding magnets made of neodymium-iron-boron (NdFeB)

Bar holding magnet made of NdFeB, brass housing with fit tolerance h6



Part number	D mm	H mm	A ¹ mm	Gap X ² mm	Holding force* N	Weight g	Temperature °C
M17058000B972U	6 (h6)	20 ^{+0.2} / _{-0.2}	10	1.5	10	4.5	80
M17058100B972U	8 (h6)	20 ^{+0.2} / _{-0.2}	10	1.5	25	8	80
M17058200B972U	10 (h6)	20 ^{+0.2} / _{-0.2}	8	2	45	12	80
M17058300B972U	13 (h6)	20 ^{+0.2} / _{-0.2}	6	2.5	70	20	80
M17058400B972U	16 (h6)	20 ^{+0.2} / _{-0.2}	2	3	150	30	80
M17058500B972U	20 (h6)	25 ^{+0.2} / _{-0.2}	5	4	280	59	80
M17058600B777U	25 (h6)	35 ^{+0.3} / _{-0.3}	7	5	450	132	80
M17058700B777U	32 (h6)	40 ^{+0.3} / _{-0.3}	4.5	6	700	246	80

Bar holding magnet made of NdFeB with internal thread, brass housing with fit tolerance h6



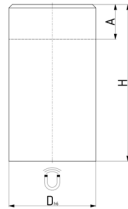
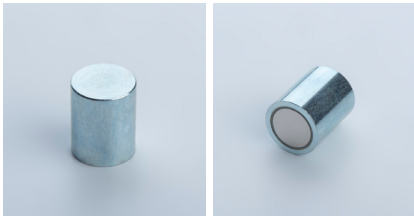
Part number	D mm	H mm	Thread MxL	Holding force* N	Weight g	Temperature °C
M17053400B973U	6 (h6)	20 ^{+0.2} / _{-0.2}	M3x5	10	4	80
M17053500B973N	8 (h6)	20 ^{+0.2} / _{-0.2}	M3x5	25	7.5	80
M17053600B973U	10 (h6)	20 ^{+0.2} / _{-0.2}	M4x7	45	11	80
M17053700B973U	13 (h6)	20 ^{+0.2} / _{-0.2}	M4x7	70	19.5	80
M17053800B973U	16 (h6)	25 ^{+0.2} / _{-0.2}	M4x8	150	38	80
M17053900B973U	20 (h6)	25 ^{+0.2} / _{-0.2}	M6x6	280	58	80
M17054000B973U	25 (h6)	35 ^{+0.3} / _{-0.3}	M6x8	450	130	80
M17054100B973U	32 (h6)	40 ^{+0.3} / _{-0.3}	M6x6	700	243	80

¹ Height "H" can be reduced by dimension "A" without loss of holding force if there is no magnetic conducting material at the end of the bar holding magnet.

² Please note that when assembling in iron, the gap "X" between the casing of the bar holding magnet and the iron must be maintained in order to avoid a magnetic short circuit. This gap also has to be maintained if the magnet is shortened by dimension "A" and constructed in iron.

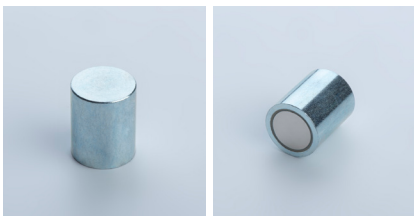
* The holding forces are ascertained using an even polished plate of steel (S235JR acc. DIN 10 025) with a thickness of 10 mm by the vertical withdrawal of the magnet at room temperature. Small cracks in the magnet material do not affect the holding force. Deviations up to minus 10 % are possible in some instances. The data given relates to minimum values which are normally exceeded.

