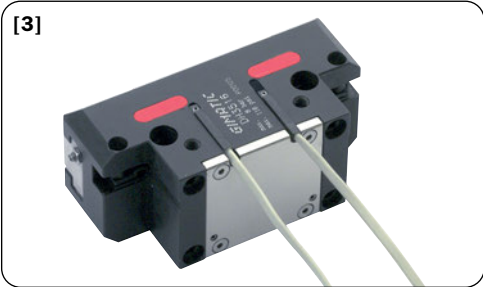
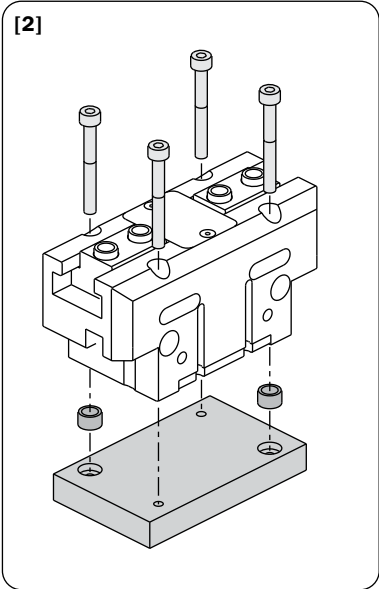
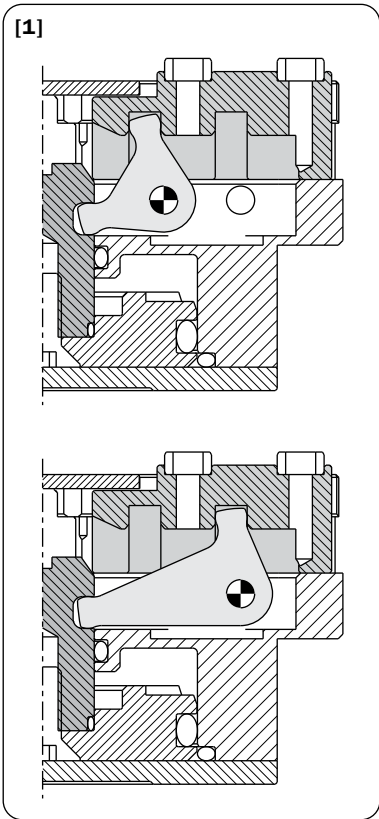


2-jaw self-centering pneumatic parallel gripper (series DH)

- Double acting with optional springs (normally closed or normally open).
- Long stroke or short stroke (1).
- Possibility of front fastening with through screws (2).
- High efficiency force transmission (1).
- Optional magnetic or inductive sensors (3).
- FDA-H1 food-grade grease.

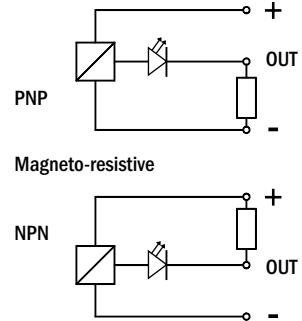


Sensors (optional)

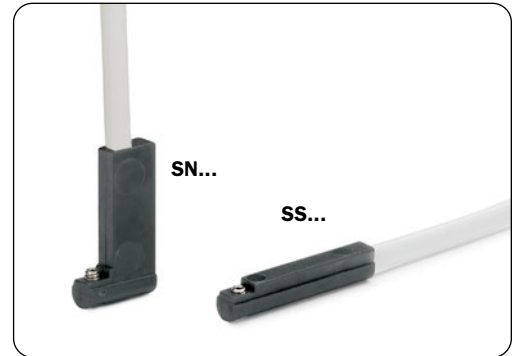
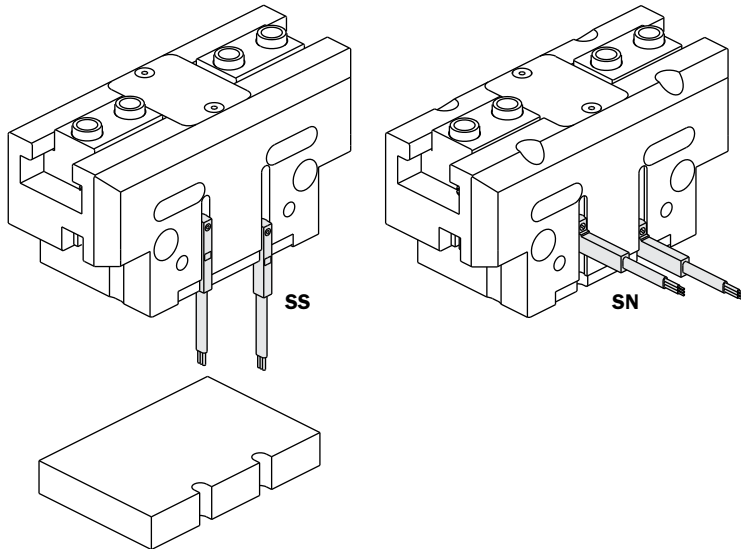
The operating position can be checked by magnetic sensors which detect a magnet on the piston, or by inductive sensors (4mm diameter), which detect a metal part (M) in an adjustable position into the jaw.

The magnetic sensors from Gimatic are the codes:

SN4N225-G	PNP	2.5m cable
SN4M225-G	NPN	
SN3N203-G	PNP	M8 snap plug connector
SN3M203-G	NPN	
SS4N225-G	PNP	2.5m cable
SS4M225-G	NPN	
SS3N203-G	PNP	M8 snap plug connector
SS3M203-G	NPN	

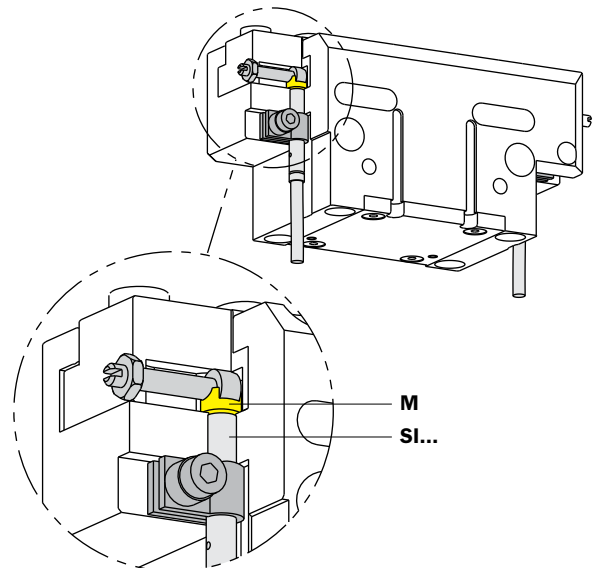
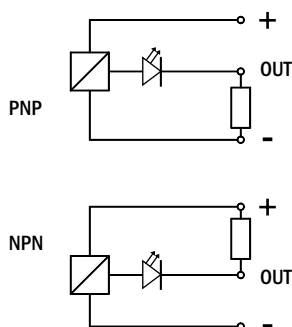


They are all provided with a 3-wire flat cable and a LED.



