

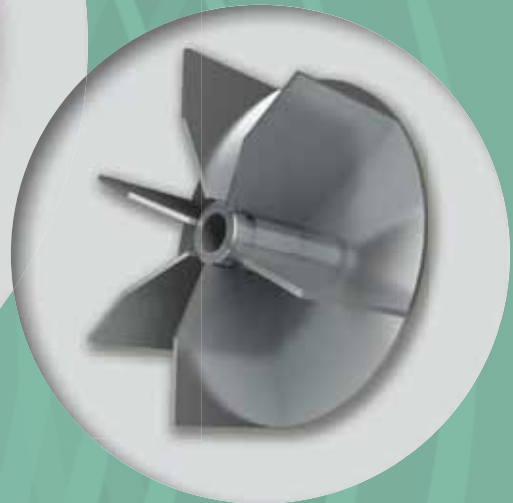
# Mod. **ZM**

$Q = 200 \div 65000 \text{ m}^3/\text{h}$

$Q = 0.06 \div 18 \text{ m}^3/\text{s}$

$p_t = 300 \div 500 \text{ mmH}_2\text{O}$

$p_t = 3000 \div 5000 \text{ Pa}$



### Campo di lavoro

Portate medie. Pressioni medie.

### Tipo di pala

Pale radiali dritte, aperta pag. 2.3.

### Applicazioni

Per trasporto pneumatico, di materiali solidi in miscela con aria, segatura e trucioli di legno; anche per materiali filamentososi che ostruirebbero una ventola chiusa a pale rovesce.

### Esecuzioni costruttive standard

Es.1-Es.4-Es.5-Es.8-Es.9-Es.12, vedi pag. 2.5 - 2.6.

### Temperature del fluido standard

-10÷+60°C. Per altre temperature vedi da pag. 1.12 a pag. 1.15.

### Tipo di costruzione

Ventilatore in lamiera di Fe360, girante in Fe360 equilibrata staticamente e dinamicamente. Per altri materiali vedi da pag. 1.12 a pag. 1.15.

### Dati di funzionamento

Condizioni dell'aria all'aspirazione T=20°C, 0m.s.l.m. e  $\rho=1.205 \text{ kg/m}^3$ .

### Rumorosità

Espressa in potenza sonora  $L_wA$  [dB(A)] rilevata in campo libero con ventilatore canalizzato, vedi da pag. 1.43 a pag. 1.49.

### Orientamenti

N°8 RD (rotazione oraria vista lato trasmissione) e N°8 LG. Ventilatore in versione imbullonata orientabile per le taglie 220-630, con supporto anteriore e quindi non orientabile dalla grandezza 710 a trasmissione, sempre orientabile nei ventilatori direttamente accoppiati senza supporto anteriore. Vedi pag. 2.7.

### Costruzioni speciali

Vedi da pag. 2.20 a pag. 2.30.

### Avviamento ventilatore

L'avviamento deve avvenire con ventilatore parzializzato, in funzione dell'assorbimento massimo del ventilatore.

### Classi giranti

La seguente tabella fa riferimento a condizioni di lavoro standard. In condizioni di esercizio gravose si consiglia di contattare il servizio clienti di MORO per conoscere la tipologia di girante più idonea. L'avviamento deve avvenire con ventilatore parzializzato, in funzione dell'assorbimento massimo del ventilatore.

#### ■ Domaine de travail

Débits moyens. Moyennes pressions.

#### Type d'ailette

Ailettes radiales droites, ouverte, voir page 2.3.

#### Applications

Pour transport pneumatique, de matières solides en mélange dans l'air, de sciure et de copeaux de bois, également pour des matières filamenteuses qui obstrueraient une hélice fermée à ailettes inversées.

#### Configurations de constructions standard

Ex.1 - Ex.4 - Ex.5 - Ex.8 - Ex.9 - Ex.12, voir pages 2.5 - 2.6.

#### Températures du fluide standard

-10÷+60°C. Pour d'autres températures voir pages 1.12-1.15.

#### Type de fabrication

Ventilateur en tôle de Fe360, turbine en Fe360 équilibrée statiquement et dynamiquement. Pour d'autres matériaux, voir pages 1.12-1.15.

#### Données de fonctionnement

Conditions de l'air à l'aspiration T=20°C, 0 m asl et  $\rho=1.205 \text{ kg/m}^3$ .

#### Niveau sonore

Exprimé en puissance sonore  $L_wA$  [dB(A)], relevé à l'air libre avec un ventilateur canalisé, voir pages 1.43 - 1.49.

#### Orientations

8 RD (rotation dans le sens des aiguilles d'une montre côté transmission) et 8 LG. Ventilateur en version boulonnée orientable pour les tailles 220-630, avec un support avant et donc non orientable de la grandeur 710 à transmission, toujours orientable dans les ventilateurs directement accouplés sans support avant. Voir page 2.7.

#### Fabrications spéciales

Voir pages 2.20-2.30.

#### Mise en marche du ventilateur

Le démarrage doit se faire avec un ventilateur partialisé, en fonction de l'absorption maximale du ventilateur.

#### Classes de turbines

Le tableau ci-dessus fait référence aux conditions de travail normales, en conditions de travail pénibles, on préconise de contacter le service clientèle de MORO pour connaître le type de turbine le plus adapté.

#### ■ Field of operation

Medium rates. Average pressures.

#### Blade type

Straight radial blades, open, see pg. 2.3.

#### Applications

For pneumatic transport of solid materials mixed with air, sawdust and wood chips; also suitable for filaments which would block a reversed blade closed fan.

#### Standard constructional arrangements

Arr.1 - Arr.4 - Arr.5 - Arr.8 - Arr.9 - Arr.12, see pgs. 2.5 - 2.6.

#### Standard fluid temperatures

-10÷+60°C. For other temperatures see pgs. 1.12 to 1.15.

#### Type of construction

Fan in Fe360 plate, impeller in Fe360 statically and dynamically balanced. For other materials see pgs. 1.12 to 1.15.

#### Operating specifications

Condition of inlet air T=20°C, 0 m above sea level and  $\rho=1.205 \text{ kg/m}^3$ .

#### Noise level

Expressed as sound power  $L_wA$  [dB(A)] measured in free field with ducted fan, see pgs. 1.43 to 1.49.

#### Orientations

No.8 RD (clockwise viewed from transmission side) and No.8 LG. Fan in bolted orientable version for sizes 220-630, with front support and so not orientable for sizes 710 and above with transmission drive, always orientable for directly coupled fans without front support. See pg. 2.7.

#### Special applications

See pgs. 2.20 to 2.30.

#### Fan start-up

During start-up the fan flow rate must be limited, calibrated for the fan's maximum electrical input.

#### Impeller classes

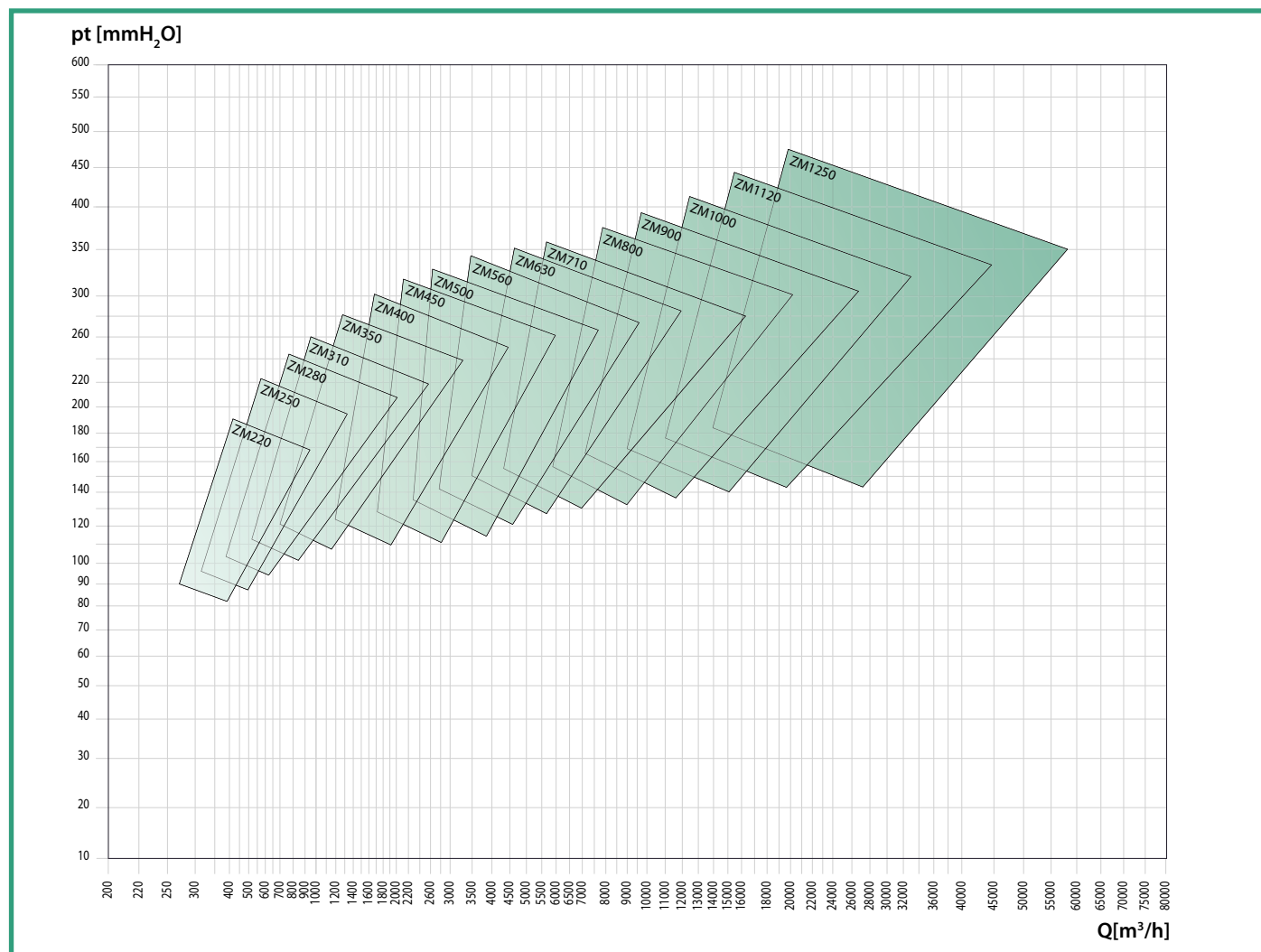
The above table refers to standard operating conditions, in heavy-duty service conditions it is advisable to contact the MORO Customer Service to establish the most suitable type of impeller.

GRANDEZZA VENTILATORE • Grandeur • Size • Größe • Tamaño	RPM MASSIMO • Maxi tours/min. • Max rpm • Max. U/min • R.p.m. máx.
	CLASSE I
ZM220	5000
ZM250	5000
ZM280	4750
ZM310	4250
ZM350	4000
ZM400	3500
ZM450	3500
ZM500	3150
ZM560	2940
ZM630	2800
ZM710	2300
ZM800	2000
ZM900	1700
ZM1000	1550
ZM1120	1300
ZM1250	1200

#### VALORI VALIDI FINO A 60°C

• Valeurs valables jusqu'à 60°C • Values valid up to 60°C  
• Werte bis 60°C gültig • Valores válidos hasta 60°C

FRA • entre • between • zwischen • entre	60°C	E • et • and • und • y	100°C	DECLASSARE VELOCITÀ • déclasser vitesse • degrade speed • Geschwindigkeit herabsetzen • rebajar velocidad	4%
	100°C		150°C		10%
	150°C		200°C		16%
	200°C		250°C		23%
	250°C		300°C		30%
	300°C		350°C		37%
	350°C		400°C		45%
	400°C		450°C		54%
	450°C		500°C		64%



### Arbeitsbereich

Mittlere Fördermengen. Mittlere Drücke.

