Ed.: 2008

GAS SPRINGS

HYDROMECANIQUE
QUIRI

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LLOYD'S REGISTER QUALITY ASSURANCE
R
ISO9001

Catalog

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QUIRI HYDROMECANIQUE

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QUIRI Hydromécanique is specialist in the design and manufacturing of components and mechanical installations that use high-pressure fluids for process plant applications.

We apply our know-how and experience to small-and medium-scale manufacture of products with high technical added-value, and to installations that are specifically adapted to our client's needs.

To provide our clients with complete solutions, **QUIRI Hydromécanique** retains control over all the specialist skills involved in hydraulic engineering (electronic and mechanical engineering, computer control) through its engineering design department, in-house precision machining, assembly and testing.

Its extensive research and development activities, combined with over 50 years experience in hydraulic systems mean that it can incorporate the most effective technology into its products, and apply continuous innovation to provide new solutions.

For every project, each client is assigned a single representative (a Project Engineer or Product Manager) who is responsible for ensuring that orders are fulfilled, right up to the time of delivery. This unique structure makes us more reactive whilst still allows us to retain control over all those aspects that contribute to the quality of our products (managed through a rigorous quality system certified to **ISO 9001**, 2000 version).

QUIRI Hydromécanique is based at in France near Strasbourg and exports a great proportion of its production within Europe (Germany, Spain and elsewhere) to Asia (including Japan, China and Korea) and America.

QUIRI Hydromécanique supplies to major industrial groups, who rely on us to provide innovative and competitive solutions in the following sectors:

- Automotive and vehicles
- Aerospace and defence
- Power and transport

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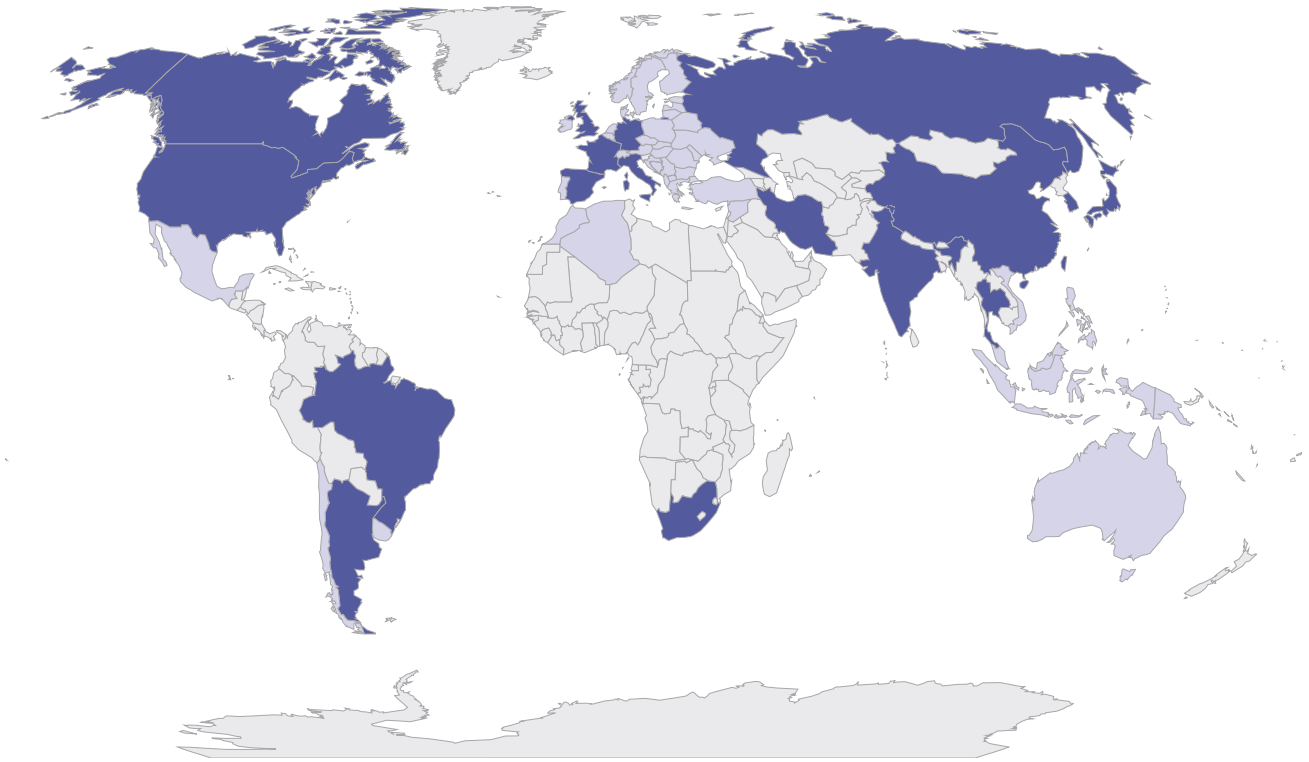
USEFUL INFORMATION

Commercial Network



PARTNERS	USA NORTH USA WEST CANADA BRAZIL ARGENTINA	FRANCE GERMANY U.K. ITALY SPAIN MIDDLE EAST	IRAN INDIA	CHINA JAPAN S. KOREA THAILAND SINGAPORE TAÏWAN
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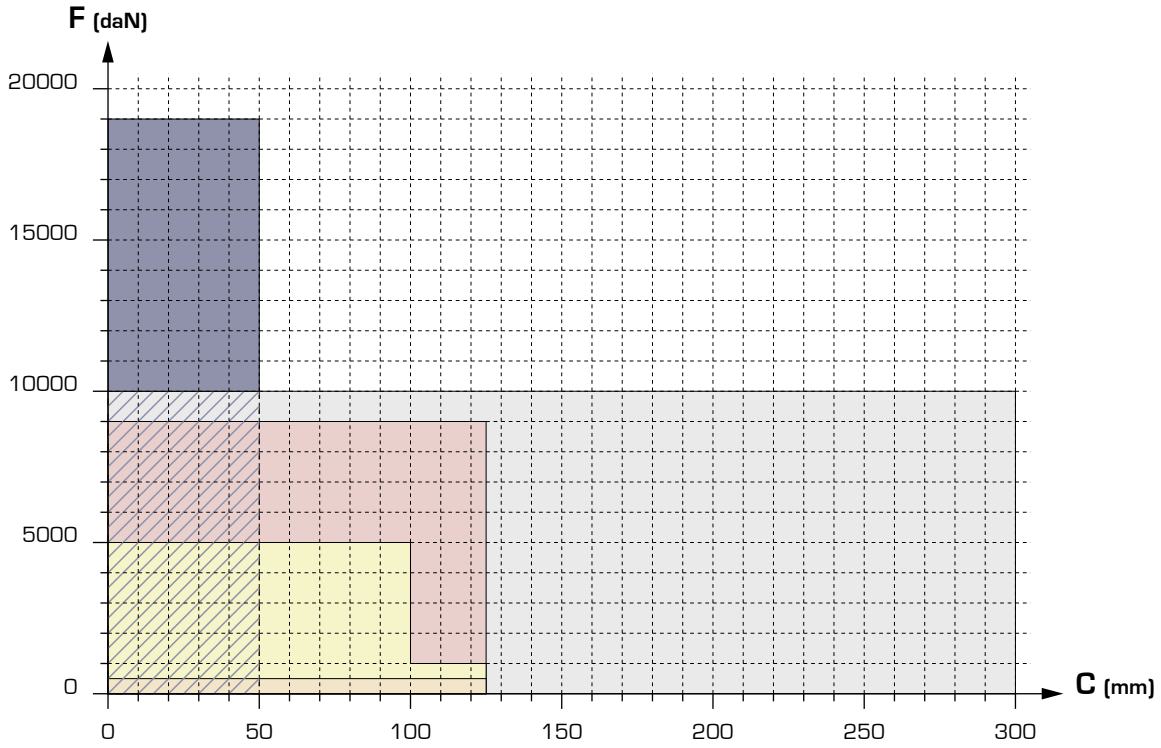
USEFUL INFORMATION

Gas springs range selection

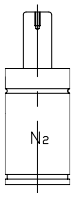


Micro	High Power	Super Compact	Low profile	ISO
RG19 RMG MRG RG150 RG250	**RGP RGT**	**RGC**	**RGH**	**RG**
				
Diameter	Diameter	Diameter	Diameter	Diameter
19 to 38 mm	19 to 150 mm	25 to 150 mm	38 to 120 mm	38 to 165 mm
Force	Force	Force	Force	Force
30 to 250 daN	170 to 9500 daN	420 to 18300 daN	500 to 5000 daN	250 to 10000 daN
Max stroke : 125 mm	Max stroke : 125 mm	Max stroke : 50 mm	Max stroke : 125 mm	Max stroke : 300 mm
▼	▼	▼	▼	▼
p.13	**p.29**	**p.65**	**p.81**	**p.93 / p.111**

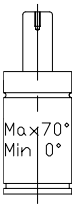
USEFUL INFORMATION

General recommandations

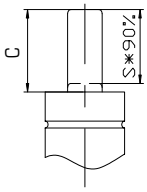
- **Gas springs are filled with high pressure Nitrogen and should not be repaired by non trained people.**
  Never try to open a gas spring if you haven't received a specific training.
- Never grind or weld near a gas spring.
- Never modify nor machine a gas spring.
- Never strike two gas springs rods against each other (the slightest mark on the piston rod may lead to a loss of pressure in the spring).
- Never fill gas springs with a pressure higher than indicated on the body.
- Never use a gas spring for other function than according to the catalogue.
- Never fill a gas spring with other gas than nitrogen.
  Using other type of gas could result in personnal danger.

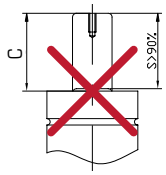


- Operating temperature : 0 to 70°C.

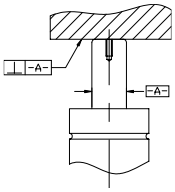


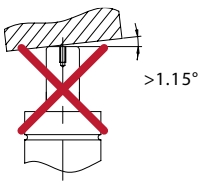
- Gas springs will permit travel of the full nominal stroke; however, a 10% stroke reserve is recommended to achieve optimal performance and safety.



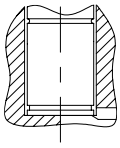


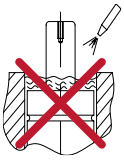
- Avoid side loading when possible. A misaligned press or die can cause side loading that increases wear on the bearing, seal and piston rod.



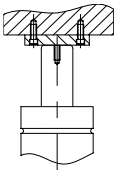


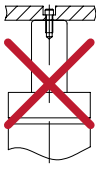
- Protect gas springs by providing adequate drainage in gas spring pockets. Direct contact with certain die lubricants and cleaners should be avoided.



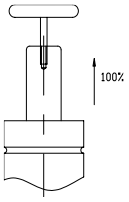


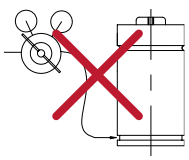
- The end of the piston rod has construction thread intended for assembly and disassembly only.
  Never to be used to mount or secure the gas spring.
  Die vibration and/or misalignment will damage the spring.



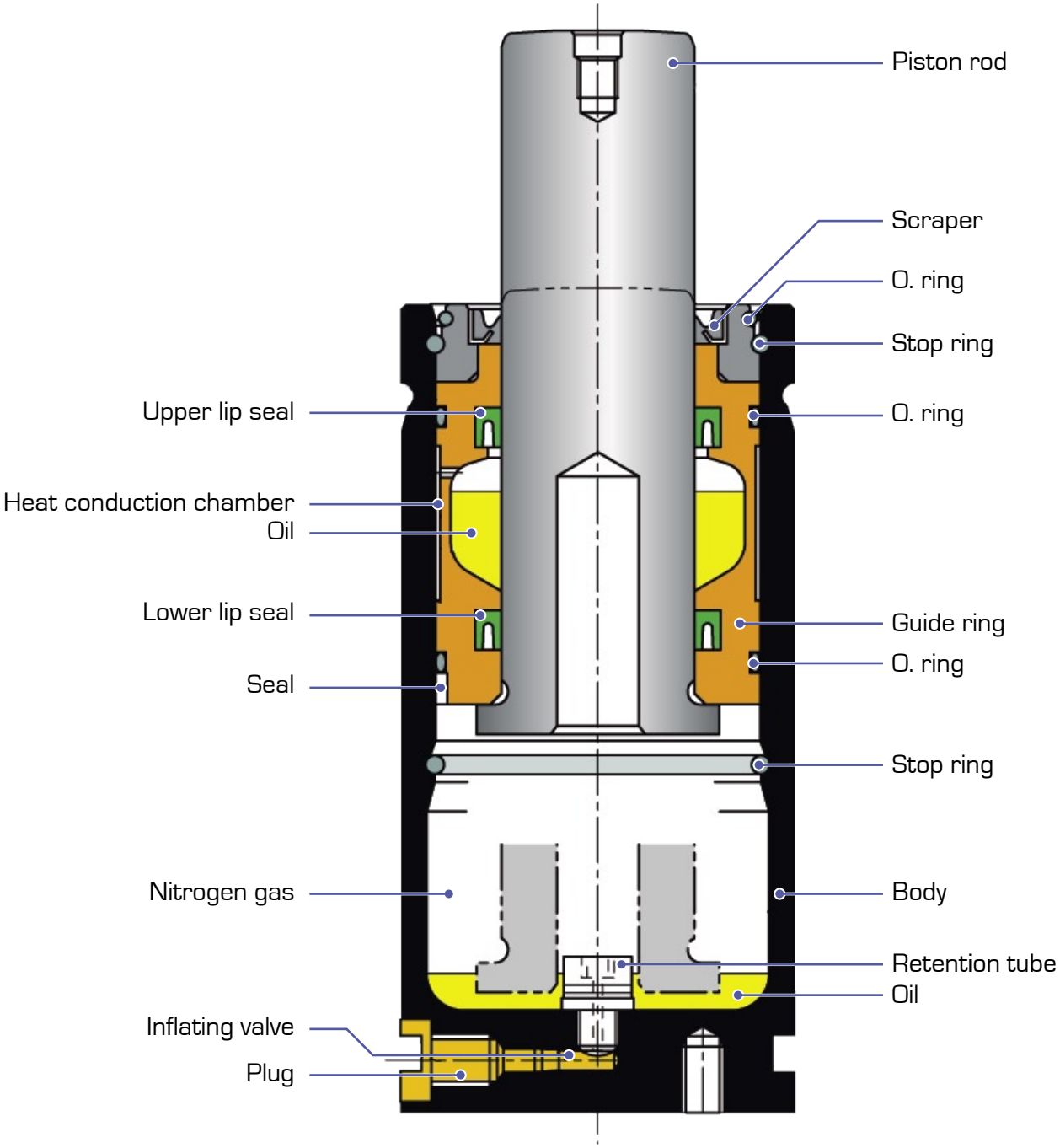


- Never fill a gas spring when the rod is not fully extended.
  Thread the T-handle **082078/000** (M8) or (M6) into the rod end and depress the valve stem with the Valve Bleed Tool, then pull the guiding ring up until it is seated firmly against the retaining ring.





STRUCTURE OF QUIRI ISO GAS SPRING



GAS SPRING FORCE CALCULATION

The force of a Gas spring depends on the Nitrogen pressure and the working surface.

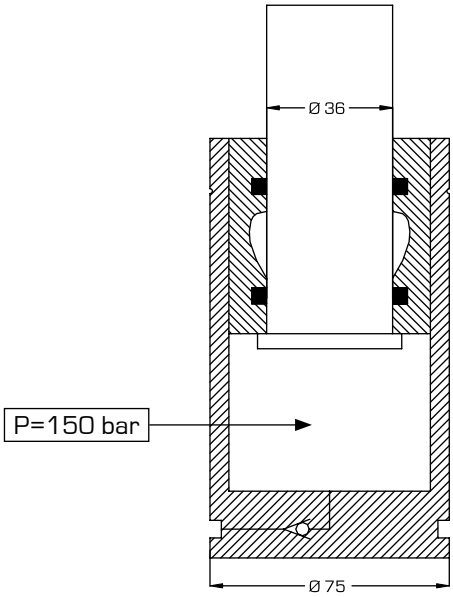
F kgf= P bar x S cm², with S=(π.d²/4), π=3.14

Piston sealed gas spring

RG 1500 ISO

d = 36 mm = 3.6 cm
P = inflating pressure = 150 bar
S = π / 4 x 3.6² = 10.17 cm²
F1 = 150 x 10.17 = 1525 kgf

Unit conversion :
10 bar = 1 MPa
1 kgf = 9.81 N
1 daN = 10 N = 1.02 kgf

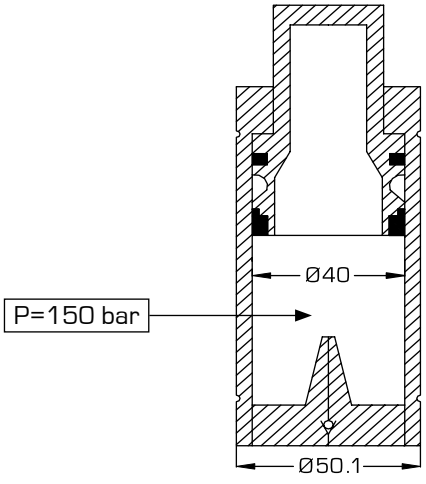


Bore sealed gas spring : Super compact

To calculate the working surface we must take the bore diameter - see the position of the seals.

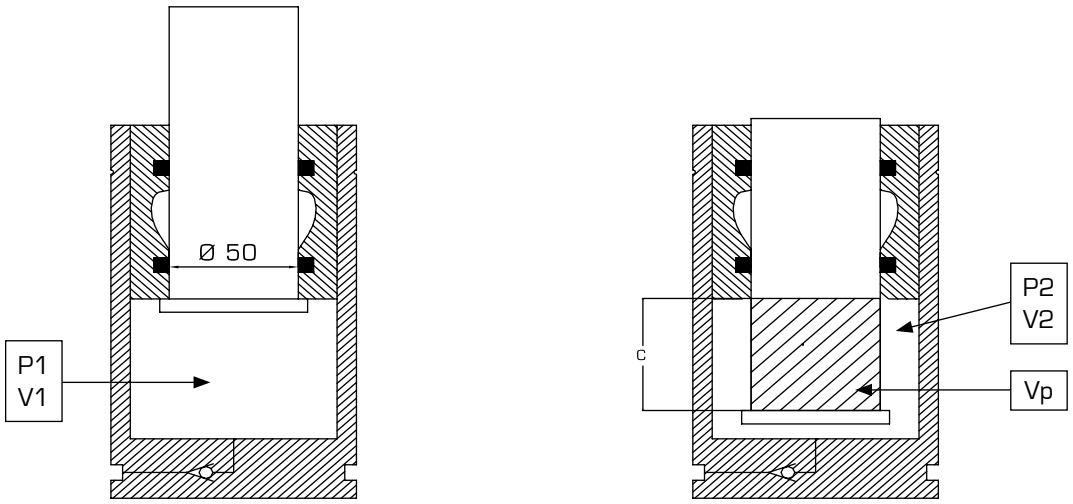
RGC 1800 Super compact

d = 40 mm = 4 cm
P = 150 bar
S = π/4 x 4² = 12.56 cm²
F1 = 150 x 12.56 = 1884 kgf



PRESSURE / FORCE BUILD-UP K

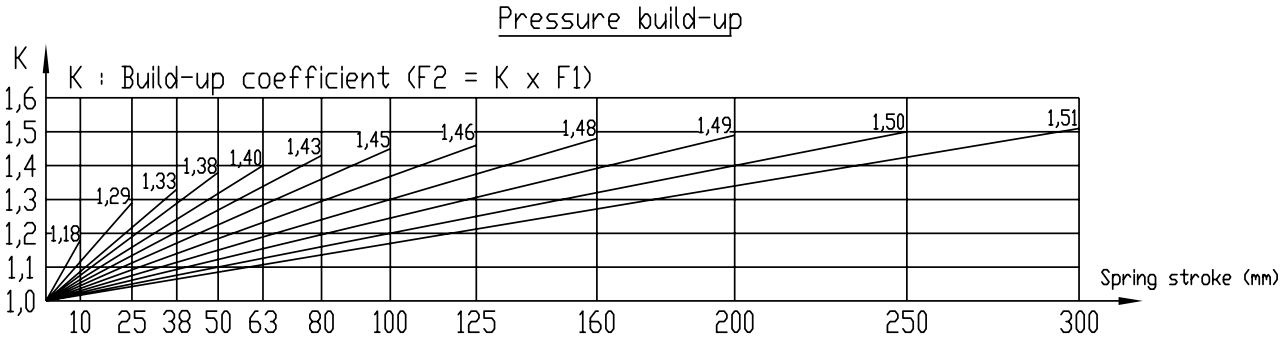
As the piston rod enters the cylinder body, the inner gas volume will be reduced. Nitrogen, like all gas is compressible, therefore the pressure inside the body will increase.
NB : In this calculation we do not consider temperature change.



BOYLE-MARIOTTE law

P1 x V1 = P2 x V2

=> P2 / P1 = V1 / V2, **P2 / P1 = K** is called the pressure build-up.



F1 = P1 x S and F2 = P2 x S => F2 = (P2 / P1) x F1 = (V1 / V2) x F1 = K x F1
V2 is the initial volume minus the volume of the piston rod entering the cylinder body :
V2 = V1 - Vp with Vp = surface x stroke = (π/4 x d^2) x C

▶ RG 3000 ISO C50

d = 50 mm, used stroke C = 40 mm = 4 cm, V1 = 356 cm^3
Vp = π/4 x d^2 x C = π/4 x 5^2 x 4 = 78.54 cm^3
V2 = V1 - Vp = 356 - 78.54 = 277.47 cm^3
K = P2 / P1 = V1 / V2 = 356 / 277.47 = 1.25
F = K x F1 = 1.25 x 2950 = 3687 kgf at 40 mm stroke

TEMPERATURE INFLUENCE ON PRESSURE

In real conditions, gas springs produce heat due to the seals friction. This is called JOULES effect. Gas springs maximum operating temperature is 70°C. Nitrogen pressure will increase with the temperature.

CHARLES law :

$P_{initial} / T_{initial} = P_{final} / T_{final}$

=> Pf = Pi x Tf/Ti ; T = temperatures in °Kelvin (°C + 273)

▶ RG 3000 force is 2950 kgf and initial pressure Pi = 150 bar at 20 °C

At 70 °C : Pf = 150 x (70+273)/(20+273) = 150 x 1.17 = 175 bar
The pressure increase is 17 %, we can calculate the force at 70 °C
Initial force 2950 kgf at 20 °C
F1 at 70 °C = 2950 x 1.17 = 3451 kgf

POLYTROPIC EFFECT

The speed of gas compression/depression will also increase/decrease the gas temperature and therefore the pressure. This is called the polytropic effect. We have seen that for a given stroke we have :

F2 = F1 x K, using Boyle-Mariotte law
K is the isothermal pressure build-up coefficient

If we introduce the influence of the speed of gas compression it will become :

$F2 = F1 \times K^n$

n is called the polytropic exponent and varies with the initial pressure and the speed of the gas compression.
For standard press die applications **n=1.4**

▶ RG 3000-50

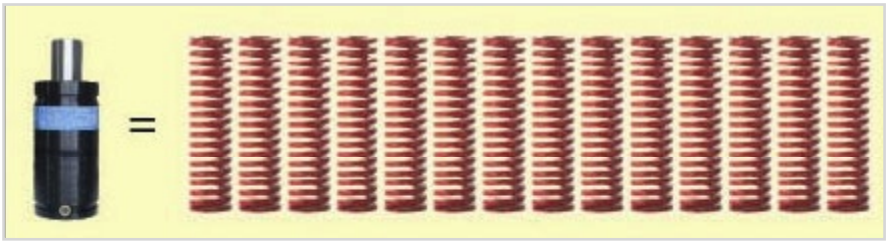
used stroke is 40 mm
K at 40 mm = 1.25
n = 1.4
$F2 = F1 \times 1.25^{1.4} = F1 \times 1.37 = 4041$ kgf

▶▶ All the data in our catalog are isothermal pressure and forces.

ADVANTAGE OF GAS SPRINGS VS. COIL SPRINGS

MORE FORCE IN LESS SPACE :

One Super compact **RGC 4700 C25** (body ø 75 mm, stroke 25 mm) against 14 **Coil springs**, extra heavy load, ø 50 mm with 25 mm pre-loading.

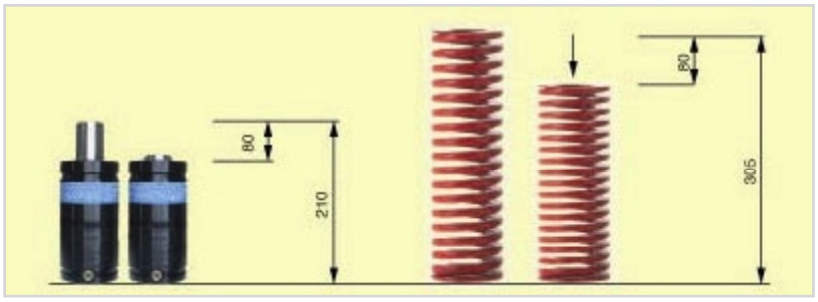


Benefits :

- Reduction of required surface area, 44 cm^2 for the cylinder against 274 cm^2 for the coil springs.
- Reduction of height, only 135 mm for the cylinder against 280 mm for the coil springs.
- Reduction of volume required, only 596 cm^3 for the cylinder against 7963 cm^3 for the springs.
- Reduction in the number of retaining device to pre-load, guide and seat. None for the cylinder against 14 for the springs.
- Reduction of cost

SAME WORKING DEFLECTION IN LESS HEIGHT :

One **RGH 500-80** (low profile gas springs ø 45 mm stroke 80 mm, total height 210 mm and a final force 636KgF) against 1 **coil spring** (medium load spring, ø 63 mm, working stroke 80 mm as 25% of length for long life, total height of 305 mm and a final force 518 KgF).

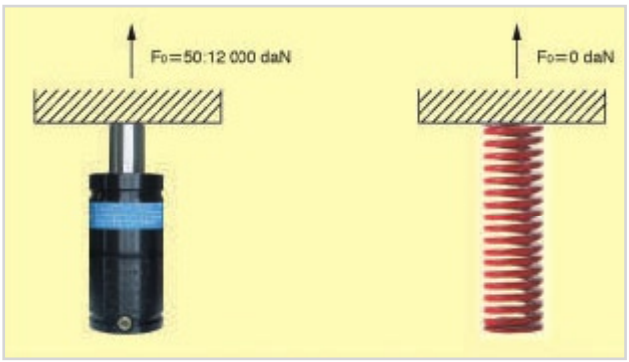


Benefits :

- Considerable height reduction for the same working deflection and force.
- Compact die construction.
- Reduction of cost

LARGE FORCE ON CONTACT :

All nitrogen gas springs provide high and known initial forces on contact from 22.5daN (for the RG19 - 22.5 with a body ø 19mm) up to 18300daN (for the **RGC 18300** with a body ø 150mm). Any mechanical wire compression spring requires a pre-load to obtain such initial forces.

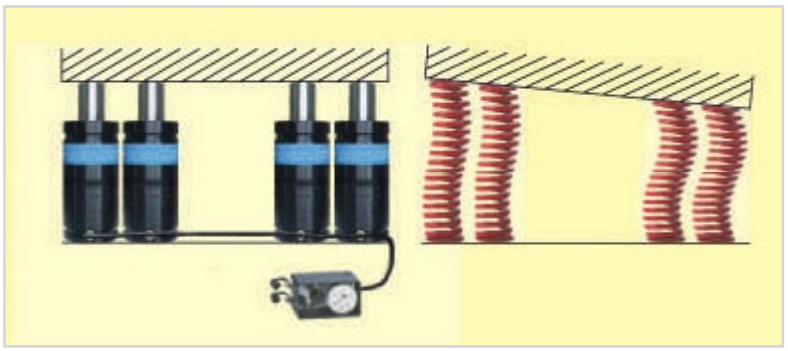


Benefits :

- No pre-load.
- Easier and quicker fitting.
- Reduction of cost

BALANCED AND CONTROLLED FORCES :

Nitrogen cylinders linked with hoses will guarantee a balanced system ensuring the same force in each cylinder. This is not possible by using coil springs since their working characteristics are never exactly the same.



Benefits :

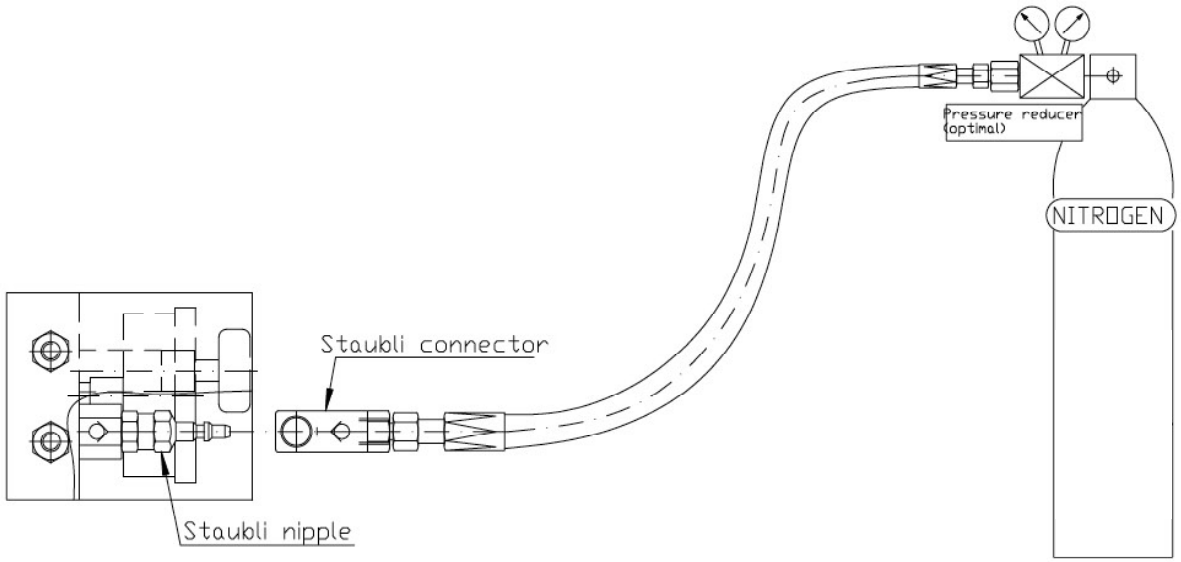
- Always the same force on each contact point.
- Forces may be setup at needed value.
- System may be continually monitored for pressure.
- Reduction of cost

Result :

- Constant production conditions of piece parts.
- Longer life for punches and tools.

ADJUSTABLE FORCES :

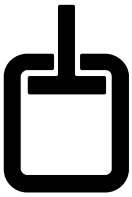
The initial force of self-contained (gas springs) cylinders can be adjusted by changing the gas pressure for hosed gas springs, this can be done through a control block (max pressure 150 bar). Wire springs cannot be adjusted in any way.



Benefits :

- Gas springs provide the actual forces required.
- Reduction of cost

NOTES



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MICRO GAS SPRINGS

RG 19

- Complies with european directive PED 97/23EC
- Body diam. 19 mm
- Inflating valve on the bottom
- Cannot be used in piping system
- Different force depends on different pressure

MRG

- Complies with european directive PED 97/23EC
- Body diam. 25 mm
- Inflating valve on the bottom
- Cannot be used in piping system
- Force can be changed by changing the pressure

RMG

- Complies with european directive PED 97/23EC
- Body diam. 25 mm
- Inflating valve on the top of the piston rod
- Cannot be used in piping system
- Force can be changed by changing the pressure
- Double sealing for heavy duty

RMGT - RMGE

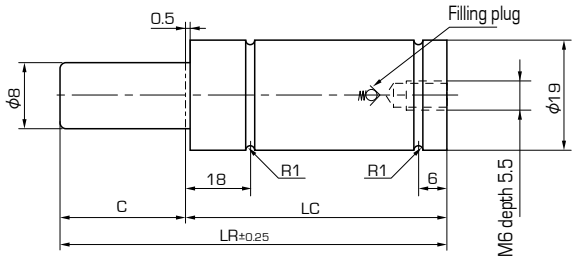
- Complies with european directive PED 97/23EC
- RMGT threaded body M 25 mm - RMGE bottom thread M8
- Inflating valve on the top of the piston rod
- Cannot be used in piping system
- Force can be changed by changing the pressure
- Double sealing for heavy duty

RG 32 - RG 300

- Complies with european directive PED 97/23EC
- Force from 50 to 3000 N
- Stroke up to 100mm
- Designed for heavy duty
- Double sealing
- Oil lubricated guide ring
- Solid structure (no welding)

MICRO GAS SPRINGS
Diameter : 19

RG 19



Type	Force daN	Stroke C mm	Order Code	Pressure MPa (bar)	Force F1 N★	Force F2 N★	LR mm	LC mm	Colour
RG 19	22.5	7	442180/100	4 (40)	225	255	56	49	green
		10	442181/100			264	62	52	
		15	442182/100			274	72	57	
		16	442183/100				74	58	
		25	442184/100			284	92	67	
		38	442185/100			295	118	80	
		50	442186/100			304	142	92	
		63.5	442187/100				172	108.5	
		80	442188/100				205	125	
	30	7	442180/500	6 (60)	300	343	56	49	green
		10	442181/500			353	62	52	
		15	442182/500			362	72	57	
		16	442183/500				74	58	
		25	442184/500			372	92	67	
		38	442185/500			392	118	80	
		50	442186/500			402	142	92	
		63.5	442187/500				172	108.5	
		80	442188/500			411	205	125	
	45	7	442180/200	9 (90)	450	510	56	49	blue
		10	442181/200			529	62	52	
		15	442182/200			539	72	57	
		16	442183/200			549	74	58	
		25	442184/200			558	92	67	
		38	442185/200			588	118	80	
		50	442186/200			598	142	92	
		63.5	442187/200			608	172	108.5	
		80	442188/200				205	125	
	50	7	442180/600	10 (100)	500	559	56	49	blue
		10	442181/600			588	62	52	
		15	442182/600			608	72	57	
		16	442183/600				74	58	
		25	442184/600			627	92	67	
		38	442185/600			657	118	80	
		50	442186/600			666	142	92	
		63.5	442187/600				172	108.5	
		80	442188/600			676	205	125	
	67.5	7	442180/300	13.5 (135)	674	755	56	49	red
		10	442181/300			794	62	52	
		15	442182/300			823	72	57	
		16	442183/300			833	74	58	
		25	442184/300			853	92	67	
		38	442185/300			892	118	80	
		50	442186/300			902	142	92	
		63.5	442187/300			912	172	108.5	
		80	442188/300			921	205	125	
	70	7	442180/700	14 (140)	700	794	56	49	red
		10	442181/700			823	62	52	
		15	442182/700			853	72	57	
		16	442183/700			863	74	58	
		25	442184/700			882	92	67	
		38	442185/700			921	118	80	
		50	442186/700			931	142	92	
		63.5	442187/700			951	172	108.5	
		80	442188/700			961	205	125	
	90	7	442180/400	18 (180)	900	1020	56	49	yellow
		10	442181/400			1059	62	52	
		15	442182/400			1088	72	57	
		16	442183/400			1098	74	58	
		25	442184/400			1127	92	67	
		38	442185/400			1176	118	80	
		50	442186/400			1196	142	92	
		63.5	442187/400			1216	172	108.5	
		80	442188/400			1225	205	125	

★ (N) = Kgf x 9.80665 (Kgf)=N x 0.101972 1daN=1 x 10^1N 1bar=1 x 10^{-1}MPa

Example of order : RG 19 C50

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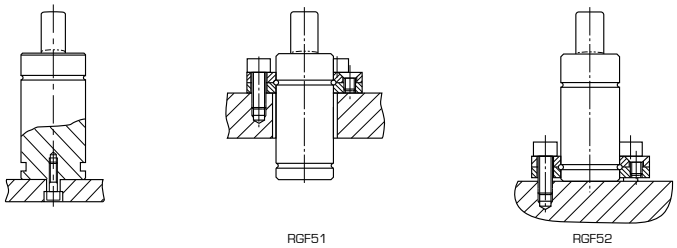
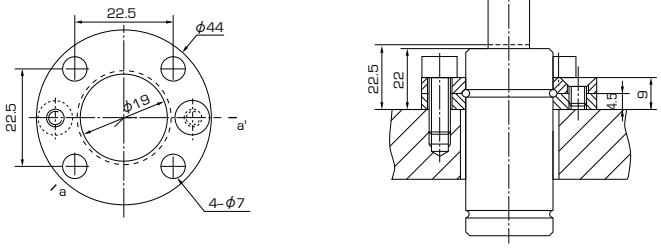
MICRO GAS SPRINGS

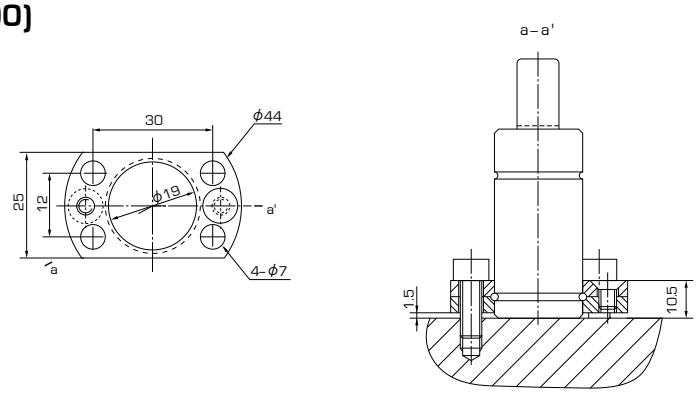
Diameter : 19



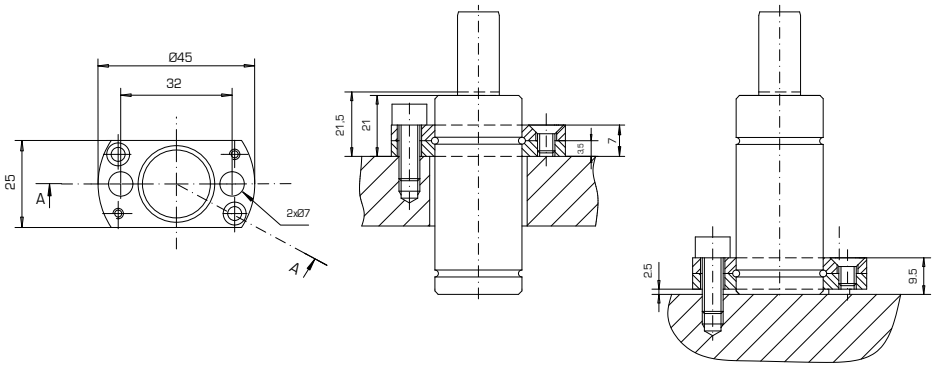
RGF 51-19 - (841178/000)



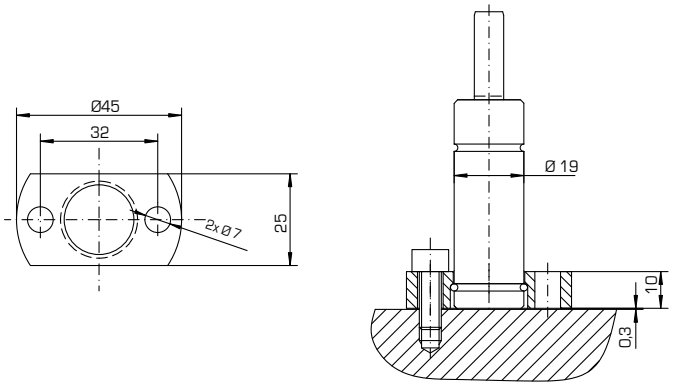
RGF 52-19 - (841179/000)



VDI 19 - (841240/000)

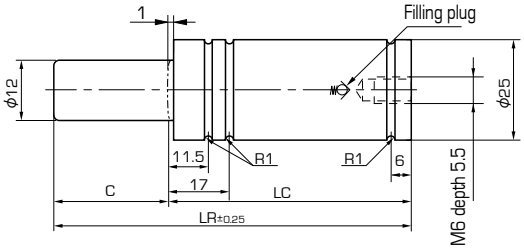


BF19 - (841242/000)



MICRO GAS SPRINGS
Diameter : 25

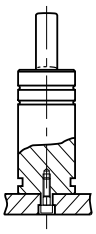
- MRG 50
- MRG 100
- MRG 150
- MRG 200

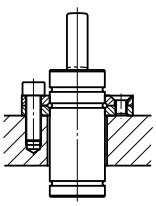


Type	Force daN	Stroke C mm	Order Code	Pressure MPa (bar)	Force F1 N★	Force F2 N★	LR mm	LC mm	Colour
MRG	50	7	442060/600	4.5 (45)	500	637	56	49	green
		10	442061/600			666	62	52	
		12.7	442069/600			686	67.4	54.7	
		15	442068/600			696	72	57	
		16	442062/600			696	74	58	
		25	442063/600			715	92	67	
		38	442066/600			735	118	80	
		50	442064/600			745	142	92	
		63.5	442067/600			735	172	108.5	
		80	442065/620			774	202	122	
		80	442065/600			745	205	125	
		100	442107/600			745	245	145	
		125	442117/600			755	295	170	
	100	7	442070/600	9 (90)	1000	1284	56	49	blue
		10	442071/600			1343	62	52	
		12.7	442079/600			1372	67.4	54.7	
		15	442078/600			1392	72	57	
		16	442072/600			1402	74	58	
		25	442073/600			1441	92	67	
		38	442076/600			1480	118	80	
		50	442074/600			1490	142	92	
		63.5	442077/600			1471	172	108.5	
		80	442075/620			1549	202	122	
		80	442075/600			1490	205	125	
		100	442108/600			1500	245	145	
		125	442118/600			1510	295	170	
	150	7	442080/600	13.5 135	1500	1922	56	49	red
		10	442081/600			2010	62	52	
		12.7	442089/600			2059	67.4	54.7	
		15	442088/600			2088	72	57	
		16	442082/600			2098	74	58	
		25	442083/600			2157	92	67	
		38	442086/600			2216	118	80	
		50	442084/600			2235	142	92	
		63.5	442087/600			2206	172	108.5	
		80	442085/620			2324	202	122	
		80	442085/600			2235	205	125	
		100	442109/600			2245	245	145	
		125	442119/600			2265	295	170	
	200	7	442090/600	18 (180)	2000	2259	56	49	yellow
		10	442091/600			2677	62	52	
		12.7	442099/600			2736	67.4	54.7	
		15	442098/600			2775	72	57	
		16	442092/600			2804	74	58	
		25	442093/600			2883	92	67	
		38	442096/600			2961	118	80	
		50	442094/600			2981	142	92	
		63.5	442097/600			2941	172	108.5	
		80	442095/620			3098	202	122	
		80	442095/600			2981	205	125	
		100	442110/600			3000	245	145	
		125	442120/600			3020	295	170	

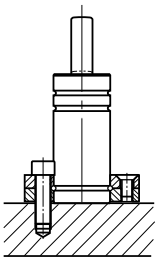
★ (N) = Kgf x 9.80665 (Kgf)=N x 0.101972 1daN=1 x 10^1N 1bar=1 x 10^{-1}MPa

Example of order : MRG 100 C50





RMGF51



RMGF52

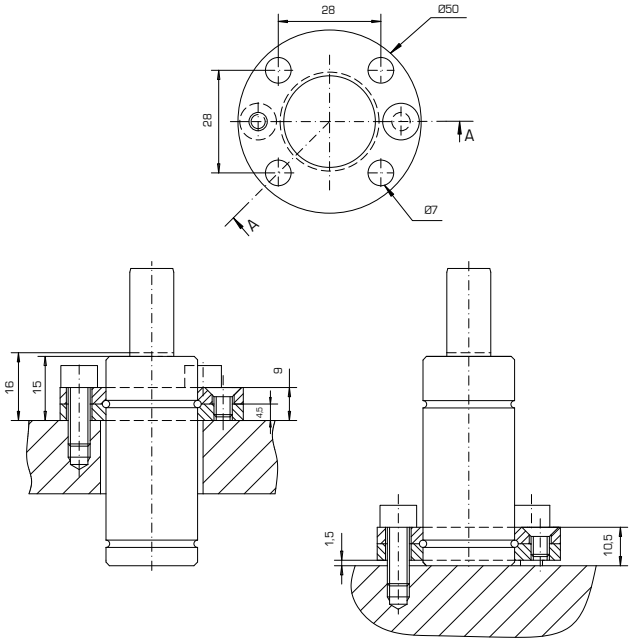
HYDROMECANIQUE QUIRI

www.quiri.com

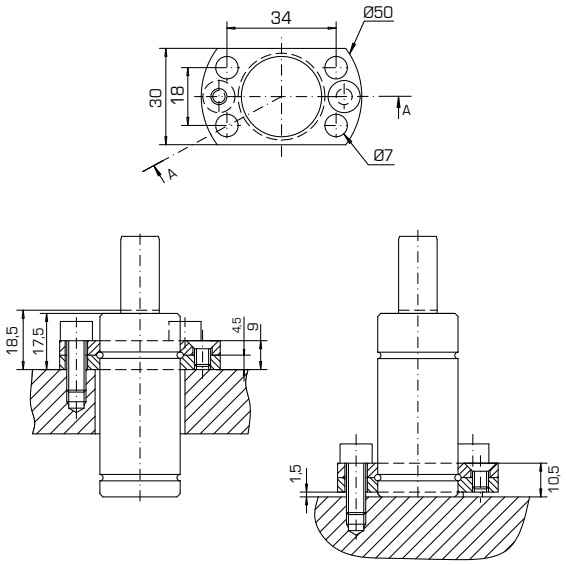
MICRO GAS SPRINGS

Diameter : 25

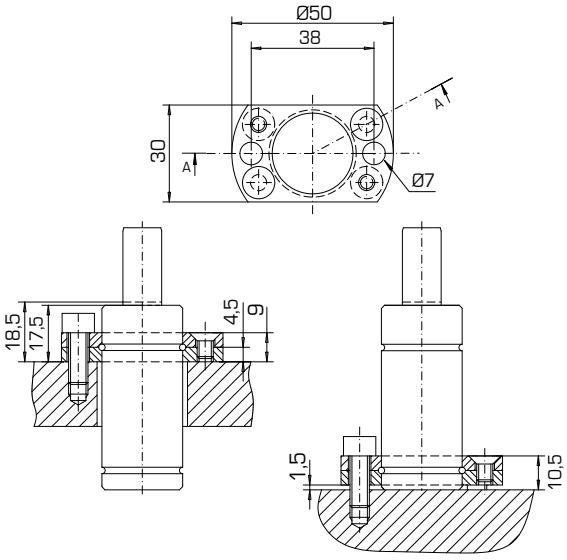
RMGF 51 - (841078/000)



RMGF 52 - 4 holes - (841077/000)

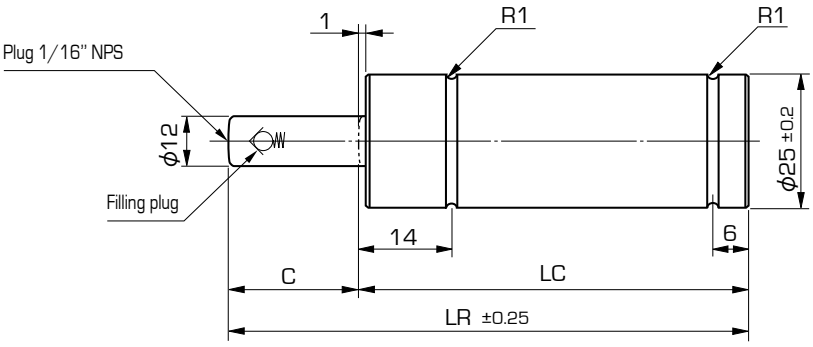


RMGF 52 - 2 holes - (841241/000)



MICRO GAS SPRINGS
Diameter : 25

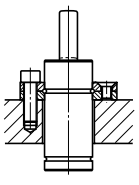
- RMG 50
- RMG 100
- RMG 150
- RMG 200



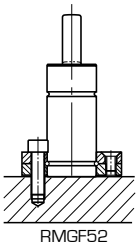
Type	Force daN	Stroke C mm	Order Code	Pressure MPa (bar)	Force F1 N★	Force F2 N★	LR mm	LC mm	Colour
RMG	50	10	442061/000	4.5 (45)	500	598	65	55	green
		16	442062/000			637	77	61	
		25	442063/000			666	95	70	
		38	442066/000			676	121	83	
		50	442064/000			686	145	95	
		63	442067/000				171	108	
		80	442065/000			696	205	125	
		100	442068/000				245	145	
		125	442069/000				295	170	
	100	10	442071/000	9 (90)	1000	1206	65	55	blue
		16	442072/000			1274	77	61	
		25	442073/000			1333	95	70	
		38	442076/000			1353	121	83	
		50	442074/000			1372	145	95	
		63	442077/000			1382	171	108	
		80	442075/000			1392	205	125	
		100	442078/000				245	145	
		125	442079/000			1402	295	170	
	150	10	442081/000	13.5 (135)	1500	1814	65	55	red
		16	442082/000			1912	77	61	
		25	442083/000			2010	95	70	
		38	442086/000			2040	121	83	
		50	442084/000			2070	145	95	
		63	442087/000			2088	171	108	
		80	442085/000			2098	205	125	
		100	442088/000			2108	245	145	
		125	442089/000			2118	295	170	
	200	10	442091/000	18 (180)	2000	2412	65	55	yellow
		16	442092/000			2559	77	61	
		25	442093/000			2687	95	70	
		38	442096/000			2716	121	83	
		50	442094/000			2755	145	95	
		63	442097/000			2785	171	108	
		80	442095/000			2794	205	125	
		100	442098/000			2804	245	145	
		125	442099/000			2814	295	170	

★ (N) = Kgf x 9.80665 (Kgf)=N x 0.101972 1daN=1 x 10^1N 1bar=1 x 10^{-1}MPa

Example of order : RMG 100 C50



RMGF51



RMGF52

HYDROMECANIQUE QUIRI

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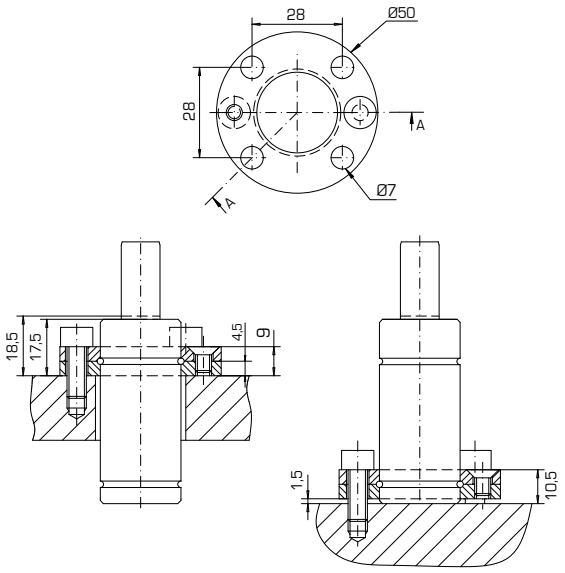
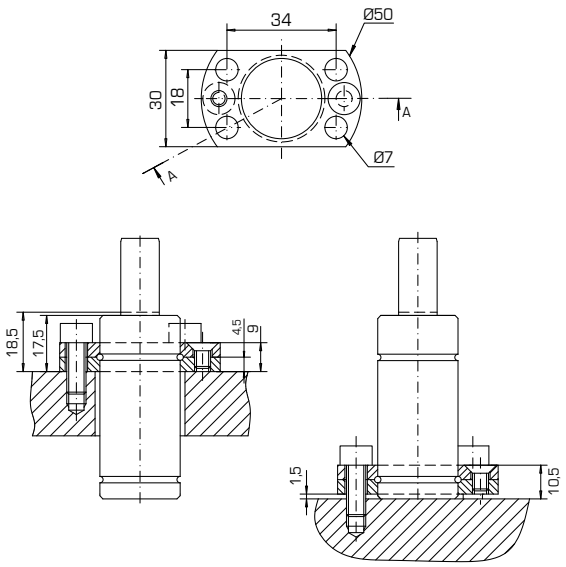
MICRO GAS SPRINGS

Diameter : 25

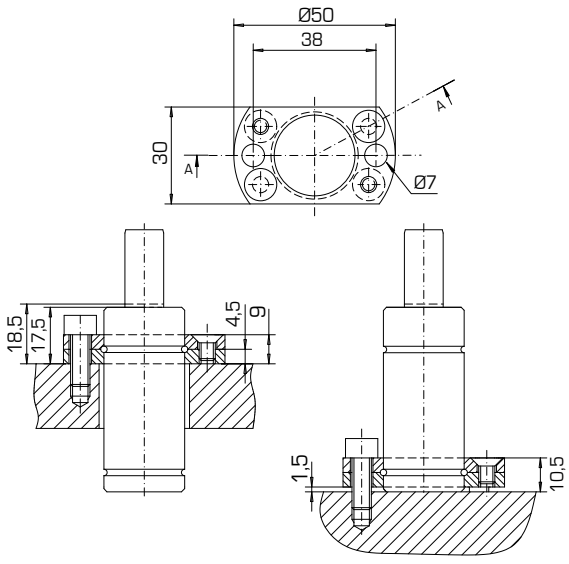
RMGF 51 - (841078/000)



RMGF 52 - 4 holes - (841077/000)

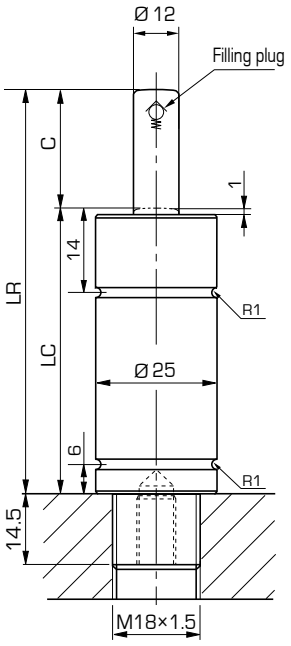


RMGF 52 - 2 holes - (841241/000)



MICRO GAS SPRINGS
Diameter : 25

- RMGT 50
- RMGT 100
- RMGT 150
- RMGT 200



Type	Force daN	Stroke C mm	Order Code	LR mm	LC mm
RMGT	50	10	442061/200	65	55
		16	442062/200	77	61
		25	442063/200	95	70
		38	442066/200	121	83
		50	442064/200	145	95
		63	442067/200	171	108
		80	442065/200	205	125
		100	442068/200	245	145
		125	442069/200	295	170
	100	10	442071/200	65	55
		16	442072/200	77	61
		25	442073/200	95	70
		38	442076/200	121	83
		50	442074/200	145	95
		63	442077/200	171	108
		80	442075/200	205	125
		100	442078/200	245	145
		125	442079/200	295	170
	150	10	442081/200	65	55
		16	442082/200	77	61
		25	442083/200	95	70
		38	442086/200	121	83
		50	442084/200	145	95
		63	442087/200	171	108
		80	442085/200	205	125
		100	442088/200	245	145
		125	442089/200	295	170
	200	10	442091/200	65	55
		16	442092/200	77	61
		25	442093/200	95	70
		38	442096/200	121	83
		50	442094/200	145	95
		63	442097/200	171	108
		80	442095/200	205	125
		100	442098/200	245	145
		125	442099/200	295	170

▶ NOTE : Height of RMGT is 14,5 mm higher than standard RMG type.

Example of order : RMGT 100 C50

QUIRI 67129 MOLSHEIM CEDEX (France) Tel. : +33 (0)3 88 04 84 00 Fax : +33 (0)3 88 04 84 01 Email : quiri.hydro@quiri.com

HYDROMECANIQUE QUIRI

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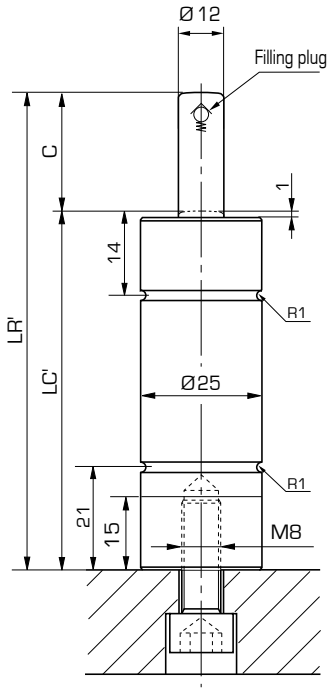
MICRO GAS SPRINGS

Diameter : 25

- RMGE 50
- RMGE 100
- RMGE 150
- RMGE 200



Type	Force daN	Stroke C mm	Order Code	LR' mm	LC' mm
RMGE	50	10	442061/300	80	70
		16	442062/300	92	76
		25	442063/300	110	85
		38	442066/300	136	98
		50	442064/300	160	110
		63	442067/300	186	123
		80	442065/300	220	140
		100	442068/300	260	160
		125	442069/300	310	185
	100	10	442071/300	80	70
		16	442072/300	92	76
		25	442073/300	110	85
		38	442076/300	136	98
		50	442074/300	160	110
		63	442077/300	186	123
		80	442075/300	220	140
		100	442078/300	260	160
		125	442079/300	310	185
	150	10	442081/300	80	70
		16	442082/300	92	76
		25	442083/300	110	85
		38	442086/300	136	98
		50	442084/300	160	110
		63	442087/300	186	123
		80	442085/300	220	140
		100	442088/300	260	160
		125	442089/300	310	185
	200	10	442091/300	80	70
		16	442092/300	92	76
		25	442093/300	110	85
		38	442096/300	136	98
		50	442094/300	160	110
		63	442097/300	186	123
		80	442095/300	220	140
		100	442098/300	260	160
		125	442099/300	310	185

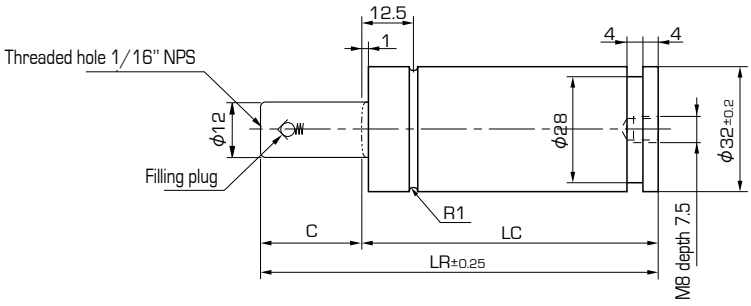
▶ NOTE : Height of RMGE is 15 mm higher than standard RMG type.

Example of order : **RMGE 100 C50**

MICRO GAS SPRINGS
Diameter : 32

RG 32

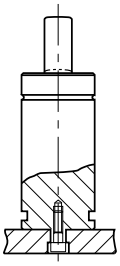
▶ Thread M8 on the bottom



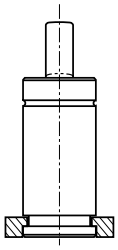
Type	Force daN	Stroke C mm	Order Code	Pressure MPa (bar)	Force F1 N★	Force F2 N★	LR mm	LC mm	Colour
RG32	50	10	442131/100	4.3 (45)	570	730	70	60	green
		16	442132/100				82	66	
		25	442133/100			750	100	75	
		38	442136/100				126	88	
		50	442134/100			770	150	100	
		63	442137/100				176	113	
		80	442135/100				210	130	
		100	442138/100			790	250	150	
		125	442139/100				300	175	
	100	10	442131/200	9 (90)	1140	1470	70	60	blue
		16	442132/200				82	66	
		25	442133/200			1500	100	75	
		38	442136/200				126	88	
		50	442134/200			1540	150	100	
		63	442137/200				176	113	
		80	442135/200				210	130	
		100	442138/200			1570	250	150	
		125	442139/200				300	175	
	150	10	442131/000	15 (150)	1700	2200	70	60	black
		16	442132/000				82	66	
		25	442133/000			2250	100	75	
		38	442136/000				126	88	
		50	442134/000			2300	150	100	
		63	442137/000				176	113	
		80	442135/000				210	130	
		100	442138/000			2350	250	150	
		125	442139/000				300	175	
	200	10	442131/300	18 (180)	2040	2630	70	60	yellow
		16	442132/300				82	66	
		25	442133/300			2700	100	75	
		38	442136/300				126	88	
		50	442134/300			2750	150	100	
		63	442137/300				176	113	
		80	442135/300				210	130	
		100	442138/300			2810	250	150	
		125	442139/300				300	175	

★(N) = Kgf x 9.80665 (Kgf)=N x 0.101972 1daN=1 x 10^1N 1bar=1 x 10^{-1}MPa

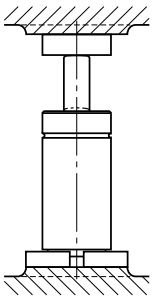
Example of order : RG32 100 C50



RGF53,RGF54



RGF4



RGF10

HYDROMECANIQUE QUIRI

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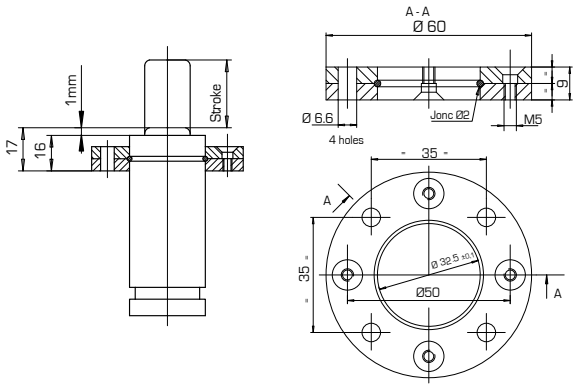
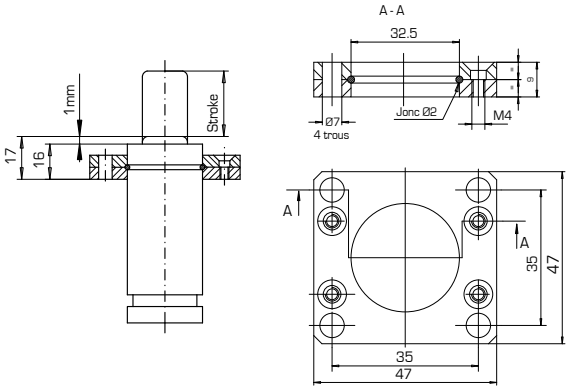
MICRO GAS SPRINGS

Diameter : 32

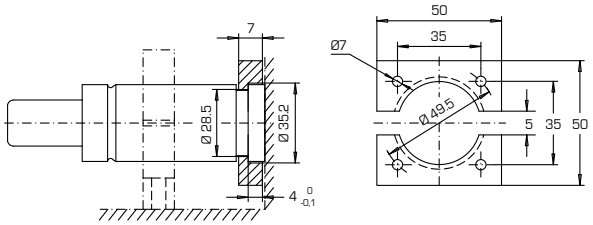
RGF 53 - (841116/000)



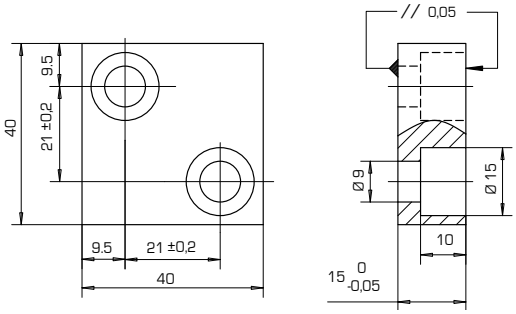
RGF 54 - (841136/000)



RGF 4 - (841062/000)



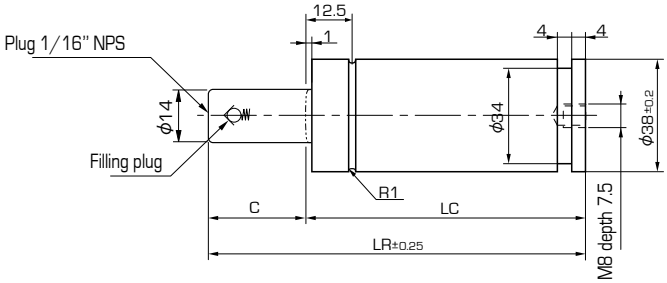
RGF 10 - (841073/000)



MICRO GAS SPRINGS
Diameter : 38

RG 250

▶ Thread M8 on the bottom

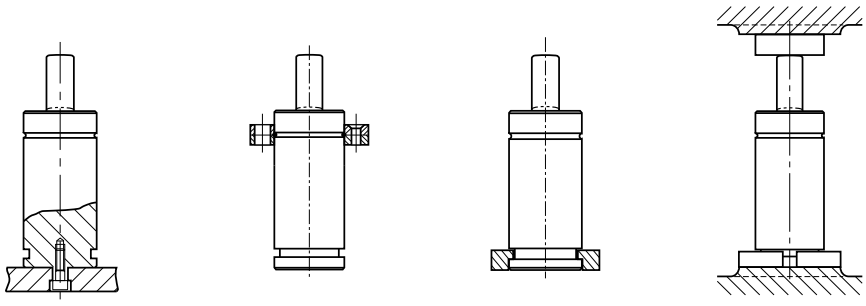


Type	Force daN	Stroke C mm	Order Code	Pressure MPa (bar)	Force F1 N★	Force F2 N★	LR mm	LC mm
RG	250	10	442141/000	15 (150) ⚠	2300	2900	70	60
		16	442142/000			2950	82	66
		25	442143/000				100	75
		38	442146/000				126	88
		50	442144/000			3000	150	100
		63	442147/000				176	113
		80	442145/000				210	130
		100	442148/000				250	150
		125	442149/000			3050	300	175

★ (N) = Kgf x 9.80665 (Kgf)=N x 0.101972 1daN=1 x 10^1N 1bar=1 x 10^{-1}MPa

Example of order : RG 250 C50

⚠ There is a blue sticker on the gas spring body when it is inflated with a special pressure (<15 Mpa)
▶ Unless otherwise requested at the time of ordering, gas springs are supplied with maximum pressure of 150 bar



RGF53,RGF54 RGF4 RGF10

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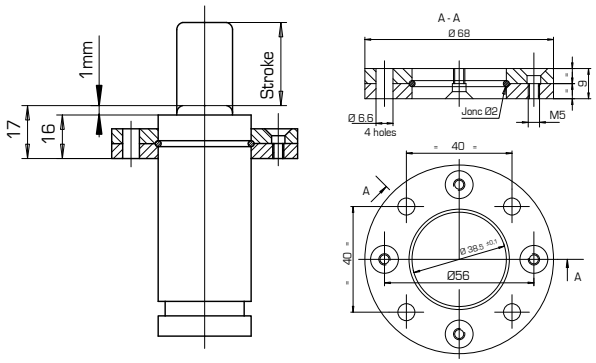
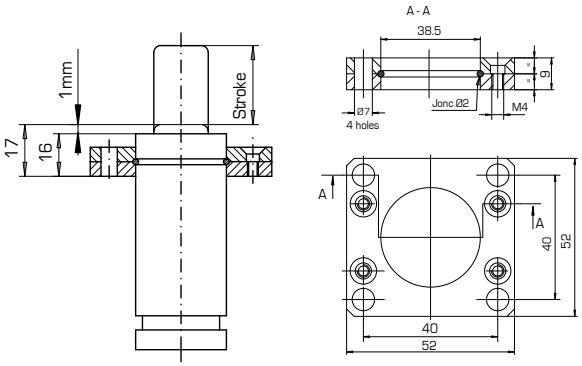
MICRO GAS SPRINGS

Diameter : 38

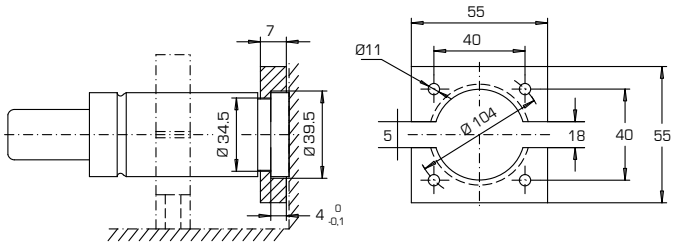
RGF 53 - (841117/000)



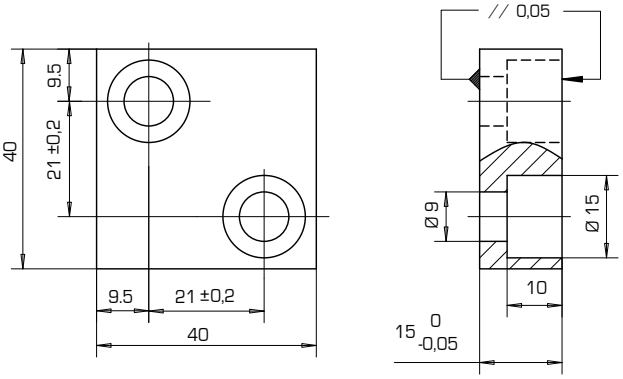
RGF 54 - (841137/000)



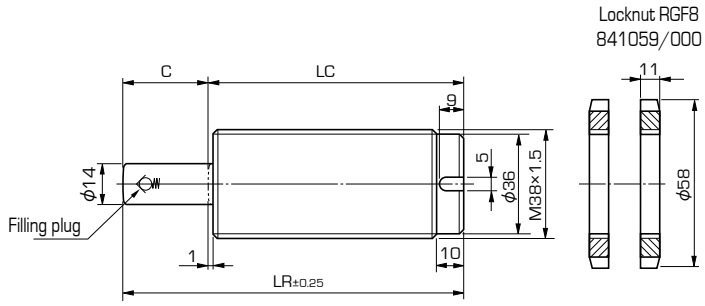
RGF 4 - (841031/000)



RGF 10 - (841073/000)



RG 300 F



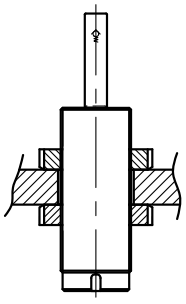
- Customer can use locknuts to fix gas springs.
- **You must order two locknuts to fixe the gas spring properly.**

Code No Type	Force daN	Stroke C mm	Order Code	Pressure MPa (bar)	Force F1 N★	Force F2 N★	LR mm	LC mm
RG	300 F	10	442241/000	18 (180) ⚠	3000	5340	70	60
		16	442242/000				82	66
		25	442243/000				100	75
		38	442246/000				126	88
		50	442244/000				150	100
		63	442247/000				176	113
		80	442245/000				210	130
		100	442248/000				250	150

★ (N) = Kgf x 9.80665 (Kgf)=N x 0.101972 1daN=1 x 10^1N 1bar=1 x 10^{-1}MPa

Example of order : RG 300F C50

⚠ There is a blue sticker on the gas spring body when it is inflated with a special pressure (<15 Mpa)

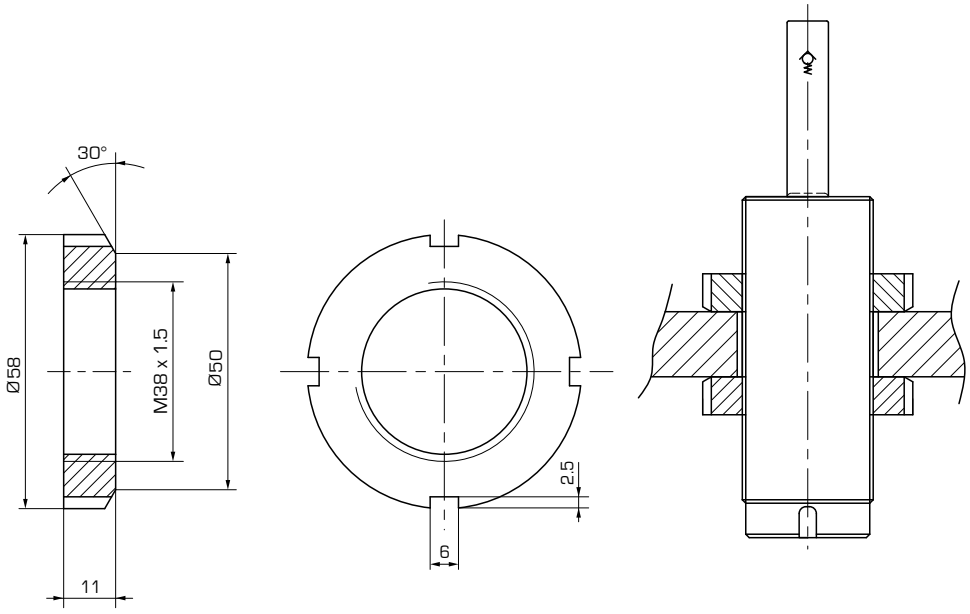


RGF8

◀ Example with two locknuts **RGF8**

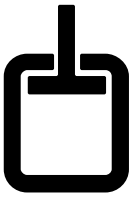
MICRO GAS SPRINGS

RGF 8 - (841059/000)



- You must order two locknuts to fix the gas spring properly.