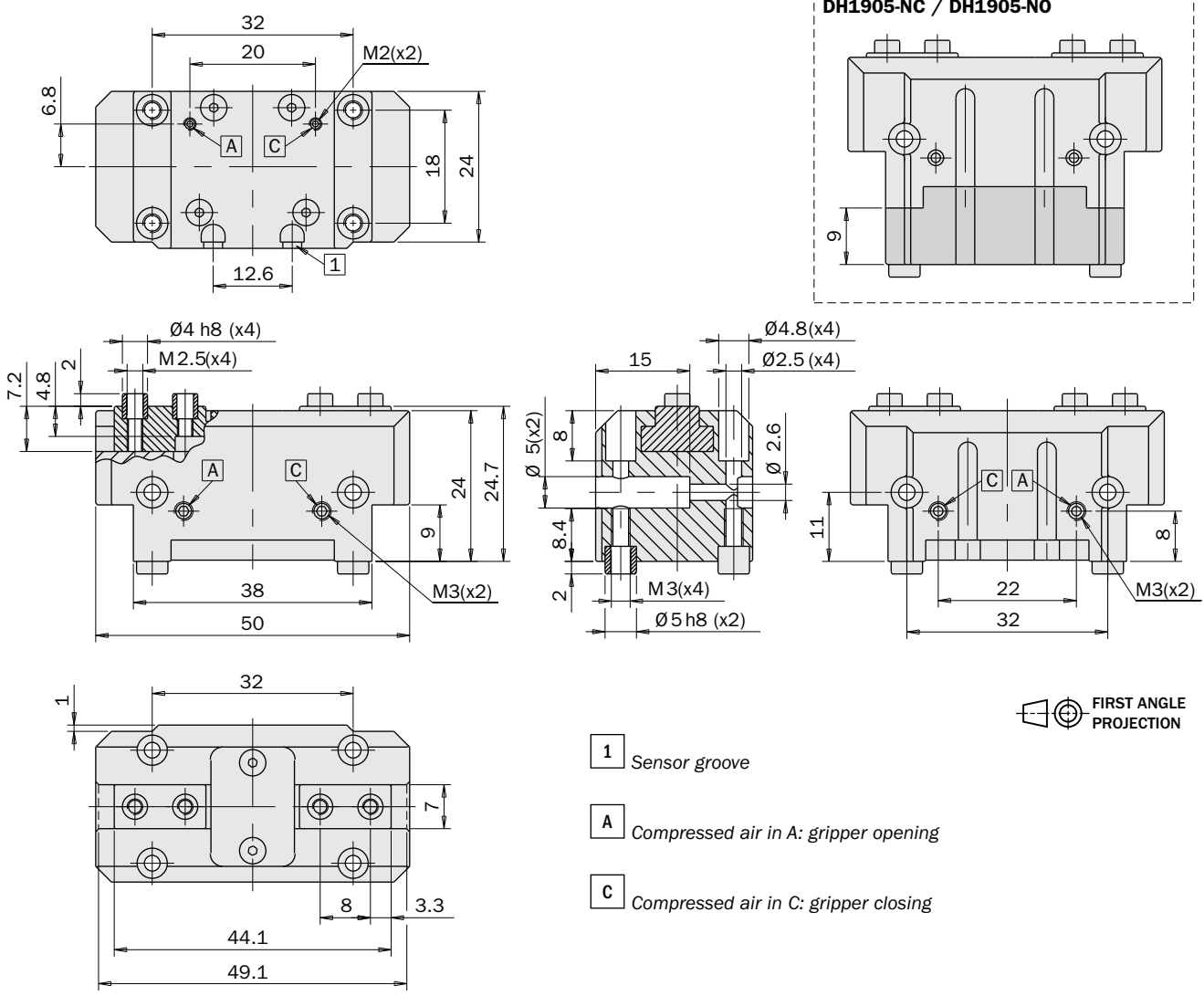
Adjustable inductive sensors (not for DH19 and DH22):

			DH27 DH35 DH44 DH55 DH66 DH87
SI4M225-G	NPN	2.5m cable	<input type="checkbox"/>
SI4N225-G	PNP		<input checked="" type="checkbox"/>



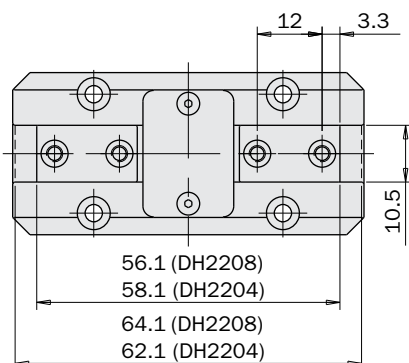
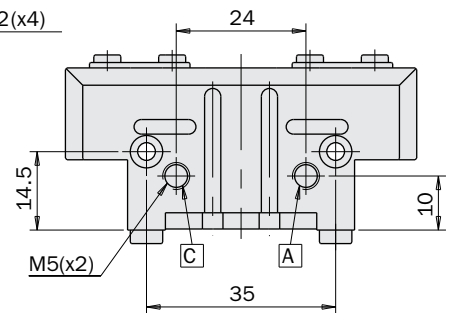
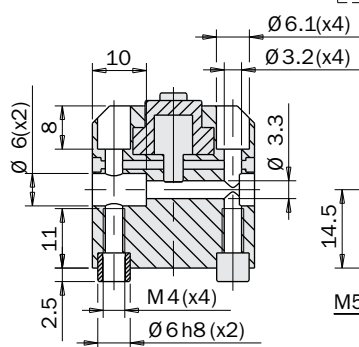
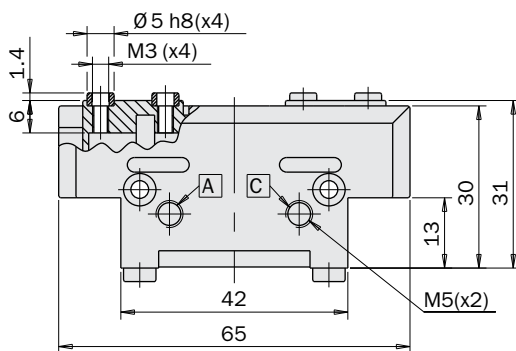
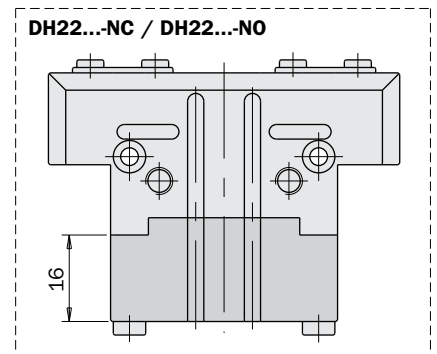
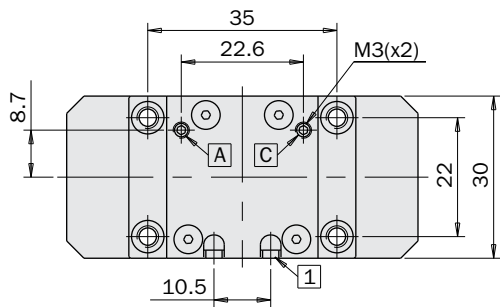
	DH1905	DH1905-NC	DH1905-NO
Medium	Compressed air in compliance with ISO 8573-1:2010 [7:4:4]		
Pressure range	2 ÷ 8bar	4 ÷ 8bar	4 ÷ 8bar
Temperature range	5 ÷ 100°C.		
Opening gripping force at 6 bar each jaw	75N	43 ÷ 49N	101 ÷ 107N
Opening total gripping force at 6 bar	150N	86 ÷ 98N	202 ÷ 214N
Closing gripping force at 6 bar each jaw	68N	94 ÷ 100N	36 ÷ 42N
Closing total gripping force at 6 bar	136N	188 ÷ 200N	72 ÷ 84N
Total stroke (±0.3mm)	5mm		
Maximum working frequency	3Hz		
Cycle air consumption	2cm ³	3cm ³	3cm ³
Closing / opening minimum time	0.01s / 0.01s	0.01s / 0.02s	0.02s / 0.01s
Repetition accuracy	0.02mm		
Weight	87g	100g	98g

Dimensions (mm)



