

Self-centering vise HIR 2-Jaws

HIR is a hydraulically actuated 2-jaw self-centering vise. Used in machining centers and in custom high-productivity machines for clamping the workpiece with high precision. The vise is design to be embedded in the machine table to reduce space and increase the rigidity. The vises are available with standard stroke, or long stroke.

Advantages

- Precise wedge-hook mechanism allows machining accuracy
- High force drive for secure clamping
- Extended clamping range with long jaw guidance
- Optimum jaw guides (hardened, sturdy, low-backlash) allow high clamping forces and a long service life
- Hydraulic pressure up to 60 bar; 200 bar on request
- Optimized lubrication system for consistently high clamping forces and long life
- All functional parts are hardened and ground to ensure a high repeatability
- Suitable to dirty and dusty environments thanks to pressurization, jaw and scrapers to prevent or limit the ingress of foreign bodies.



SPECIFICATIONS

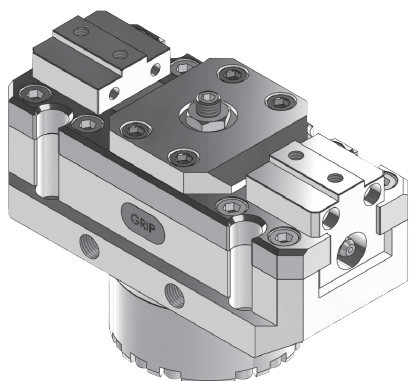
Model	Stroke per jaw	Closing force per jaw @ max pressure	Total closing force @ max pressure	Pressure	Repeatability	Fluid consumption double stroke	Weight
HIR 65 short stroke	5.5 mm 0.22 in	4427.5 N 995.39 lb	8855 N 1990.78 lb	12-60 bar 174-870 psi	±0.01 mm ±0.0004 in	32.44 cm³ 1.98 in³	3.12 kg 6.88 lb
HIR 65 long stroke	10 mm 0.39 in	2458.5 N 552.72 lb	4917 N 1105.44 lb	12-60 bar 174-870 psi	±0.01 mm ±0.0004 in	32.44 cm³ 1.98 in³	3.12 kg 6.88 lb
HIR 90 short stroke	7.5 mm 0.30 in	10631.5 N 2390.17 lb	21263 N 4780.35 lb	12-60 bar 174-870 psi	±0.01 mm ±0.0004 in	102.43 cm³ 4.03 in³	6.91 kg 1.55 lb
HIR 90 long stroke	13.5 mm 0.53 in	5907 N 1328.01 lb	11814 N 2656.02 lb	12-60 bar 174-870 psi	±0.01 mm ±0.0004 in	102.43 cm³ 4.03 in³	6.91 kg 1.55 lb
HIR 120 short stroke	10 mm 0.39 in	17897 N 4023.60 lb	35794 N 8047.21 lb	12-60 bar 174-870 psi	±0.01 mm ±0.0004 in	230.76 cm³ 9.09 in³	18.87 kg 4.24 lb
HIR 120 long stroke	18.00 mm 0.71 in	9949.50 N 2236.85 lb	19899.00 N 4473.69 lb	12-60 bar 174-870 psi	±0.01 mm ±0.0004 in	230.76 cm³ 9.09 in³	18.87 kg 4.24 lb
HIR 135 short stroke	11.5 mm 0.45 in	22236.5 N 4999.21 lb	44473 N 9998.42 lb	12-60 bar 174-870 psi	±0.01 mm ±0.0004 in	330.29 cm³ 13.00 in³	21.2 kg 4.77 lb
HIR 135 long stroke	20.6 mm 0.81 in	12358.5 N 2778.44 lb	24717 N 5556.88 lb	12-60 bar 174-870 psi	±0.01 mm ±0.0004 in	330.29 cm³ 13.00 in³	21.2 kg 4.77 lb