NOTES



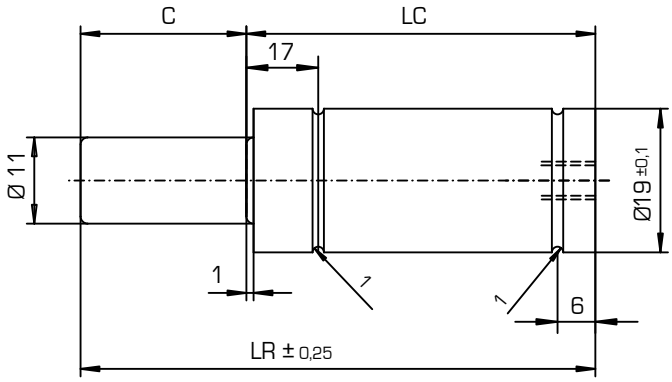
HIGH POWER GAS SPRINGS

RGP

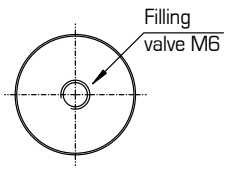
- Diameter from 19 to 150 mm
- Stroke from 7 to 125 mm
- Force from 1700 to 95000 N (9.5t)
- Very compact size
- Solid design (no welding)

HIGH POWER GAS SPRINGS

RGP 170



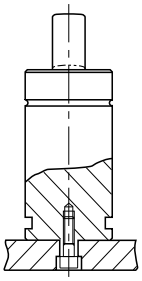
▶ **CAUTION : This gas spring cannot be repaired**

Type	Force daN	Stroke C mm	Order Code	Pressure MPa (bar)	Force F1 N★	Force F2 N★	LC mm	LR mm	Weight Kg	
RGP	170	7	443200/000	18 (180) ⓘ	1710	2140	37	44	0.050	
		10	443201/000			2720	40	50	0.080	
		15	443203/000			2420	45	60	0.110	
		19	443205/000			2890	49	68	0.140	
		25	443206/000			2600	55	80	0.170	
		38	443208/000			2720	68	106	0.200	
		50	443209/000			2890	80	130	0.230	
		63	443210/000			2940	93	156	0.260	
		75	443211/000			3020	110	185	0.290	
		80	443212/000			2840	115	195	0.320	
		100	443213/000			2900	135	235	0.350	
		125	443214/000			2890	160	285	0.380	

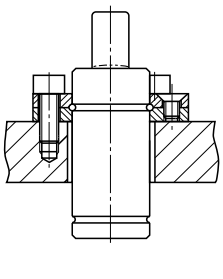
★ (N) = Kgf x 9.80665 (Kgf)=N x 0.101972 1daN=1 x 10^{1}N 1bar=1 x 10^{-1}MPa

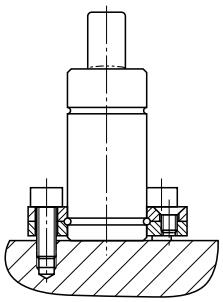
Example of order : RGP 170 C50

ⓘ There is a blue sticker on the gas spring body when it is inflated with a special pressure (<15 Mpa)



RGF51

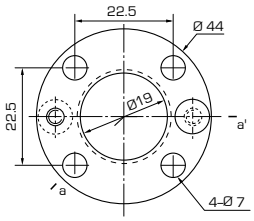


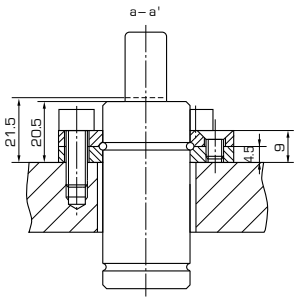


RGF52

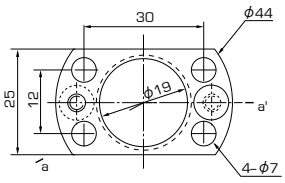
HIGH POWER GAS SPRINGS

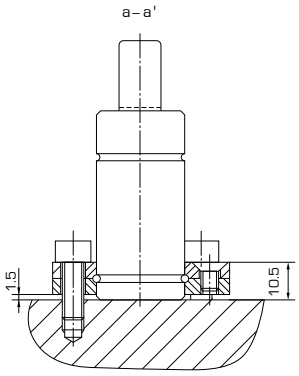
RGF 51 - (841178/000)



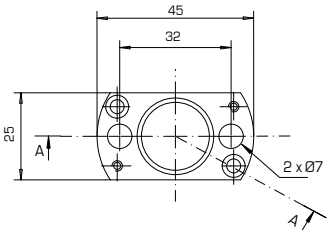


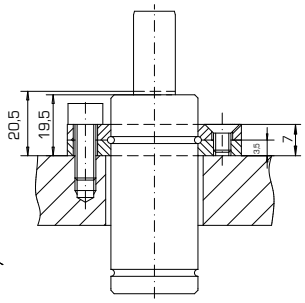
RGF 52- 4 holes - (841179/000)

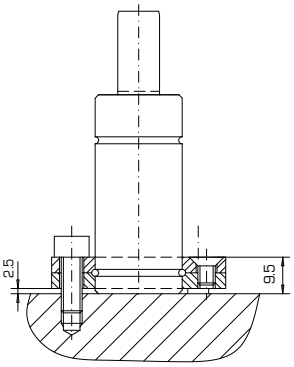




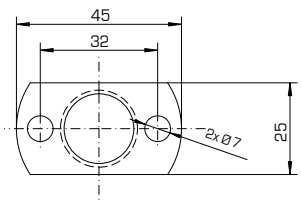
RGF 52- 2 holes - (841240/000)

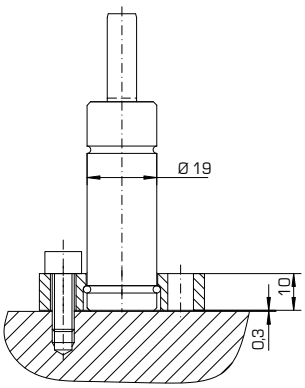






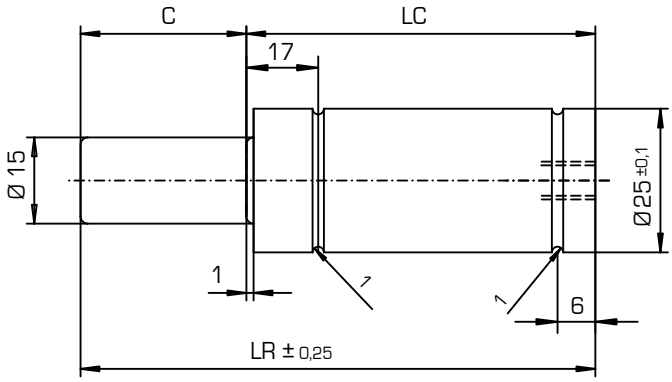
BF19 - (841242/000)



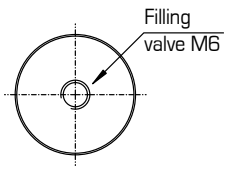


HIGH POWER GAS SPRINGS

RGP 320



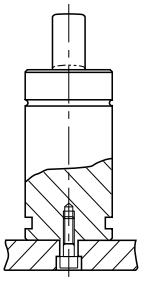
▶ **CAUTION : This gas spring cannot be repaired**

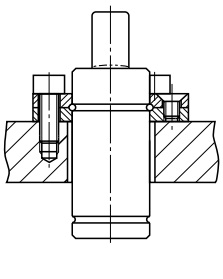
Type	Force daN	Stroke C mm	Order Code	Pressure MPa (bar)	Force F1 N★	Force F2 N★	LC mm	LR mm	Weight Kg	
RGP	320	7	443220/000	18 (180) ⓘ	3180	3840	37	44	0.070	
		10	443221/000			4750	40	50	0.105	
		15	443223/000			4900	45	60	0.140	
		19	443225/000			5010	49	68	0.175	
		25	443226/000			5090	55	80	0.210	
		38	443228/000			4750	68	106	0.245	
		50	443229/000			5010	80	130	0.280	
		63	443230/000			4800	93	156	0.315	
		75	443231/000			4950	110	185	0.350	
		80	443232/000			4940	115	195	0.385	
		100	443233/000			5030	135	235	0.420	
		125	443234/000			5010	160	285	0.460	

★ (N) = Kgf x 9.80665 (Kgf)=N x 0.101972 1daN=1 x 10^1N 1bar=1 x 10^{-1}MPa

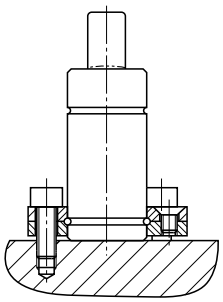
Example of order : RGP 320 C50

ⓘ There is a blue sticker on the gas spring body when it is inflated with a special pressure (<15 Mpa)





RGF51



RGF52

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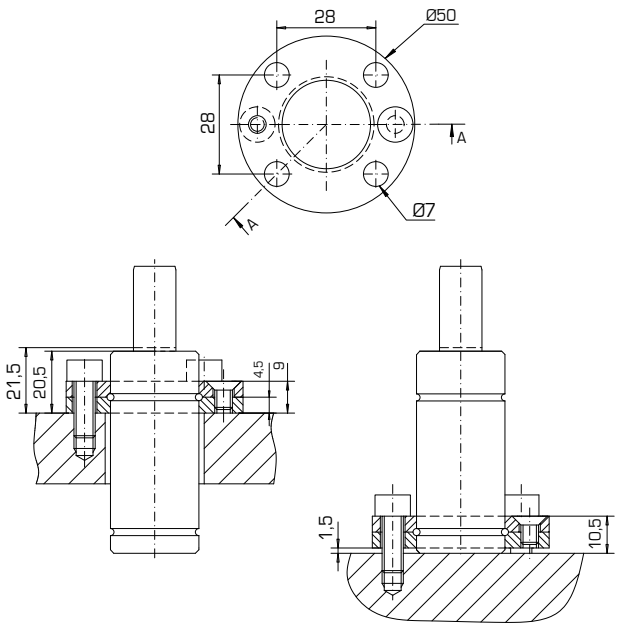
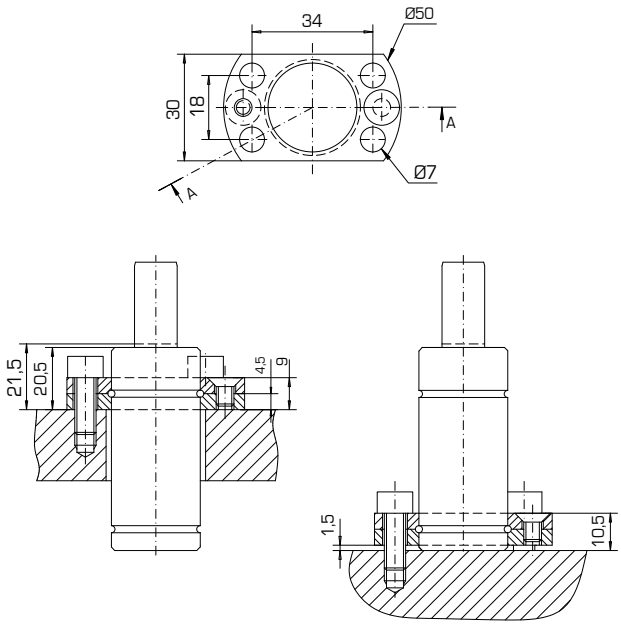
HIGH POWER GAS SPRINGS

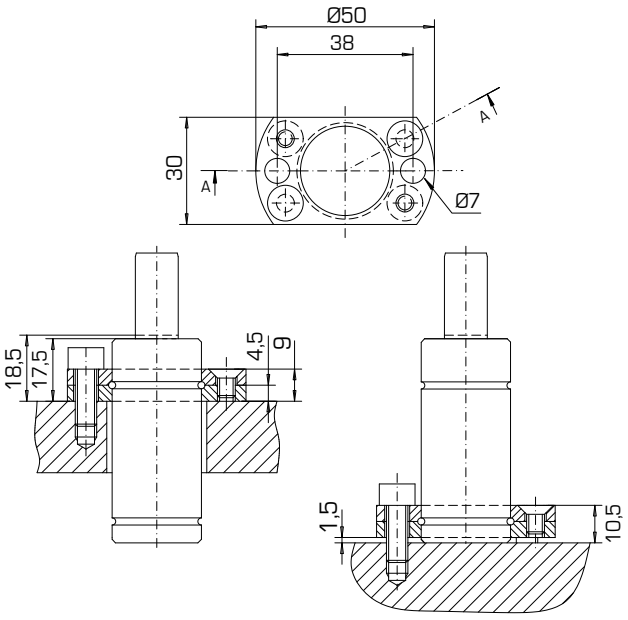
RGF 51 - (841078/000)



RGF 52 - 4 holes - (841077/000)

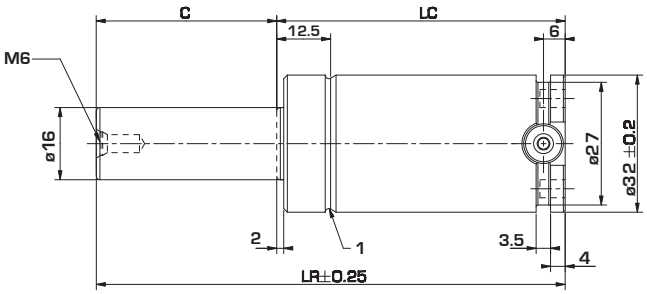


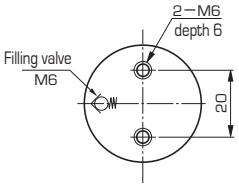
VDI - (841241/000)



HIGH POWER GAS SPRINGS

RGP 350

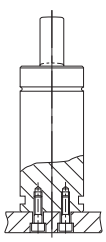


Type	Force daN	Stroke C mm	Order Code	Pressure MPa (bar)	Force F1 N★	Force F2 N★	LC mm	LR mm	Weight Kg	
RGP	350	10	443241/000	18 (180) ⚠	3620	5080	40	50	0.174	
		13	443242/000			5100	43	56	0.204	
		16	443244/000			5120	46	62	0.234	
		19	443245/000			5310	49	68	0.264	
		25	443246/000			5280	55	80	0.294	
		32	443247/000			5220	62	94	0.324	
		38	443248/000			5310	68	106	0.354	
		50	443249/000			5280	80	130	0.384	
		63	443250/000			5300	93	156	0.414	
		75	443251/000			5280	105	180	0.444	
		80	443252/000			5290	110	190	0.474	
		100	443253/000			5320	130	230	0.504	
		125	443254/000			5310	155	280	0.534	

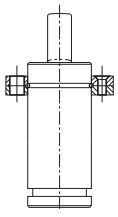
★ (N) = Kgf x 9.80665 (Kgf)=N x 0.101972 1daN=1 x 10^1N 1bar=1 x 10^{-1}MPa

Example of order : RGP 350 C50

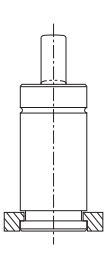
⚠ There is a blue sticker on the gas spring body when it is inflated with a special pressure (<18 Mpa)



RGF53,RGF54



RGF4



RGF10

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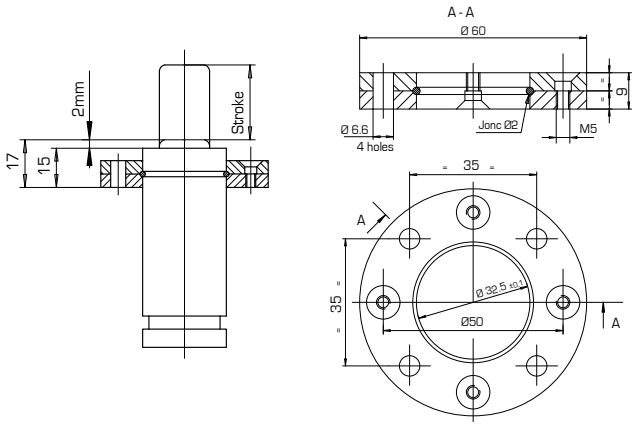
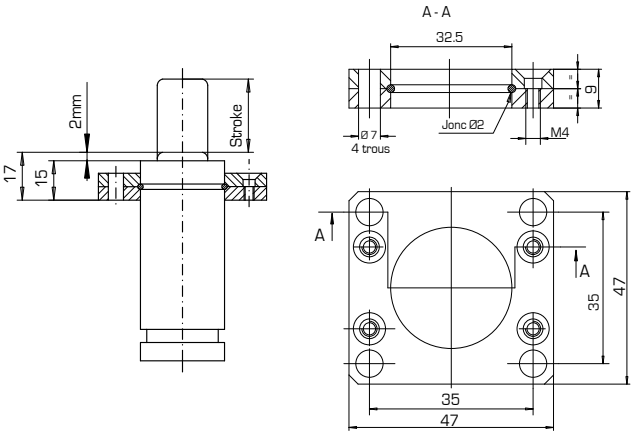
HIGH POWER GAS SPRINGS

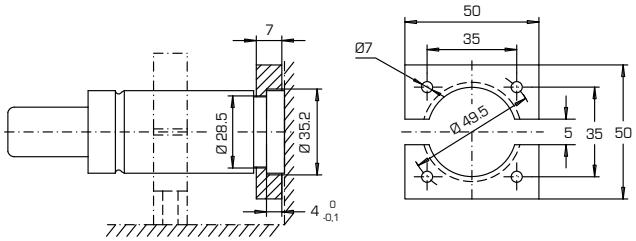
RGF 53 - (841116/000)



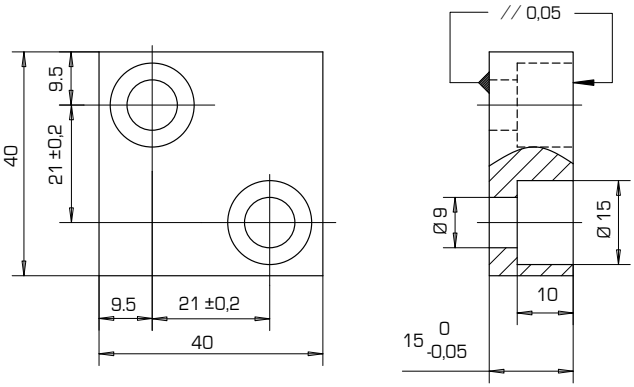
RGF 54 - (841136/000)



RGF 4 - (841062/000)

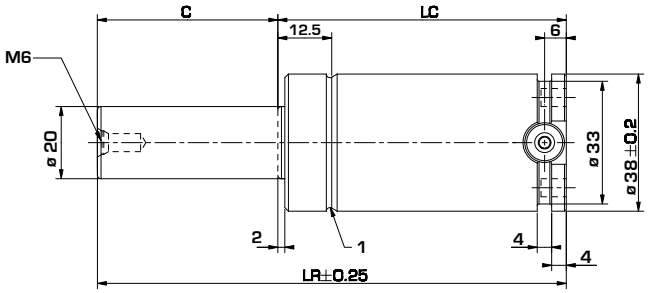


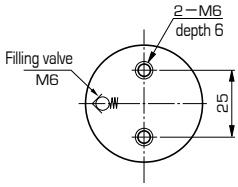
RGF 10 - (841073/000)



HIGH POWER GAS SPRINGS

RGP 500

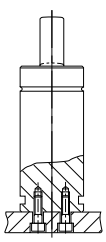


Type	Force daN	Stroke C mm	Order Code	Pressure MPa (bar)	Force F1 N★	Force F2 N★	LC mm	LR mm	Weight Kg	
RGP	500	10	443261/000	15 (150) ⓘ	4710	7240	40	50	0.257	
		13	443262/000			7970	43	56	0.308	
		16	443264/000			7350	46	62	0.359	
		19	443265/000			7520	49	68	0.410	
		25	443266/000			7530	55	80	0.461	
		32	443267/000			7510	62	94	0.512	
		38	443268/000			7520	68	106	0.563	
		50	443269/000			7640	80	130	0.614	
		63	443270/000			7610	93	156	0.665	
		75	443271/000			7600	105	180	0.716	
		80	443272/000			7610	110	190	0.767	
		100	443273/000			7640	130	230	0.818	
		125	443274/000			7620	155	280	0.869	

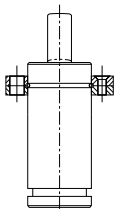
★ (N) = Kgf x 9.80665 (Kgf)=N x 0.101972 1daN=1 x 10^1N 1bar=1 x 10^{-1}MPa

Example of order : RGP 500 C50

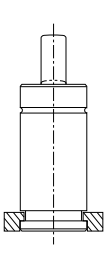
ⓘ There is a blue sticker on the gas spring body when it is inflated with a special pressure (<15 Mpa)



RGF53,RGF54



RGF4



RGF10

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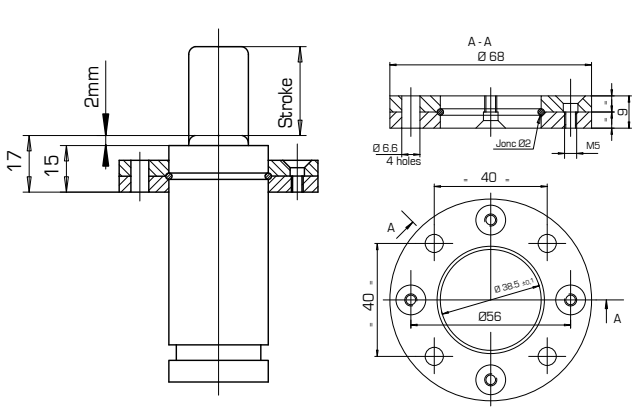
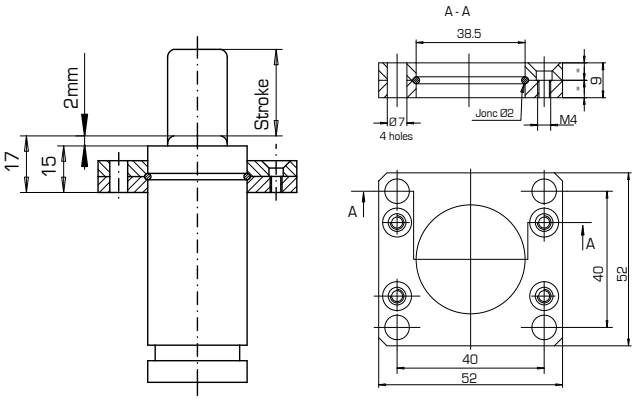
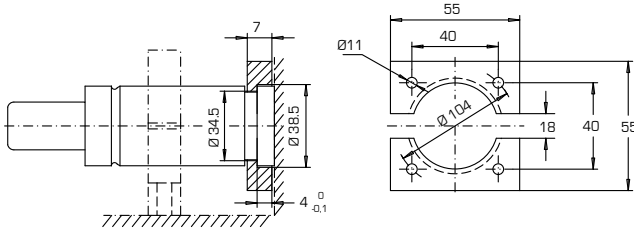
RGF 53 - (841117/000)



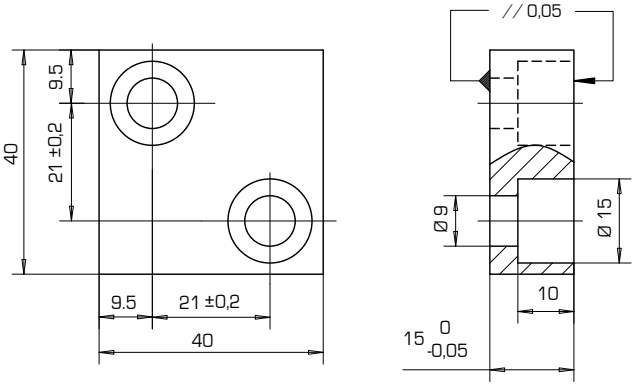
RGF 54 - (841137/000)



RGF 4 - (841031/000)

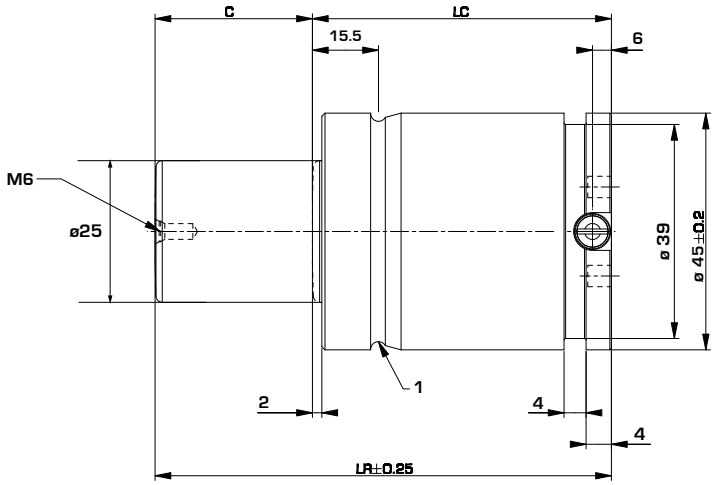


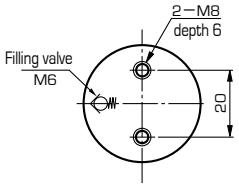
RGF 10 - (841073/000)



HIGH POWER GAS SPRINGS

RGP 750

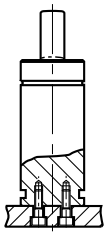


Type	Force daN	Stroke C mm	Order Code	Pressure MPa (bar)	Force F1 N★	Force F2 N★	LC mm	LR mm	Weight Kg	
RGP	750	10	443281/000	15 (150) ⓘ	7360	11200	42	52	0.40	
		13	443282/000				45	58	0.42	
		16	448284/000			11300	48	64	0.44	
		19	443285/000			11300	51	70	0.46	
		25	443286/000			11400	57	82	0.51	
		32	443287/000				64	96	0.55	
		38	443288/000			11600	70	108	0.59	
		50	443289/000				82	132	0.67	
		63	443290/000				95	158	0.75	
		75	443291/000				107	182	0.83	
		80	443292/000			11700	112	192	0;86	
		100	443293/000				132	232	0.99	
		125	443294/000				157	282	1.15	

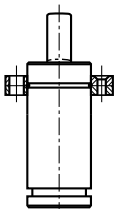
★ (N) = Kgf x 9.80665 (Kgf)=N x 0.101972 1daN=1 x 10^1N 1bar=1 x 10^{-1}MPa

Example of order : RGP 750 C50

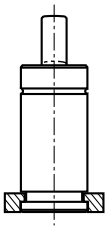
ⓘ There is a blue sticker on the gas spring body when it is inflated with a special pressure (<15 Mpa)



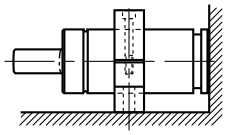
RGF53,RGF54



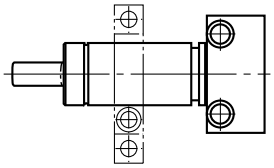
RGF4



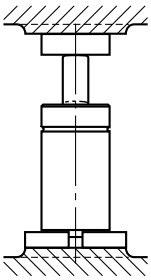
RGF3



RGF9

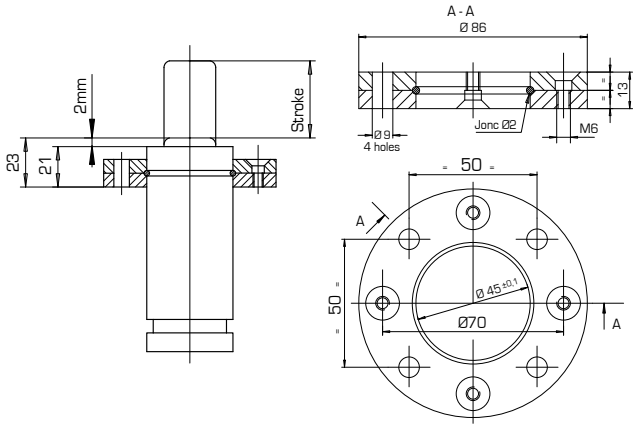


RGF10

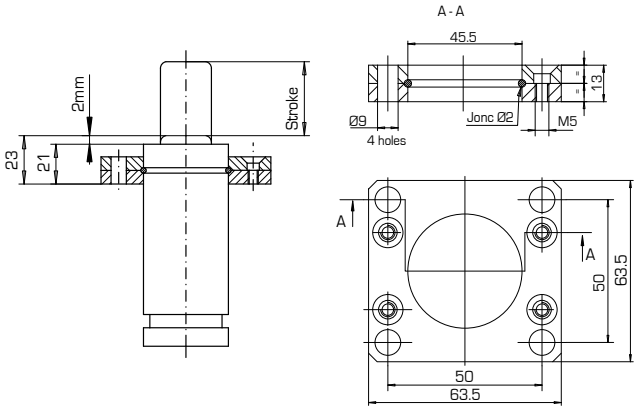


HIGH POWER GAS SPRINGS

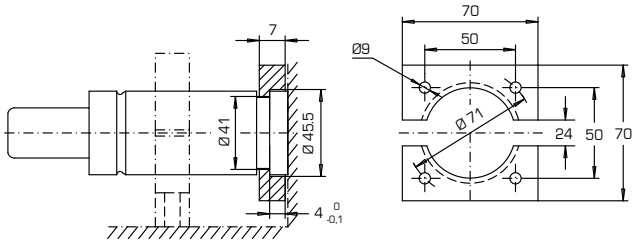
RGF 53 - (841118/000)



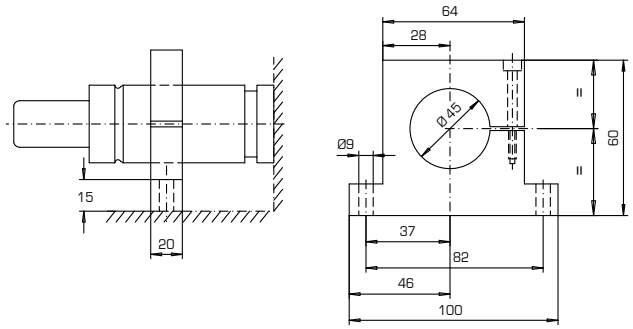
RGF 54 - (841138/000)



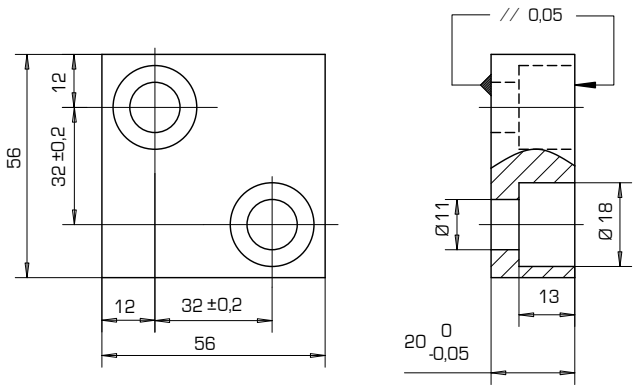
RGF 4 - (841063/000)



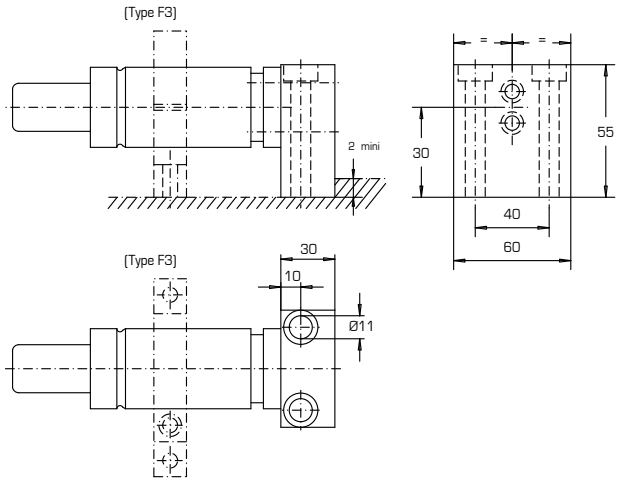
RGF 3 - (841205/000)



RGF 10 - (841074/000)

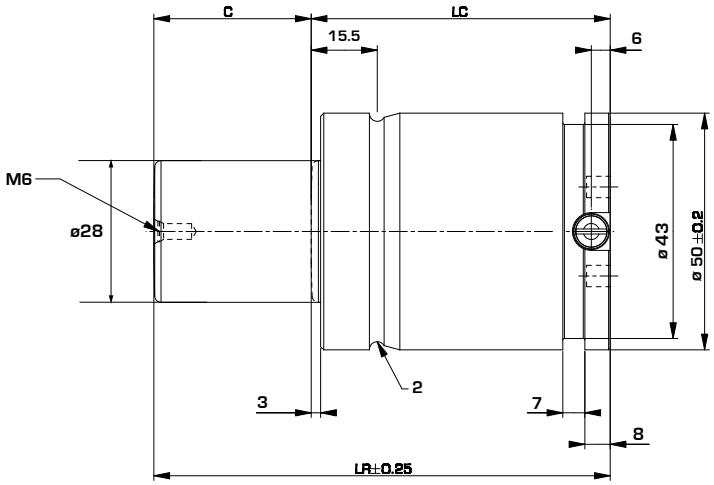


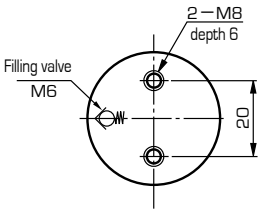
RGF 9 - (841224/000)



HIGH POWER GAS SPRINGS

RGP 1000

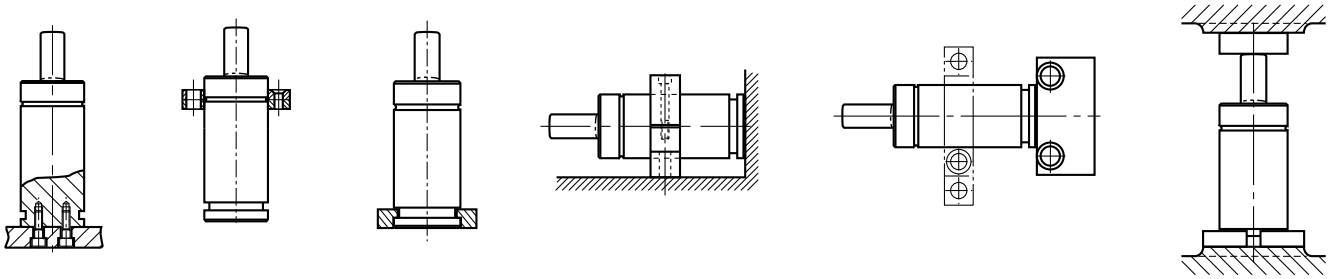


Type	Force daN	Stroke C mm	Order Code	Pressure MPa (bar)	Force F1 N★	Force F2 N★	LC mm	LR mm	Weight Kg	
RGP	1000	13	443302/000	15 (150) ⓘ	9240	14100	51	64	0.58	
		16	443304/000			14200	54	70	0.60	
		19	443305/000			14300	57	76	0.63	
		25	443306/000			14400	63	88	0.70	
		32	443307/000				70	102	0.74	
		38	443308/000				76	114	0.80	
		50	443309/000			14800	88	138	0.92	
		63	443310/000			14900	101	164	1.02	
		75	443311/000			15100	113	188	1.13	
		80	443312/000				118	198	1.16	
		100	443313/000			15300	138	238	1.35	
		125	443314/000				163	288	1.56	

★ (N) = Kgf x 9.80665 (Kgf)=N x 0.101972 1daN=1 x 10^1N 1bar=1 x 10^{-1}MPa

Example of order : RGP 1000 C50

ⓘ There is a blue sticker on the gas spring body when it is inflated with a special pressure (<15 Mpa)



RGF53,RGF54 RGF4 RGF3 RGF9 RGF10

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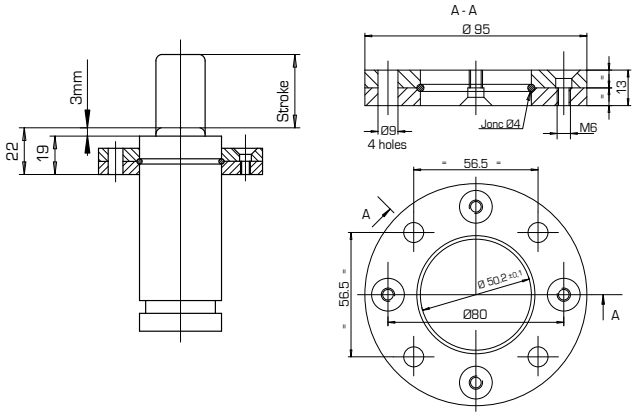
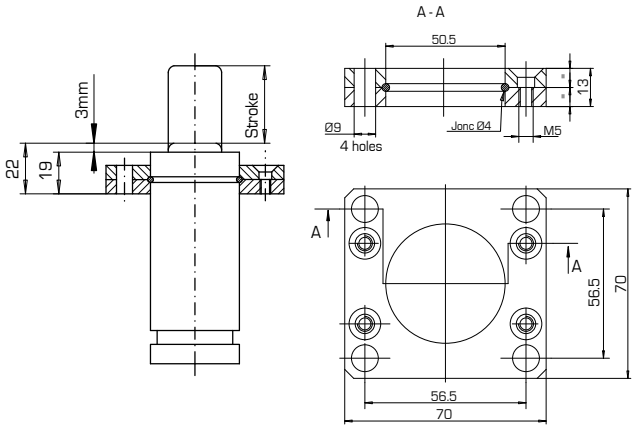
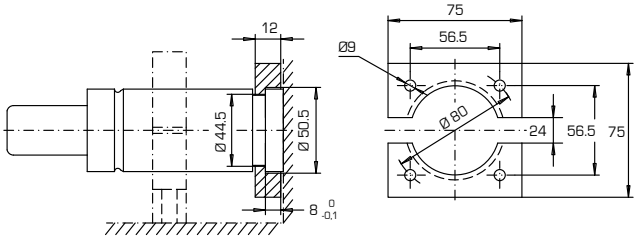
RGF 53 - (841119/000)



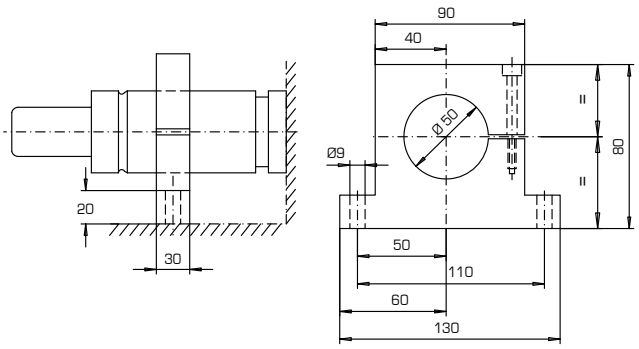
RGF 54 - (841139/000)



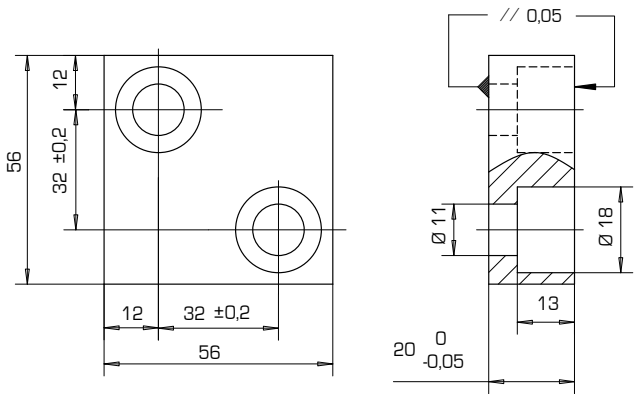
RGF 4 - (841032/000)



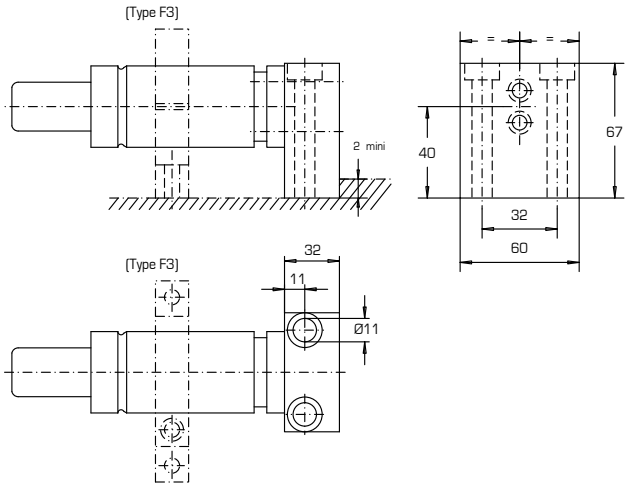
RGF 3 - (841027/000)



RGF 10 - (841074/000)

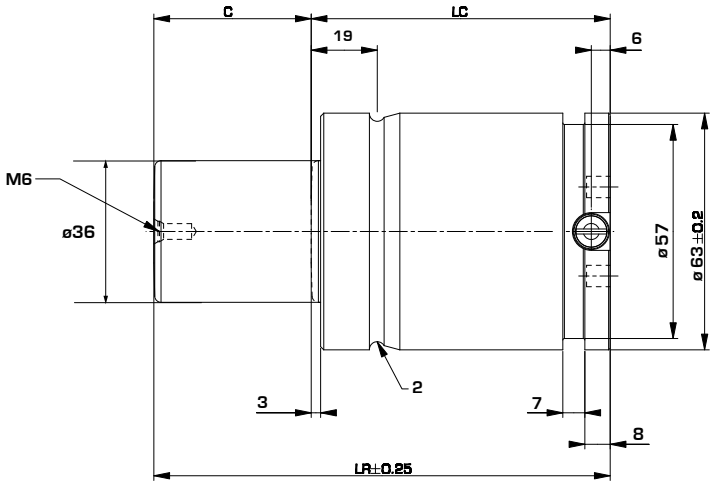


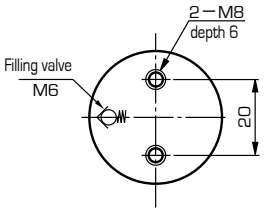
RGF 9 - (841225/000)



HIGH POWER GAS SPRINGS

RGP 1500

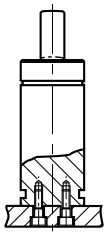


Type	Force daN	Stroke C mm	Order Code	Pressure MPa (bar)	Force F1 N★	Force F2 N★	LC mm	LR mm	Weight Kg	
RGP	1500	13	443322/000	15 (150) ⓘ	15300	23200	57	70	1.00	
		16	443324/000				60	76	1.04	
		19	443325/000			23500	63	82	1.10	
		25	443326/000			23700	69	94	1.20	
		32	443327/000				76	108	1.25	
		38	443328/000			23800	82	120	1.32	
		50	443329/000				94	144	1.47	
		63	443330/000			24000	107	170	1.63	
		75	443331/000			24100	119	194	1.77	
		80	443332/000			24300	124	204	1.83	
		100	443333/000			24400	144	244	2.10	
		125	443334/000			24600	169	294	2.40	

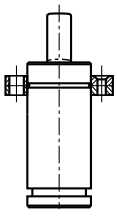
★ (N) = Kgf x 9.80665 (Kgf)=N x 0.101972 1daN=1 x 10^1N 1bar=1 x 10^{-1}MPa

Example of order : RGP 1500 C50

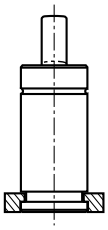
ⓘ There is a blue sticker on the gas spring body when it is inflated with a special pressure (<15 Mpa)



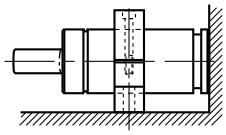
RGF53,RGF54



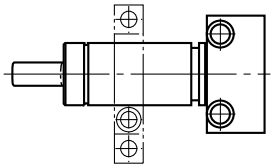
RGF4



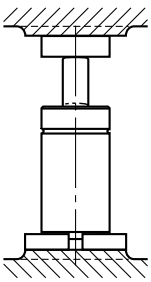
RGF3



RGF9



RGF10



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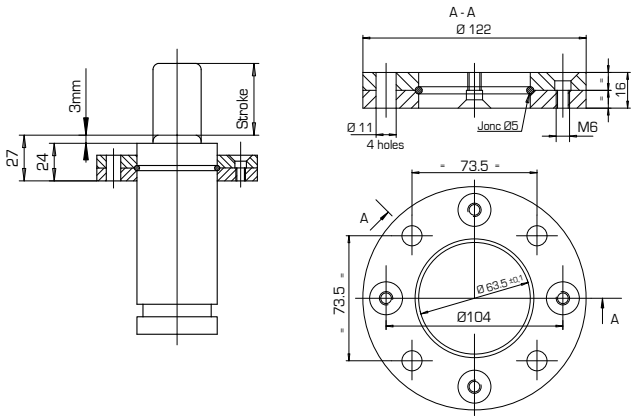
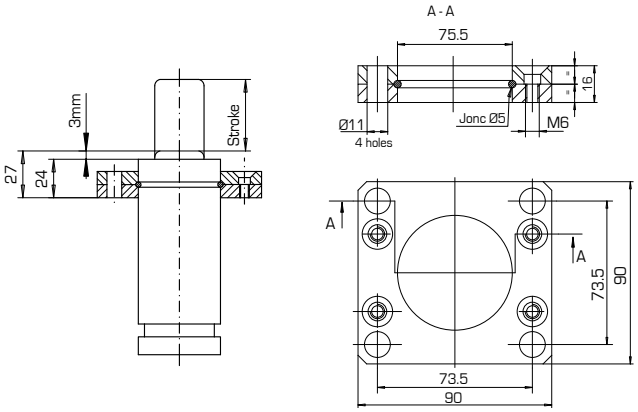
HIGH POWER GAS SPRINGS

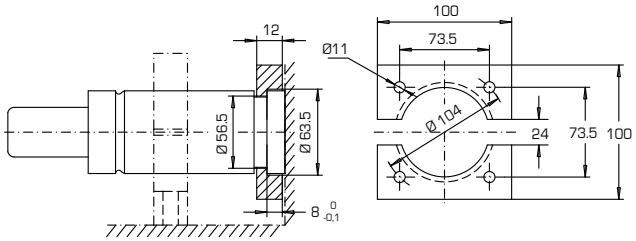
RGF 53 - (841219/000)



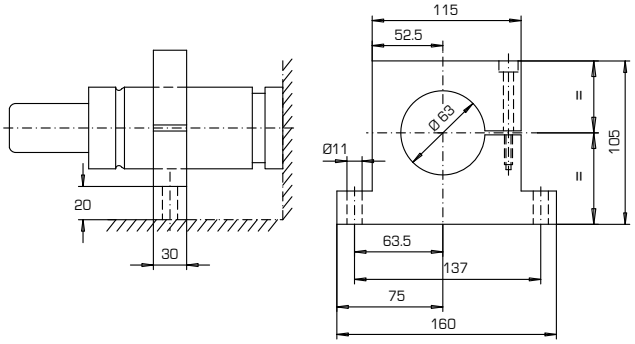
RGF 54 - (841220/000)



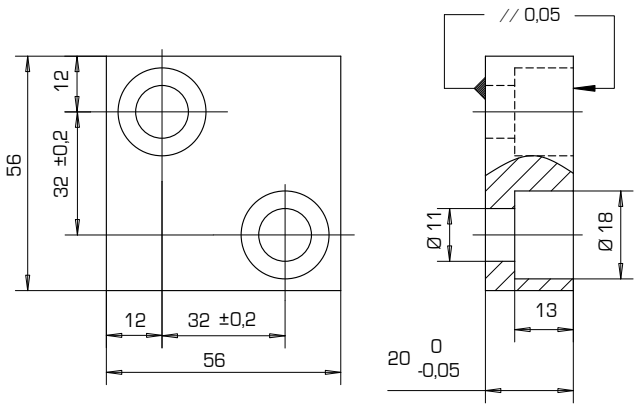
RGF 4 - (841202/000)



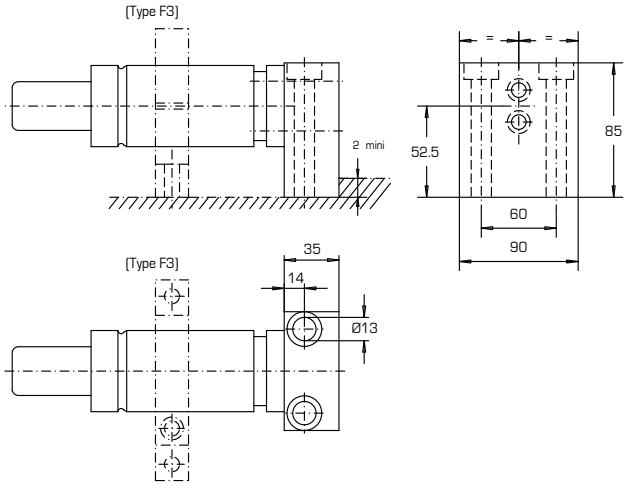
RGF 3 - (841223/000)



RGF 10 - (841074/000)

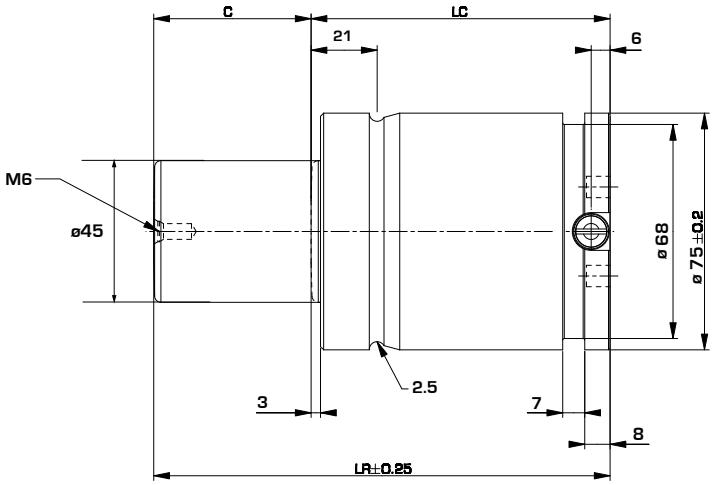


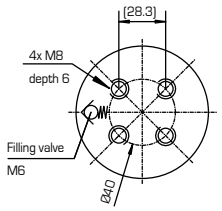
RGF 9 - (841226/000)



HIGH POWER GAS SPRINGS

RGP 2400

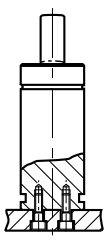


Type	Force daN	Stroke C mm	Order Code	Pressure MPa (bar)	Force F1 N★	Force F2 N★	LC mm	LR mm	Weight Kg	
RGP	2400	16	443344/000	15 (150) ⓘ	23900	36700	61	77	1.50	
		19	443345/000				64	83	1.54	
		25	443346/000			37000	70	95	1.66	
		32	443347/000				77	109	1.78	
		38	443348/000			37200	83	121	1.88	
		50	443349/000			37700	95	145	2.10	
		63	443350/000			38200	108	171	2.30	
		75	443351/000			38400	120	195	2.50	
		80	443352/000				125	205	2.60	
		100	443353/000			38600	145	245	2.90	
		125	443354/000			38900	170	295	3.30	

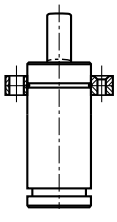
★ (N) = Kgf x 9.80665 (Kgf)=N x 0.101972 1daN=1 x 10^1N 1bar=1 x 10^{-1}MPa

Example of order : RGP 2400 C50

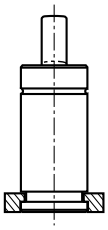
ⓘ There is a blue sticker on the gas spring body when it is inflated with a special pressure (<15 Mpa)



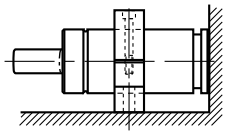
RGF53,RGF54



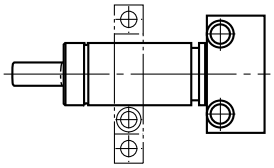
RGF4



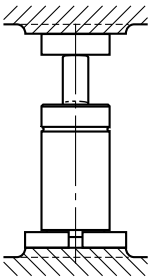
RGF3



RGF9



RGF10



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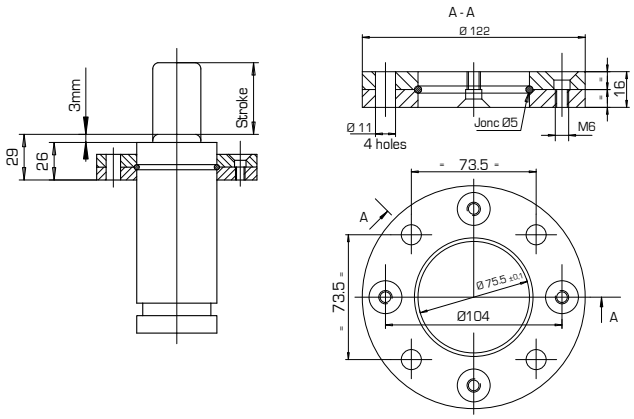
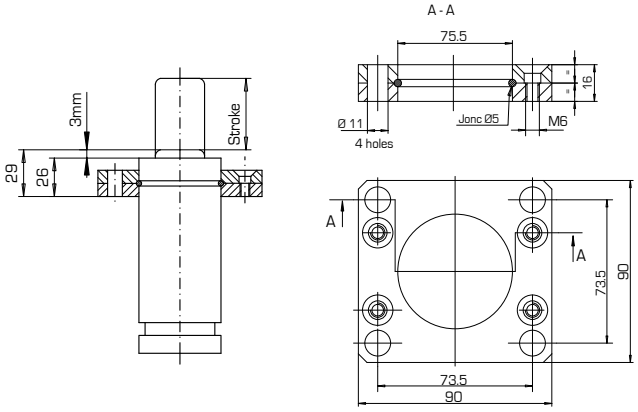
HIGH POWER GAS SPRINGS

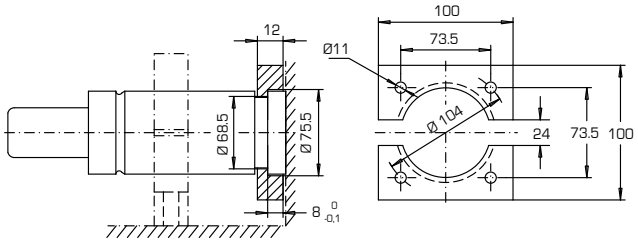
RGF 53 - (841120/000)



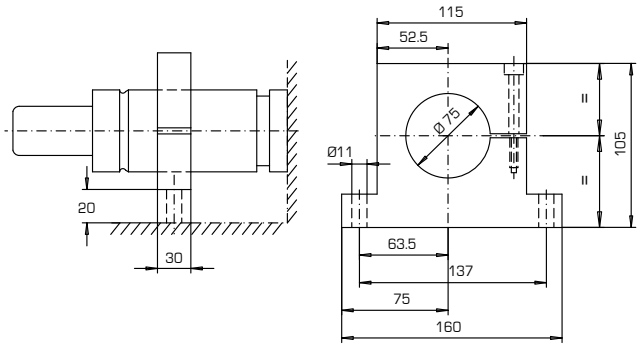
RGF 54 - (841140/000)



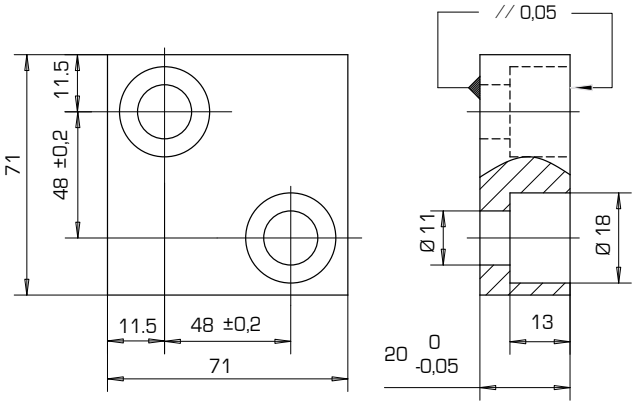
RGF 4 - (841033/000)



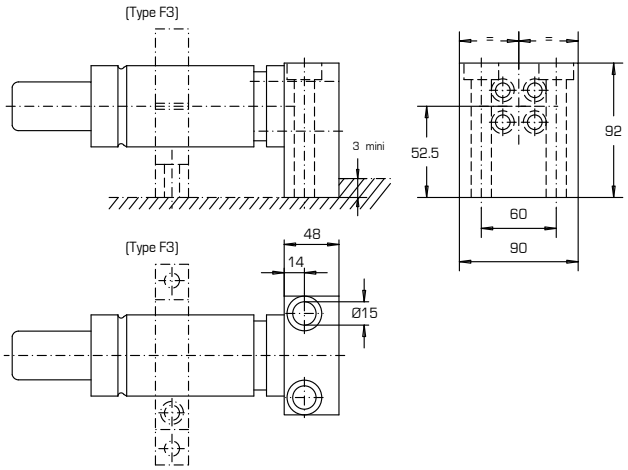
RGF 3 - (841028/000)



RGF 10 - (841075/000)

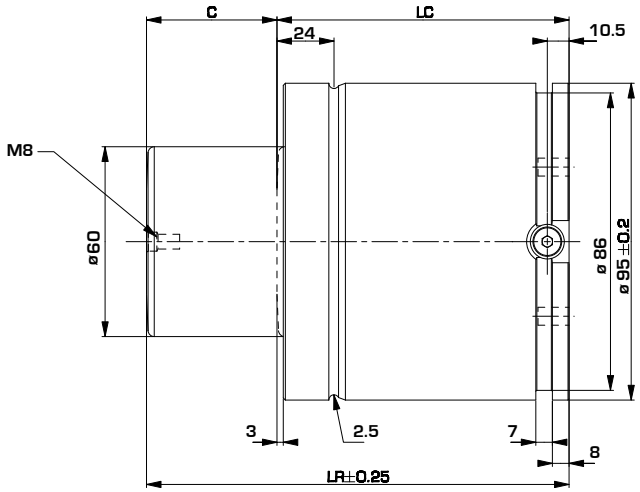


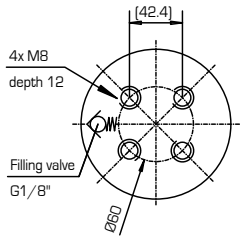
RGF 9 - (841227/000)



HIGH POWER GAS SPRINGS

RGP 4200

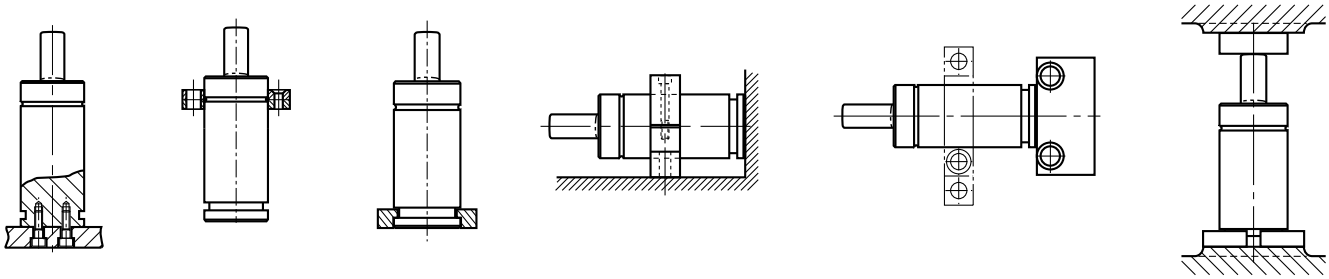


Type	Force daN	Stroke C mm	Order Code	Pressure MPa (bar)	Force F1 N★	Force F2 N★	LC mm	LR mm	Weight Kg	
RGP	4200	16	443364/000	15 (150) ⓘ	42400	68300	74	90	3.00	
		19	443365/000			70000	77	96	3.10	
		25	443366/000			72100	83	108	3.30	
		32	443367/000			73800	90	122	3.50	
		38	443368/000			75500	96	134	3.60	
		50	443369/000			76800	108	158	4.00	
		63	443370/000			77600	121	184	4.30	
		75	443371/000			78500	133	208	4.60	
		80	443372/000			78900	138	218	4.70	
		100	443373/000			79300	158	258	5.30	
		125	443374/000			80200	183	308	5.90	

★ (N) = Kgf x 9.80665 (Kgf)=N x 0.101972 1daN=1 x 10^1N 1bar=1 x 10^{-1}MPa

Example of order : RGP 4200 C50

ⓘ There is a blue sticker on the gas spring body when it is inflated with a special pressure (<15 Mpa)



RGF53,RGF54 RGF4 RGF3 RGF9 RGF10

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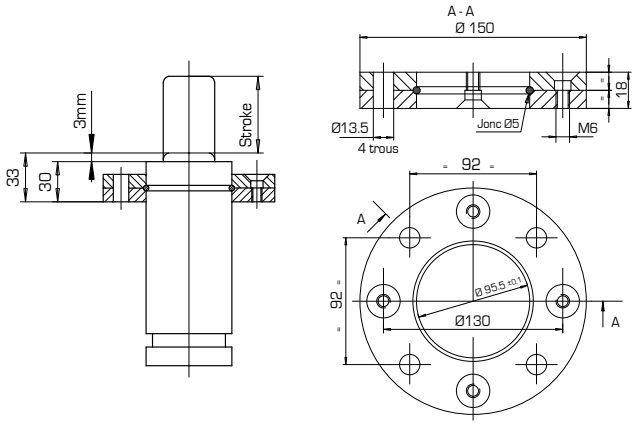
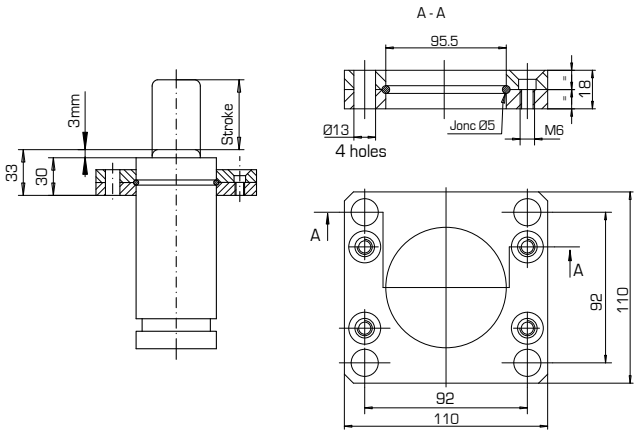
HIGH POWER GAS SPRINGS

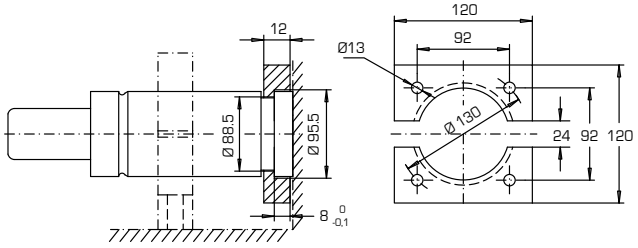
RGF 53 - (841121/000)



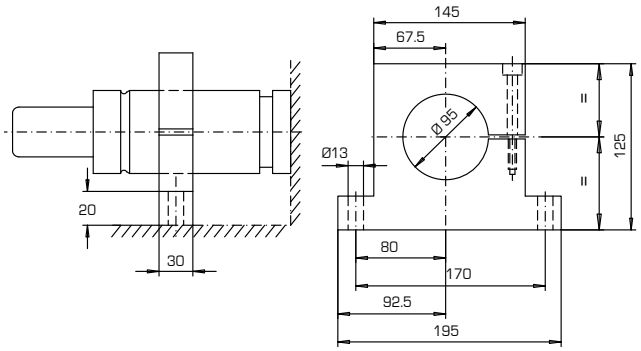
RGF 54 - (841141/000)



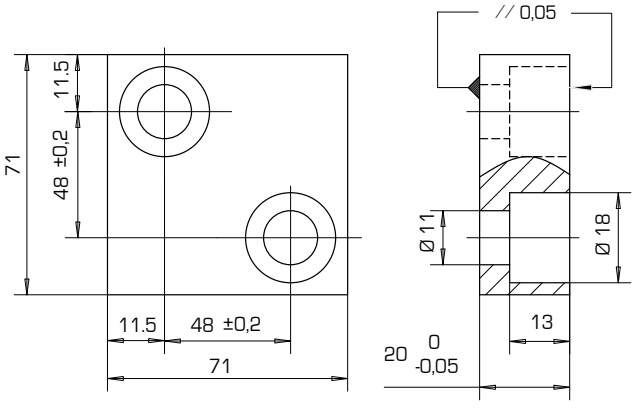
RGF 4 - (841034/000)



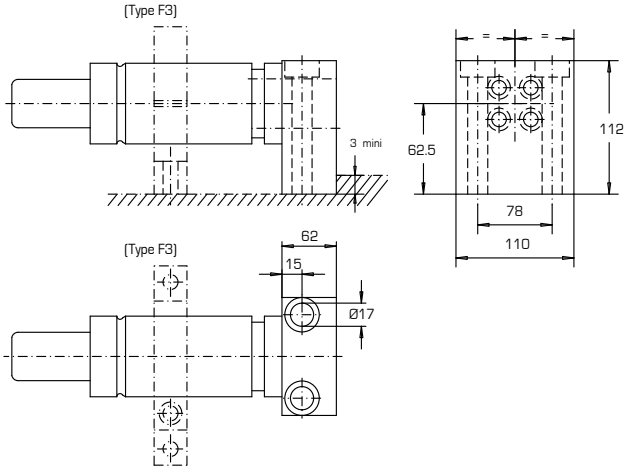
RGF 3 - (841029/000)



RGF 10 - (841075/000)

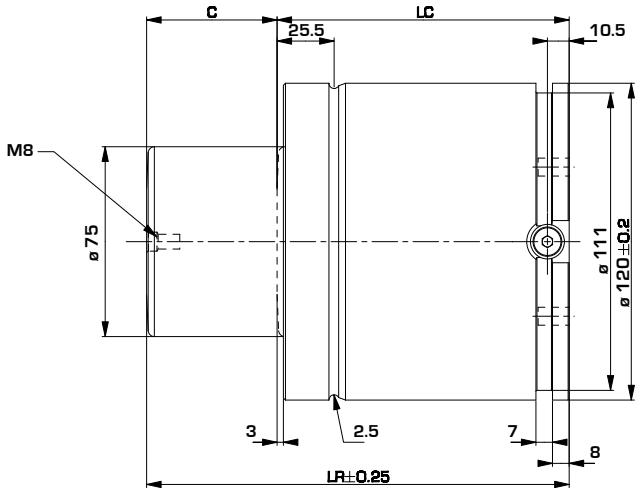


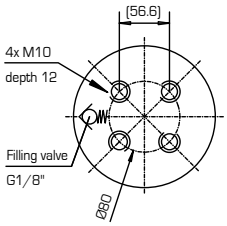
RGF 9 - (841228/000)



HIGH POWER GAS SPRINGS

RGP 6600

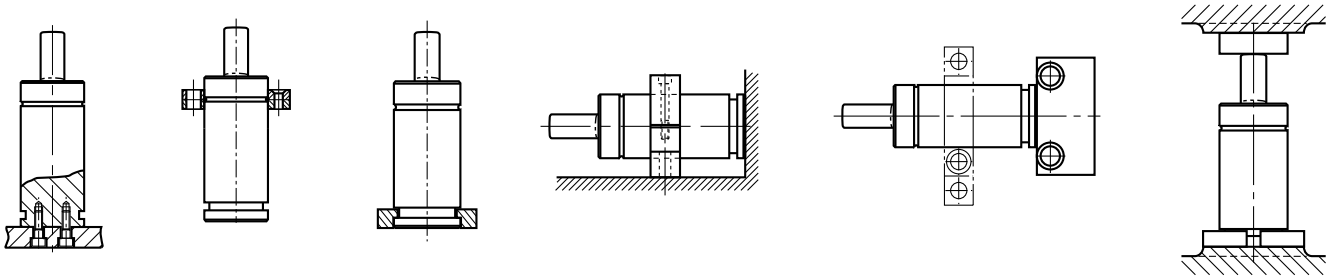


Type	Force daN	Stroke C mm	Order Code	Pressure MPa (bar)	Force F1 N★	Force F2 N★	LC mm	LR mm	Weight Kg	
RGP	6600	16	443384/000	15 (150) ⓘ	66300	92100	84	100	5.70	
		19	443385/000			94100	87	106	5.90	
		25	443386/000			97400	93	118	6.20	
		32	443387/000			100100	100	132	6.40	
		38	443388/000			101400	106	144	6.70	
		50	443389/000			104000	118	168	7.40	
		63	443390/000			105400	131	194	7.80	
		75	443391/000			106700	143	218	8.40	
		80	443392/000			107400	148	228	8.60	
		100	443393/000			108700	168	268	9.50	
		125	443394/000			115300	193	318	10.90	

★(N) = Kgf x 9.80665 (Kgf)=N x 0.101972 1daN=1 x 10¹N 1bar=1 x 10⁻¹MPa

Example of order : RGP 6600 C50

ⓘ There is a blue sticker on the gas spring body when it is inflated with a special pressure (<15 Mpa)



