

The Pneumostatic Air Pads HRA series are proposed to be naturally used in dynamic systems characterized by heavy masses and big inertia forces, and where should be necessary and sufficient to minimize the friction forces le forze di attrito and consequently the applied forces to move the systems. Moreover they are suitable for the use in precise application.

The use of the HRA series pads is suggested in case of the following conditions:

- high static & dynamics forces
- high temperature
- high shape and geometrical error in the sliding guides
- presence of solid, liquid o gas pollution (dust and chips, lubricant oils and grease, process gas).

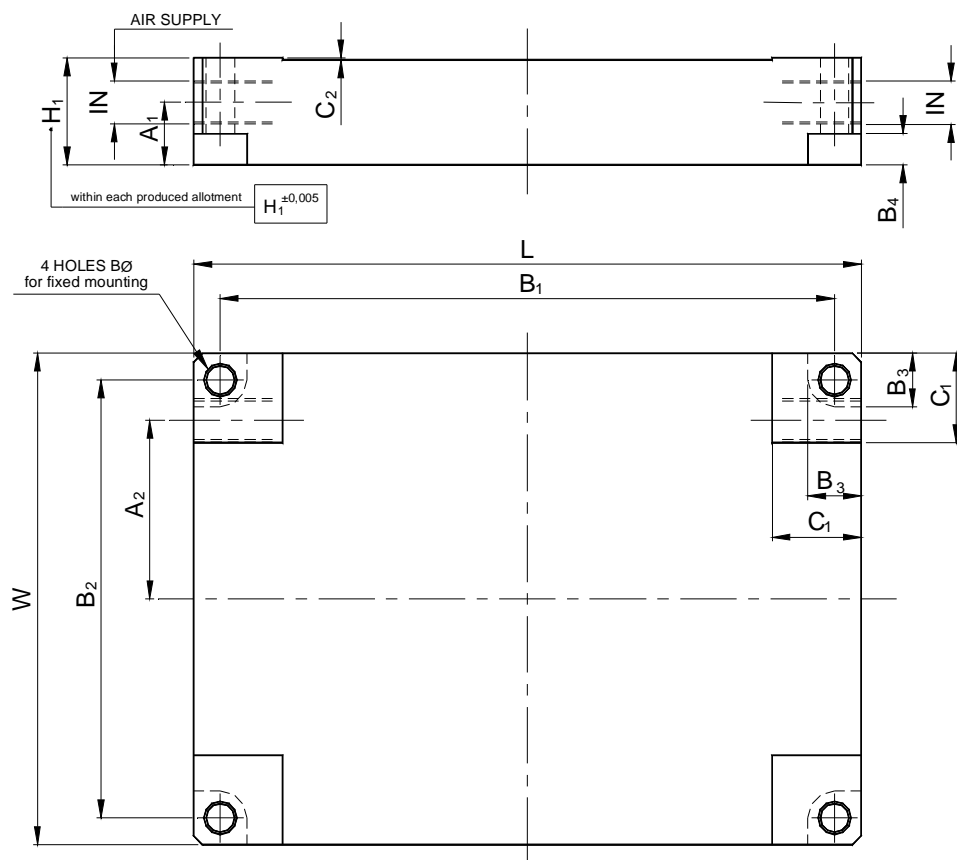
Material: hard anodized aluminium.

Mounting solutions:

- FIXED
- ADJUSTABLE PIVOTING

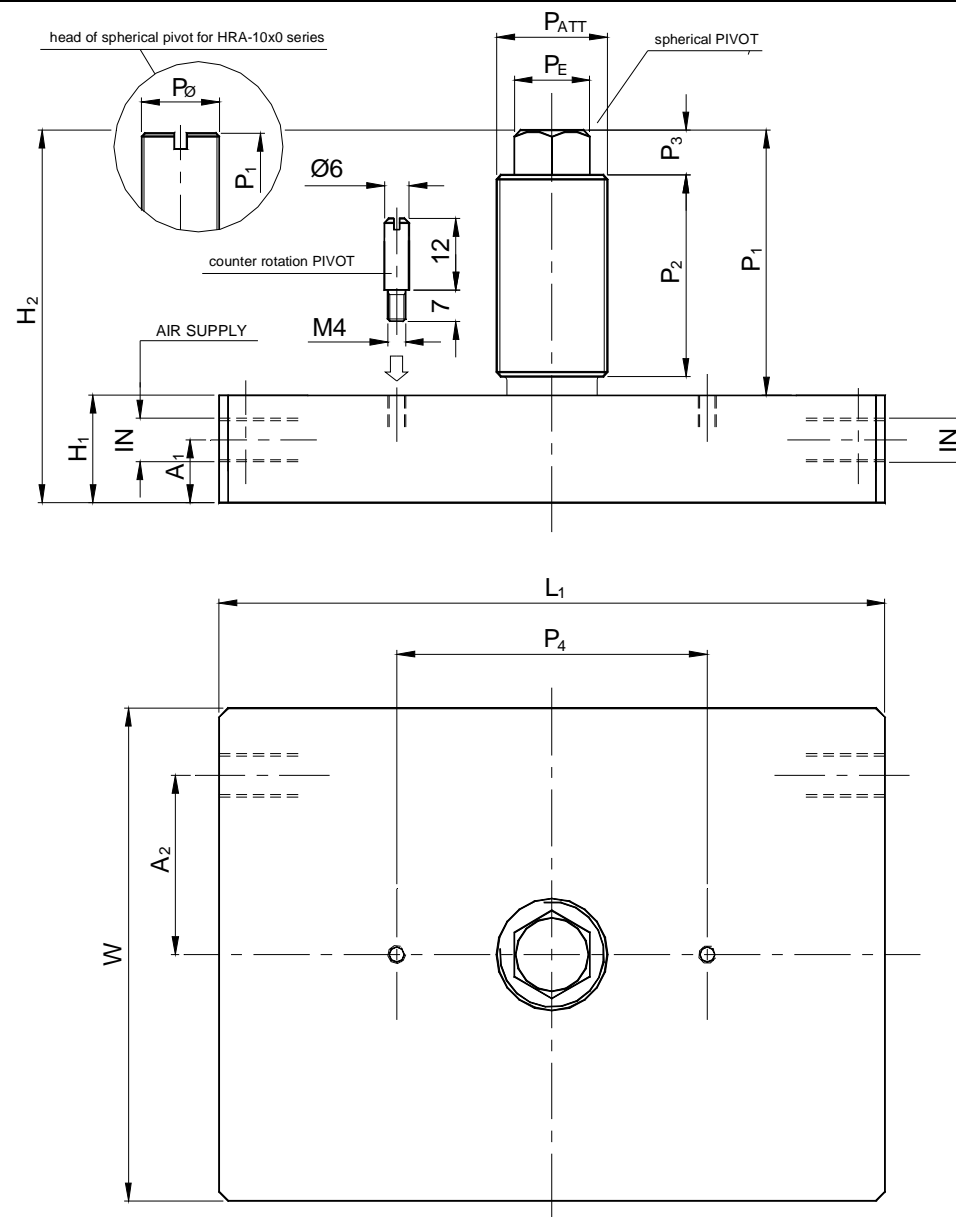


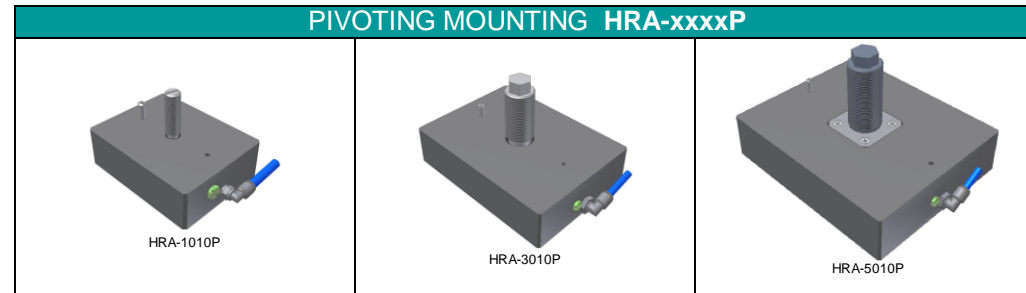
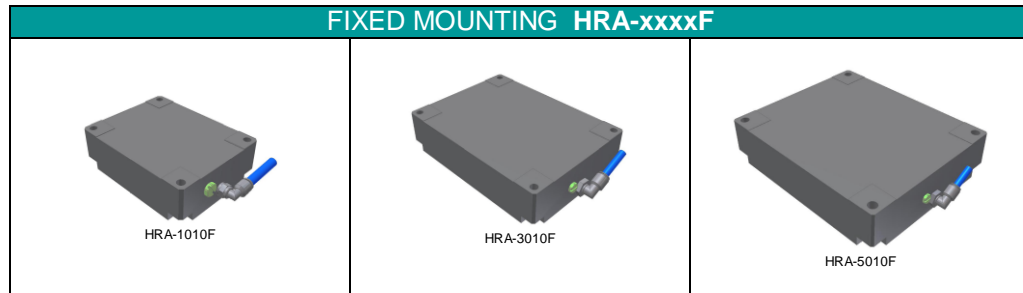
OVERALL DIMENSIONS FIXED MOUNTING HRA-xxxxF



PNEUMOSTATIC PADS HRA series
DATA SHEET

OVERALL DIMENSIONS PIVOTING MOUNTING HRA-xxxxP





TECHNICAL SPECIFICATIONS

MODEL	code
HRA-1010x	F0101-00H31x
HRA-1020x	F0101-00H32x
HRA-2010x	F0101-00H33x
HRA-2020x	F0101-00H34x
HRA-3010x	F0101-00H35x
HRA-3020x	F0101-00H36x
HRA-4010x	F0101-00H37x
HRA-4020x	F0101-00H38x
HRA-4030x	F0101-00H39x
HRA-5010x	F0101-00H40x
HRA-5020x	F0101-00H41x
HRA-5030x	F0101-00H42x
HRA-5040x	F0101-00H43x

PNEUMOSTATIC PERFORMANCES at 5 bar

h_{RM} [μm]	L_{RM} [daN]	R_{max} [daN/μm]	Q_{RM} [Nl/min]	h_{min} [μm]	L_{max} [daN]	R_{hm} [daN/μm]	Q_{hm} [Nl/min]
18	158	6,3	12	5	252	4	5
18	210	8,4	14	5	336	5	6
20	270	10,8	18	5	432	6,5	7
20	338	13,5	20	5	540	8	8
22	413	16,5	24	6	660	10	10
22	495	19,8	27	6	792	12	11
25	585	23,4	32	8	936	14	13
25	683	27,3	35	8	1.092	16,5	14
25	780	31,2	39	8	1.248	18	15
28	675	27,0	39	10	1.080	16	15
28	788	31,5	42	10	1.260	19	17
28	900	36,0	46	10	1.440	21,5	18
28	1.013	40,5	49	10	1.620	24	20

