

The HRA series (High Resistance Aluminium) is ideally applied to heavy weight or inertia of motion systems, where it is necessary and sufficient to minimize the friction forces and therefore the forces applied for motion operations.

Their use is therefore recommended in the following conditions:

- high static and dynamic forces
- high temperatures
- elevated errors on sliding guides
- presence of solid, liquid or gaseous pollutants (dusts and scraps, oils and greases, process and protection gases)

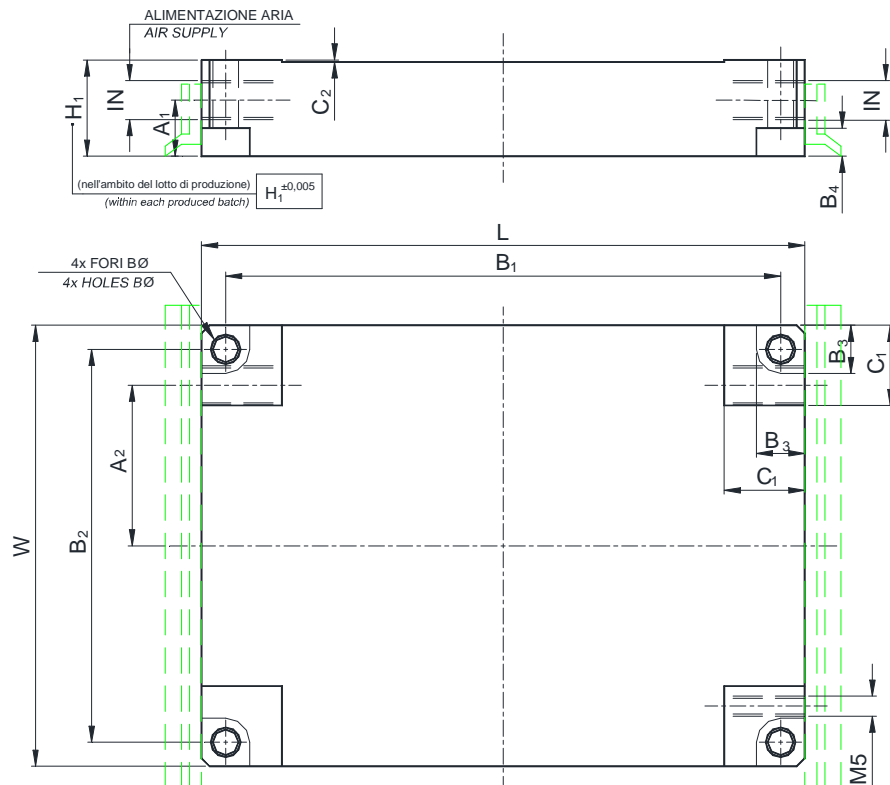
FIXED MOUNTING
HRA-xxxxF



ADJUSTABLE
PIVOTING MOUNTING
HRA-xxxxP



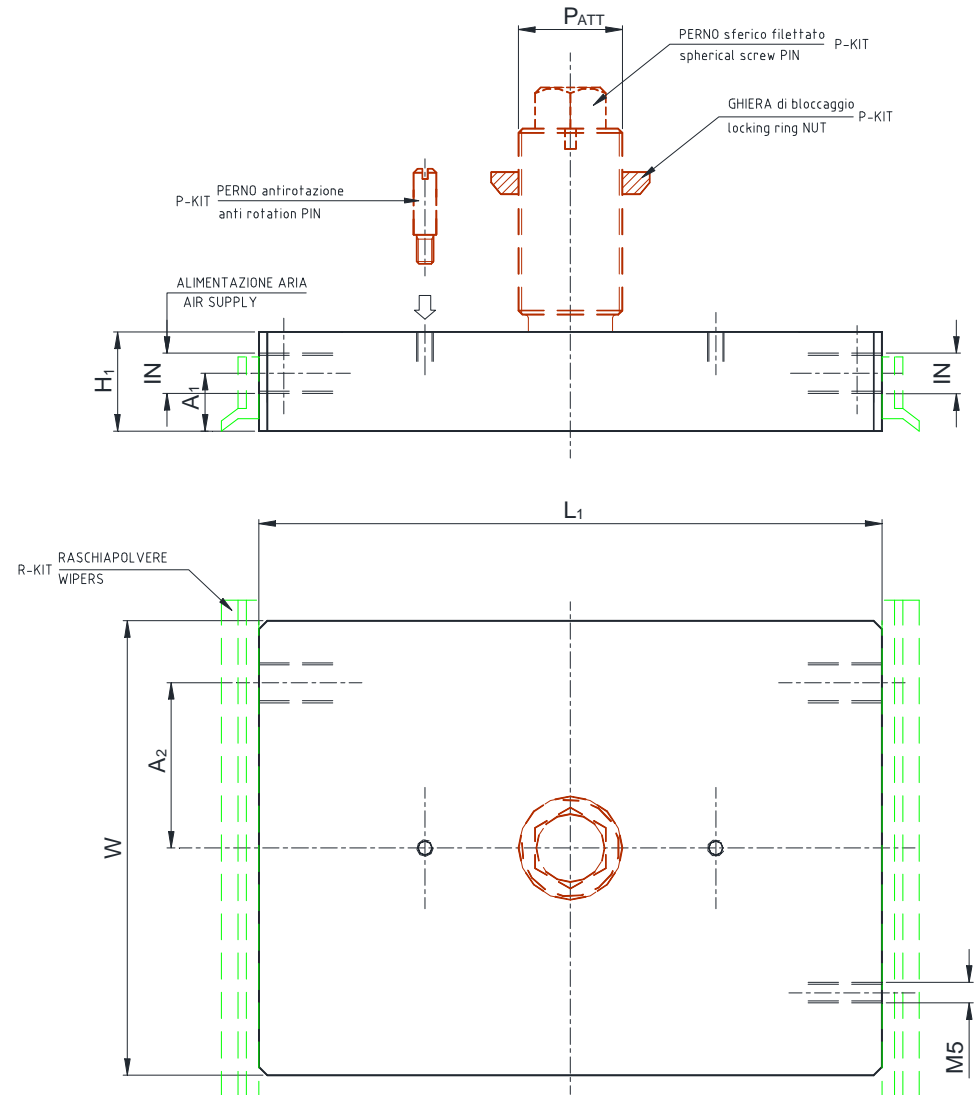
OUTLINE DIMENSIONS HRA-xxxx F FIXED MOUNTING



**FLAT AIR BEARINGS
DATA SHEET**

HRA series

OUTLINE DIMENSIONS HRA-xxxx P PIVOTING MOUNTING



TECHNICAL FEATURES

CODE	DESCRIPTION
WF10100H31#00	AIR PAD HRA-1010X 70x90x28.5
WF10100H32#00	AIR PAD HRA-1020X 70x120x28.5
WF10100H33#00	AIR PAD HRA-2010X 90x120x33
WF10100H34#00	AIR PAD HRA-2020X 90x150x33