RGF53,RGF54 RGF4 RGF3 RGF9 RGF10

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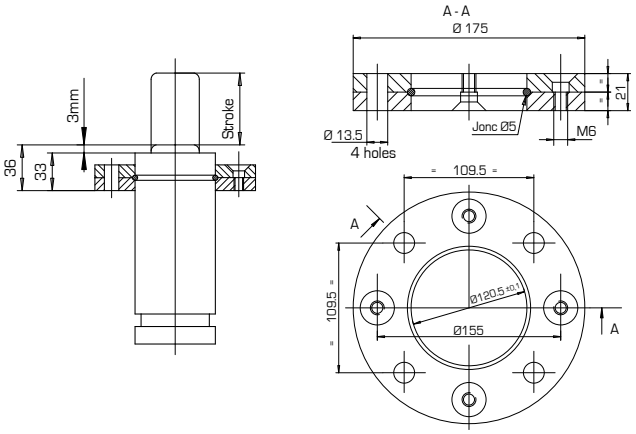
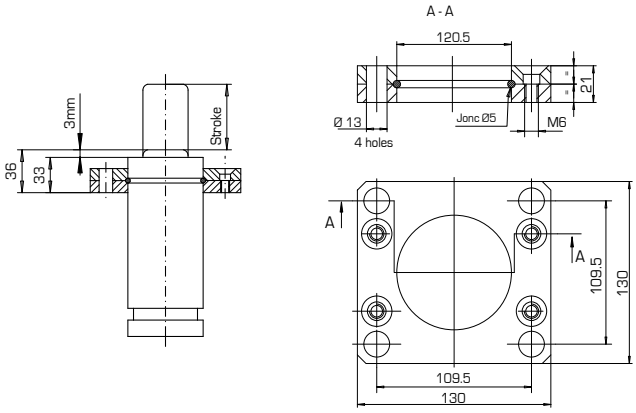
HIGH POWER GAS SPRINGS

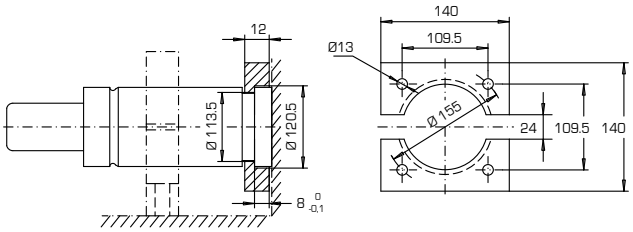
RGF 53 - (841122/000)



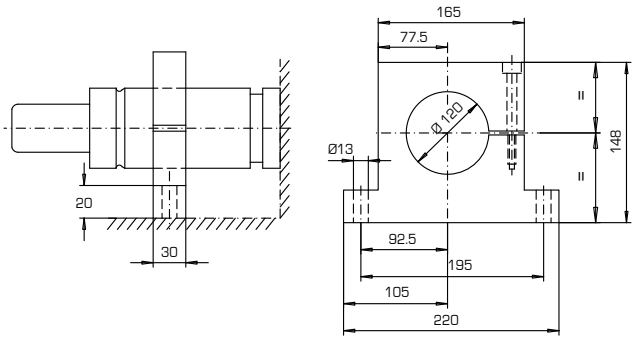
RGF 54 - (841142/000)



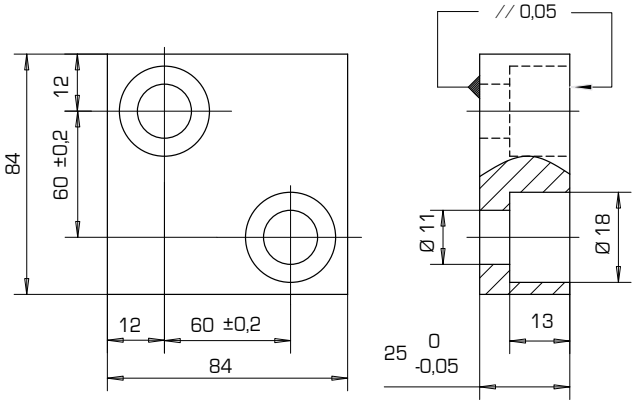
RGF 4 - (841035/000)



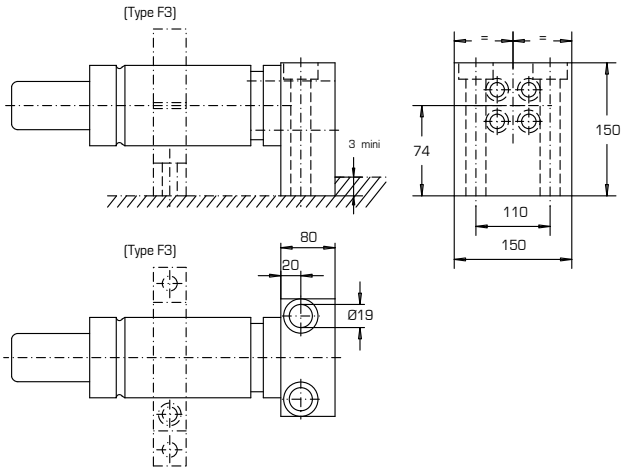
RGF 3 - (841030/000)



RGF 10 - (841110/000)

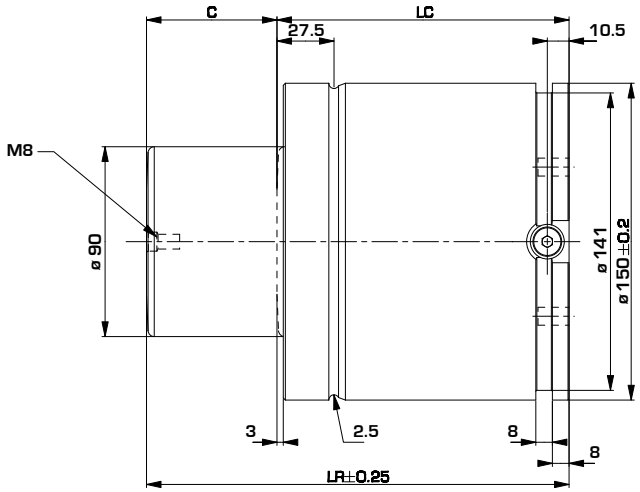


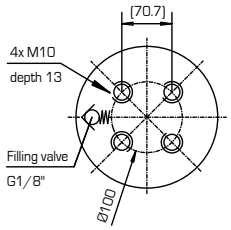
RGF 9 - (841229/000)



HIGH POWER GAS SPRINGS

RGP 9500

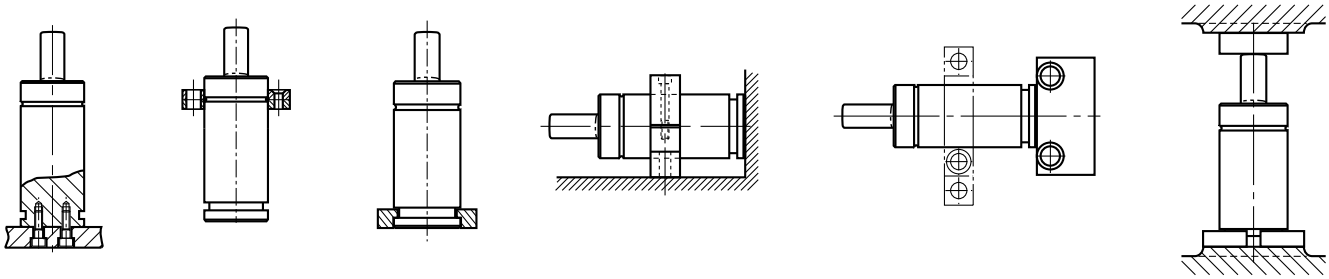


Type	Force daN	Stroke C mm	Order Code	Pressure MPa (bar)	Force F1 N★	Force F2 N★	LC mm	LR mm	Weight Kg	
RGP	9500	19	443405/000	15 (150) ⓘ	95400	140300	97	116	10.80	
		25	443406/000			144100	103	128	11.40	
		32	443407/000			147900	110	142	11.70	
		38	443408/000			149800	116	154	12.10	
		50	443409/000			152700	128	178	13.00	
		63	443410/000			154600	141	204	14.00	
		75	443411/000			156500	153	228	14.90	
		80	443412/000				158	238	15.30	
		100	443413/000			158400	178	278	16.70	
		125	443414/000			159400	203	328	18.40	

★ (N) = Kgf x 9.80665 (Kgf)=N x 0.101972 1daN=1 x 10^1N 1bar=1 x 10^{-1}MPa

Example of order : RGP 9500 C50

ⓘ There is a blue sticker on the gas spring body when it is inflated with a special pressure (<15 Mpa)



RGF53,RGF54 RGF4 RGF3 RGF9 RGF10

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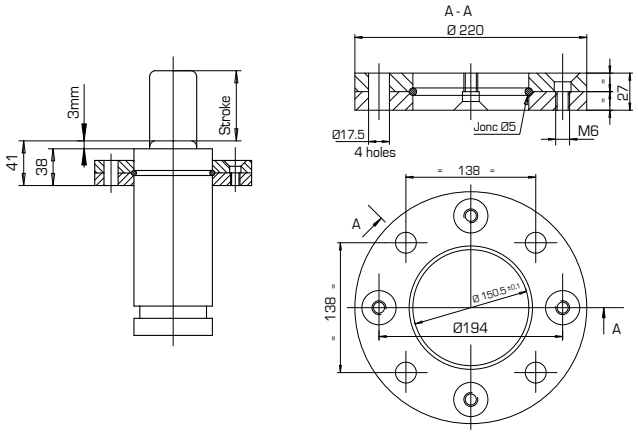
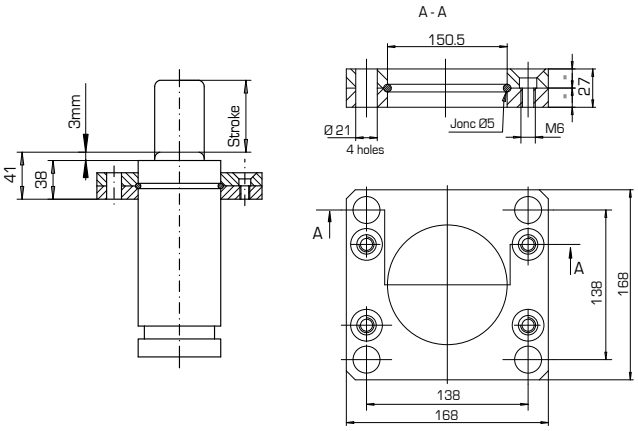
HIGH POWER GAS SPRINGS

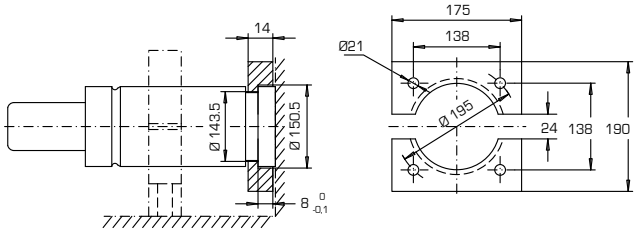
RGF 53 - (841123/000)



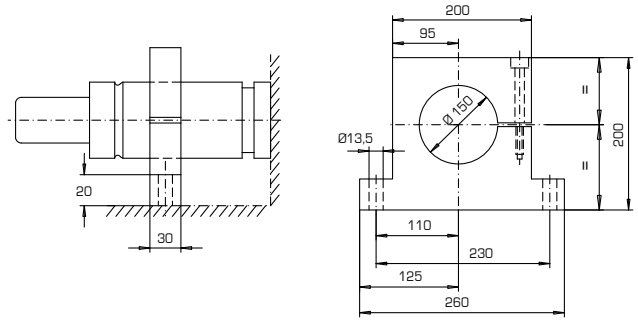
RGF 54 - (841143/000)



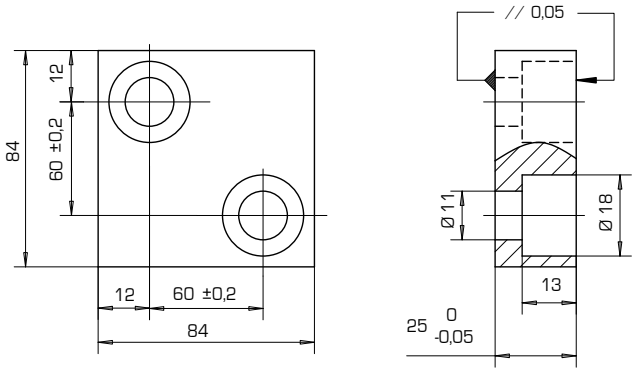
RGF 4 - (841106/000)



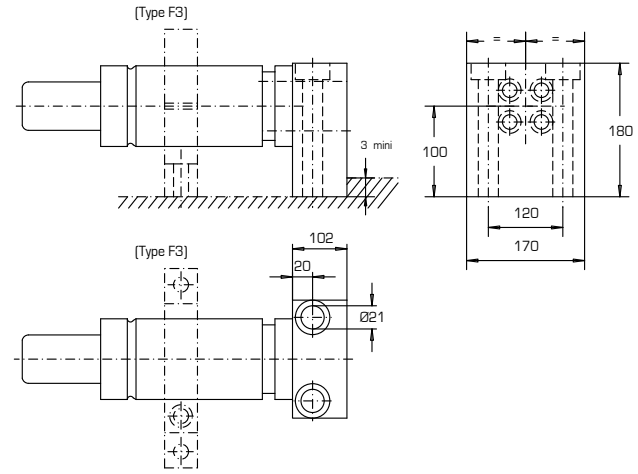
RGF 3 - (841206/000)



RGF 10 - (841110/000)



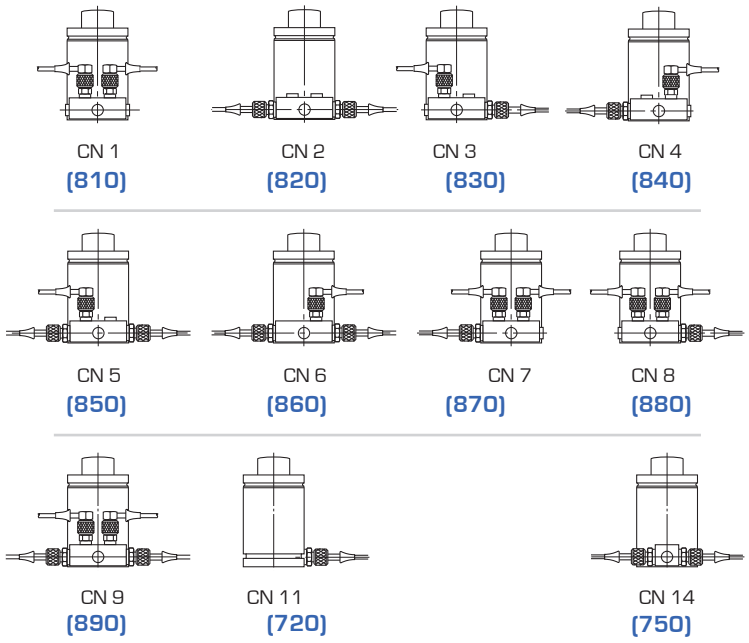
RGF 9 - (841230/000)



HIGH POWER GAS SPRINGS

CONNECTIONS FOR RGP GAS SPRINGS

Type	Force daN	Stroke C mm	Order Code	RGP type	Connection type
RGPR	750	10	443281/...	RGP 750	
		13	443282/...		
		16	448284/...		
		19	443285/...		
		25	443286/...		
		32	443287/...		
		38	443288/...		
		50	443289/...		
		63	443290/...		
		75	443291/...		
		80	443292/...		
		100	443293/...		
		125	443294/...		
	1000	13	443302/...	RGP 1000	
		16	443304/...		
		19	443305/...		
		25	443306/...		
		32	443307/...		
		38	443308/...		
		50	443309/...		
		63	443310/...		
		75	443311/...		
		80	443312/...		
		100	443313/...		
		125	443314/...		
	1500	13	443322/...	RGP 1500	
		16	443324/...		
		19	443325/...		
		25	443326/...		
		32	443327/...		
		38	443328/...		
		50	443329/...		
		63	443330/...		
		75	443331/...		
		80	443332/...		
		100	443333/...		
		125	443334/...		
	2400	16	443344/...	RGP 2400	
		19	443345/...		
		25	443346/...		
		32	443347/...		
		38	443348/...		
		50	443349/...		
		63	443350/...		
		75	443351/...		
		80	443352/...		
		100	443353/...		
		125	443354/...		
	4200	16	443364/...	RGP 4200	
		19	443365/...		
		25	443366/...		
		32	443367/...		
		38	443368/...		
		50	443369/...		
		63	443370/...		
		75	443371/...		
		80	443372/...		
		100	443373/...		
		125	443374/...		
	6600	16	443384/...	RGP 6600	
		19	443385/...		
		25	443386/...		
		32	443387/...		
		38	443388/...		
		50	443389/...		
		63	443390/...		
		75	443391/...		
		80	443392/...		
		100	443393/...		
		125	443394/...		
	9500	19	443405/...	RGP 9500	
		25	443406/...		
		32	443407/...		
		38	443408/...		
		50	443409/...		
		63	443410/...		
		75	443411/...		
		80	443412/...		
		100	443413/...		
		125	443414/...		



▶ All connections above can be selected by customer's design, please turn to page **129** to **139** for details

▶ **Example of ordering** : For a **RGP 750,** stroke **32** mm + connection **CN2** ; the order code is : **443287/820**

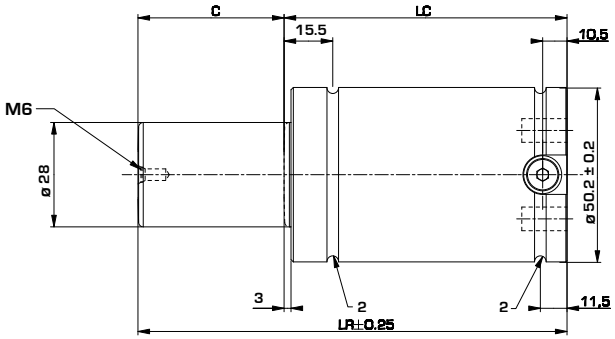
HIGH POWER GAS SPRINGS

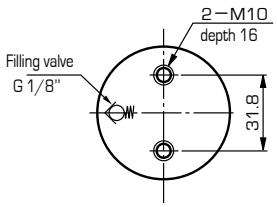
RGT

- Diameter from 50 to 150 mm
- Stroke from 25 to 125 mm
- Force from 10000 to 95000 N (9.5t)
- Designed especially for car makers
- Solid design (no welding)
- Design and features similar to RGP but can be used with standard G 1/8" piping system
- Long bottom threads recommended for fixtures with screws in the upper die
- Conforms to Toyota standard : SMS DNH 3203 N

HIGH POWER GAS SPRINGS

RGT 1000

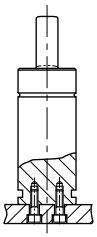


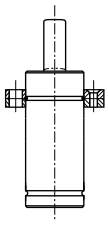
Type	Force daN	Stroke C mm	Order Code	Pressure MPa (bar)	Force F1 N★	Force F2 N★	LC mm	LR mm	Weight Kg	
RGT	1000	25	443606/000	15 (150) ⓘ	9240	14400	77	102	0.90	
		50	443609/000			14800	102	152	1.13	
		75	443611/000			15100	127	202	1.34	
		100	443613/000			15300	152	252	1.56	
		125	443614/000				177	302	1.77	

★ (N) = Kgf x 9.80665 (Kgf)=N x 0.101972 1daN=1 x 10^1N 1bar=1 x 10^{-1}MPa

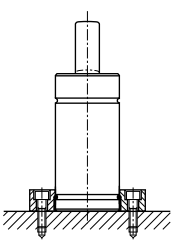
Example of order : RGT 1000 C50

ⓘ There is a blue sticker on the gas spring body when it is inflated with a special pressure (<15 Mpa)

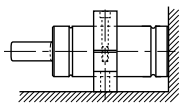




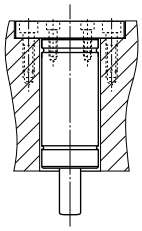
RGF53,RGF54



RGF42

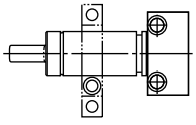


RGF3

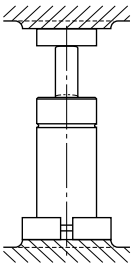


RGF21

▲ Must be used with counter-plate



RGF9



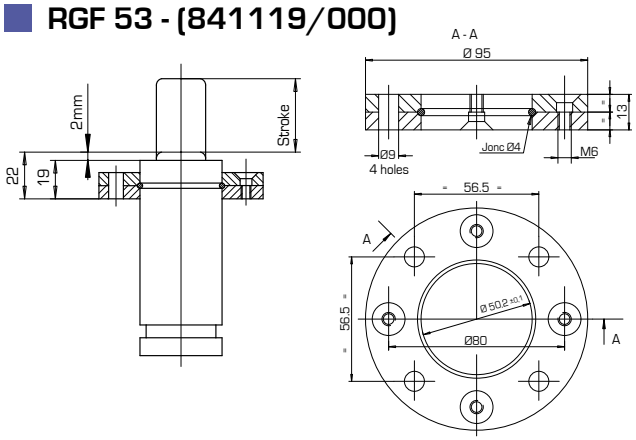
RGF10

HYDROMECANIQUE QUIRI

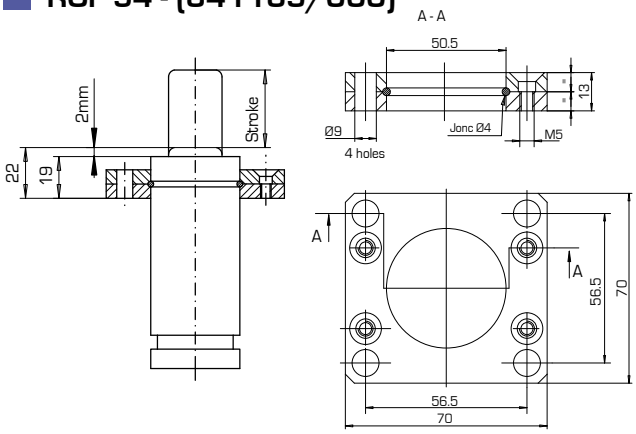
www.quiri.com

HIGH POWER GAS SPRINGS

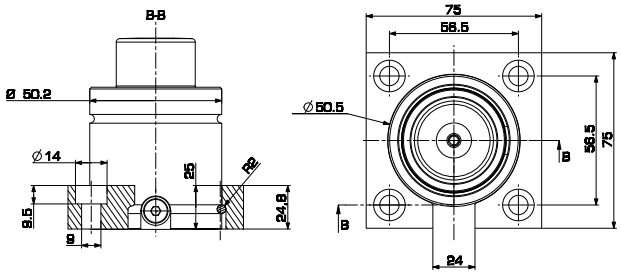
RGF 53 - (841119/000)



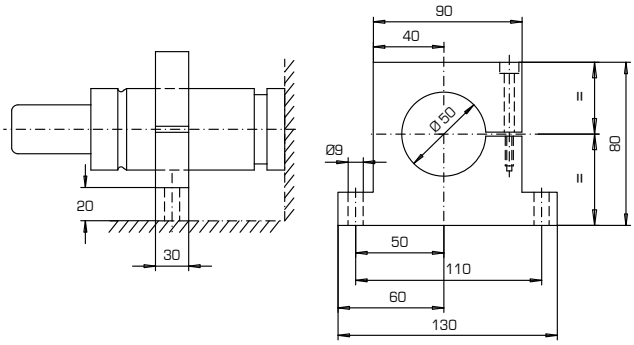
RGF 54 - (841139/000)



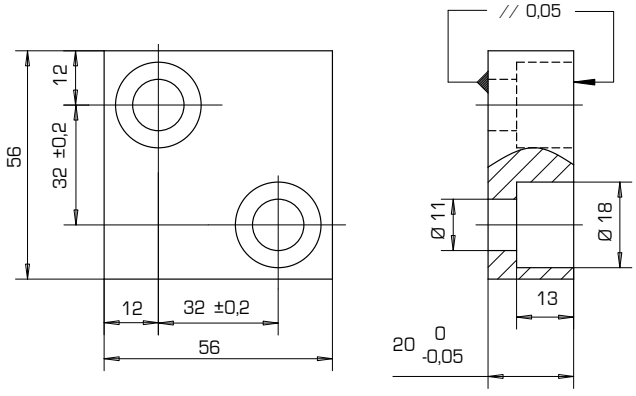
RGTF 42 - (841209/000)



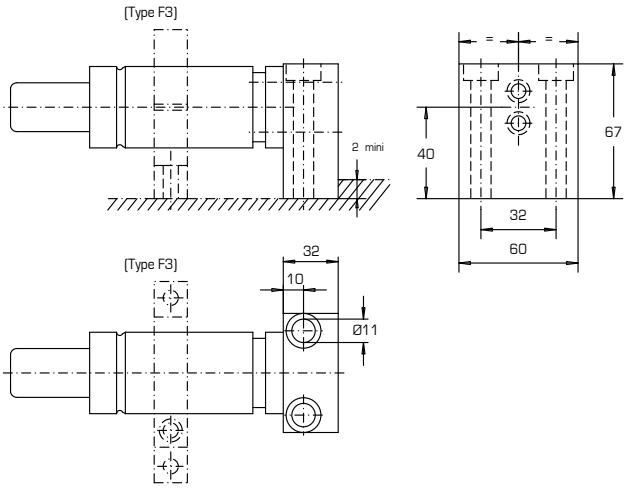
RGF 3 - (841027/000)



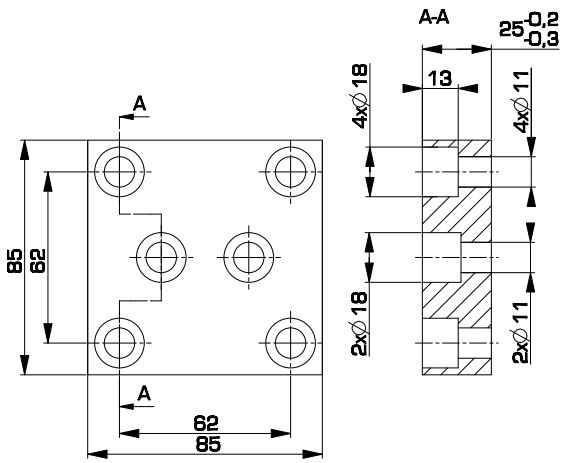
RGF 10 - (841074/000)



RGTF 9 - (841231/000)

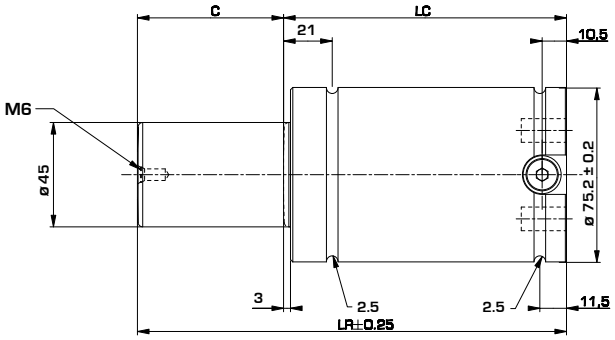


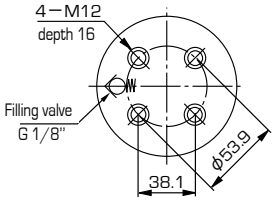
RGTF 21 - (841214/000)



HIGH POWER GAS SPRINGS

RGT 2400

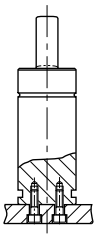


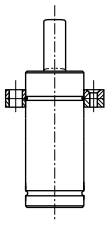
Type	Force daN	Stroke C mm	Order Code	Pressure MPa (bar)	Force F1 N★	Force F2 N★	LC mm	LR mm	Weight Kg	
RGT	2400	25	443646/000	15 (150) ⓘ	23900	37000	84	109	2.00	
		50	443649/000			37700	109	159	2.60	
		75	443651/000			38400	134	209	3.00	
		100	443653/000			38600	159	259	3.40	
		125	443654/000			38900	184	309	3.80	

★ (N) = Kgf x 9.80665 (Kgf)=N x 0.101972 1daN=1 x 10^1N 1bar=1 x 10^{-1}MPa

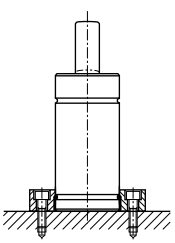
Example of order : RGT 2400 C50

ⓘ There is a blue sticker on the gas spring body when it is inflated with a special pressure (<15 Mpa)

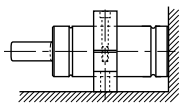




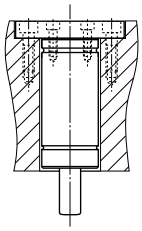
RGF53,RGF54



RGF42

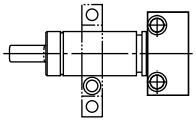


RGF3

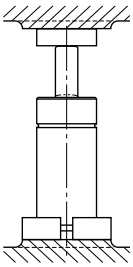


RGF21

▲ Must be used with counter-plate



RGF9



RGF10

HYDROMECANIQUE QUIRI

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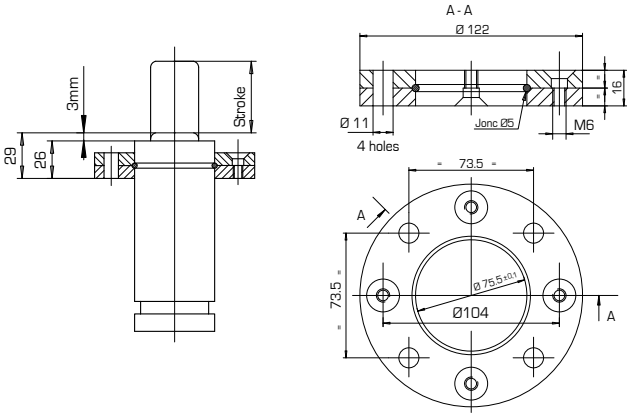
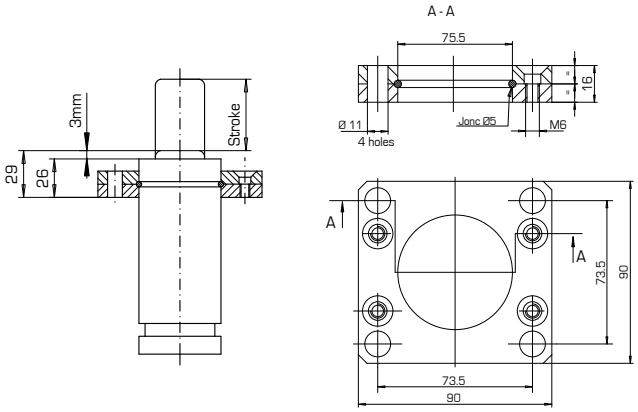
HIGH POWER GAS SPRINGS

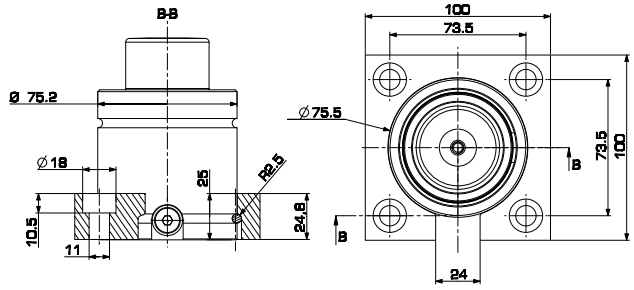
RGF 53 - (841120/000)



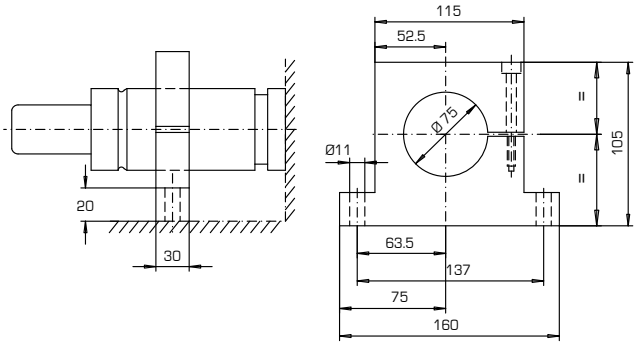
RGF 54 - (841140/000)



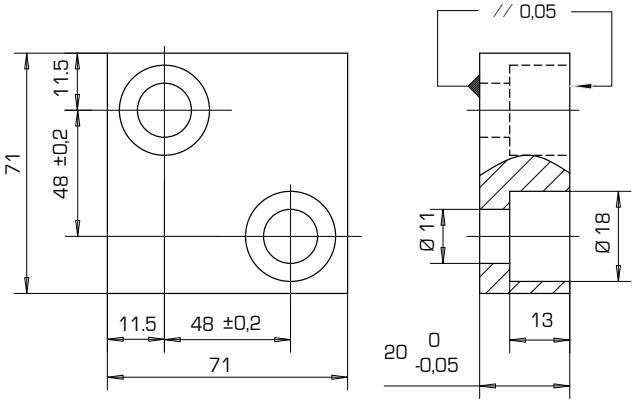
RGTF 42 - (841210/000)



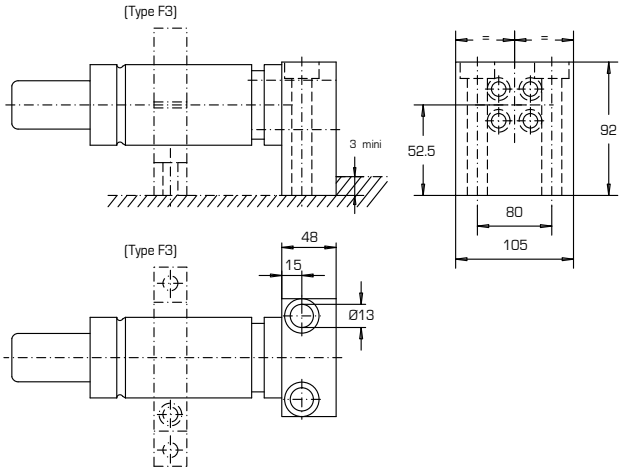
RGF 3 - (841028/000)



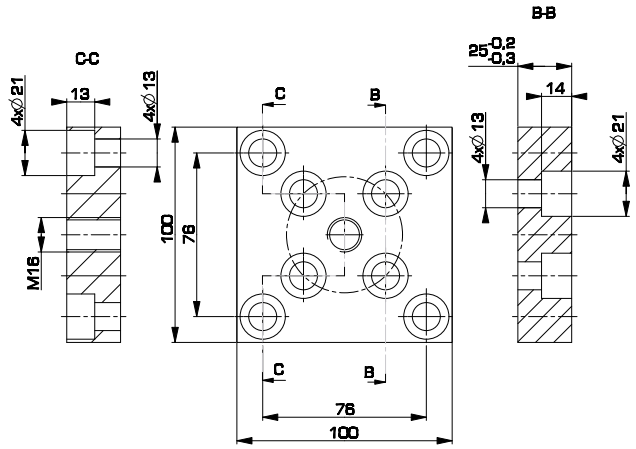
RGF 10 - (841075/000)



RGTF 9 - (841232/000)

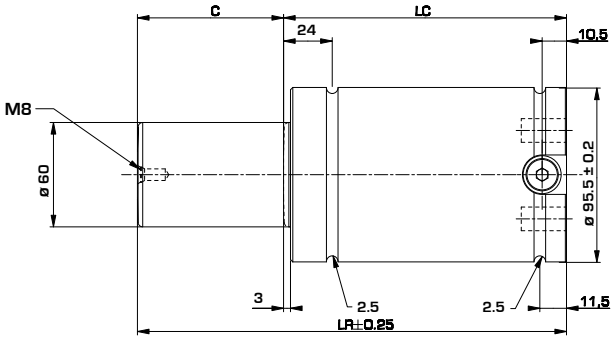


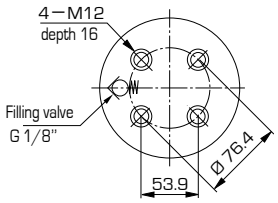
RGTF 21 - (841215/000)



HIGH POWER GAS SPRINGS

RGT 4200

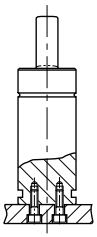


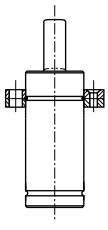
Type	Force daN	Stroke C mm	Order Code	Pressure MPa (bar)	Force F1 N★	Force F2 N★	LC mm	LR mm	Weight Kg	
RGT	4200	25	443666/000	15 (150) ⓘ	42400	72100	87	112	3.60	
		50	443669/000			76800	112	162	4.20	
		75	443671/000			78500	137	212	4.90	
		100	443673/000			79300	162	262	5.50	
		125	443674/000			80200	187	312	6.20	

★ (N) = Kgf x 9.80665 (Kgf)=N x 0.101972 1daN=1 x 10^1N 1bar=1 x 10^{-1}MPa

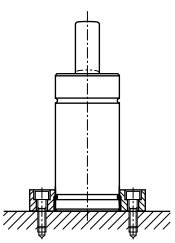
Example of order : RGT 4200 C50

ⓘ There is a blue sticker on the gas spring body when it is inflated with a special pressure (<15 Mpa)

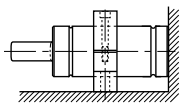




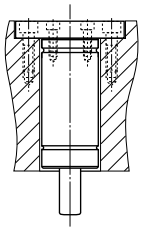
RGF53,RGF54



RGF42

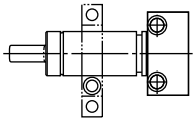


RGF3

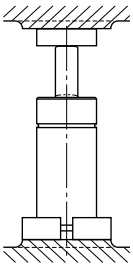


RGF21

▲ Must be used with counter-plate



RGF9



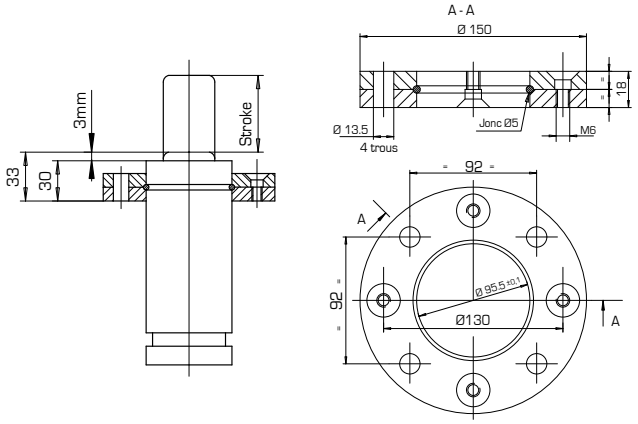
RGF10

HYDROMECANIQUE QUIRI

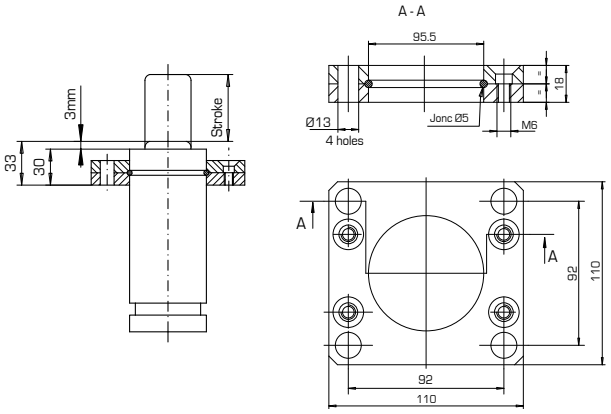
www.quiri.com

HIGH POWER GAS SPRINGS

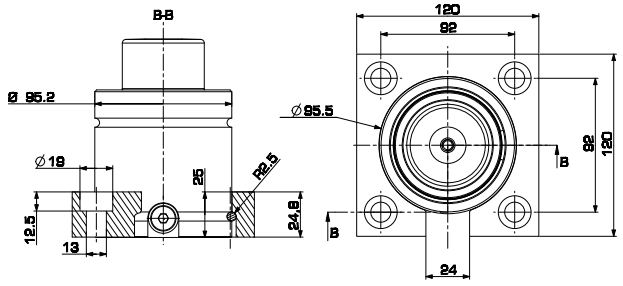
RGF 53 - (841121/000)



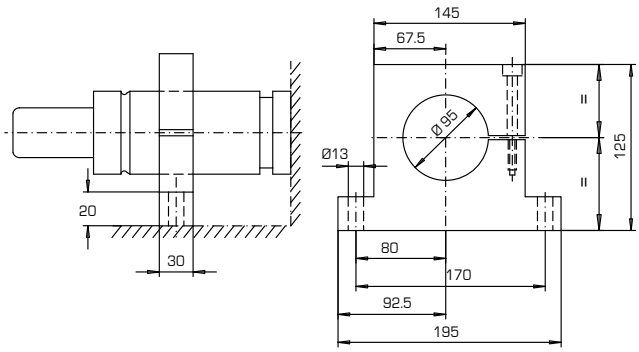
RGF 54 - (841141/000)



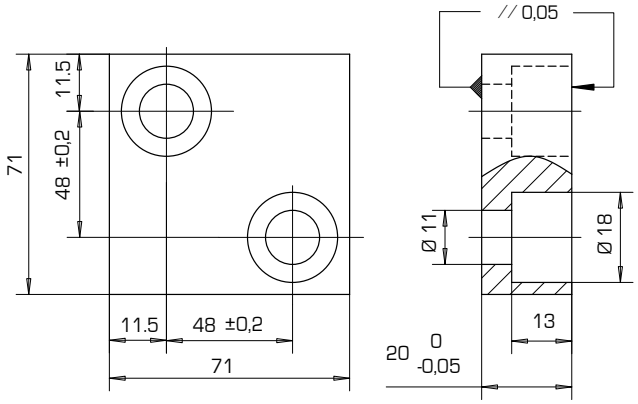
RGTF 42 - (841211/000)



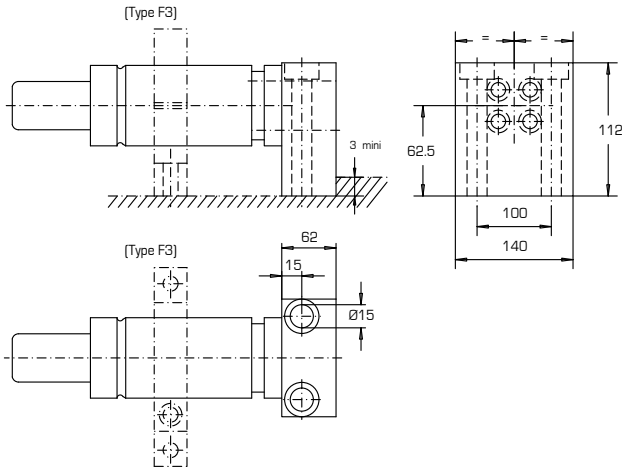
RGF 3 - (841029/000)



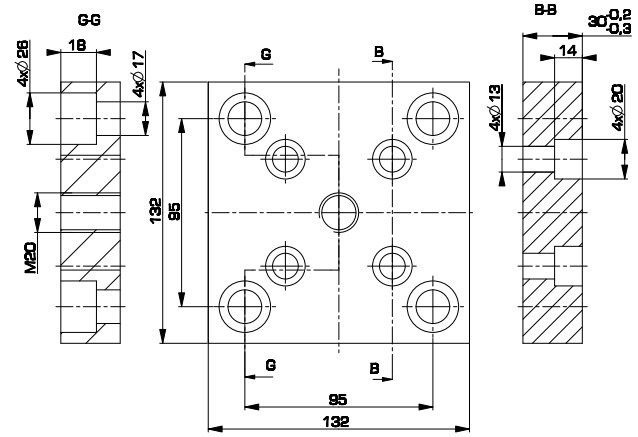
RGF 10 - (841075/000)



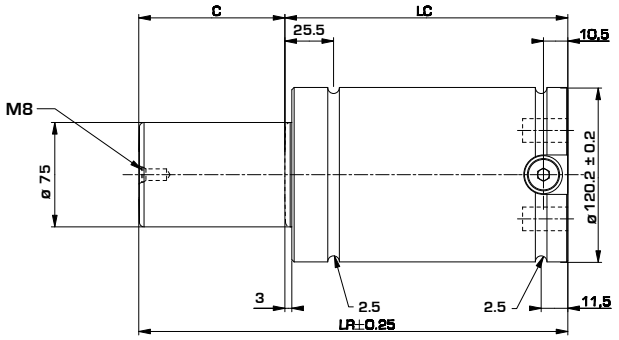
RGTF 9 - (841233/000)

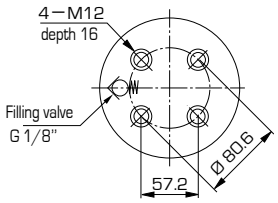


RGTF 21 - (841216/000)



RGT 6600

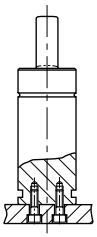


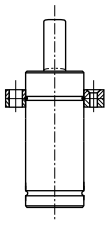
Type	Force daN	Stroke C mm	Order Code	Pressure MPa (bar)	Force F1 N★	Force F2 N★	LC mm	LR mm	Weight Kg	
RGT	6600	25	443686/000	15 (150) ⚠	66300	97400	97	122	6.60	
		50	443689/000			104000	122	172	7.70	
		75	443691/000			106700	147	222	8.70	
		100	443693/000			108700	172	272	9.90	
		125	443694/000			115300	197	322	11.20	

★ (N) = Kgf x 9.80665 (Kgf)=N x 0.101972 1daN=1 x 10^1N 1bar=1 x 10^{-1}MPa

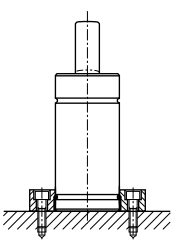
Example of order : RGT 6600 C50

⚠ There is a blue sticker on the gas spring body when it is inflated with a special pressure (<15 Mpa)

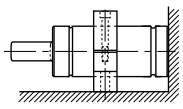




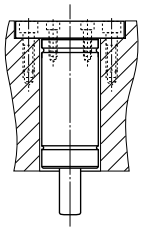
RGF53,RGF54



RGF42

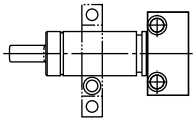


RGF3

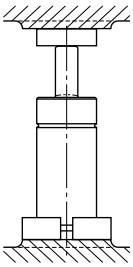


RGF21

▲ Must be used with counter-plate



RGF9



RGF10

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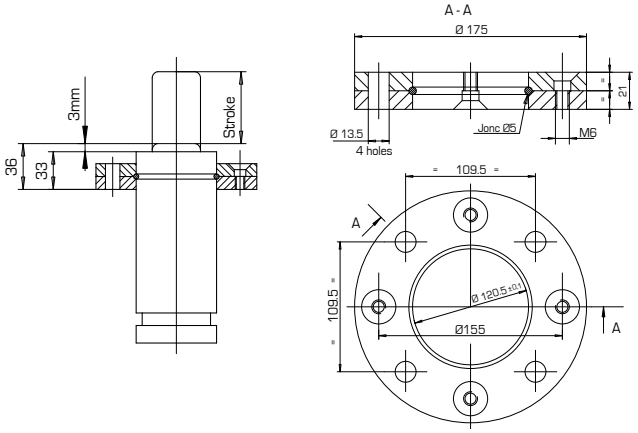
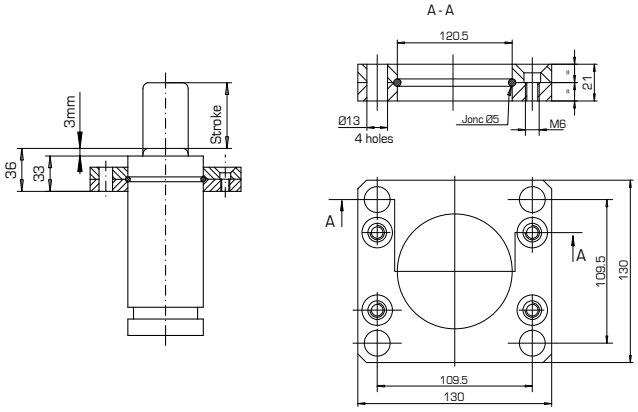
HIGH POWER GAS SPRINGS

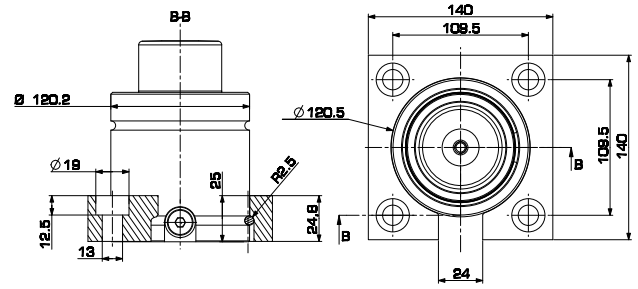
RGF 53 - (841122/000)



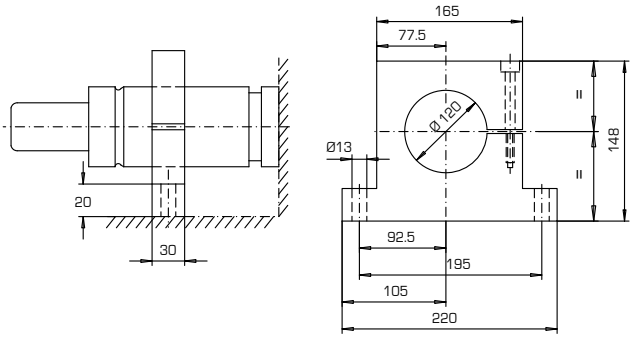
RGF 54 - (841142/000)



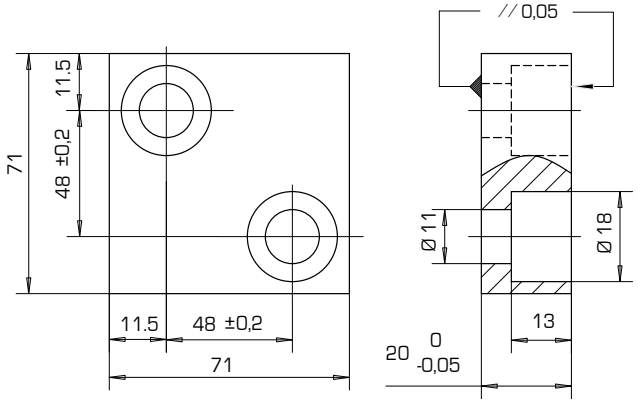
RGTF 42 - (841212/000)



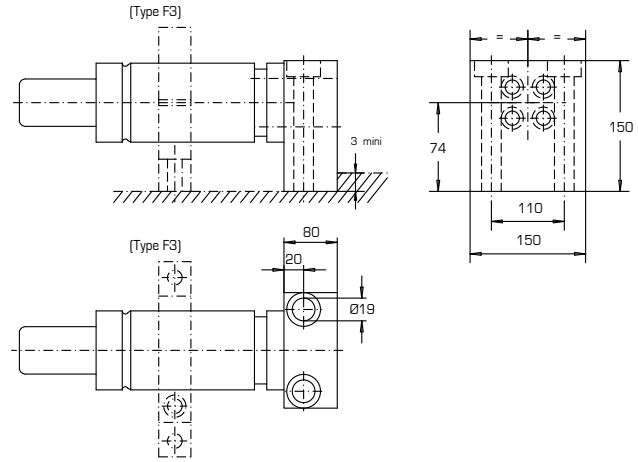
RGF 3 - (841030/000)



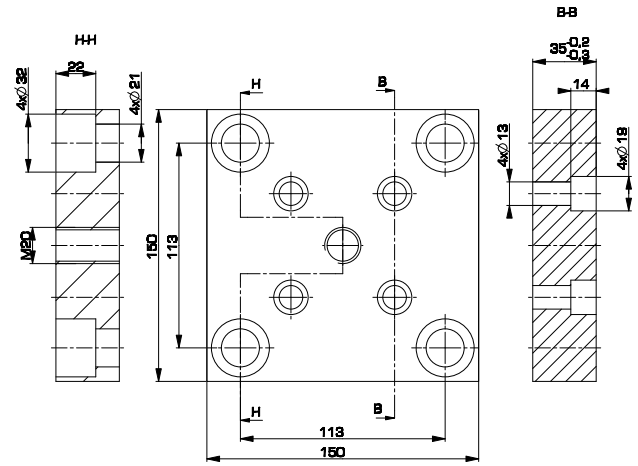
RGF 10 - (841110/000)



RGTF 9 - (841234/000)

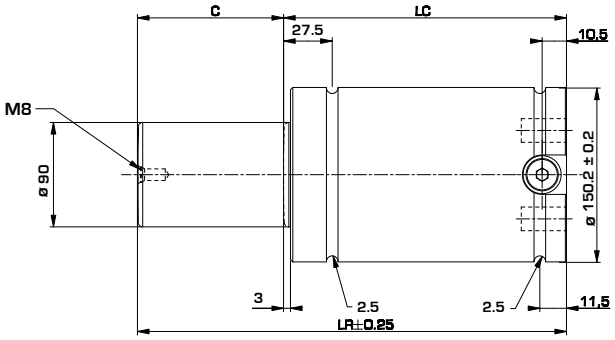


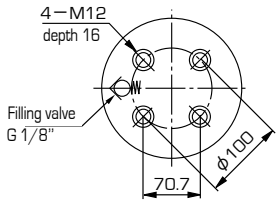
RGTF 21 - (841217/000)



HIGH POWER GAS SPRINGS

RGT 9500

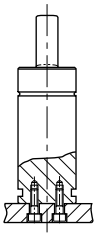


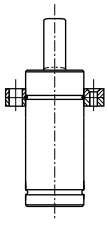
Type	Force daN	Stroke C mm	Order Code	Pressure MPa (bar)	Force F1 N★	Force F2 N★	LC mm	LR mm	Weight Kg	
RGT	9500	25	443706/000	15 (150) ⓘ	95400	144100	103	128	11.40	
		50	443709/000			152700	128	178	13.20	
		75	443711/000			156500	153	228	15.00	
		100	443713/000			158400	178	278	16.80	
		125	443714/000			159400	203	328	18.60	

★ (N) = Kgf x 9.80665 (Kgf)=N x 0.101972 1daN=1 x 10^1N 1bar=1 x 10^{-1}MPa

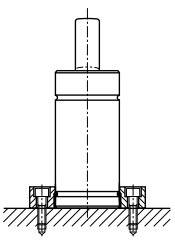
Example of order : RGT 9500 C50

ⓘ There is a blue sticker on the gas spring body when it is inflated with a special pressure (<15 Mpa)

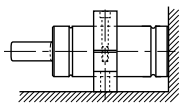




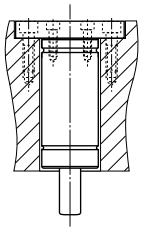
RGF53,RGF54



RGF42

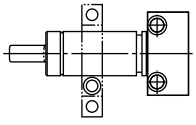


RGF3

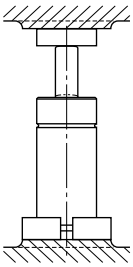


RGF21

▲ Must be used with counter-plate



RGF9



RGF10

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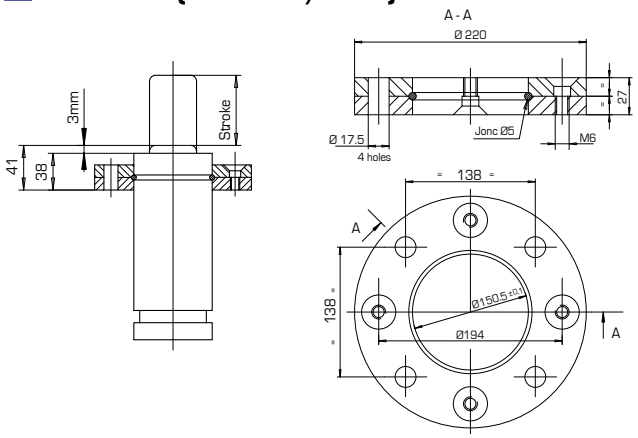
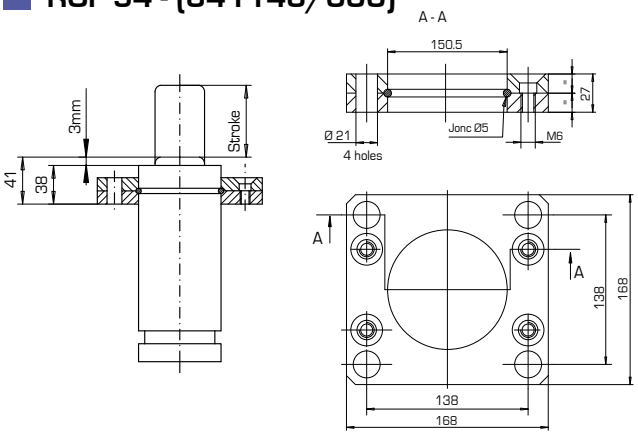
HIGH POWER GAS SPRINGS

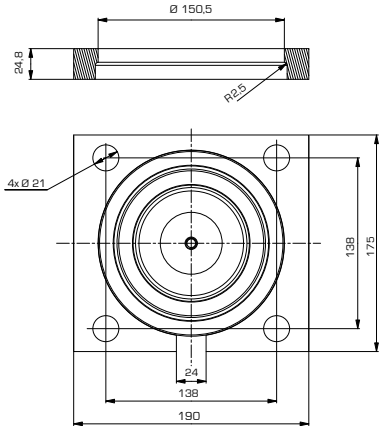
RGF 53 - (841123/000)



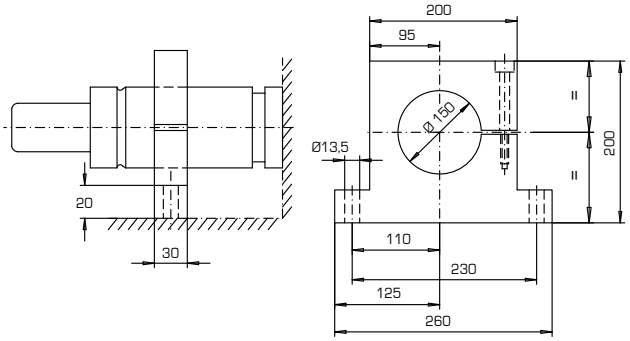
RGF 54 - (841143/000)



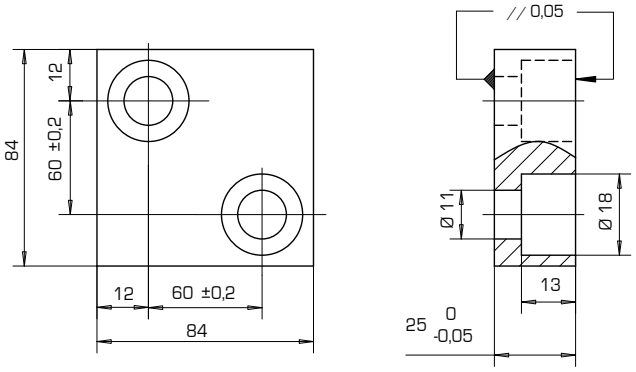
RGTF 42 - (841213/000)



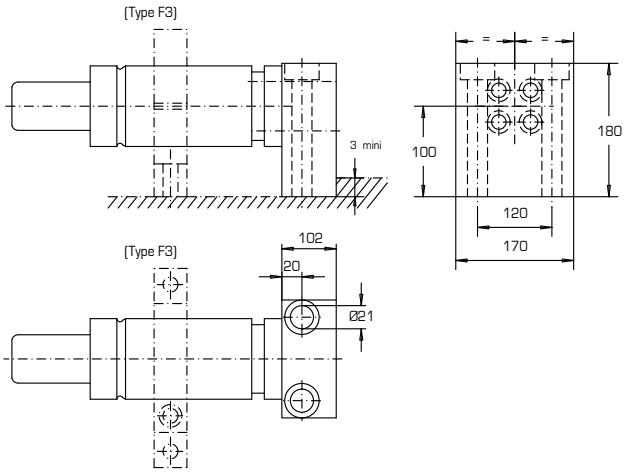
RGF 3 - (841206/000)



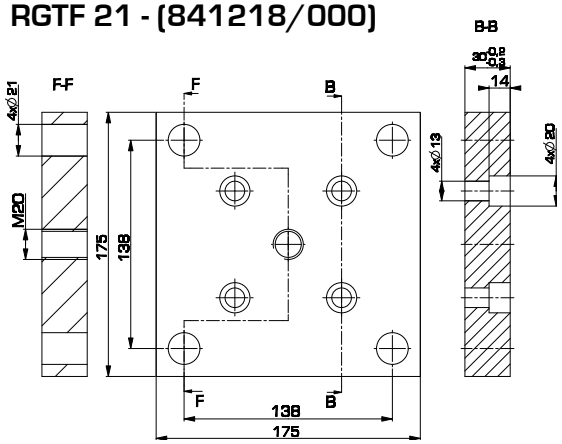
RGF 10 - (841110/000)



RGTF 9 - (841235/000)

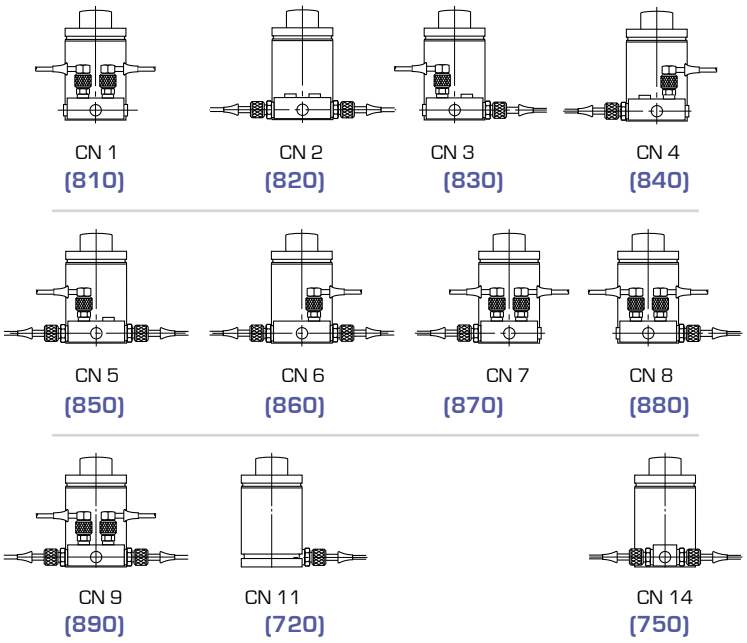


RGTF 21 - (841218/000)



CONNECTIONS FOR RGT GAS SPRINGS

Type	Force daN	Stroke C mm	Order Code	RGT type	Connection type
RGTR	1000	25	443606/...	RGT 1000	
		50	443609/...		
		75	443611/...		
		100	443613/...		
		125	443614/...		
	2400	25	443646/...	RGT 2400	
		50	443649/...		
		75	443651/...		
		100	443653/...		
		125	443654/...		
	4200	25	443666/...	RGT 4200	
		50	443669/...		
		75	443671/...		
		100	443673/...		
		125	443674/...		
	6600	25	443686/...	RGT 6600	
		50	443689/...		
		75	443691/...		
		100	443693/...		
		125	443694/...		
	9500	25	443706/...	RGT 9500	
		50	443709/...		
		75	443711/...		
		100	443713/...		
		125	443714/...		



