

Air motors



Reversible air motors

- **Power:**
from 90 to 645 watt
- **Idle speed:**
from 44
to 23.500 r.p.m.

Reversible air m

A complete range for every need

FIAM's reversible air motors, with right-hand and left-hand rotation, are **sturdy, reliable, and extremely versatile**.

This wide range, including 90, 140, 180, 240, 375 and 645 watt models, represents the ideal solution **for hundreds of applications**.

These motors can be used on mixers, conveyor belts, machine tool, feed devices and on machine for: bottling, buttons, glass, knitting, coating, binding, plastics, packing, paint-spraying, assembly, drilling, threading, grinding, stud-driving, etc.

Often some applications are so particular that they **require specific design and construction**.

FIAM, with its vast experience accumulated by the company in this field, **is able to manufacture "special" motors developed to satisfy the customer's specific needs**, especially when the motor has to be integrated with the precise characteristics of a certain type of equipment or in a particular type of tool.

The **models**, for example, **can be equipped** with:

- sliding square drive output shaft;
- fixed square drive output shaft;
- tapered output shaft;
- morse taper output shaft;
- shafts with diameters other than those mentioned in the catalogue;
- output shafts and gears;
- models constructed in plastic or stainless steel;
- models with flanged sleeves.



Starting system:

direct
(with remote control)



Rotation:

to the right and to the left
(the direction in which the output shaft turns is considered to be in function of the delivery air input)



Idle speed:


from 44 to 23.500 r.p.m.



FIAM air motors are designed for use with lubricated compressed air.