Bar holding magnet made of NdFeB, steel housing with fit tolerance h6, galvanized



Part number	D mm	H mm	A ¹ mm	Holding force* N	Weight g	Temperature °C
M17143000B972U	4 (h6)	10 ^{+0.2} / _{-0.2}	7	2.5	1	80
M17143100B972U	5 (h6)	10 ^{+0.2} / _{-0.2}	6	4.5	1.5	80
M17059000B972U	6 (h6)	10 ^{+0.2} / _{-0.2}	5	6	2	80
M17059100B972U	8 (h6)	12 ^{+0.2} / _{-0.2}	7	12	5	80
M17059200B972U	10 (h6)	16 ^{+0.2} / _{-0.2}	11	24	10	80
M17059300B972U	13 (h6)	18 ^{+0.2} / _{-0.2}	13	60	18	80
M17059400B972U	16 (h6)	20 ^{+0.2} / _{-0.2}	15	90	31	80
M17059500B972U	20 (h6)	25 ^{+0.2} / _{-0.2}	18	135	61	80
M17059600B972U	25 (h6)	30 ^{+0.2} / _{-0.2}	22	190	114	80
M17059700B972U	32 (h6)	35 ^{+0.2} / _{-0.2}	27	340	217	80

Bar holding magnet made of NdFeB, steel housing, galvanized

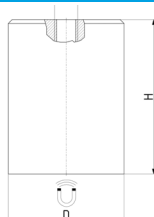
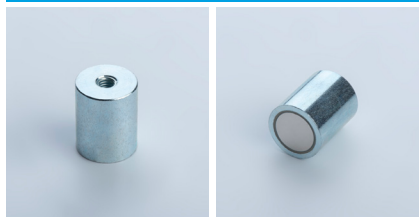


Part number	D mm	H mm	A ¹ mm	Holding force* N	Weight g	Temperature °C
M17104900B972U	4 ^{+0.1} / _{-0.1}	20 ^{+0.2} / _{-0.2}	15	2.5	2	80
M17199000B972U	5 ^{+0.1} / _{-0.1}	20 ^{+0.2} / _{-0.2}	15	4.5	3	80
M17057200B972U	6 ^{+0.1} / _{-0.1}	20 ^{+0.2} / _{-0.2}	15	6	4.5	80
M17057300B972U	8 ^{+0.1} / _{-0.1}	20 ^{+0.2} / _{-0.2}	15	12	8	80
M17057400B972U	10 ^{+0.1} / _{-0.1}	20 ^{+0.2} / _{-0.2}	15	24	12	80
M17057500B972U	13 ^{+0.1} / _{-0.1}	20 ^{+0.2} / _{-0.2}	15	60	21	80
M17057600B972U	16 ^{+0.1} / _{-0.1}	20 ^{+0.2} / _{-0.2}	15	90	31	80
M17057700B972U	20 ^{+0.1} / _{-0.1}	25 ^{+0.2} / _{-0.2}	18	135	61	80
M17057800B972U	25 ^{+0.1} / _{-0.1}	35 ^{+0.2} / _{-0.2}	27	190	133	80
M17057900B972U	32 ^{+0.1} / _{-0.1}	40 ^{+0.2} / _{-0.2}	32	340	249	80

¹ Height "H" can be reduced by dimension "A" without loss of holding force if there is no magnetic conducting material at the end of the bar holding magnet.

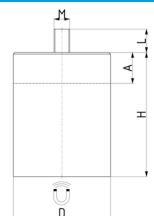
* The holding forces are ascertained using an even polished plate of steel (S235JR acc. DIN 10 025) with a thickness of 10 mm by the vertical withdrawal of the magnet at room temperature. Small cracks in the magnet material do not affect the holding force. Deviations up to minus 10 % are possible in some instances. The data given relates to minimum values which are normally exceeded.

Bar holding magnet made of NdFeB with internal thread, steel housing, galvanized



Part number	D mm	H mm	Thread MxL	Holding force* N	Weight g	Temperature °C
M17108000B973U	6 ^{+0.1} / _{-0.1}	20 ^{+0.2} / _{-0.2}	M3x5	6	4	80
M17108100B973U	8 ^{+0.1} / _{-0.1}	20 ^{+0.2} / _{-0.2}	M3x5	12	7.5	80
M17108200B973U	10 ^{+0.1} / _{-0.1}	20 ^{+0.2} / _{-0.2}	M4x7	24	11	80
M17108300B973U	13 ^{+0.1} / _{-0.1}	20 ^{+0.2} / _{-0.2}	M4x7	60	20	80
M17108400B973U	16 ^{+0.1} / _{-0.1}	20 ^{+0.2} / _{-0.2}	M4x7	90	30	80
M17108500B973U	20 ^{+0.1} / _{-0.1}	25 ^{+0.2} / _{-0.2}	M6x9	135	58	80
M17108600B973U	25 ^{+0.1} / _{-0.1}	35 ^{+0.2} / _{-0.2}	M6x9	190	131	80
M17108700B973U	32 ^{+0.1} / _{-0.1}	40 ^{+0.2} / _{-0.2}	M8x12	340	243	80
M17429000B973U	40 ^{+0.1} / _{-0.1}	50 ^{+0.2} / _{-0.2}	M8x12	700	480	80
M17429100B973U	50 ^{+0.1} / _{-0.1}	60 ^{+0.2} / _{-0.2}	M10x12	1000	900	80
M17429200B272U	63 ^{+0.1} / _{-0.1}	65 ^{+0.2} / _{-0.2}	M12x14	1700	1560	80