▶ All connections above can be selected by customer's design, please turn to page 141 to 145 for details

▶ **Example of ordering** : For a **RGT 2400,** stroke **50** mm + connection **CN4** ; the order code is : **443649/840**

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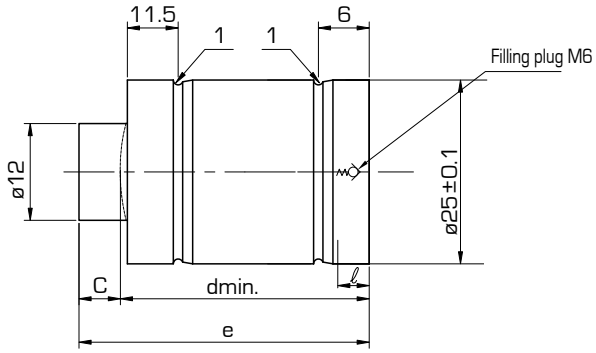
SUPERCOMPACT GAS SPRINGS

RGC

- Compact design, with extra high force 4200N to 183 000N
- Maximum stroke 50mm
- Double sealing
- Solid design (no welding)
- Lubricated guiding
- Can be used in piping system with a rear adapter

SUPERCOMPACT GAS SPRINGS

RGC 420

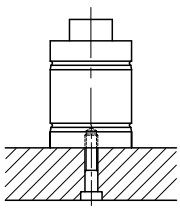


Type	Force daN	Stroke C mm	Order Code	Pressure MPa (bar)	Force F1 N★	Force F2 N★	d	e	Weight Kg
RGC	420	6	443111/000	13.5 (135) ⓘ	4200	6700	50	56	0.150
		10	443112/000			6800	60	70	0.160
		16	443113/000			6800	75	91	0.175
		25	443114/000			7000	95	120	0.210

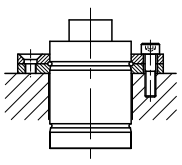
★ (N) = Kgf x 9.80665 (Kgf)=N x 0.101972 1daN=1 x 10^1N 1bar=1 x 10^{-1}MPa

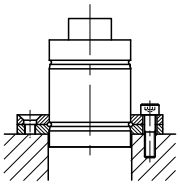
Example of order : RGC 420 C50

ⓘ There is a blue sticker on the gas spring body when it is inflated with a special pressure (<15 Mpa)



RGCF53, RGCF54, RMGF51





RGCF53, RGCF54, RMGF52

▶ **CAUTION : If you fix RGC type by bottom thread, gas spring's bottom surface should lay completely on the die. RGC with stroke > 25mm should be attached to the die with screws or flanges (no drop-in mounting)**

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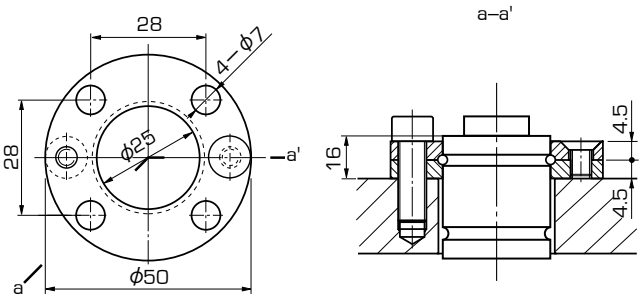
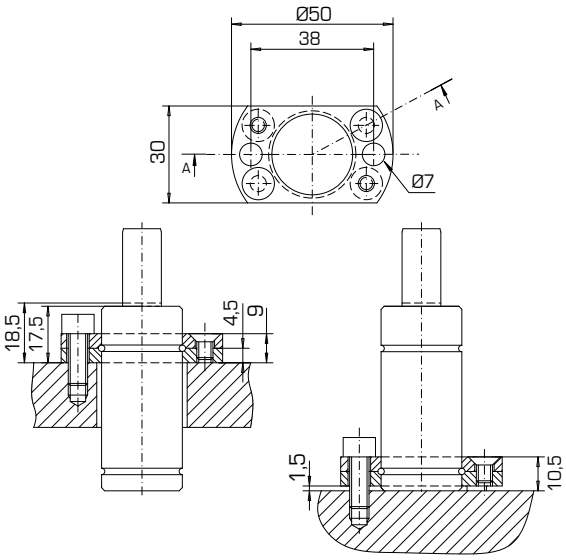
SUPERCOMPACT GAS SPRINGS

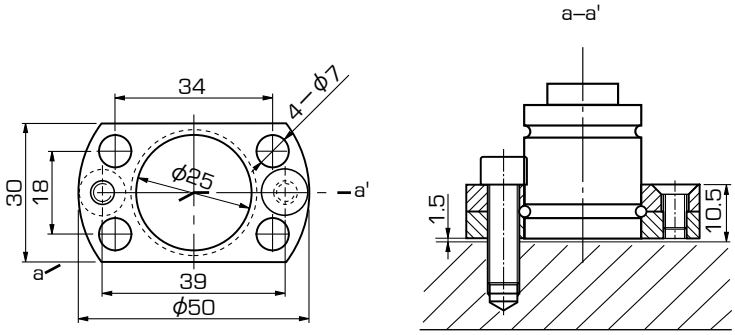
RMGF 51 - (841078/000)



RMGF 52 - 2 holes - (841241/000)

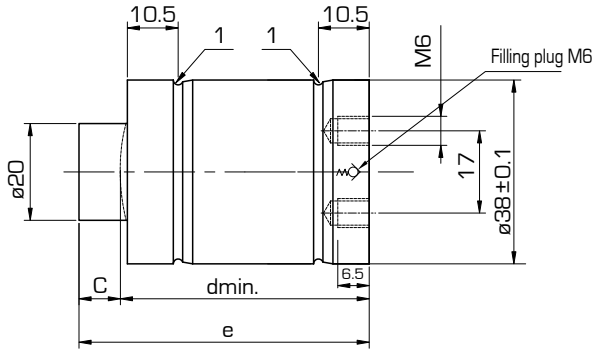


RMGF 52 - 4 holes - (841077/000)



SUPERCOMPACT GAS SPRINGS

RGC 1000



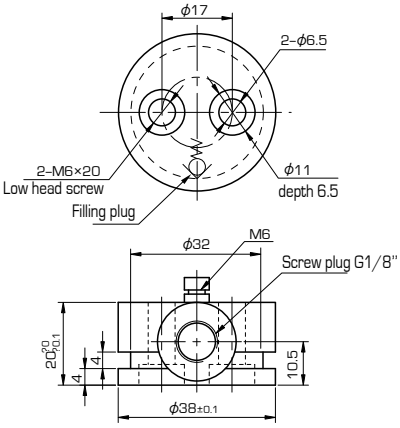
Type	Force daN	Stroke C mm	Order Code	Pressure MPa (bar)	Force F1 N★	Force F2 N★	d	e	Weight Kg
RGC	1000	6	443131/000	15 (150) ⓘ	10600	16500	55	61	0.35
		10	443132/000			15900	68	78	0.41
		16	443133/000			16100	84	100	0.48
		25	443134/000			15300	110	135	0.58
		32	443135/000			15600	135	167	0.68
		40	443136/000			15800	155	195	0.76
		50	443137/000			16000	180	230	0.86

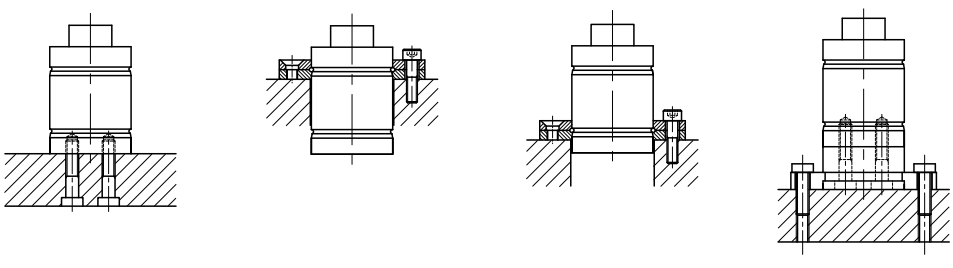
★ (N) = Kgf x 9.80665 (Kgf)=N x 0.101972 1daN=1 x 10^1N 1bar=1 x 10^{-1}MPa

Example of order : RGC 1000 C50

ⓘ There is a blue sticker on the gas spring body when it is inflated with a special pressure (<15 Mpa)

REAR ADAPTER - RGCA 1000 - (443131/100)



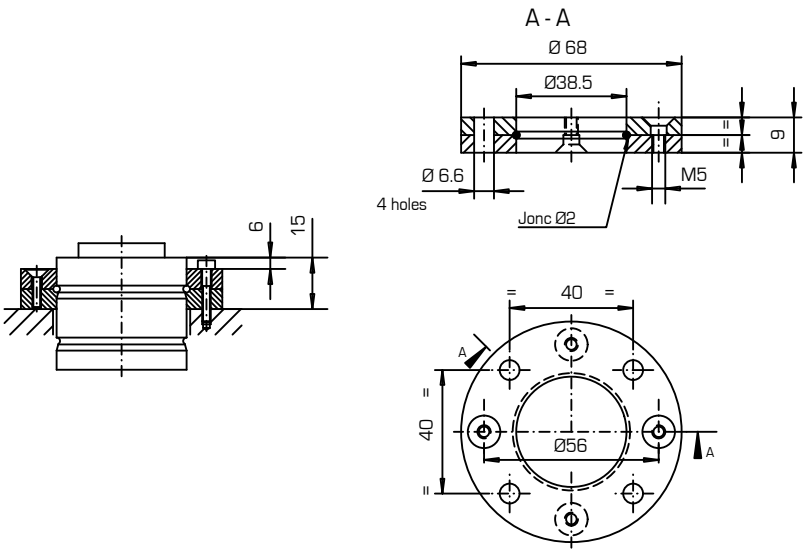


RGCF53, RGCF54, RMGF51 RGCF53, RGCF54, RMGF52 RGF4 RGCA

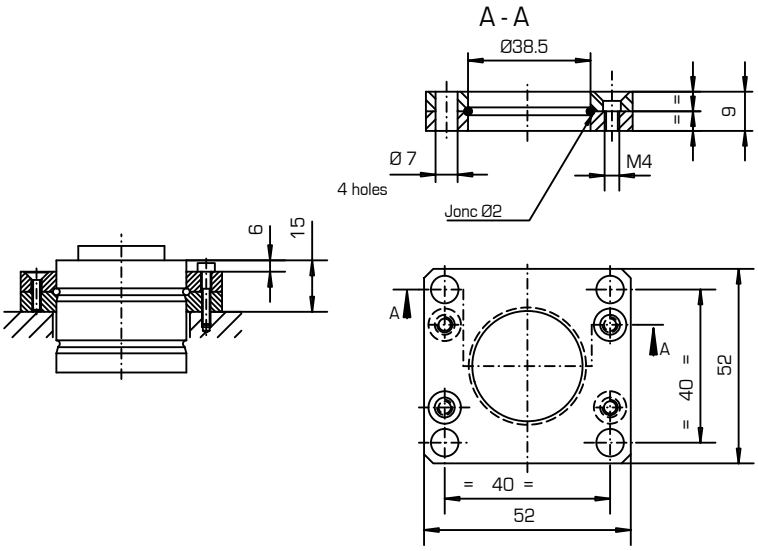
▶ **CAUTION : If you fix RGC type by bottom thread, gas spring's bottom surface should lay completely on the die. RGC with stroke > 25mm should be attached to the die with screws or flanges (no drop-in mounting)**

SUPERCOMPACT GAS SPRINGS

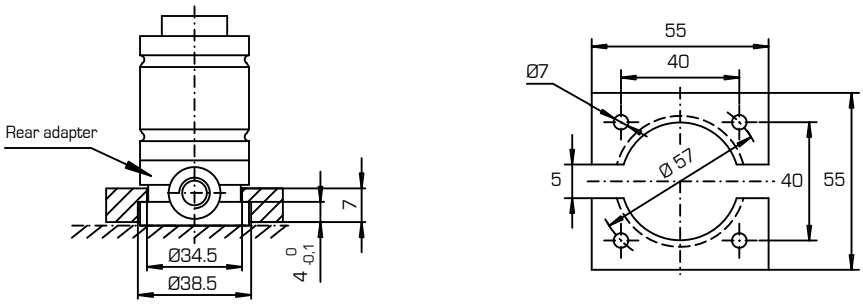
RGCF 53 - (841117/000)



RGCF 54 - (841137/000)

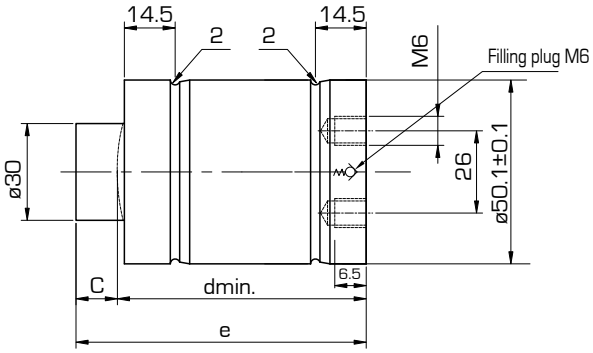


RGCF 4 - (841031/000)



SUPERCOMPACT GAS SPRINGS

RGC 1800



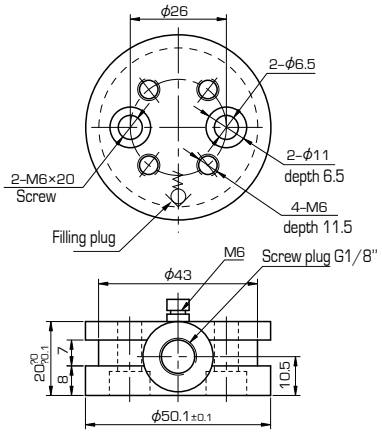
Type	Force daN	Stroke C mm	Order Code	Pressure MPa (bar)	Force F1 N★	Force F2 N★	d	e	Weight Kg
RGC	1800	6	443141/000	15 (150) ⓘ	18800	25800	60	66	0.40
		10	443142/000			26400	70	80	0.73
		16	443143/000			27000	90	106	0.86
		25	443144/000			28100	110	135	1.01
		32	443145/000				130	162	1.13
		40	443146/000				150	190	1.26
		50	443147/000			28800	170	220	1.40

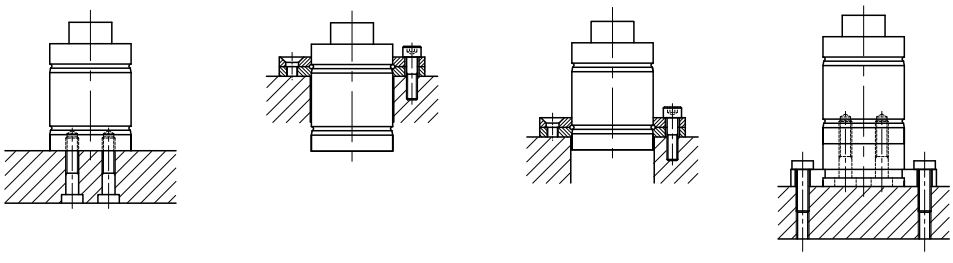
★ (N) = Kgf x 9.80665 (Kgf)=N x 0.101972 1daN=1 x 10^1N 1bar=1 x 10^{-1}MPa

Example of order : RGC 1800 C50

ⓘ There is a blue sticker on the gas spring body when it is inflated with a special pressure (<15 Mpa)

REAR ADAPTER - RGCA 1800 - (442141/100)





RGCF53, RGCF54, RMGF51 RGCF53, RGCF54, RMGF52 RGF4 RGCA

▶ **CAUTION : If you fix RGC type by bottom thread, gas spring's bottom surface should lay completely on the die. RGC with stroke > 25mm should be attached to the die with screws or flanges (no drop-in mounting)**

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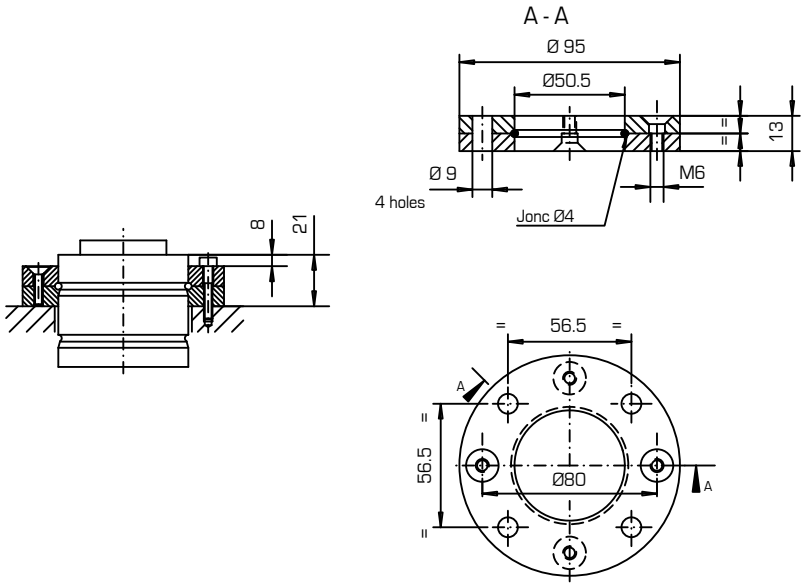
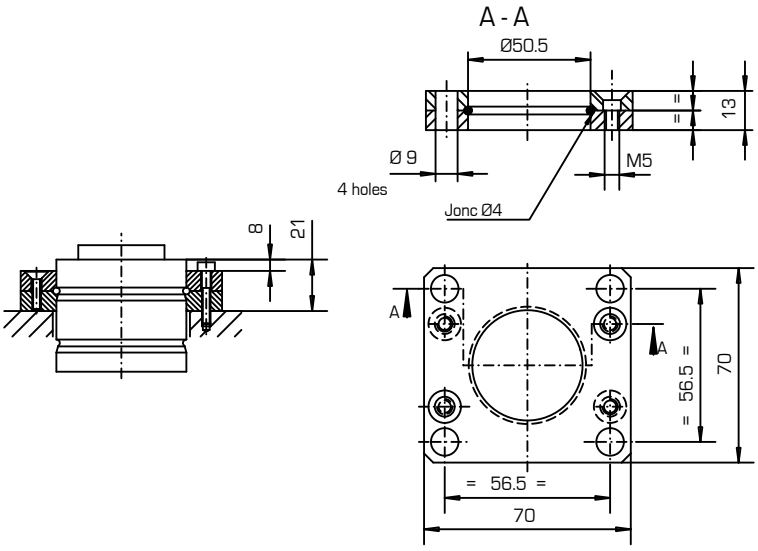
SUPERCOMPACT GAS SPRINGS

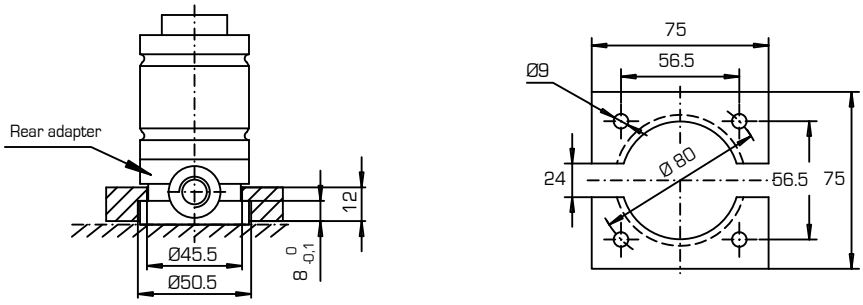
RGCF 53 - (841119/000)



RGCF 54 - (841139/000)

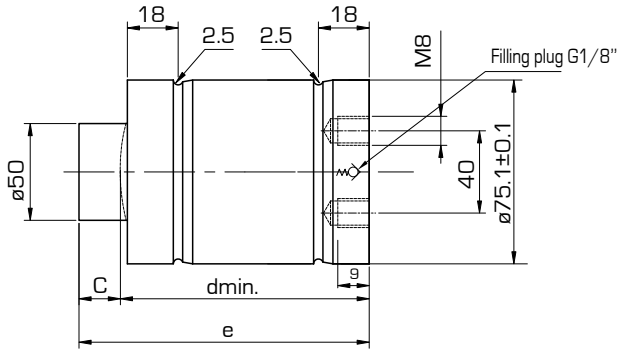


RGCF 4 - (841032/000)



SUPERCOMPACT GAS SPRINGS

RGC 4700



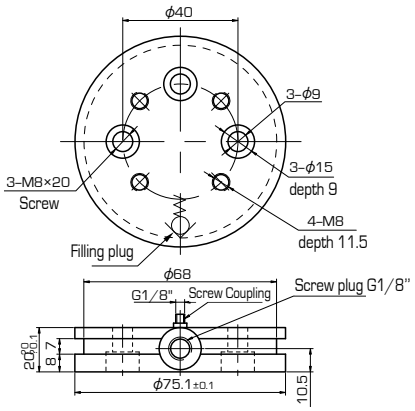
Type	Force daN	Stroke C mm	Order Code	Pressure MPa (bar)	Force F1 N★	Force F2 N★	d	e	Weight Kg
RGC	4700	10	443152/000	15 (150) ⓘ	46800	67300	70	80	1.59
		16	443153/000			66400	90	106	1.86
		25	443154/000			68700	110	135	2.10
		32	443155/000			66900	135	167	2.40
		40	443156/000			66400	160	200	2.80
		50	443157/000				190	240	3.10

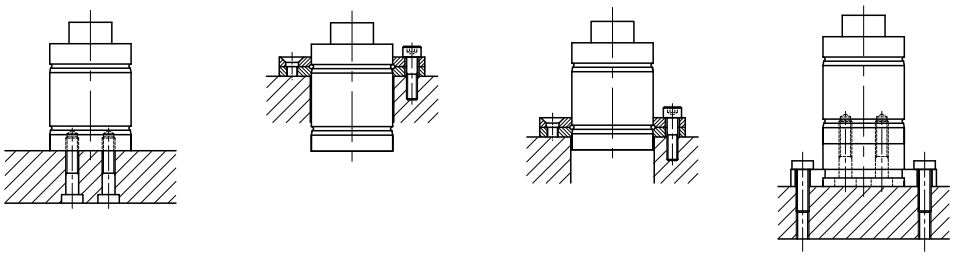
★ (N) = Kgf x 9.80665 (Kgf)=N x 0.101972 1daN=1 x 10^1N 1bar=1 x 10^{-1}MPa

Example of order : RGC 4700 C50

ⓘ There is a blue sticker on the gas spring body when it is inflated with a special pressure (<15 Mpa)

REAR ADAPTER - RGCA 4700 - (443151/100)



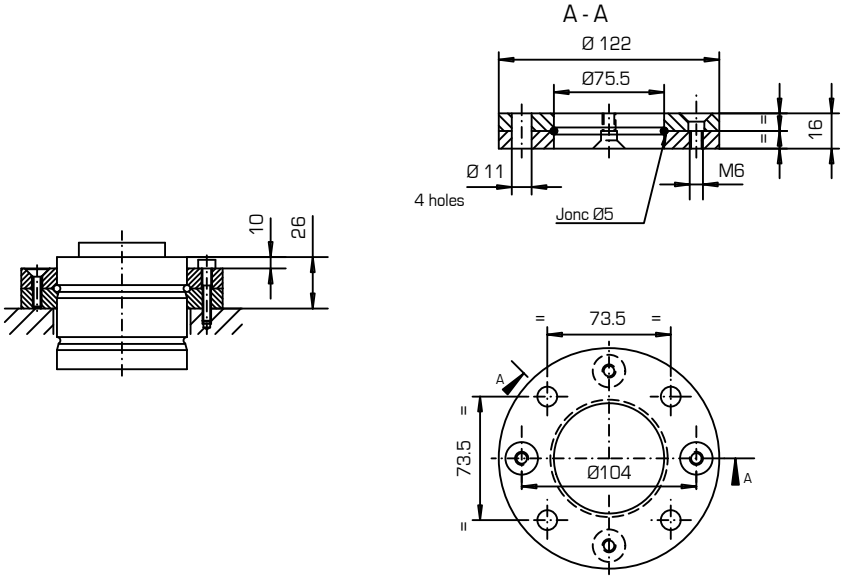


RGCF53, RGCF54, RMGF51 RGCF53, RGCF54, RMGF52 RGF4 RGCA

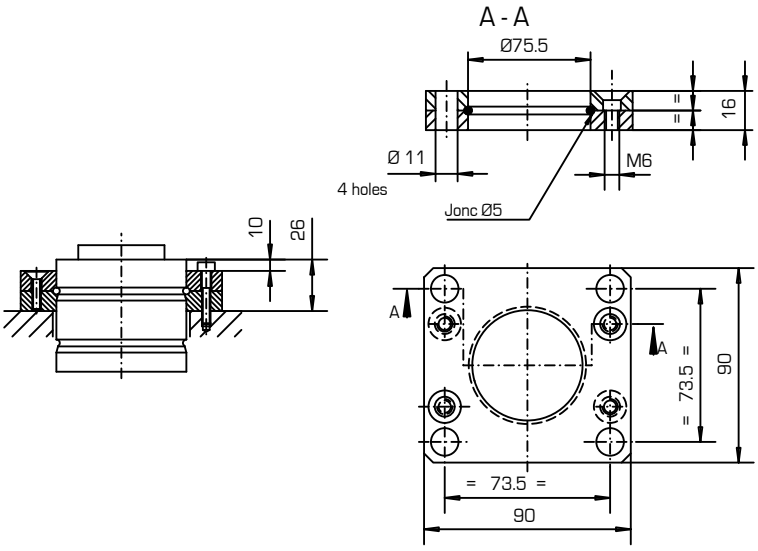
▶ **CAUTION : If you fix RGC type by bottom thread, gas spring's bottom surface should lay completely on the die. RGC with stroke > 25mm should be attached to the die with screws or flanges (no drop-in mounting)**

SUPERCOMPACT GAS SPRINGS

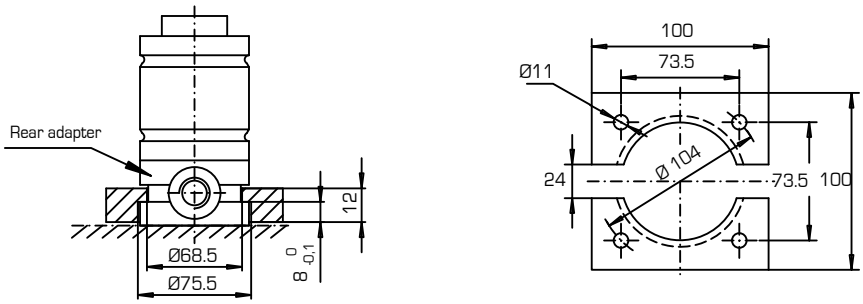
RGCF 53 - (841120/000)



RGCF 54 - (841140/000)

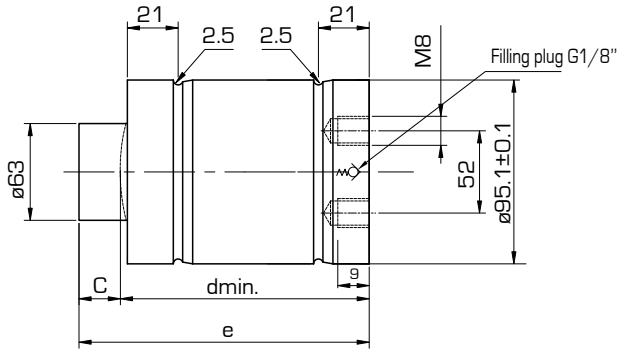


RGCF 4 - (841033/000)



SUPERCOMPACT GAS SPRINGS

RGC 7500



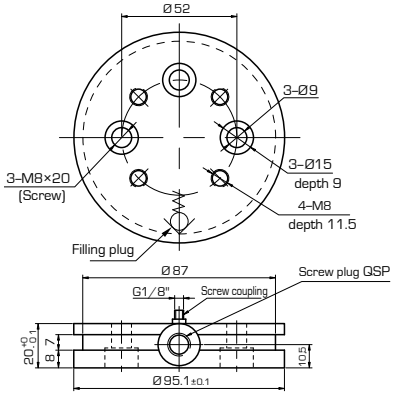
Type	Force daN	Stroke C mm	Order Code	Pressure MPa (bar)	Force F1 N★	Force F2 N★	d	e	Weight Kg
RGC	7500	10	443162/000	15 (150) ⓘ	75400	104000	80	90	3.00
		16	443163/000			104800	100	116	3.40
		25	443164/000			109300	120	145	3.80
		32	443165/000			104800	150	182	4.40
		40	443166/000			106300	170	210	4.80
		50	443167/000			105600	205	255	5.50

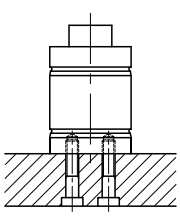
★ (N) = Kgf x 9.80665 (Kgf)=N x 0.101972 1daN=1 x 10^1N 1bar=1 x 10^{-1}MPa

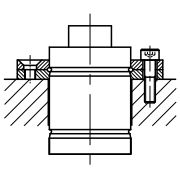
Example of order : RGC 7500 C50

ⓘ There is a blue sticker on the gas spring body when it is inflated with a special pressure (<15 Mpa)

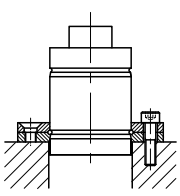
REAR ADAPTER - RGCA 7500 - (443161/100)



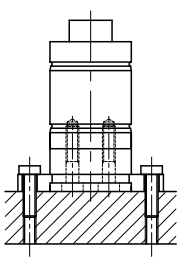




RGCF53, RGCF54, RMGF51



RGCF53, RGCF54, RMGF52

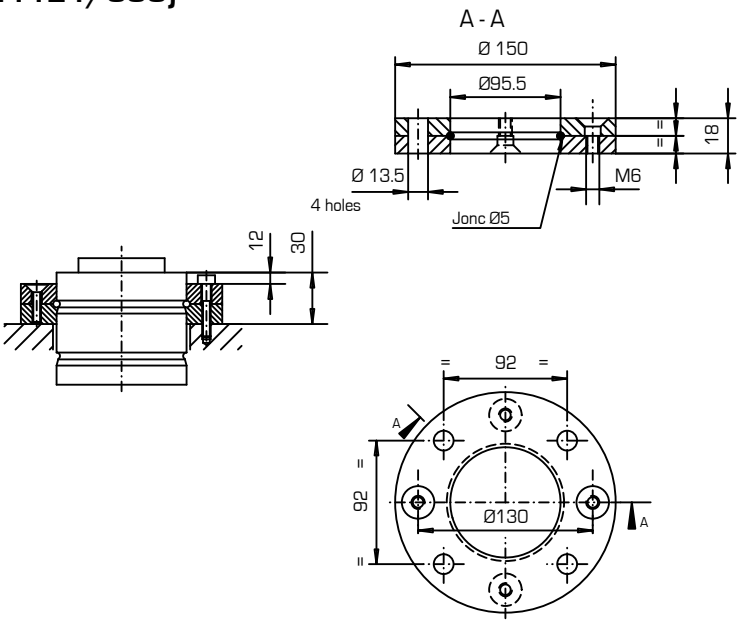


RGF4 RGCA

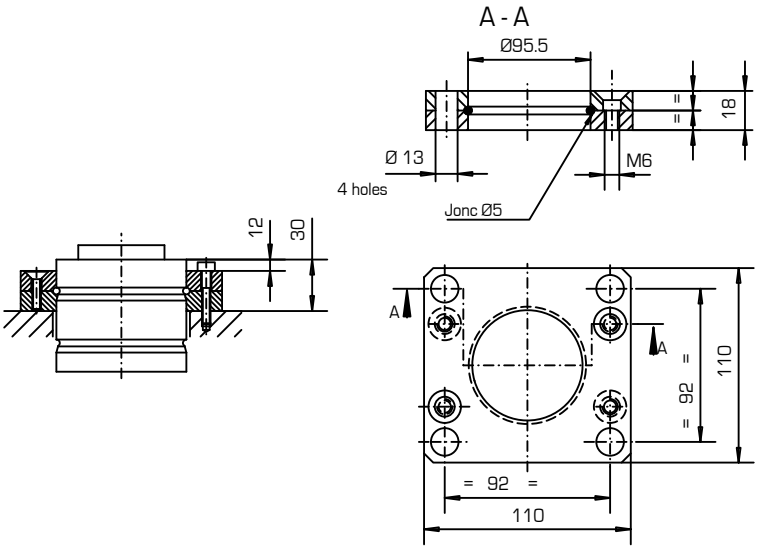
▶ **CAUTION : If you fix RGC type by bottom thread, gas spring's bottom surface should lay completely on the die. RGC with stroke > 25mm should be attached to the die with screws or flanges (no drop-in mounting)**

SUPERCOMPACT GAS SPRINGS

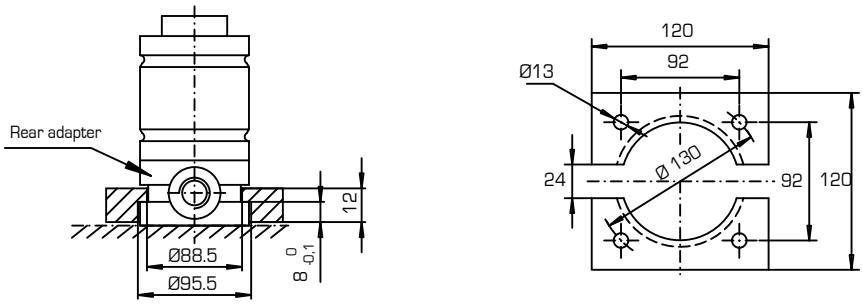
RGCF 53 - (841121/000)



RGCF 54 - (841141/000)

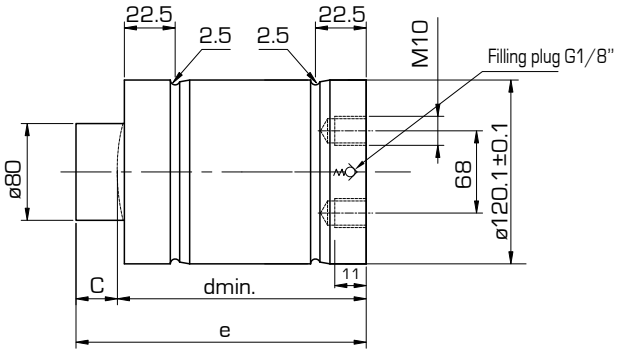


RGCF 4 - (841034/000)



SUPERCOMPACT GAS SPRINGS

RGC 11800



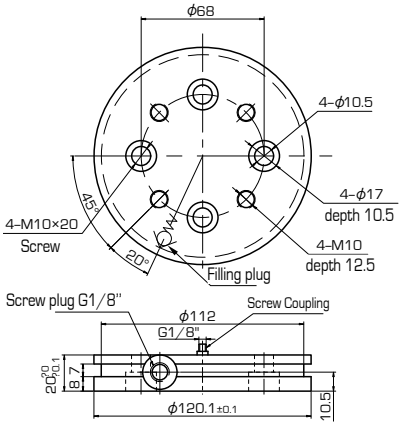
Type	Force daN	Stroke C mm	Order Code	Pressure MPa (bar)	Force F1 N★	Force F2 N★	d	e	Weight Kg
RGC	11800	10	443172/000	15 (150) ⓘ	117800	155500	90	100	5.70
		16	443173/000			159000	110	126	6.10
		25	443174/000			166100	130	155	6.50
		32	443175/000			163800	155	187	7.60
		40	443176/000				180	220	8.10
		50	443177/000				210	260	8.70

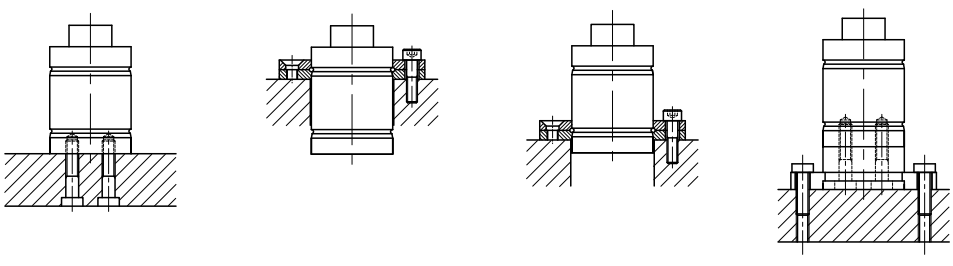
★ (N) = Kgf x 9.80665 (Kgf)=N x 0.101972 1daN=1 x 10^1N 1bar=1 x 10^{-1}MPa

Example of order : RGC 11800 C50

ⓘ There is a blue sticker on the gas spring body when it is inflated with a special pressure (<15 Mpa)

REAR ADAPTER - RGCA 11800 - (443171/100)



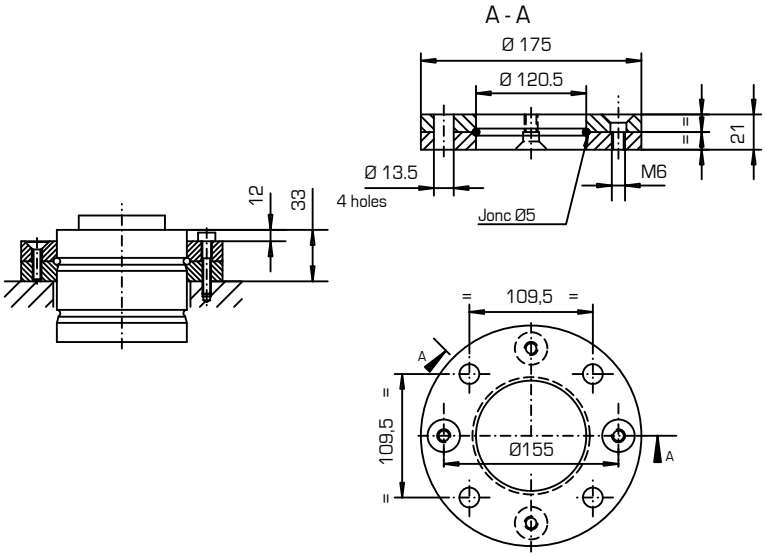


RGCF53, RGCF54, RMGF51 RGCF53, RGCF54, RMGF52 RGF4 RGCA

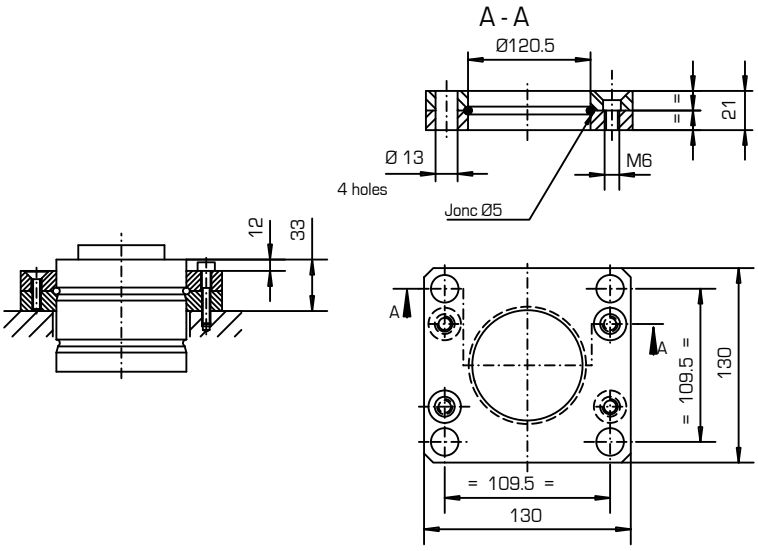
▶ **CAUTION : If you fix RGC type by bottom thread, gas spring's bottom surface should lay completely on the die. RGC with stroke > 25mm should be attached to the die with screws or flanges (no drop-in mounting)**

SUPERCOMPACT GAS SPRINGS

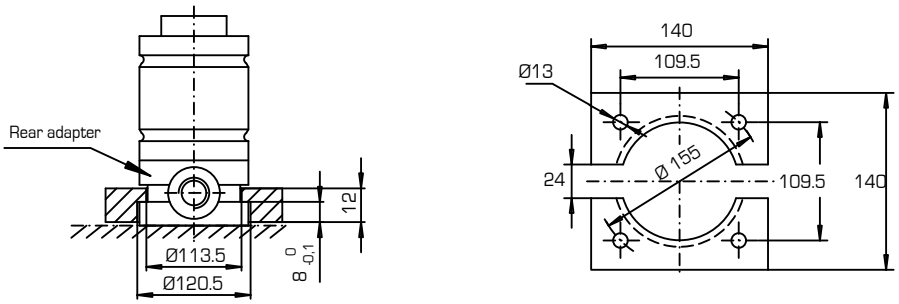
RGCF 53 - (841122/000)



RGCF 54 - (841142/000)

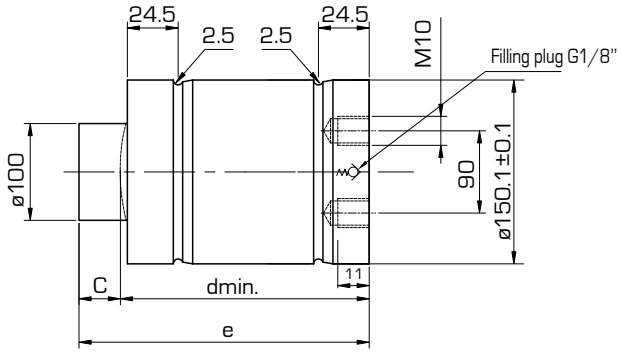


RGCF 4 - (841035/000)



SUPERCOMPACT GAS SPRINGS

RGC 18300



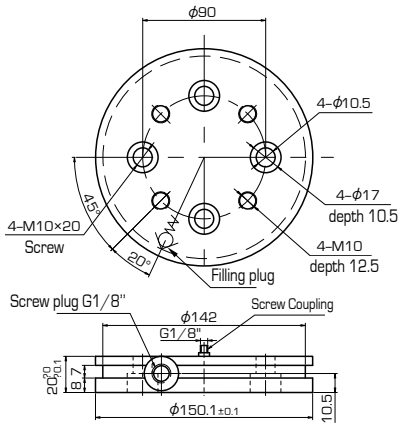
Type	Force daN	Stroke C mm	Order Code	Pressure MPa (bar)	Force F1 N★	Force F2 N★	d	e	Weight Kg
RGC	18300	10	443182/000	15 (150) ⚠	184100	239300	100	110	9.70
		16	443183/000			244800	120	136	11.00
		25	443184/000			257700	140	165	12.00
		32	443185/000			254000	165	197	13.20
		40	443186/000			252200	195	235	14.70
		50	443187/000			255900	220	270	16.00

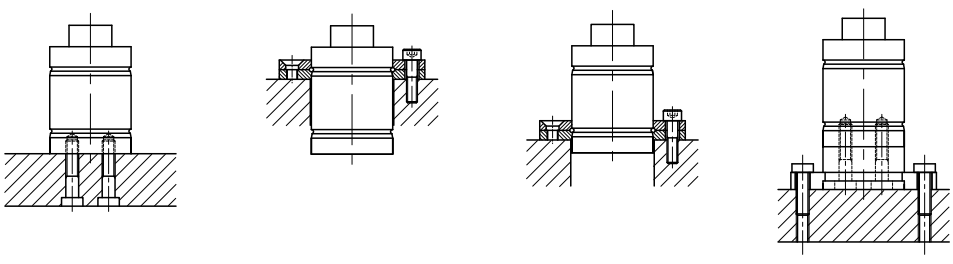
★ (N) = Kgf x 9.80665 (Kgf)=N x 0.101972 1daN=1 x 10^1N 1bar=1 x 10^{-1}MPa

Example of order : RGC 18300 C50

⚠ There is a blue sticker on the gas spring body when it is inflated with a special pressure (<15 Mpa)

REAR ADAPTER - RGCA 18300 - (443181/101)



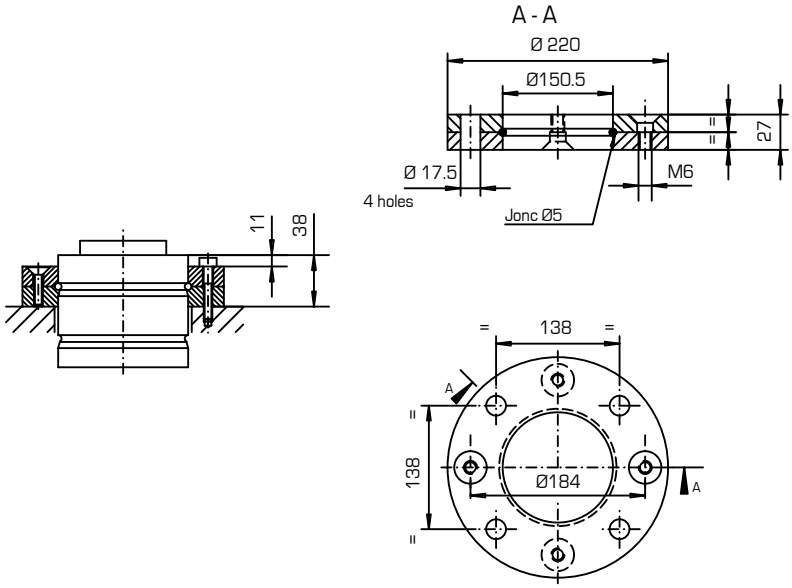


RGCF53, RGCF54, RMGF51 RGCF53, RGCF54, RMGF52 RGF4 RGCA

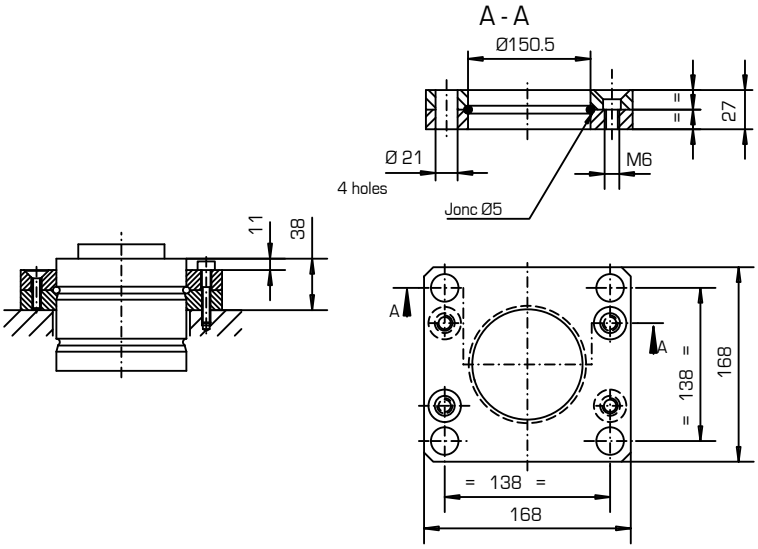
▶ **CAUTION : If you fix RGC type by bottom thread, gas spring's bottom surface should lay completely on the die. RGC with stroke > 25mm should be attached to the die with screws or flanges (no drop-in mounting)**

SUPERCOMPACT GAS SPRINGS

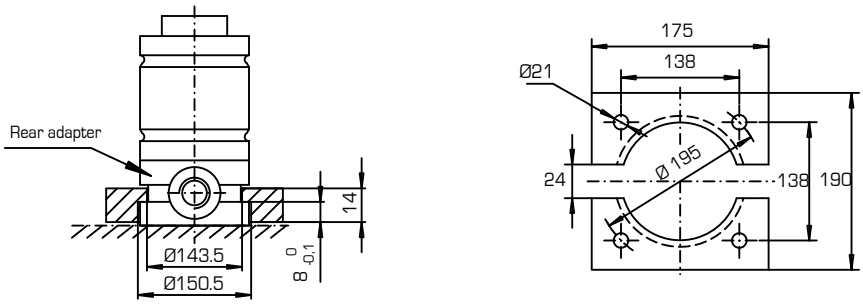
RGCF 53 - (841123/000)



RGCF 54 - (841143/000)

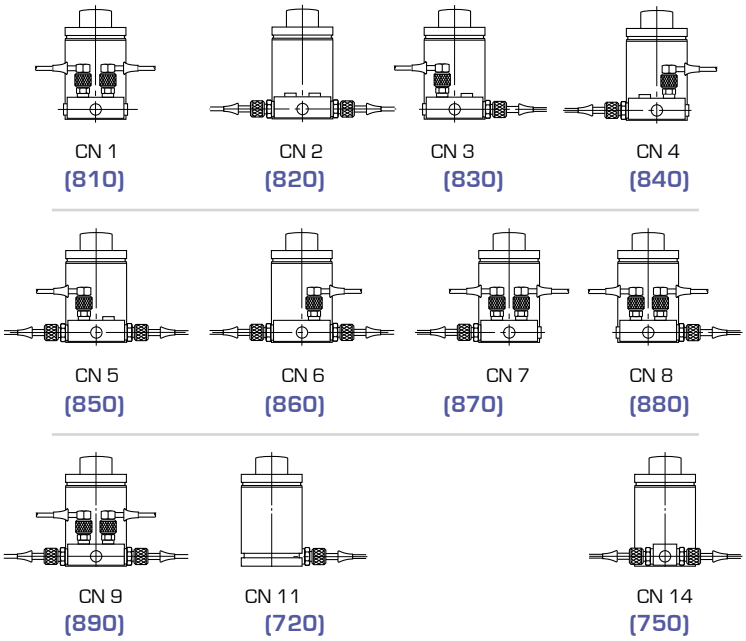


RGCF 4 - (841106/000)



CONNECTIONS FOR RGC GAS SPRINGS

Type	Force	Stroke C mm	Order Code	RGC type	Connection type
RGCR	1000	6	443131/...	RGC 1000	
		10	443132/...		
		16	443133/...		
		25	443134/...		
		32	443135/...		
		40	443136/...		
		50	443137/...		
	1800	6	443141/...	RGC 1800	
		10	443142/...		
		16	443143/...		
		25	443144/...		
		32	443145/...		
		40	443146/...		
		50	443147/...		
	4700	10	443152/...	RGC 4700	
		16	443153/...		
		25	443154/...		
		32	443155/...		
		40	443156/...		
		50	443157/...		
	7500	10	443162/...	RGC 7500	
		16	443163/...		
		25	443164/...		
		32	443165/...		
		40	443166/...		
		50	443167/...		
	11800	10	443172/...	RGC 11800	
		16	443173/...		
		25	443174/...		
		32	443175/...		
		40	443176/...		
		50	443177/...		
	18300	10	443182/...	RGC 18300	
		16	443183/...		
		25	443184/...		
		32	443185/...		
		40	443186/...		
		50	443187/...		



- **All theses connections are possible with the use of rear adaptor only**
- Above all connections can be selected by customer's design, please turn to page 115 to 119 for details.
- The adapter and manifold block connection dimensions are same for RG type and RGC type with rear adapter.
- **Example of ordering** : For a **RGC 1000,** stroke **32** mm + connection **CN2**; the order code is : **443135/820**

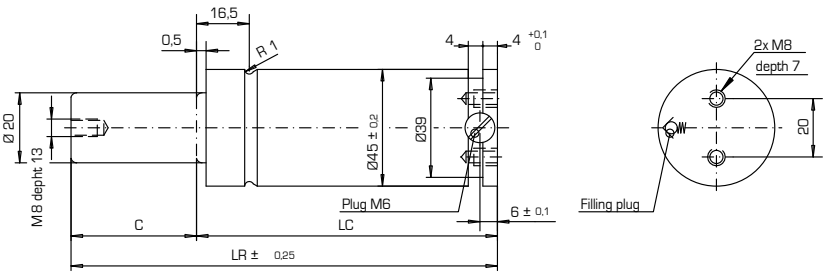
LOW PROFILE GAS SPRINGS

RGH

- Shortest length gas spring
- Body diameter is same as ISO type - from 38 mm to 120 mm
- Force from 5000 N to 50000 N
- Stroke from 12.7 mm to 125 mm
- Can be used in piping system

RGH 500

▶ Comply with European Regulation Nr 97/23 CE

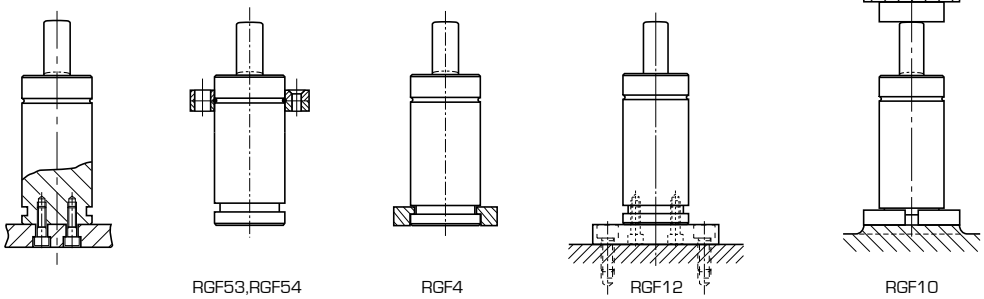


▶ Please turn to page **92** for connection details of RGH type

Type	Force daN	Stroke C mm	Order Code	Pressure MPa (bar)	Force F1 N★	Force F2 N★	LR mm	LC mm	Weight Kg
RGH	500	6	442261/000	15 (150)	4700	5200	62	56	0.83
		12.7	442262/000			5300	75.4	62.7	0.85
		19	442263/000			5800	88	69	0.87
		25	442264/000			6000	100	75	0.89
		38	442265/000			6100	126	88	0.93
		50	442266/000			5300	150	100	0.97
		63	442267/000			6300	176	113	1.01
		80	442268/000			6350	210	130	1.06
		100	442269/000			6400	250	150	1.12
		125	442270/000				300	175	1.20

★ (N) = Kgf x 9.80665 (Kgf)=N x 0.101972 1daN=1 x 10^1N 1bar=1 x 10^{-1}MPa

Example of order : RGH 500 C50



RGF53,RGF54 RGF4 RGF12 RGF10

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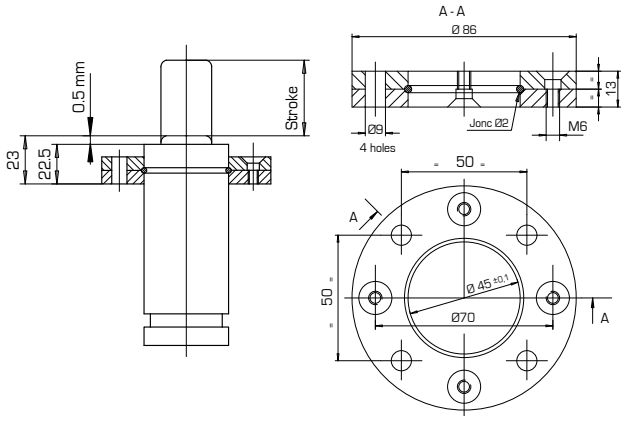
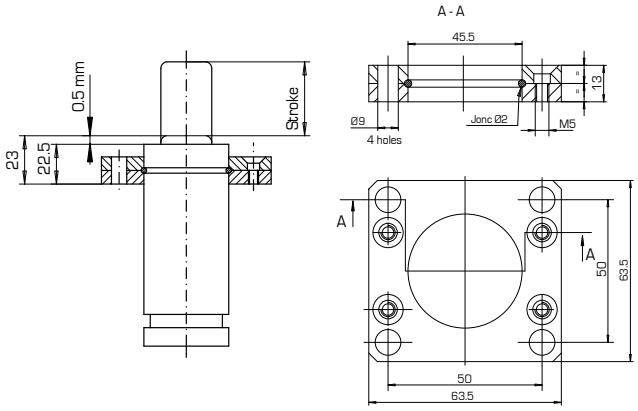
LOW PROFILE GAS SPRINGS

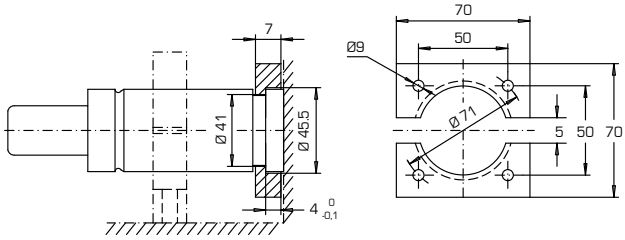
RGF 53 - (841118/000)



RGF 54 - (841138/000)

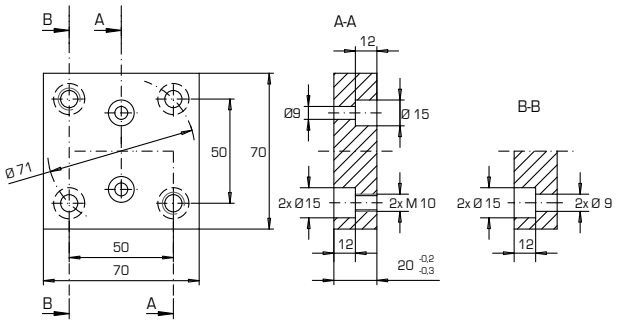


RGF 4 - (841063/000)

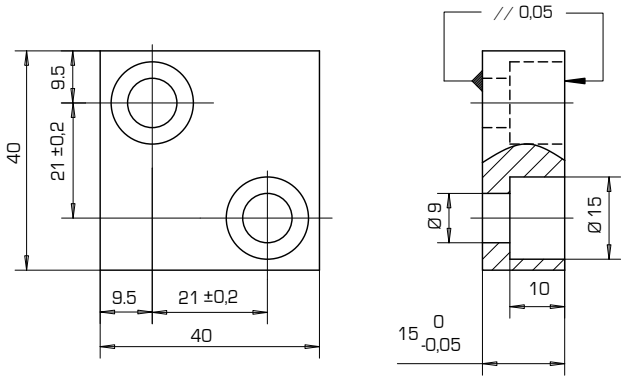


RGHF 12 - (841131/100)

▶ **Includes** : **2 screws** to attach the flange to the gas springs



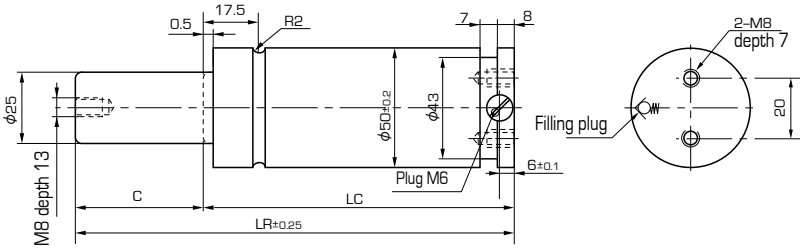
RGF 10 - (841073/000)



LOW PROFILE GAS SPRINGS

RGH 750

▶ Comply with European Regulation Nr 97/23 CE

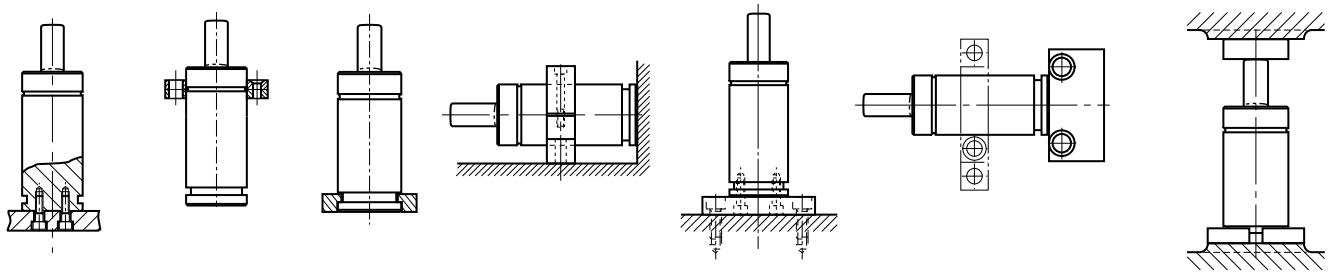


▶ Please turn to page **92** for connection details of RGH type

Type	Force daN	Stroke C mm	Order Code	Pressure MPa (bar)	Force F1 N★	Force F2 N★	LR mm	LC mm	Weight Kg
RGH	750	6	442361/000	15 (150)	7400	9000	62	56	0.65
		12.7	442362/000			11200	75.4	62.7	0.68
		19	442363/000			11400	88	69	0.71
		25	442364/000			11300	100	75	0.74
		38	442365/000			11400	126	88	0.80
		50	442366/000			11600	150	100	0.85
		63	442367/000			11900	176	113	0.91
		80	442368/000			11500	210	130	0.98
		100	442369/000				250	150	1.07
		125	442370/000			11600	300	175	1.18

★ (N) = Kgf x 9.80665 (Kgf)=N x 0.101972 1daN=1 x 10^1N 1bar=1 x 10^{-1}MPa

Example of order : RGH 750 C50



RGF53,RGF54 RGF4 RGF3 RGF12 RGF9 RGF10

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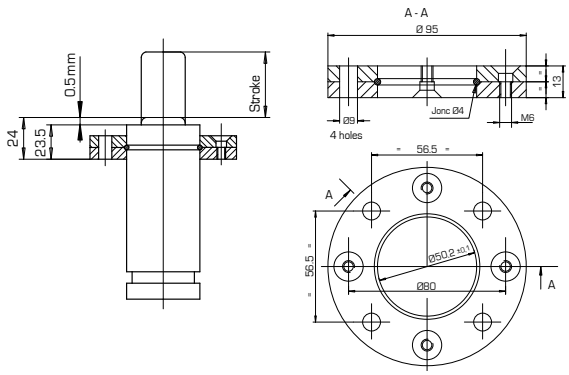
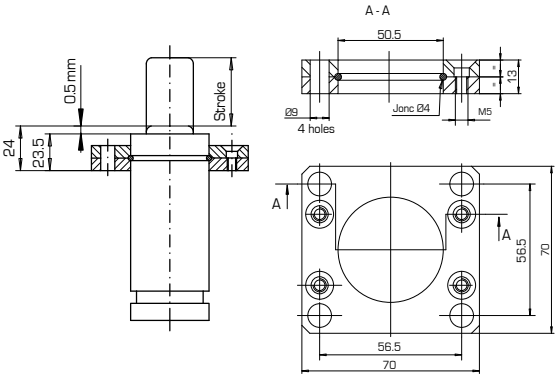
LOW PROFILE GAS SPRINGS

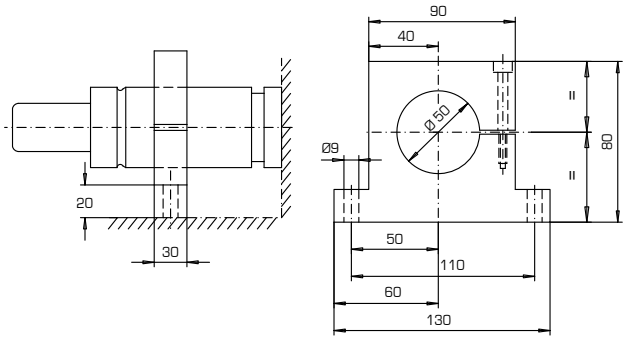
RGF 53 - (841119/000)



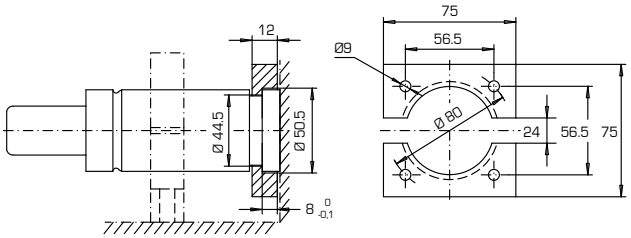
RGF 54 - (841139/000)



RGF 3 - (841027/000)

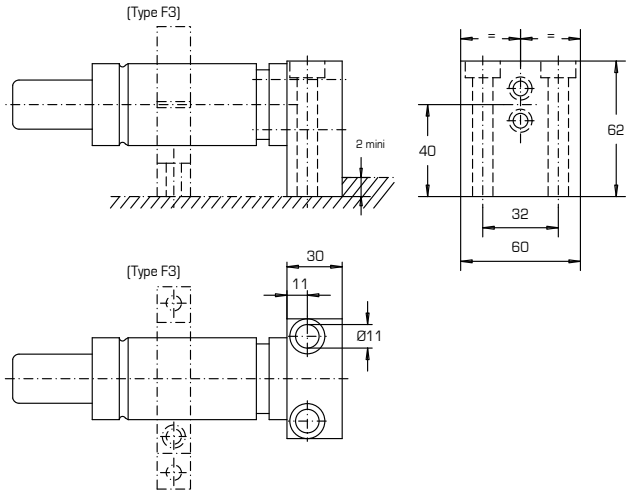


RGF 4 - (841032/000)



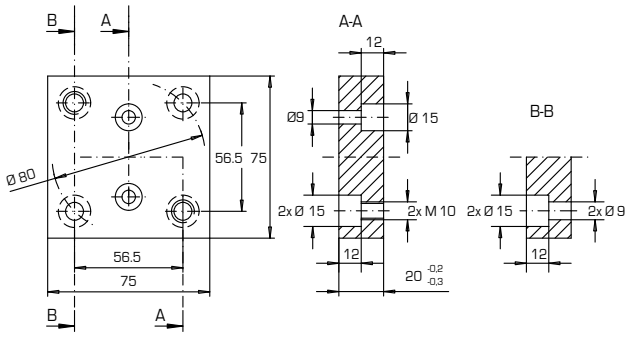
RGF 9 - (841069/000)

▶ **Includes** : **2 screws** to attach the flange to the gas springs

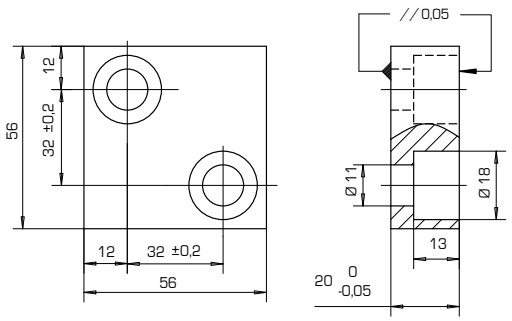


RGHF 12 - (831132/100)

▶ **Includes** : **2 screws** to attach the flange to the gas springs



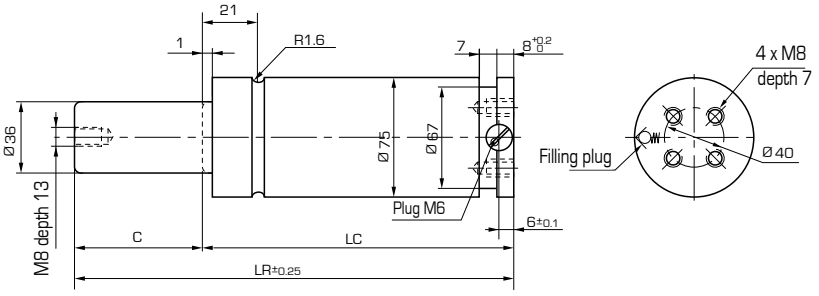
RGF 10 - (841074/000)



LOW PROFILE GAS SPRINGS

RGH 1500

▶ Comply with European Regulation Nr 97/23 CE

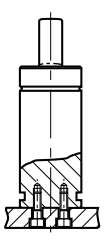


▶ Please turn to page **92** for connection details of RGH type

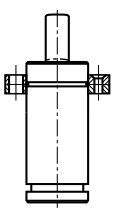
Type	Force daN	Stroke C mm	Order Code	Pressure MPa (bar)	Force F1 N★	Force F2 N★	LR mm	LC mm	Weight Kg
RGH	1500	25	442561/000	15 (150)	15300	20800	110	85	2.70
		38.1	442562/000			21000	136.2	98.1	2.80
		50	442563/000			21200	160	110	2.90
		63.5	442564/000				187	123.5	3.00
		80	442565/000				220	140	3.20
		100	442566/000			21500	260	160	3.40

★ (N) = Kgf x 9.80665 (Kgf)=N x 0.101972 1daN=1 x 10^1N 1bar=1 x 10^{-1}MPa

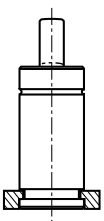
Example of order : RGH 1500 C50



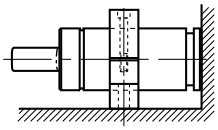
RGHF53,RGHF54



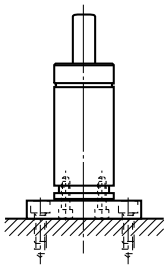
RGF4



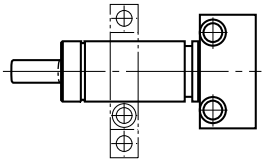
RGF3



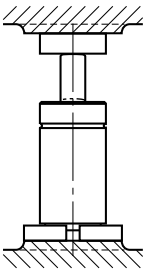
RGF12



RGF9



RGF10



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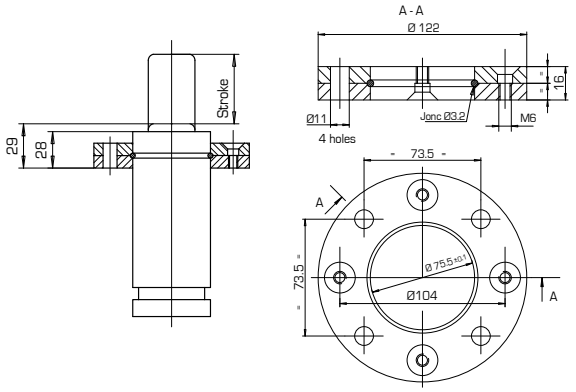
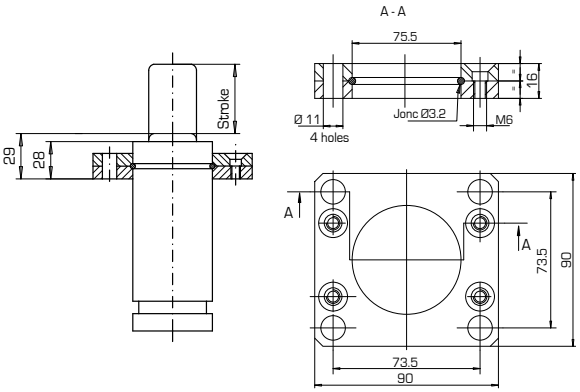
LOW PROFILE GAS SPRINGS

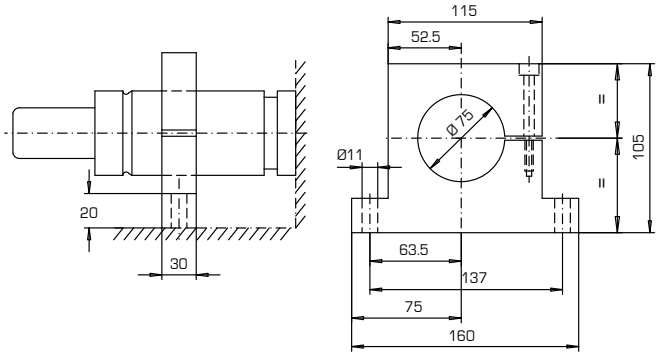
RGHF 53 - (841184/000)



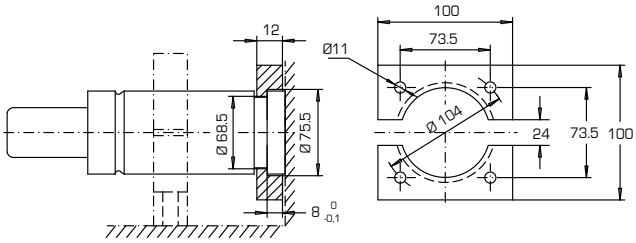
RGHF 54 - (841186/000)



RGF 3 - (841028/000)

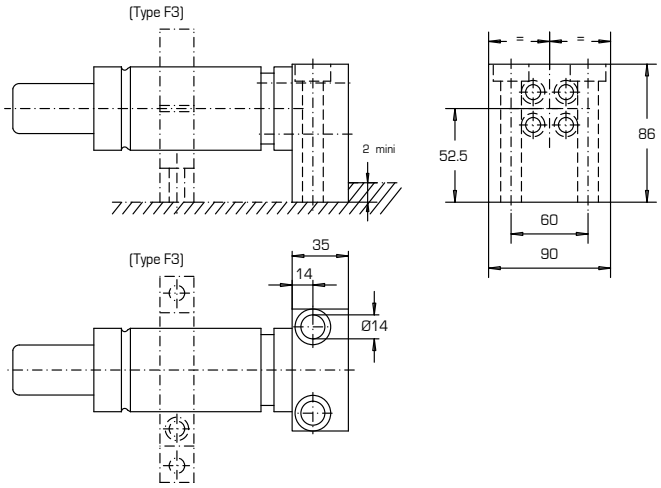


RGF 4 - (841033/000)



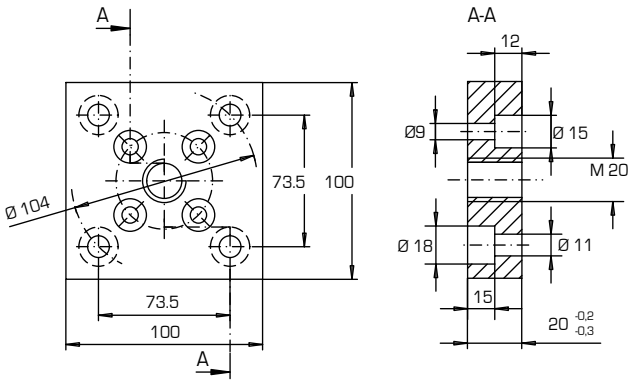
RGF 9 - (841070/000)

▶ **Includes** : **4 screws** to attach the flange to the gas springs

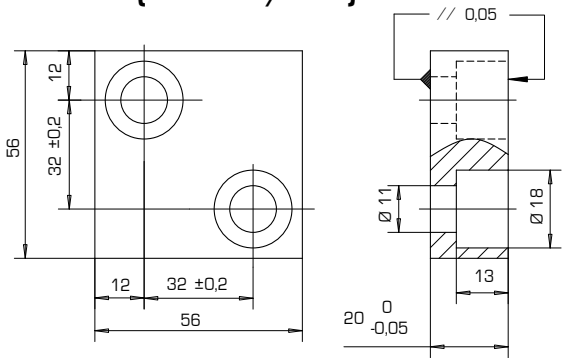


RGHF 12 - (841133/100)

▶ **Includes** : **4 screws** to attach the flange to the gas springs



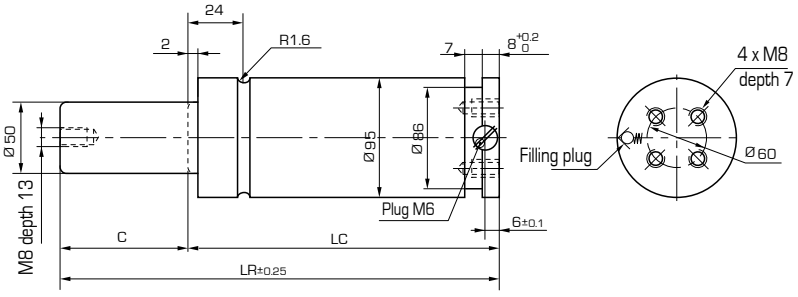
RGF 10 - (841074/000)



LOW PROFILE GAS SPRINGS

RGH 3000

▶ Comply with European Regulation Nr 97/23 CE

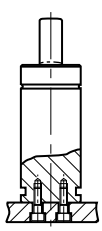


▶ Please turn to page **92** for connection details of RGH type

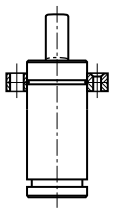
Type	Force daN	Stroke C mm	Order Code	Pressure MPa (bar)	Force F1 N★	Force F2 N★	LR mm	LC mm	Weight Kg
RGH	3000	25	442761/000	15 (150)	29500	41500	120	95	4.20
		38.1	442762/000			42300	146.2	108.1	4.40
		50	442763/000			42900	170	120	4.60
		63.5	442764/000			42900	197	133.5	4.80
		80	442765/000			43000	230	150	5.10
		100	442766/000			43000	270	170	5.40

★ (N) = Kgf x 9.80665 (Kgf)=N x 0.101972 1daN=1 x 10^1N 1bar=1 x 10^{-1}MPa

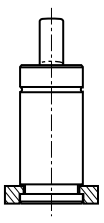
Example of order : RGH 3000 C50



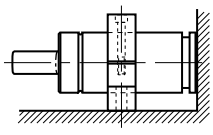
RGHF53,RGHF54



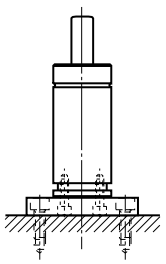
RGF4



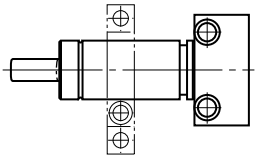
RGF3



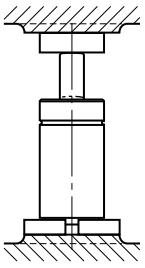
RGF12



RGF9



RGF10, RGF101



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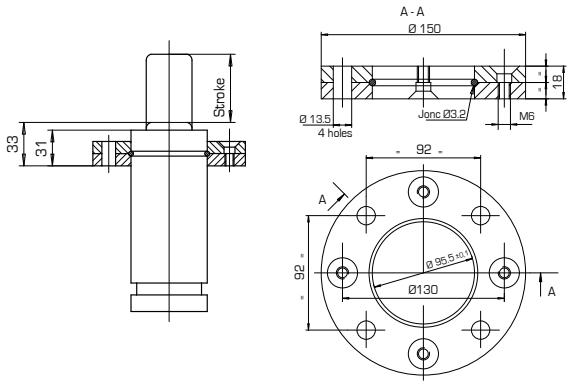
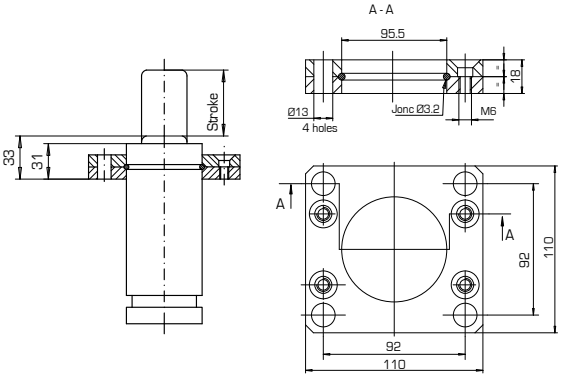
LOW PROFILE GAS SPRINGS