*Versions available **60 and 200 bar**

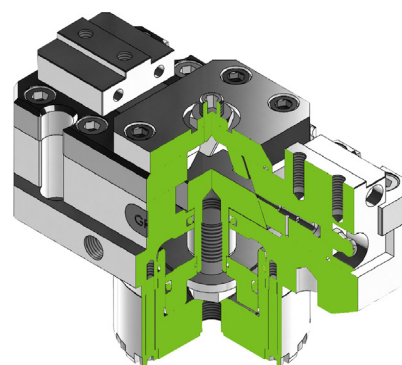
Ambient Temperature **5 - 60 °C (41 - 140 °F)**

Noise Emission (Sound Pressure) **≤ 70 dB(A) in any direction**

SECTIONAL DIAGRAM

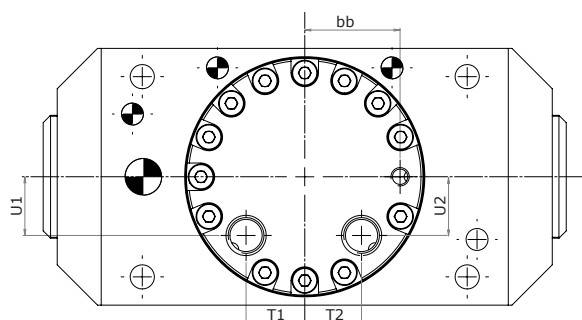
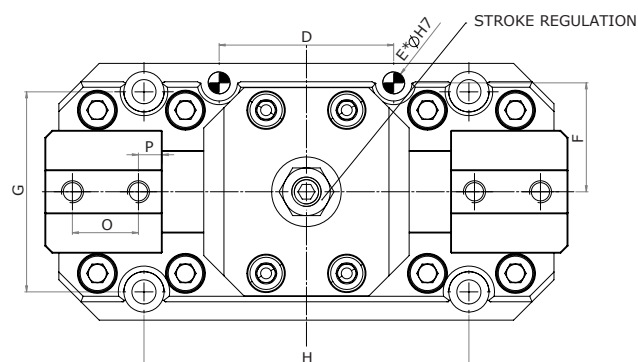
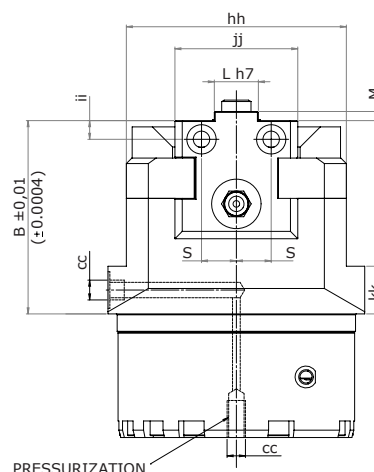
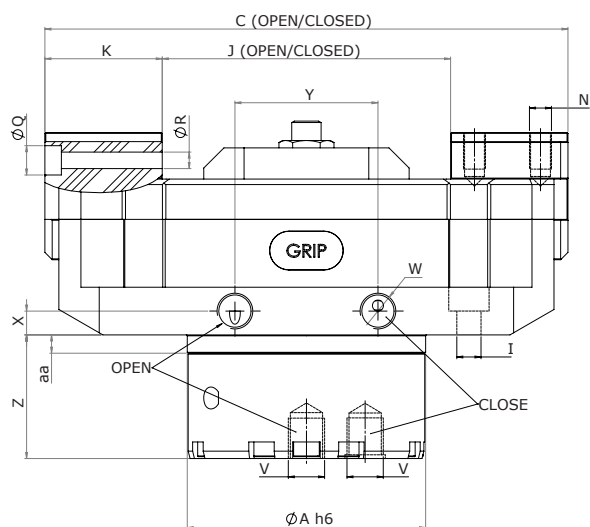


For a better operation of the vise
please consider the distance between the clamping point
and the top surface of the jaws.