BASIC DIMENSIONS

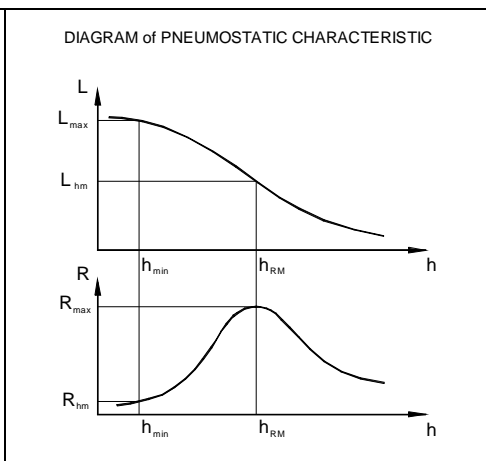
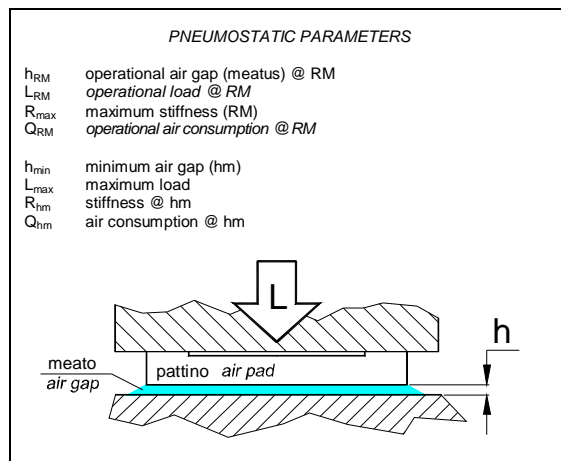
W [mm]	L [mm]	H ₁ [mm]	mass [kg]	IN	A ₁ [mm]
70	90	28,5	0,45	M5x0,8	9
70	120	28,5	0,63		
90	120	33	0,9	1/8 GAS	9
90	150	33	1,13		
110	150	36	1,52	1/8 GAS	9
110	180	36	1,83		
130	180	36	2,17	1/8 GAS	9
130	210	36	2,59		
130	240	36	2,97		
150	180	42	2,98	1/8 GAS	12
150	210	42	3,51		
150	240	42	4,02		
150	270	42	4,52		

FIXED MOUNTING VERSION
HRA-xxxxF code F0101-00Hxx0

B _Ø [mm]	B ₁ [mm]	B ₂ [mm]	B ₃ [mm]	B ₄ [mm]	C ₁ [mm]	C ₂ [mm]
5,3	80 110	60	10	6	15	0,5
6,4	108 138	78	12	7	20	0,5
6,4	138 168	98	12	7	20	0,5
6,4	168 198 228	118	12	7	20	0,5
8,5	164 194 224 254	134	16	9	25	0,5

PIVOTING MOUNTING VERSION
HRA-xxxxP code F0101-00Hxx2

P-SET	H ₂ [mm]	P _{ATT} [mm]	P _E [mm]	P ₁ [mm]	P ₂ [mm]	P ₃ [mm]	P ₄ [mm]
[A]	60	M10x0,75	---	32	30	---	60 80
[B]	78	M16x1	10	45	35	7	80 100
[C]	94	M25x1,5	17	58,5	45	10	100
[C]	94	M25x1,5	17	58,5	45	10	150
[D]	114	M30x1,5	20	72,7	60	10	150 180



P-SET	plate	ISO M4x screw	O-Ring	spherical pivot	counter rotation pivot
[A]	----	----	OR 106	SL101-200010	SL111-040612
[B]	----	----	OR 3050	SL101-200030	SL111-040612
[C]	----	----	OR 4081	SL101-200050	SL111-040612
[D]	SL101-000040	4 pcs	OR 4100	SL101-200060	SL111-040612

The values of the functional pneumostatic characteristics refer to load test done on restino plane in steel AISI 420 with the following geometric characteristics:

- Grinded and lapped to final roughness $R_a \approx 0,4 \mu\text{m}$;
- Flatness $F \leq 0,3 \mu\text{m}$.

The pneumostatic performances can be influenced depending on the use conditions.

TOLERANCES
 The tolerance $\pm\Delta L$ to be applied to the loads L reported in the tables is $\pm 10\%$.
 The pneumostatic stiffness values R have to be intended as minimum values
 The tolerance $\pm\Delta Q$ applied to the air consumption values is $\pm 10\%$.

MAGER reserves the right to change the characteristics of the products in any time without previous advice