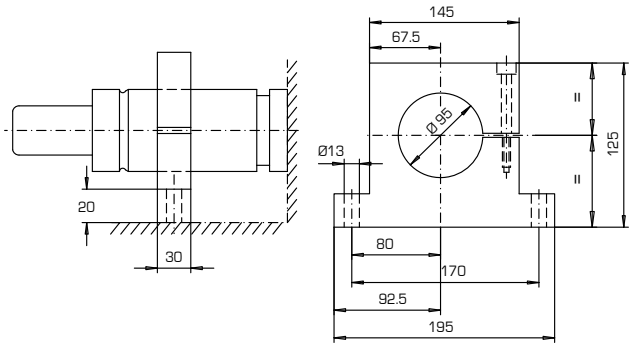
RGHF 53 - (841182/000)



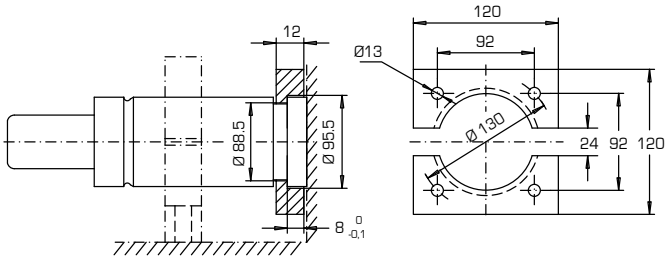
RGHF 54 - (841183/000)



RGF 3 - (841029/000)

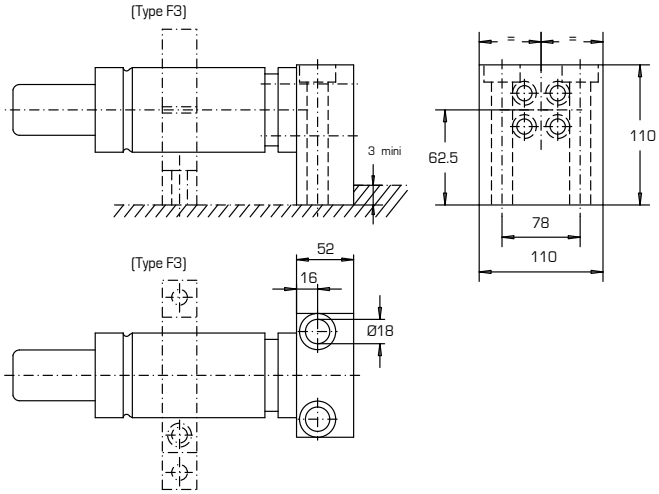


RGF 4 - (841034/000)



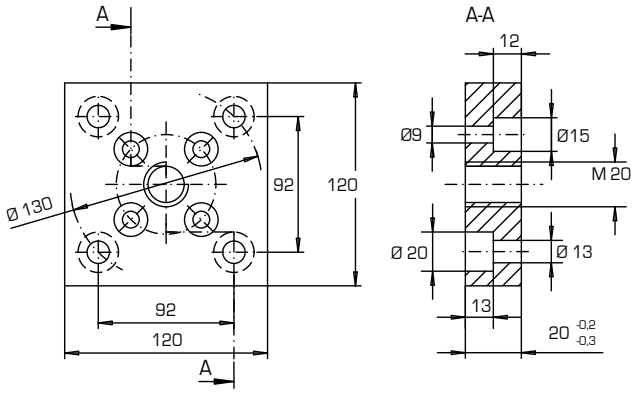
RGF 9 - (841071/000)

▶ **Includes** : **4 screws** to attach the flange to the gas springs

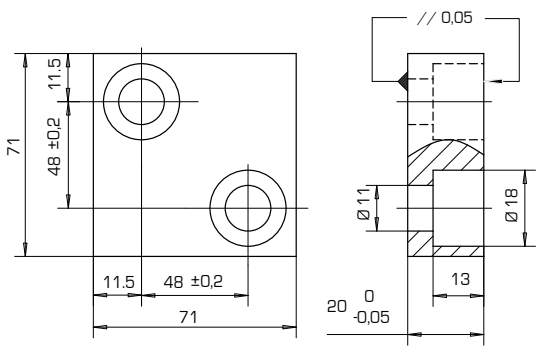


RGHF 12 - (841134/000)

▶ **Includes** : **4 screws** to attach the flange to the gas springs

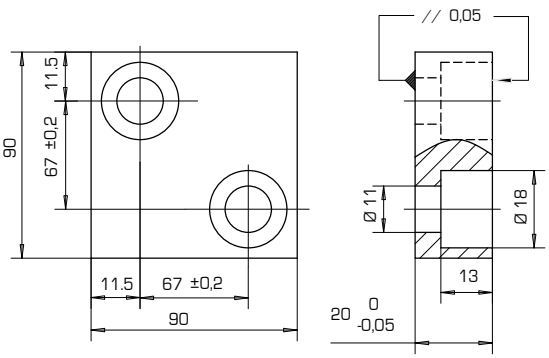


RGF 10 - (841075/000)



RGF 101 - (841176/000)

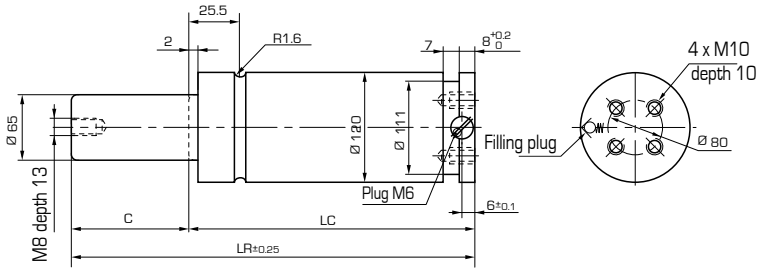
▶ Adapt to Renault standard EM24.54.700 (2003)



LOW PROFILE GAS SPRINGS

RGH 5000

▶ Comply with European Regulation Nr 97/23 CE

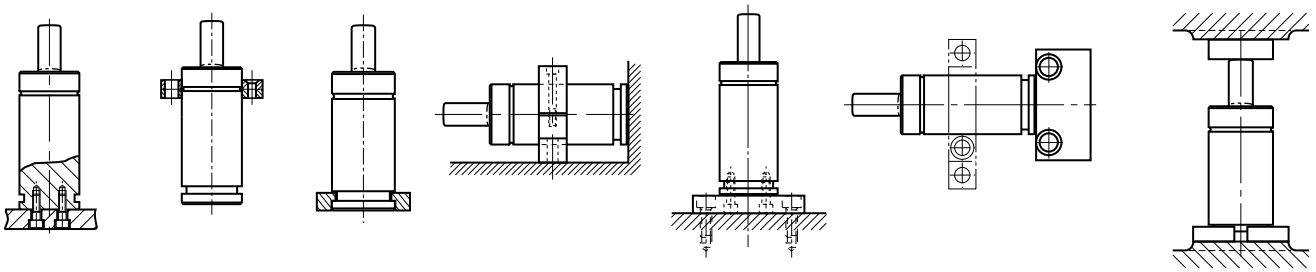


▶ Please turn to page 92 for connection details of RGH type

Type	Force daN	Stroke C mm	Order Code	Pressure MPa (bar)	Force F1 N★	Force F2 N★	LR mm	LC mm	Weight Kg
RGH	5000	25	442961/000	15 (150)	50000	72700	140	115	8.20
		38.1	442962/000			74200	166.2	128.1	8.60
		50	442963/000			74700	190	140	8.90
		63.5	442964/000			75200	217	153.5	9.30
		80	442965/000			75700	250	170	9.70
		100	442966/000			76200	290	190	10.30

★ (N) = Kgf x 9.80665 (Kgf)=N x 0.101972 1daN=1 x 10^1N 1bar=1 x 10^{-1}MPa

Example of order : RGH 5000 C50



RGHF53,RGHF54 RGF4 RGF3 RGF12 RGF9 RGF10, RGF101

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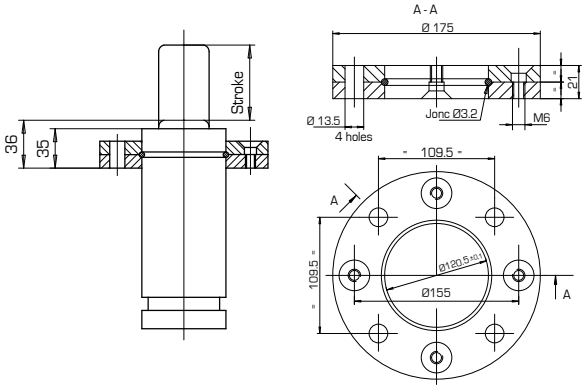
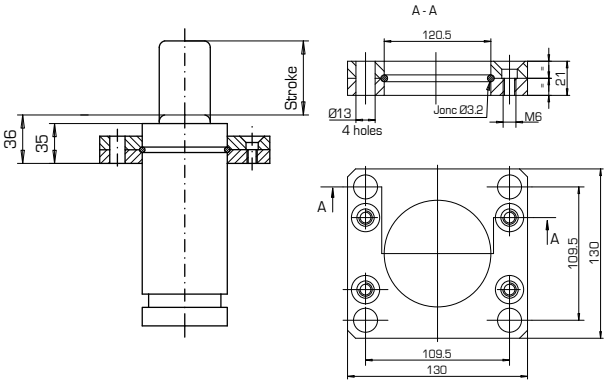
LOW PROFILE GAS SPRINGS

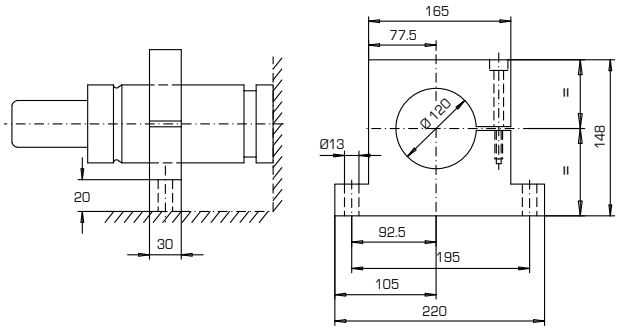
RGHF 53 - (841185/000)



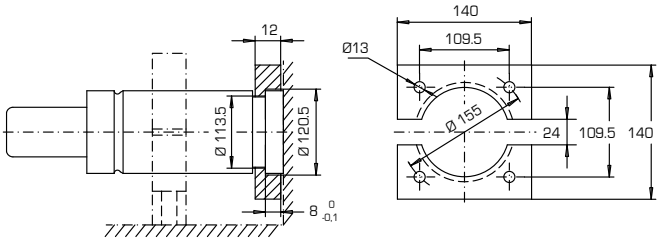
RGHF 54 - (841187/000)



RGF 3 - (841030/000)

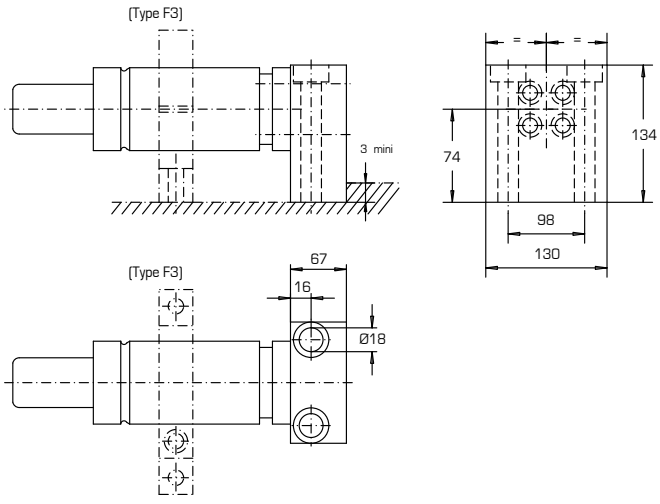


RGF 4 - (841035/000)



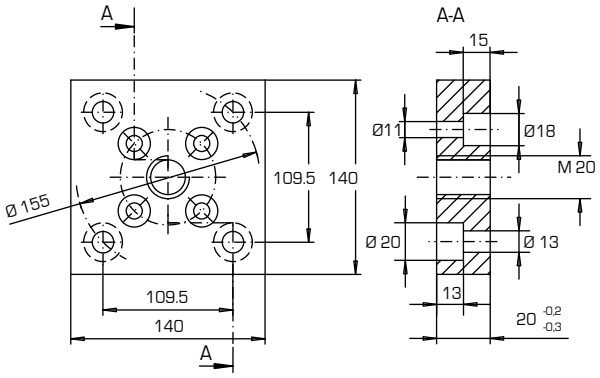
RGF 9 - (841072/000)

▶ **Includes** : **4 screws** to attach the flange to the gas springs

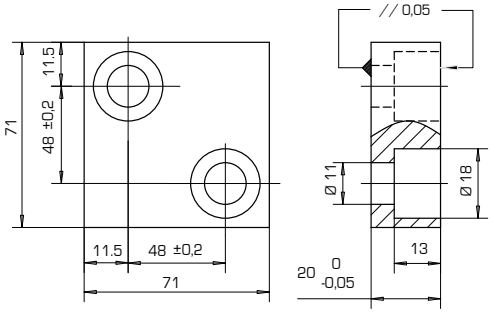


RGHF 12 - (841135/100)

▶ **Includes** : **4 screws** to attach the flange to the gas springs

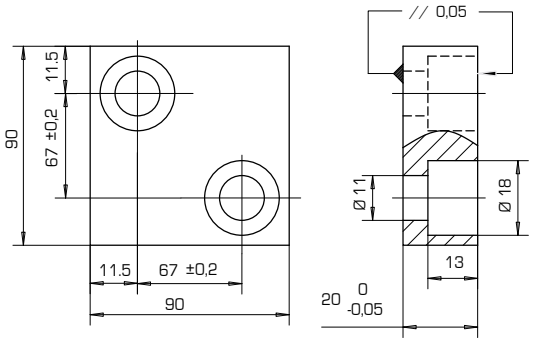


RGF 10 - (841075/000)



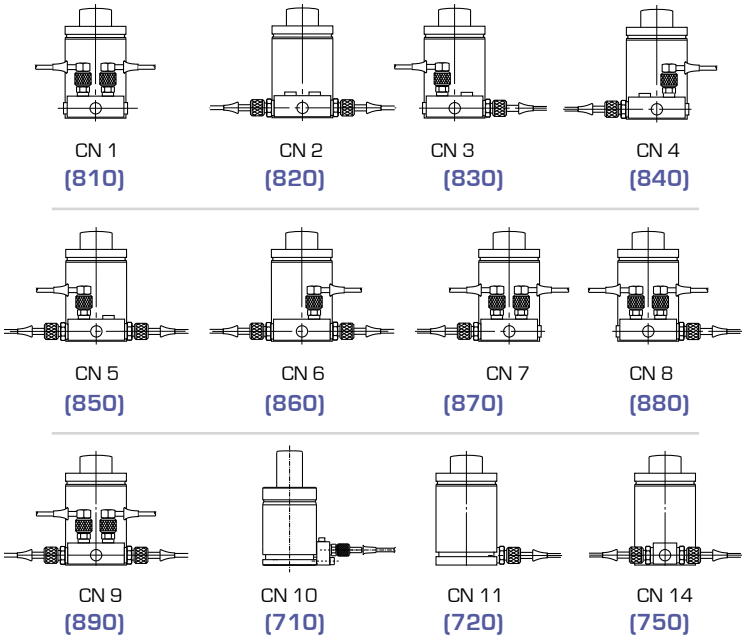
RGF 101 - (841176/000)

▶ Adapt to Renault standard EM24.54.700 (05/1999)



CONNECTIONS FOR RGH GAS SPRINGS

Type	Force daN	Stroke C mm	Order Code	RGH type	Connection type
RGHR	500	6	442261/...	RGH 500	
		12.7	442262/...		
		19	442263/...		
		25	442264/...		
		38	442265/...		
		50	442266/...		
		63	442267/...		
		80	442268/...		
		100	442269/...		
		125	442270/...		
	750	6	442361/...	RGH 750	
		12.7	442362/...		
		19	442363/...		
		25	442364/...		
		38	442365/...		
		50	442366/...		
		63	442367/...		
		80	442368/...		
		100	442369/...		
		125	442370/...		
	1500	25	442561/...	RGH 1500	
		38.1	442562/...		
		50	442563/...		
		63.5	442564/...		
		80	442565/...		
		100	442566/...		
	3000	25	442761/...	RGH 3000	
		38.1	442762/...		
		50	442763/...		
		63.5	442764/...		
		80	442765/...		
		100	442766/...		
	5000	25	442961/...	RGH 5000	
		38.1	442962/...		
		50	442963/...		
		63.5	442964/...		
		80	442965/...		
		100	442966/...		



- Above all connections can be selected by custmer's design, please turn to page 147 to 153 for details
- **Example of ordering** : For a **RGH 500,** stroke **63** mm + connection **CN2** ; the order code is : **442267/820**

ISO
GAS SPRINGS

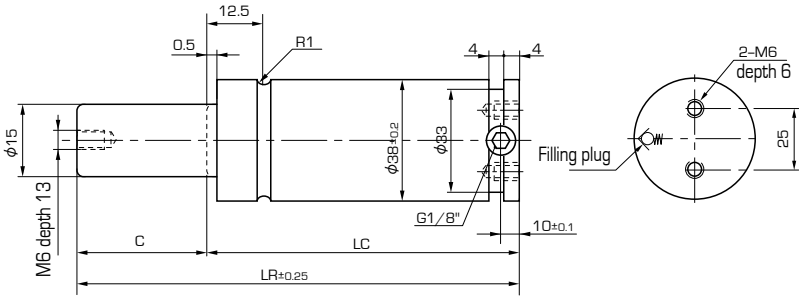
RG

- Conform to standard dimensions ISO11901-1, CNOMO E.24.54.815.N, VDI3003
- Comply with European directive PED 97/23EC
- Force from 500N to 100 000N (10t)
- Stroke up to 300mm
- Designed for heavy duty
- Double sealing
- Oil lubricated guide ring
- Solid structure (no welding)
- Can be used in piping system

BASIC INFORMATION

- Gas : Nitrogen
- Maximum inflating pressure : 150 bar
- Minimum inflating pressure : 25 bar
- Temperature limit : 0/+70°C
- Maximum piston rod speed : 1.6 m/s

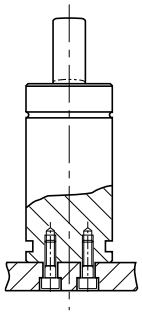
RG 250



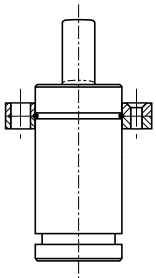
▶ Please see page **110** for connection details of ISO standard gas springs

Type	Force daN	Stroke C mm	Order Code	Pressure MPa (bar)	Force F1 N★	Force F2 N★	LR mm	LC mm	Weight Kg
RG	250	12.7	442122/200	15 (150)	2650	2950	75.4	62.7	0.41
		19	442123/200			2990	88	69	0.44
		25	442124/200			3040	100	75	0.49
		38	442125/200			3060	126	88	0.55
		50	442126/200			3090	150	100	0.60
		63	442127/200			3090	176	113	0.65
		80	442128/200			3110	210	130	0.75
		100	442129/200			3110	250	150	0.82
		125	442130/200			3130	300	175	0.93

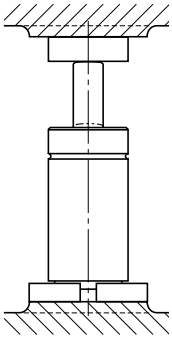
★ (N) = Kgf x 9.80665 (Kgf)=N x 0.101972 1daN=1 x 10^1N 1bar=1 x 10^{-1}MPa



RGF53, RGF54



RGF4, RGF6, RGF7



RGF10

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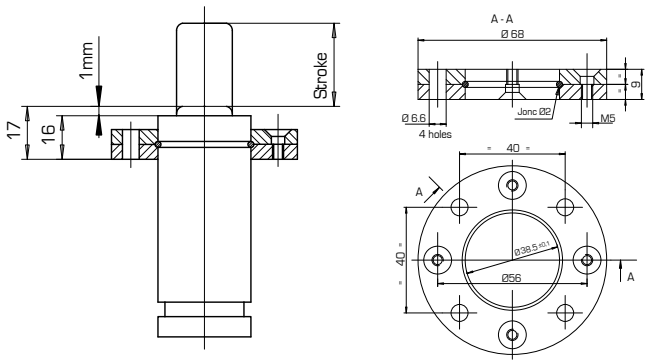
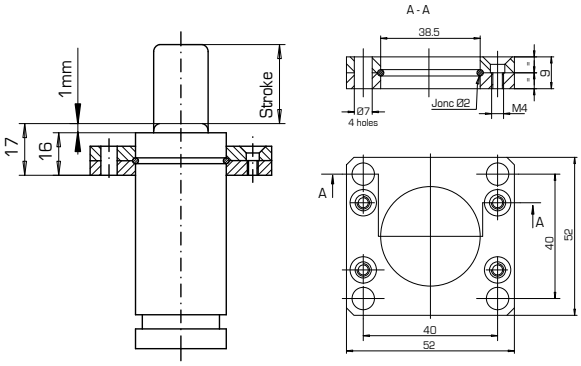
ISO
GAS SPRINGS

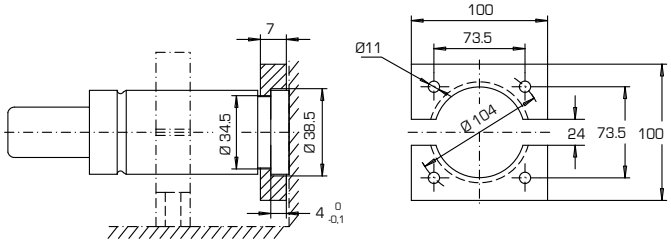
RGF 53 - (841117/000)



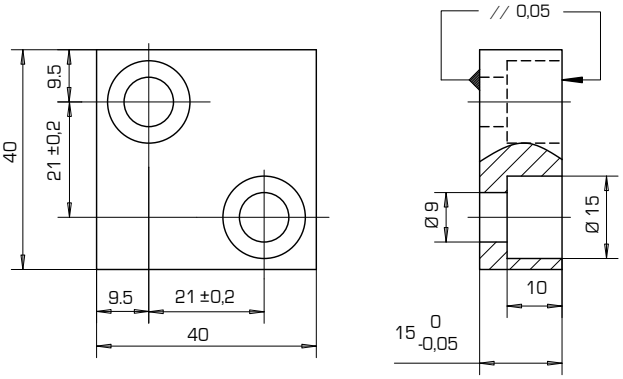
RGF 54 - (841137/000)



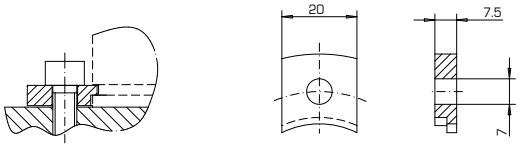
RGF 4 - (841031/000)



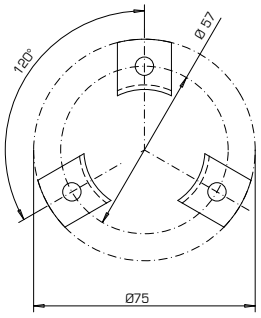
RGF 10 - (841073/000)



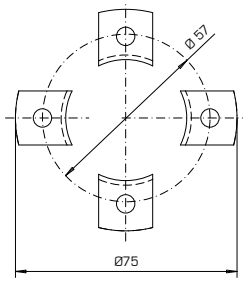
RGF 6 - (841041/000)
RGF 7 - (841037/000)



RGF 6

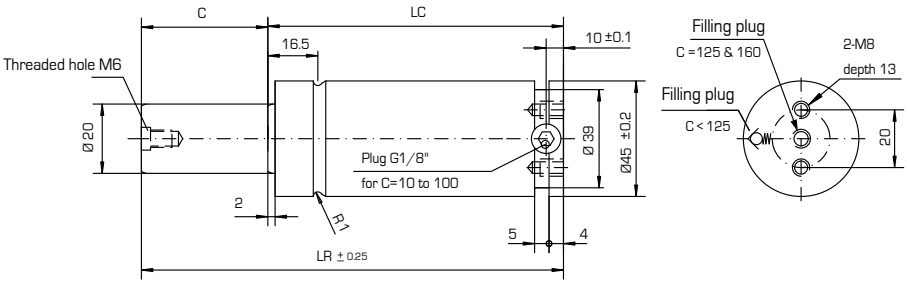


RGF 7



ISO
GAS SPRINGS

RG 500



▶ Please see page 110 for connection details of ISO standard gas springs

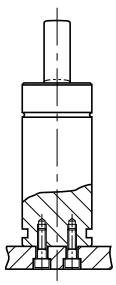
▶ **Also exists for high velocity. For more information, please contact us**

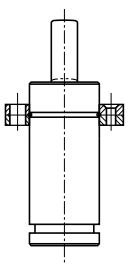
Type	Force daN	Stroke C mm	Order Code	Pressure MPa (bar)	Force F1 N★	Force F2 N★	LR mm	LC mm	Weight Kg
RG	500	10	442251/000	15 (150) ⚠	4700	5900	105	95	0.95
		16	442252/000			6000	117	101	1.00
		25	442253/000			6200	135	110	1.05
		38	442257/000			6300	161	123	1.15
		50	442254/000			6400	185	135	1.20
		63	442258/000			6450	211	148	1.30
		80	442255/000			6500	245	165	1.40
		100	442256/000			6600	285	185	1.55
		125 ●	442259/000			6700	335	210	1.70
		160 ●	442260/000			6900	405	245	1.90

★ (N) = Kgf x 9.80665 (Kgf)=N x 0.101972 1daN=1 x 10^1N 1bar=1 x 10^{-1}MPa

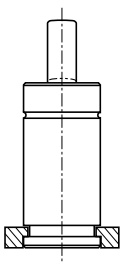
● Stroke 125, 160 can not be used in piping system because their inflating valve is on the bottom of cylinder body.

⚠ There is a blue sticker on the gas spring body when it is inflated with a special pressure (<15 Mpa)

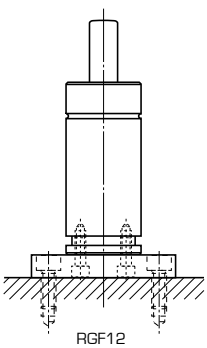




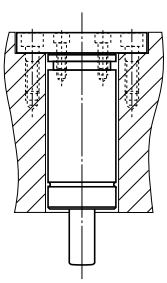
RGF53,RGF54



RGF4, RGF6, RGF7

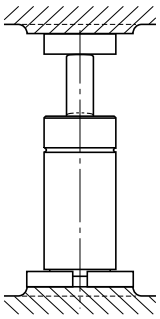


RGF12



RGF1

▲ **Must be used with counter-plate**



RGF10

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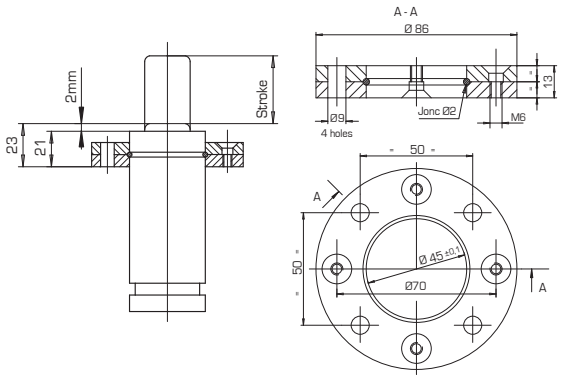
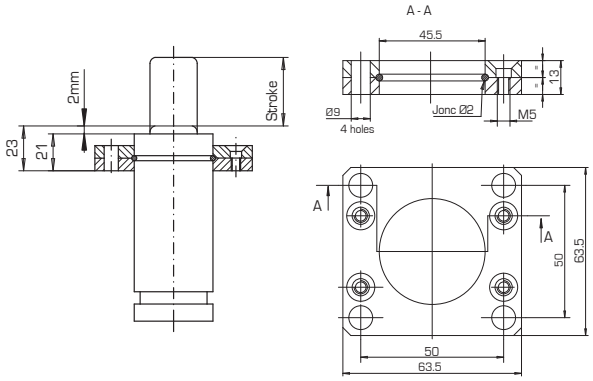
ISO
GAS SPRINGS

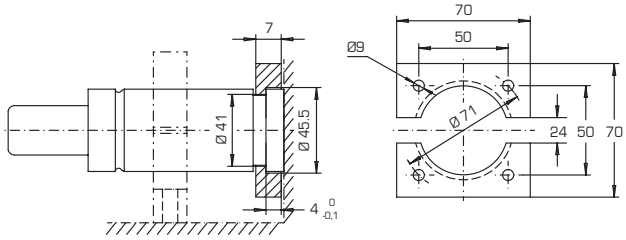
RGF 53 - (841118/000)



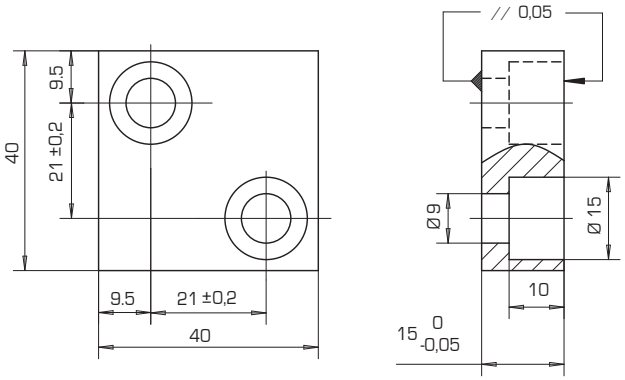
RGF 54 - (841138/000)



RGF 4 - (841063/000)

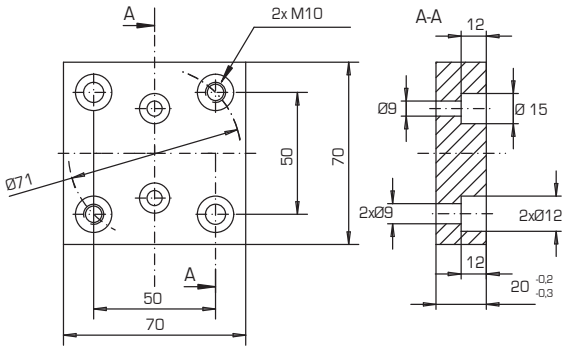


RGF 10 - (841073/000)



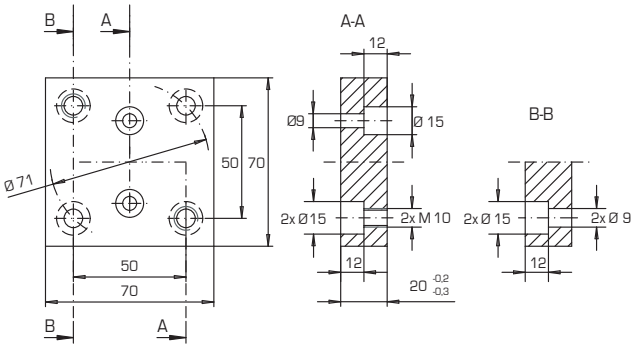
RGF 1 - (841061/000)

▶ **Includes** : **2 screws** to attach the flange to the gas springs

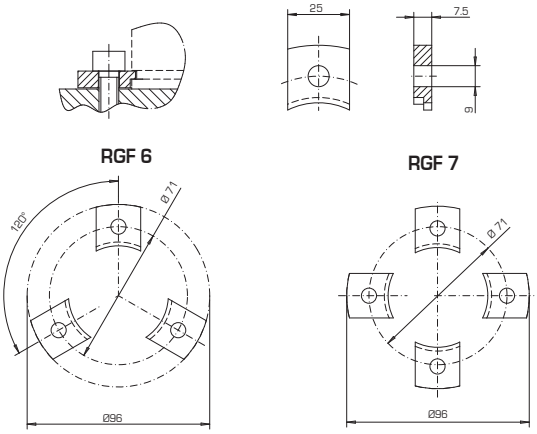


RGF 12 - (841131/000)

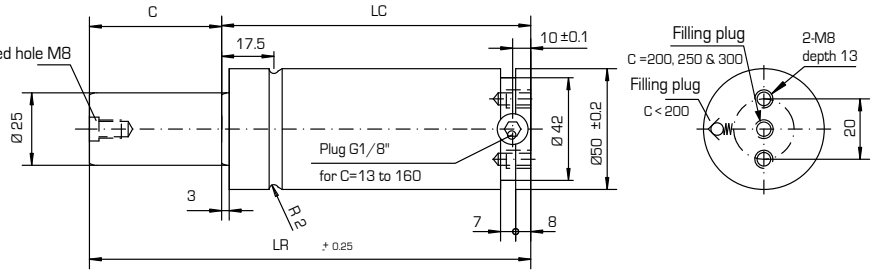
▶ **Includes** : **2 screws** to attach the flange to the gas springs



RGF 6 - (841245/000)
RGF 7 - (841248/000)



RG 750



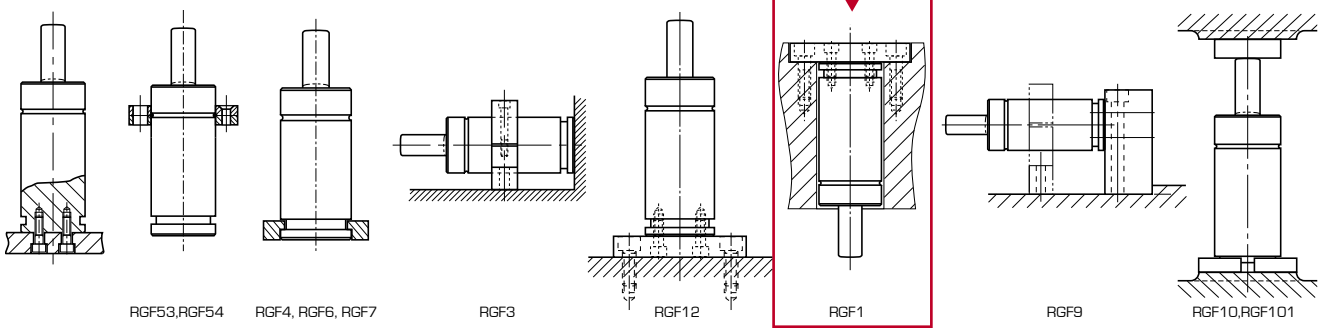
- Please see page 110 for connection details of ISO standard gas springs
- **Also exists for high velocity. For more information, please contact us**

Type	Force daN	Stroke C mm	Order Code	Pressure MPa (bar)	Force F1 N★	Force F2 N★	LR mm	LC mm	Weight Kg
RG	750	13	442337/000	15 (150) ⓘ	7400	9600	121	108	1.30
		25	442331/000			10300	145	120	1.40
		38	442338/000			10500	171	133	1.50
		50	442332/000			10700	195	145	1.60
		63	442339/000			10850	221	158	1.70
		80	442333/000			11000	255	175	1.80
		100	442334/000			11100	295	195	2.00
		125	442335/000			11200	345	220	2.20
		160	442336/000			11200	415	255	2.50
		200 ●	442330/000			11300	495	295	2.90
		250 ●	442341/000			11550	595	345	3.30
		300 ●	442342/000			11700	695	395	3.70

★ (N) = Kgf x 9.80665 (Kgf)=N x 0.101972 1daN=1 x 10^1N 1bar=1 x 10^{-1}MPa

● Stroke 200, 250 and 300 can not be used in piping system because their inflating valve is on the bottom of cylinder body.

ⓘ There is a blue sticker on the gas spring body when it is inflated with a special pressure (<15 Mpa)



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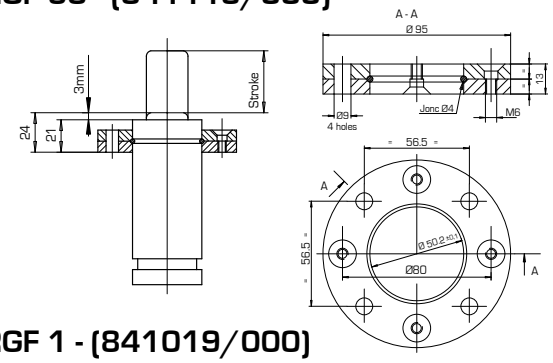
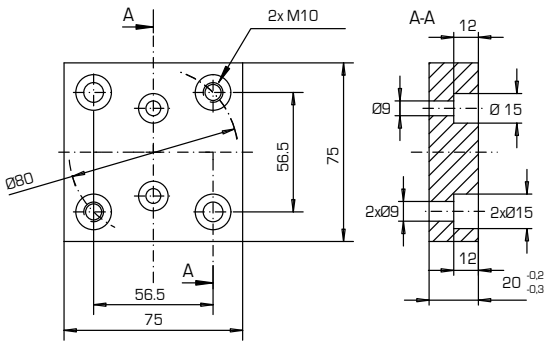
ISO
GAS SPRINGS

RGF 53 - (841119/000)



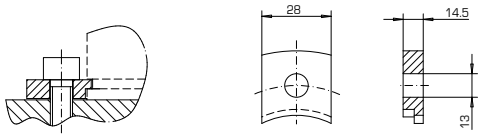
RGF 1 - (841019/000)

▶ Includes : **2 screws** to attach the flange to the gas springs

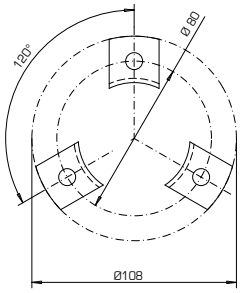


RGF 6 - (841041/000)

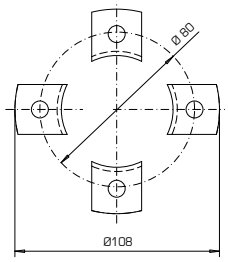
RGF 7 - (841251/000)



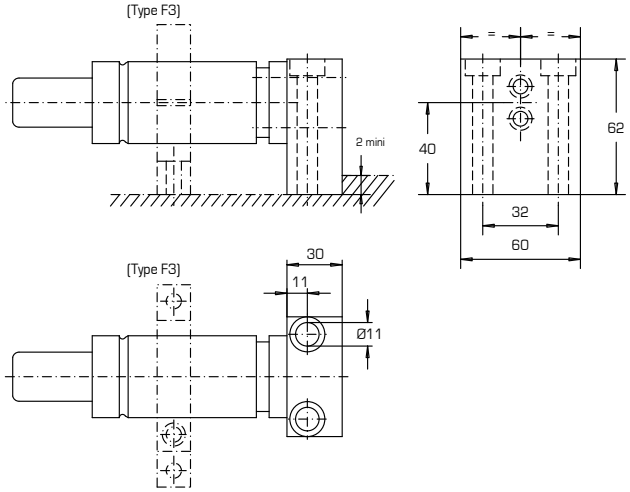
RGF 6



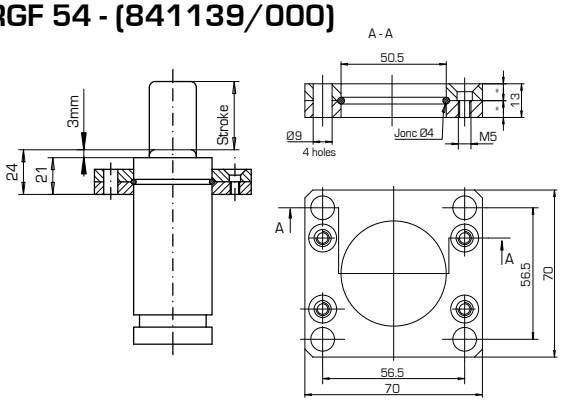
RGF 7



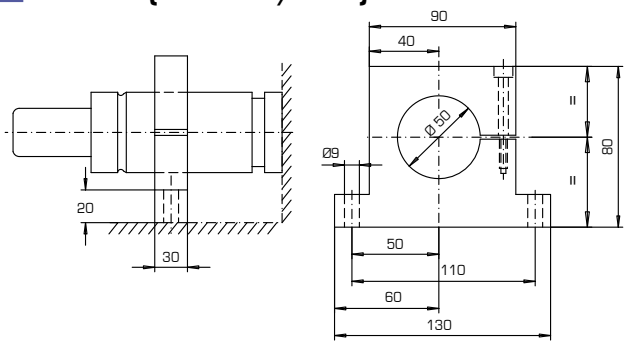
RGF 9 - (841069/000)



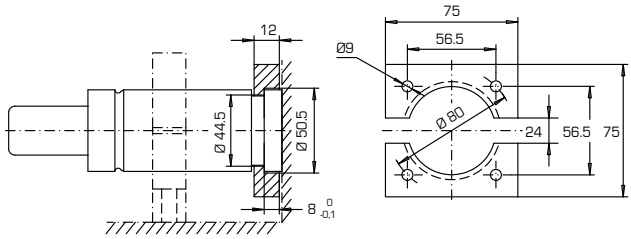
RGF 54 - (841139/000)



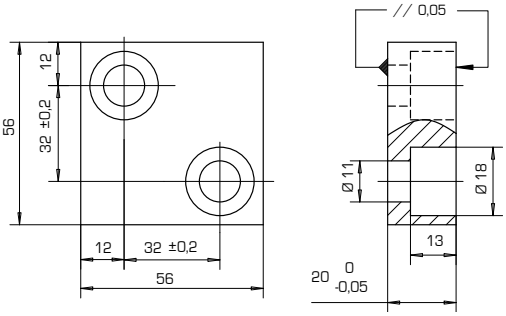
RGF 3 - (841027/000)



RGF 4 - (841032/000)

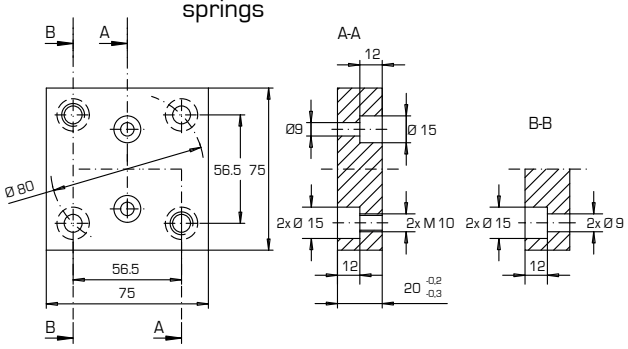


RGF 10 - (841074/000)



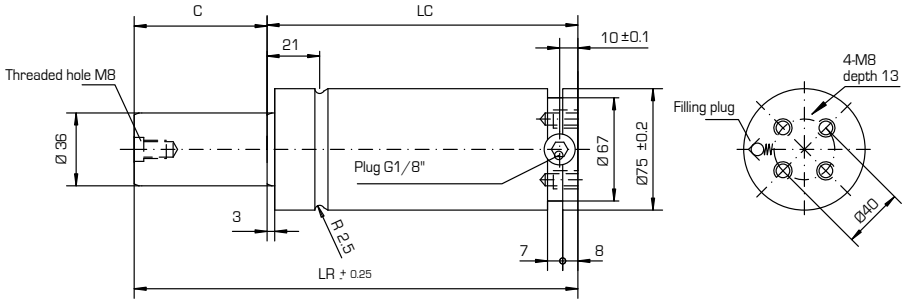
RGF 12 - (841132/000)

▶ Includes : **2 screws** to attach the flange to the gas springs



ISO
GAS SPRINGS

RG 1500



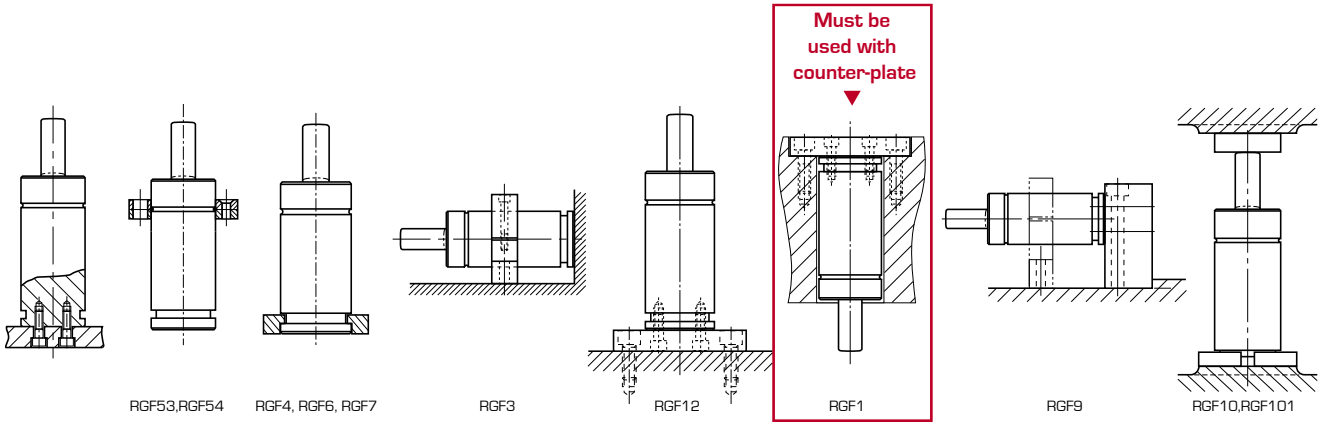
▶ Please see page 110 for connection details of ISO standard gas springs

▶ **Also exists for high velocity. For more information, please contact us**

Type	Force daN	Stroke C mm	Order Code	Pressure MPa (bar)	Force F1 N★	Force F2 N★	LR mm	LC mm	Weight Kg
RG	1500	10	442537/000	15 (150) ⓘ	1560	18700	130	120	3.30
		25	442531/000			19400	160	135	3.50
		38	442538/000			19900	186	148	3.70
		50	442532/000			20500	210	160	4.00
		63	442539/000			20800	236	173	4.20
		80	442533/000			21000	270	190	4.50
		100	442534/000			21300	310	210	4.90
		125	442535/000			21400	360	235	5.40
		160	442536/000			21600	430	270	5.80
		200	442540/000			21700	510	310	6.50
		250	442541/000			21900	610	360	7.50
		300	442542/000			20200	710	410	8.50

★ (N) = Kgf x 9.80665 (Kgf)=N x 0.101972 1daN=1 x 10^1N 1bar=1 x 10^{-1}MPa

ⓘ There is a blue sticker on the gas spring body when it is inflated with a special pressure (<15 Mpa)



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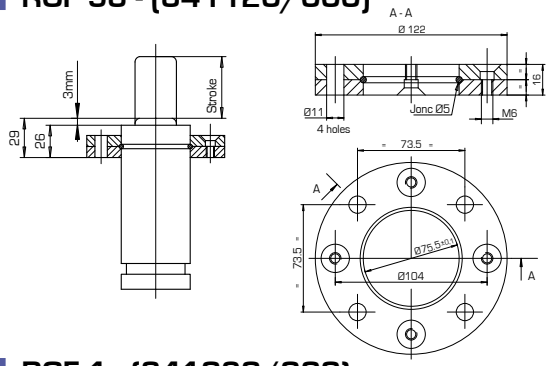
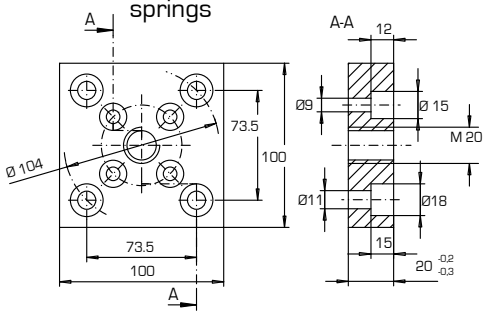
ISO
GAS SPRINGS

RGF 53 - (841120/000)



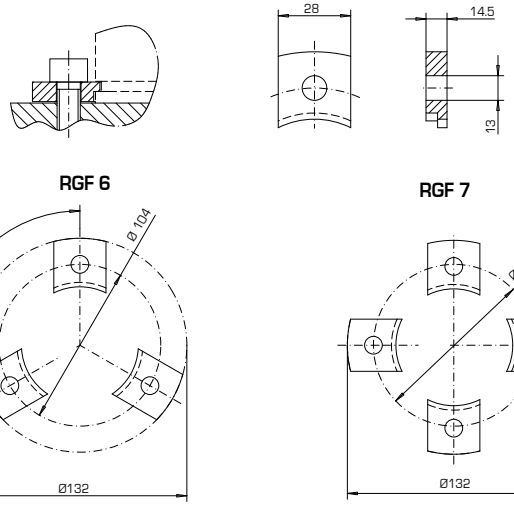
RGF 1 - (841020/000)

▶ Includes : **4 screws** to attach the flange to the gas springs

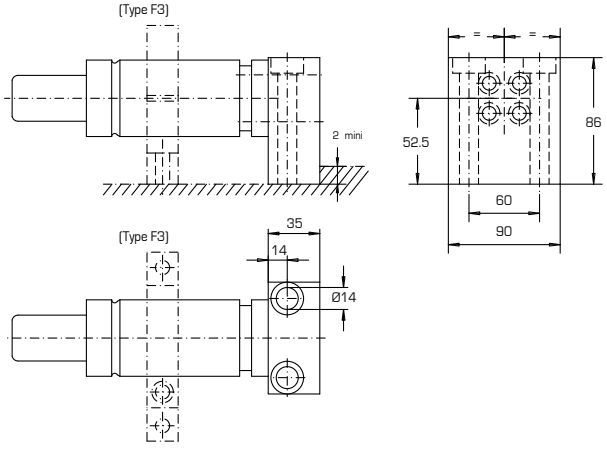


RGF 6 - (841043/000)

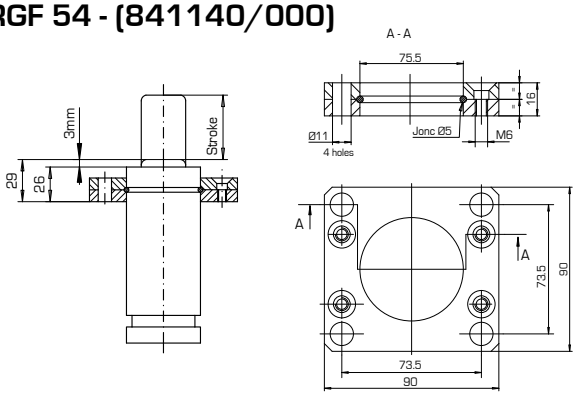
RGF 7 - (841048/000)



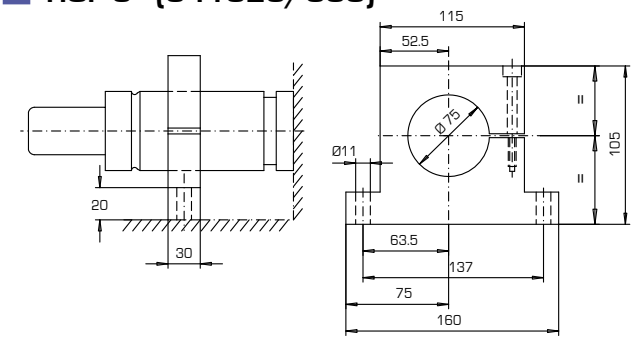
RGF 9 - (841070/000)



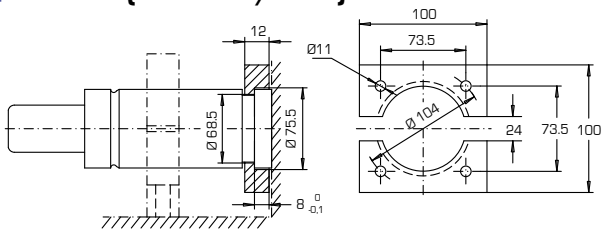
RGF 54 - (841140/000)



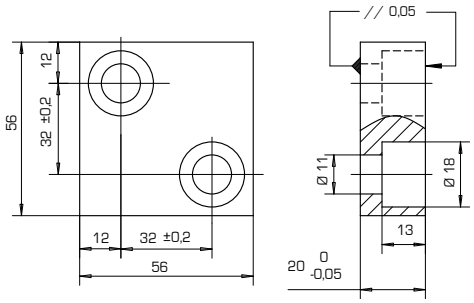
RGF 3 - (841028/000)



RGF 4 - (841033/000)

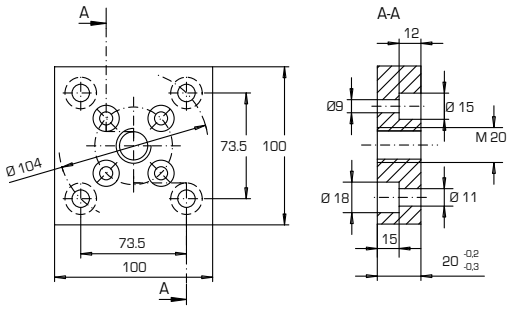


RGF 10 - (841074/000)



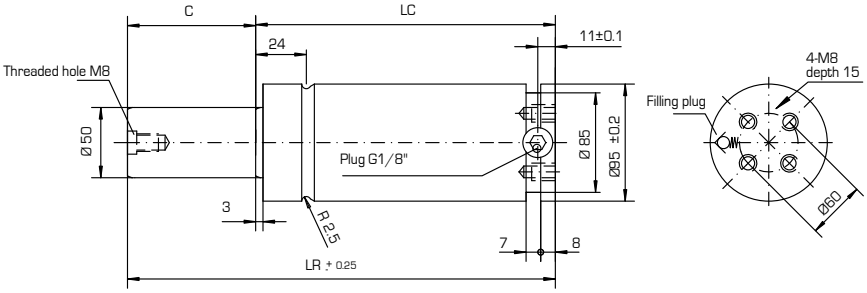
RGF 12 - (841133/000)

▶ Includes : **4 screws** to attach the flange to the gas springs



ISO
GAS SPRINGS

RG 3000



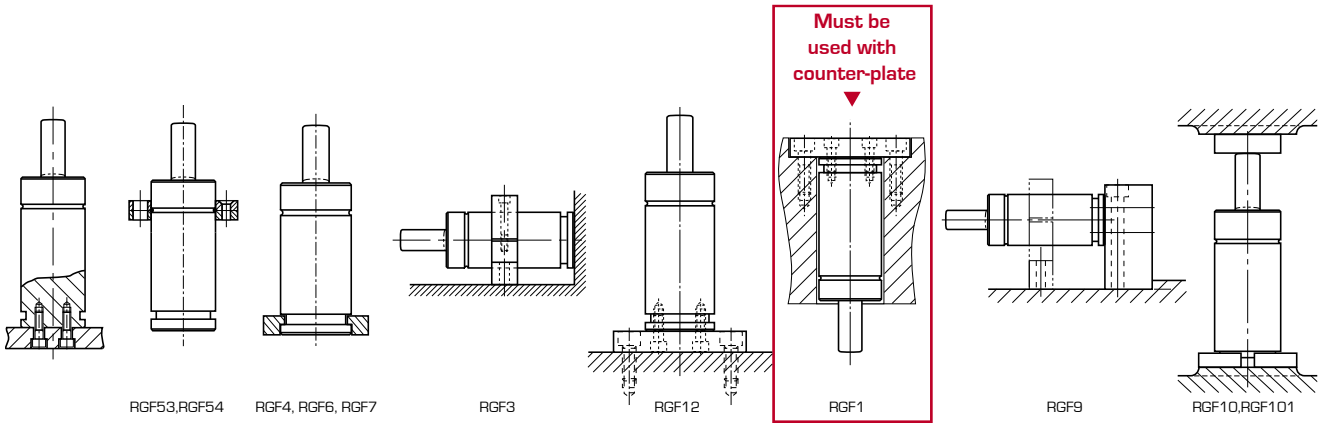
▶ Please see page 110 for connection details of ISO standard gas springs

▶ **Also exists for high velocity. For more information, please contact us**

Type	Force daN	Stroke C mm	Order Code	Pressure MPa (bar)	Force F1 N★	Force F2 N★	LR mm	LC mm	Weight Kg
RG	3000	10	442737/000	15 (150) ⓘ	29500	35000	140	130	5.90
		25	442731/000			38000	170	145	6.30
		38	442738/000			39300	196	158	6.70
		50	442732/000			40700	220	170	7.00
		63	442739/000			41200	246	183	7.50
		80	442733/000			42200	280	200	7.90
		100	442734/000			42800	320	220	8.50
		125	442735/000			43100	370	245	9.30
		160	442736/000			43700	440	280	10.40
		200	442740/000			44000	520	320	11.70
		250	442798/000			44300	620	370	13.40
		300	442799/000			44700	720	420	15.00

★ (N) = Kgf x 9.80665 (Kgf)=N x 0.101972 1daN=1 x 10^1N 1bar=1 x 10^{-1}MPa

ⓘ There is a blue sticker on the gas spring body when it is inflated with a special pressure (<15 Mpa)



▶ Please see p109 for RGF6, RGF7 dimensions and details

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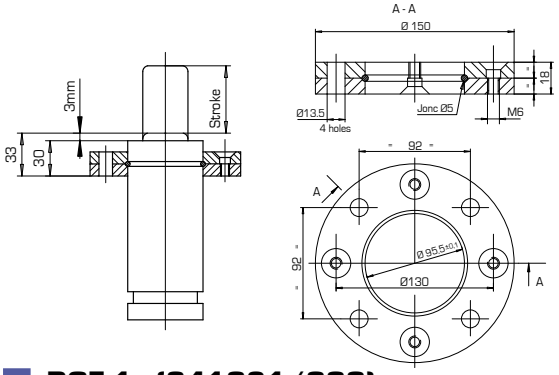
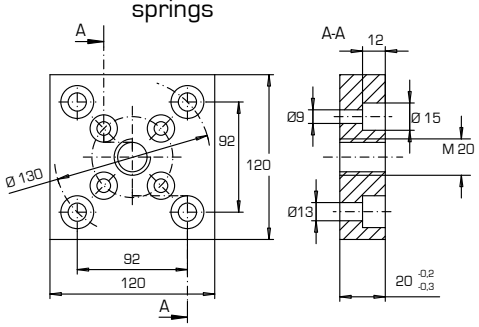
ISO
GAS SPRINGS

RGF 53 - (841121/000)



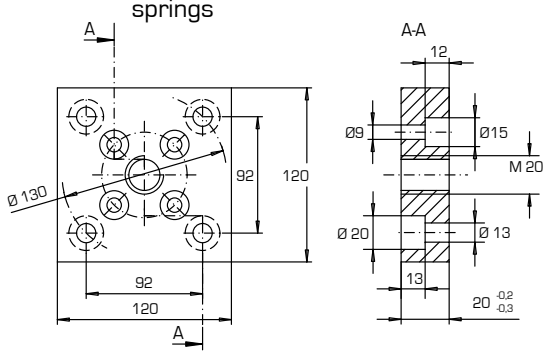
RGF 1 - (841021/000)

▶ Includes : **4 screws** to attach the flange to the gas springs

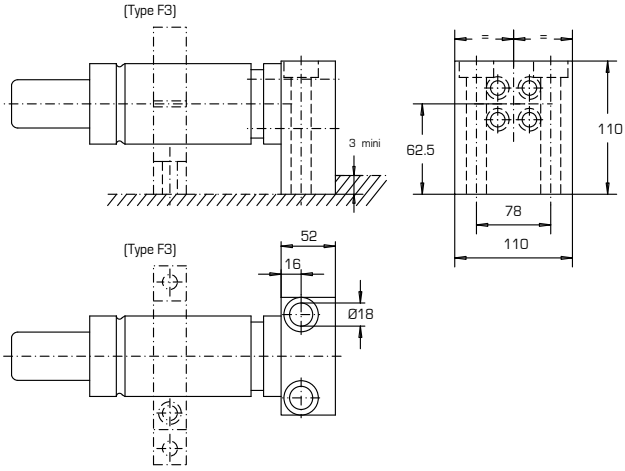


RGF 12 - (841134/000)

▶ Includes : **4 screws** to attach the flange to the gas springs



RGF 9 - (841071/000)

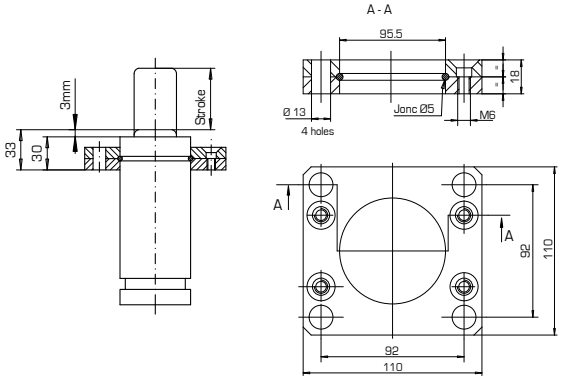


RGF 6 - (841044/000)

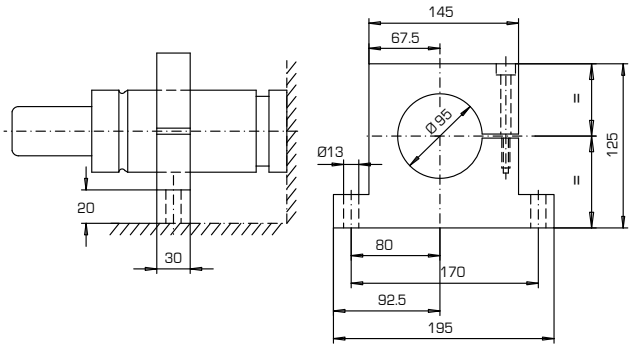
RGF 7 - (841049/000)

▶ Please see p109

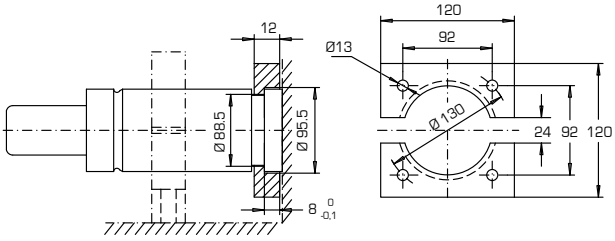
RGF 54 - (841141/000)



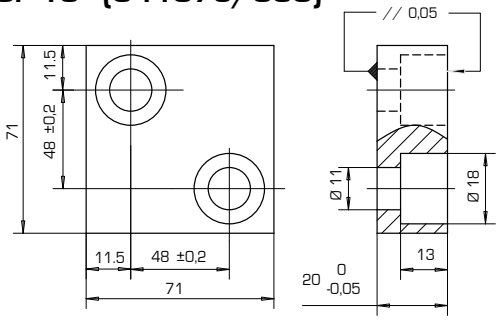
RGF 3 - (841029/000)



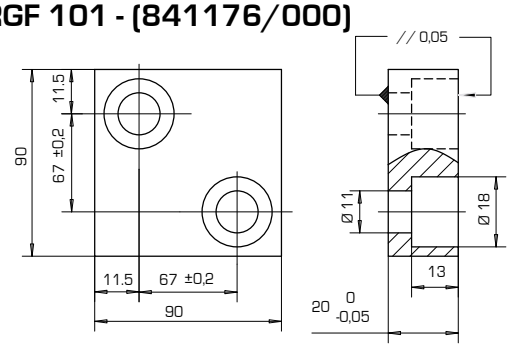
RGF 4 - (841034/000)



RGF 10 - (841075/000)



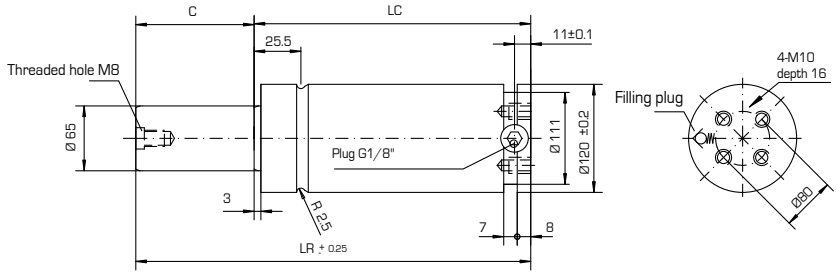
RGF 101 - (841176/000)



Complies with Renault standard EM24.54.700 (2003)

ISO
GAS SPRINGS

RG 5000



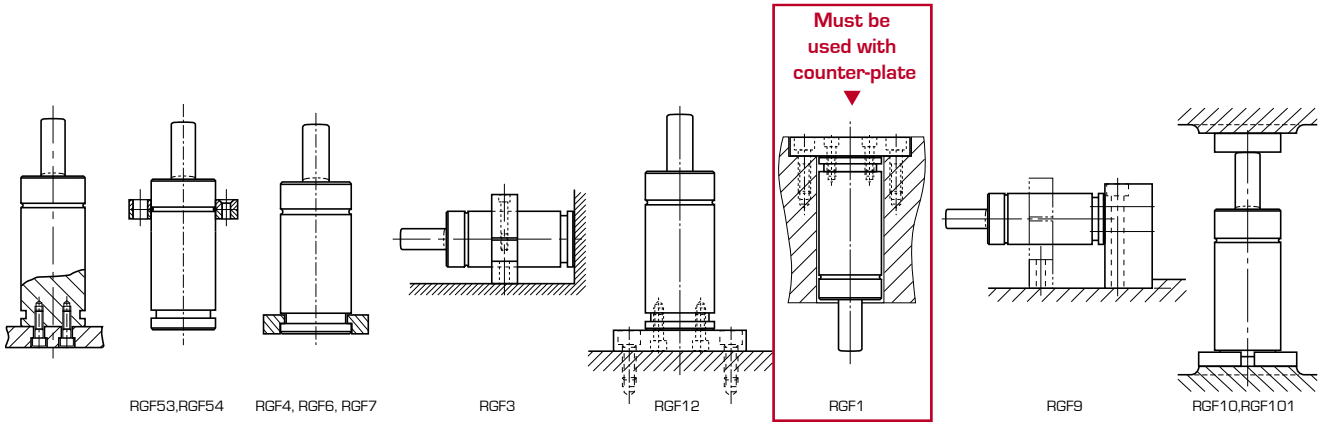
▶ Please see page 110 for connection details of ISO standard gas springs

▶ **Also exists for high velocity. For more information, please contact us**

Type	Force daN	Stroke C mm	Order Code	Pressure MPa (bar)	Force F1 N★	Force F2 N★	LR mm	LC mm	Weight Kg
RG	5000	10	442927/000	15 (150) ⚠	49800	62500	160	150	11.50
		25	442911/000			70200	190	165	12.10
		38	442928/000			74000	216	178	12.70
		50	442912/000			76200	240	190	13.40
		63	442929/000			74300	266	203	14.20
		80	442913/000			73200	300	220	14.90
		100	442914/000			74200	340	240	16.00
		125	442915/000			75200	390	265	17.30
		160	442996/000			76200	460	300	19.00
		200	442997/000			76700	540	340	21.00
		250	442998/000			77200	640	390	24.00
		300	442999/000			77700	740	440	27.00

★ (N) = Kgf x 9.80665 (Kgf)=N x 0.101972 1daN=1 x 10^1N 1bar=1 x 10^{-1}MPa

⚠ There is a blue sticker on the gas spring body when it is inflated with a special pressure (<15 Mpa)



▶ Please see p109 for RGF6, RGF7 dimensions and details

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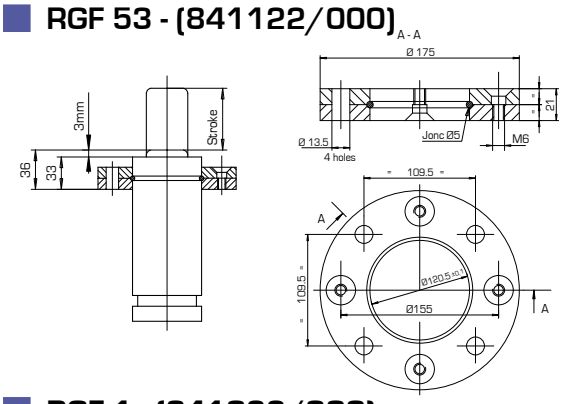
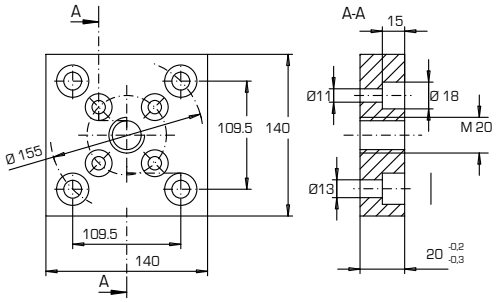
ISO
GAS SPRINGS

RGF 53 - (841122/000)



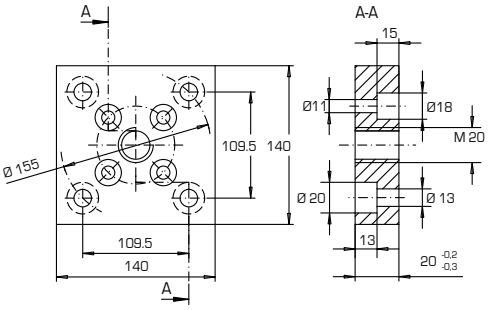
RGF 1 - (841022/000)

▶ Includes : **4 screws** to attach the flange to the gas springs

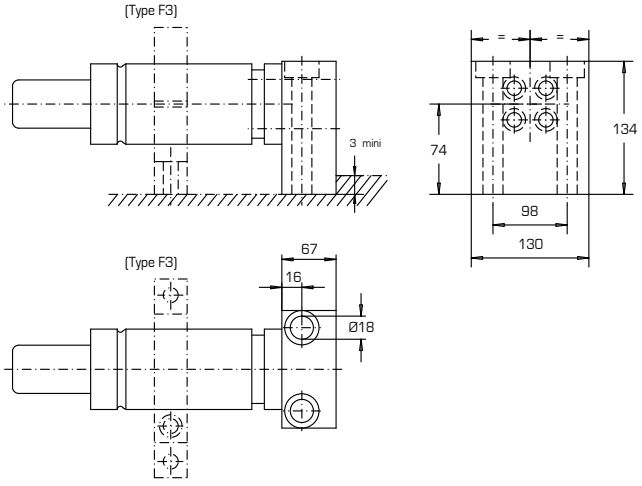


RGF 12 - (841135/000)

▶ Includes : **4 screws** to attach the flange to the gas springs



RGF 9 - (841072/000)

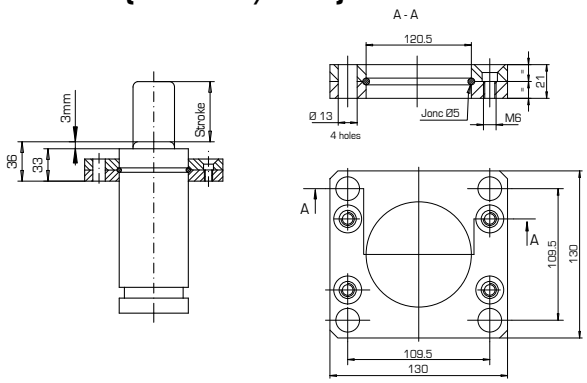


RGF 6 - (841045/000)