#### Schaufelform

Gerade Radialschaufeln, offen, siehe Seite 2.3.

#### Anwendungen

Zum Transport von in Luft vermischten Feststoffen, Sägestaub und Holzspäne, auch für fadenförmige Materialien, die einen geschlossenen Ventilator mit rückwärts gekrümmten Schaufeln zusetzen würden.

#### Konstruktive Standardausführungen

Ausf. 1-Ausf. 4-Ausf. 5-Ausf. 8-Ausf. 9-Ausf. 12, siehe Seiten 2.5 - 2.6.

#### Standardtemperatur des Mediums

-10 ÷ +60°C. Für andere Temperaturen siehe Seiten 1.12 bis 1.15.

#### Konstruktionsart

Ventilator aus Blech Fe360, Laufrad aus Fe360, statisch und dynamisch ausgewuchtet. Für andere Materialien siehe Seiten 1.12 bis 1.15.

#### Betriebsdaten

Physikalischer Zustand der Ansaugluft T=20°C, 0 m ü. M. und ρ=1.205 kg/m<sup>3</sup>.

#### Geräuschpegel

Angegeben als Schalleistungspegel L<sub>wA</sub> [dB(A)] mit Messung im Freifeld und an Rohren angeschlossenem Ventilatore, siehe Seiten 1.43 bis 1.49.

#### Ausrichtung

8 Modelle RD (Drehrichtung im Uhrzeigersinn, von Antriebsseite aus gesehen) und 8 Modelle LG. Angeschraubter, in der Ausrichtung veränderbarer Ventilator in den Grössen 220 - 630, mit Vorderstütze und damit nicht veränderbar ab Grösse 710 mit Riementrieb, immer ausrichtbar bei allen direkt angetriebenen Ventilatoren ohne Vorderstütze, siehe Seite 2.7.

#### Spezialausführungen

Siehe Seiten 2.20 bis 2.30.

#### Ventilator-Anlauf

Der Ventilatoranlauf muss bei teilweise geschlossenem Ventilator erfolgen, in Abhängigkeit von der maximalen Stromaufnahme des Motors.

#### Laufradklassen

Die obenstehende Tabelle bezieht sich auf normale Betriebsbedingungen. Bei erschwerenden Betriebsbedingungen wird empfohlen, den Kundenservice der MORO zu kontaktieren, um den am besten geeigneten Laufradtyp zu bestimmen.

### Campo de trabajo

Caudales medios. Presiones medias.

#### Tipo de pala

Palas radiales rectas, abierta, ver pág. 2.3.

#### Aplicaciones

Para transporte neumático de materiales sólidos mezclados con aire, serrín y virutas de madera; también para materiales filamentosos que obstruirían un ventilador cerrado de palas invertidas.

#### Variantes constructivas estándares

Ejec. 1-Ejec.4-Ejec.5-Ejec.8-Ejec.9-Ejec.12, ver págs. 2.5 - 2.6.

#### Temperaturas del fluido estándares

De -10 a +60°C. Para otras temperaturas, ver págs. de 1.12 a 1.15.

#### Tipo de construcción

Ventilador de chapa en Fe360, rotor en Fe360 equilibrado estática y dinámicamente. Para otros materiales, ver págs. de 1.12 a 1.15.

#### Datos de funcionamiento

Condiciones del aire en aspiración T=20°C, 0 m SNM y ρ=1.205 kg/m<sup>3</sup>.

#### Niveles de ruido

Expresados en potencia sonora L<sub>wA</sub> [dB(A)] medida en campo abierto con ventilador canalizado, ver págs. de 1.43 a 1.49.

#### Orientaciones

8 RD (rotación dextrógira vista desde el lado de transmisión) y 8 LG. Ventilador en versión empernada orientable para tamaños 220-630, con soporte delantero, por lo cual no es orientable a partir del tamaño 710 de transmisión, siempre orientable en ventiladores acoplados directamente sin soporte delantero. Ver pág. 2.7.

#### Construcciones especiales

Ver págs. de 2.20 a 2.30.

#### Puesta en marcha del ventilador

La puesta en marcha debe efectuarse con ventilador parcializado, en función de la absorción máxima del ventilador.

#### Clases de rotores

La tabla arriba hace referencia a condiciones de trabajo estándares, en condiciones de funcionamiento pesadas se aconseja llamar al Servicio de atención al cliente de MORO para conocer el tipo de rotor más adecuado.

Tipo • Type • Type • Typ • Tipo		P inst. [kW]	n	LpA [dB(A)]	Tolleranza sulla portata ±5% • Tolérance sur le débit ±5% • Load tolerance ±5% • Durchsatztoleranz ±5% • Tolerancia respecto caudal ±5%																		
Ventilatore • Ventilateur • Fan • Ventilator • Ventilador	Motore • Moteur • Motor • Motor • Motor				Q [m³/h]																		
					325	360	400	430	470	540	650	720	790	865	935	1080	1225	1370	1440	1620	1800	2160	
					pt[mmH <sub>2</sub> O]																		
ZM220/2	71	0,37	2740	60	71	71	70	69	68	65	57	51	48	42									
ZM250/2R	71	0,55	2800	62		90	90	89	89	88	85	80	76	72	68	56							
ZM250/2	80	0,75	2855	63				101	101	100	98	96	93	90	84	73	66						
ZM280/2R	80	1,1	2855	64					109	108	107	106	105	102	99	88	80	71					
ZM280/2	90	1,5	2855	66						126	125	125	124	124	122	117	112	100	97	86	75		
ZM310/2R	90	1,5	2855	66							130	128	126	125	124	116	110	102	98	86			
ZM310/2	90	2,2	2880	68									163	160	158	156	155	152	146	140	128	122	
ZM350/2R	100	3	2900	70												183	179	177	176	175	163	152	
ZM350/2	112	4	2905	72														205	204	201	199	184	
ZM400/2R	132	5,5	2925	74																	244	240	
ZM400/2	132	7,5	2930	76																		271	
ZM450/2R	132	9,2	2940	77																			
ZM450/2	160	11	2940	80																			
ZM500/2R	160	15	2940	80																			
ZM500/2	180	22	2960	82																			
ZM450/4	90	1,5	1440	65															83	82	81	78	
ZM500/4R	100	2,2	1440	66																	90	88	
ZM500/4	100	3	1440	67																		102	
ZM560/4R	112	4	1440	69																			
ZM560/4	132	5,5	1460	70																			
ZM630/4R	132	7,5	1460	72																			
ZM630/4	160	11	1460	73																			
ZM710/4R	160	11	1460	76																			
ZM710/4	160	15	1460	76																			
ZM800/4R	180	18,5	1460	79																			
ZM800/4	200	30	1470	80																			
ZM900/4R	225	37	1470	82																			
ZM900/4	225	45	1470	82																			
ZM1000/4R	250	55	1480	84																			
ZM1000/4	280	75	1480	85																			

Il livello di pressione sonora ponderato A, LpA (cap.14), corrisponde al valore rilevato, nelle condizioni di prova, nel punto di massima rumorosità.

Tolleranza sulla rumorosità ±4dB(A)																										
• Tolérance sur le bruit ±4dB(A) • Noise tolerance ±4dB(A) • Geräushtoleranz ±4dB(A) • Tolerancia respecto a ruido ±4dB(A)																										
Q [m³/h]																										
2520	2880	3240	3600	3960	4320	4680	5400	6120	7200	7920	9000	10080	10800	12600	14400	16200	18000	19800	21600	25200	28800	32400	36000	42120		
pt[mmH <sub>2</sub> O]																										
137																										
170	162	142	120																							
236	230	220	195	178	165																					
269	265	245	235	224	214	208	159																			
311	310	308	306	299	285	275	245	220																		
	344	342	340	338	333	323	300	285	230																	
	387	384	380	375	368	363	352	345	316	298	283															
		438	436	434	433	431	428	416	400	385	365	340	320													
76	69	61	51																							
85	82	80	76	73	68	62																				
99	97	95	93	90	86	81	74																			
	119	117	115	114	110	107	102	94																		
	132	130	129	128	126	124	118	112	102																	
			146	145	144	142	137	133	124	117																
				168	167	166	164	160	153	147	139	129														
							190	185	181	176	170	162	157	143												
								211	210	207	202	196	190	177												
										251	247	243	239	231	219	209	197	180								
										270	268	266	264	260	251	241	230	219	204							
												324	321	314	306	300	290	281	260	234						
													345	341	334	328	321	312	296	271						
															398	393	386	381	365	350	331	309				
																430	428	425	421	412	398	381	360	341		

■ Le niveau de pression sonore pondérée A, LpA (chap. 14), correspond à la valeur relevée dans les conditions d'essai au point de niveau sonore maximum.

■ The A-weighted sound power level, LpA (Chap.14), is the value measured in test conditions at the point of maximum noise level.

■ Der nach A bewertete Schalldruckpegel LpA (Kap. 14) entspricht in den Testbedingungen dem höchsten gemessenen Wert des Geräuschpegels.

■ El nivel de presión sonora ponderado A, LpA (cap. 14), corresponde al valor medido, en las condiciones de prueba, en el punto con máximos niveles de ruido.

Tipo • Type • Type • Typ • Tipo		P inst. [kW]	n	LpA [dB(A)]	Tolleranza sulla portata ±5% • Tolérance sur le débit ±5% • Load tolerance ±5% • Durchsatztoleranz ±5% • Tolerancia respecto caudal ±5%																		
Ventilatore • Ventilateur • Fan • Ventilator • Ventilador	Motore • Moteur • Motor • Motor • Motor				Q [m³/h]																		
					325	360	400	430	470	540	650	720	790	865	935	1080	1225	1370	1440	1620	1800	2160	
					pt[mmH <sub>2</sub> O]																		
ZM220/2	71	0,37	2740	60	70	70	69	68	67	64	56	50	47	40									
ZM250/2R	71	0,55	2800	62		89	89	89	89	88	85	80	76	73	69	58							
ZM250/2	80	0,75	2855	63				100	100	100	98	96	93	90	85	74	68						
ZM280/2R	80	1,1	2855	64					108	107	106	106	105	102	99	89	81	73					
ZM280/2	90	1,5	2855	66						125	124	124	123	123	122	117	113	101	99	88	78		
ZM310/2R	90	1,5	2855	66							129	127	125	124	123	116	110	103	99	87			
ZM310/2	90	2,2	2880	68									161	158	156	155	154	151	146	140	129	124	
ZM350/2R	100	3	2900	70												180	177	175	174	173	162	152	
ZM350/2	112	4	2905	72														202	201	199	197	183	
ZM400/2R	132	5,5	2925	74																	239	236	
ZM400/2	132	7,5	2930	76																		266	
ZM450/2R	132	9,2	2940	77																			
ZM450/2	160	11	2940	80																			
ZM500/2R	160	15	2940	80																			
ZM500/2	180	22	2960	82																			
ZM450/4	90	1,5	1440	65															83	82	81	78	
ZM500/4R	100	2,2	1440	66																	90	88	
ZM500/4	100	3	1440	67																		102	
ZM560/4R	112	4	1440	69																			
ZM560/4	132	5,5	1460	70																			
ZM630/4R	132	7,5	1460	72																			
ZM630/4	160	11	1460	73																			
ZM710/4R	160	11	1460	76																			
ZM710/4	160	15	1460	76																			
ZM800/4R	180	18,5	1460	79																			
ZM800/4	200	30	1470	80																			
ZM900/4R	225	37	1470	82																			
ZM900/4	225	45	1470	82																			
ZM1000/4R	250	55	1480	84																			
ZM1000/4	280	75	1480	85																			