	DH2208	DH2208-NC	DH2208-NO	DH2204	DH2204-NC	DH2204-NO
Medium	Compressed air in compliance with ISO 8573-1:2010 [7:4:4]					
Pressure range	2 ÷ 8bar	4 ÷ 8bar	4 ÷ 8bar	2 ÷ 8bar	4 ÷ 8bar	4 ÷ 8bar
Temperature range	5 ÷ 100°C.					
Opening gripping force at 6 bar each jaw	100N	58 ÷ 67N	134 ÷ 142N	200N	116 ÷ 133N	267 ÷ 284N
Opening total gripping force at 6 bar	200N	116 ÷ 134N	268 ÷ 284N	400N	232 ÷ 266N	534 ÷ 568N
Closing gripping force at 6 bar each jaw	90N	123 ÷ 132N	48 ÷ 56N	180N	247 ÷ 264N	96 ÷ 113N
Closing total gripping force at 6 bar	180N	246 ÷ 264N	96 ÷ 112N	360N	494 ÷ 528N	192 ÷ 226N
Total stroke (±0.3mm)	8mm			4mm		
Maximum working frequency	3Hz					
Cycle air consumption	4cm ³	7cm ³	7cm ³	4cm ³	7cm ³	7cm ³
Closing / opening minimum time	0.02s / 0.02s	0.02s / 0.03s	0.03s / 0.02s	0.02s / 0.02s	0.02s / 0.03s	0.03s / 0.02s
Repetition accuracy	0.02mm	0.02mm	0.02mm	0.02mm	0.02mm	0.02mm
Weight	148g	188g	184g	150g	190g	186g

Dimensions (mm)

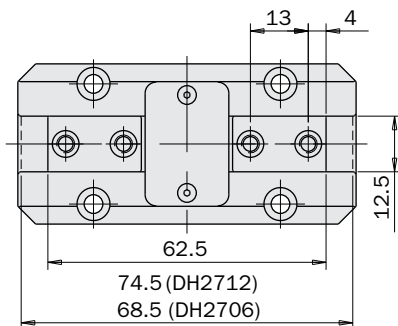
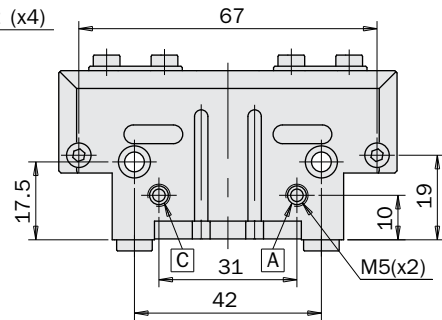
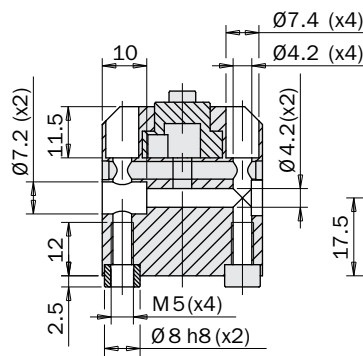
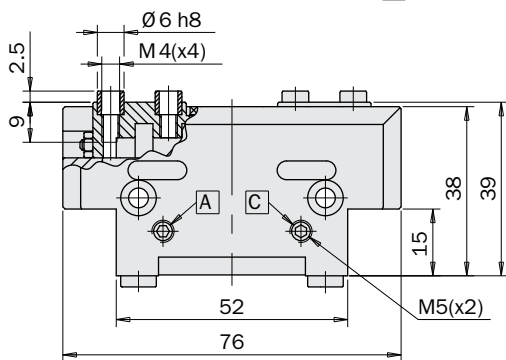
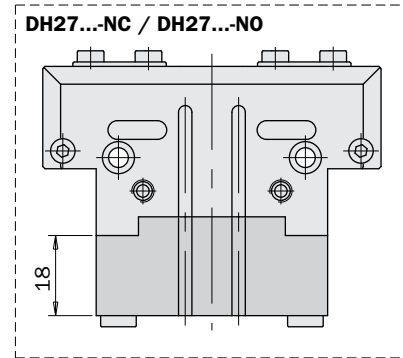
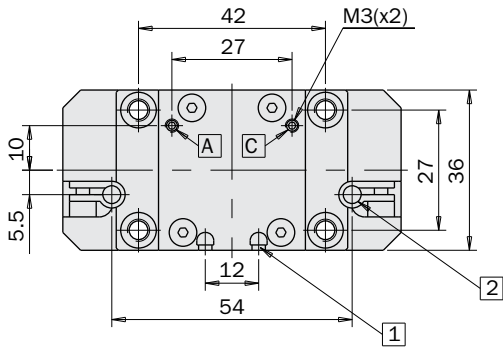


FIRST ANGLE PROJECTION

- 1** Sensor groove
- A** Compressed air in A: gripper opening
- C** Compressed air in C: gripper closing

	DH2712	DH2712-NC	DH2712-NO	DH2706	DH2706-NC	DH2706-NO
Medium	Compressed air in compliance with ISO 8573-1:2010 [7:4:4]					
Pressure range	2 ÷ 8bar	4 ÷ 8bar	4 ÷ 8bar	2 ÷ 8bar	4 ÷ 8bar	4 ÷ 8bar
Temperature range	5 ÷ 100°C.					
Opening gripping force at 6 bar each jaw	145N	85 ÷ 97N	194 ÷ 206N	290N	170 ÷ 194N	389 ÷ 413N
Opening total gripping force at 6 bar	290N	170 ÷ 194N	388 ÷ 412N	580N	340 ÷ 388N	778 ÷ 826N
Closing gripping force at 6 bar each jaw	130N	178 ÷ 190N	69 ÷ 81N	260N	356 ÷ 380N	138 ÷ 162N
Closing total gripping force at 6 bar	260N	356 ÷ 380N	138 ÷ 162N	520N	712 ÷ 760N	276 ÷ 324N
Total stroke (±0.3mm)	12mm			6mm		
Maximum working frequency	3Hz					
Cycle air consumption	9cm ³	13cm ³	13cm ³	9cm ³	13cm ³	13cm ³
Closing / opening minimum time	0.03s / 0.03s	0.03s / 0.04s	0.04s / 0.03s	0.03s / 0.03s	0.03s / 0.04s	0.04s / 0.03s
Repetition accuracy	0.02mm					
Weight	255g	325g	315g	260g	330g	320g

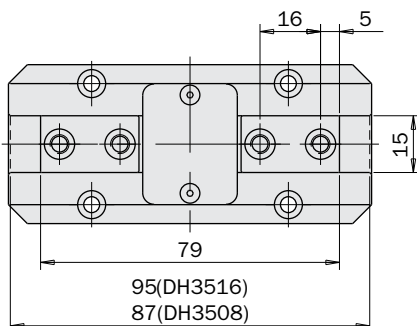
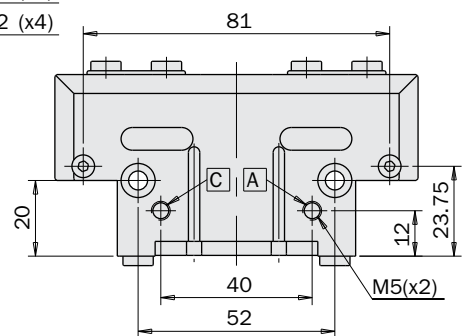
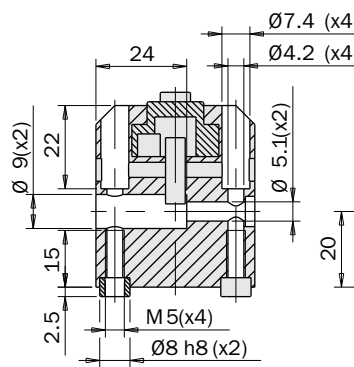
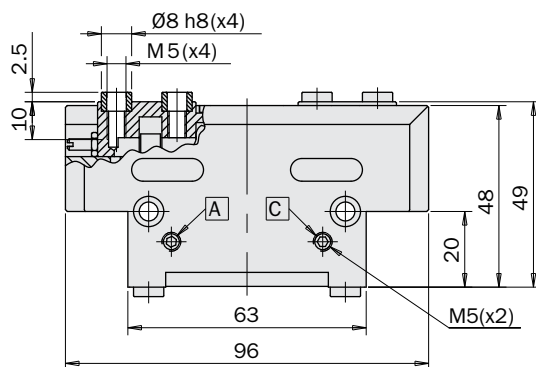
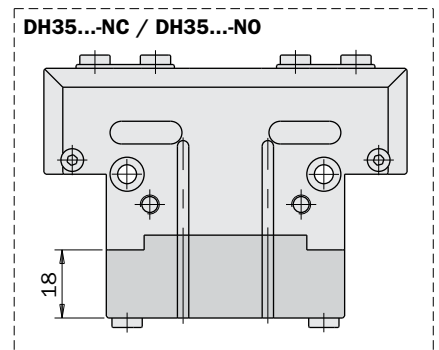
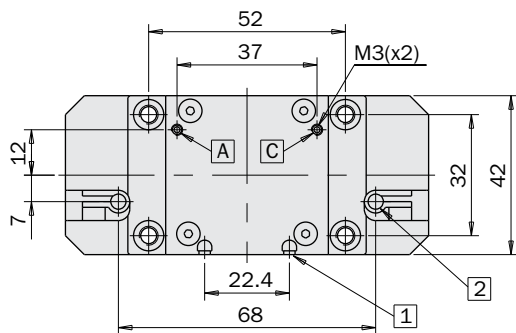
Dimensions (mm)



