



ROEMHELD
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Workholding Systems

Multiple clamping system

Premium • EasyClamp • Goliath

05/2014

Products | for | productivity

8.3480



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MSH – The multiple clamping system

MSH – The multiple clamping system with triple system selection: Premium – EasyClamp – Goliath



The high-precision multiple clamping system MSH clamps cubic, round as well as irregularly-shaped workpieces with identical or different dimensions in small, mid-sized, and large lot sizes.

MSH may be used as an individual system or in combination with additional elements (e.g. towers, bridges, base plates) on all machine tools, machining centres and flexible manufacturing systems.

The simple, well thought-out design guarantees safe and user-friendly handling. The modular design allows any extension to suit specific requirements.

Short set-up times, minimum machine travel achieved by high workpieces density, reduced tool changes and a high rate of amortisation, these are the economic advantages of using this system.

Precise frictional connection between base and clamping module via fine toothing as well as patented eccentric locking by means of one locking screw only.

Rapid set-up without measuring instruments using the scale on the base module and graduation marks on the fixed and clamping module.

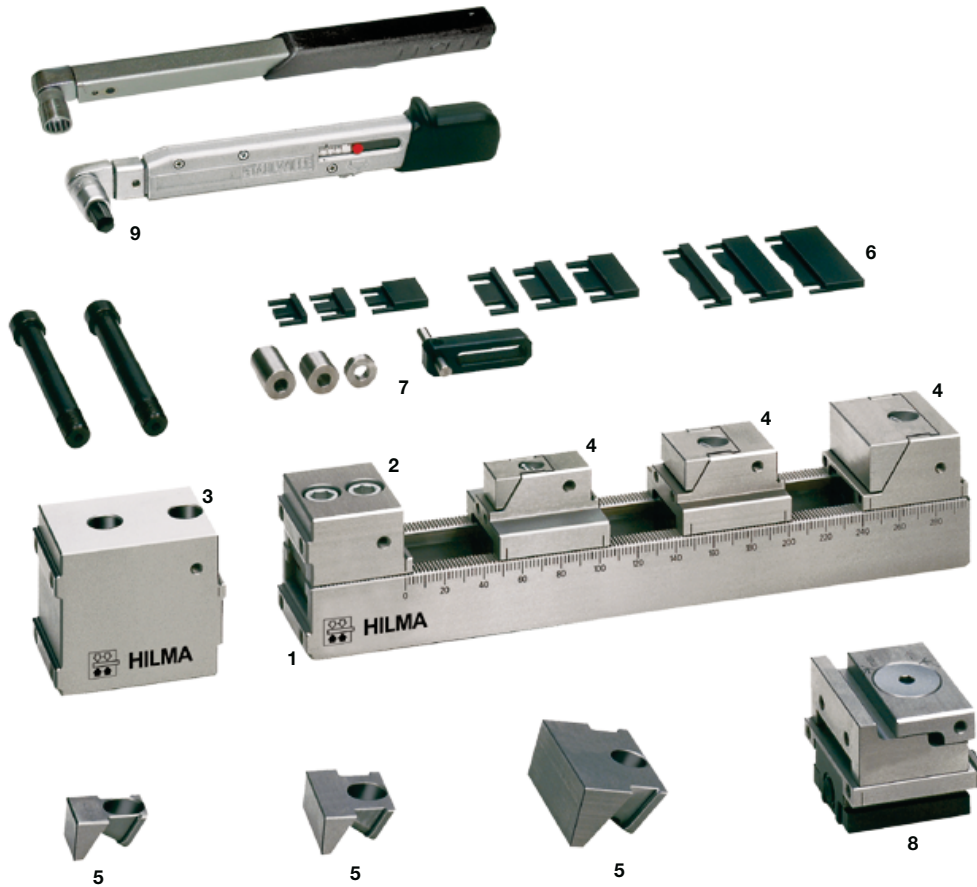
3 designs:
Premium, EasyClamp, Goliath

Fixed and clamping modules are available in various widths.

Clamping modules with a rear contact surface accurate in size. Workpieces need not be accommodated "in mirror image".

Accommodation of a maximum number of workpieces. Any extension to the base modules is possible.

Exact and repetitive accuracy of the workpiece position. Alignment or zero point adjustment using the machine spindle is not required.



Just a few elements form the basic of the multiple clamping system (example design Premium):

- | | | | | |
|----------------------------|--------------------------------|-----------------------|-----------------------------|------------------|
| 1. Base module | 3. Fixed module (modular size) | 5. Clamping jaws | 7. Stops | 9. Torque wrench |
| 2. Fixed module (standard) | 4. Clamping module (pull down) | 6. Workpiece supports | 8. Clamping module (linear) | |

A perfect fit thanks to the ingenious technique!