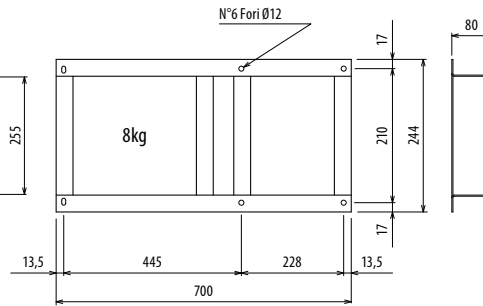
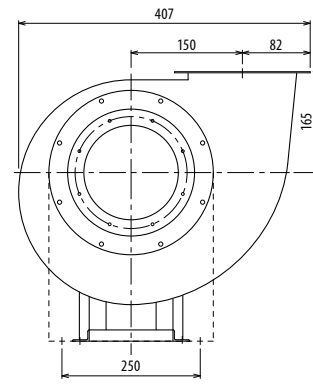
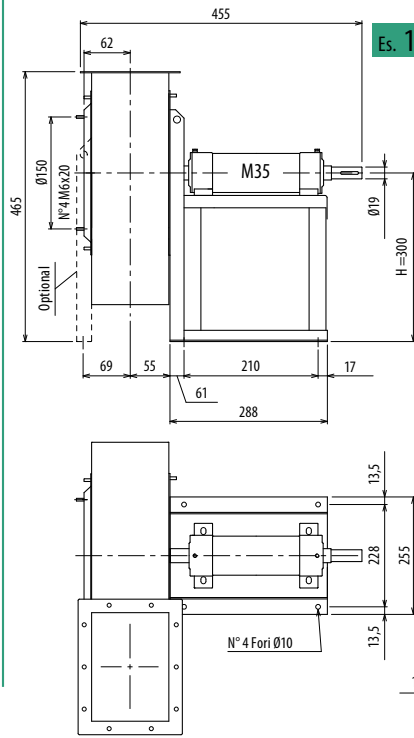
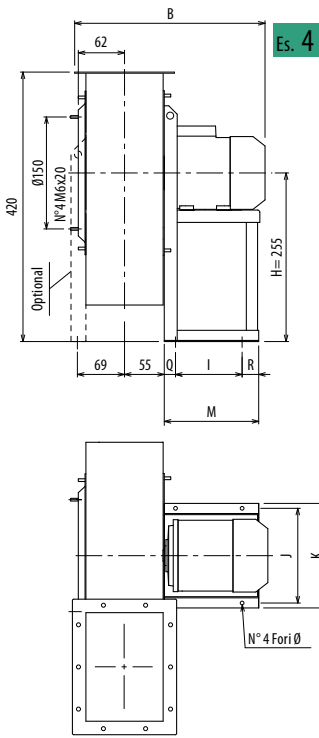
Il livello di pressione sonora ponderato A, LpA (cap.14), corrisponde al valore rilevato, nelle condizioni di prova, nel punto di massima rumorosità.

**Tolleranza sulla rumorosità ±4dB(A)**  
 • Tolérance sur le bruit ±4dB(A) • Noise tolerance ±4dB(A)  
 • Geräushtoleranz ±4dB(A) • Tolerancia respecto a ruido ±4dB(A)

Q [m³/h]

2520	2880	3240	3600	3960	4320	4680	5400	6120	7200	7920	9000	10080	10800	12600	14400	16200	18000	19800	21600	25200	28800	32400	36000	42120	
pt[mmH <sub>2</sub> O]																									
138																									
170	164	145	125																						
233	228	219	196	180	168																				
264	261	243	234	225	216	211	166																		
303	303	301	300	294	281	272	245	223																	
	335	333	332	331	327	318	298	285	236																
	374	372	368	364	358	354	344	339	313	298	286														
		422	420	419	418	417	415	405	392	380	363	342	325												
77	70	63	53																						
85	82	81	77	74	70	64																			
99	97	95	94	91	87	83	77																		
	118	116	115	114	110	107	103	96																	
	131	129	128	128	126	124	119	113	105																
			145	144	143	141	136	133	125	118															
				166	165	164	163	159	153	148	141	132													
							188	183	180	175	170	163	158	146											
								208	208	205	201	196	190	179											
										246	243	240	236	229	219	210	200	185							
										265	263	262	260	257	250	241	232	223	210						
												316	313	308	301	296	287	280	262	240					
													336	333	327	322	317	309	296	275					
															385	381	375	371	358	345	329	310			
																415	414	412	408	402	390	376	359	344	

- Le niveau de pression sonore pondérée A, LpA (chap. 14), correspond à la valeur relevée dans les conditions d'essai au point de niveau sonore maximum.
- The A-weighted sound power level, LpA (Chap.14), is the value measured in test conditions at the point of maximum noise level.
- Der nach A bewertete Schalldruckpegel LpA (Kap. 14) entspricht in den Testbedingungen dem höchsten gemessenen Wert des Geräuschpegels.
- El nivel de presión sonora ponderado A, LpA (cap. 14), corresponde al valor medido en las condiciones de prueba, en el punto con máximos niveles de ruido.

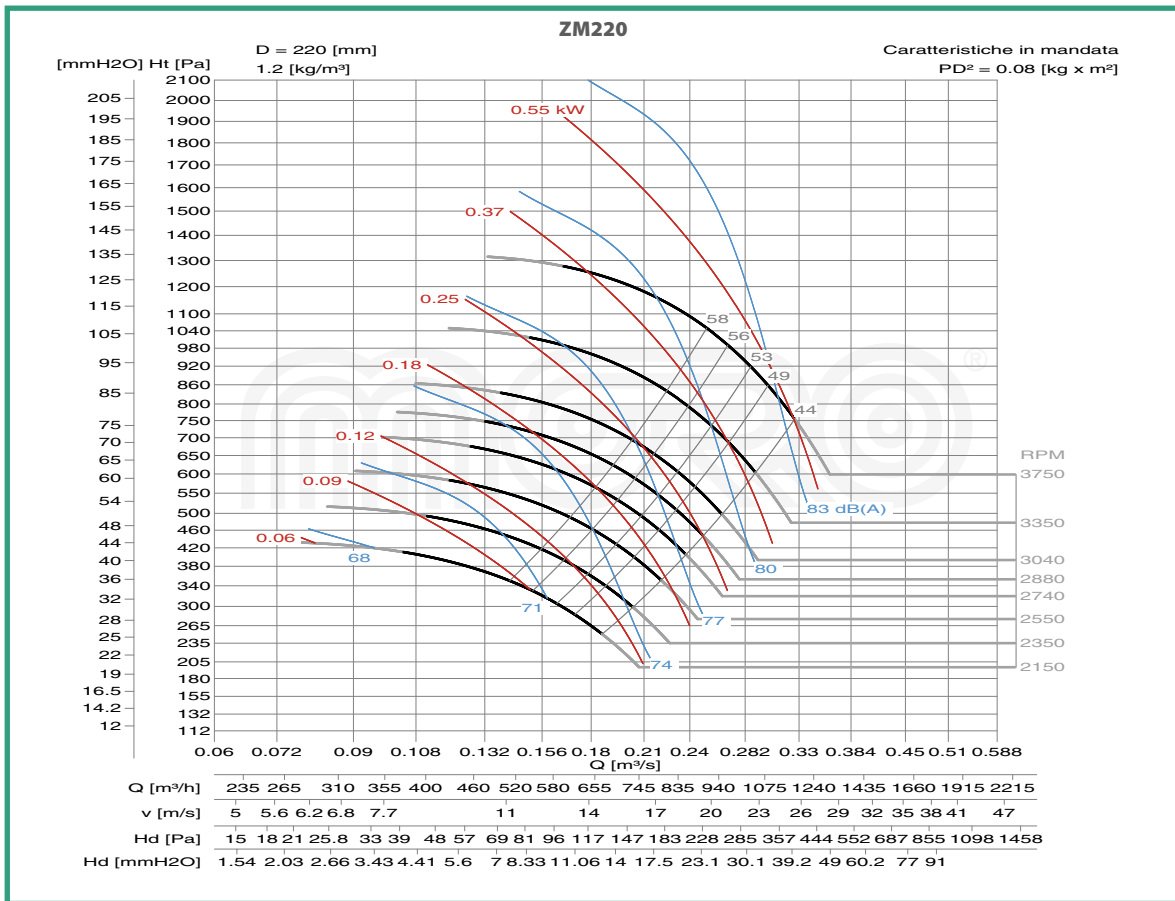
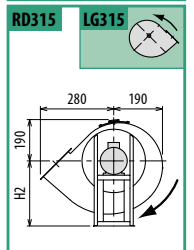
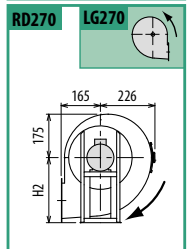
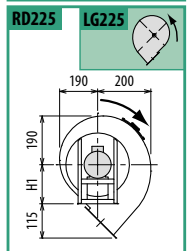
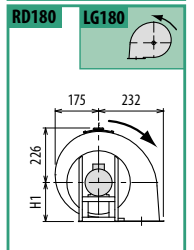
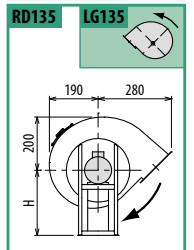
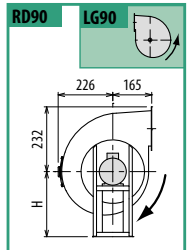
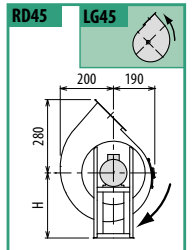
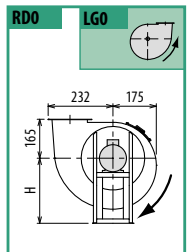
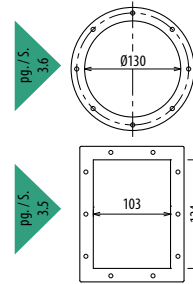


Il ventilatore è orientabile • Peso in tabella comprensivo di motore

- Le ventilatore est orientable
- The fan is revolvable
- Der Ventilator ist drehbar
- El ventilador es orientable
- Le poids dans le tableau inclut le moteur
- The weight indicated in the table includes motor
- Gewichtsangabe in Tabelle inkl. Motor
- El peso en la tabla incluye el motor

TIPO • Type		PESO Weight Kg	PD <sup>2</sup> Kgf x m <sup>2</sup>	B	I	H	H1	H2	J	K	M	Q	R	Ø
VENTILATORE Fan	MOTORE Motor													
ZM220/2	71 A2	20	0,08	337	121	255	165	255	203	225	195	48	26	10
ZM220/T		20	0,08			300	180	300						

Ulteriori informazioni e quote:  
 ■ Ulérieures informations et cotes:  
 ■ Further information and sizes:  
 ■ Weitere Infos und Größen:  
 ■ Más informaciones y medidas:

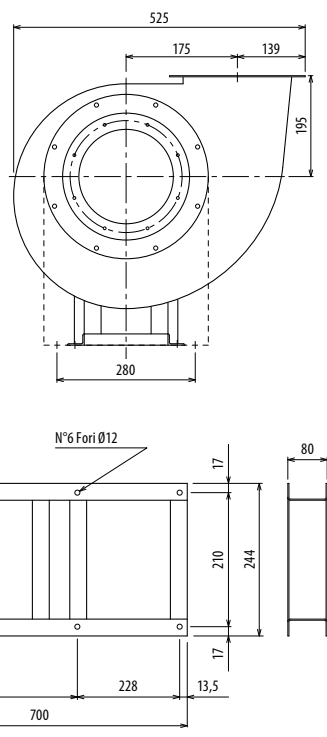
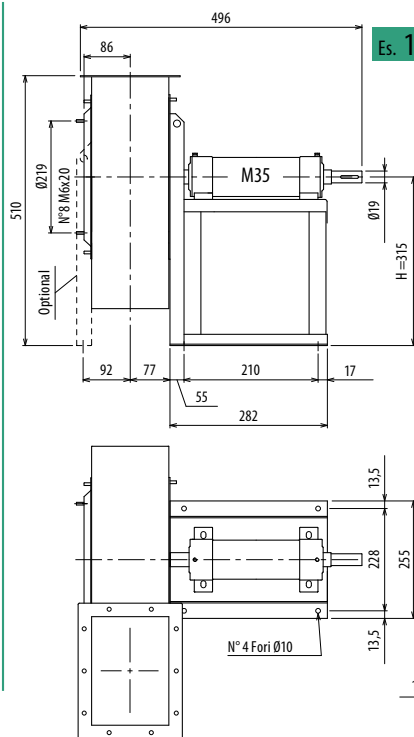
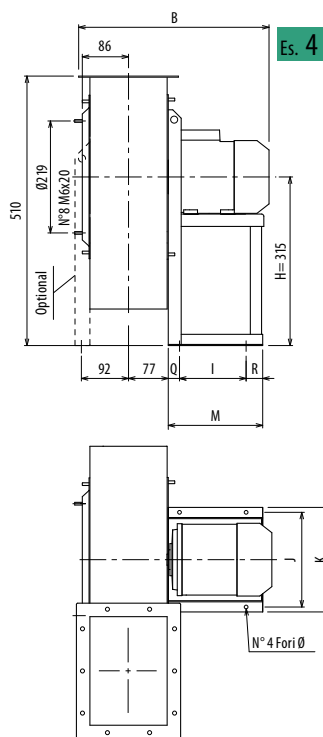




# DIMENSIONI D'INGOMBRO E PESI/CURVE DI FUNZIONAMENTO

■ DIMENSIONS D'ENCOMBREMENT ET POIDS/COURBES DE FONCTIONNEMENT ■ OVERALL DIMENSIONS AND WEIGHT/WORKING CURVES  
 ■ AUSMAßE UND GEWICHTE/FUNKTIONSKURVEN ■ DIMENSIONES QUE OCUPA Y PESOS/CURVAS DE FUNCIONAMIENTO

# ZM250



Il ventilatore è orientabile • Peso in tabella comprensivo di motore

■ Le ventilateur est orientable  
Le poids dans le tableau inclut le moteur

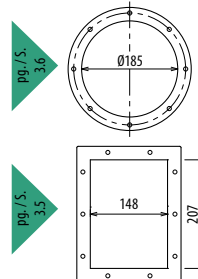
■ The fan is revolvable  
The weight indicated in the table includes motor

■ Der Ventilator ist drehbar  
Gewichtsangabe in Tabelle inkl. Motor

■ El ventilador es orientable  
El peso en la tabla incluye el motor

TIPO • Type		PESO Weight Kg	PD <sup>2</sup> Kgf x m <sup>2</sup>	B	I	H	H1	H2	J	K	M	Q	R	Ø
VENTILATORE Fan	MOTORE Motor													
ZM250/2R	71 B2	25	0,09	396	121	315	195	315	203	225	195	48	26	10
ZM250/2	80 A2	30	0,10	420	121	315	195	315	203	225	217	48	48	10
ZM250/T		25	0,10			315	195	315						

Ulteriori informazioni e quote:  
 ■ Ulérieures informations et cotes:  
 ■ Further information and sizes:  
 ■ Weitere Infos und Größen:  
 ■ Más informaciones y medidas:



**RD0 LG0**

**RD45 LG45**

**RD90 LG90**

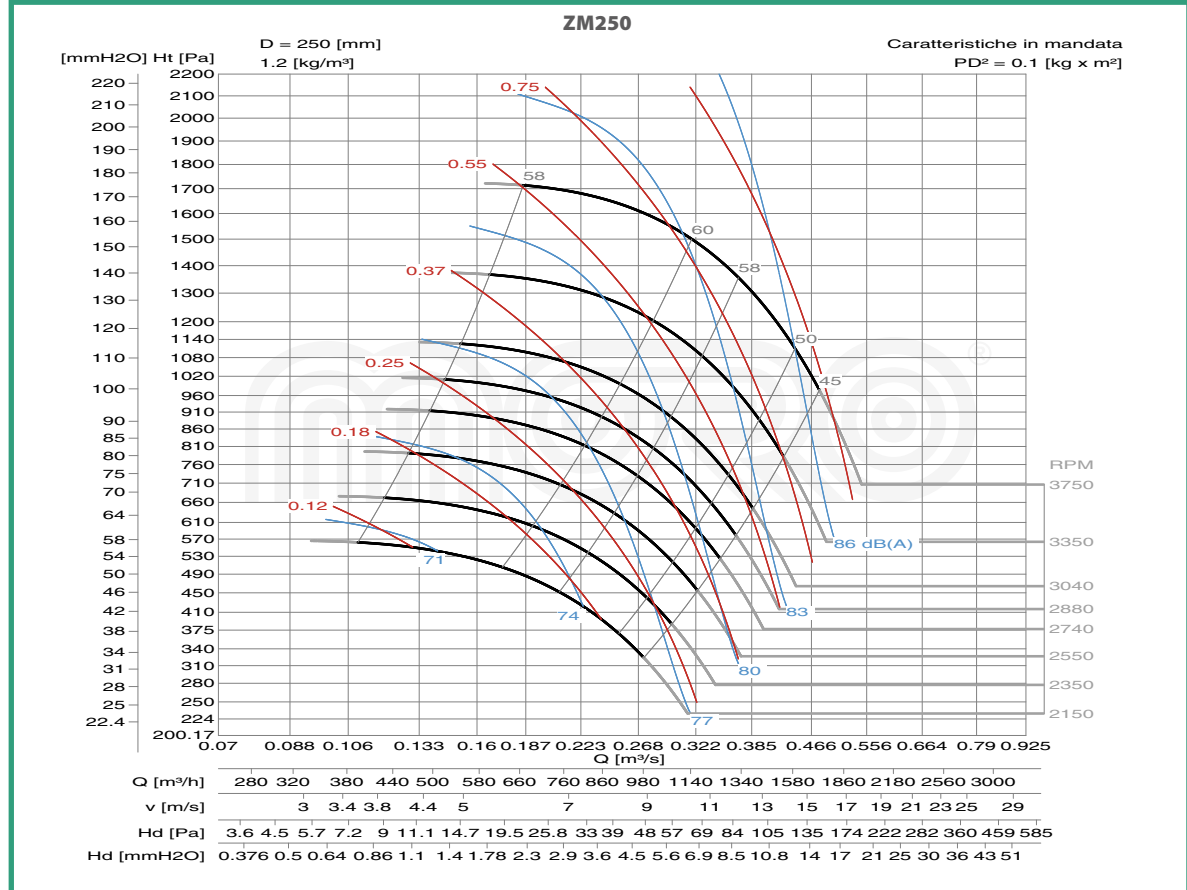
**RD135 LG135**

**RD180 LG180**

**RD225 LG225**

**RD270 LG270**

**RD315 LG315**

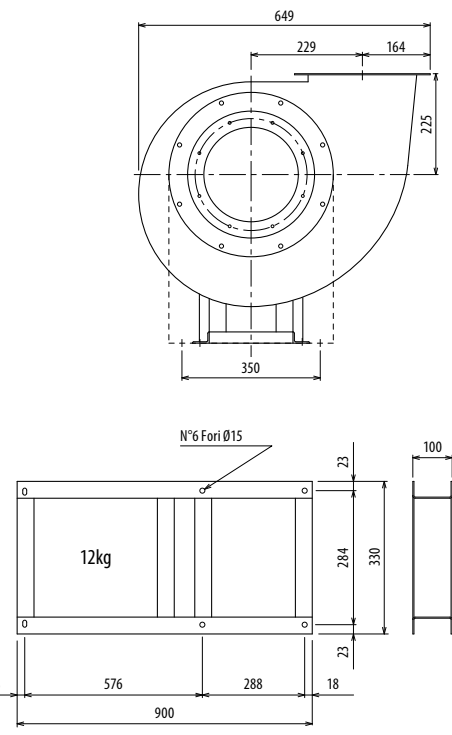
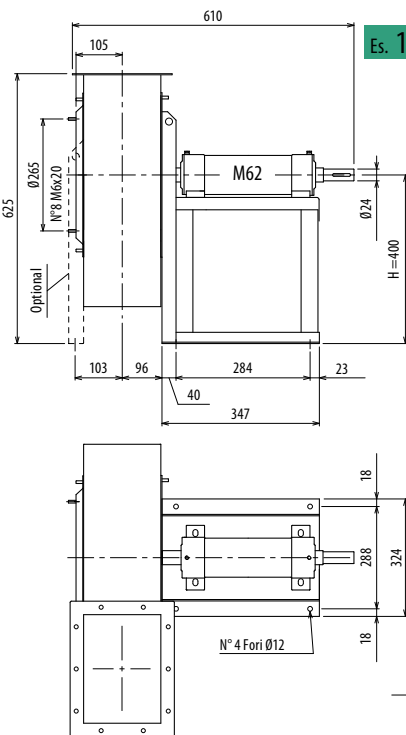
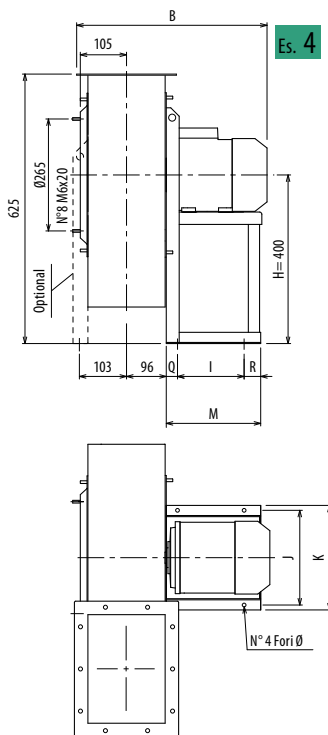




# DIMENSIONI D'INGOMBRO E PESI/CURVE DI FUNZIONAMENTO

■ DIMENSIONS D'ENCOMBREMENT ET POIDS/COURBES DE FONCTIONNEMENT ■ OVERALL DIMENSIONS AND WEIGHT/WORKING CURVES  
 ■ AUSMAßE UND GEWICHTE/FUNKTIONSKURVEN ■ DIMENSIONES QUE OCUPA Y PESOS/CURVAS DE FUNCIONAMIENTO

# ZM310

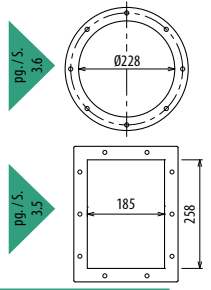


Il ventilatore è orientabile • Peso in tabella comprensivo di motore

- Le ventilateur est orientable
  - The fan is revoluble
  - Der Ventilator ist drehbar
  - El ventilador es orientable
- Le poids dans le tableau inclut le moteur    The weight indicated in the table includes motor    Gewichtsangabe in Tabelle inkl. Motor    El peso en la tabla incluye el motor