- 1** Sensor groove
- 2** Ø4 inductive sensor holder
- A** Compressed air in A: gripper opening
- C** Compressed air in C: gripper closing

	DH3516	DH3516-NC	DH3516-NO	DH3508	DH3508-NC	DH3508-NO
Medium	Compressed air in compliance with ISO 8573-1:2010 [7:4:4]					
Pressure range	1.5 ÷ 8bar	4 ÷ 8bar	4 ÷ 8bar	1.5 ÷ 8bar	4 ÷ 8bar	4 ÷ 8bar
Temperature range	5 ÷ 100°C.					
Opening gripping force at 6 bar each jaw	250N	140 ÷ 177N	323 ÷ 360N	500N	280 ÷ 353N	647 ÷ 720N
Opening total gripping force at 6 bar	500N	280 ÷ 354N	646 ÷ 720N	1000N	560 ÷ 706N	1294 ÷ 1440N
Closing gripping force at 6 bar each jaw	220N	298 ÷ 319N	122 ÷ 143N	440N	595 ÷ 639N	244 ÷ 287N
Closing total gripping force at 6 bar	440N	596 ÷ 638N	244 ÷ 286N	880N	1190 ÷ 1278N	488 ÷ 574N
Total stroke (±0.3mm)	16mm			8mm		
Maximum working frequency	3Hz					
Cycle air consumption	18cm ³	25cm ³	25cm ³	18cm ³	25cm ³	25cm ³
Closing / opening minimum time	0.03s / 0.03s	0.03s / 0.04s	0.04s / 0.03s	0.03s / 0.03s	0.03s / 0.04s	0.04s / 0.03s
Repetition accuracy	0.02mm					
Weight	460g	550g	540g	470g	560g	550g

Dimensions (mm)

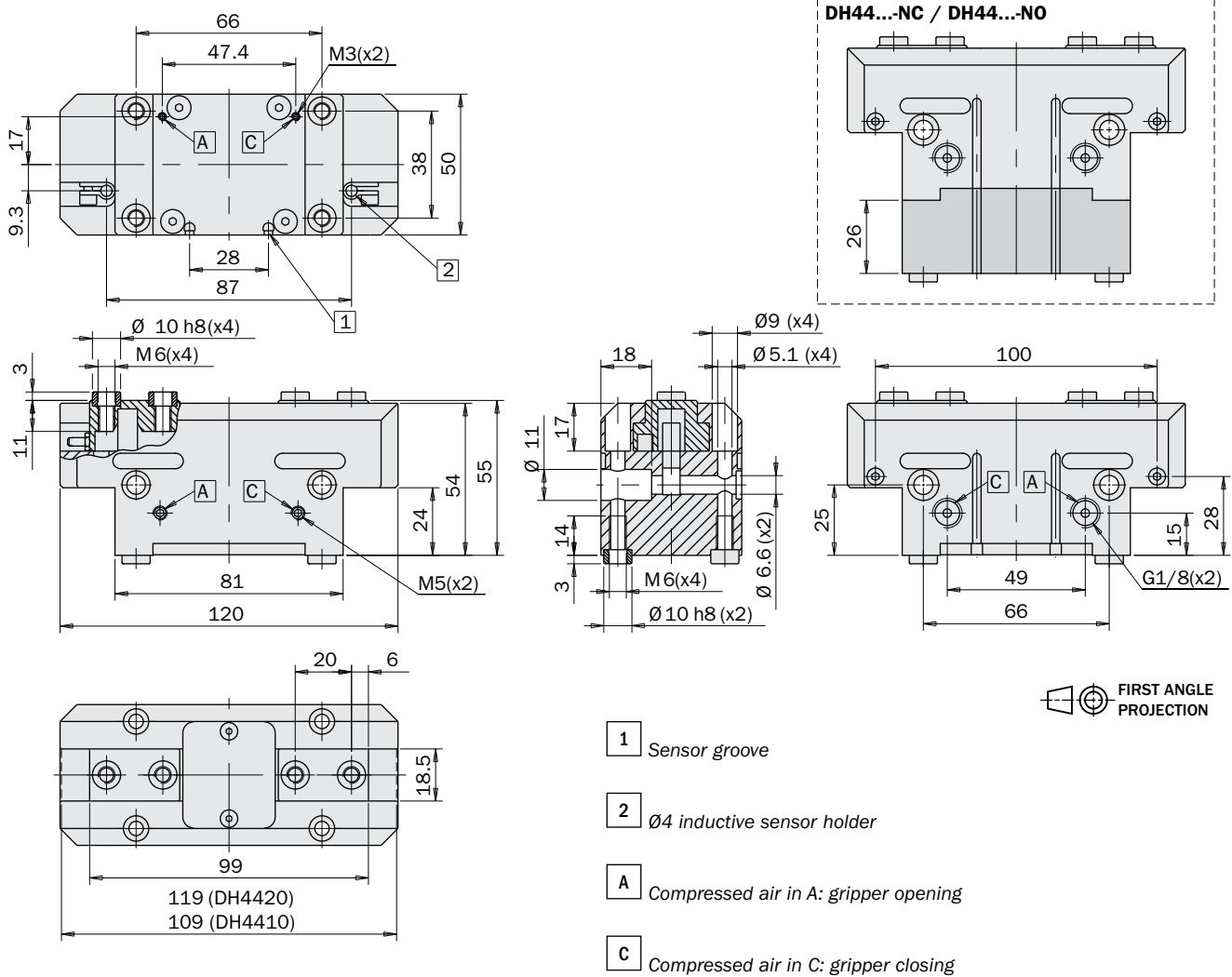


FIRST ANGLE PROJECTION

- 1 Sensor groove
- 2 Ø4 inductive sensor holder
- A Compressed air in A: gripper opening
- C Compressed air in C: gripper closing