Bar holding magnet made of NdFeB with external thread, steel housing, galvanized

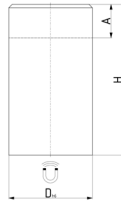


Part number	D mm	H mm	Thread MxL	Holding force* N	Weight g	Temperature °C
M17424000B971U	6 ^{+0.1} / _{-0.1}	20 ^{+0.2} / _{-0.2}	M3x7	6	4	80
M17424100B971U	8 ^{+0.1} / _{-0.1}	20 ^{+0.2} / _{-0.2}	M3x7	12	7.5	80
M17424200B971U	10 ^{+0.1} / _{-0.1}	20 ^{+0.2} / _{-0.2}	M4x8	24	11	80
M17424300B971U	13 ^{+0.1} / _{-0.1}	20 ^{+0.2} / _{-0.2}	M4x8	60	20	80
M17424400B971U	16 ^{+0.1} / _{-0.1}	20 ^{+0.2} / _{-0.2}	M4x10	90	30	80
M17424500B971U	20 ^{+0.1} / _{-0.1}	25 ^{+0.2} / _{-0.2}	M6x10	135	58	80
M17424600B971U	25 ^{+0.1} / _{-0.1}	35 ^{+0.2} / _{-0.2}	M6x10	190	131	80
M17424700B971U	32 ^{+0.1} / _{-0.1}	40 ^{+0.2} / _{-0.2}	M8x12	340	243	80
M17424800B971U	40 ^{+0.1} / _{-0.1}	50 ^{+0.2} / _{-0.2}	M8x15	700	490	80
M17424900B971U	50 ^{+0.1} / _{-0.1}	60 ^{+0.2} / _{-0.2}	M10x15	1000	915	80
M17425000B971U	63 ^{+0.1} / _{-0.1}	65 ^{+0.2} / _{-0.2}	M12x20	1700	1579	80

* The holding forces are ascertained using an even polished plate of steel (S235JR acc. DIN 10 025) with a thickness of 10 mm by the vertical withdrawal of the magnet at room temperature. Small cracks in the magnet material do not affect the holding force. Deviations up to minus 10 % are possible in some instances. The data given relates to minimum values which are normally exceeded.

Bar holding magnets made of samarium-cobalt (SmCo)

Bar holding magnet made of SmCo, brass housing with fit tolerance h6



Part number	D mm	H mm	A ¹ mm	Gap X ² mm	Holding force* N	Weight g	Temperature °C
M17055000B777U	6 (h6)	20 ^{+0.2} / _{-0.2}	10	1.5	8	4.5	200
M17055100B773U	8 (h6)	20 ^{+0.2} / _{-0.2}	10	1.5	22	8	200
M17055200B773U	10 (h6)	20 ^{+0.2} / _{-0.2}	8	2	40	12	200
M17055300B773U	13 (h6)	20 ^{+0.2} / _{-0.2}	6	2.5	60	20	200
M17055400B773U	16 (h6)	20 ^{+0.2} / _{-0.2}	2	3	125	30	200
M17055500B773U	20 (h6)	25 ^{+0.2} / _{-0.2}	5	4	250	60	200
M17055600B777U	25 (h6)	35 ^{+0.3} / _{-0.3}	7	5	400	134	200
M17055700B777U	32 (h6)	40 ^{+0.3} / _{-0.3}	4.5	6	600	251	200

Bar holding magnet made of SmCo, steel housing



Part number	D mm	H mm	A ¹ mm	Holding force* N	Weight g	Temperature °C
M17198000B777U	4 (h6)	20 ^{+0.2} / _{-0.2}	15	2	1	200
M17198100B773U	5 (h6)	20 ^{+0.2} / _{-0.2}	15	4	3	200
M17053000B773U	6 (h6)	20 ^{+0.2} / _{-0.2}	15	6	4.5	200
M17053100B773U	8 (h6)	20 ^{+0.2} / _{-0.2}	15	10	8	200
M17198300B777U	10 (h6)	16 ^{+0.2} / _{-0.2}	11	25	10	200

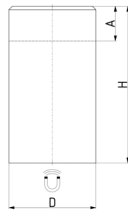
¹ Height "H" can be reduced by dimension "A" without loss of holding force if there is no magnetic conducting material at the end of the bar holding magnet.