TIPO • Type		PESO Weight Kg	PD <sup>2</sup> Kg f x m <sup>2</sup>	B	I	H	H1	H2	J	K	M	Q	R	Ø
VENTILATORE Fan	MOTORE Motor													
ZM310/2R	90 S2	43	0,19	505	133	400	225	400	234	260	246	55	58	10
ZM310/2	90 L2	47	0,21	505	133	400	225	400	234	260	246	55	58	10
ZM310/T		45	0,21			400	225	400						

Ulteriori informazioni e quote:  
 ■ Ulérieures informations et cotes:  
 ■ Further information and sizes:  
 ■ Weitere Infos und Größen:  
 ■ Más informaciones y medidas:



**RD0 LG0**

**RD45 LG45**

**RD90 LG90**

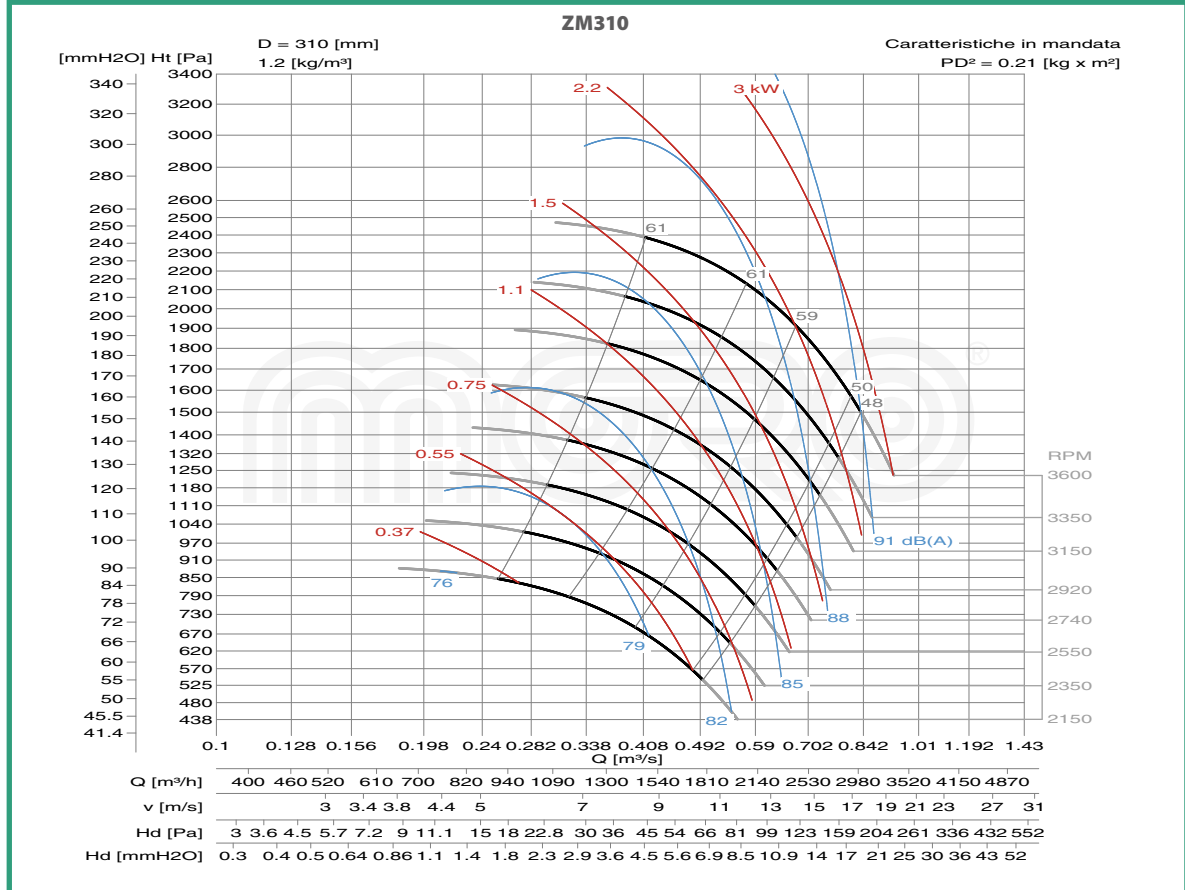
**RD135 LG135**

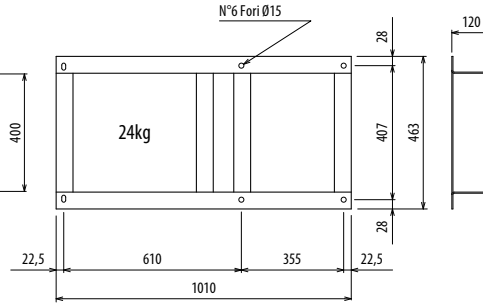
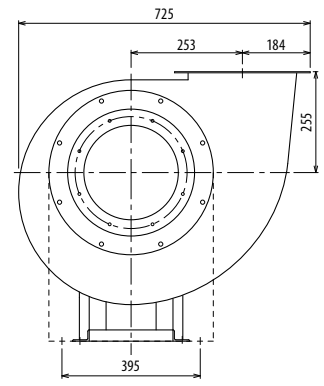
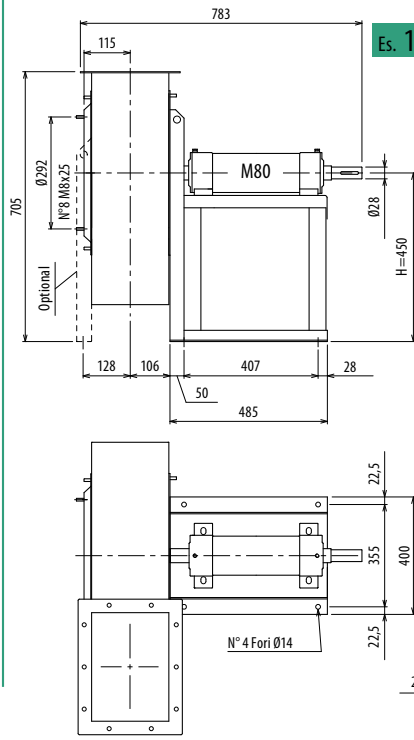
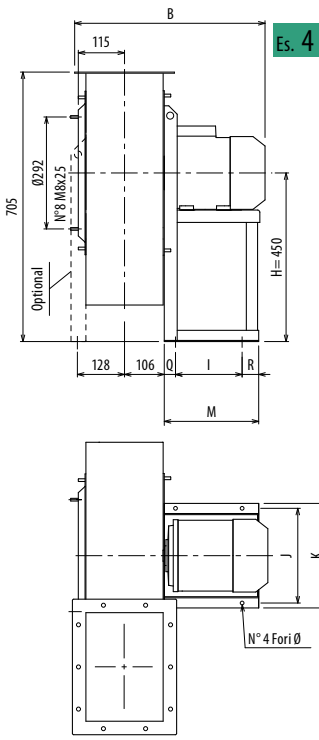
**RD180 LG180**

**RD225 LG225**

**RD270 LG270**

**RD315 LG315**



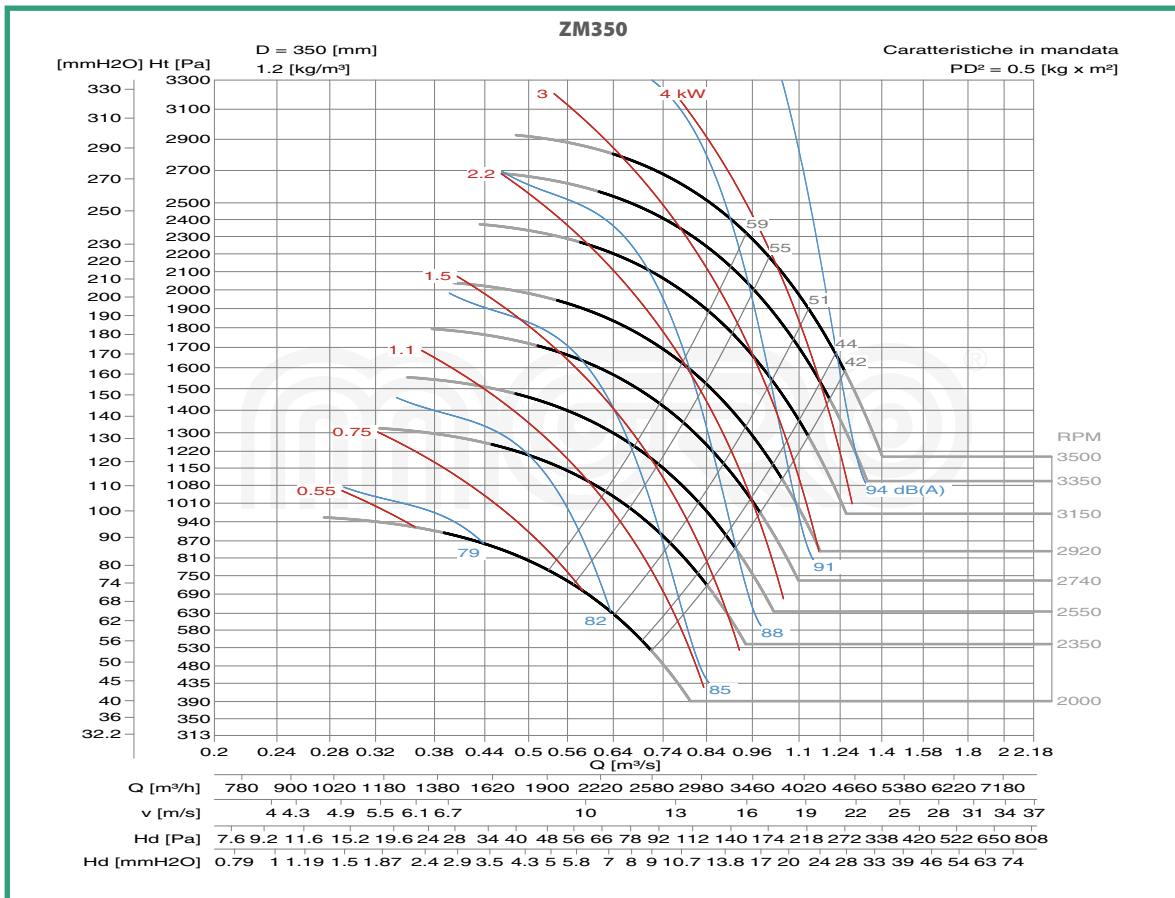
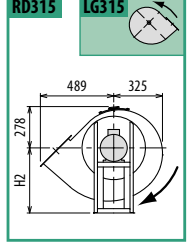
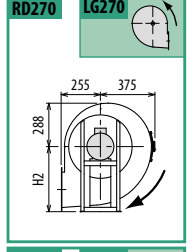
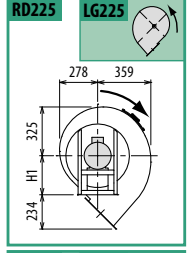
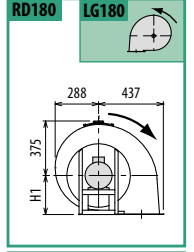
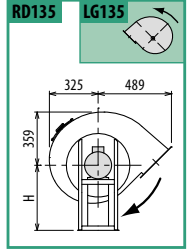
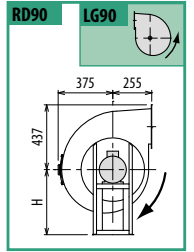
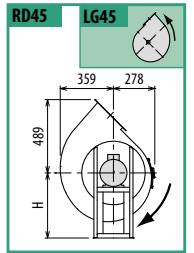
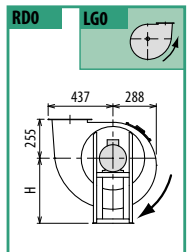
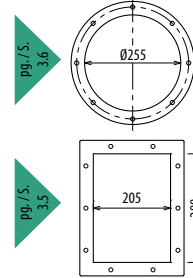