PRODUCT INFORMATION

HIR 2-Jaws



	A	B	Short stroke C open	Short stroke C closed	Long stroke C open	Long stroke C closed	D	E	F	G	H	I	Short stroke J open	Short stroke J closed	Long stroke J open	Long stroke J closed	K	L	M
HIR 65	65 (2.56)	52.7 (2.07)	142.6 (5.61)	131.6 (5.18)	151.4 (5.96)	131.4 (5.17)	47.6 (1.87)	6 (0.24)	29.7 (1.17)	54.6 (2.15)	88.6 (3.49)	6.5 (0.26)	78.6 (3.09)	67.6 (2.66)	87.4 (3.44)	67.4 (2.65)	32 (1.26)	12 (0.47)	2.5 (0.10)
HIR 90	90 (3.54)	69.5 (2.74)	185.3 (7.30)	170.3 (6.70)	197.2 (7.76)	170.2 (6.70)	68 (2.68)	8 (0.31)	39 (1.54)	72 (2.83)	120 (4.72)	9 (0.35)	100.3 (3.95)	85.3 (3.36)	112.2 (4.42)	85.2 (3.35)	42.5 (1.67)	16 (0.63)	3 (0.12)
HIR 120	120 (4.72)	98 (3.86)	261.1 (10.28)	241.1 (9.49)	276.3 (10.88)	240.3 (9.46)	88 (3.46)	10 (0.39)	55 (2.17)	101 (3.98)	164 (6.46)	12.5 (0.49)	141.1 (5.56)	121.1 (4.77)	156.3 (6.15)	120.3 (4.74)	60 (2.36)	22 (0.87)	4 (0.16)
HIR 135	135 (5.31)	111.5 (4.39)	295.9 (11.65)	272.9 (10.74)	314.3 (12.37)	273.1 (10.75)	99 (3.90)	12 (0.47)	60 (2.36)	114 (4.49)	185 (7.28)	17 (0.67)	161.9 (6.37)	138.9 (5.47)	180.3 (7.10)	139.1 (5.48)	67 (2.64)	25 (0.98)	4.5 (0.18)

	N	O	P	Q	R	S	T1	T2	U1	U2	V	W	Y	Z	aa	bb	cc	hh	ii	jj	kk
HIR 65	M6	18 (0.71)	6.5 (0.26)	8 (0.31)	4.5 (0.18)	9.5 (0.37)	16 (0.63)	0 (0.00)	16 (0.63)	0 (0.00)	1/8" Gas	1/8" Gas	39 (1.54)	33.7 (1.33)	5 (0.20)	26 (1.02)	M5	60 (2.36)	5.1 (0.20)	33.5 (1.32)	13 (0.51)
HIR 90	M10	22 (0.87)	10.5 (0.41)	10.5 (0.41)	6.5 (0.26)	12.4 (0.49)	23.62 (0.93)	23.29 (0.92)	26.79 (1.05)	26.79 (1.05)	1/8" Gas	1/8" Gas	53 (2.09)	35.8 (1.41)	6 (0.24)	38.5 (1.52)	M5	80 (3.15)	7.2 (0.28)	44 (1.73)	17 (0.67)
HIR 120	M12	30 (1.18)	12 (0.47)	13.5 (0.53)	8.5 (0.33)	17.5 (0.69)	33.23 (1.31)	33.23 (1.31)	33.23 (1.31)	33.23 (1.31)	1/4" Gas	1/4" Gas	76 (2.99)	50 (1.97)	8 (0.31)	48 (1.89)	1/4" Gas	112 (4.41)	10 (0.39)	62 (2.44)	24 (0.94)
HIR 135	M16	34 (1.34)	16 (0.63)	14.5 (0.57)	8.5 (0.33)	20 (0.79)	34.5 (1.36)	34.5 (1.36)	39.5 (1.56)	39.5 (1.56)	1/4" Gas	1/4" Gas	80 (3.15)	54.5 (2.15)	8.5 (0.33)	56 (2.20)	1/4" Gas	126 (4.96)	11 (0.43)	70 (2.76)	27 (1.06)

* Dimensions are in millimeters (inches).

** All dimensions are descriptive and subject to variation for technical upgrading. We reserve the right to make variations without prior notification



Applied Robotics
648 Saratoga Road
Glenville, NY 12302 USA
Tel. +1 518 384 1000 Fax +1.5183841200
info@appliedrobotics.com
www.appliedrobotics.com



EFFECTO GROUP S.p.A.
Via Roma, 141/143
28017 San Maurizio d'Opaglio (NO) - Italy
Tel. +39 0322 96142 Fax +39 0322 967453
info@effectogroup.com
www.effectogroup.com