1. The clamping module with released eccentric locking is inserted in the high-precision slot.



2. The clamping module is exactly positioned on the base module using the graduation marks and the scale.



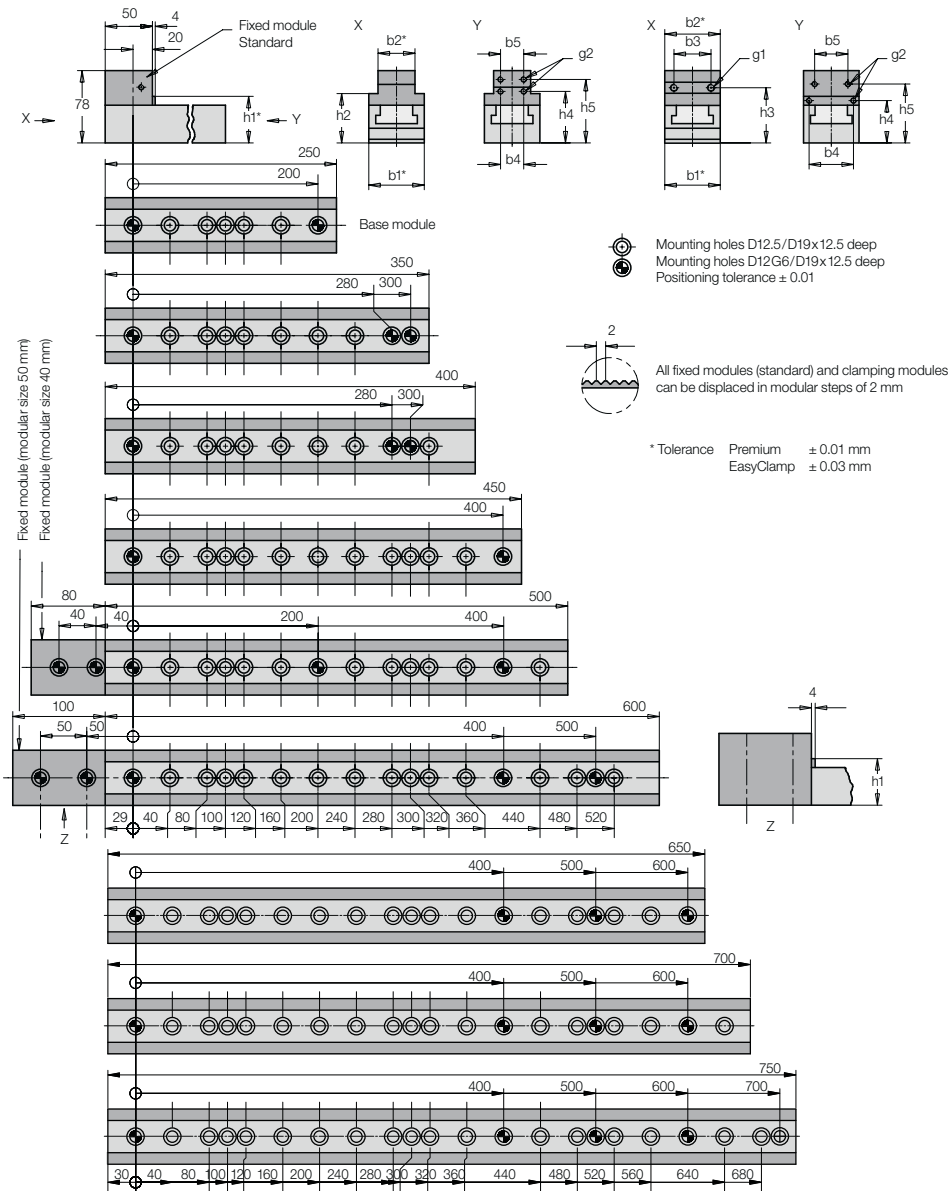
3. The clamping module is fixed by means of the eccentric screw and the torque wrench.