Il ventilatore è orientabile • Peso in tabella comprensivo di motore

- Le ventilateur est orientable
- The fan is revoluble
- Der Ventilator ist drehbar
- El ventilador es orientable
- Le poids dans le tableau inclut le moteur
- The weight indicated in the table includes motor
- Gewichtsangabe in Tabelle inkl. Motor
- El peso en la tabla incluye el motor

TIPO • Type		PESO Weight Kg	PD <sup>2</sup> Kg f x m <sup>2</sup>	B	I	H	H1	H2	J	K	M	Q	R	Ø
VENTILATORE Fan	MOTORE Motor													
ZM350/2R	100 LA2	63	0,44	561	197	450	255	450	289	324	276	30	49	12
ZM350/2	112 M2	72	0,50	582	197	450	255	450	289	324	276	30	49	12
ZM350/T		75	0,50			450	255	450						

Ulteriori informazioni e quote:  
 ■ Ulérieures informations et cotes:  
 ■ Further information and sizes:  
 ■ Weitere Infos und Größen:  
 ■ Más informaciones y medidas:

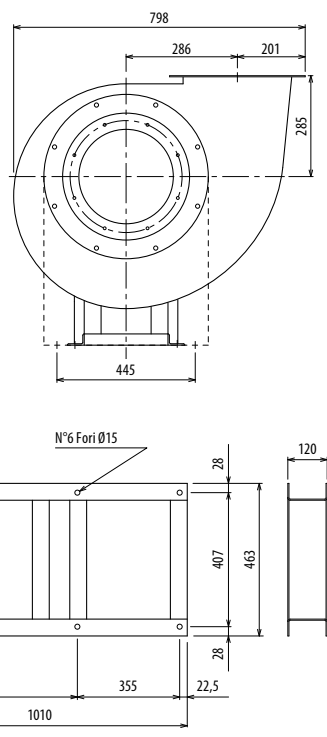
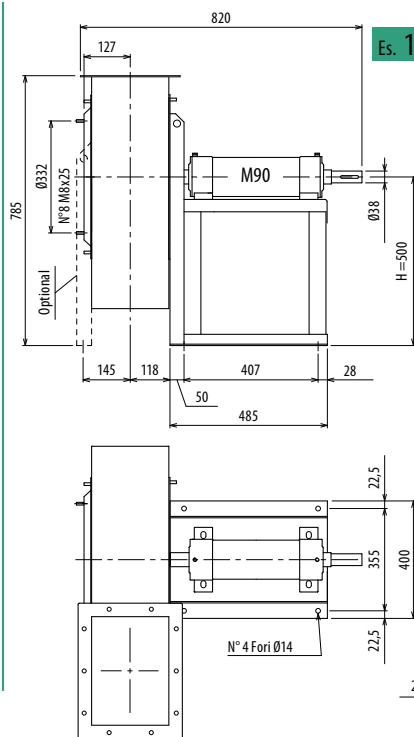
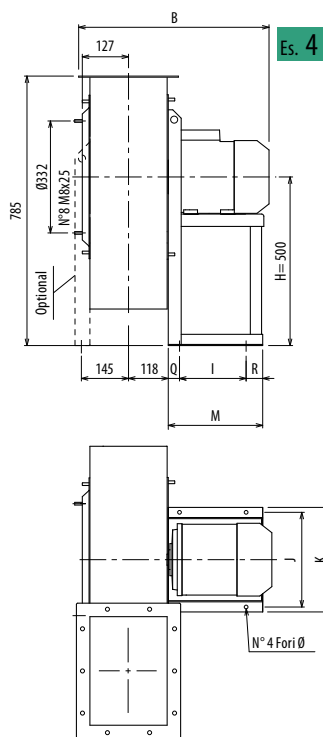


# DIMENSIONI D'INGOMBRO E PESI/CURVE DI FUNZIONAMENTO

# ZM400



■ DIMENSIONS D'ENCOMBREMENT ET POIDS/COURBES DE FONCTIONNEMENT ■ OVERALL DIMENSIONS AND WEIGHT/WORKING CURVES  
 ■ AUSMAßE UND GEWICHTE/FUNKTIONSKURVEN ■ DIMENSIONES QUE OCUPA Y PESOS/CURVAS DE FUNCIONAMIENTO

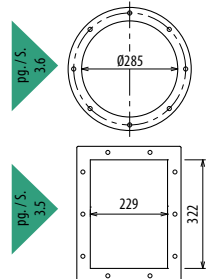


Il ventilatore è orientabile • Peso in tabella comprensivo di motore

- Le ventilateur est orientable
- The fan is revolvable
- Der Ventilator ist drehbar
- El ventilador es orientable
- Le poids dans le tableau inclut le moteur
- The weight indicated in the table includes motor
- Gewichtsangabe in Tabelle inkl. Motor
- El peso en la tabla incluye el motor

TIPO • Type		PESO Weight Kg	PD <sup>2</sup> Kg x m <sup>2</sup>	B	I	H	H1	H2	J	K	M	Q	R	Ø
VENTILATORE Fan	MOTORE Motor													
ZM400/2R	132 SA2	101	0,72	646	237	500	285	500	337	372	336	40	59	12
ZM400/2	132 SB2	106	0,85	646	237	500	285	500	337	372	336	40	59	12
ZM400/T		86	0,85			500	285	500						

Ulteriori informazioni e quote:  
 ■ Ulérieures informations et cotes:  
 ■ Further information and sizes:  
 ■ Weitere Infos und Größen:  
 ■ Más informaciones y medidas:



**RD0 LG0**

**RD45 LG45**

**RD90 LG90**

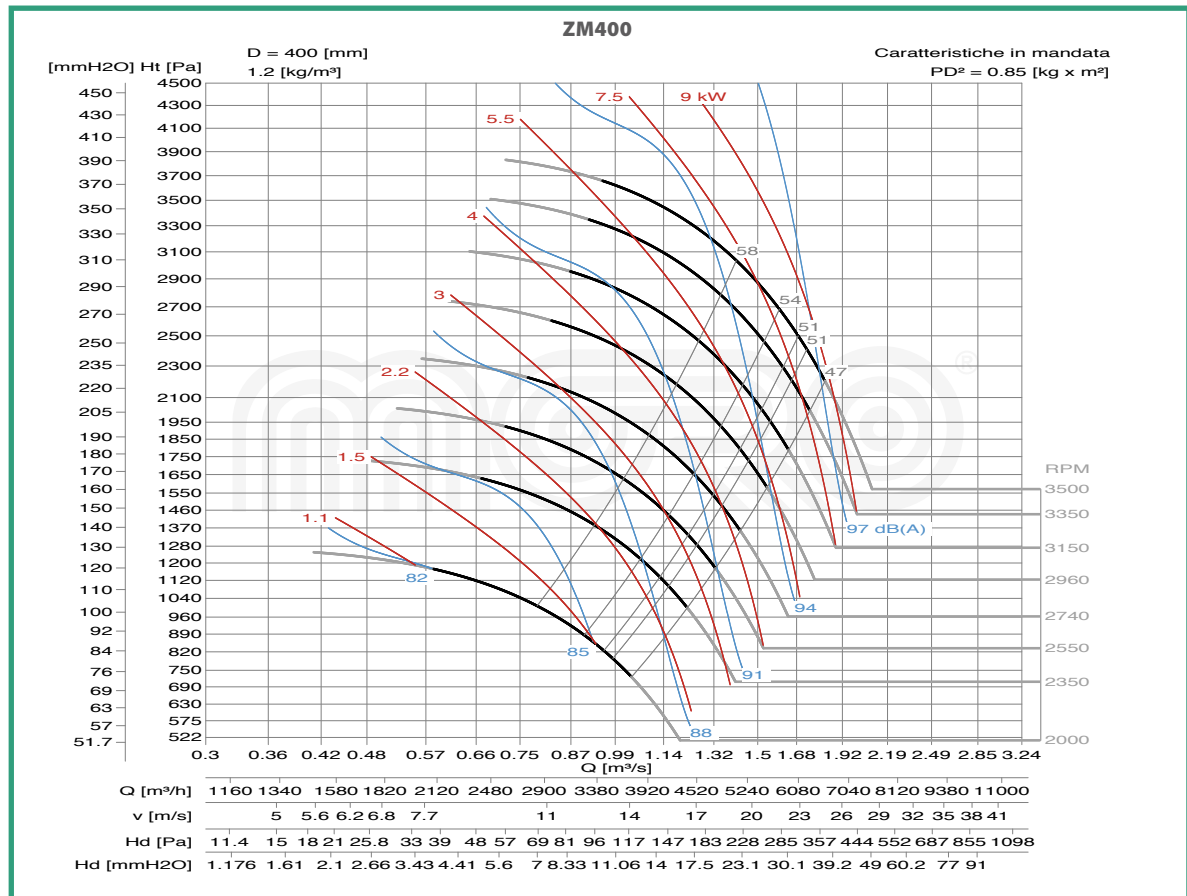
**RD135 LG135**

**RD180 LG180**

**RD225 LG225**

**RD270 LG270**

**RD315 LG315**



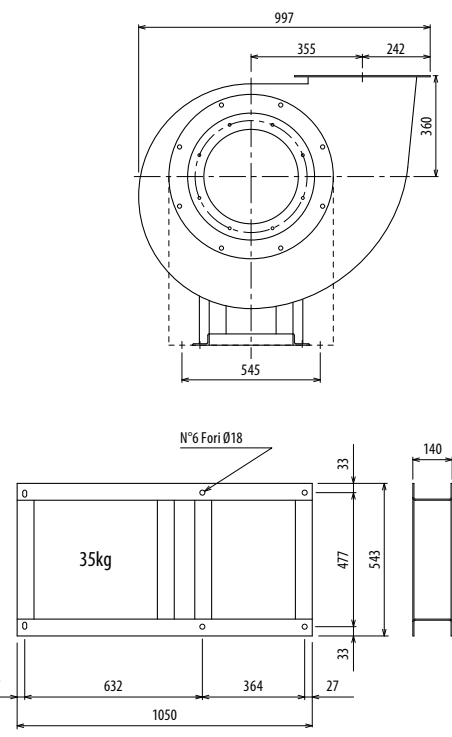
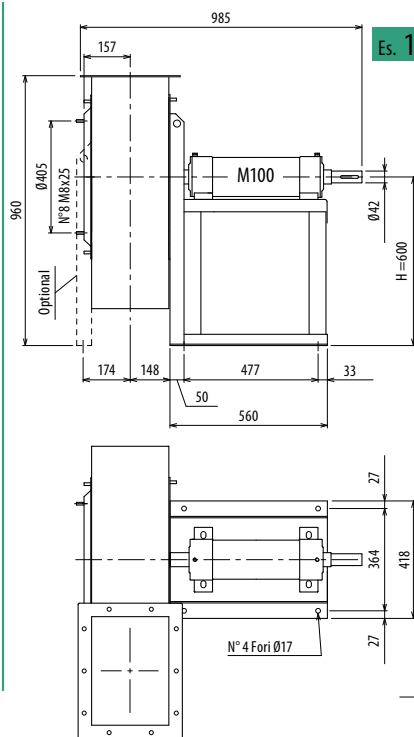
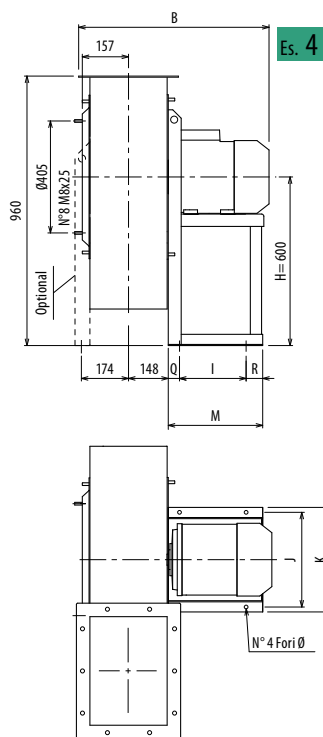