OUT OF PRODUCTION

TYPE		POWER	STATIC TORQUE		TORQUE AT THE MAX. POWER	SPEED AT THE MAX. POWER	SPEED	REVERSIBILITY	WEIGHT	DIMENSIONS mm		COMPRESSED AIR CONSUMPTION	NOISE LEVEL
Model	Code	Watt ①	Nm ②	Nm ②	r.p.m.	r.p.m.	Type	Kg	L	l/s	dB(A)		
→ MX 440 R	182211410	90	0,74	0,37	2200	4400	↻	0,24	79,5	4	68÷70		
→ MX 140 R	182212110	90	2,2	1,1	700	1400	↻	0,31	103,5	4	68÷70		
→ MX 090 R	182212910	90	3,44	1,72	450	900	↻	0,31	103,5	4	68÷70		
→ ML 2000R/2 EZ	183210201	140	0,24	0,12	11750	23500	↻	0,53	86	5	73÷75		
→ ML 500R/2 EZ	183211501	140	1,02	0,15	2700	5400	↻	0,56	86	5	73÷75		
→ ML 235R/2 EZ	183211201	140	1,84	0,92	1500	3000	↻	0,56	86	5	73÷75		
→ ML 100R/2 EZ	183212101	140	4,3	2,15	625	1250	↻	0,71	120,5	5	73÷75		
→ ML 55R/2 EZ	183212501	140	7,9	3,95	345	690	↻	0,71	120,5	5	73÷75		
→ ML 32R/2 EZ	183212301	140	14,2	7,1	195	390	↻	0,71	120,5	5	73÷75		
→ ML 22R/2 EZ	183213201	140	18,2	9,1	145	290	↻	0,86	155	5	73÷75		
→ ML 13R/2 EZ	183213101	140	20 ③	16,5	80	160	↻	0,86	155	5	73÷75		
→ ML 8R/2 EZ	183213801	140	20 ③	20 ③	45	90	↻	0,86	155	5	73÷75		
→ ML 5R/2 EZ	183213501	140	20 ③	20 ③	25	50	↻	0,86	155	5	73÷75		
→ MK 2000R/2 EZ	184210201	180	0,29	0,145	11750	23500	↻	0,58	96	6	73÷75		
→ MK 500R/2 EZ	184211501	180	1,26	0,63	2700	5400	↻	0,61	96	6	73÷75		
→ MK 235R/2 EZ	184211201	180	2,26	1,13	1500	3000	↻	0,61	96	6	73÷75		
→ MK 100R/2 EZ	184212101	180	5,4	2,7	625	1250	↻	0,76	130,5	6	73÷75		
→ MK 55R/2 EZ	184212501	180	9,7	4,85	345	690	↻	0,76	130,5	6	73÷75		
→ MK 32R/2 EZ	184212301	180	17,2	8,6	195	390	↻	0,76	130,5	6	73÷75		
→ MM 1400R/2 E	185210101	240	0,58	0,29	7750	15500	↻	0,90	99,5	7	75÷78		
→ MM 400R/2 E	185211401	240	1,92	0,96	2300	4600	↻	0,94	99,5	7	75÷78		
→ MM 240R/2 E	185211201	240	3,5	1,75	1275	2550	↻	0,94	99,5	7	75÷78		
→ MM 170R/2 E	185211101	240	4,94	2,47	900	1800	↻	0,94	99,5	7	75÷78		
→ MM 130R/2 E	185212101	240	6,54	3,27	675	1350	↻	1,22	133,5	7	75÷78		
→ MM 80R/2 E	185212801	240	11,8	5,9	375	750	↻	1,22	133,5	7	75÷78		
→ MM 45R/2 E	185212401	240	21	10,5	210	420	↻	1,22	133,5	7	75÷78		
→ MM 32R/2 E	185212301	240	30,4	15,2	145	290	↻	1,22	133,5	7	75÷78		
→ MM 25R/2 E	185212201	240	41,8	20,9	105	210	↻	1,22	133,5	7	75÷78		
→ MM 13R/2 E	185213101	240	45 ③	36,3	60	120	↻	1,50	167,5	7	75÷78		
→ MM 9R/2 E	185213901	240	45 ③	45 ③	32	64	↻	1,50	167,5	7	75÷78		
→ MM 5R/2 E	185213501	240	45 ③	45 ③	22	44	↻	1,50	167,5	7	75÷78		
→ MN 1500R	186210112	375	0,9	0,5	7500	15000	↻	1,45	149	10	82÷84		
→ MN 450R	186211412	375	3,1	1,6	2250	4500	↻	1,45	149	10	82÷84		
→ MN 250R	186211212	375	5,7	2,8	1250	2500	↻	1,45	149	10	82÷84		
→ MN 170R	186211112	375	7,5	3,8	850	1700	↻	1,45	149	10	82÷84		
→ MN 130R	186212112	375	10	5	650	1300	↻	1,85	183	10	82÷84		
→ MN 80R	186212812	375	17	8,5	400	800	↻	1,85	183	10	82÷84		
→ MN 40R	186212412	375	32	16	200	400	↻	1,85	183	10	82÷84		
→ MN 28R	186212313	375	42	21	140	280	↻	1,85	183	10	82÷84		
→ MN 20R	186212212	375	45 ③	28	100	200	↻	1,85	183	10	82÷84		
→ MO 1200R	187210102	645	2,5	1,3	6000	12000	↻	3,3	177,5	18	85÷88		
→ MO 360R	187211302	645	8	4,2	1800	3600	↻	3,4	187	18	85÷88		
→ MO 220R	187211202	645	15	7,7	1100	2200	↻	3,4	187	18	85÷88		
→ MO 110R	187212102	645	28	14,3	550	1100	↻	4,1	222	18	85÷88		
→ MO 70R	187212702	645	49	25	350	700	↻	4,1	222	18	85÷88		
→ MO 32R	187213302	645	90 ③	48	160	320	↻	4,8	257	18	85÷88		
→ MO 20R	187213202	645	90 ③	77	100	200	↻	4,8	257	18	85÷88		

 REVERSIBILITY:
right and left

- The figures shown are measured at a pressure of 6,3 bar (ISO 2787), the recommended operating pressure.
- Working air pressure: max 7 bar.
- Noise level has been measured in accordance with ISO 15744.
- The code number must be used when ordering.