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Technical data

Base modules (Premium/EasyClamp/Goliath) Fixed modules (Premium/EasyClamp)



Jaw width	Module width	Height of supports									
b2	b1	h1	b3	b4	b5	h2	h3	h4	h5	g1	g2
24	60	60	-	13	-	55,5	-	54	-	-	M5/ 6 deep
40	60	60	-	25	25	55,5	-	56	-	-	M6/ 8 deep
60	60	50	40	48	36 (30*)	-	60	46	64	M8/12 deep	M6/10 deep
100	100	50	40	80	60	-	60	46	64	M8/12 deep	M6/10 deep

Dimensions in mm

Order data



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Make your choice:

Premium	EasyClamp	Goliath
Highest precision in series: <ul style="list-style-type: none"> • All faces are ground • Tolerance ± 0.01 mm • All system parts hardened and corrosion-resistant • Clamping modules with retaining guide • Scale on both sides 	For lower-cost introduction: <ul style="list-style-type: none"> • All surfaces fine milled and surface hardened • Tolerance ± 0.03 mm • Scale one-sided • Eccentric lead screw with hexagon socket 	Clamping modules for high requirements: <ul style="list-style-type: none"> • Clamping forces up to 40 kN per element • Additional force absorption with link blocks • Use at heavy-duty machining
<p style="color: #e91e63;">All clamping series are compatible and can be combined with each other!</p>		

Base module

Module width b1 [mm]	Jaw width b2	Length L [mm]	Premium	EasyClamp	Goliath	
			Part no.	Part no.	Part no.	
60	–	250	9.3481.0625	9.3491.0625	↑	
100	–	250	9.3481.1025	9.3491.1025		
60	–	350	9.3481.0635	9.3491.0635		
100	–	350	9.3481.1035	9.3491.1035		
60	–	400	9.3481.0640	9.3491.0640		
100	–	400	9.3481.1040	9.3491.1040		
60	–	450	9.3481.0645	9.3491.0645		
100	–	450	9.3481.1045	9.3491.1045		
60	–	500	9.3481.0650	9.3491.0650		Use premium base modules !
100	–	500	9.3481.1050	9.3491.1050		
60	–	600	9.3481.0660	9.3491.0660	↓	
100	–	600	9.3481.1060	9.3491.1060		
60	–	650	9.3481.0665	9.3491.0665		
100	–	650	9.3481.1065	9.3491.1065		
60	–	700	9.3481.0670	9.3491.0670		
100	–	700	9.3481.1070	9.3491.1070		
60	–	750	9.3481.0675	9.3491.0675		
100	–	750	9.3481.1075	9.3491.1075		

Special length up to 1000 mm on request

Fixed modules (standard)

60	24		9.3482.1100	–	–
60	40		9.3482.2100	9.3492.2100	–
60	60		9.3482.3100	9.3492.3100	9.3482.5100
60	60	Linear	9.3482.3300	–	–
100	100		9.3482.4100	9.3492.4100	9.3482.6100
120	120		–	–	9.3482.7100

Fixed modules (modular size)

60	24	40	9.3482.1240	–	–
60	24	50	9.3482.1250	–	–
60	40	40	9.3482.2240	Use	–
60	40	50	9.3482.2250	Premium	–
60	60	40	9.3482.3240	fixed modules!	–
60	60	50	9.3482.3250		9.3482.5250
100	100	40	9.3482.4240	↓	–
100	100	50	9.3482.4250	–	9.3482.6250
120	120	50	–	–	9.3482.7250

Goliath fixed modules not shown

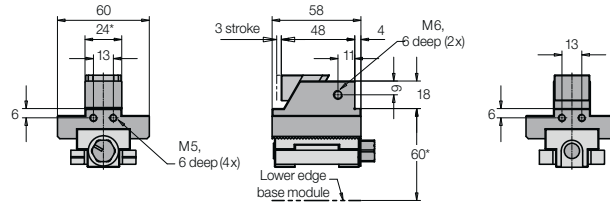


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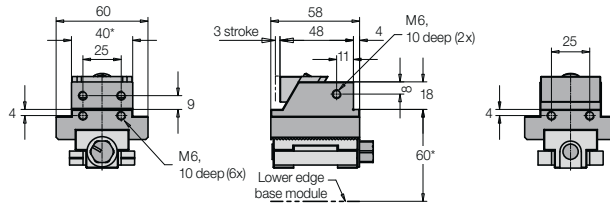
Technical data