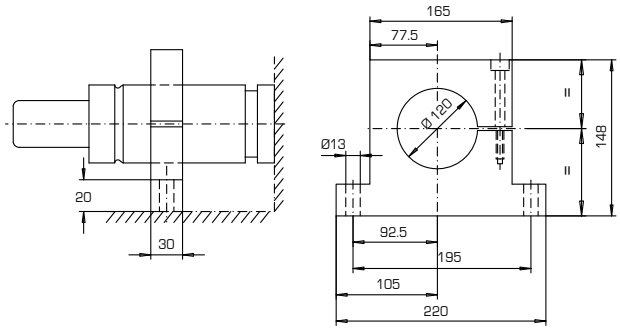
RGF 7 - (841050/000)

▶ Please see p109

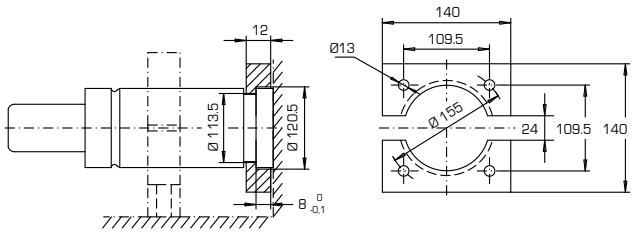
RGF 54 - (841142/000)



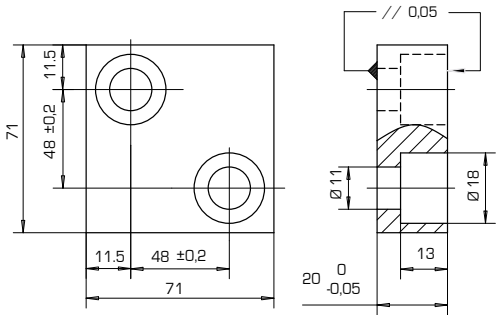
RGF 3 - (841030/000)



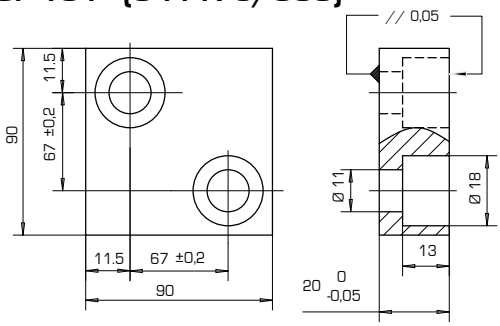
RGF 4 - (841035/000)



RGF 10 - (841075/000)



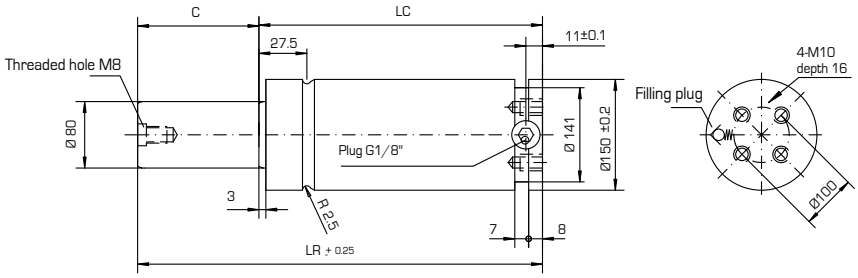
RGF 101 - (841176/000)



Complies with Renault standard EM24.54.700 (05/1999)

ISO
GAS SPRINGS

RG 7500

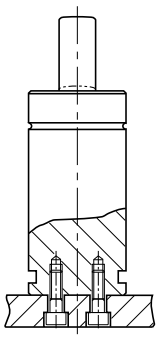


- Please see page 110 for connection details of ISO standard gas springs
- **Also exists for high velocity. For more information, please contact us**

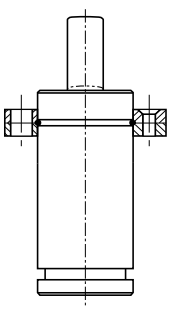
Type	Force daN	Stroke C mm	Order Code	Pressure MPa (bar)	Force F1 N★	Force F2 N★	LR mm	LC mm	Weight Kg
RG	7500	25	442631/000	15 (150) ⚠	75400	95300	205	180	20.00
		50	442632/000			105800	255	205	22.00
		80	442633/000			108800	315	235	24.00
		100	442694/000			110200	355	255	26.00
		125	442695/000			111000	405	280	28.00
		160	442696/000			111800	475	315	31.00
		200	442697/000			112500	555	355	35.00
		250	442698/000			113200	655	405	39.00
		300	442699/000			114000	755	455	44.00

★(N) = Kgf x 9.80665 (Kgf)=N x 0.101972 1daN=1 x 10^1N 1bar=1 x 10^{-1}MPa

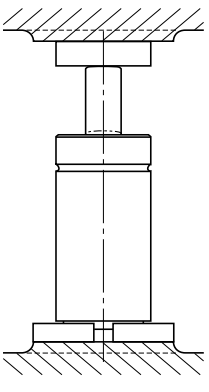
⚠ There is a blue sticker on the gas spring body when it is inflated with a special pressure (<15 Mpa)



RGF53,RGF54



RGF4, RGF6, RGF7



RGF10,RGF101

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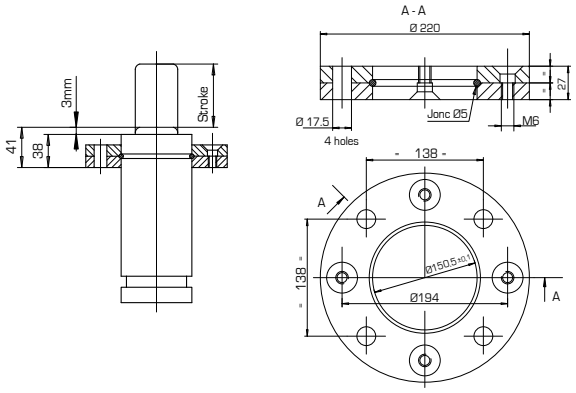
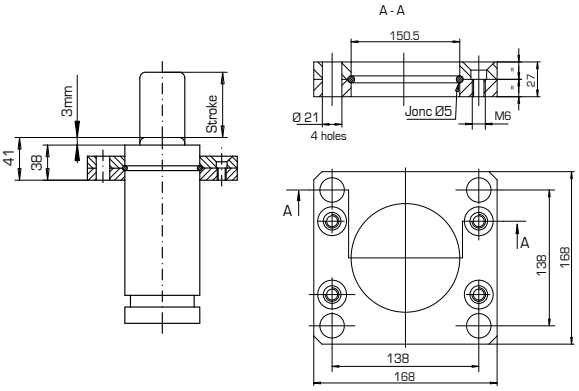
GAS SPRINGS

RGF 53 - (841123/000)

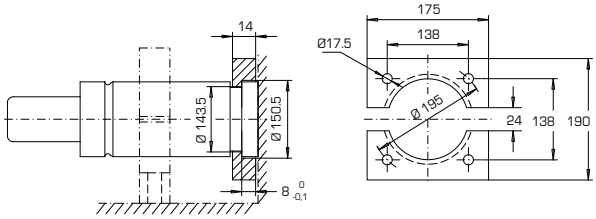


RGF 54 - (841143/000)

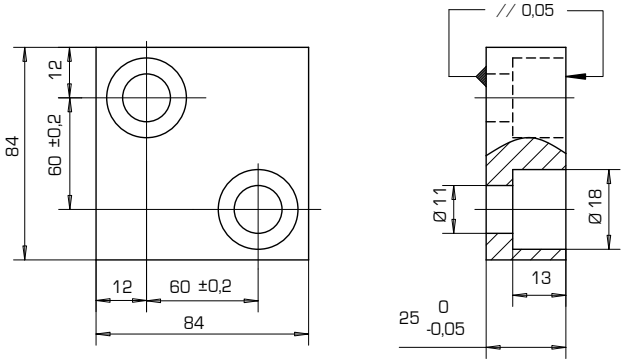


RGF 4 - (841191/000)

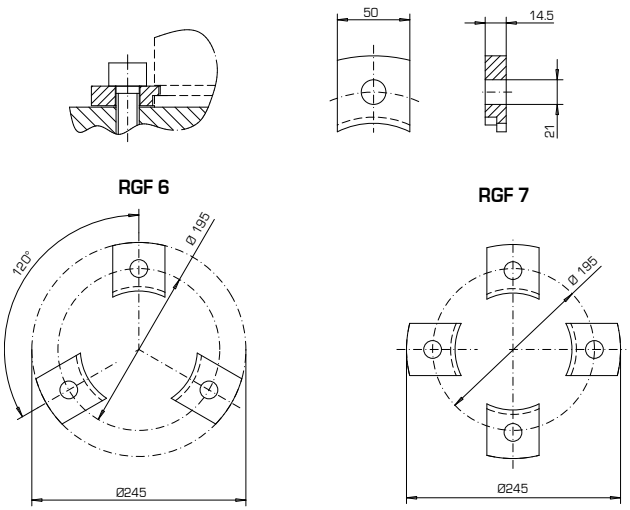
Suivant norme ISO 11901-2
et EM 24.54.700



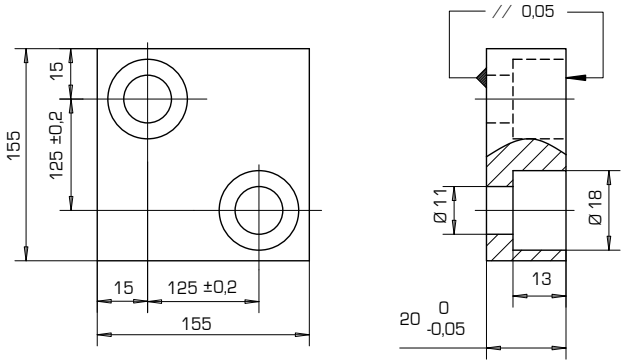
RGF 10 - (841110/000)



RGF 6 - (841246/000)
RGF 7 - (841249/000)



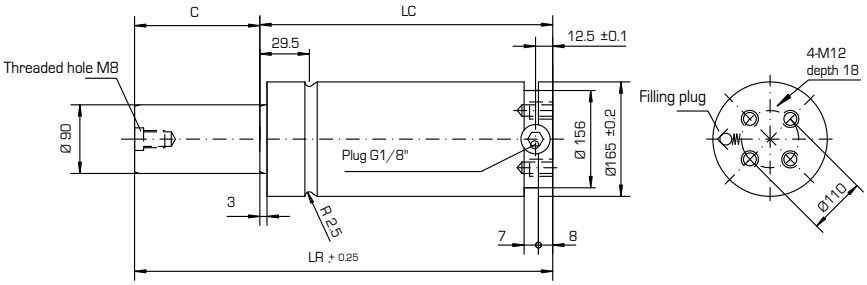
RGF 101 - (841168/000)



Complies with Renault standard EM24.54.700 (2003)

RG 10000

▶ Does not comply with ISO standard



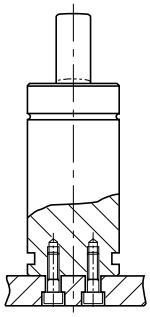
▶ Please see page 110 for connection details of ISO standard gas springs

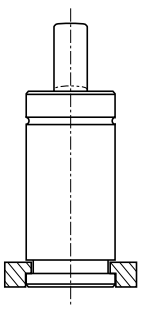
▶ **Also exists for high velocity. For more information, please contact us**

Type	Force daN	Stroke C mm	Order Code	Pressure MPa (bar)	Force F1 N★	Force F2 N★	LR mm	LC mm	Weight Kg
RG	10000	80	442893/000	15 (150) ⓘ	95400	138500	340	260	34.00
		100	442894/000			140500	380	280	36.00
		125	442895/000			142500	430	305	39.00
		160	442896/000			145000	500	340	43.00
		200	442897/000			145500	580	380	47.00
		250	442898/000			146000	680	430	53.00
		300	442899/000			148000	780	480	58.00

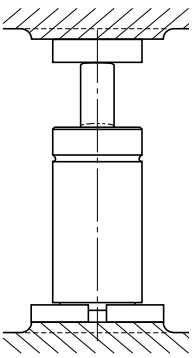
★ (N) = Kgf x 9.80665 (Kgf)=N x 0.101972 1daN=1 x 10^1N 1bar=1 x 10^{-1}MPa

ⓘ There is a blue sticker on the gas spring body when it is inflated with a special pressure (<15 Mpa)





RGF4



RGF10,RGF101

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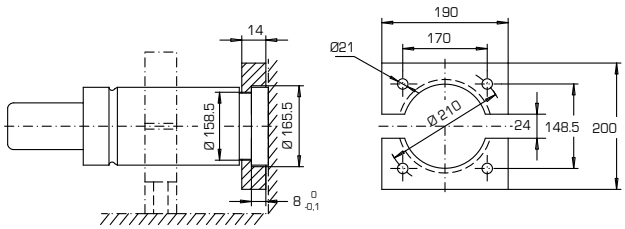
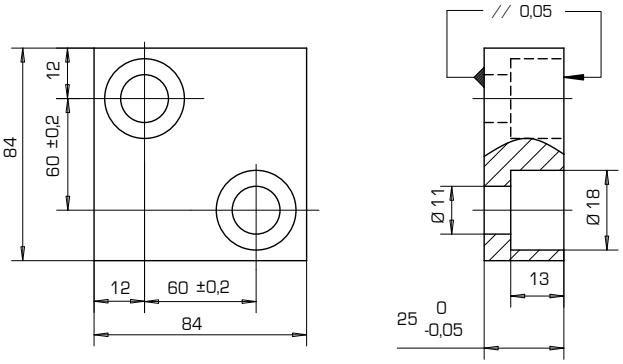
GAS SPRINGS

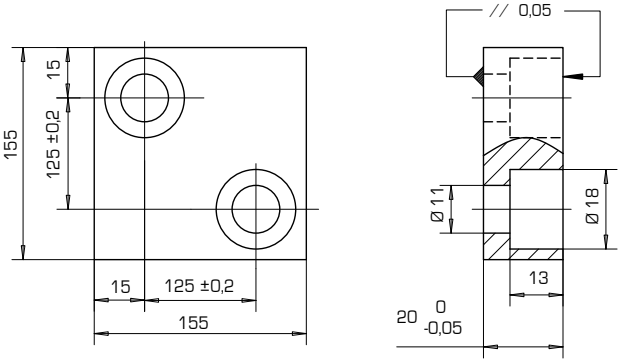
RGF 4 - (841107/000)



RGF 10 - (841110/000)



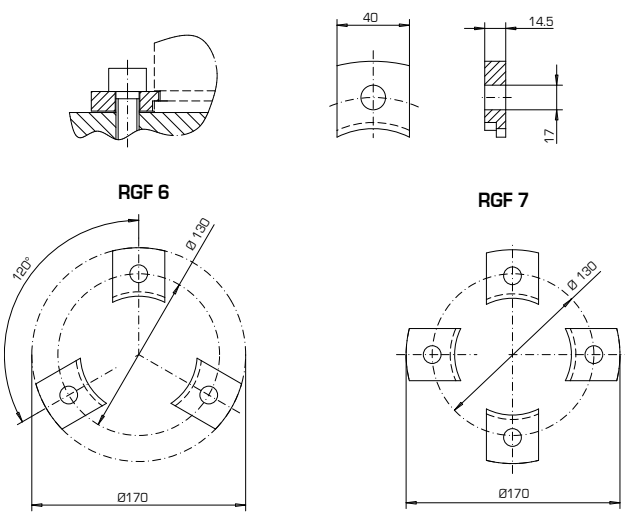
RGF 101 - (841168/000)



Complies with Renault standard EM24.54.700 (2003)

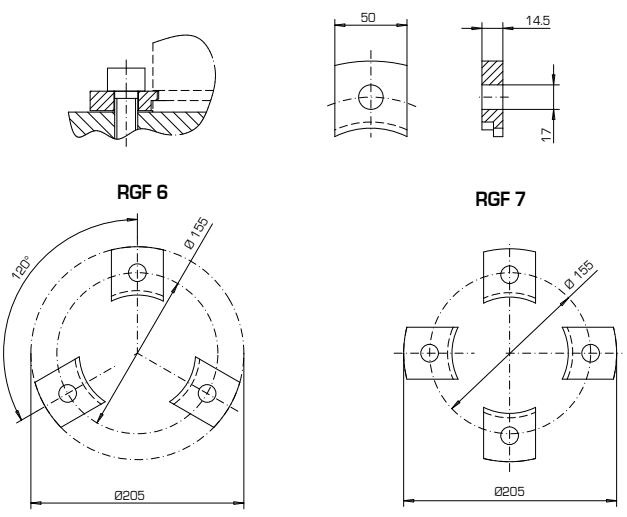
For RG 3000 (p102)

RGF 6 - (841044/000)
RGF 7 - (841049/000)



For RG 5000 (p104)

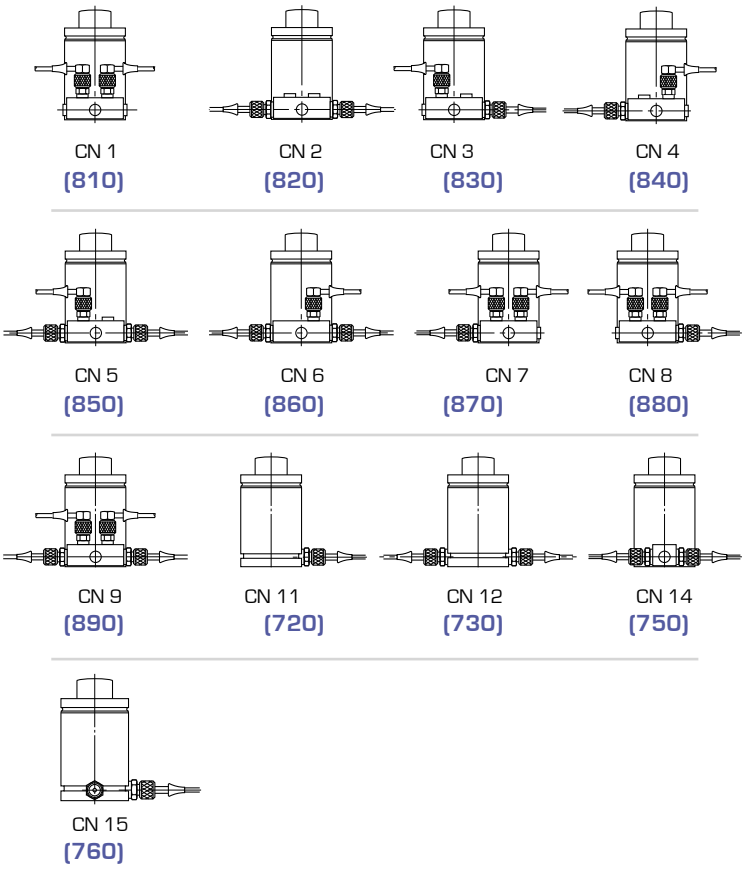
RGF 6 - (841045/000)
RGF 7 - (841050/000)



ISO
GAS SPRINGS

CONNECTIONS FOR ISO GAS SPRINGS

Type	Force daN	Stroke C mm	Order Code	RG type	Connection type
RGR	500	10	442251/...	RG 500	
		16	442252/...		
		25	442253/...		
		38	442257/...		
		50	442254/...		
		63	442258/...		
		80	442255/...		
		100	442256/...		
	750	13	442337/...	RG 750	
		25	442331/...		
		38	442338/...		
		50	442332/...		
		63	442339/...		
		80	442333/...		
		100	442334/...		
		125	442335/...		
		160	442336/...		
	1500	10	442537/...	RG 1500	
		25	442531/...		
		38	442538/...		
		50	442532/...		
		63	442539/...		
		80	442533/...		
		100	442534/...		
		125	442535/...		
		160	442536/...		
		200	442540/...		
		250	442541/...		
		300	442542/...		
	3000	10	442737/...	RG 3000	
		25	442731/...		
		38	442738/...		
		50	442732/...		
		63	442739/...		
		80	442733/...		
		100	442734/...		
		125	442735/...		
		160	442736/...		
		200	442740/...		
		250	442798/...		
		300	442799/...		
	5000	10	442927/...	RG 5000	
		25	442911/...		
		38	442928/...		
		50	442912/...		
		63	442929/...		
		80	442913/...		
		100	442914/...		
		125	442915/...		
		160	442996/...		
		200	442997/...		
		250	442998/...		
		300	442999/...		
	7500	25	442631/...	RG 7500	
		50	442632/...		
		80	442633/...		
		100	442694/...		
		125	442695/...		
		160	442696/...		
		200	442697/...		
		250	442698/...		
		300	442699/...		
	10000	80	442893/...	RG 10000	
		100	442894/...		
		125	442895/...		
		160	442896/...		
		200	442897/...		
		250	442898/...		
		300	442899/...		



▶ Above all connections can be selected by customer's design, please turn to page 121 to 127 for details

▶ **Example of ordering** : For a **RGH 500,** stroke **63** mm + connection **CN2** ; the order code is : **442258/820**

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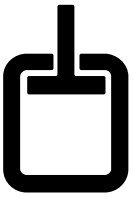
CONNECTION of GAS SPRINGS

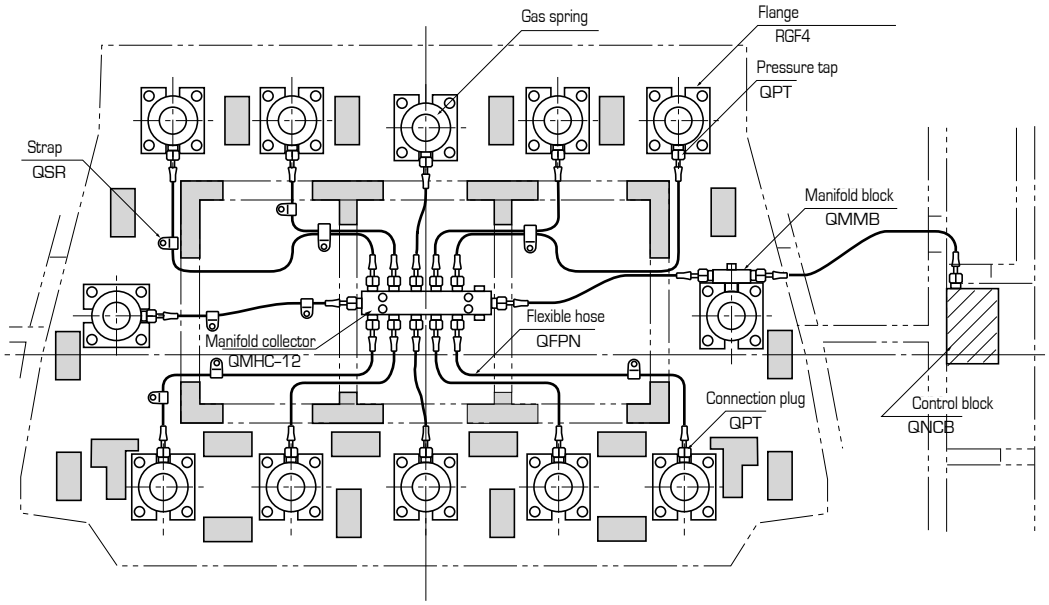


- With piping system, the force can be adjusted easily
- The force is perfectly balanced among several gas springs
- The pressure can be controlled easily with a pressure gauge
- For safety, our connectors include a valve.
  The replacement of a pipe or a gas spring can be done without releasing the pressure in the system
- Pipes are very small (diam. 5) and bending radius is 20mm for easy setup
- QUIRI piping system is widely recognized as the most reliable piping system on the market

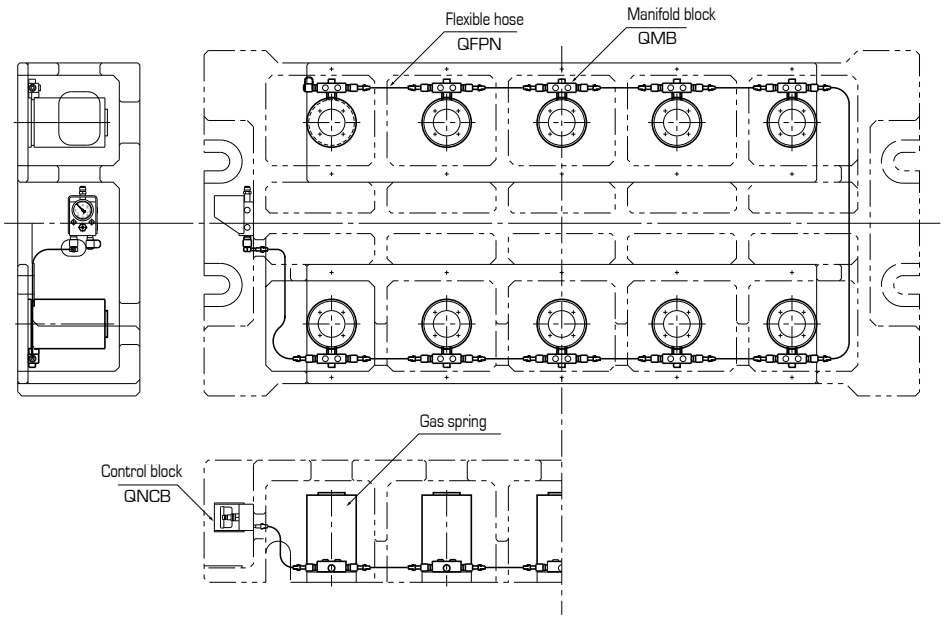
CONNECTIONS FOR RGC GAS SPRINGS	115
CONNECTIONS FOR ISO GAS SPRINGS	121
CONNECTIONS FOR RGP GAS SPRINGS (M6 thread)	129
CONNECTIONS FOR RGP GAS SPRINGS (G1/8" thread)	135
CONNECTIONS FOR RGT GAS SPRINGS	141
CONNECTIONS FOR RGH GAS SPRINGS	147
CONNECTION MANIFOLD BLOCKS	155
MANIFOLD DISTRIBUTORS	157
COMPACT CONTROL BLOCKS	160

EXAMPLES of PIPING SYSTEM

Example 1 : Connection 11 and manifold collector



Example 2 : Connection 2 or 14



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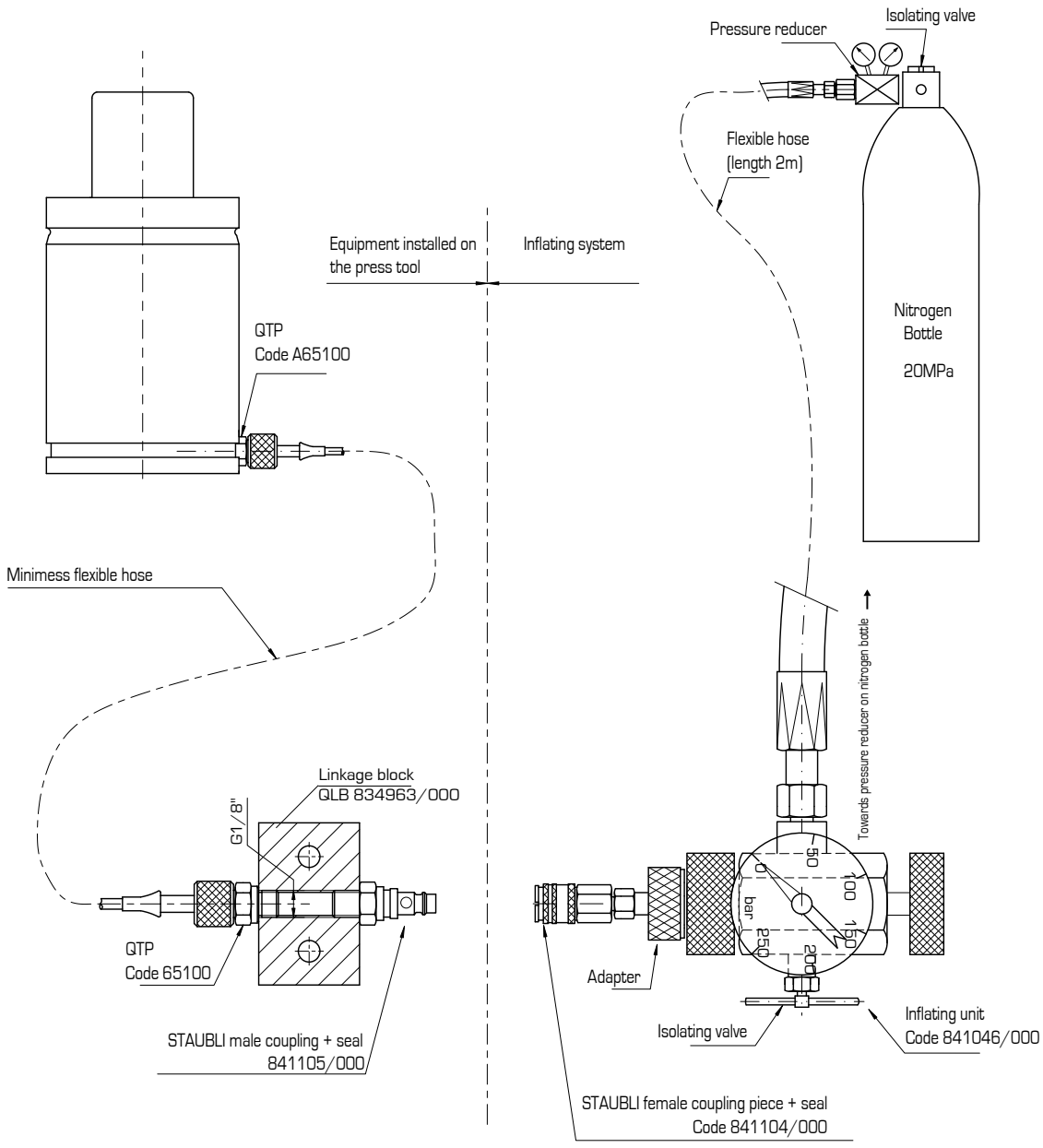
CONNECTION of GAS SPRINGS

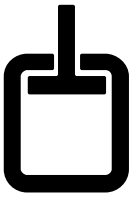
EXAMPLE of PIPING SYSTEM



PERMANENT CONNECTION TO SELF-CONTAINED GAS SPRING

This connecting system is designed for inflating or reinflating unreachable self-contained gas springs in press equipment.
(types RG500 / 750 / 1500 / 3000 / 5000 / 7500 / 10000)
Example : gas springs fitted in cam units.

NOTES



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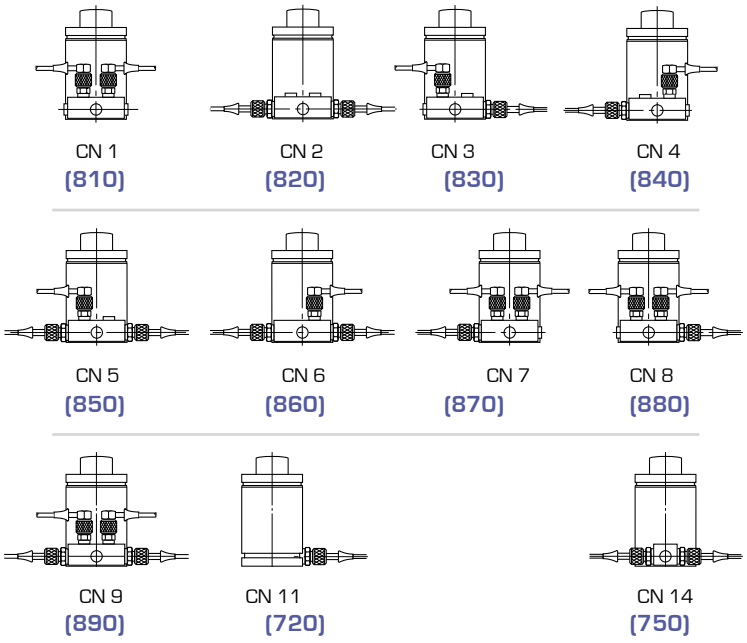
CONNECTION of GAS SPRINGS

CONNECTIONS FOR RGC GAS SPRINGS

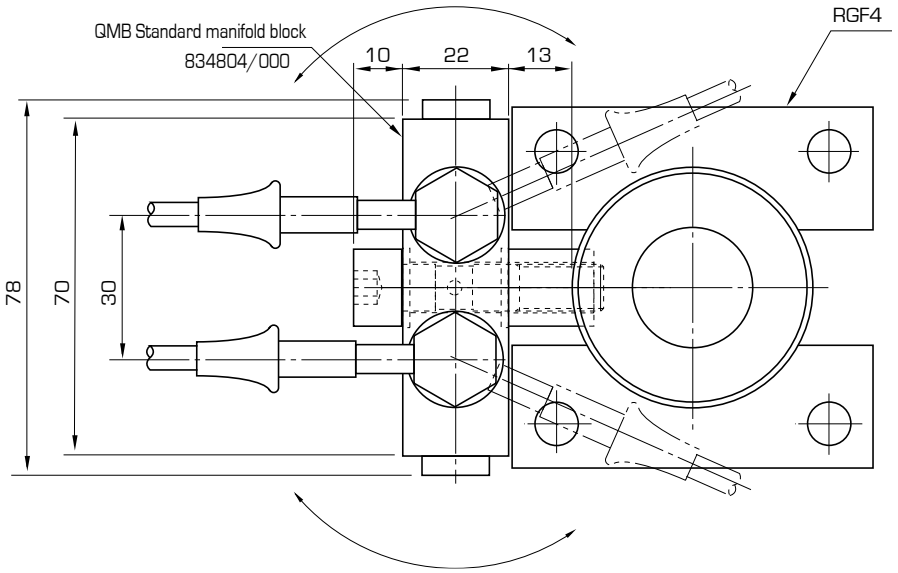
Type	Force	Stroke C mm	Order Code	RGC type	Connection type
RGCR	1000	6	443131/...	RGC 1000	
		10	443132/...		
		16	443133/...		
		25	443134/...		
		32	443135/...		
		40	443136/...		
		50	443137/...		
	1800	6	443141/...	RGC 1800	
		10	443142/...		
		16	443143/...		
		25	443144/...		
		32	443145/...		
		40	443146/...		
		50	443147/...		
	4700	10	443152/...	RGC 4700	
		16	443153/...		
		25	443154/...		
		32	443155/...		
		40	443156/...		
		50	443157/...		
	7500	10	443162/...	RGC 7500	
		16	443163/...		
		25	443164/...		
		32	443165/...		
		40	443166/...		
		50	443167/...		
	11800	10	443172/...	RGC 11800	
		16	443173/...		
		25	443174/...		
		32	443175/...		
		40	443176/...		
		50	443177/...		
	18300	10	443182/...	RGC 18300	
		16	443183/...		
		25	443184/...		
		32	443185/...		
		40	443186/...		
		50	443187/...		

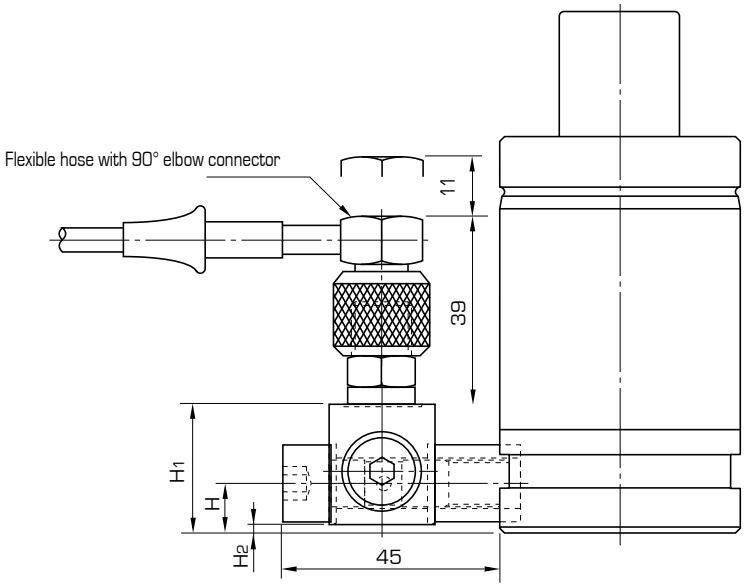


- **All theses connections are possible with the use of rear adaptor only**
- Above all connections can be selected by customer's design.
- The adapter and manifold block connection dimensions are same for RG type and RGC type with rear adapter.
- **Example of ordering** : For a **RGC 1000,** stroke **32** mm + connection **CN2**; the order code is : **443135/820**

Dimension of connections
For RGC (with rear adapter)

VERTICAL CONNECTION - CN 1/CN 2/CN 3/CN 4/CN 5/CN 6/CN 7/CN 8/CN 9





Type	H	H1	H2
RGCR 1000	10.5	27	2
RGCR 1800			
RGCR 4700			
RGCR 7500			
RGCR 11800			
RGCR 18300			

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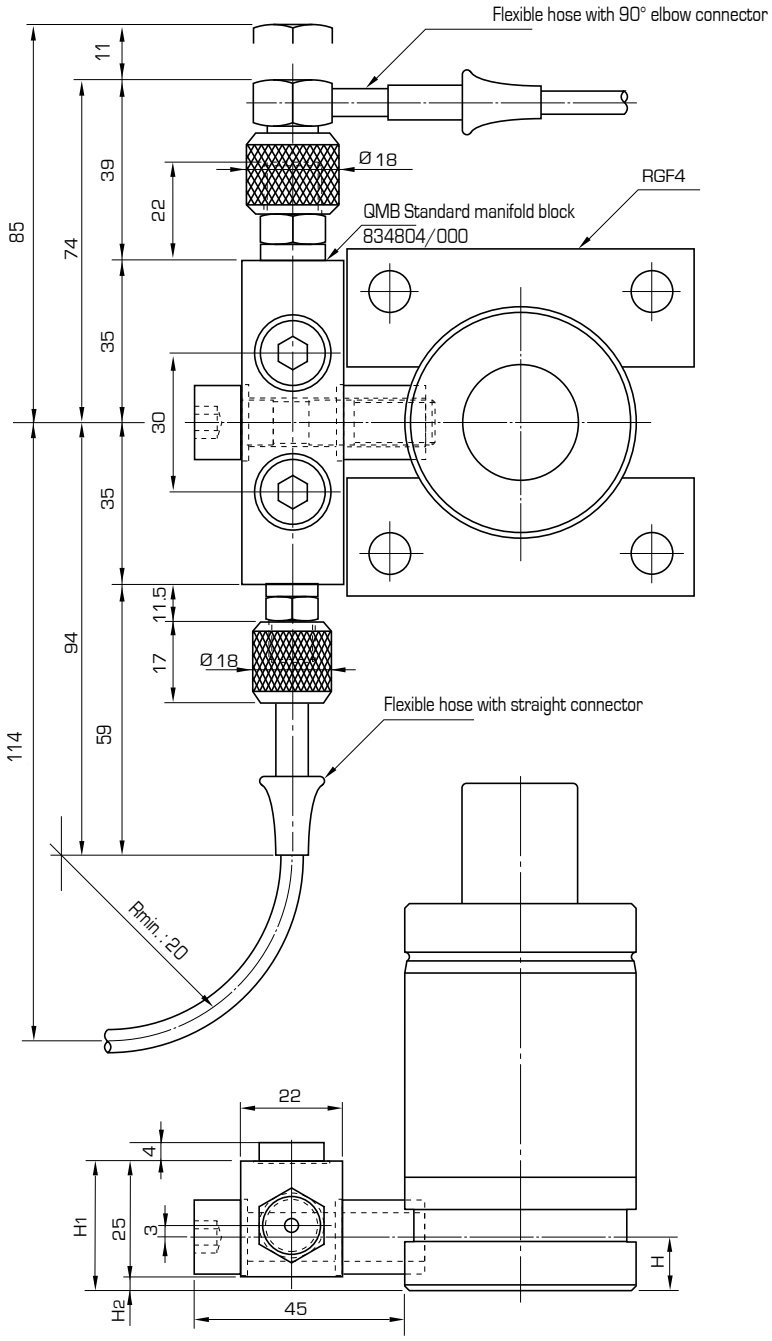
Dimension of connections
For RGC (with rear adapter)

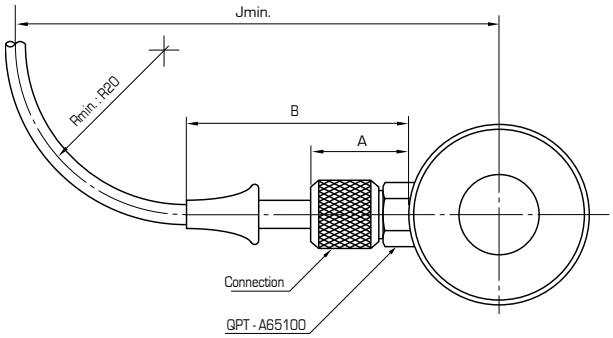
HORIZONTAL CONNECTION - CN 1/CN 2/CN 3/CN 4/CN 5/CN 6/CN 7/CN 8/CN 9

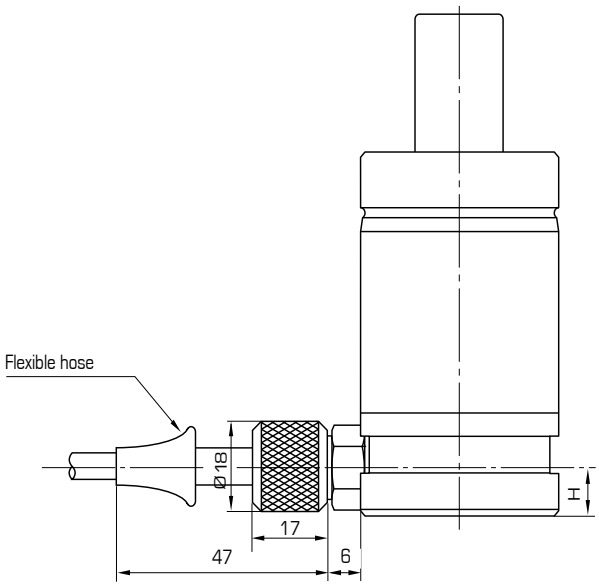


Type	H	H1	H2
RGCR 1000	10.5	27	2
RGCR 1800			
RGCR 4700			
RGCR 7500			
RGCR 11800			
RGCR 18300			

Dimension of connections
For RGC (with rear adapter)

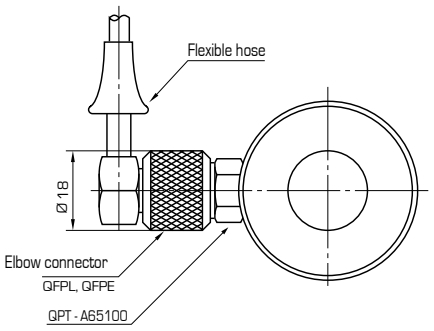
CN 11
(With straight connector)

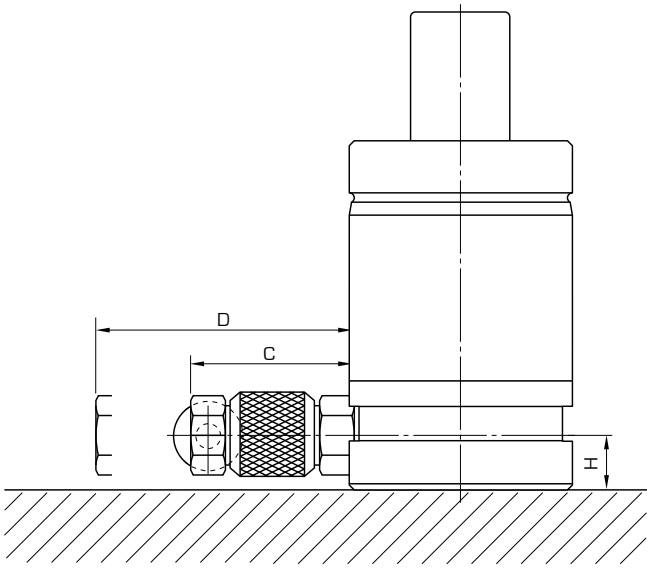




Code No.	A	B	H	Jmin.
RGCR 1000	24.5	54,5	10.1	128
RGCR 1800	23	53		129
RGCR 4700				142
RGCR 7500			11	152
RGCR 11800				164
RGCR 18300			12.5	179

CN 11
(With 90° Elbow connector)





Code No.	C	D	H
RGCR 1000	36.5	47.5	10.5
RGCR 1800	34	46	
RGCR 4700			
RGCR 7500			11
RGCR 11800			
RGCR 18300			12.5

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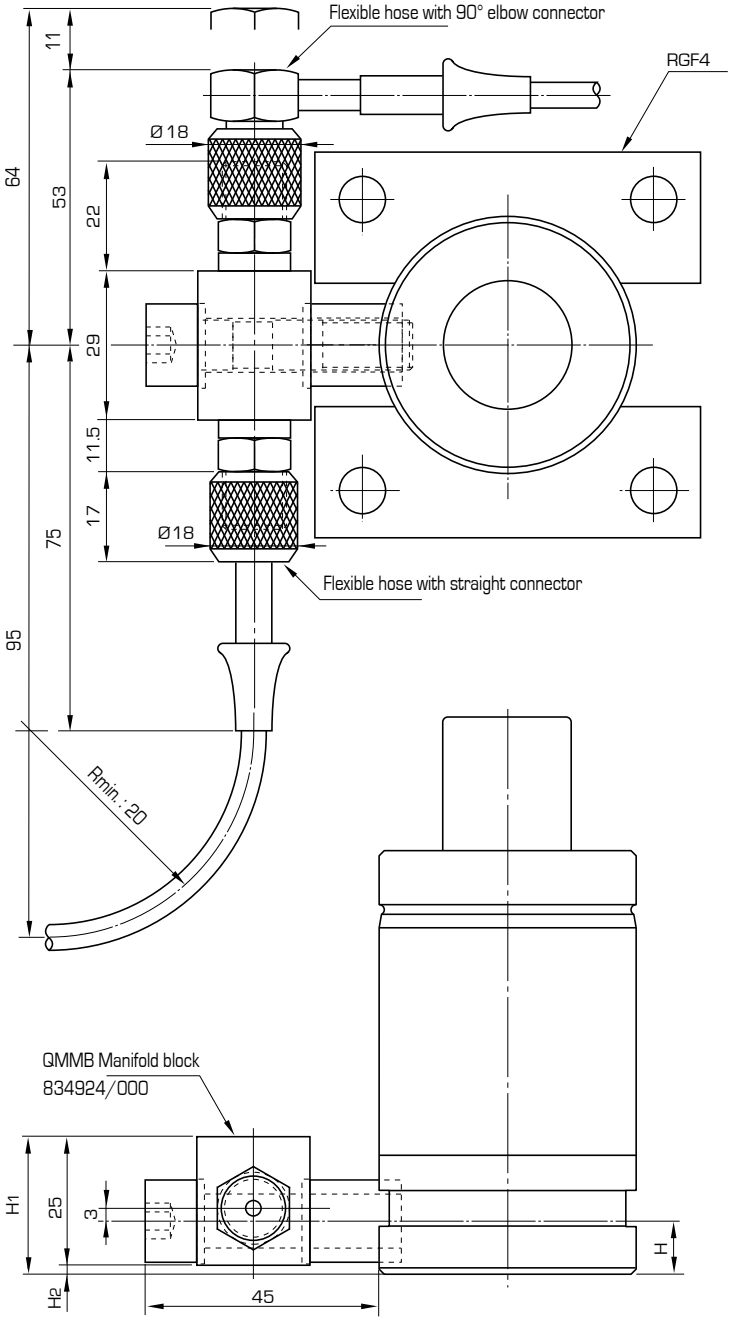
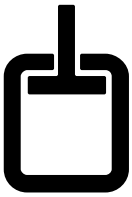
Dimension of connections
For RGC (with rear adapter)

MINI MANIFOLD BLOCK QMMB FOR CN 14 - (834924/000)



Code No.	H	H1	H2
RGCR 1000	10.5	27	2
RGCR 1800			
RGCR 4700			
RGCR 7500			
RGCR 11800			
RGCR 18300			

NOTES



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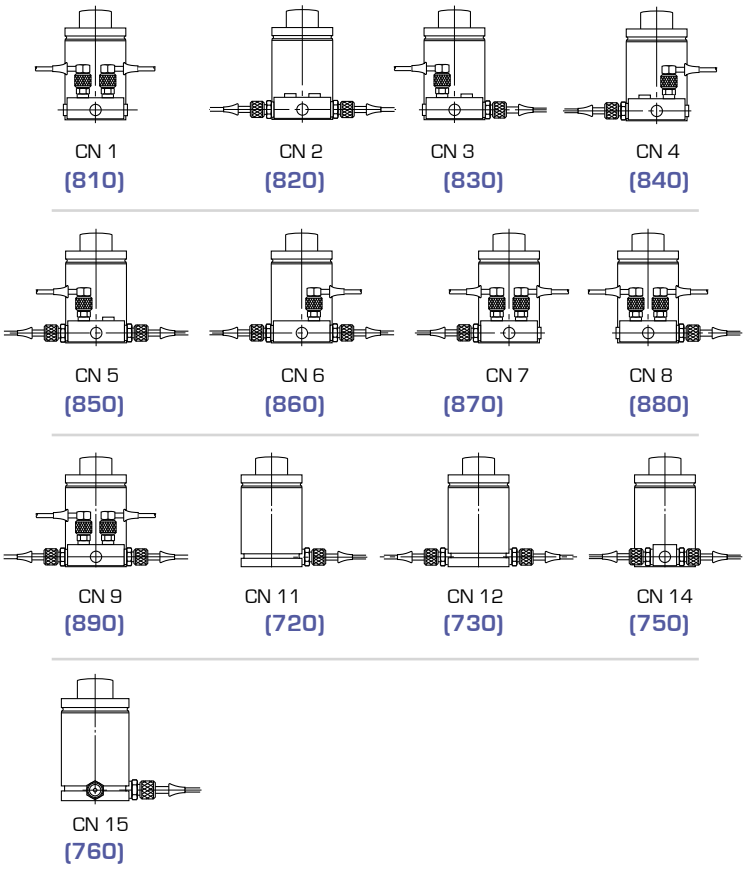
CONNECTION of GAS SPRINGS

CONNECTIONS FOR ISO GAS SPRINGS

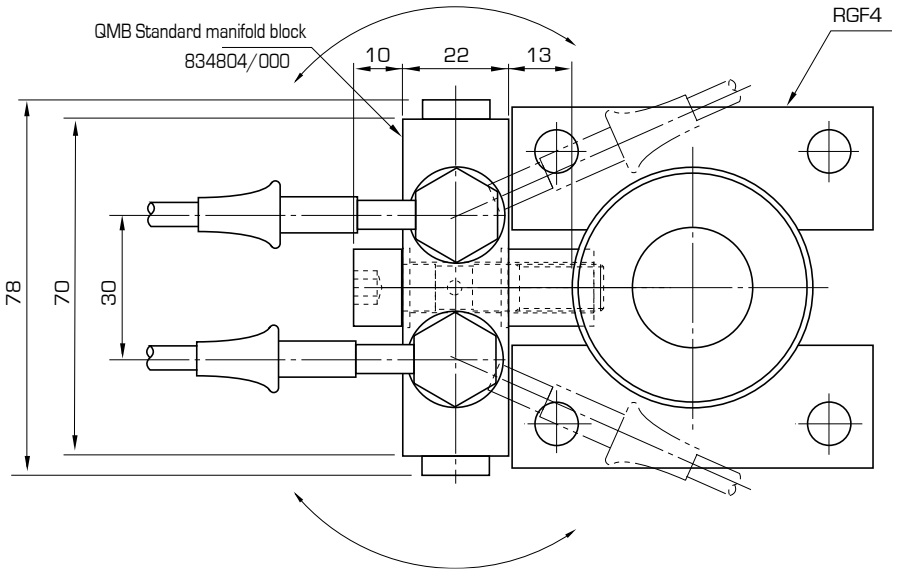
Type	Force daN	Stroke C mm	Order Code	RG type	Connection type
RGR	500	10	442251/...	RG 500	
		16	442252/...		
		25	442253/...		
		38	442257/...		
		50	442254/...		
		63	442258/...		
		80	442255/...		
		100	442256/...		
	750	13	442337/...	RG 750	
		25	442331/...		
		38	442338/...		
		50	442332/...		
		63	442339/...		
		80	442333/...		
		100	442334/...		
		125	442335/...		
		160	442336/...		
	1500	10	442537/...	RG 1500	
		25	442531/...		
		38	442538/...		
		50	442532/...		
		63	442539/...		
		80	442533/...		
		100	442534/...		
		125	442535/...		
		160	442536/...		
		200	442540/...		
		250	442541/...		
		300	442542/...		
	3000	10	442737/...	RG 3000	
		25	442731/...		
		38	442738/...		
		50	442732/...		
		63	442739/...		
		80	442733/...		
		100	442734/...		
		125	442735/...		
		160	442736/...		
		200	442740/...		
		250	442798/...		
		300	442799/...		
	5000	10	442927/...	RG 5000	
		25	442911/...		
		38	442928/...		
		50	442912/...		
		63	442929/...		
		80	442913/...		
		100	442914/...		
		125	442915/...		
		160	442996/...		
		200	442997/...		
		250	442998/...		
		300	442999/...		
	7500	25	442631/...	RG 7500	
		50	442632/...		
		80	442633/...		
		100	442694/...		
		125	442695/...		
		160	442696/...		
		200	442697/...		
		250	442698/...		
		300	442699/...		
	10000	80	442893/...	RG 10000	
		100	442894/...		
		125	442895/...		
		160	442896/...		
		200	442897/...		
		250	442898/...		
		300	442899/...		

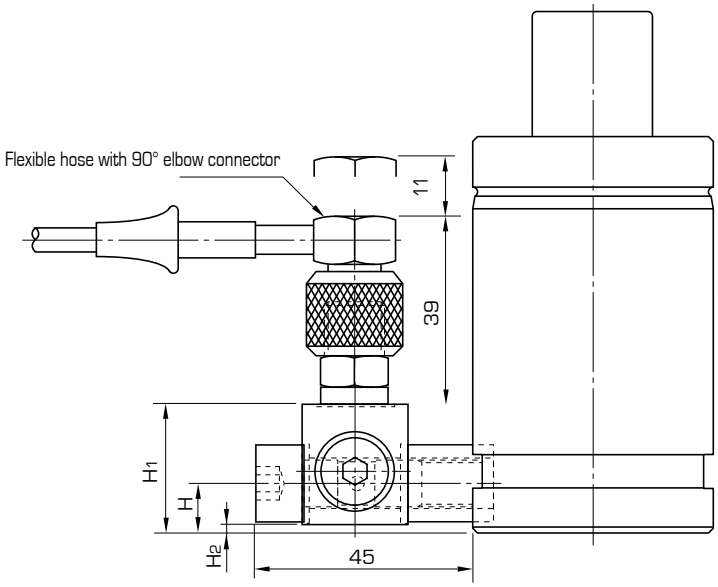


- Above all connections can be selected by customer's design.
- **Example of ordering** : For a **RGH 500,** stroke **63** mm + connection **CN2** ; the order code is : **442258/820**

Dimension of connections
For ISO GAS SPRINGS

VERTICAL CONNECTION - CN 1/CN 2/CN 3/CN 4/CN 5/CN 6/CN 7/CN 8/CN 9





Type	H	H1	H2
RGR 500	10.1	26.6	1.6
RGR 750			
RGR 1500			
RGR 3000	11	27.5	2.5
RGR 5000			
RGR 7500	12.5	29.0	4.0
RGR 10000			

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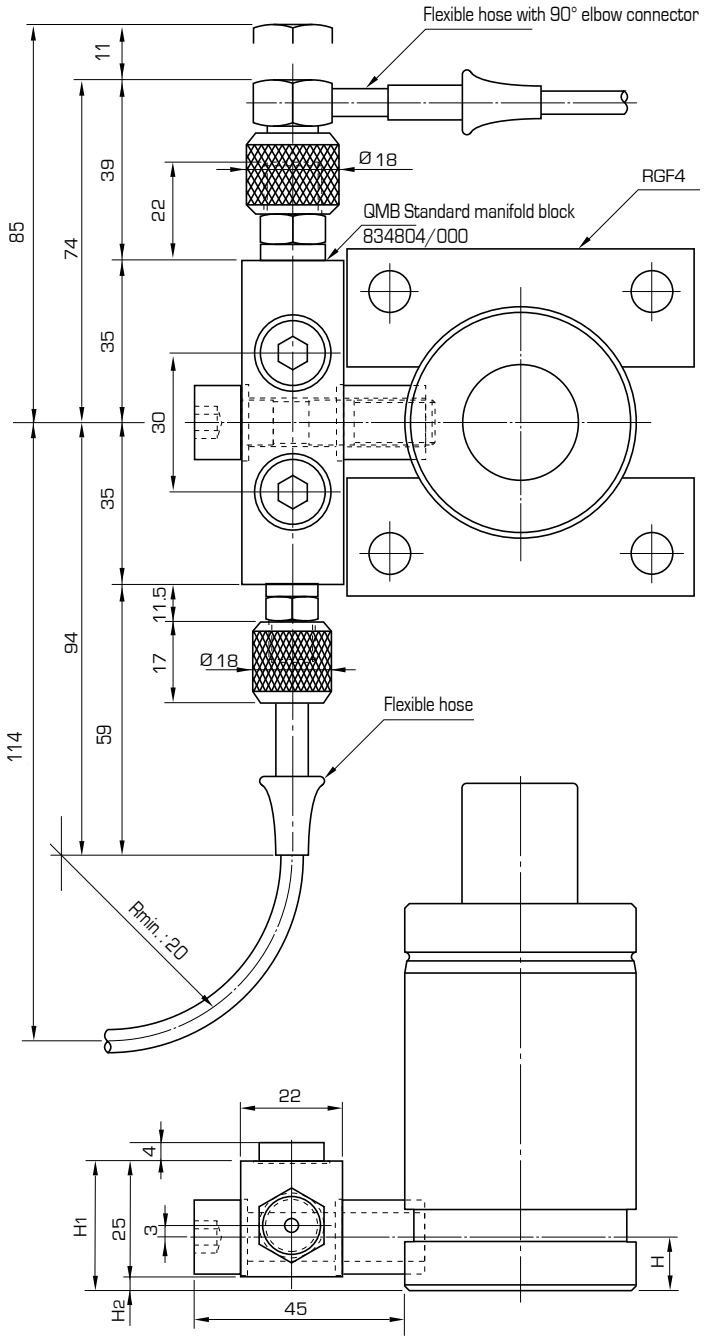
Dimension of connections
For ISO GAS SPRINGS

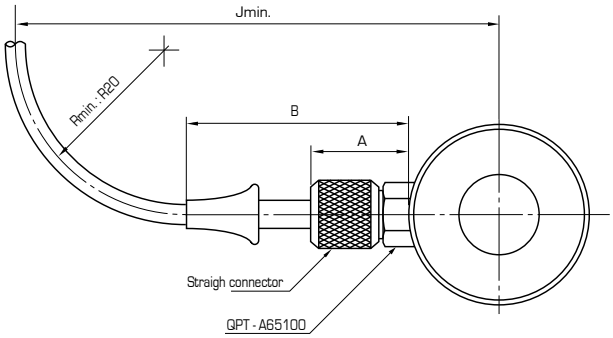
HORIZONTAL CONNECTION - CN 1/CN 2/CN 3/CN 4/CN 5/CN 6/CN 7/CN 8/CN 9



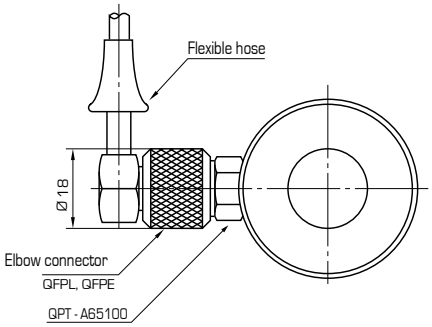
Type	H	H1	H2
RGR 500	10.1	26.6	1.6
RGR 750			
RGR 1500			
RGR 3000	11	27.5	2.5
RGR 5000			
RGR 7500	12.5	29.0	4.0
RGR 10000			

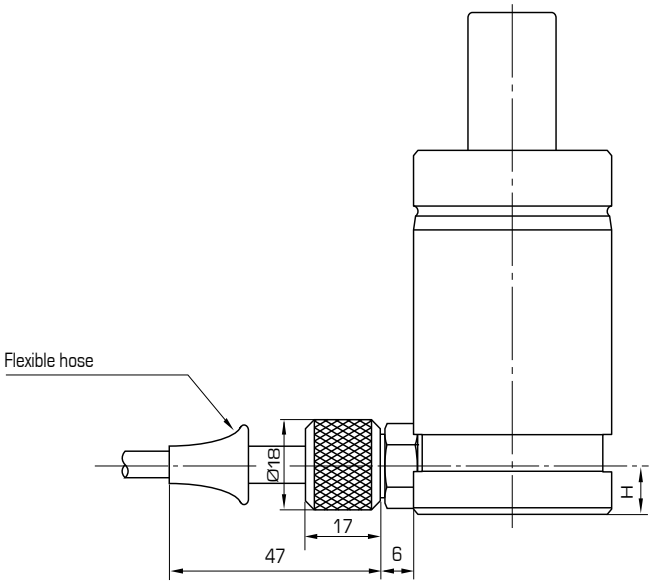
Dimension of connections
For ISO GAS SPRINGS

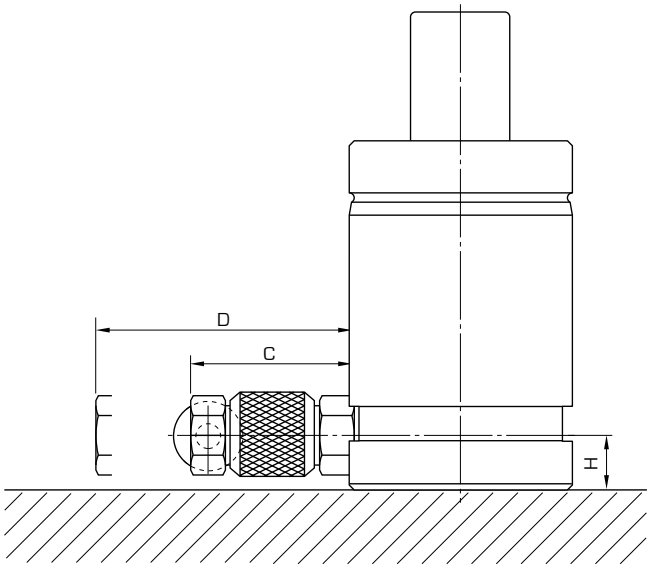
CN 11/CN12/CN15
(With straight connector)



CN 11/CN12/CN15
(With 90° Elbow connector)







Code No.	A	B	H	Jmin.
RGR 500	24.5	64.5	10.1	128
RGR 750	23	53		129
RGR 1500				142
RGR 3000			11	152
RGR 5000				164
RGR 7500			12.5	179
RGR 10000				187

Code No.	C	D	H
RGR 500	36.5	47.5	10.1
RGR 750	34	46	
RGR 1500			
RGR 3000			11
RGR 5000			
RGR 7500			12.5
RGR 10000			

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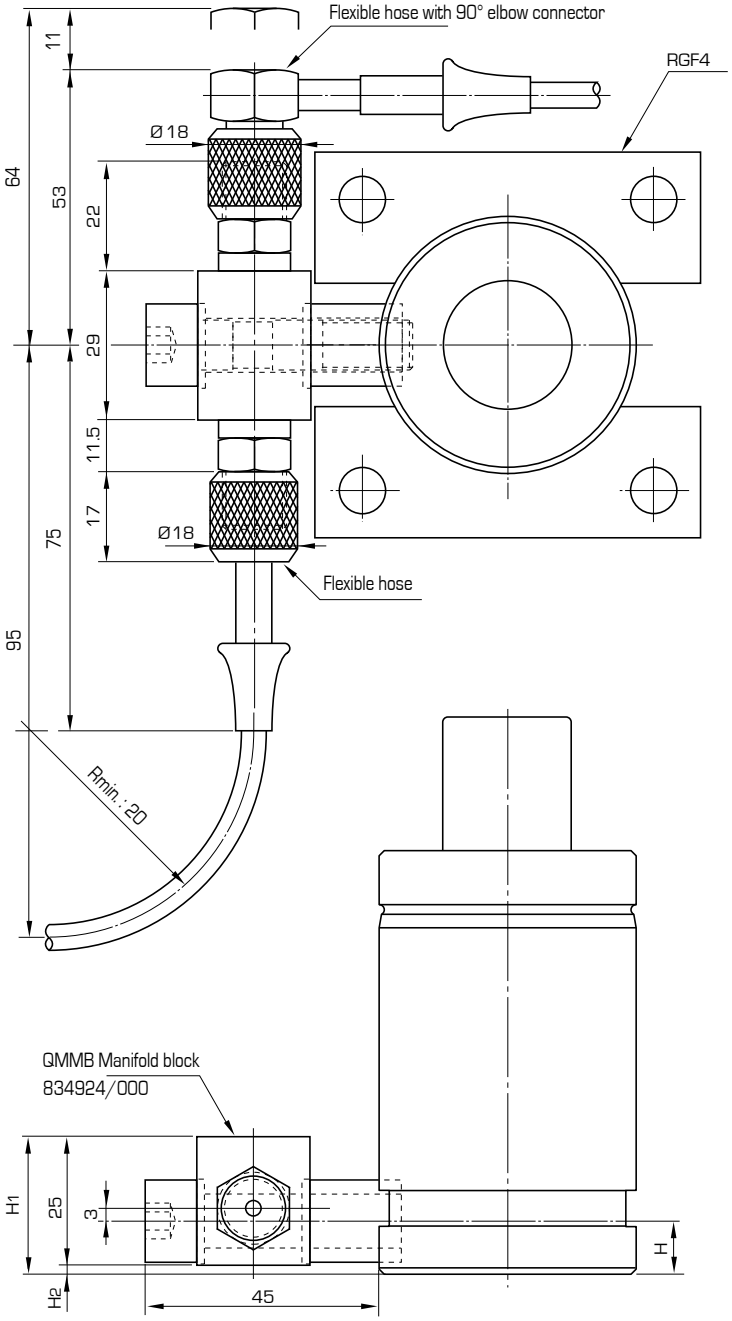
Dimension of connections
For ISO GAS SPRINGS

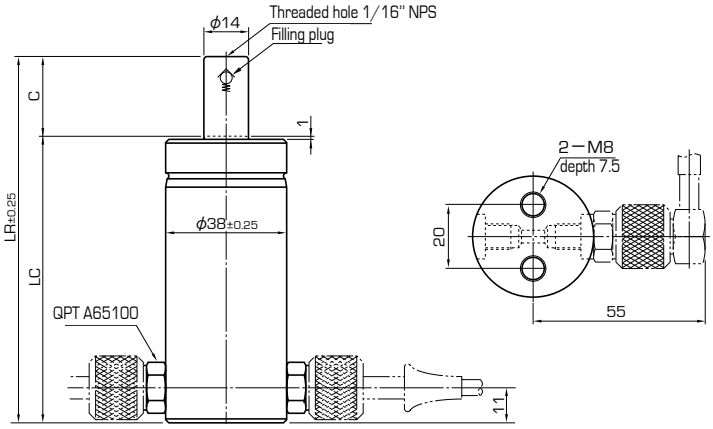
MINI MANIFOLD BLOCK QMMB FOR CN 14 - (834924/000)



Code No.	H	H1	H2
RGR 500	10.1	26.6	1.6
RGR 750			
RGR 1500			
RGR 3000	11	27.5	2.5
RGR 5000			
RGR 7500	12.5	29.0	4.0
RGR 10000			

ISO GAS SPRINGS with CONNECTIONS

RGR 250

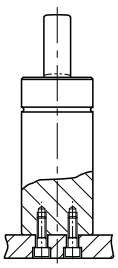


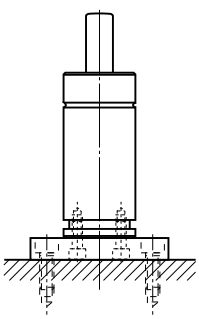
▶ **CAUTION : RGR250 is higher than RG250.**

Type	Force daN	Stroke C mm	Order Code	Pressure MPa (bar)	Force F1 N★	Force F2 N★	LR mm	LC mm
RGR	250	10	442231/000	15 (150) ⓘ	2300	2900	85	75
		16	442232/000			2930	97	81
		25	442233/000				115	90
		38	442236/000				141	103
		50	442234/000			2950	165	115
		80	442235/000				225	145

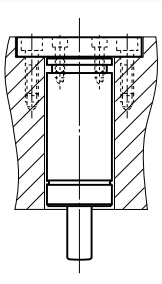
★ (N) = Kgf x 9.80665 (Kgf)=N x 0.101972 1daN=1 x 10^1N 1bar=1 x 10^{-1}MPa

ⓘ There is a blue sticker on the gas spring body when it is inflated with a special pressure (<15 Mpa)



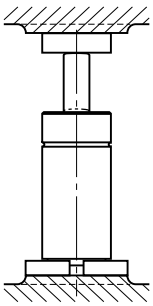


RGF12



RGF1

▲ **Must be used with counter-plate**



RGF10

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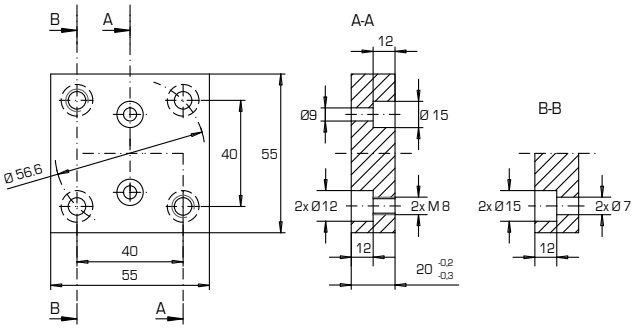
ISO GAS SPRINGS with CONNECTIONS

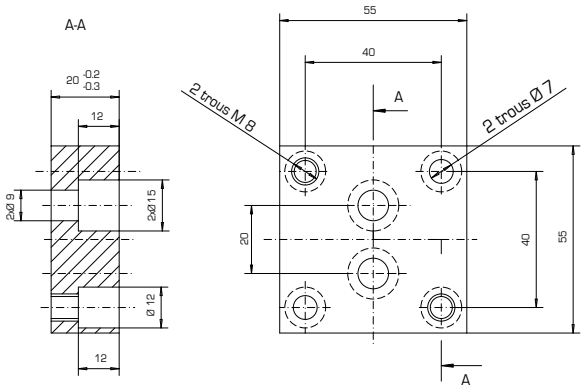
RGF 12 - (841130/000)

▶ Includes : **2 screws** to attach the flange to the gas springs

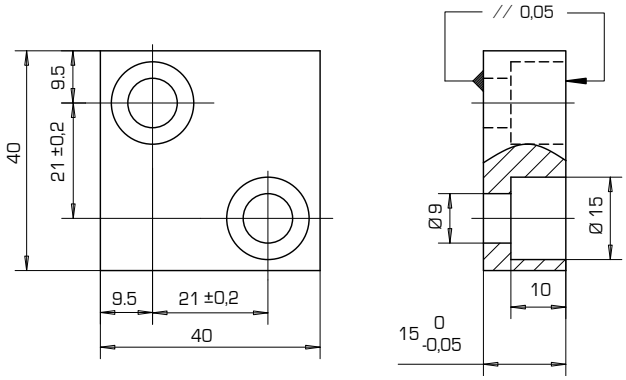


RGF 1 - (841067/000)

▶ Includes : **2 screws** to attach the flange to the gas springs



RGF 10 - (841073/000)



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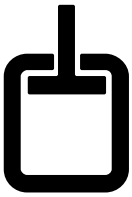

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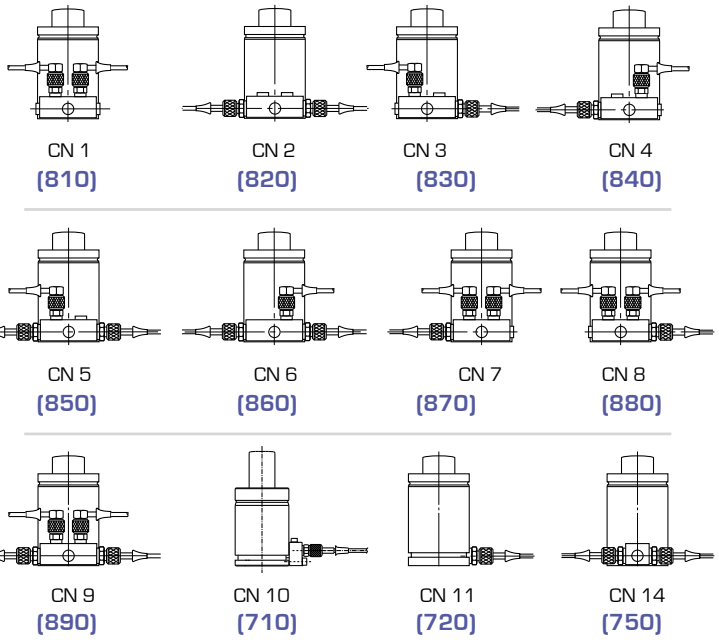
CONNECTION of GAS SPRINGS

CONNECTIONS FOR RGP GAS SPRINGS (M6 thread)

Type	Force daN	Stroke C mm	Order Code	RGP type
RGPR	750	10	443281/...	RGP 750
		13	443282/...	
		16	448284/...	
		19	443285/...	
		25	443286/...	
		32	443287/...	
		38	443288/...	
		50	443289/...	
		63	443290/...	
		75	443291/...	
		80	443292/...	
		100	443293/...	
		125	443294/...	
	1000	13	443302/...	RGP 1000
		16	443304/...	
		19	443305/...	
		25	443306/...	
		32	443307/...	
		38	443308/...	
		50	443309/...	
		63	443310/...	
		75	443311/...	
		80	443312/...	
		100	443313/...	
		125	443314/...	
	1500	13	443322/...	RGP 1500
		16	443324/...	
		19	443325/...	
		25	443326/...	
		32	443327/...	
		38	443328/...	
		50	443329/...	
		63	443330/...	
		75	443331/...	
		80	443332/...	
		100	443333/...	
		125	443334/...	
	2400	16	443344/...	RGP 2400
		19	443345/...	
		25	443346/...	
		32	443347/...	
		38	443348/...	
		50	443349/...	
		63	443350/...	
		75	443351/...	
		80	443352/...	
		100	443353/...	
		125	443354/...	