WF10300094200	AIR PAD HRA-2030P 90x180x30
WF10100H35#00	AIR PAD HRA-3010X 110x150x36
WF10100H36#00	AIR PAD HRA-3020X 110x180x36
WF10100H37#00	AIR PAD HRA-4010X 130x180x36
WF10100H38#00	AIR PAD HRA-4020X 130x210x36
WF10100H39#00	AIR PAD HRA-4030X 130x240x36
WF10100H40#00	AIR PAD HRA-5010X 150x180x42
WF10100H41#00	AIR PAD HRA-5020X 150x210x42
WF10100H42#00	AIR PAD HRA-5030X 150x240x42
WF10100H43#00	AIR PAD HRA-5040X 150x270x42

AEROSTATIC PERFORMANCES at 5 bar air consumption

Meatus	Lift	Stiffness	Air Cons.	Meatus	Lift	Stiffness	Air Cons.
h_{RM}	L_{RM}	R_{max}	Q_{RM}	h_{min}	L_{max}	R_{hm}	Q_{hm}
[μ m]	[daN]	[daN/ μ m]	[Nl/min]	[μ m]	[daN]	[daN/ μ m]	[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
20	380	15,5	22	5	620	9	9
22	413	16,5	24	6	660	10	10
22	495	19,8	27	6	792	12	11
24	585	23,4	32	8	936	14	13
24	683	27,3	35	8	1.092	16,5	14
24	780	31,2	39	8	1.248	18	15
26	675	27,0	39	10	1.080	16	15
26	788	31,5	42	10	1.260	19	17
26	900	36,0	46	10	1.440	21,5	18
26	1.013	40,5	49	10	1.620	24	20