² Please note that when assembling in iron, the gap "X" between the casing of the bar holding magnet and the iron must be maintained in order to avoid a magnetic short circuit. This gap also has to be maintained if the magnet is shortened by dimension "A" and constructed in iron.

* The holding forces are ascertained using an even polished plate of steel (S235JR acc. DIN 10 025) with a thickness of 10 mm by the vertical withdrawal of the magnet at room temperature. Small cracks in the magnet material do not affect the holding force. Deviations up to minus 10 % are possible in some instances. The data given relates to minimum values which are normally exceeded.

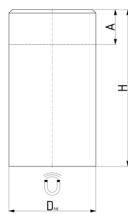
Bar holding magnets made of aluminium-nickel-cobalt (AlNiCo)

Bar holding magnet made of AlNiCo, steel housing, galvanized



Part number	D mm	H mm	A ¹ mm	Holding force* N	Weight g	Temperature °C
M17030000B272U	6 ^{+0.1/-0.1}	20 ^{+0.2/-0.2}	12	2	4.5	450
M17030100B272U	8 ^{+0.1/-0.1}	20 ^{+0.2/-0.2}	11	4	7.5	450
M17030200B272U	10 ^{+0.1/-0.1}	20 ^{+0.2/-0.2}	10	8.5	12	450
M17030300B272U	13 ^{+0.1/-0.1}	20 ^{+0.2/-0.2}	8	12	19	450
M17030400B272U	16 ^{+0.1/-0.1}	20 ^{+0.2/-0.2}	6	20	30	450
M17030500B272U	20 ^{+0.1/-0.1}	25 ^{+0.2/-0.2}	5	40	58	450
M17030600B272U	25 ^{+0.1/-0.1}	35 ^{+0.2/-0.2}	13	60	125	450
M17030700B272U	32 ^{+0.1/-0.1}	40 ^{+0.2/-0.2}	9	160	220	450
M17030800B272U	40 ^{+0.1/-0.1}	50 ^{+0.2/-0.2}	10	240	440	450
M17030900B272U	50 ^{+0.1/-0.1}	60 ^{+0.2/-0.2}	10	400	813	450
M17031000B272U	63 ^{+0.1/-0.1}	65 ^{+0.2/-0.2}	10	660	1306	450

Bar holding magnet made of AlNiCo, steel housing with fit tolerance h6

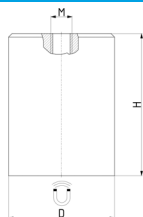


Part number	D mm	H mm	A ¹ mm	Holding force* N	Weight g	Temperature °C
M17025000B273U	6 (h6)	10 ^{+0.2/-0.2}	2	2	2	450
M17025100B273U	8 (h6)	12 ^{+0.2/-0.2}	3	4	4.5	450
M17025200B273U	10 (h6)	16 ^{+0.2/-0.2}	6	8.5	9.5	450
M17025300B273U	13 (h6)	18 ^{+0.2/-0.2}	6	12	18	450
M17025400B273U	16 (h6)	20 ^{+0.2/-0.2}	6	20	30	450
M17025500B273U	20 (h6)	25 ^{+0.2/-0.2}	5	40	57	450
M17025600B273U	25 (h6)	30 ^{+0.2/-0.2}	7	60	106	450
M17025700B273U	32 (h6)	35 ^{+0.2/-0.2}	4	160	187	450
M17025800B273U	40 (h6)	45 ^{+0.2/-0.2}	5	240	390	450
M17025900B273U	50 (h6)	50 ^{+0.2/-0.2}		400	639	450
M17026000B273U	63 (h6)	60 ^{+0.2/-0.2}	5	660	1175	450

¹ Height "H" can be reduced by dimension "A" without loss of holding force if there is no magnetic conducting material at the end of the bar holding magnet.