- ① Conversion factor: 1 Watt ≅ 0,00136 HP.
- ② Conversion factor: 1 Nm ≅ 0,102 Kgm.
- ③ The torque indicated is the maximum at which the motor can be used in order to guaranty the life endurance of the internal gears.

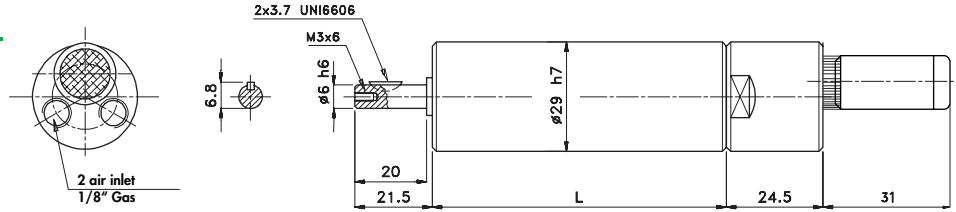
The above figures should be used as a guide only and could be changed without notice.
For all further details, please apply to the **Fiam Technical Assistance Service**.

Other technical features

Power (watt)	Air inlet	Recommended hose bore	Output shaft
90	1/8" gas	∅ 5 mm	∅ 6 mm with key 2x3,7 (UNI 6606)
140, 180, 240	1/4" gas	∅ 6 mm	∅ 13 mm with key 3x5 (UNI 6606)
375	1/4" gas	∅ 8 mm	∅ 14 mm with key 5x5x12 (UNI 6604)
645	3/8" gas	∅ 13 mm	∅ 24 mm with key 8x7x20 (UNI 6604)

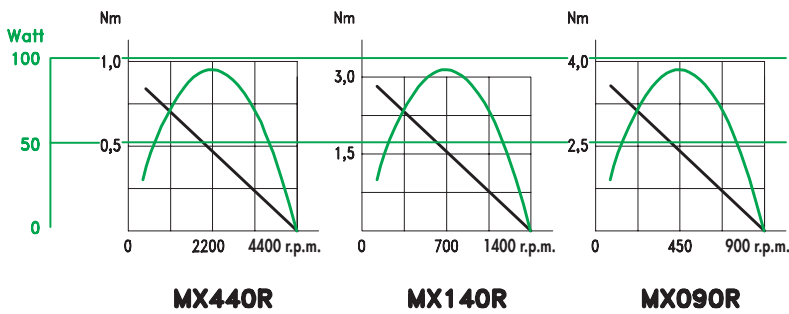
MODELS MX...R

Dimensions



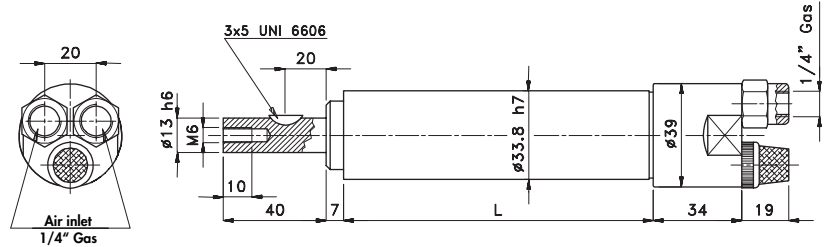
Performance diagrams

The diagrams show the theoretical curves for torque and power in function of the number of revolutions: ——— = power ——— = torque