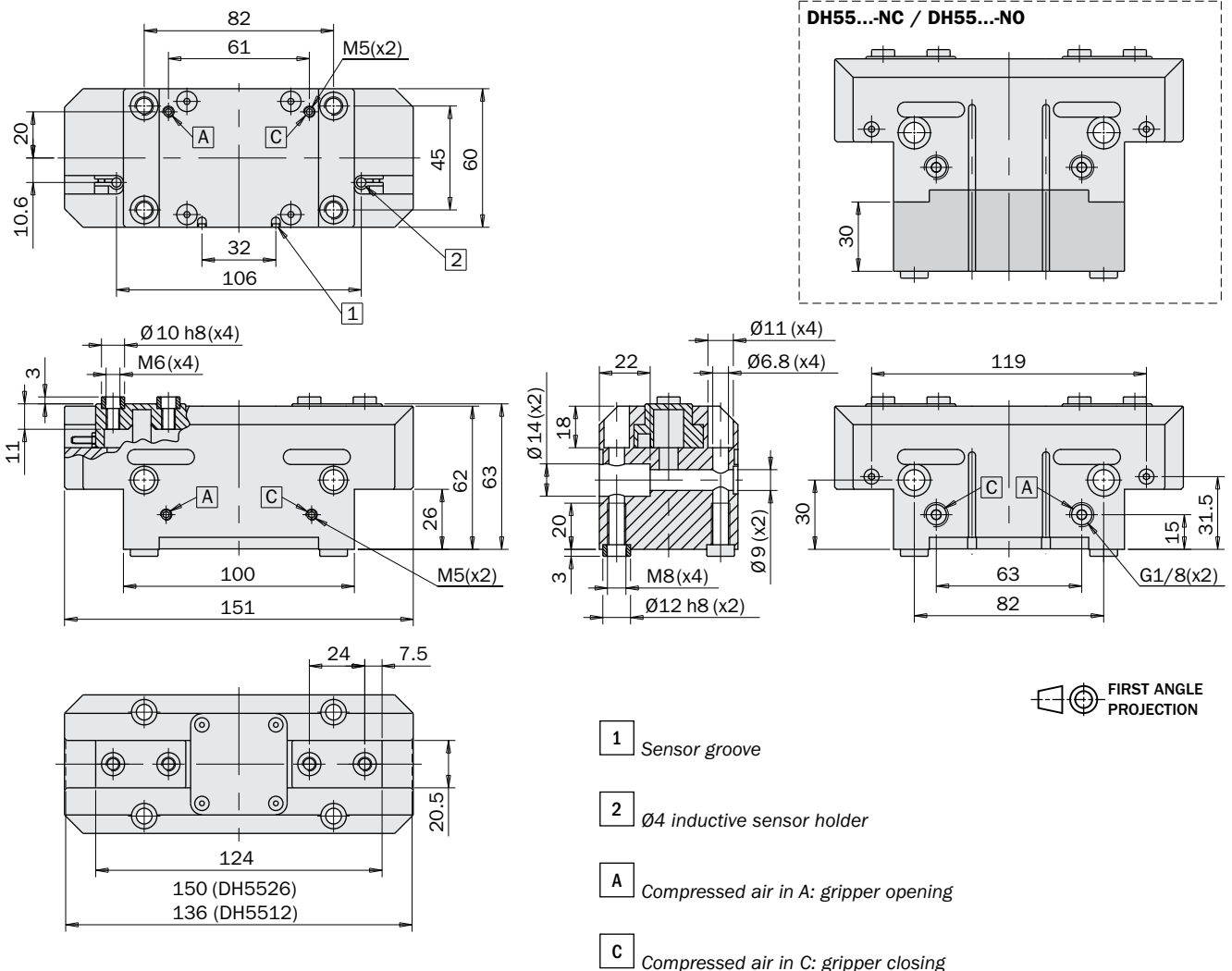
	DH4420	DH4420-NC	DH4420-NO	DH4410	DH4410-NC	DH4410-NO
Medium	Compressed air in compliance with ISO 8573-1:2010 [7:4:4]					
Pressure range	1.5 ÷ 8bar	4 ÷ 8bar	4 ÷ 8bar	1.5 ÷ 8bar	4 ÷ 8bar	4 ÷ 8bar
Temperature range	5 ÷ 100°C.					
Opening gripping force at 6 bar each jaw	405N	236 ÷ 298N	513 ÷ 575N	810N	472 ÷ 595N	1027 ÷ 1150N
Opening total gripping force at 6 bar	810N	472 ÷ 596N	1026 ÷ 1150N	1620N	944 ÷ 1190N	2054 ÷ 2300N
Closing gripping force at 6 bar each jaw	365N	472 ÷ 534N	195 ÷ 257N	730N	945 ÷ 1068N	390 ÷ 513N
Closing total gripping force at 6 bar	730N	944 ÷ 1068N	390 ÷ 514N	1460N	1890 ÷ 2136N	780 ÷ 1026N
Total stroke (±0.3mm)	20mm			10mm		
Maximum working frequency	2Hz					
Cycle air consumption	36cm ³	52cm ³	52cm ³	36cm ³	52cm ³	52cm ³
Closing / opening minimum time	0.08s / 0.08s	0.06s / 0.13s	0.13s / 0.06s	0.08s / 0.08s	0.06s / 0.13s	0.13s / 0.06s
Repetition accuracy	0.02mm					
Weight	780g	990g	960g	800g	1010g	980g

Dimensions (mm)



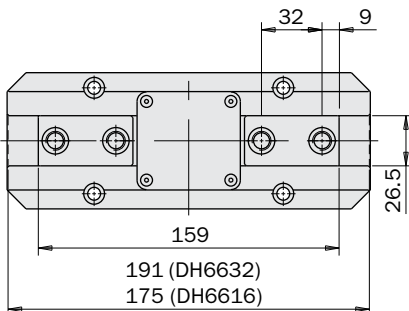
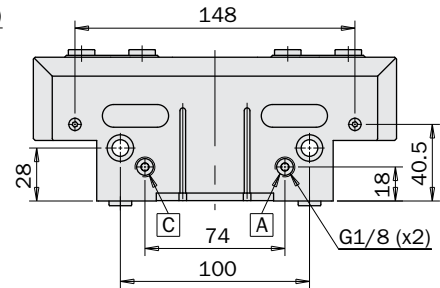
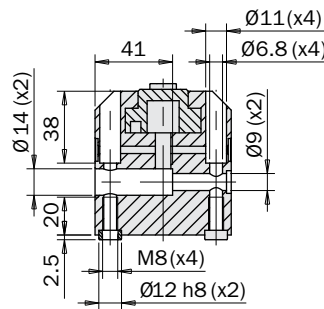
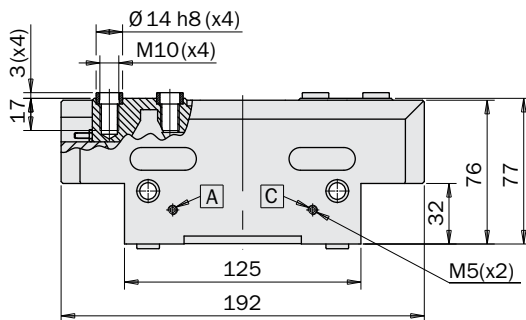
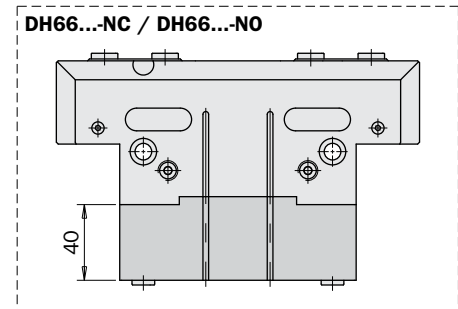
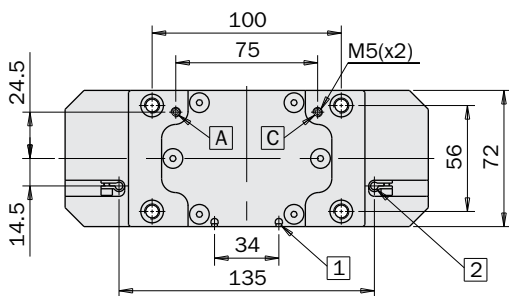
	DH5526	DH5526-NC	DH5526-NO	DH5512	DH5512-NC	DH5512-NO
Medium	Compressed air in compliance with ISO 8573-1:2010 [7:4:4]					
Pressure range	1.5 ÷ 8bar	4 ÷ 8bar	4 ÷ 8bar	1.5 ÷ 8bar	4 ÷ 8bar	4 ÷ 8bar
Temperature range	5 ÷ 100°C.					
Opening gripping force at 6 bar each jaw	625N	359 ÷ 443N	807 ÷ 891N	1350N	774 ÷ 957N	1742 ÷ 1924N
Opening total gripping force at 6 bar	1250N	718 ÷ 886N	1614 ÷ 1782N	2700N	1548 ÷ 1914N	3484 ÷ 3884N
Closing gripping force at 6 bar each jaw	555N	739 ÷ 823N	290 ÷ 375N	1200N	1595 ÷ 1777N	627 ÷ 809N
Closing total gripping force at 6 bar	1110N	1478 ÷ 1646N	580 ÷ 750N	2400N	3190 ÷ 3554N	1254 ÷ 1618N
Total stroke (±0.3mm)	26mm			12mm		
Maximum working frequency	2Hz					
Cycle air consumption	70cm ³	97cm ³	97cm ³	70cm ³	97cm ³	97cm ³
Closing / opening minimum time	0.11s / 0.11s	0.08s / 0.13s	0.13s / 0.08s	0.08s / 0.08s	0.06s / 0.13s	0.13s / 0.06s
Repetition accuracy	0.02mm					
Weight	1350g	1750g	1700g	1370g	1770g	1720g