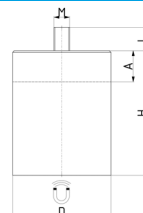
* The holding forces are ascertained using an even polished plate of steel (S235JR acc. DIN 10 025) with a thickness of 10 mm by the vertical withdrawal of the magnet at room temperature. Small cracks in the magnet material do not affect the holding force. Deviations up to minus 10 % are possible in some instances. The data given relates to minimum values which are normally exceeded.

Bar holding magnet made of AlNiCo with internal thread, steel housing, galvanized



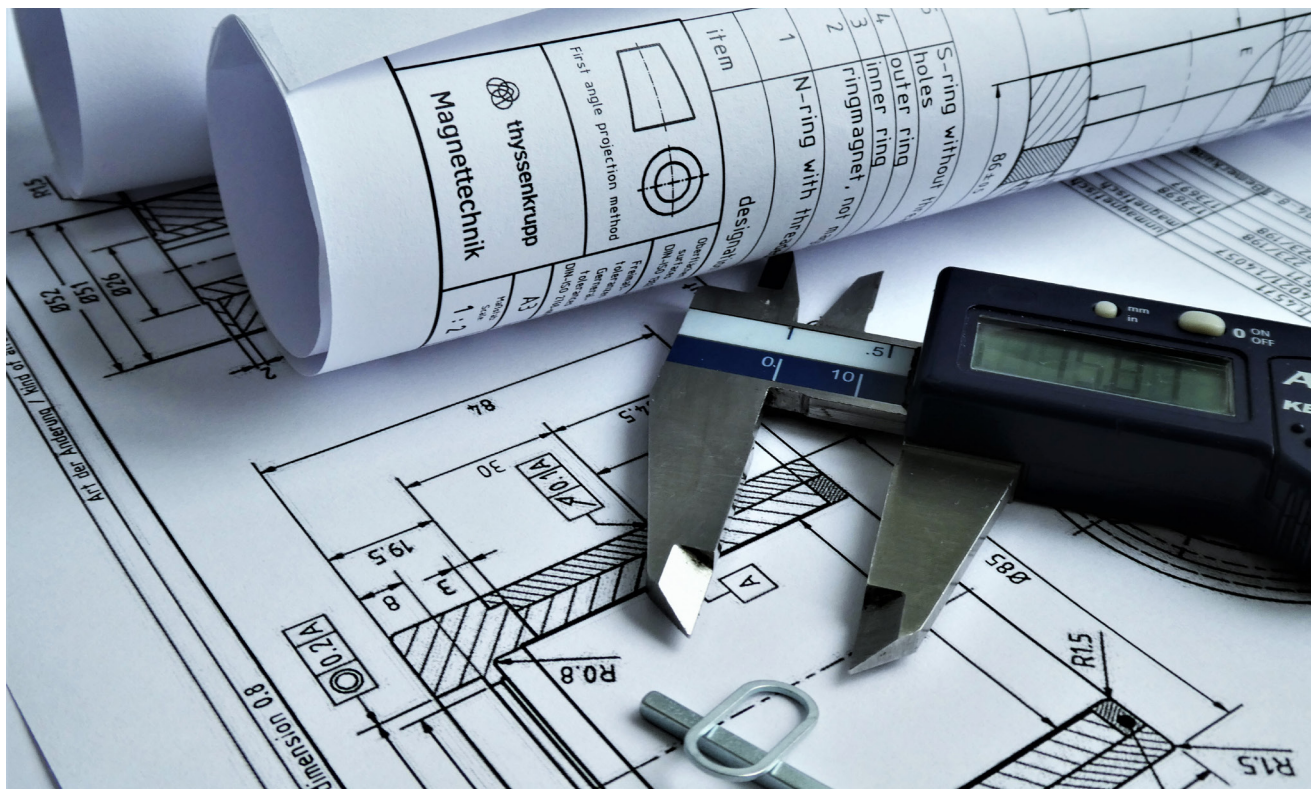
Part number	D mm	H mm	Thread MxL	Holding force* N	Weight g	Temperature °C
M17038300B272U	6 ^{+0.1} / _{-0.1}	20 ^{+0.2} / _{-0.2}	M3x5	2	4	450
M17038400B272U	8 ^{+0.1} / _{-0.1}	20 ^{+0.2} / _{-0.2}	M3x5	4	7.5	450
M17038500B272U	10 ^{+0.1} / _{-0.1}	20 ^{+0.2} / _{-0.2}	M4x7	8,5	11	450
M17038600B272U	13 ^{+0.1} / _{-0.1}	20 ^{+0.2} / _{-0.2}	M4x7	12	19	450
M17038700B276U	16 ^{+0.1} / _{-0.1}	20 ^{+0.2} / _{-0.2}	M4x5	20	30	450
M17038800B272U	20 ^{+0.1} / _{-0.1}	25 ^{+0.2} / _{-0.2}	M6x7	40	55	450
M17038900B276U	25 ^{+0.1} / _{-0.1}	35 ^{+0.2} / _{-0.2}	M6x9	60	121	450
M17039000B276U	32 ^{+0.1} / _{-0.1}	40 ^{+0.2} / _{-0.2}	M8x9	160	220	450
M17428700B272U	40 ^{+0.1} / _{-0.1}	50 ^{+0.2} / _{-0.2}	M8x12	240	436	450
M17428800B272U	50 ^{+0.1} / _{-0.1}	60 ^{+0.2} / _{-0.2}	M10x12	400	794	450
M17428900B272U	63 ^{+0.1} / _{-0.1}	65 ^{+0.2} / _{-0.2}	M12x14	660	1274	450