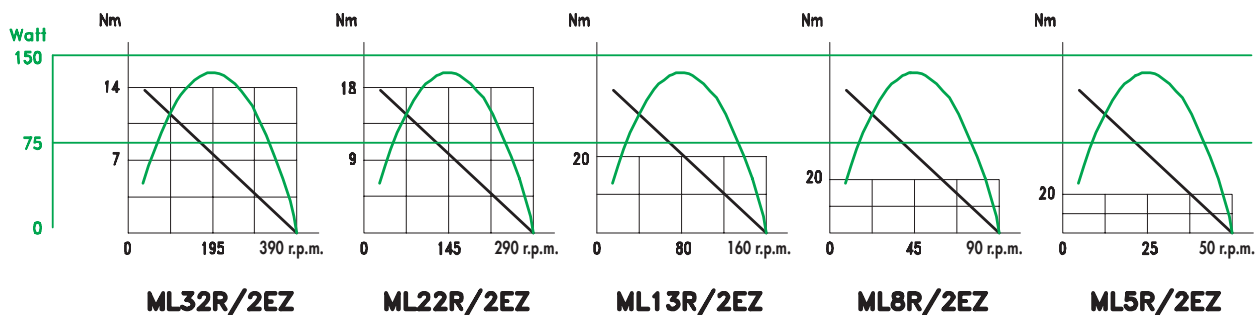
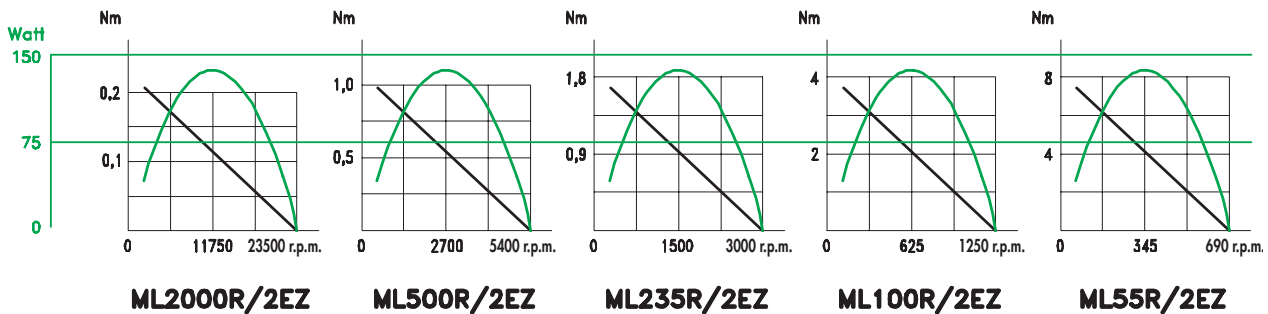
MODELS ML...R/2EZ

Dimensions



Performance diagrams

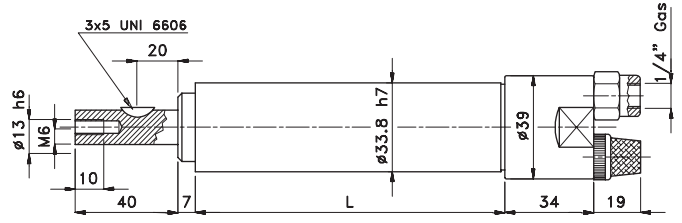
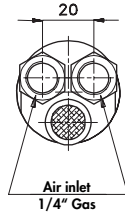
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Other technical features