OUTLINE DIMENSIONS

W	L	H ₁	mass	IN	A ₁	R-KIT	B ₀	B ₁	B ₂	B ₃	B ₄	C ₁	C ₂
[mm]	[mm]	[mm]	[kg]		[mm]		[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]
70	90	28,5	0,45	M5	9	[A]	5,3	80	60	10	6	15	0,5
70	120	28,5	0,60					110					
90	120	33	0,90	G 1/8	9	[B]	6,4	108	78	12	7	20	0,5
90	150	33	1,13					138					
90	180	30	1,13	G 1/8	9								
110	150	36	1,53	G 1/8	9	[C]	6,4	138	98	12	7	20	0,5
110	180	36	1,84					168					
130	180	36	2,19					168					
130	210	36	2,71	G 1/8	9	[D]	6,4	198	118	12	7	20	0,5
130	240	36	2,92					228					
150	180	42	2,94					164					
150	210	42	3,44	G 1/8	12	[E]	8,5	194	134	16	9	25	0,5
150	240	42	3,95					224					
150	270	42	4,45					254					

FIXED MOUNTING

★ = 0 X = F

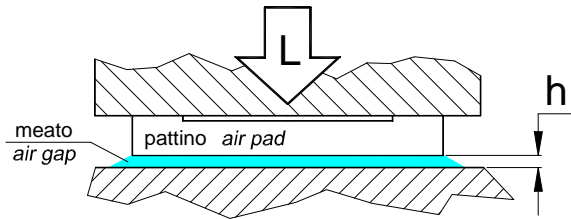
PVOTING MOUNTING

★ = 2 X = P

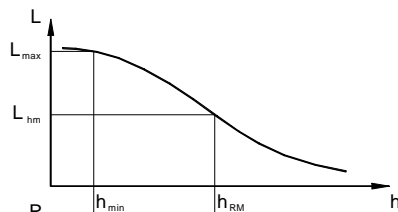
standard P-KIT	PATT
	[mm]
[B2]	M10x0,75
[C1]	M16x1,0
[D2]	M25x1,5
[D1]	M25x1,5
[D2]	M25x1,5
[E1]	M30x1,5

AEROSTATIC PARAMETERS

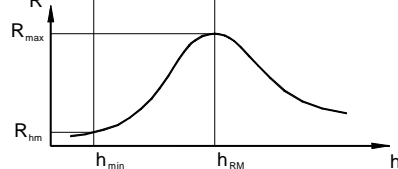
h_{RM} meatus @ RM
 L_{RM} lift @ RM
 R_{max} max stiffness (RM)
 Q_{RM} air consumption @ RM
 h_{min} min meatus (h_{min})
 L_{max} max lift @ h_{min}
 R_{hm} stiffness @ h_{min}
 Q_{hm} air consumption @ h_{min}



AEROSTATIC LIFT CURVE DIAGRAM



AEROSTATIC STIFFNESS CURVE DIAGRAM



It is recommended to use the HRA-xxxxP series in combination with a spherical screw pin, a locking ring nut and an anti-rotation pin (P-KIT). Here below the list of standard P-KIT which can be supplied on demand. Screw pins with different features and custom made screw pins are available on request as well.

standard P-KIT CODE DESCRIPTION	Screw pin CODE DESCRIPTION	Ring nut CODE DESCRIPTION	Anti-rotation pin CODE DESCRIPTION
WL10200010000 P-KIT [B2]	WL10124011200 PRN-R05.0-OR-L034-M12x1.00L19-E10-----A-	C0203-300020 RING NUT M 12x1.00 DIN 981 KM001	WL11130441000 ANTIROTATION PIN M4 D4 L10
WL10200020000 P-KIT [C1]	WL10126004000 PRN-R08.0-OR-L054-M16x1.00L35-E10-----A-	WL20602007000 RING NUT M 16x1	WL11130441000 ANTIROTATION PIN M4 D4 L10
WL10200030000 P-KIT [D1]	WL10128002000 PRN-R12.5-OR-L071-M25x1.50L45-E17-----A-	C0203-300055 RING NUT M 25x1,5 DIN 981 KM005	WL11130441000 ANTIROTATION PIN M4 D4 L10
WL10200040000 P-KIT [D2]	WL10128002000 PRN-R12.5-OR-L071-M25x1.50L45-E17-----A-	C0203-300055 RING NUT M 25x1,5 DIN 981 KM005	WL11167061600 ANTIROTATION PIN M6 D6 L12
WL10200050000 P-KIT [E1]	WL10129001000 PRN-R16.0-OR-L088-M30x1.50L60-E20-----A-	C0203-300060 RING NUT M 30x1,5 DIN 981 KM006	WL11167061600 ANTIROTATION PIN M6 D6 L12

R-KIT CODE DESCRIPTION	WL10140010000 R-KIT [A]	WL10140020000 R-KIT [B]	WL10140030000 R-KIT [C]	WL10140040000 R-KIT [D]	WL10140050000 R-KIT [E]
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MAGER reserves the right to change his products at its sole discretion at any time and without further notice.