Bar holding magnet made of AlNiCo with external thread, steel housing, galvanized



Part number	D mm	H mm	Thread MxL	Holding force* N	Weight g	Temperature °C
M17422000B272U	6 ^{+0.1} / _{-0.1}	20 ^{+0.2} / _{-0.2}	M3x7	2	4.5	450
M17422100B272U	8 ^{+0.1} / _{-0.1}	20 ^{+0.2} / _{-0.2}	M3x7	4	8	450
M17422200B272U	10 ^{+0.1} / _{-0.1}	20 ^{+0.2} / _{-0.2}	M4x8	8,5	11.5	450
M17422300B272U	13 ^{+0.1} / _{-0.1}	20 ^{+0.2} / _{-0.2}	M4x8	12	19.5	450
M17422400B272U	16 ^{+0.1} / _{-0.1}	20 ^{+0.2} / _{-0.2}	M4x10	20	31	450
M17422500B272U	20 ^{+0.1} / _{-0.1}	25 ^{+0.2} / _{-0.2}	M6x10	40	58	450
M17422600B272U	25 ^{+0.1} / _{-0.1}	35 ^{+0.2} / _{-0.2}	M6x10	60	124	450
M17422700B272U	32 ^{+0.1} / _{-0.1}	40 ^{+0.2} / _{-0.2}	M8x12	160	228	450
M17422800B272U	40 ^{+0.1} / _{-0.1}	50 ^{+0.2} / _{-0.2}	M8x15	240	446	450
M17422900B272U	50 ^{+0.1} / _{-0.1}	60 ^{+0.2} / _{-0.2}	M10x15	400	807	450
M17423000B272U	63 ^{+0.1} / _{-0.1}	65 ^{+0.2} / _{-0.2}	M12x20	660	1293	450

* The holding forces are ascertained using an even polished plate of steel (S235JR acc. DIN 10 025) with a thickness of 10 mm by the vertical withdrawal of the magnet at room temperature. Small cracks in the magnet material do not affect the holding force. Deviations up to minus 10 % are possible in some instances. The data given relates to minimum values which are normally exceeded.



- Contact us if you need other dimensions or types. Other versions of bar holding magnets are also quickly available on request.
- In addition to our standard program, we also offer custom solutions. We will be happy to advise you on this.

General information

The statements are in no way to be deemed as an advisory service of our company, but are only descriptive without guaranteeing or granting property-related qualities. Liability on the basis of the statements of this product information is specifically excluded, unless compelling legal liability facts are evident. All information is correct to the best of our knowledge, but no responsibility will be taken for any errors. We reserve the right to make technical changes. Reproduction in any form, including extracts, only with the express permission of thyssenkrupp Magnettechnik.

 **Contact**

thyssenkrupp Magnettechnik
Branch of thyssenkrupp Schulte GmbH
Am Hellweg 7
44805 Bochum, Germany
T: +49 234 622014-00
www.thyssenkrupp-magnettechnik.com
magnet@thyssenkrupp-materials.com