# DIMENSIONI D'INGOMBRO E PESI/CURVE DI FUNZIONAMENTO

# ZM500



■ DIMENSIONS D'ENCOMBREMENT ET POIDS/COURBES DE FONCTIONNEMENT ■ OVERALL DIMENSIONS AND WEIGHT/WORKING CURVES  
 ■ AUSMAßE UND GEWICHTE/FUNKTIONSKURVEN ■ DIMENSIONES QUE OCUPA Y PESOS/CURVAS DE FUNCIONAMIENTO



Il ventilatore è orientabile • Peso in tabella comprensivo di motore

■ Le ventilateur est orientable  
Le poids dans le tableau inclut le moteur

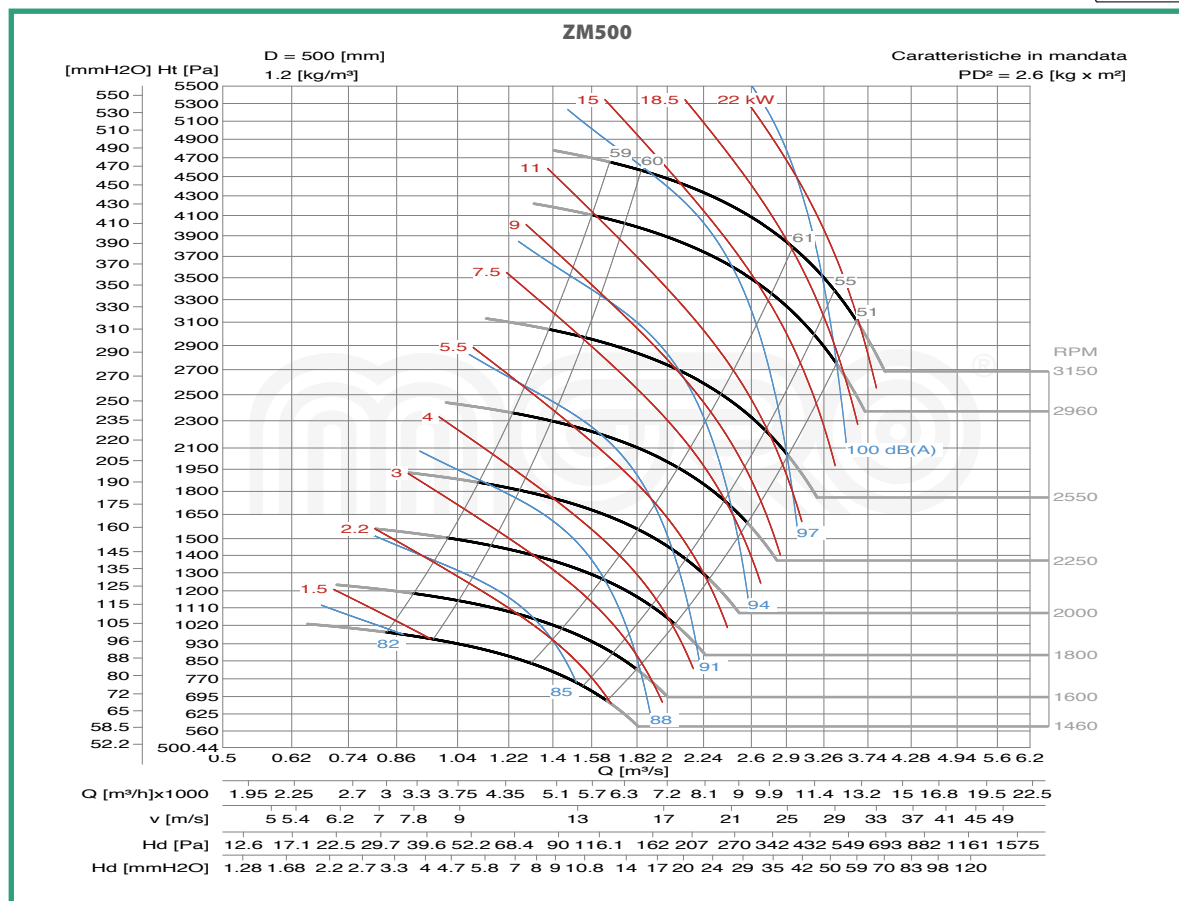
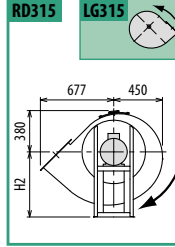
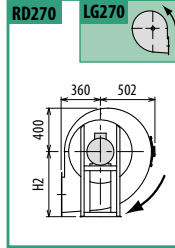
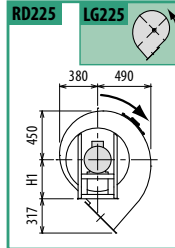
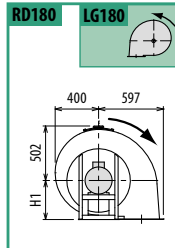
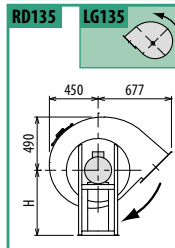
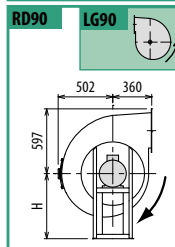
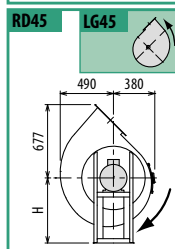
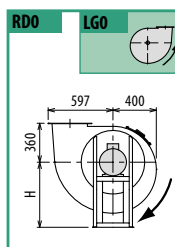
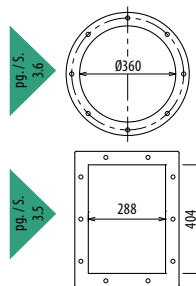
■ The fan is revolvable  
The weight indicated in the table includes motor

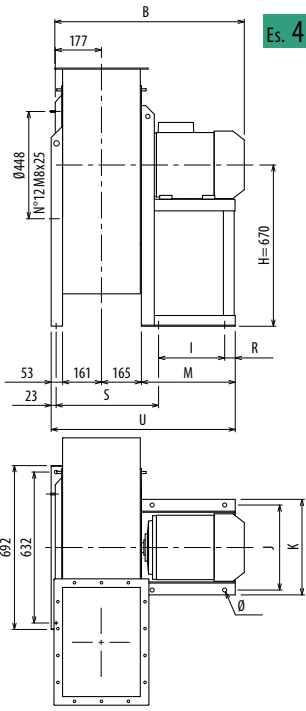
■ Der Ventilator ist drehbar  
Gewichtsangabe in Tabelle inkl. Motor

■ El ventilador es orientable  
El peso en la tabla incluye el motor

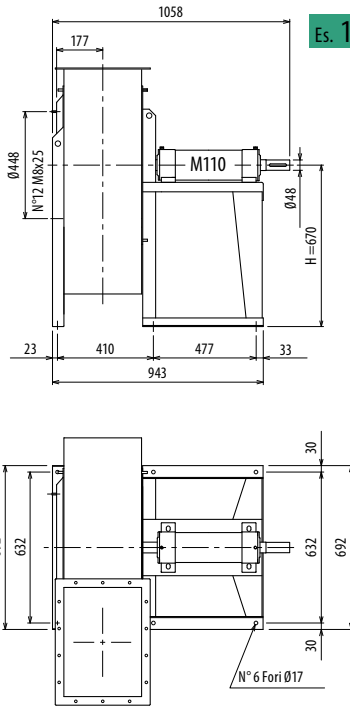
TIPO • Type		PESO Weight Kg	PD² Kgf x m²	B	I	H	H1	H2	J	K	M	Q	R	Ø
VENTILATORE Fan	MOTORE Motor													
ZM500/2R	160 MB2	180	2,3	810	337	600	360	600	395	440	436	50	49	14
ZM500/2	180 M2	250	2,6	891	357	600	360	600	434	488	460	70	33	17
ZM500/4R	100 LA4	112	2,4	644	197	600	360	600	289	324	276	30	49	12
ZM500/4	100 LB4	117	2,7	644	197	600	360	600	289	324	276	30	49	12
ZM500/T		115	2,60			600	360	600						

Ulteriori informazioni e quote:  
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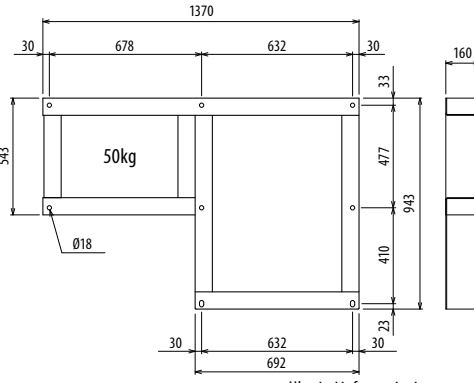
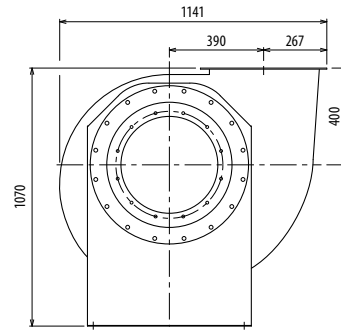