Pull-down clamping modules

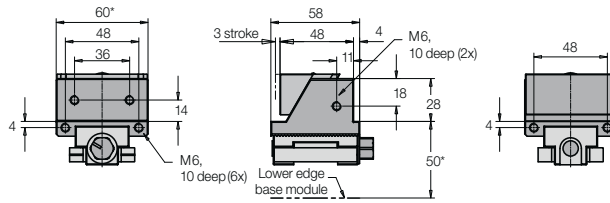
Max. clamping force
17 kN at 17 Nm



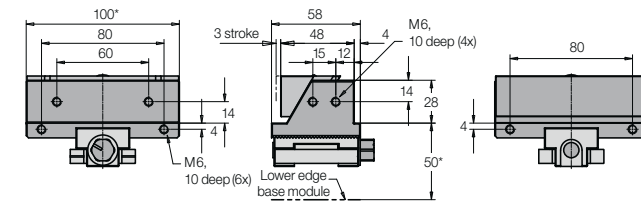
Max. clamping force
20 kN at 20 Nm



Max. clamping force
25 kN at 25 Nm



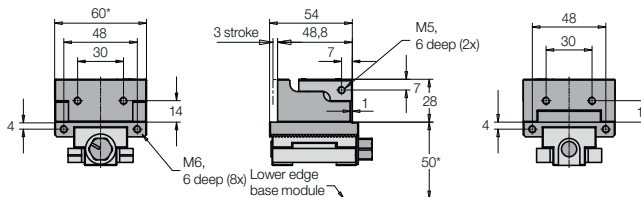
Max. clamping force
25 kN at 25 Nm



* tolerances Premium $\pm 0,01$ mm / EasyClamp $\pm 0,03$ mm

Linear clamping modules

Max. clamping force
15 kN at 30 Nm



Order data



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Pull-down clamping modules incl. clamping jaw

Module width b1 [mm]	Jaw width b2	Design Clamping jaw	Premium	EasyClamp	Goliath
			Part no.	Part no.	Part no.
60	24	smooth	9.3483.1110	-	-
60	24	serrated	9.3483.1120	-	-
60	40	smooth	9.3483.2110	9.3493.2110	-
60	40	serrated	9.3483.2120	9.3493.2120	-
60	60	smooth	9.3483.3110	9.3493.3110	9.3483.5110
60	60	serrated	9.3483.3120	9.3493.3120	9.3483.5120
100	100	smooth	9.3483.4110	9.3493.4110	9.3483.6110
100	100	serrated	9.3483.4120	9.3493.4120	9.3483.6120
120	120	smooth	-	-	9.3483.7110
120	120	serrated	-	-	9.3483.7120

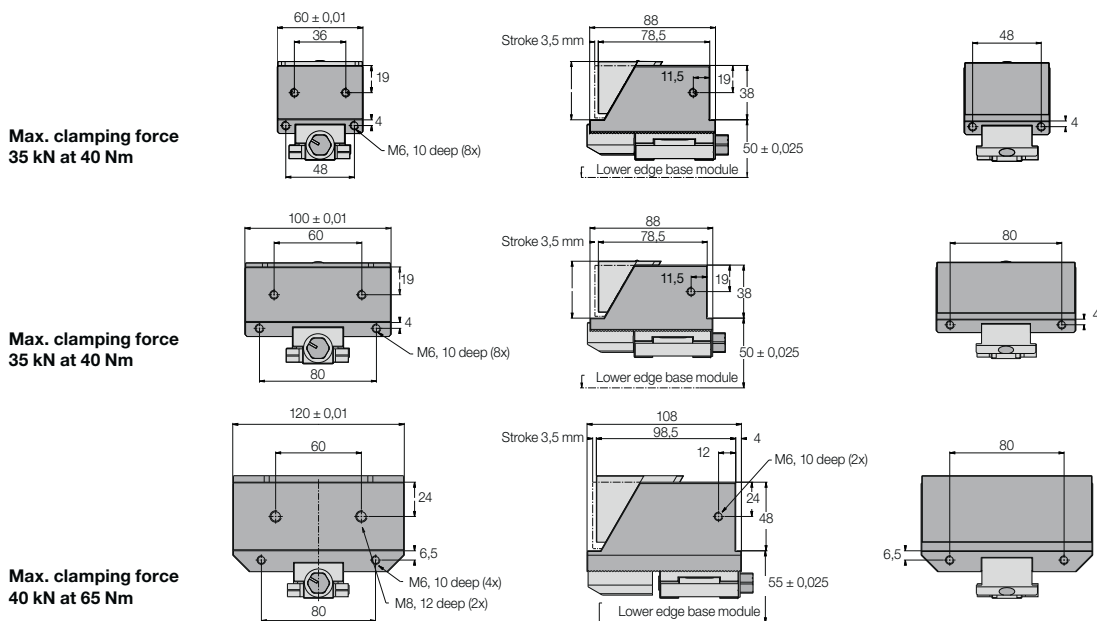
Linear clamping modules

60	60	smooth	9.3483.3210	-	-
60	60	serrated	9.3483.3220	-	-

Single clamping jaws

	24	smooth	9.3484.1110	-	-
	24	serrated	9.3484.1120	-	-
	40	smooth	9.3484.2110	9.3494.2110	-
	40	serrated	9.3484.2120	9.3494.2120	-
	60	smooth	9.3484.3110	9.3494.3110	9.3484.5110
	60	serrated	9.3484.3120	9.3494.3120	9.3484.5120
Linear	60	smooth	9.3484.3210	-	-
Linear	60	serrated	9.3484.3220	-	-
	100	smooth	9.3484.4110	9.3494.4110	9.3484.6110
	100	serrated	9.3484.4120	9.3494.4120	9.3484.6120
	120	smooth	-	-	9.3484.7110
	120	serrated	-	-	9.3484.7120