Dimensions (mm)



	DH6632	DH6632-NC	DH6632-NO	DH6616	DH6616-NC	DH6616-NO
Medium	Compressed air in compliance with ISO 8573-1:2010 [7:4:4]					
Pressure range	1.5 ÷ 8bar	4 ÷ 8bar	4 ÷ 8bar	1.5 ÷ 8bar	4 ÷ 8bar	4 ÷ 8bar
Temperature range	5 ÷ 100°C.					
Opening gripping force at 6 bar each jaw	920N	559 ÷ 663N	1180 ÷ 1284N	1840N	1119 ÷ 1326N	2361 ÷ 2568N
Opening total gripping force at 6 bar	1840N	1118 ÷ 1326N	2360 ÷ 2568N	3680N	2238 ÷ 2652N	4722 ÷ 5136N
Closing gripping force at 6 bar each jaw	820N	1078 ÷ 1181N	457 ÷ 560N	1640N	2156 ÷ 2363N	914 ÷ 1121N
Closing total gripping force at 6 bar	1640N	2156 ÷ 2362N	914 ÷ 1120N	3280N	4312 ÷ 4726N	1828 ÷ 2242N
Total stroke (±0.3mm)	32mm			16mm		
Maximum working frequency	2Hz					
Cycle air consumption	127cm ³	178cm ³	178cm ³	127cm ³	178cm ³	178cm ³
Closing / opening minimum time	0.15s / 0.15s	0.12s / 0.18s	0.18s / 0.12s	0.15s / 0.15s	0.12s / 0.18s	0.18s / 0.12s
Repetition accuracy	0.02mm					
Weight	2630g	3430g	3300g	2670g	3470g	3340g

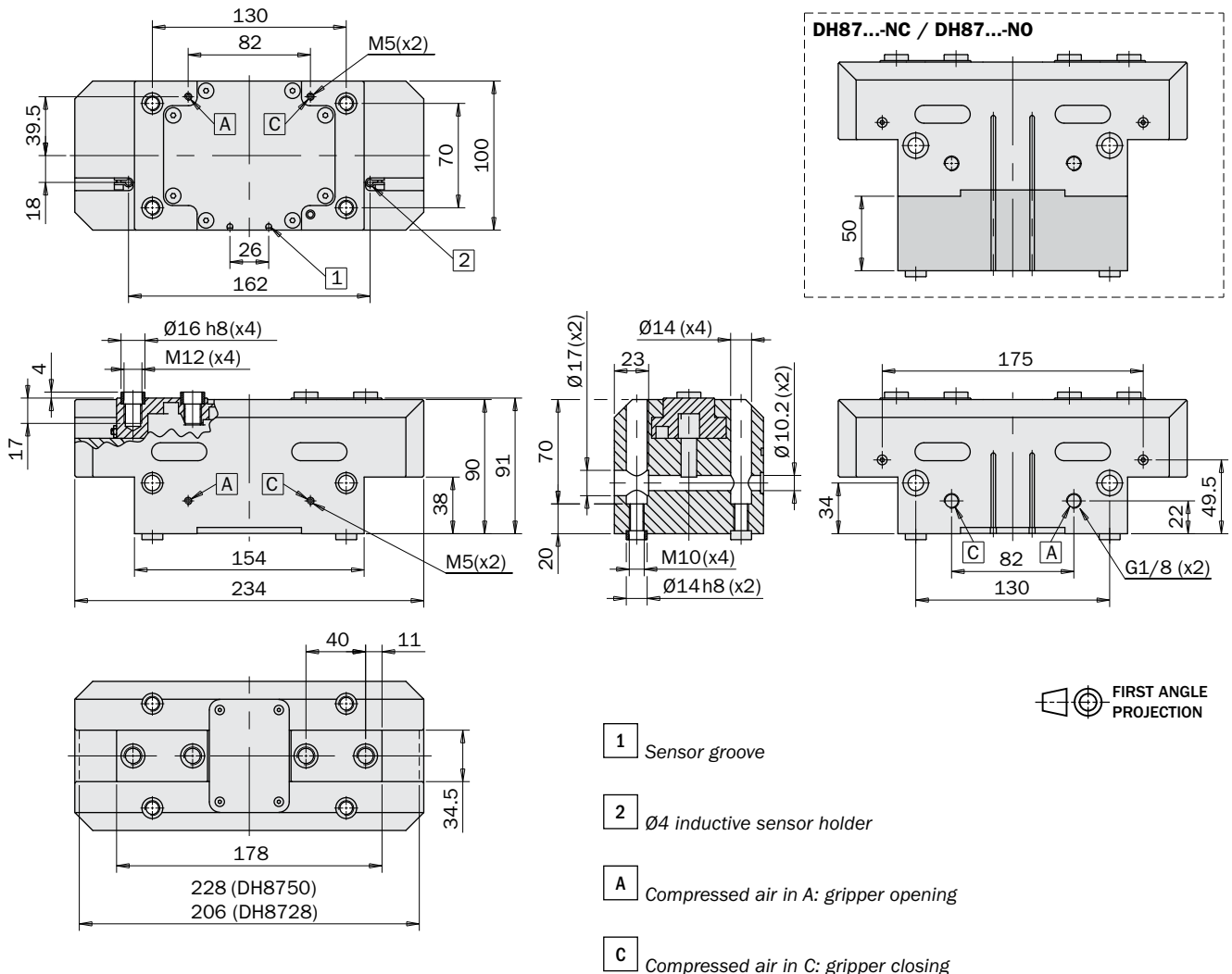
Dimensions (mm)



- 1** Sensor groove
- 2** Ø4 inductive sensor holder
- A** Compressed air in A: gripper opening
- C** Compressed air in C: gripper closing

	DH8750	DH8750-NC	DH8750-NO	DH8728	DH8728-NC	DH8728-NO
Medium	Compressed air in compliance with ISO 8573-1:2010 [7:4:4]					
Pressure range	1.5 ÷ 8bar	4 ÷ 8bar	4 ÷ 8bar	1.5 ÷ 8bar	4 ÷ 8bar	4 ÷ 8bar
Temperature range	5 ÷ 100°C.					
Opening gripping force at 6 bar each jaw	1560N	977 ÷ 1129N	1992 ÷ 2144N	2750N	1720 ÷ 1988N	3509 ÷ 3776N
Opening total gripping force at 6 bar	3120N	1954 ÷ 2258N	3984 ÷ 4288N	5500N	3440 ÷ 3976N	7018 ÷ 7552N
Closing gripping force at 6 bar each jaw	1420N	1853 ÷ 2005N	837 ÷ 989N	2500N	3263 ÷ 3531N	1475 ÷ 1742N
Closing total gripping force at 6 bar	2840N	3706 ÷ 4010N	1674 ÷ 1978N	5000N	6526 ÷ 7026N	2950 ÷ 3484N
Total stroke (±0.3mm)	50mm			28mm		
Maximum working frequency	1Hz					
Cycle air consumption	347cm ³	472cm ³	472cm ³	347cm ³	472cm ³	472cm ³
Closing / opening minimum time	0.21s / 0.21s	0.19s / 0.31s	0.31s / 0.19s	0.21s / 0.21s	0.19s / 0.31s	0.31s / 0.19s
Repetition accuracy	0.02mm					
Weight	4990g	6920g	6750g	5050g	6980g	6810g