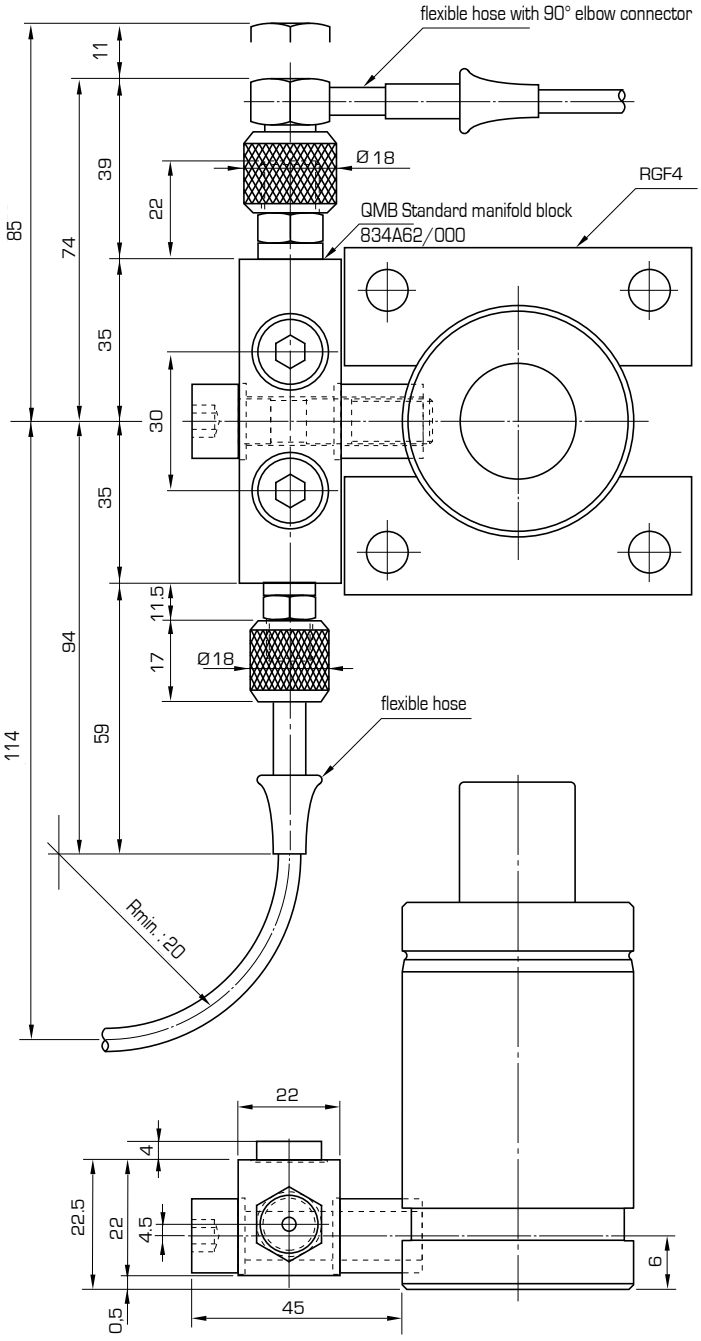
Connection type



- All connections above can be selected by customer's design.
- **Example of ordering** : For a **RGP 750,** stroke **32** mm + connection **CN2** ; the order code is : **443287/820**

Dimension of connections
For RGPR 750/1000/1500/2400
(M6 thread)

HORIZONTAL CONNECTION - CN 1/CN 2/CN 3/CN 4/CN 5/CN 6/CN 7/CN 8/CN 9



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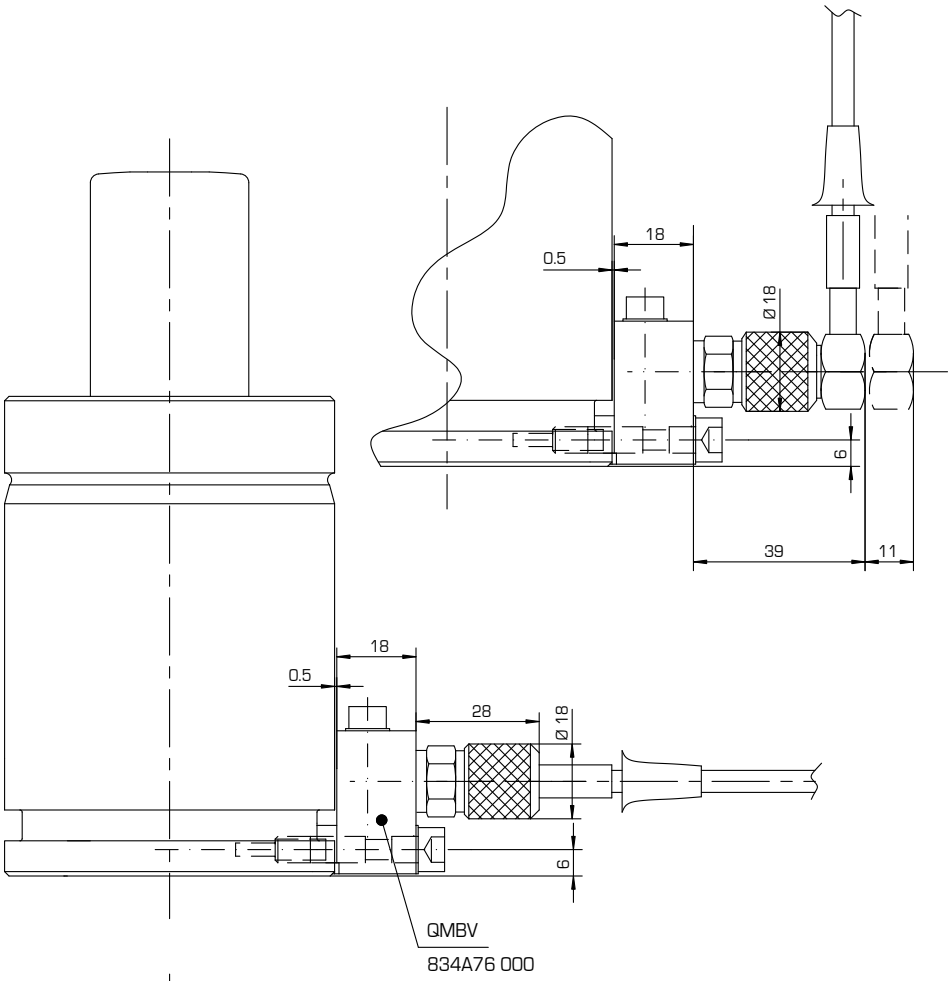
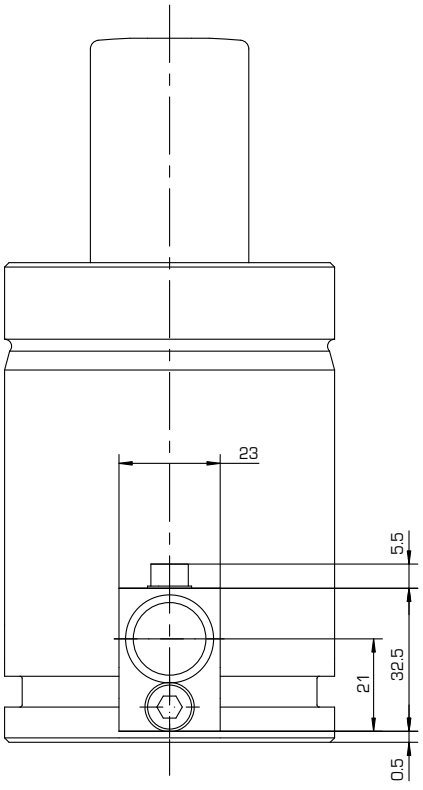
Dimension of connections
For RGPR 750/1000/1500/2400
(M6 thread)

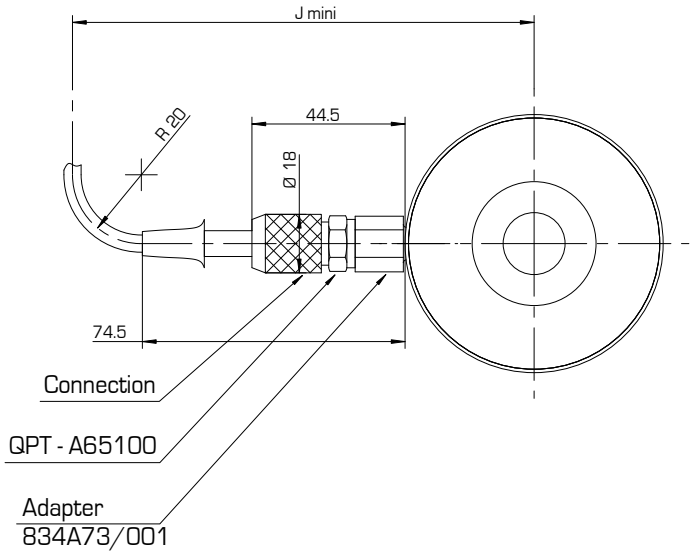
CN 10



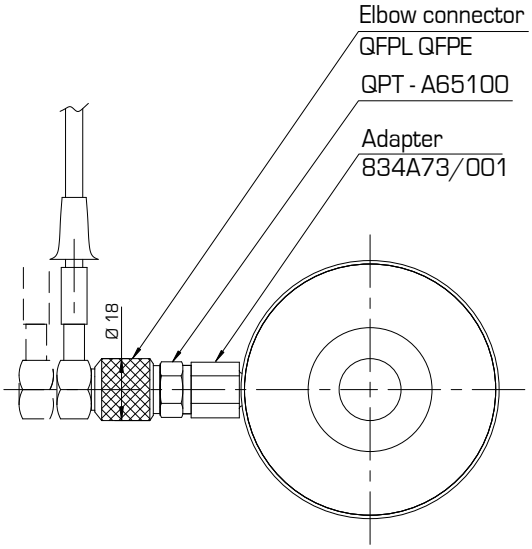


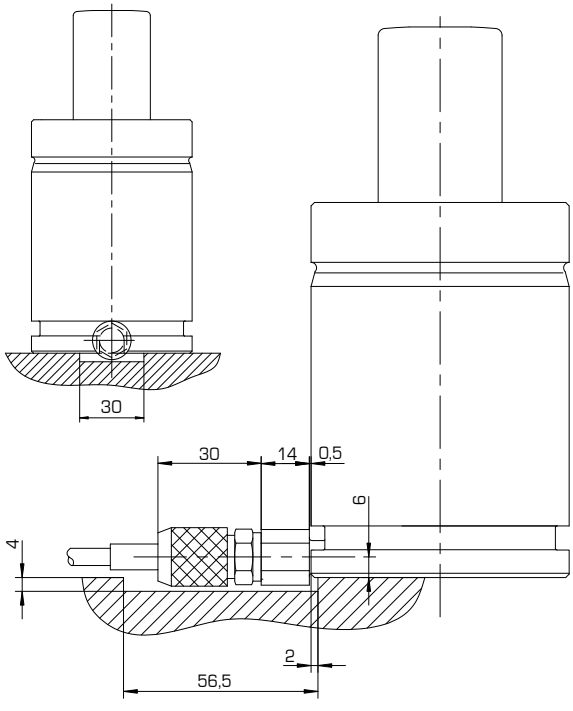
Dimension of connections
For RGPR 750/1000/1500/2400
(M6 thread)

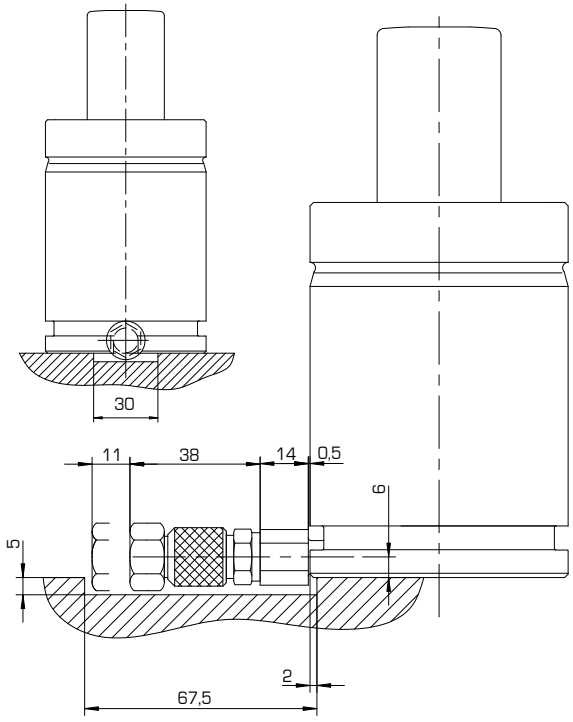
CN 11
(With straight connector)



CN 11
(With 90° Elbow connector)







Code No.	Jmin. (mm)
RGPR 350	141.5
RGPR 500	143.5
RGPR 750	148
RGPR 1000	150.5
RGPR 1500	157
RGPR 2400	163

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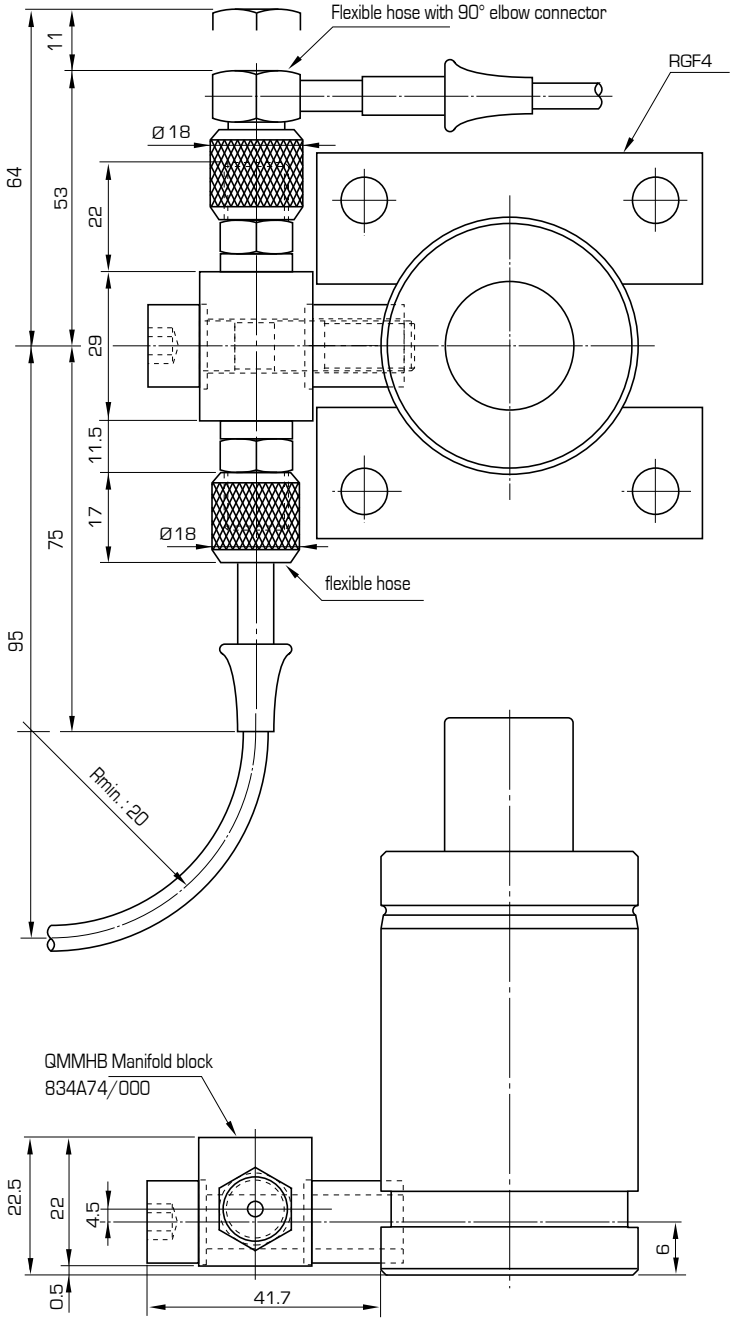
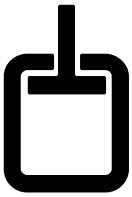
Dimension of connections
For RGPR 750/1000/1500/2400
(M6 thread)

MINI MANIFOLD BLOCK QMMBH FOR CN 14 - (834A74/000)



NOTES



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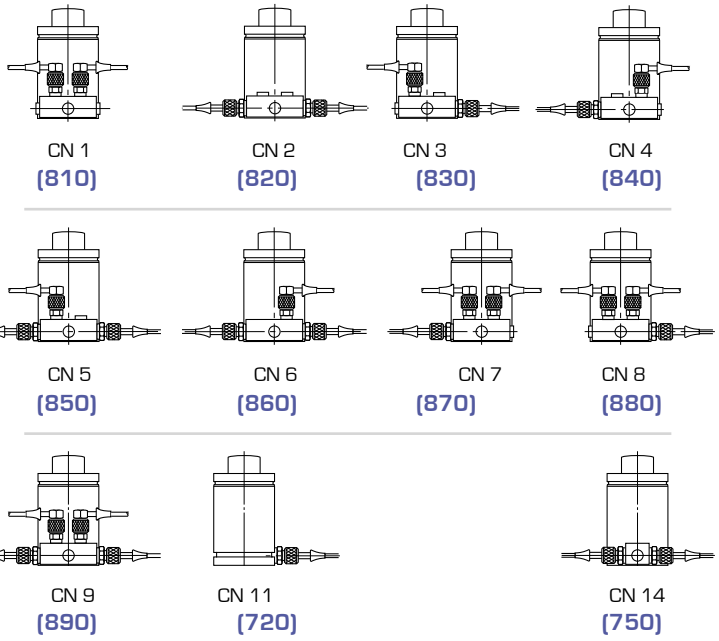
CONNECTION of GAS SPRINGS

CONNECTIONS FOR RGP GAS SPRINGS (G1/8" thread)

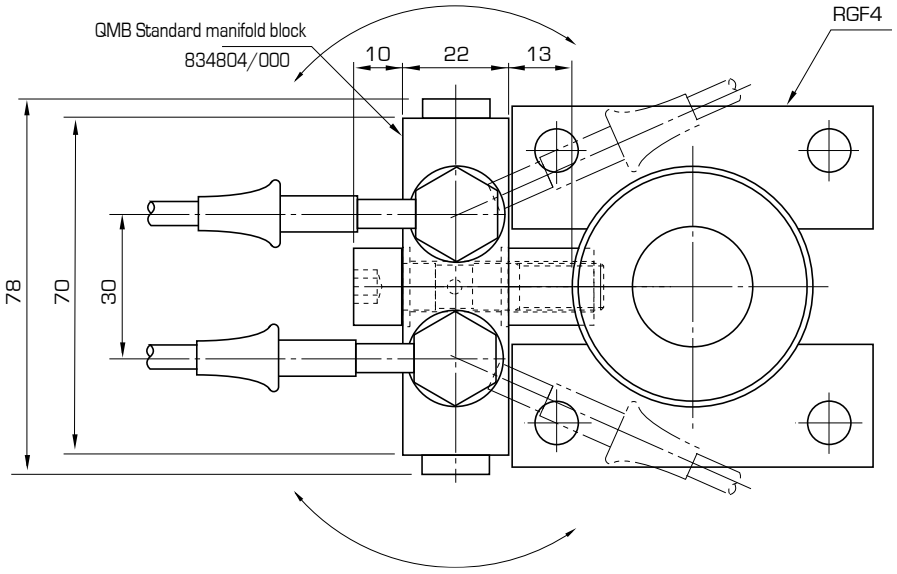
Type	Force daN	Stroke C mm	Order Code	RGP type	Connection type
RGPR	4200	16	443364/...	RGP 4200	
		19	443365/...		
		25	443366/...		
		32	443367/...		
		38	443368/...		
		50	443369/...		
		63	443370/...		
		75	443371/...		
		80	443372/...		
		100	443373/...		
		125	443374/...		
	6600	19	443384/...	RGP 6600	
		25	443385/...		
		32	443386/...		
		38	443387/...		
		50	443388/...		
		63	443389/...		
		75	443390/...		
		80	443391/...		
		100	443392/...		
		125	443393/...		
	9500	19	443405/...	RGP 9500	
		25	443406/...		
		32	443407/...		
		38	443408/...		
		50	443409/...		
		63	443410/...		
		75	443411/...		
		80	443412/...		
		100	443413/...		
		125	443414/...		

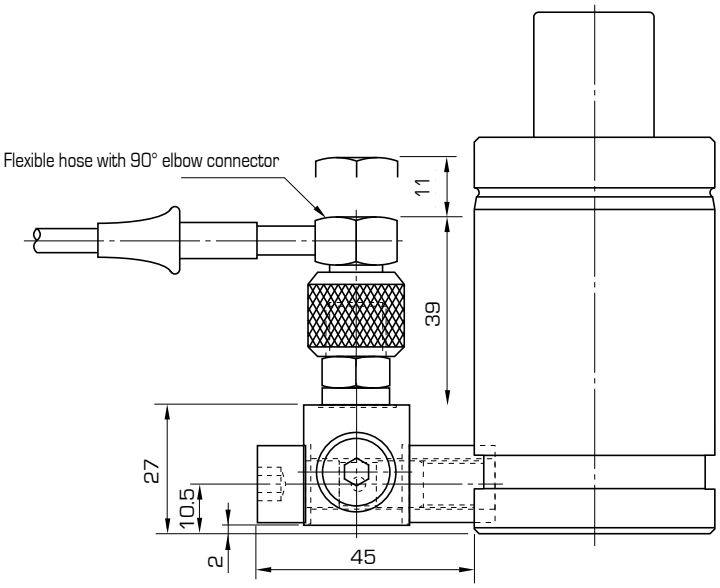


- All connections above can be selected by customer's design.
- **Example of ordering** : For a **RGP 4200,** stroke **32** mm + connection **CN2** ; the order code is : **443367/820**

Dimension of connections
For RGPR 4200/6600/9500
(G1/8" thread)

VERTICAL CONNECTION - CN 1/CN 2/CN 3/CN 4/CN 5/CN 6/CN 7/CN 8/CN 9





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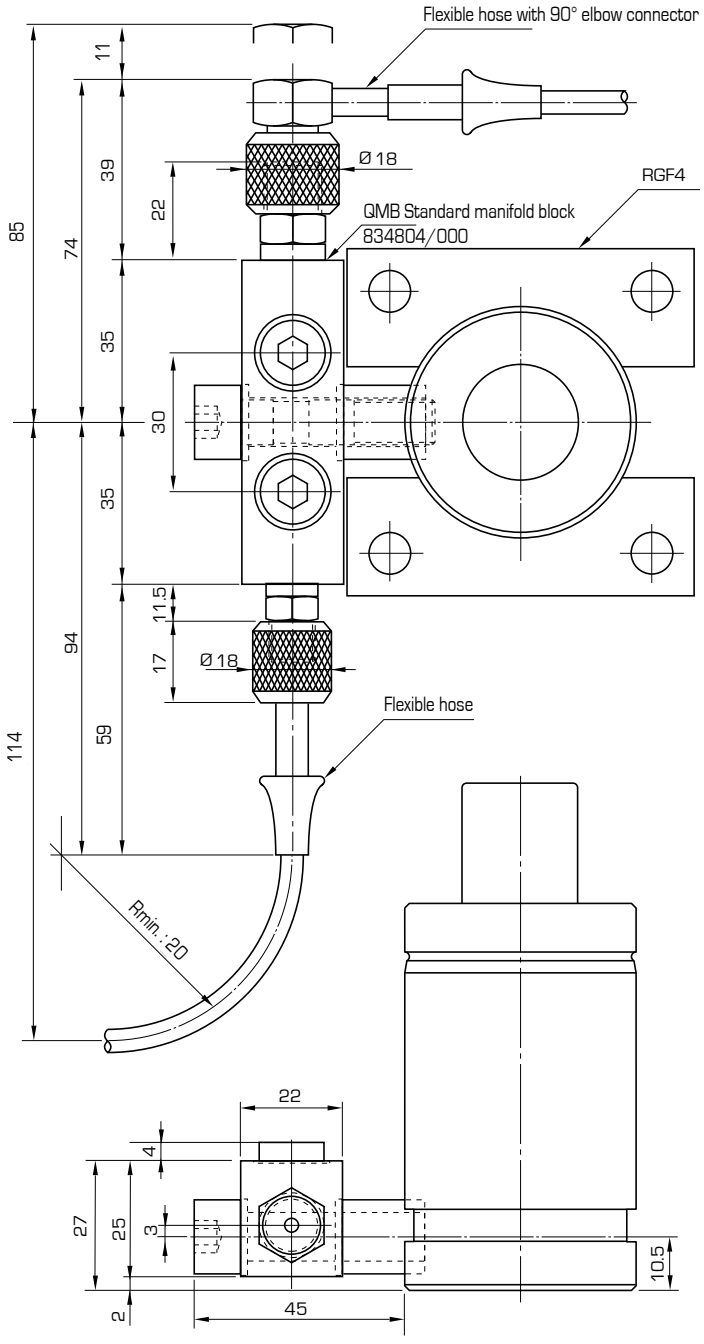
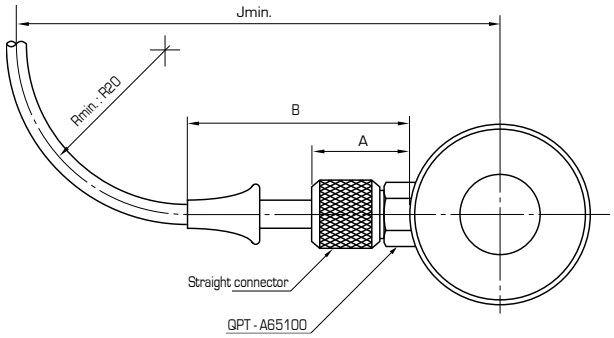
Dimension of connections
For RGPR 4200/6600/9500
(G1/8" thread)

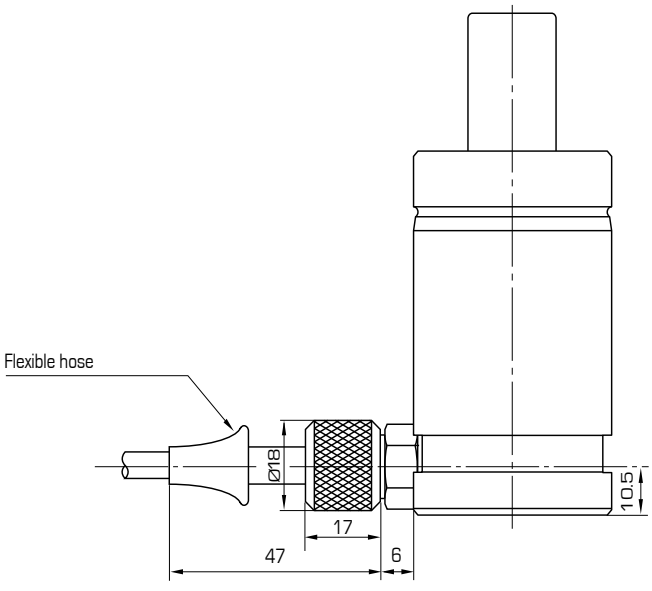
HORIZONTAL CONNECTION - CN 1/CN 2/CN 3/CN 4/CN 5/CN 6/CN 7/CN 8/CN 9



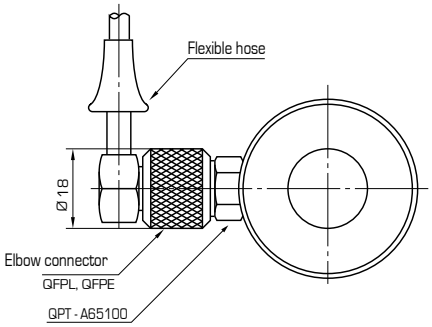
Dimension of connections
For RGPR 4200/6600/9500
(G1/8" thread)

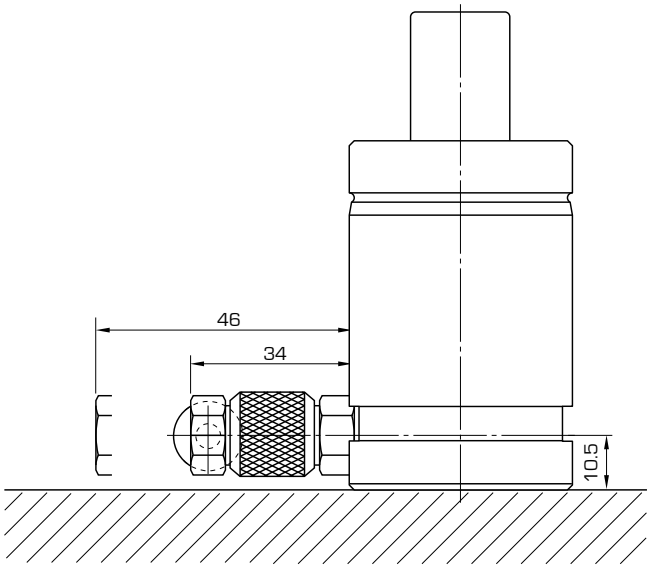
CN 11
(With straight connector)





CN 11
(With 90° Elbow connector)





Code No.	Jmin. (mm)
RGPR 4200	152
RGPR 6600	164
RGPR 9500	179

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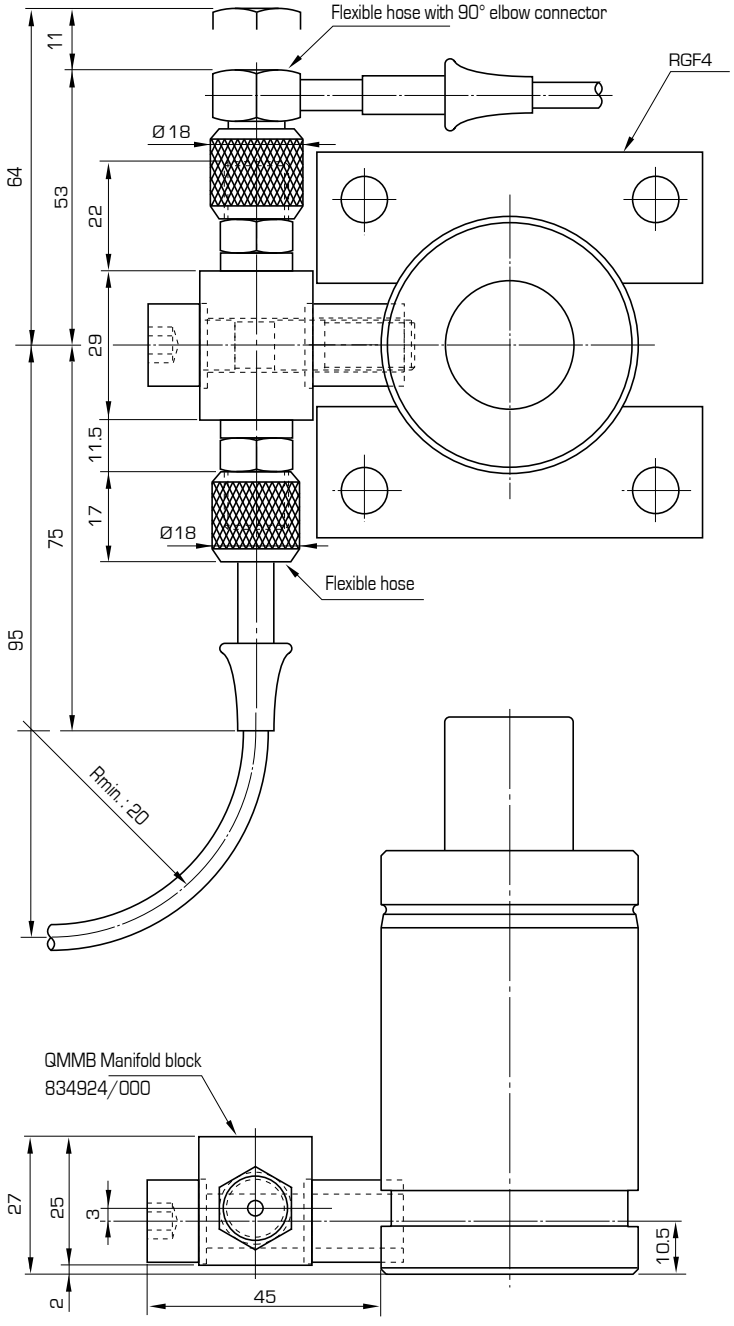
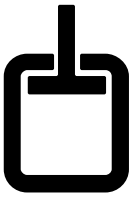
Dimension of connections
For RGPR 4200/6600/9500
(G1/8" thread)

MINI MANIFOLD BLOCK QMMB FOR CN 14 - (834924/000)



NOTES



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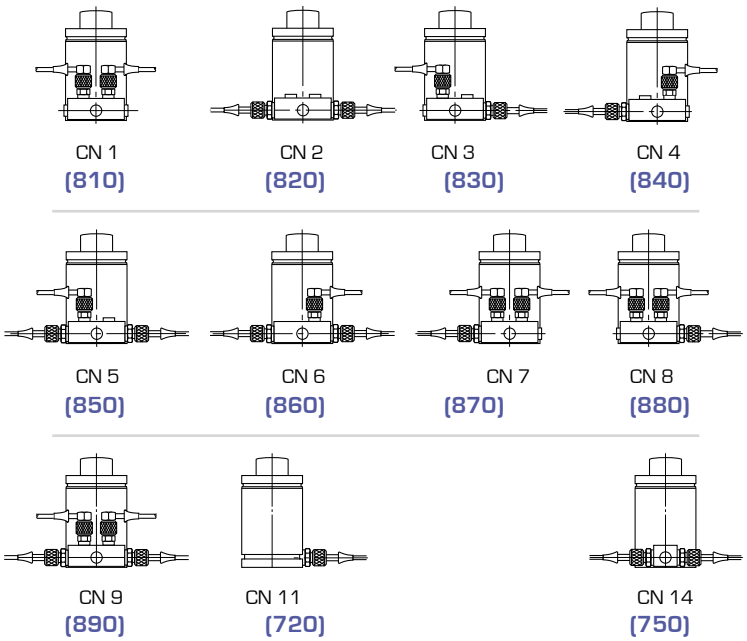
CONNECTION of GAS SPRINGS

CONNECTIONS FOR RGT GAS SPRINGS

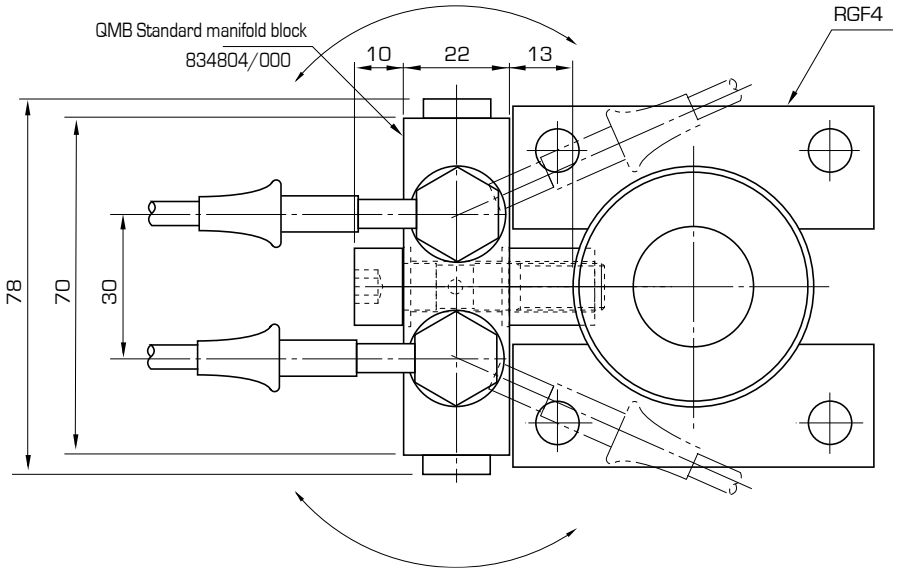
Type	Force daN	Stroke C mm	Order Code	RGT type	Connection type
RGTR	1000	25	443606/...	RGT 1000	
		50	443609/...		
		75	443611/...		
		100	443613/...		
		125	443614/...		
	2400	25	443646/...	RGT 2400	
		50	443649/...		
		75	443651/...		
		100	443653/...		
		125	443654/...		
	4200	25	443666/...	RGT 4200	
		50	443669/...		
		75	443671/...		
		100	443673/...		
		125	443674/...		
	6600	25	443686/...	RGT 6600	
		50	443689/...		
		75	443691/...		
		100	443693/...		
		125	443694/...		
	9500	25	443706/...	RGT 9500	
		50	443709/...		
		75	443711/...		
		100	443713/...		
		125	443714/...		

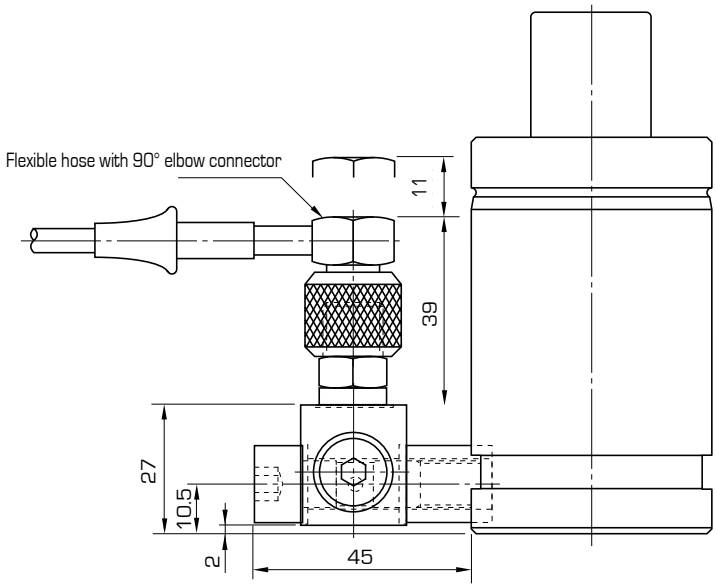


- All connections above can be selected by customer's design.
- **Example of ordering** : For a **RGT 2400,** stroke **50** mm + connection **CN4** ; the order code is : **443649/840**

Dimension of connections
For RGTR

VERTICAL CONNECTION - CN 1/CN 2/CN 3/CN 4/CN 5/CN 6/CN 7/CN 8/CN 9





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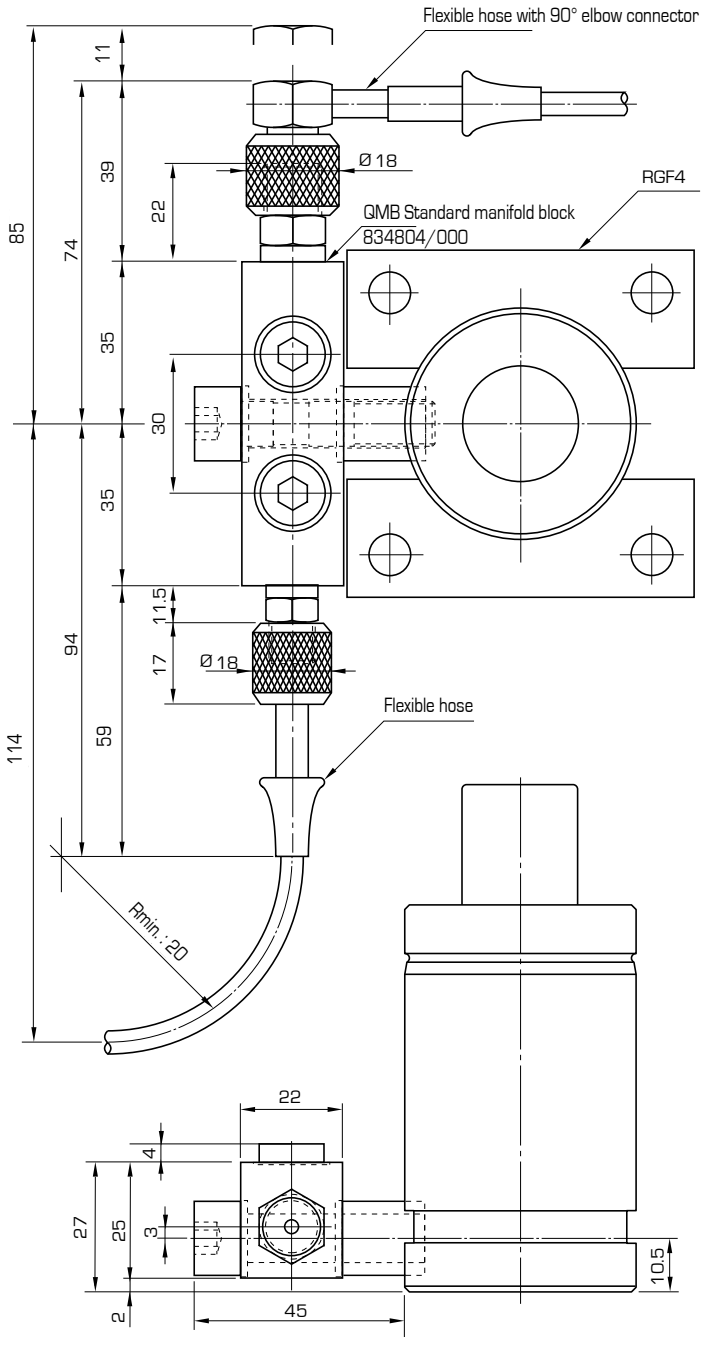
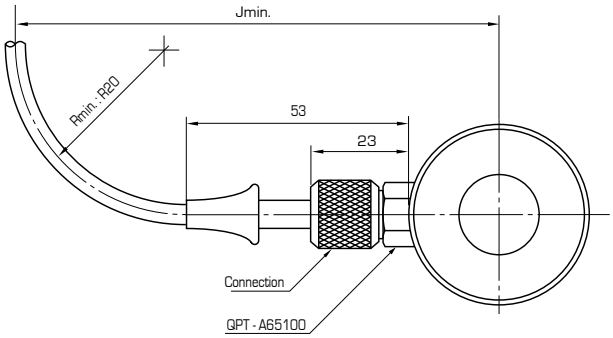
Dimension of connections
For RGTR

HORIZONTAL CONNECTION - CN 1/CN 2/CN 3/CN 4/CN 5/CN 6/CN 7/CN 8/CN 9

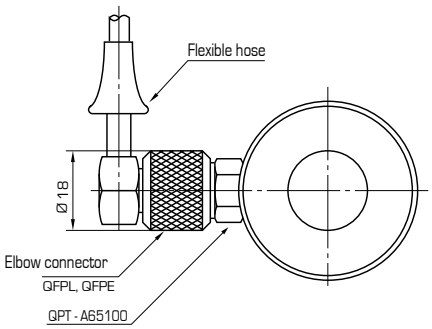


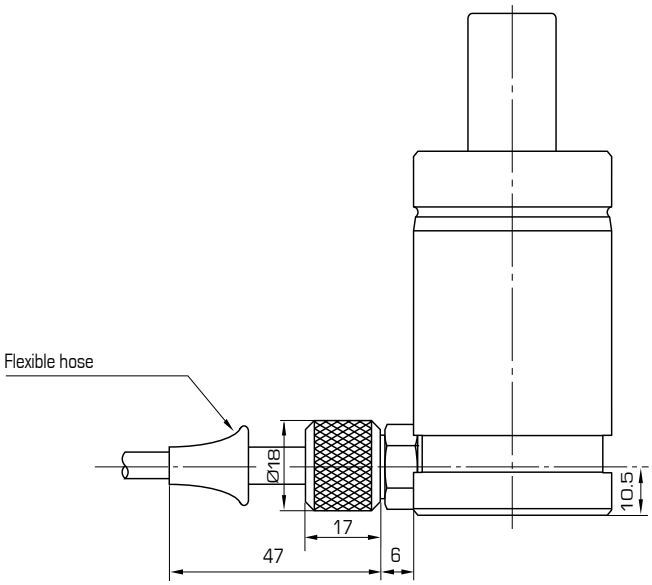
Dimension of connections
For RGTR

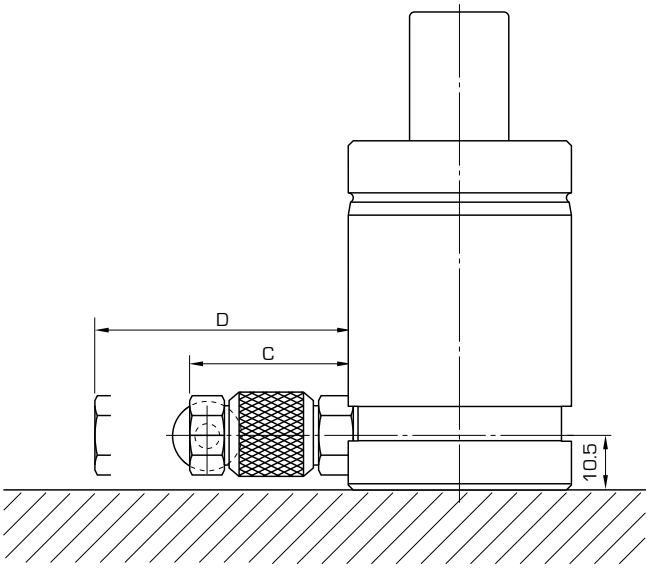
CN 11
(With straight connector)



CN 11
(With 90° Elbow connector)







Code No.	Jmin. (mm)
RGTR 1000	128
RGTR 2400	129
RGTR 4200	152
RGTR 6600	164
RGTR 9500	179

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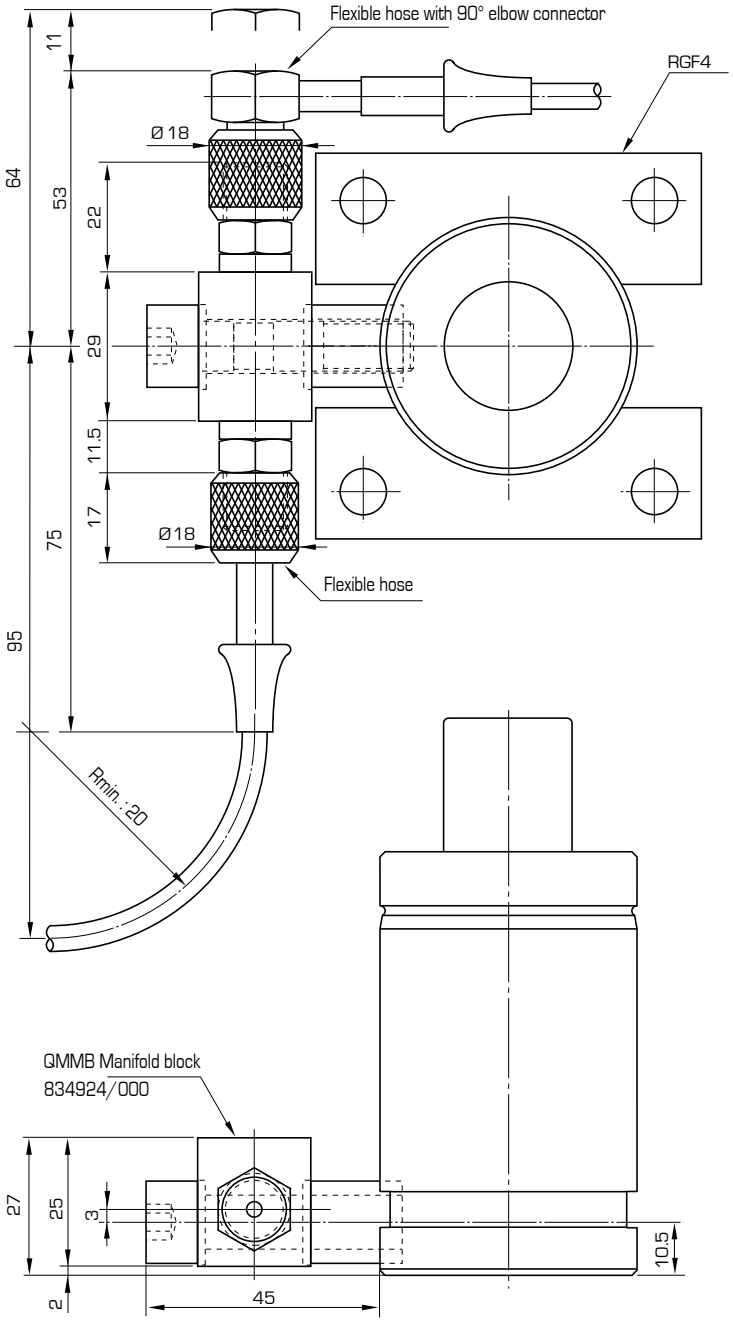
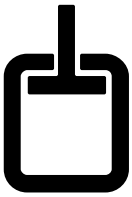
Dimension of connections
For RGTR

MINI MANIFOLD BLOCK QMMB FOR CN 14 - (834924/000)



NOTES



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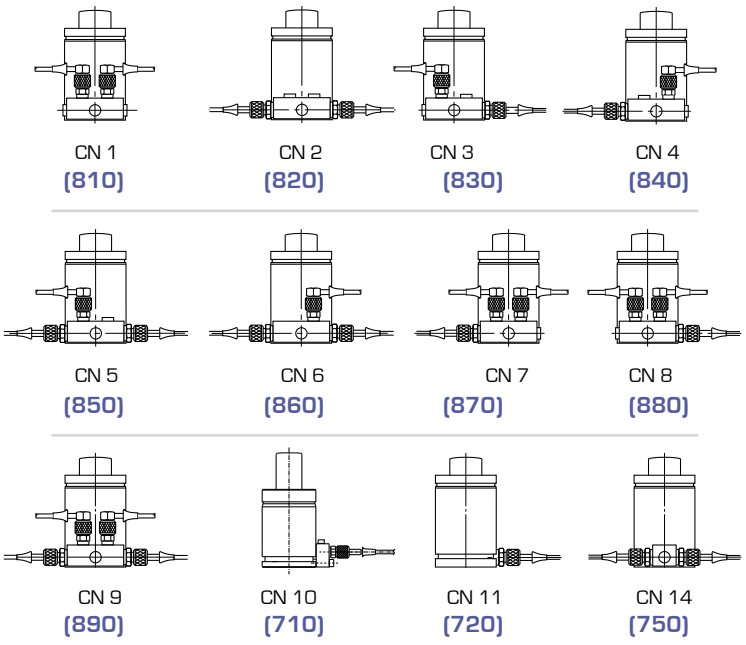
CONNECTION of GAS SPRINGS

CONNECTIONS FOR RGH GAS SPRINGS

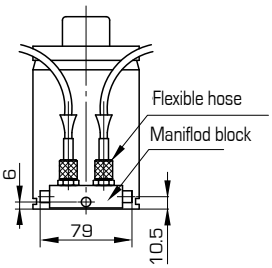
Type	Force daN	Stroke C mm	Order Code	RGH type	Connection type
RGHR	500	6	442261/...	RGH 500	
		12.7	442262/...		
		19	442263/...		
		25	442264/...		
		38	442265/...		
		50	442266/...		
		63	442267/...		
		80	442268/...		
		100	442269/...		
		125	442270/...		
	750	6	442361/...	RGH 750	
		12.7	442362/...		
		19	442363/...		
		25	442364/...		
		38	442365/...		
		50	442366/...		
		63	442367/...		
		80	442368/...		
		100	442369/...		
		125	442370/...		
	1500	25	442561/...	RGH 1500	
		38.1	442562/...		
		50	442563/...		
		63.5	442564/...		
		80	442565/...		
		100	442566/...		
	3000	25	442761/...	RGH 3000	
		38.1	442762/...		
		50	442763/...		
		63.5	442764/...		
		80	442765/...		
		100	442766/...		
	5000	25	442961/...	RGH 5000	
		38.1	442962/...		
		50	442963/...		
		63.5	442964/...		
		80	442965/...		
		100	442966/...		



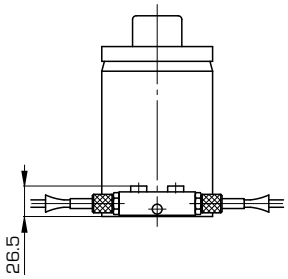
- Above all connections can be selected by customer's design.
- **Example of ordering** : For a **RGH 500,** stroke **63** mm + connection **CN2** ; the order code is : **442267/820**

Dimension of connections
For RGHR

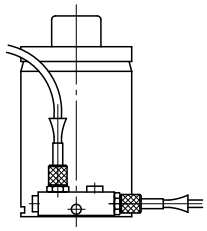
CN 1



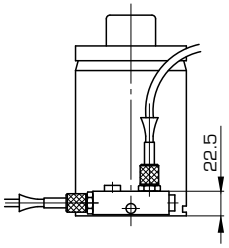
CN 2

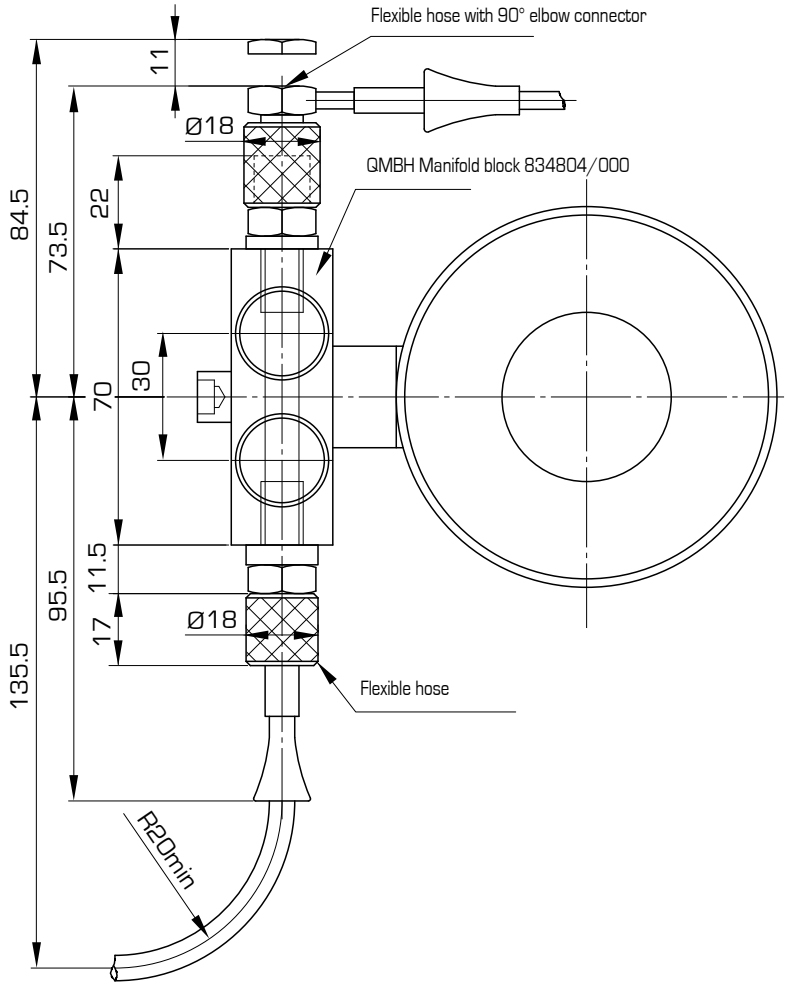


CN 3



CN 4





▶ **NOTE : Flexible hoses should not exceed the cylinder body**

▶ There is special manifold block for RGH type because of it's bottom is different than other types. Turn to page 156 for detail.

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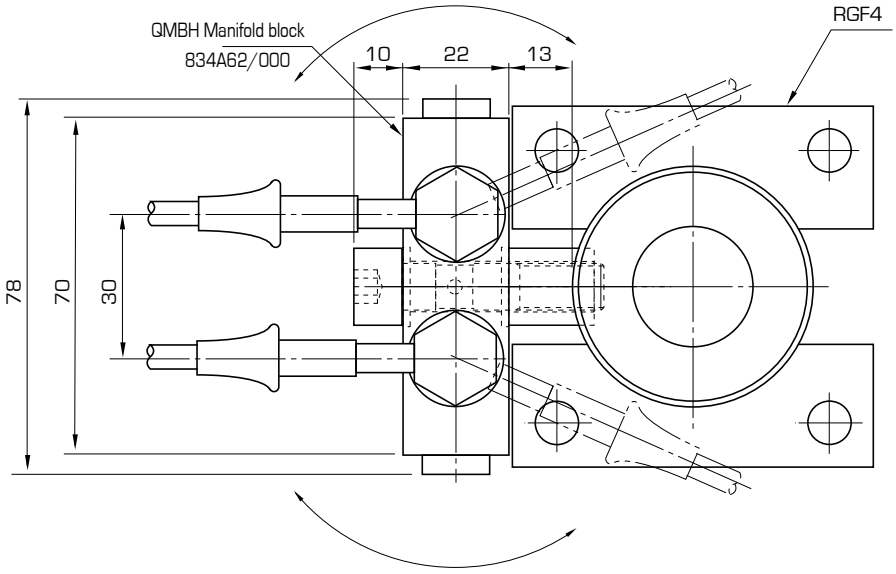
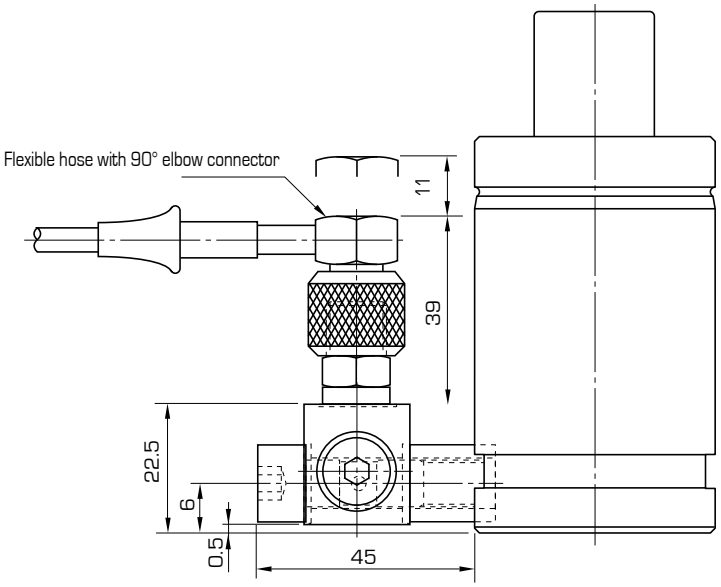
Dimension of connections
For RGHR

VERTICAL CONNECTION - CN 1/CN 2/CN 3/CN 4/CN 5/CN 6/CN 7/CN 8/CN 9



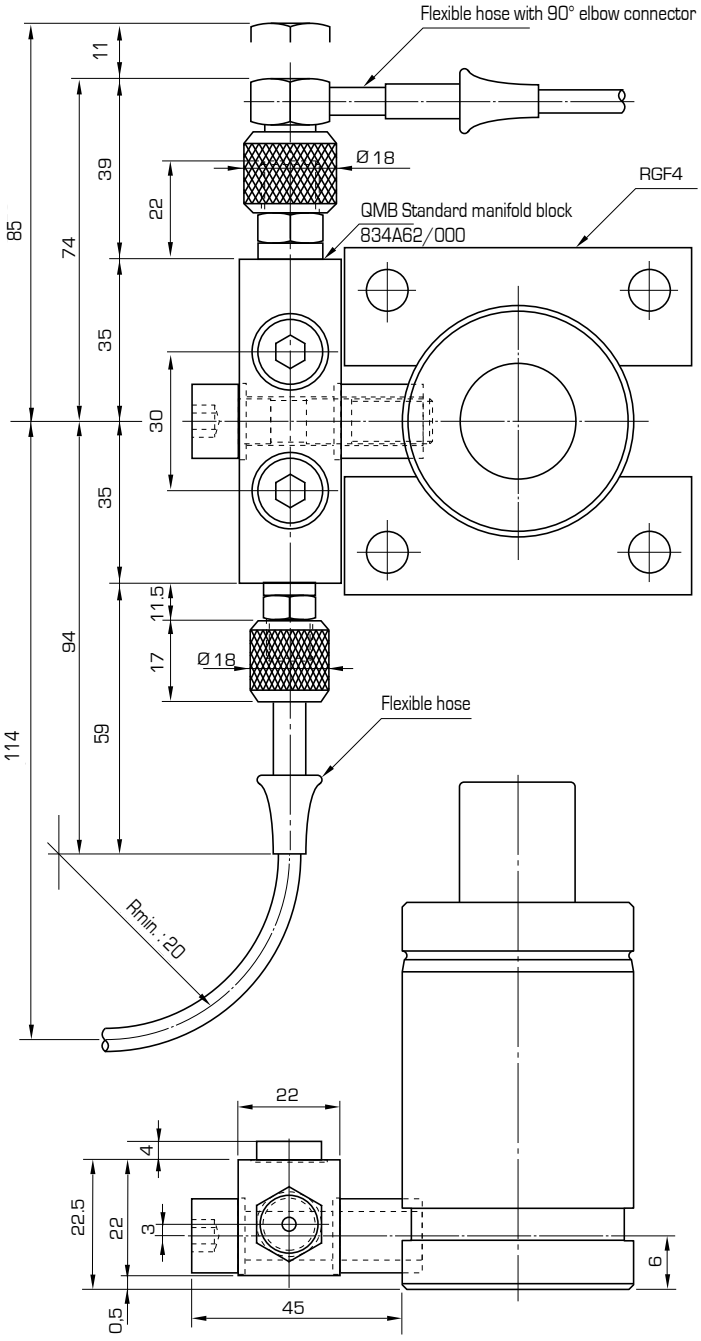


▶ **NOTE : Flexible hoses should not exceed the cylinder body**

▶ There is special manifold block for RGH type because of it's bottom is different than other types. Turn to page 156 for detail.