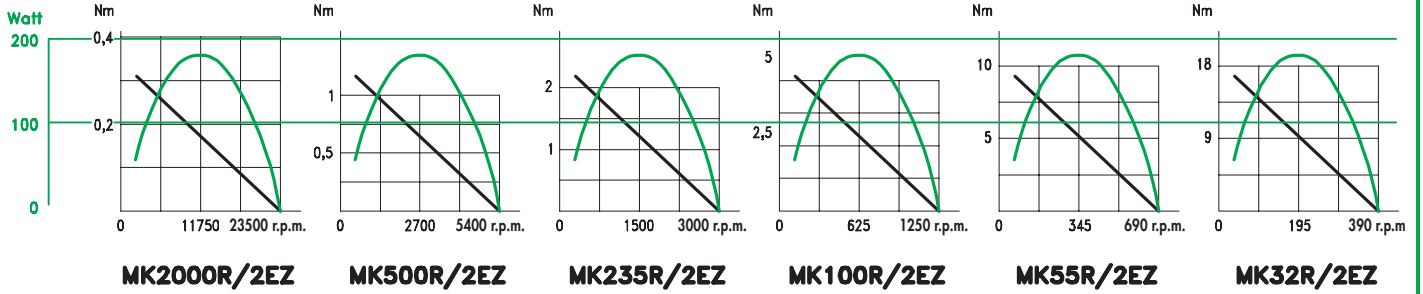
MODELS MK...R/2EZ

Dimensions



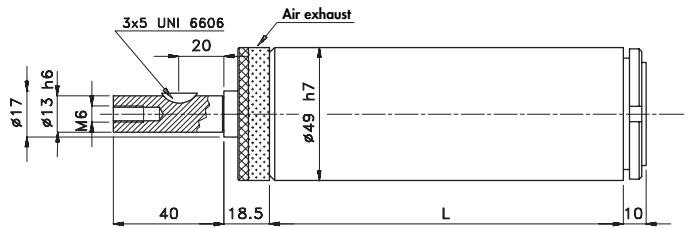
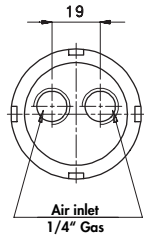
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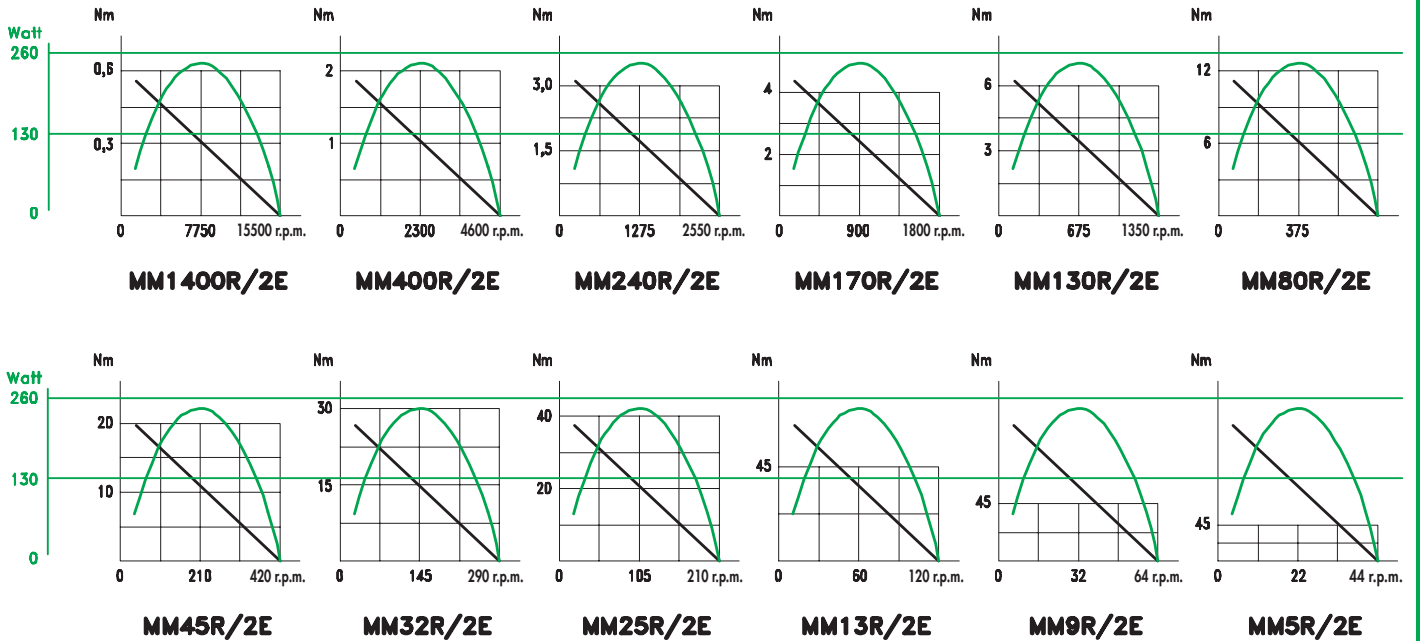
MODELS MM...R/2E