Dimensions (mm)



Gripper fastening

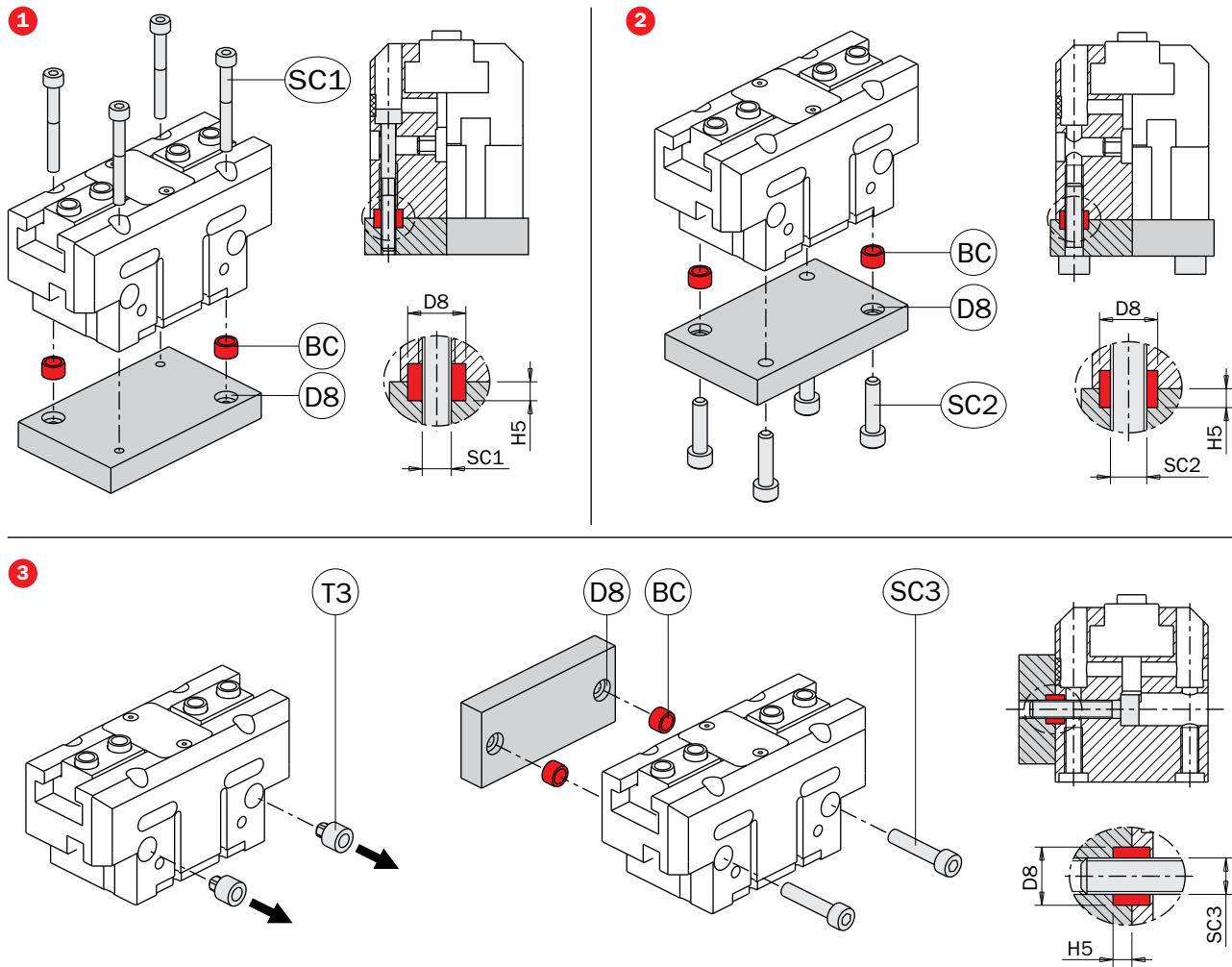
The gripper can be fastened to a static or moving part. When on a moving part, you must pay attention to the inertial force to which the gripper and its load are subjected.

1) To fasten gripper to base, use four screws (SC1) in the through holes.

2) To fasten gripper to base, you can also use four screws (SC2) through the mounting plate, screwed in the gripper.

3) To fasten the gripper side, use two screws (SC3) in the through holes, after removing the protection plugs (T3).

In every case, put the two centering sleeves (BC), which are supplied in the package. Check the dimensions in the table (D8 and H5) for their housings in the mounting plate.

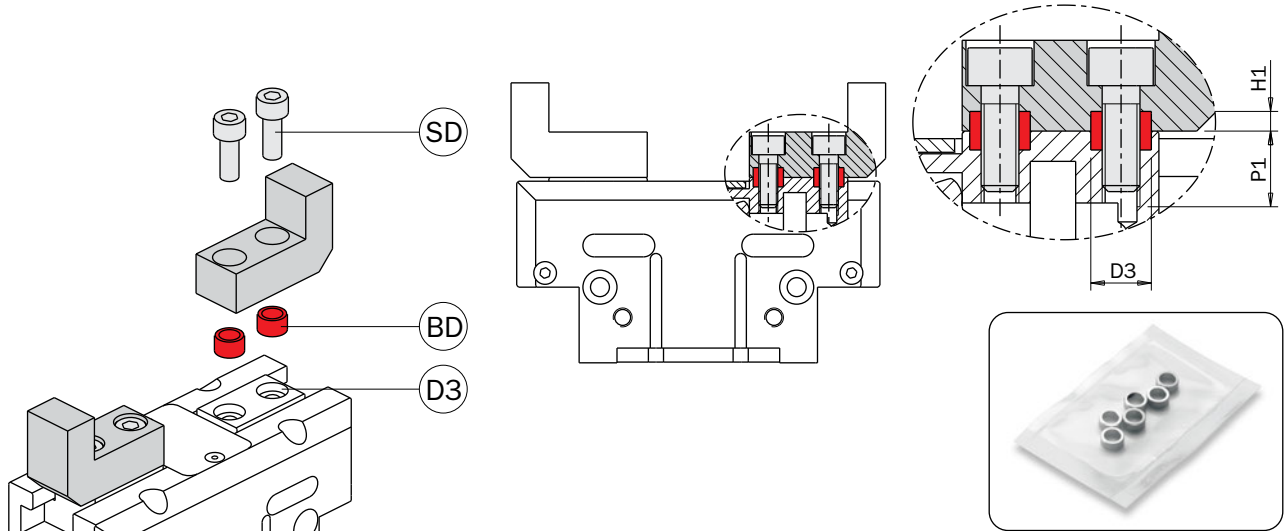


		DH19...	DH22...	DH27...	DH35...	DH44...	DH55...	DH66...	DH87...
D8	H8	Ø5	Ø6	Ø8	Ø8	Ø10	Ø12	Ø12	Ø14
H5	+0.1 +0.2	2	2.5	2.5	2.5	3	3	2.5	4
SC1		M2.5	M3	M4	M4	M5	M6	M6	M8
SC2		M3	M4	M5	M5	M6	M8	M8	M10
SC3		M2.5	M3	M4	M5	M6	M8	M8	M10

Gripping tool fastening

The gripping tools must be as short and light as possible. They must be fastened by two screws (SD) and two centering sleeves (BD) in the calibrated holes (D3) of the jaws.