Dimension of connections
For RGHR

HORIZONTAL CONNECTION - CN 1/CN 2/CN 3/CN 4/CN 5/CN 6/CN 7/CN 8/CN 9



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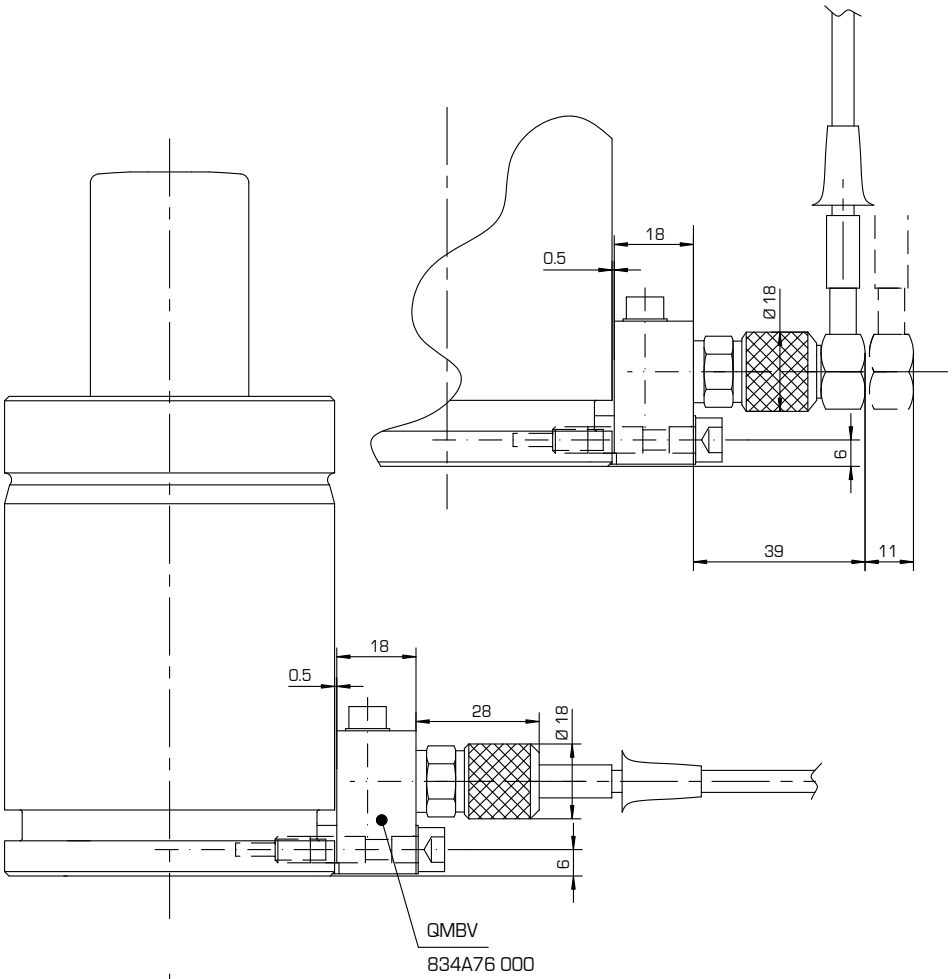
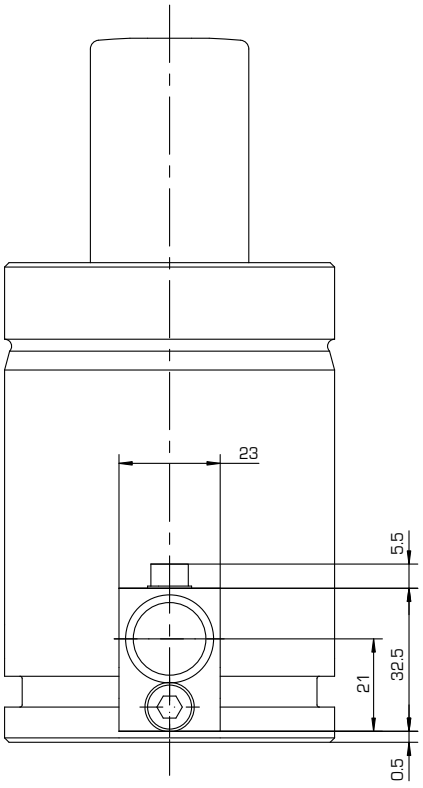
Dimension of connections
For RGHR

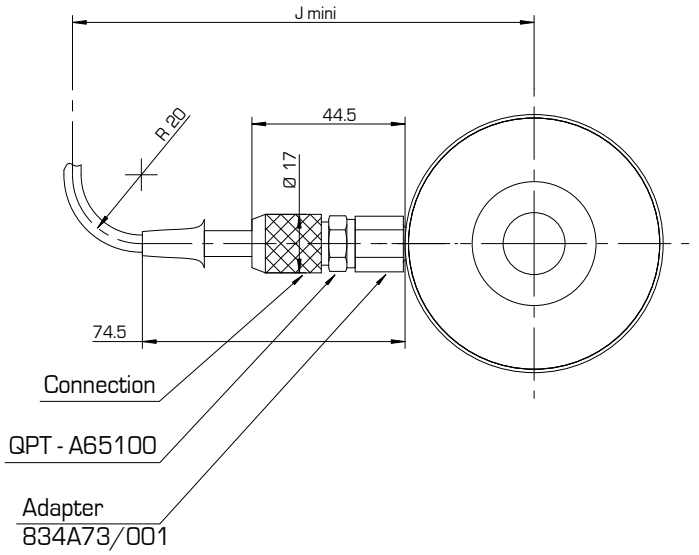
CN 10



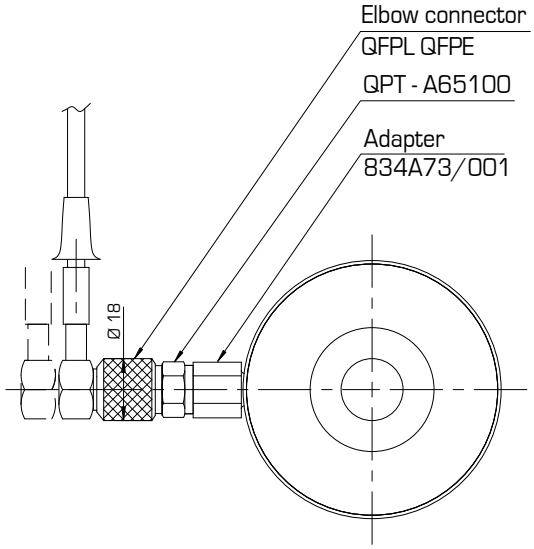


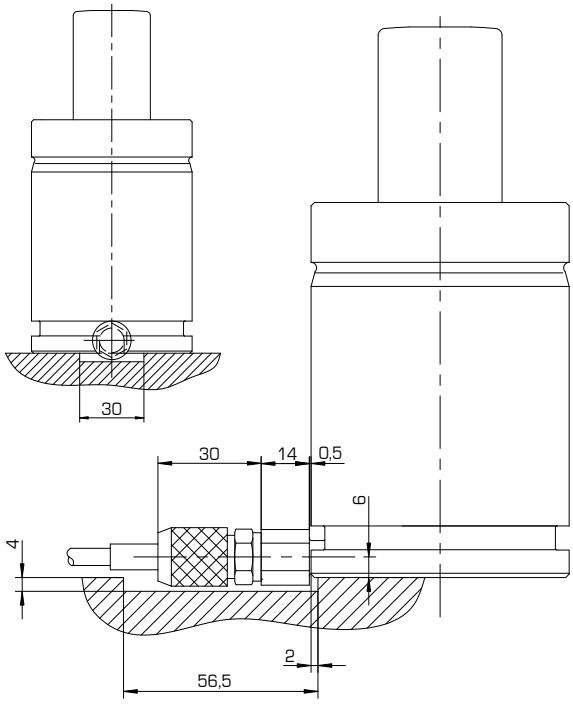
Dimension of connections
For RGHR

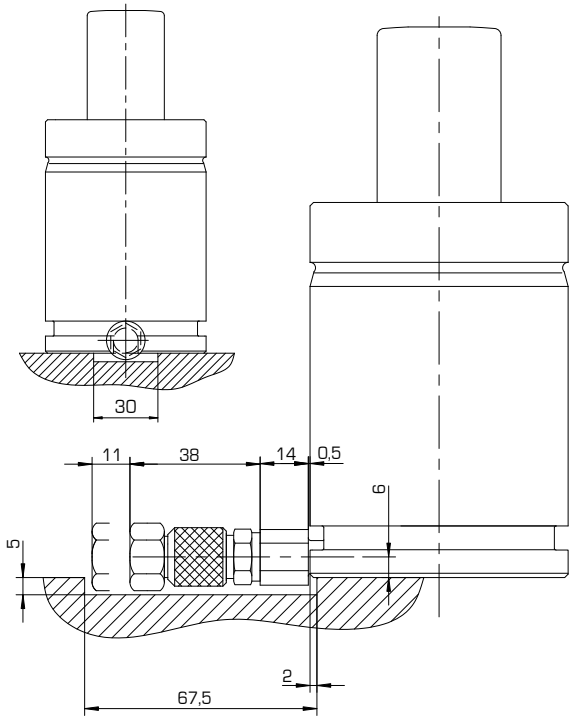
CN 11
(With straight connector)



CN 11
(With 90° Elbow connector)







Code No.	Jmin. (mm)
RGHR 500	147.5
RGHR 750	150
RGHR 1500	162.5
RGHR 3000	172.5
RGHR 5000	185

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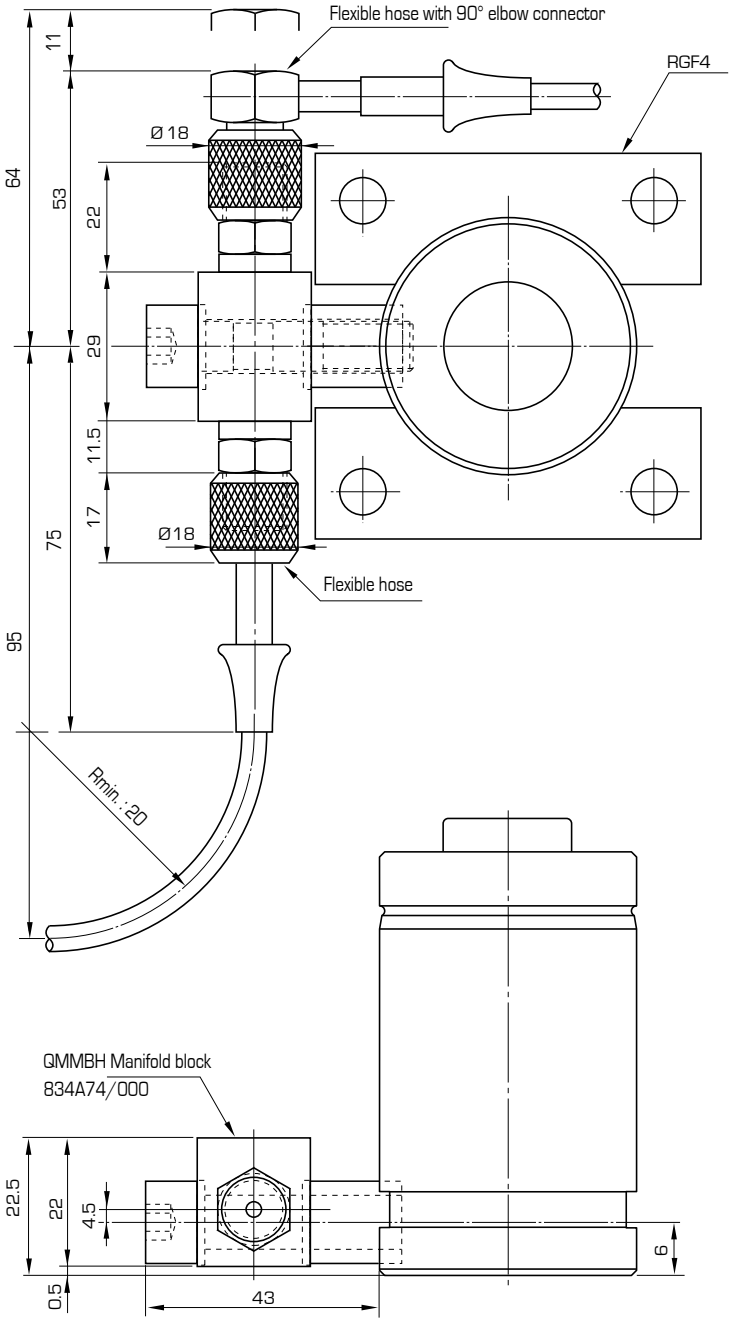
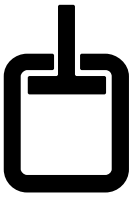
Dimension of connections
For RGHR

MINI MANIFOLD BLOCK QMMBH FOR CN 14 - (834A74/000)



NOTES



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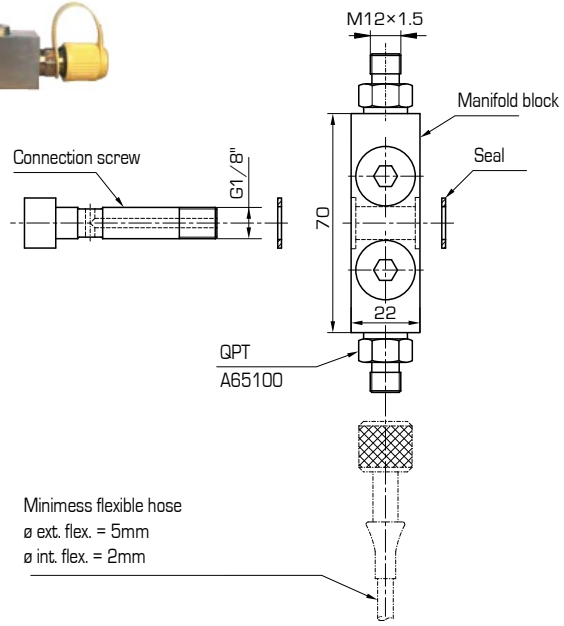
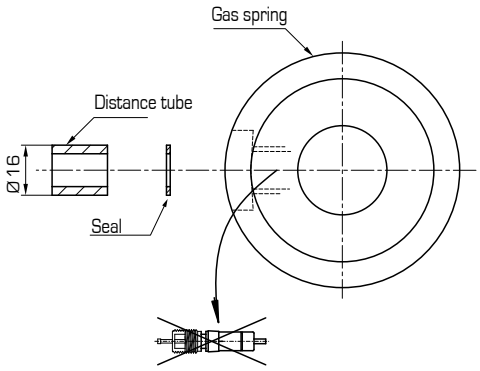
CONNECTION MANIFOLD BLOCKS
For RGR, RGCR, RGTR & RGPR 4200 to 9500
(G1/8" threaded gas springs)

QMB for CONNECTION CN1/2/3/4/5/6/7/8/9 - (834804/000)

- QPT - Pressure taps - (A65100) included

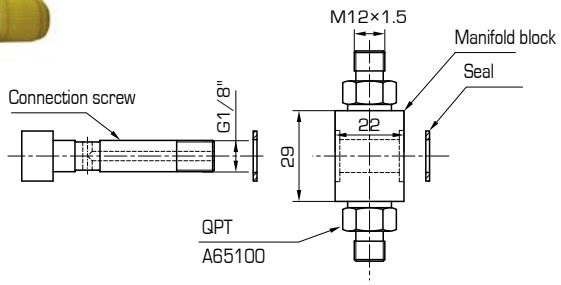


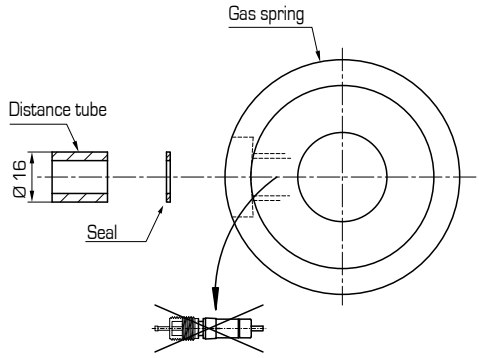


- The inflating valve should be removed before assembling manifold block

QMMB for CONNECTION CN14 - (834924/000)

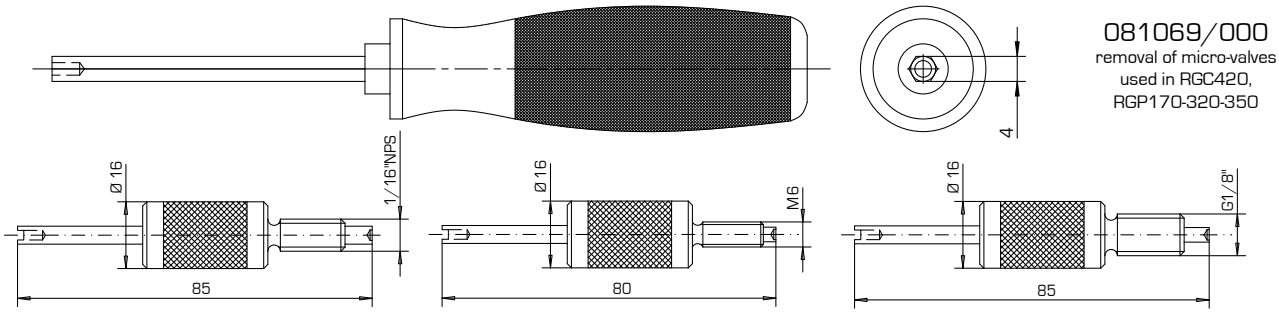
- QPT - Pressure taps - (A65100) included
- **Mini manifold block only can be used in horizontal connection.**





- The inflating valve should be removed before assembling manifold block

DISMOUNTING TOOL SET FOR VALVE REMOVAL



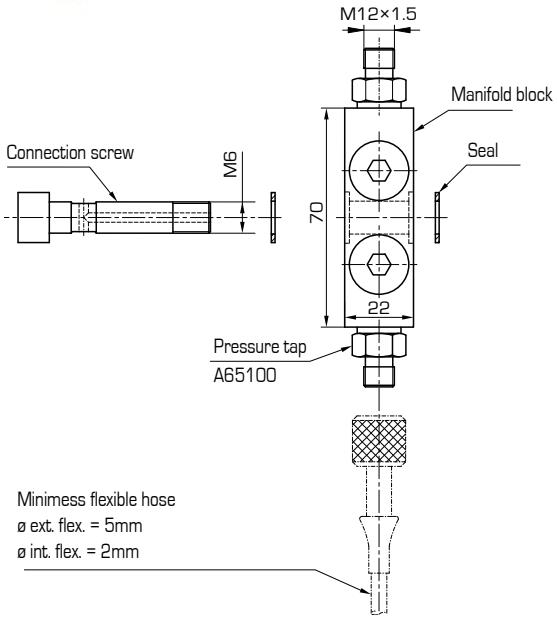
081069/000
removal of micro-valves used in RGC420, RGP170-320-350

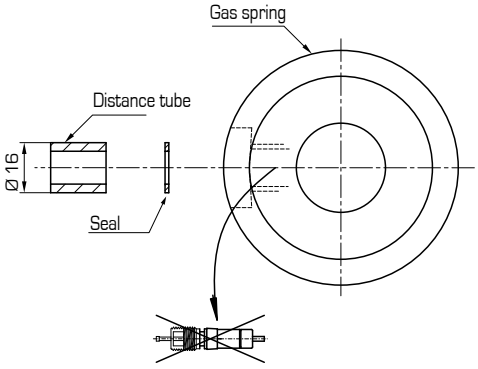
081053/000 081055/000 081041/000

CONNECTION MANIFOLD BLOCKS
For RGHR & RGPR 750 to 2400
(M6 threaded gas springs)

QMBH for CONNECTION CN1/2/3/4/5/6/7/8/9 - (834A62/000)

- QPT - Pressure taps - (A65100) included

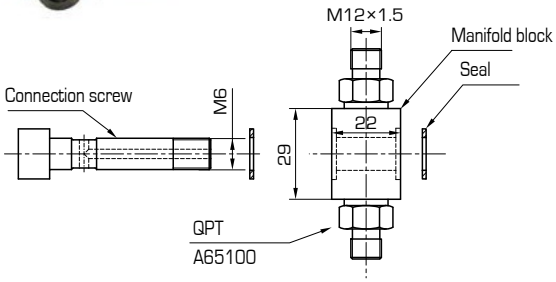


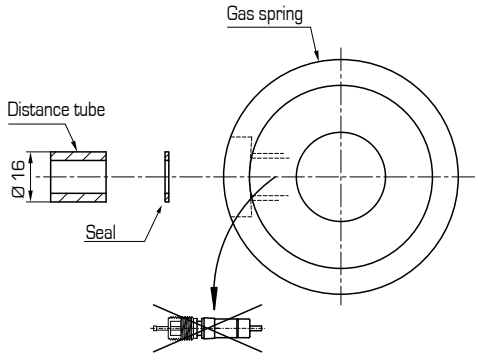


- The inflating valve should be removed before assembling manifold block, see tool set p.154

QMMBH for CONNECTION CN14 - (834A74/000)

- QPT - Pressure taps - (A65100) included
- **Mini manifold block only can be used in horizontal connection.**





- The inflating valve should be removed before assembling manifold block, see tool set p.154

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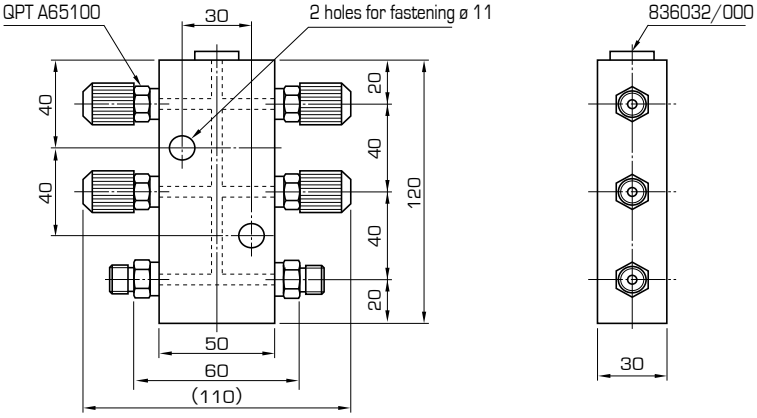
MANIFOLD DISTRIBUTORS
6 TAPS

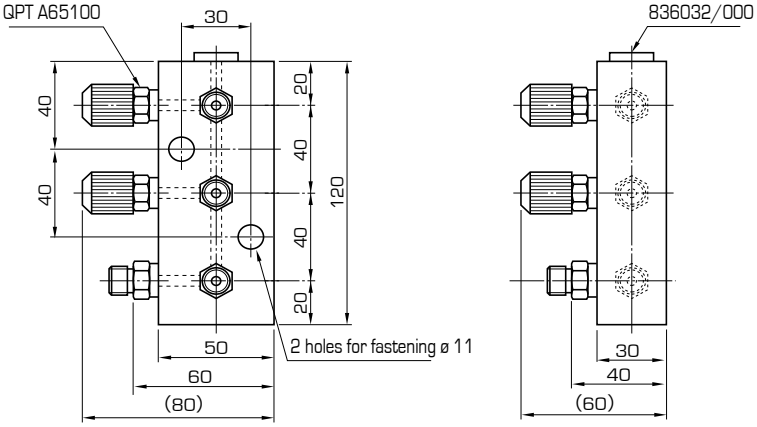
6 Taps HORIZONTAL CONNECTION - QMHC6 - (834954/000)

- QPT - Pressure taps - (A65100) included



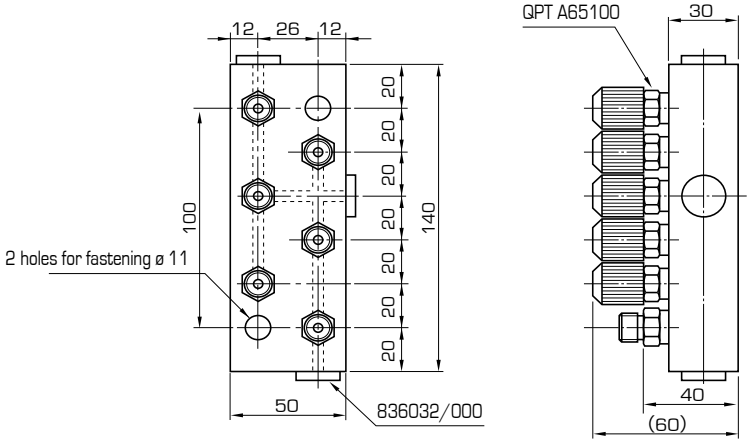
6 Taps ANGLE CONNECTION - QMAC6 - (834955/000)

- QPT - Pressure taps - (A65100) included



6 Taps VERTICAL CONNECTION - QMVC6 - (834956/000)

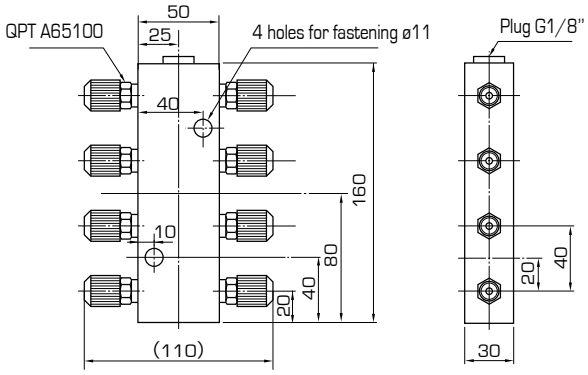
- QPT - Pressure taps - (A65100) included



MANIFOLD DISTRIBUTORS
8 TAPS

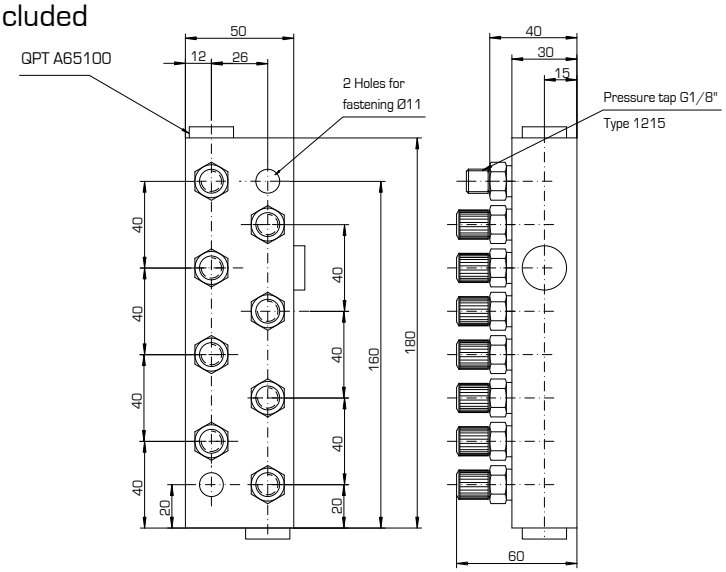
8 Taps HORIZONTAL CONNECTION - QMHC 8 - (834983/000)

- QPT - Pressure taps - (A65100) included



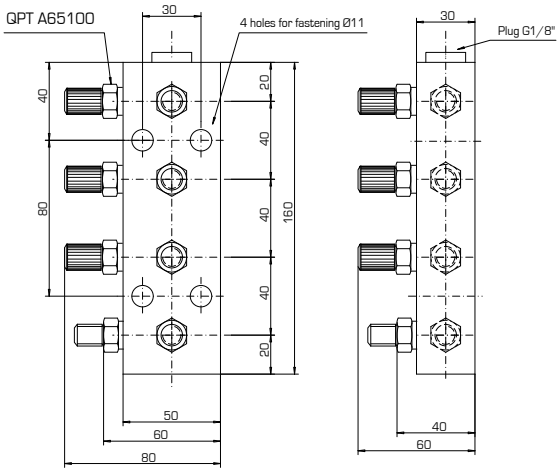
8 Taps VERTICAL CONNECTION - QMVC8 - (834984/000)

- QPT - Pressure taps - (A65100) included



8 Taps ANGLE CONNECTION - QMAC8 - (834B09/000)

- QPT - Pressure taps - (A65100) included



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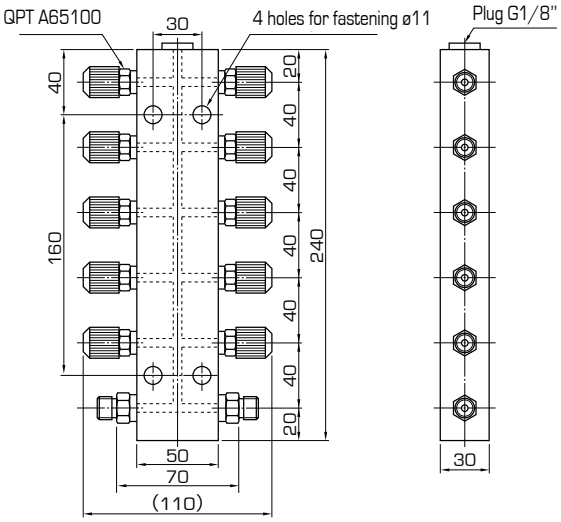
MANIFOLD DISTRIBUTORS
12 TAPS

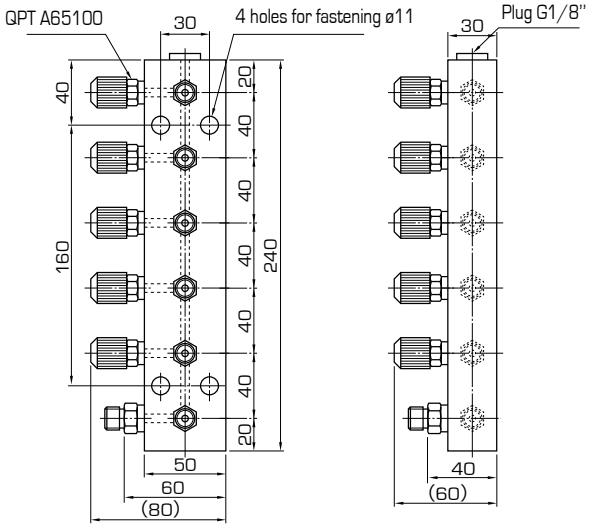
12 Taps HORIZONTAL CONNECTION - QMHC12 - (834927/000)

- QPT - Pressure taps - (A65100) included



12 Taps ANGLE CONNECTION - QMAC12 - (834928/000)

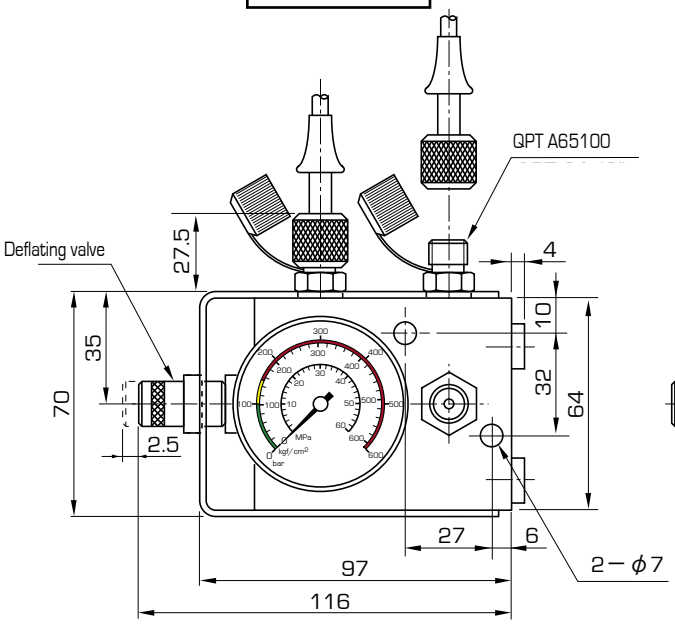
- QPT - Pressure taps - (A65100) included



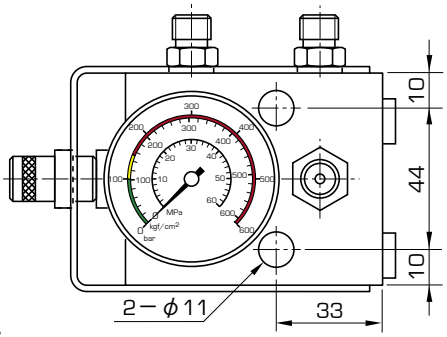
COMPACT CONTROL BLOCKS

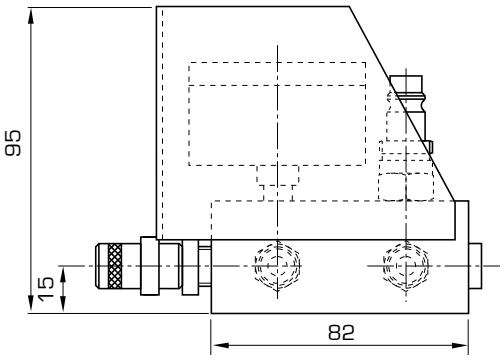
- **FEMALE G1/8" THREAD ADAPTER -** **QNCB-A - (834959/000)**
- **FAST COUPLING ADAPTER (STAUBLI standard) -** **QNCB-B - (834957/000)**
- **FAST COUPLING ADAPTER (CEJN standard) -** **QNCB-C - (834960/000)**
- **FAST COUPLING ADAPTER (CEJN standard, special fixture) -** **QNCB-T - (834964/000)**

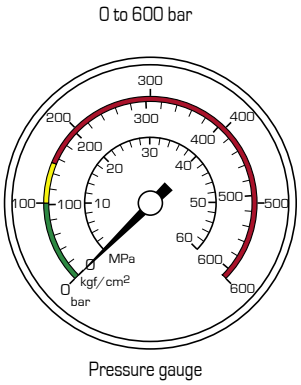
QNCB-A
QNCB-B
QNCB-C



QNCB-T







▶ A maximum of 4 QTP adapters can be fitted on the control panel, we set up 2 pieces.

Please use plyer to adjust the outlet valve, the mounting torque should be less than 30 N.m. There can be some useless oil coming out with nitrogen when you open the outlet valve in piping system. Please pay attention to not let the oil go into your eyes.

HYDROMECANIQUE QUIRI

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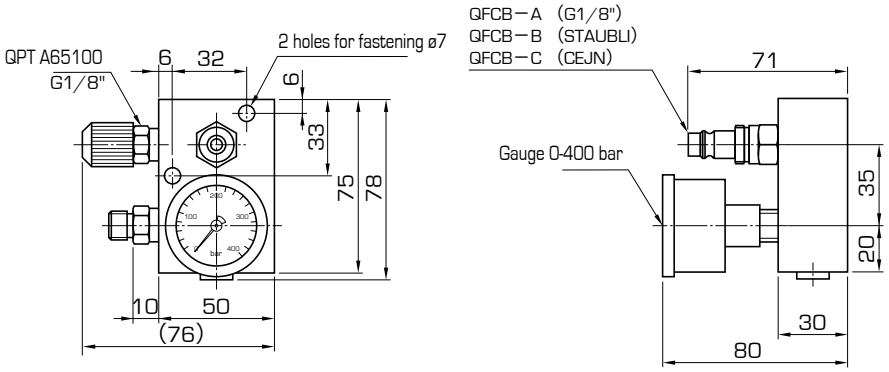
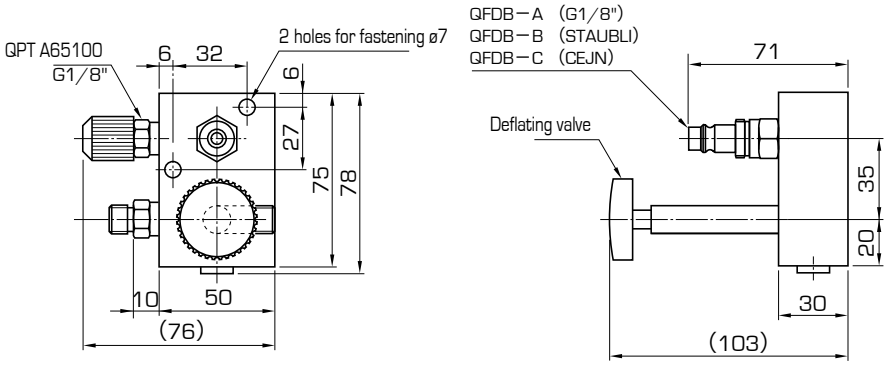
INFLATING - DEFLATING CONTROL - LINKING BLOCKS

- **QFCB-A - (834895/000)**
- **QFCB-B - (834913/000)**
- **QFCB-C - (834896/000)**



- **QFDB-A - (834893/000)**
- **QFDB-B - (834914/000)**
- **QFDB-C - (834894/000)**



HOW TO USE FLEXIBLE HOSES

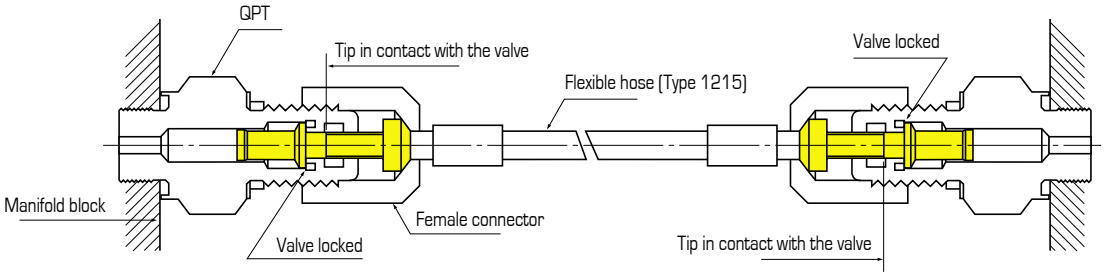
FEATURES

1) Each pipe has a sticker on both end.
2) QUIRI pipes are made on order at any length.
3) Pipes must be assembled by hand, **not by tools**.
4) The minimum bending radius is 20mm.
5) Pipe's inside diameter is 2mm, outside diameter is 5mm, the maximum pressure can reach 63 MPa (630 bar)

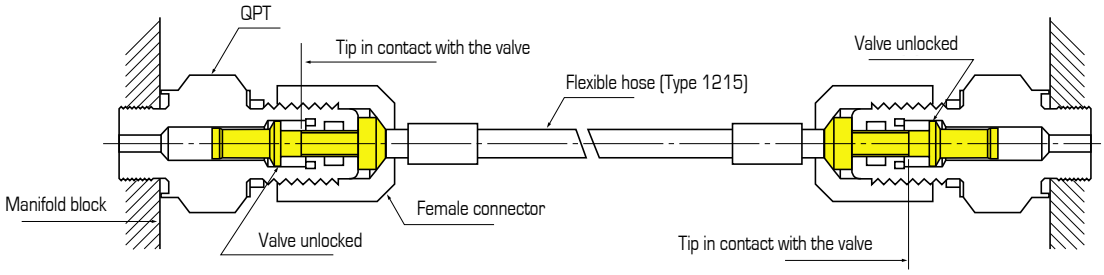
CONNECTION AND NOTICE

The QTP adapter on manifold block, includes a one way valve to avoid leakage. When you make the connection, the pin which is inside the female adapter will push the valve to open it, the nitrogen gas will be transferred freely. When you disassemble the piping system, the valve will close by itself.

When there is no pressure in the system, valve is closed.



- Drawing 1-



- Drawing 2 -

a) Screw the female adapter on the adapter (QPT) by hand.
b) You can feel the pin touch the valve (Drawing 1).
c) Turn more after you feel it.
d) When the valves is opened, the connection is finished (Drawing 2).
e) If you use some tools like pliers to close it, the torque moment should be less than 3 N.m if the length of your tool is about 300mm, your force should be less than 1 kgF.

If there is pressure in the piping system, please follow the above a) to e) steps.

But, because there is pressure pushing the valve in the adapter (QTP), when you make step b), c) ,d) it will be more difficult for you to turn it than without pressure.

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HOW TO USE FLEXIBLE HOSES

NOTICE

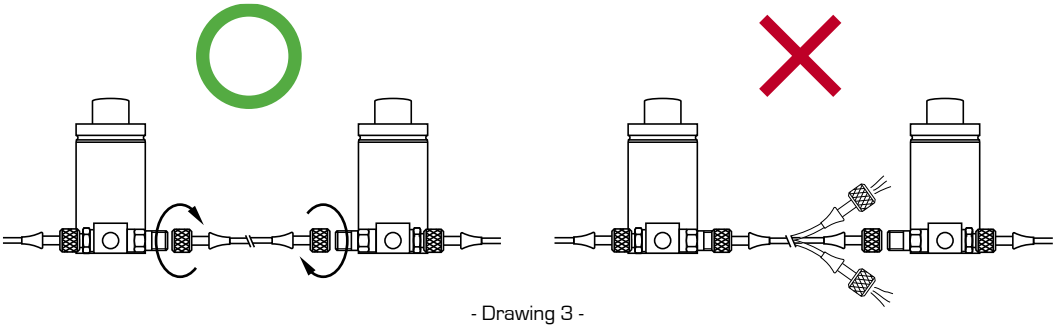
a) When you connect gas spring with pressure (or connect to the manifold block), you should connect the two sides at the same time. (Drawing 3)

b) Before you connect it, please confirm the female adapter can connect with the adapter on the gas spring. If there is leakage, the pipe will sway disorderly and it can be dangerous. (Drawing 3)

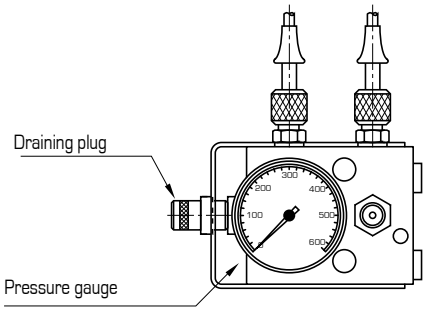
c) You should check the adapters if there is leakage after you finish connection.

d) You can use our gas leak detection liquid **(order code : A99525)** to check if there is leakage. In this case, please turn the female adapter further.

e) After connection, you can check the pressure through control panel (QNCB). If the gauge indicates 0, you should check the system carefully again.



- Drawing 3 -



DISASSEMBLY OF PIPES FROM THE SYSTEM AND NOTICE

1) If there is no pressure in the system, you can make it with opposite sequence.
Even you release the pressure from control panel (QNCB), manifold block and the piping system, there will still be some gas inside, so you should use some force to open the adapters.

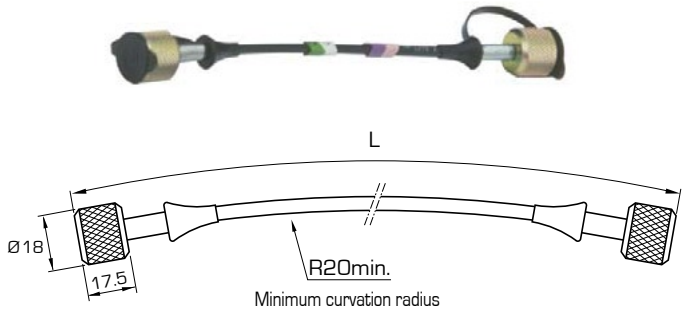
Notice : When you release the pressure, you should confirm that the pressure gauge indicates 0, and the draining plug is opened.

2) If there is pressure in the system, you can make it with opposite sequence.

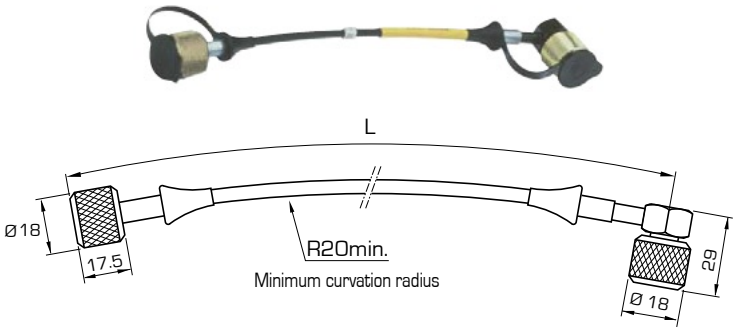
Notice : When you remove the pipe between two gas springs or one side is manifold block with pressure, you must remove both sides of female adapters at the same time. If you remove one side at first, there will be leakage and the pipe will sway disorderly and it can be dangerous.

MINI FLEXIBLE HOSES

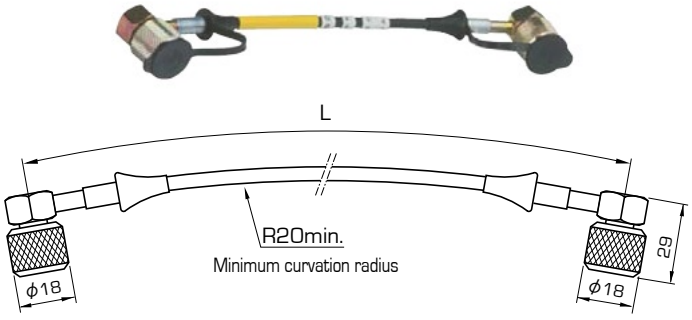
FLEXIBLE HOSE EQUIPED WITH 2 NORMAL JOINING PIECES QFPN



FLEXIBLE HOSE EQUIPED WITH 1 NORMAL JOINING PIECE AND 1 ELBOW JOINING PIECE QFPL



FLEXIBLE HOSE EQUIPED WITH 2 ELBOW JOINING PIECES QFPE



Examples of ordering : For **600 mm** lenght **straight ends** flexible hose, the order code is : **QFPN 600**
For **1000 mm** lenght **straight and elbow ends** flexible hose, the order code is : **QFPL 1000**

▶ Any length, from 200mm and up, are available on request

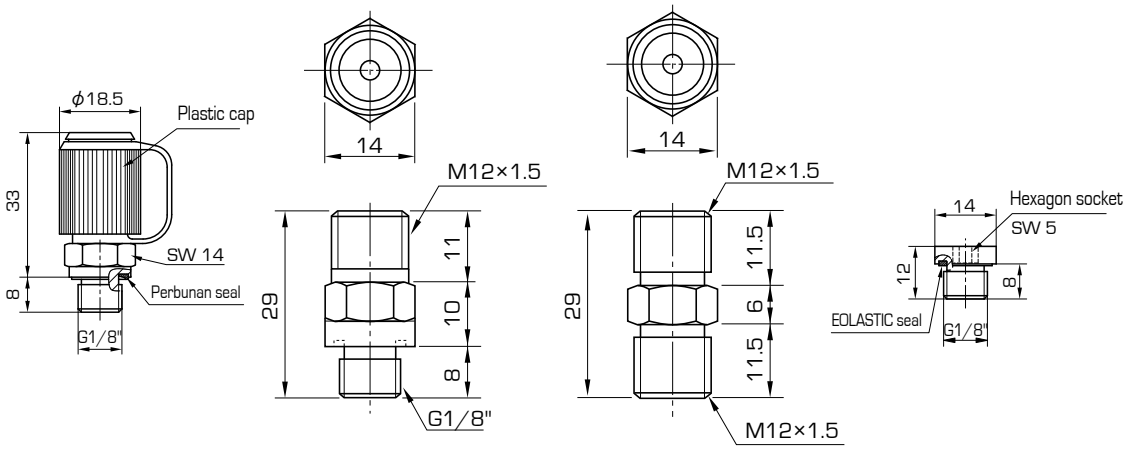
ACCESSORIES

PRESSURE TAP "MINIMESS" - QPT - (A65100)
CONNECTOR for FLEXIBLE HOSE - QMC - (A65106)
SCREW PLUG G1/8" - QPS - (836032/000)
G1/8" FEMALE/M6 MALE ADAPTER - QPA - (834A73/001)

QPT - Pressure tap
Order code : A65100

QMC - Connector for flexible hose
Order code : A65106

QPS - Screw plug G1/8"
Order code : 836082/000



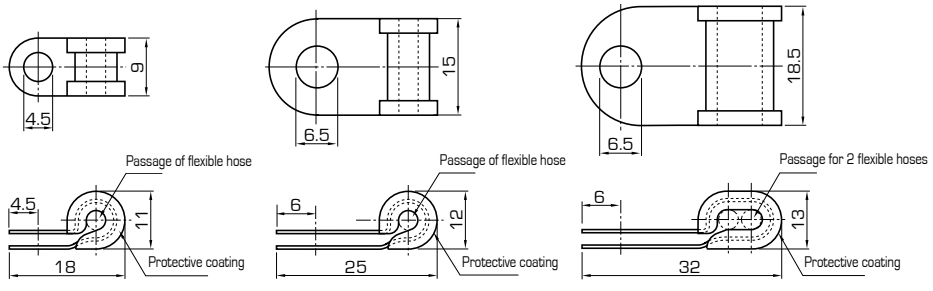
- Can be used with CN11, 12, 15, 16
- Can be used to connect 2 pipes together

STRAP RETAINER for FLEXIBLE HOSE - QSR4 - (A96063)
STRAP RETAINER for FLEXIBLE HOSE - QSR6 - (A96087)
STRAP RETAINER for FLEXIBLE HOSE - QSR 6W - (A96088)

QSR4 - Strap retainer for flexible hoses
Order code : A96063

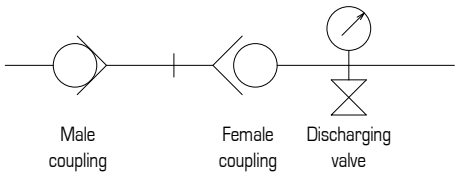
QSR6 - Strap retainer for flexible hoses
Order code : A96087

QSR6W - Strap retainer for flexible hoses
Order code : A96088



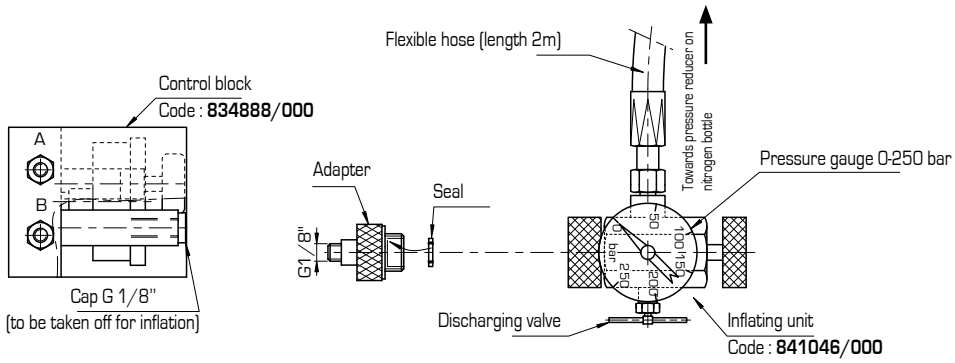
INFLATING PROCESS OF GAS SPRINGS CONNECTED FOR EQUAL PRESSURE

- Confirm that the pressure reducer has been connected to the nitrogen bottle and adjust the output pressure to **150** to **155** bar (15 to 1.5 MPa).
- Connect the adapters to the inflating unit.
- Connect the inflating unit to the control panel.
- Close the pressure reducer.
- Open the nitrogen bottle.
- When the inflating gauge indicates the pressure that you need, please wait for a while (about 10 seconds), the piping system pressure will stabilize.
- Close the nitrogen bottle.
- Open discharging valve to release the pressure.
- Remove the inflating unit from the control panel.



Control panel with G1/8" adapter

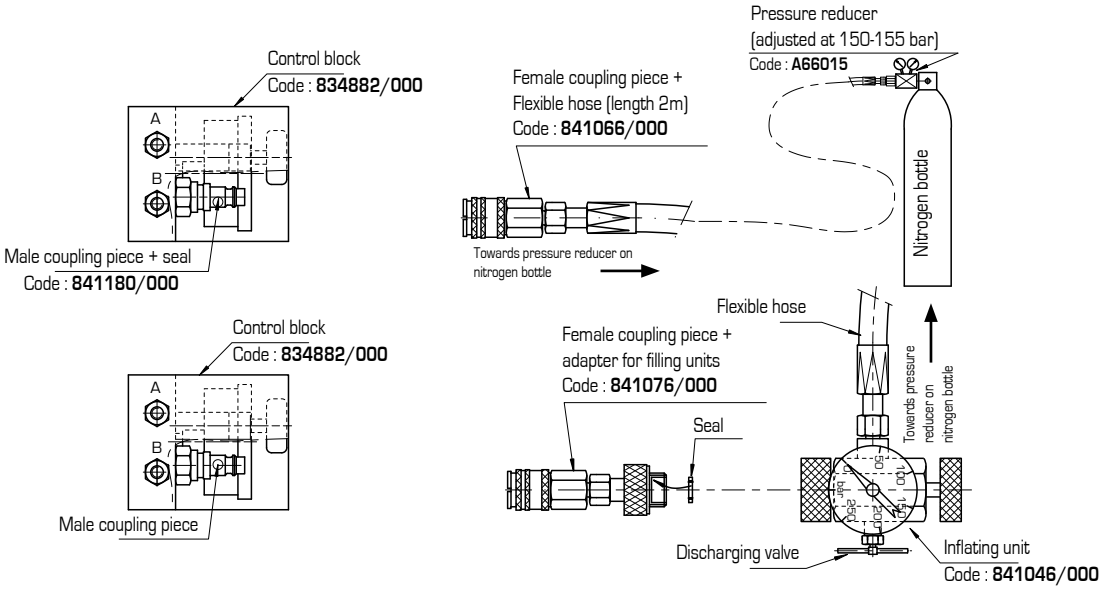
To inflate the piping system with standard G1/8" adapter, you can use standard inflating units and G1/8" adapter.



Control panel with CEJN adapter

You can use self-lock fast coupling adapter to connect it.

Notice : The fast coupling should be ordered with inflating units separately.
The pressure reducer should be ordered separately.



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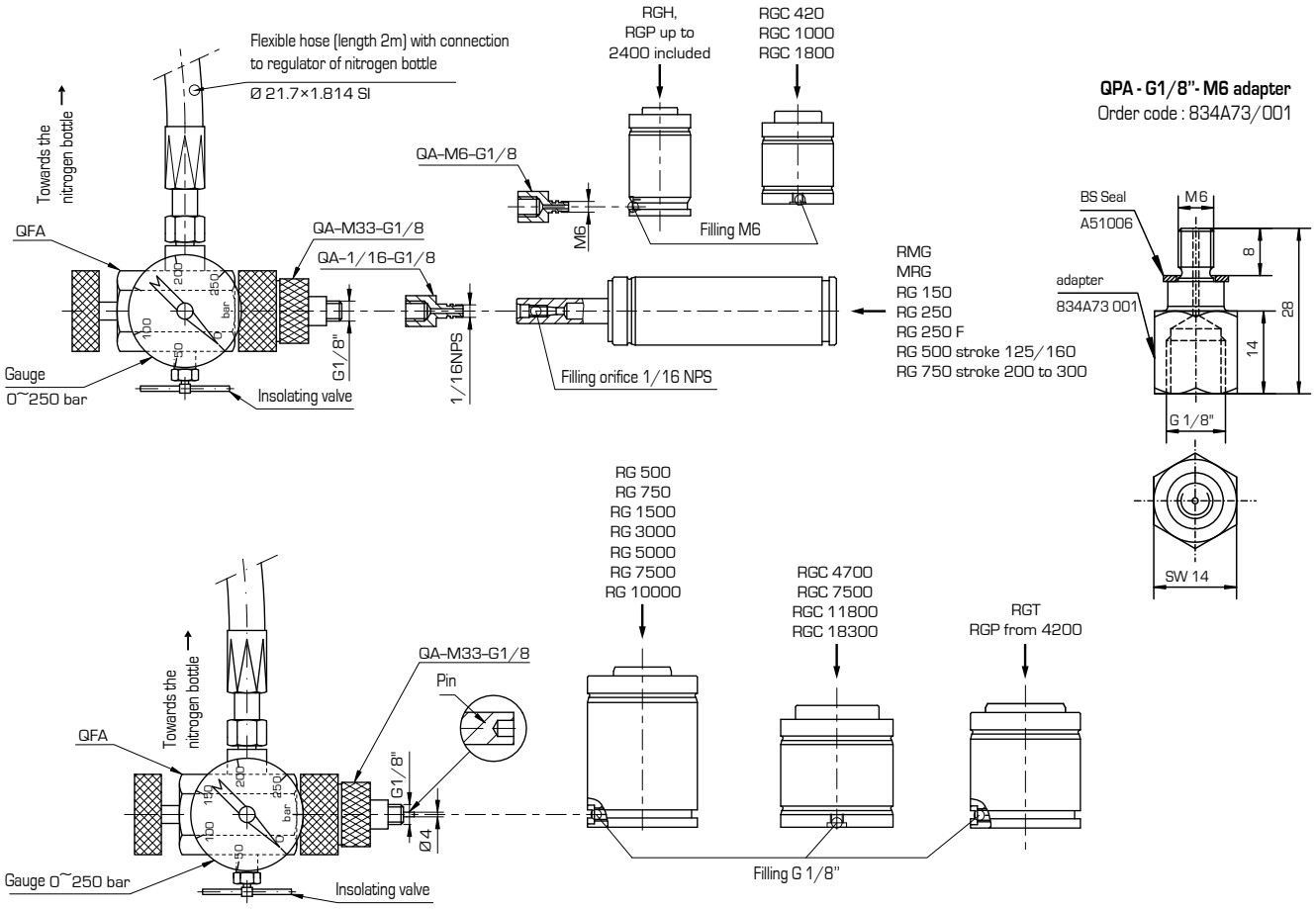
GAS SPRINGS
INFLATING & PRESSURISING

AJUST THE PRESSURE OF GAS SPRINGS

- The inflating device is designed to pressurize and depressurize gas springs
- Use of the device as a pressure tester is not recommended, as each test result leads to a loss of pressure of approximately 10 %.
- The pin ø4 mm is designed to depressurize a gas spring, but is not required for pressurizing.

Each pressurising kit (Code 841046/000) includes :

- 1 pressurizing assembly — Code : **A63295**
  With gauge 0-250 bar + flexible hose (2m) + valve spanner.
- 1 adapter MM M33x1,5 - G1/8" + 1 pin ø4 mm — Code : **831050/000**
- 1 adapter MF 1/16NPS - G1/8" — Code : **831052/000**
- 1 adapter MF M6 - G1/8" — Code : **831101/000**
- 1 adapter MF M6 - G1/8" — Code : **831113/000**



PROCEDURE

To reduce the pressure (P<150 bar) of a gas spring, please proced as followed :

- Unscrew the plug of the filling valve
- Depressurize the gas spring completely by depressing the valve with the special QUIRI tool, whilst keeping the piston rod of the gas spring fully extended.
- Refill the gas spring to the required pressure level (eg. 100 bar).
- Check the valve tightness with a drop of oil inside the pressuring orifice.
- If the valve is not tight, replace it with new one.
- **Do not forget to indicate the new inflating pressure on the gas spring body and identify if with a blue adhesive strip if the new pressure is lower than 150 bar.**

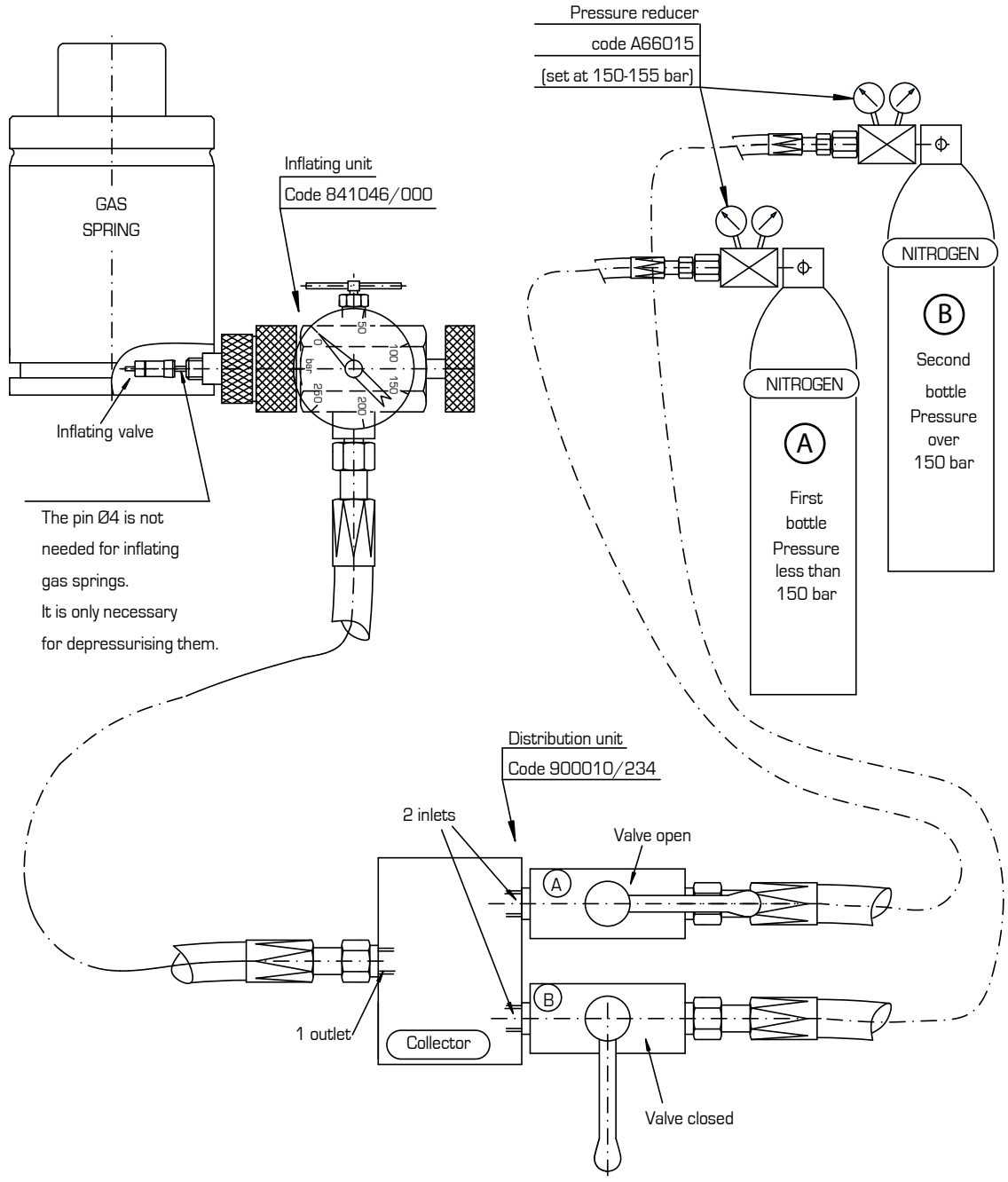
INFLATING GAS SPRINGS WITH 2 NITROGEN BOTTLES

THE ADVANTAGE OF THAT EQUIPMENT IS THE OPTIMAL USE OF NITROGEN BOTTLE CONTENTS

- At first, use bottle **A** only
- After several usages, the pressure in bottle **A** will be lower than initial pressure (15MPa). Then you can use bottle **B** to add the missing pressure. **Example** : bottle **A** contains 13.5 MPa, use bottle B to add 1.5 MPa. You can use bottle **A** until bottle **B** is lower than 15Mpa.
- Then you should replace bottle **A** by a new one, and bottle **B** becomes bottle **A**

Inflating advice :

- Open valve **A** and close valve **B**, then fill the gas spring with maximum pressure from the bottle **A**.
- Close valve **A** and open valve **B**, then fill the gas spring with about 155 bar.

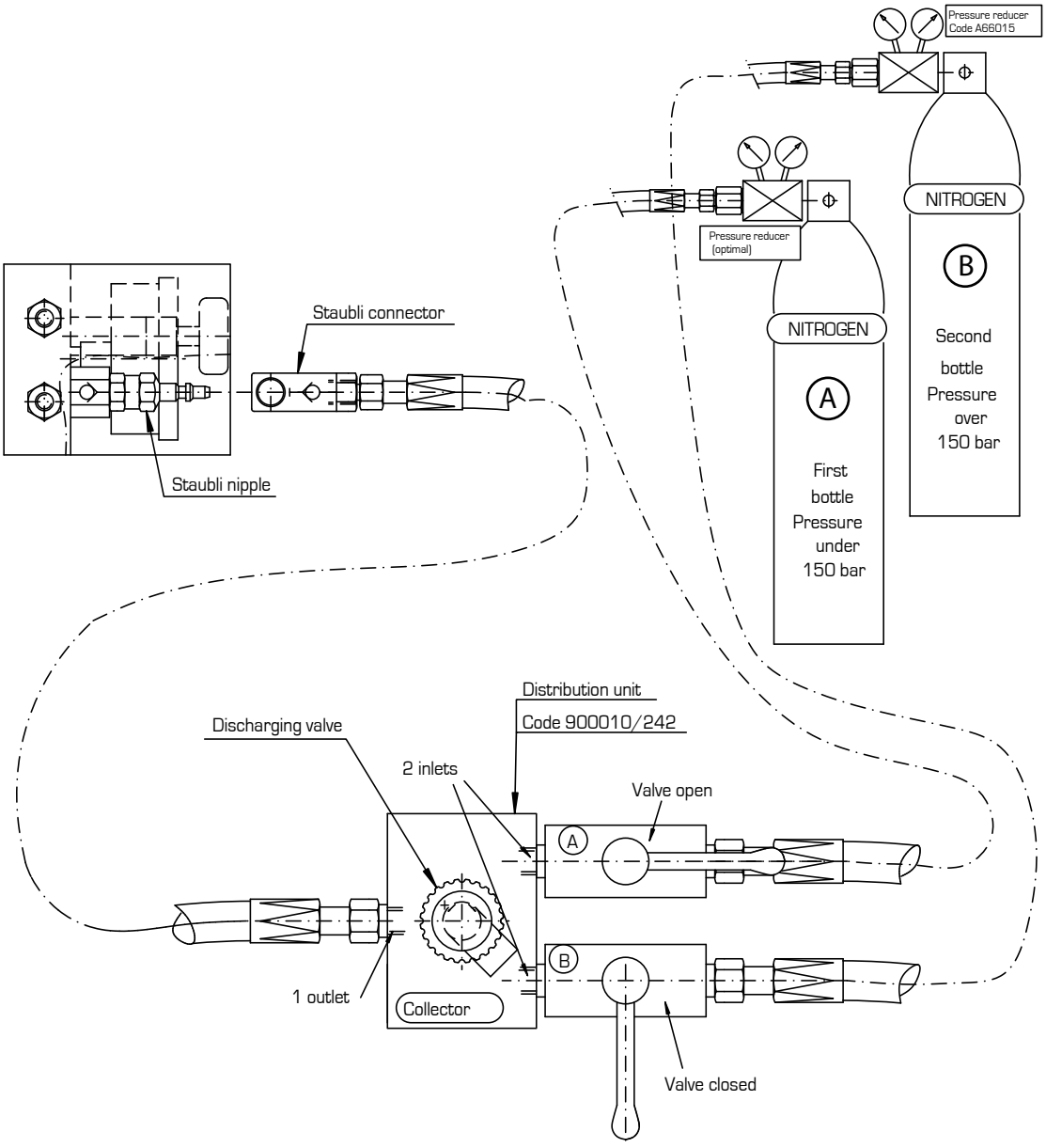


INFLATION OF CONTROL PANEL EQUIPED WITH STAUBLI CONNECTOR WITH 2 NITROGEN BOTTLES

THE ADVANTAGE OF THAT EQUIPMENT IS THE OPTIMAL USE OF NITROGEN BOTTLE CONTENTS

Inflating advice :

- First of all, setup the inflating pressure on the pressure reducer.
- Connect the STAUBLI connector to the control panel.
- Open valve **A** and close valve **B**, then fill the gas spring with maximum pressure from the first bottle.
- Close valve **A** and open valve **B**, then fill the gas spring with about 155 bar.
- Close valve **B** and the valves on the nitrogen bottle.
- Open discharging valve on the collector to remove pressure.
- Disconnect the STAUBLI connector by pushing the knob.
- **WARNING ! : NEVER REMOVE THE CONNECTOR WHILE UNDER PRESSURE.**



INFLATING UNITS

PRESSURE REDUCER - QPR - (A66015)

INFLATING UNIT with HOSE - QIV - 2m - (841046/000)
INFLATING UNIT with HOSE - QIV - 5m - (841208/000)

INFLATING HOSE - QFPH - 3m - (841190/000)
INFLATING HOSE - QFPH - 4m - (841091/000)
INFLATING HOSE - QFPH - 5m - (841200/000)

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INFLATING UNITS

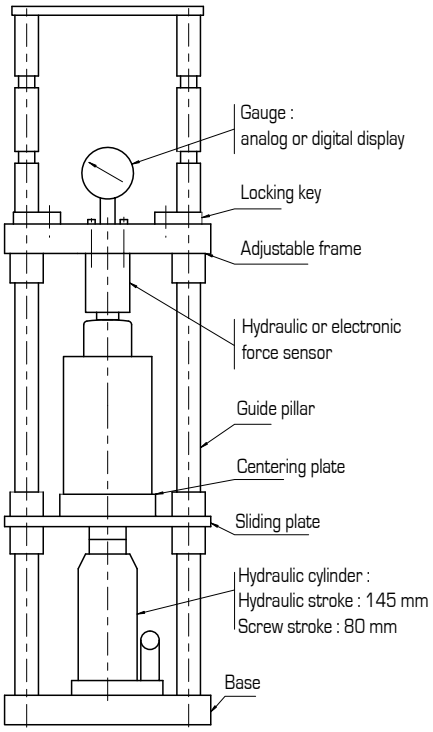
INFLATING UNIT with HOSE and PRESSURE REDUCER - QIFU - 2m - (841237/000)

PRESSURE REDUCER with HOSE - QPFF - 3m - (841238/000)
PRESSURE REDUCER with HOSE - QPFF - 5m - (841239/000)

FAST COUPLING CEJN - QFFC - (841181/000)

TEST BENCH
5 TONS & 8 TONS

- **QTB-A (8 tons) with MECHANICAL PRESSURE GAUGE - (852019/000)**
- **QTB-B (5 tons) - 220V-50Hz power supply - with DIGITAL GAUGE - (852020/000)**
- **QTB-B (5 tons) - 110V-60Hz power supply - with DIGITAL GAUGE - (852022/000)**



Control :
The test bench has been specially designed to check the nominal load of the range of gas springs from 1500N to 50 000N

Capacity :
- Maximum force :
  - Hydraulic sensor => 8t
  - Electronic sensor => 5t
- Maximum stroke : 225 mm

Dial gauge reading tolerance :
- Mechanical gauge tolerance : ± 10%
- Digital gauge tolerance : ± 0.1%

Overall dimension :
- Height 1000 mm
- Length 300 mm
- Width 200 mm

Weight :
Approximately 50 kg (without gas spring)

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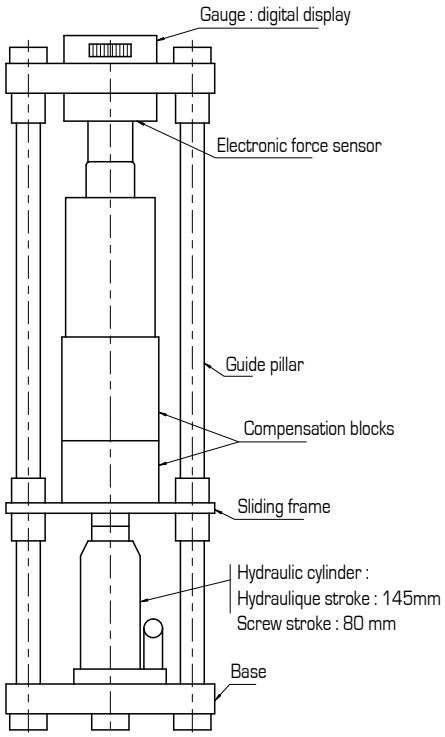
TEST BENCH
20 TONS

- **QTB-C (20 tons) - 220V-50Hz power supply - with DIGITAL GAUGE - (853027/100)**
- **QTB-C (20 tons) - 110V-60Hz power supply - with DIGITAL GAUGE - (853027/200)**



Control :
The test bench has been specially designed to check the nominal load of heavy load gas springs up to 20 Tons

Capacity :
- Maximum force : Electronic sensor => 20t
- Maximum stroke : 225 mm

Dial gauge reading tolerance :
up to ± 0.1%

Overall dimension :
- Height 1400 mm
- Length 390 mm
- Width 340 mm

Weight :
Approximately 220 kg (without gas spring)

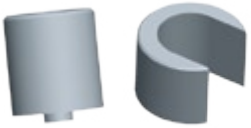
DIE LIFTING / SPLITTING EQUIPMENT

This equipment is designed to lift the upper part of large dies, using 4 hydraulic cylinders and one hydraulic pump. It allows **synchronous lifting and lowering operations**. You can also use each cylinder individually in order to split a die blocked on its guide pins

Advantages of this equipment :

- Synchronous lifting and lowering (regardless of load)
- Easy to use / very quick installation
- All equipment contained on one carriage
- Différent sizes of cylinders available

Features :

Remote controller	Cylinder	Mechanical chocks	Transport carriage
			
Cylinder control for individual or simultaneous motion	Diameter : 108 mm Collapsed height : 105 mm Stroke : 45 mm Other strokes on demand Magnetic basis on option	To increase the total lifting stroke.	Dimensions (mm) : 1380 x 1100 x 670 Drawer for flexible hoses Electrical panel and hydraulic unit inside the carriage.

QUIRI 67129 MOLSHEIM CEDEX (France) Tel. : +33 (0)3 88 04 84 00 Fax : +33 (0)3 88 04 84 01 Email : quiri.hydro@quiri.com

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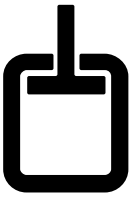
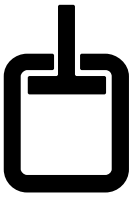
NOTES



NOTES



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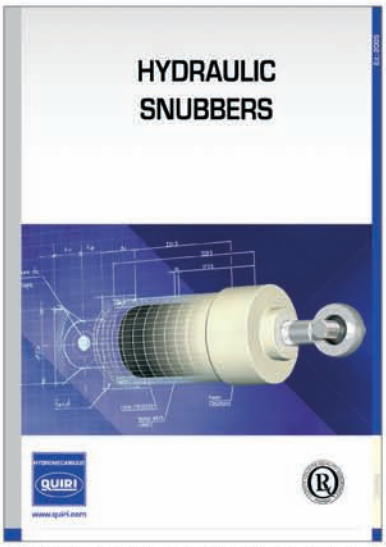
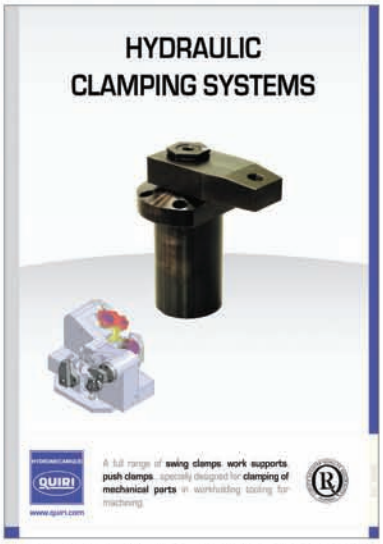
OTHER PRODUCTS



HYDRAULIC SNUBBERS



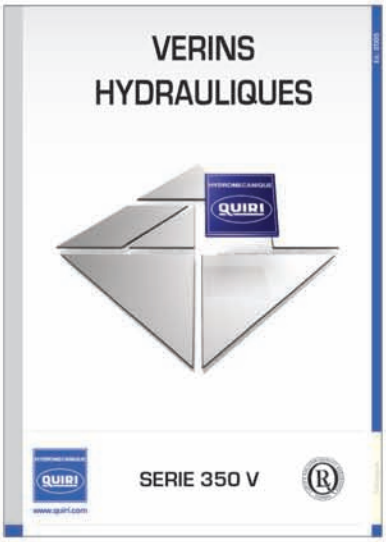
CLAMPING CYLINDERS

HYDRAULIC CAM UNITS

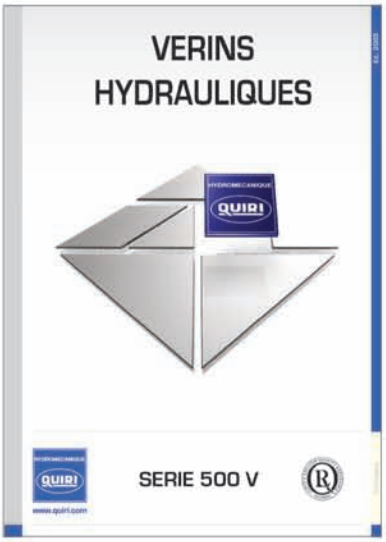
ACTUATORS FOR MOULDS

LIFTING TOOLS & EQUIPMENTS

QUIRI HYDROSYSTEMS



350V SERIES ACTUATORS



500V SERIES ACTUATORS

Catalogs and Application files are available on demand.

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