Dimensions



Performance diagrams

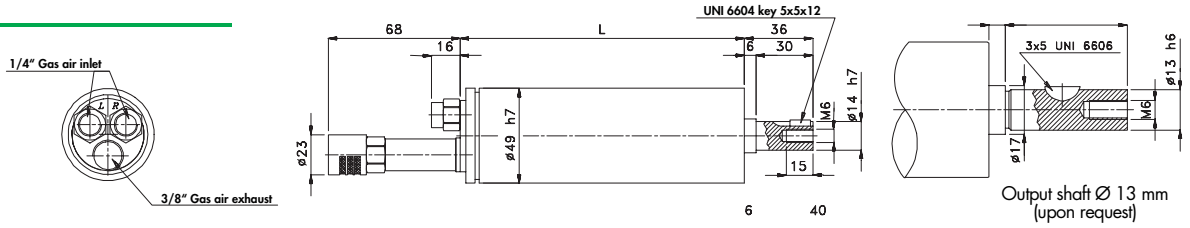
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Other technical features

MODELS MN...R

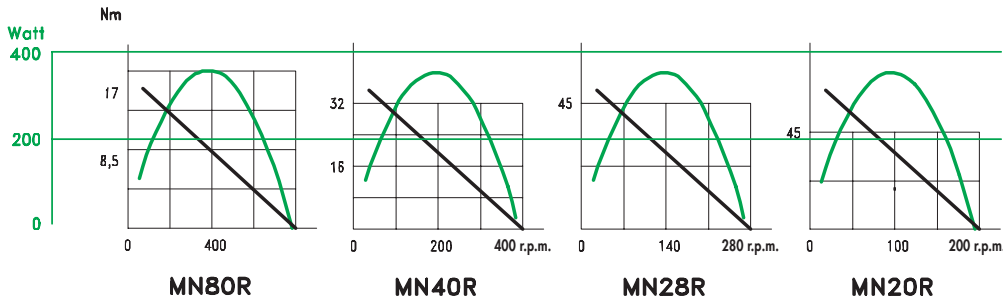
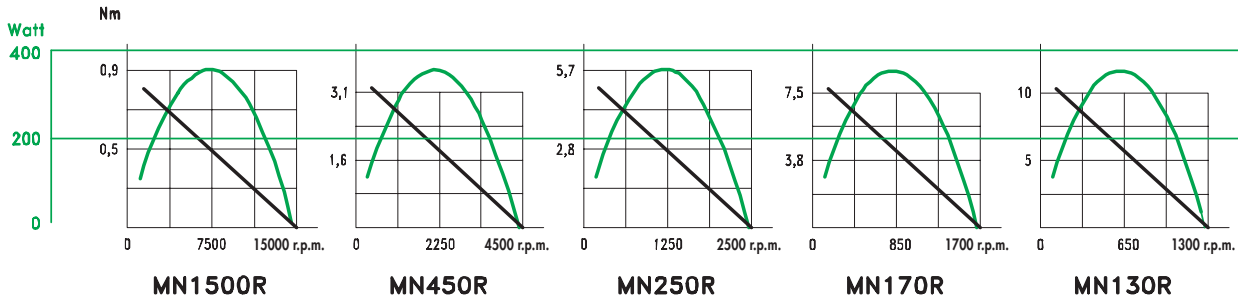
Dimensions



Performance diagrams

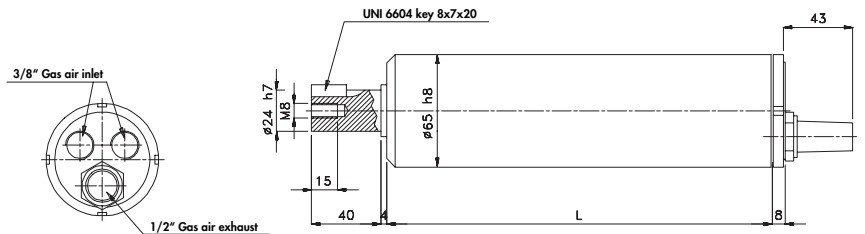
The diagrams show the theoretical curves for torque and power in function of the number of revolutions:

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MODELS MO...R

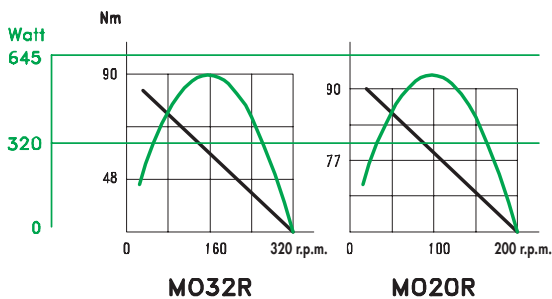
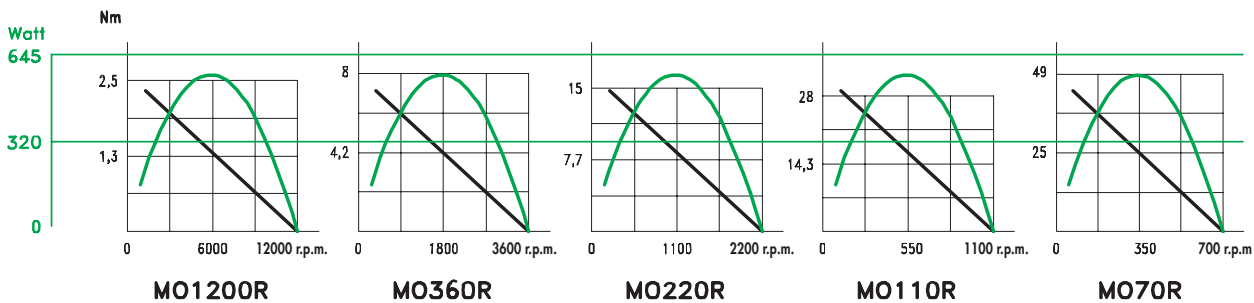
Dimensions



Performance diagrams

The diagrams show the theoretical curves for torque and power in function of the number of revolutions:

—— = power ——— = torque



Other technical features

Accessories available upon request

- Hoses, filters and accessories for compressed air (see Fiam Accessories Catalogue).

FRL group

- Filter, pressure regulator, lubricator.
Suitable to obtain the required torque value by adjusting the air feed pressure.



Threaded attack	Flow rate	Complete assembly	Reduction compl. of gauge	Lubricator
mm	l/s	code	code	code
1/4" gas	1,7÷16	697331020	697331025	697281020
3/8" gas	4,2÷20	697351020	697351025	697291020
1/2" gas	8÷43	697371020	697371025	697301020

Air flow governor with scaled control

- For power from 90 to 180 watt.
Suitable to obtain the required torque value and revolutions by adjusting the air feed flow (cod. 697451000).



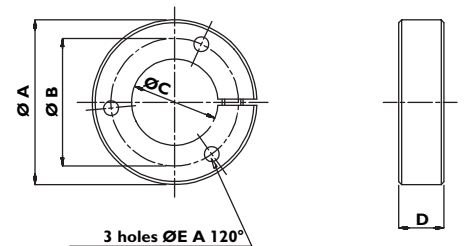
Air flow governor with micrometer screw control

- For power from 90 to 375 watt.
Suitable to obtain the required torque value and revolutions by adjusting the air feed flow (cod. 697431000).



Flange bracket

- Suggested for the motor's installation.



Code	Power (watt)	A mm	B mm	C mm	D mm	E mm
684011001	150, 190	64,5	50	33,8	18	5,2
684011002	260, 375	79,5	64	49	18	6,2
684011005	800	129	105	65	35	10,2

Fiam

INDUSTRIAL AIR TOOLS

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Quality Management
System Certificate
ISO 9001: 2000
ICIM 0250



Environmental
Management
System Certificate
ISO 14001: 1996
ICIM 0002A

FIAM PRODUCTS ONLY USE
QUALITY COMPONENTS



FESTO