4 centering rings (BD) for the gripping tools and 2 centering sleeves (BC) for the housing are supplied in the packaging.



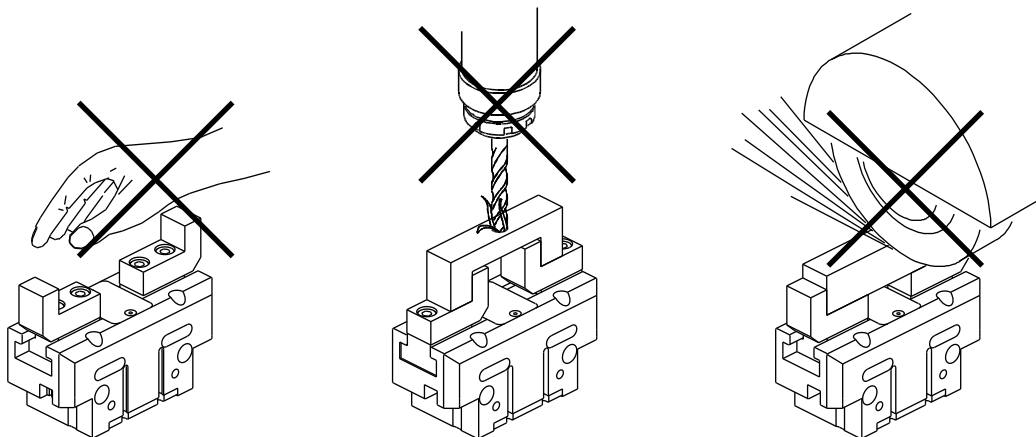
		DH19...	DH22...	DH27...	DH35...	DH44...	DH55...	DH66...	DH87...
D3	H8	Ø4	Ø5	Ø6	Ø8	Ø10	Ø10	Ø14	Ø16
H1	+0.1 +0.2	2	1.4	2.5	2.5	3	3	3	4
P1		5	6	8	9.5	11	11	17	17
SD		M2.5	M3	M4	M5	M6	M6	M10	M12

Cautions

Avoid the gripper coming into contact with the following media: coolants which cause corrosion, grinding dust or glowing sparks.

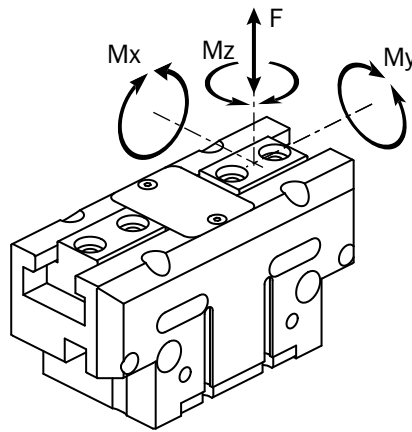
Make sure that nobody can place his/her hand between the gripping tools and there are no objects in the path of the gripper.

The gripper must not run before the whole machine, on which it is mounted, complies with the laws or safety norms of your country.



Safety loads

Check the table for maximum permitted loads.
 Excessive forces or torques can damage the gripper, cause functioning troubles and endanger the safety of the operator.
 F s, Mx s, My s, Mz s, are maximum permitted static loads.
 Static means with motionless jaws.
 F d, Mx d, My d, Mz d, are maximum permitted dynamic loads.
 Dynamic means with running jaws.
 m, is the maximum permitted weight of each gripping tool, when the gripper works without speed adjustment. If the weight is over the permitted value, it is necessary to decrease the speed of the jaw by using flow controllers (not supplied).



	DH1905 DH1905-NC DH1905-NO	DH2208 DH2208-NC DH2208-NO	DH2204 DH2204-NC DH2204-NO	DH2712 DH2712-NC DH2712-NO	DH2706 DH2706-NC DH2706-NO	DH3516 DH3516-NC DH3516-NO	DH3508 DH3508-NC DH3508-NO
F s	200N	350N	350N	600N	600N	900N	900N
Mx s	2.5Nm	5Nm	7.5Nm	8Nm	13Nm	18Nm	30Nm
My s	2.5Nm	7.5Nm	7.5Nm	13Nm	13Nm	30Nm	30Nm
Mz s	2Nm	4Nm	6Nm	6.5Nm	10Nm	15Nm	23Nm
F d	2N	4N	4N	6N	6N	9N	9N
Mx d	0.06Nm	0.12Nm	0.12Nm	0.25Nm	0.25Nm	0.5Nm	0.5Nm
My d	0.06Nm	0.12Nm	0.12Nm	0.25Nm	0.25Nm	0.5Nm	0.5Nm
Mz d	0.06Nm	0.12Nm	0.12Nm	0.25Nm	0.25Nm	0.5Nm	0.5Nm
m	100g	180g	180g	350g	350g	600g	600g

	DH4420 DH4420-NC DH4420-NO	DH4410 DH4410-NC DH4410-NO	DH5526 DH5526-NC DH5526-NO	DH5512 DH5512-NC DH5512-NO	DH6632 DH6632-NC DH6632-NO	DH6616 DH6616-NC DH6616-NO	DH8750 DH8750-NC DH8750-NO	DH8728 DH8728-NC DH8728-NO
F s	1500N	1500N	2500N	2500N	4000N	4000N	7000N	7000N
Mx s	40Nm	60Nm	80Nm	125Nm	145Nm	215Nm	350Nm	400Nm
My s	60Nm	60Nm	80Nm	80Nm	145Nm	145Nm	200Nm	200Nm
Mz s	30Nm	45Nm	65Nm	95Nm	115Nm	165Nm	280Nm	300Nm
F d	15N	15N	25N	25N	40N	40N	70N	70N
Mx d	1Nm	1Nm	2Nm	2Nm	4Nm	4Nm	8Nm	8Nm
My d	1Nm	1Nm	2Nm	2Nm	4Nm	4Nm	8Nm	8Nm
Mz d	1Nm	1Nm	2Nm	2Nm	4Nm	4Nm	8Nm	8Nm
m	1100g	1100g	2100g	2100g	3500g	3500g	6500g	6500g

Compressed air feeding

The compressed air feeding can be accomplished by the main lateral air ports on the gripper side, after mounting fittings and hoses (not supplied).

Or the compressed air can be supplied directly by the mounting plate, through O-Rings (not supplied), after removing the plugs.

This is possible with the gripper fastened on the bottom, or on one side, after plugging the main air ports.

Check the dimensions in the table for the housings of the O-Rings in the mounting plate.

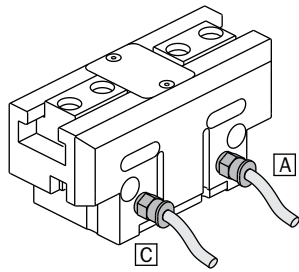
Compressed air in A: gripper opening.

Compressed air in C: gripper closing.

Compressed air must be supplied filtered (5÷40µm), not necessarily lubricated.

The initial choice on air lubrication (lubricated or not) must be kept for the complete service life of the gripper.

The pneumatic circuit must be pressurized progressively, to avoid uncontrolled movements.



		DH19...	DH22...	DH27...	DH35...	DH44...	DH55...	DH66...	DH87...	
G1		O-Ring 1x3 (GUAR-082)			O-Ring 1x5 (GUAR-021)					
DG1	H11	Ø5 mm			Ø7 mm					
PG1	+0.1	0.7 mm								
G2		O-Ring 1x3 (GUAR-082)				O-Ring 1x5 (GUAR-021)				
DG2	H11	Ø5 mm				Ø7 mm				
PG2	+0.1	0.4 mm	0.4 mm	0.4 mm	0.4 mm	0.5 mm	0.5 mm	0.5 mm	0.7 mm	