Goliath pull-down clamping modules

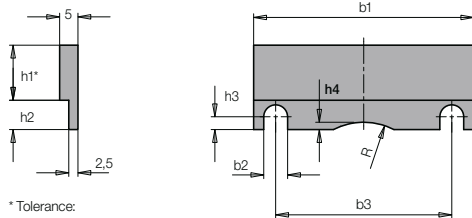




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Technical data

Workpiece supports

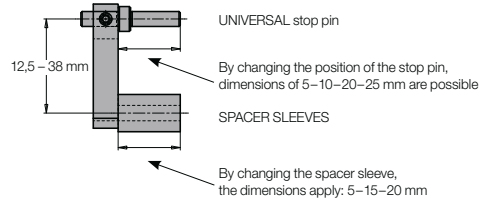


* Tolerance:
± 0.05 mm soft steel + aluminium
± 0.01 mm hardened steel

Part no.	Jaw width b1	Height h1	Design	b2	b3	h2	h3	h4	R
xx1	24	from 3 to 18	soft steel	5,5	13	11	6,75	-	-
9.3485.1xx2		from 3 to 15	hardened steel						
xx3	40	from 3 to 18	aluminium	6,5	25	11	6,75	-	-
9.3485.2xx2		from 3 to 15	hardened steel						
xx1	60	from 3 to 18	aluminium	6,5	48	8,5	5,25	2	18
9.3485.3xx2		from 6 to 28	soft steel						
xx3	100	from 6 to 25	hardened steel	6,5	80	8,5	5,25	2	18
9.3485.4xx2		from 6 to 28	aluminium						
xx1	100	from 6 to 25	hardened steel	6,5	80	8,5	5,25	2	18
9.3485.4xx2		from 6 to 28	aluminium						

Example:
— 0 3 — for 3 mm in steps of 1 mm
— 2 8 — for 28 mm see chart

Stop, complete 9.3488.0100



Torque wrench 9.3792.6650

8 – 40 Nm for clamping/unclamping
incl. socket SW 5, 6, 8, 10 interior)
(for Goliath on request)



Torque wrench 9.3792.6660

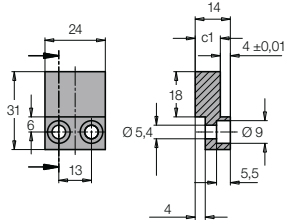
65 Nm, to fix the clamping module
incl. socket SW 14 (exterior)



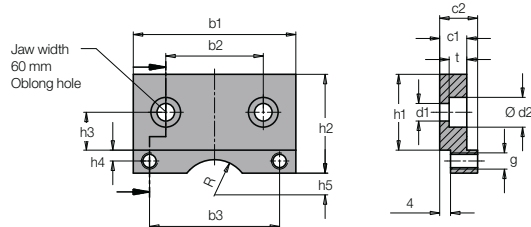
Spacer jaws

They are required for jaw openings < 10 mm and screwed onto the fixed side of the clamping module.

Jaw width 24 mm



Jaw width 40 – 100 mm



Part no.	Jaw width b1	Design	b2	b3	c1 ±0,01	c2	d1	d2	g	h1	h2	h3	h4	h5	R	t	
9.3486.1110	24	soft steel	smooth	-	13	10	Dimensions see drawing										
9.3486.1160		hardened steel	smooth														
9.3486.1170		hardened steel	serrated														
9.3486.2110	40	soft steel	smooth	25	25	10	14	6,5	11	M6	18	31	9	4	-	-	6,5
9.3486.2160		hardened steel	smooth														
9.3486.2170	hardened steel	serrated															
9.3486.3110	60	soft steel	smooth	30 - 36	48	10	14	6,5	11	M6	28	36,5	14	4	8	13	6,5
9.3486.3160		hardened steel	smooth														
9.3486.3170		hardened steel	serrated														
9.3486.4110	100	soft steel	smooth	60	80	10	14	6,5	11	M6	28	36,5	14	4	8	13	6,5
9.3486.4160		hardened steel	smooth														
9.3486.4170		hardened steel	serrated														

Formed jaws (soft steel or aluminium) for milling workpiece contours on request!