Es. 4



Es. 1

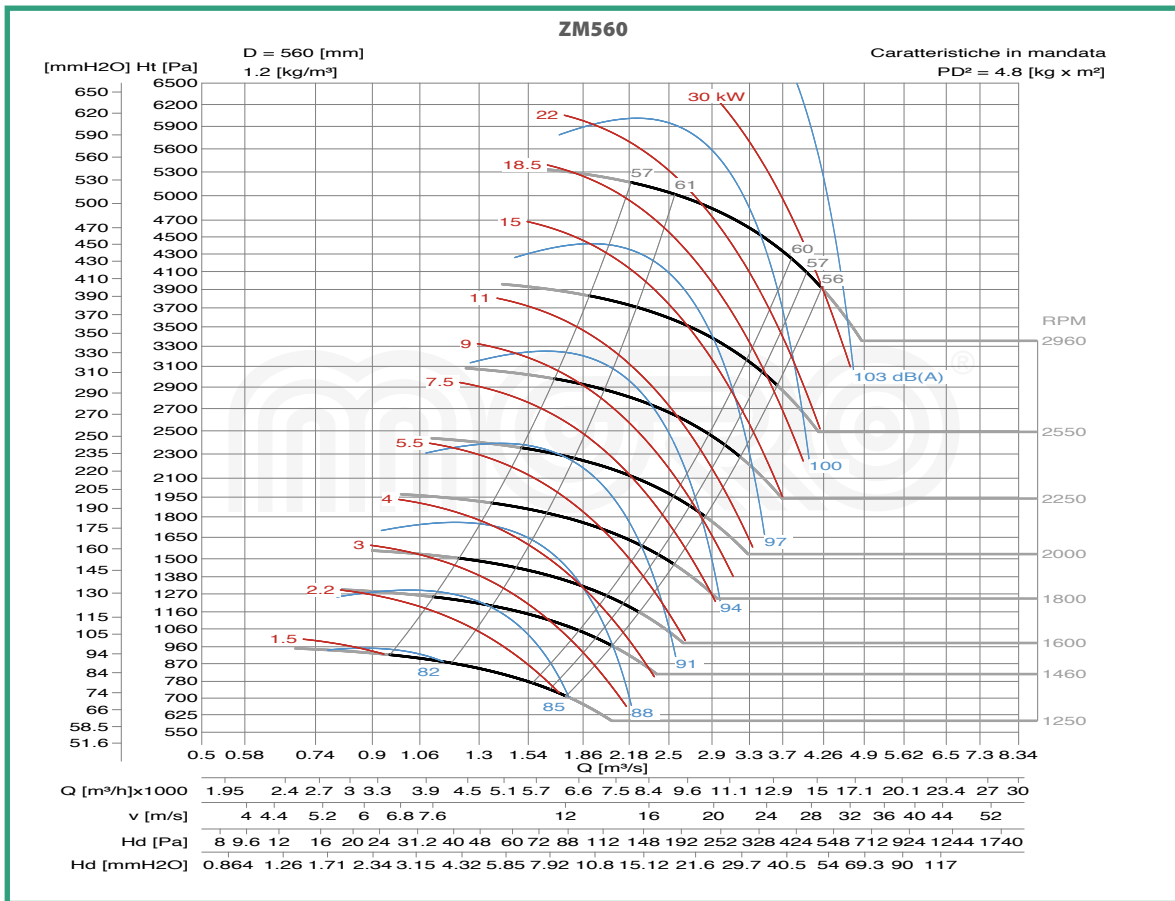
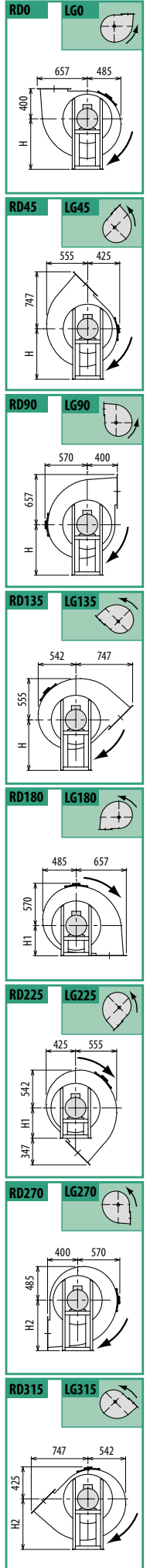
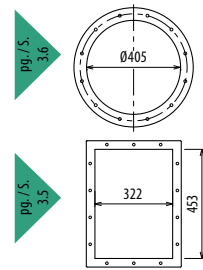


Il ventilatore è orientabile • Peso in tabella comprensivo di motore

- Le ventilateur est orientable
  - The fan is revolvable
  - Der Ventilator ist drehbar
  - El ventilador es orientable
- Le poids dans le tableau inclut le moteur    The weight indicated in the table includes motor    Gewichtsangabe in Tabelle inkl. Motor    El peso en la tabla incluye el motor

TIPO • Type		PESO Weight Kg	PD² Kgf x m²	B	I	H	H1	H2	J	K	M	R	S	U	Ø
VENTILATORE Fan	MOTORE Motor														
ZM560/4R	112 M4	156	4	712	197	670	400	670	289	324	277	49	387	656	12
ZM560/4	132 S4	177	4,8	752	237	670	400	670	337	372	337	59	397	716	12
ZM560/T		200	4,8			670	400	670							

Ulteriori informazioni e quote:  
 ■ Ulérieures informations et cotes:  
 ■ Further information and sizes:  
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 ■ Más informaciones y medidas:



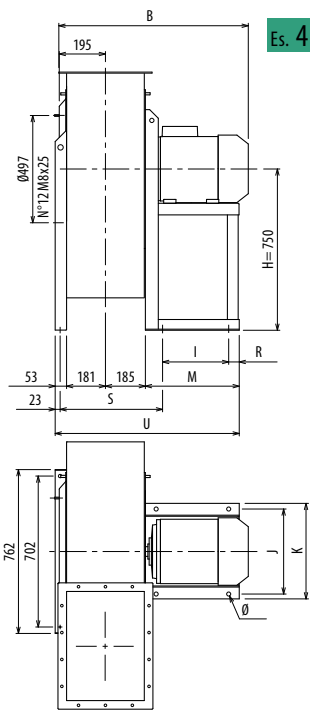


# DIMENSIONI D'INGOMBRO E PESI/CURVE DI FUNZIONAMENTO

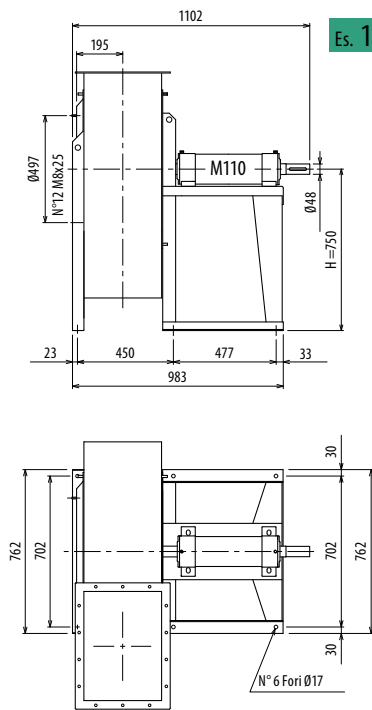
# ZM630



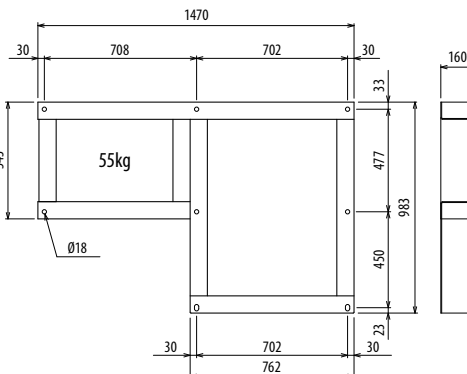
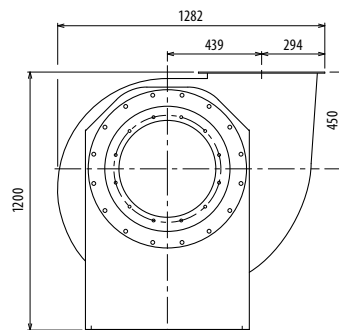
■ DIMENSIONS D'ENGREMENT ET POIDS/COURBES DE FONCTIONNEMENT ■ OVERALL DIMENSIONS AND WEIGHT/WORKING CURVES  
 ■ AUSMAßE UND GEWICHTE/FUNKTIONSKURVEN ■ DIMENSIONES QUE OCUPA Y PESOS/CURVAS DE FUNCIONAMIENTO



Es. 4



Es. 1



Il ventilatore è orientabile • Peso in tabella comprensivo di motore

■ Le ventilateur est orientable  
Le poids dans le tableau inclut le moteur

■ The fan is revolvable  
The weight indicated in the table includes motor

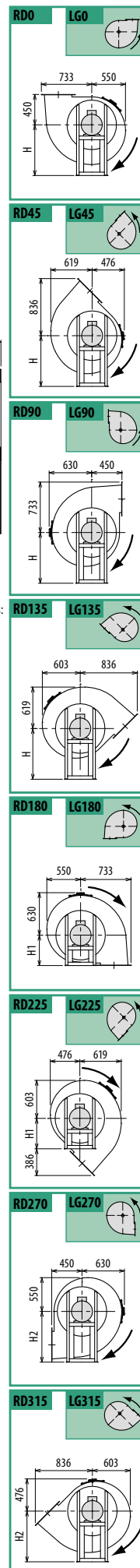
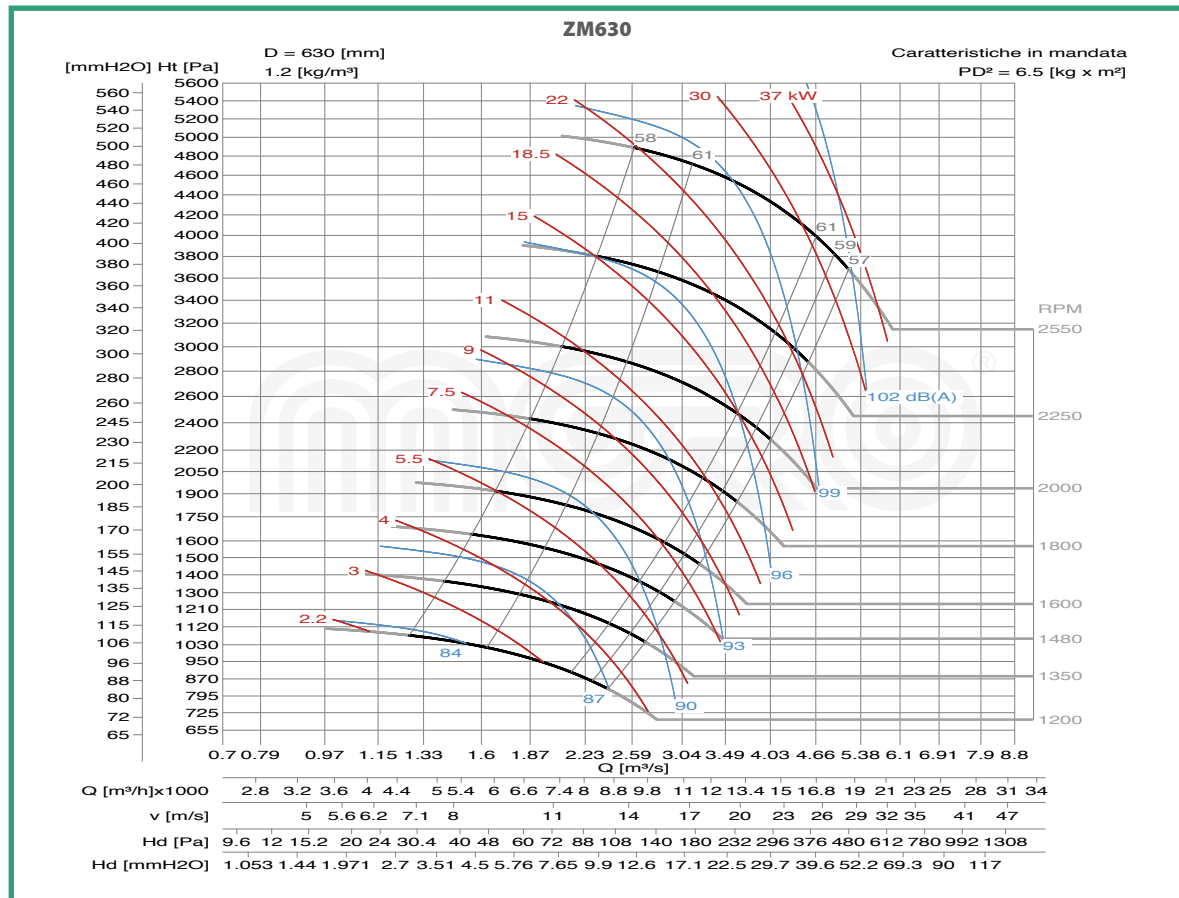
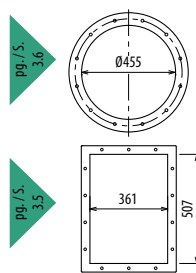
■ Der Ventilator ist drehbar  
Gewichtsangabe in Tabelle inkl. Motor

■ El ventilador es orientable  
El peso en la tabla incluye el motor

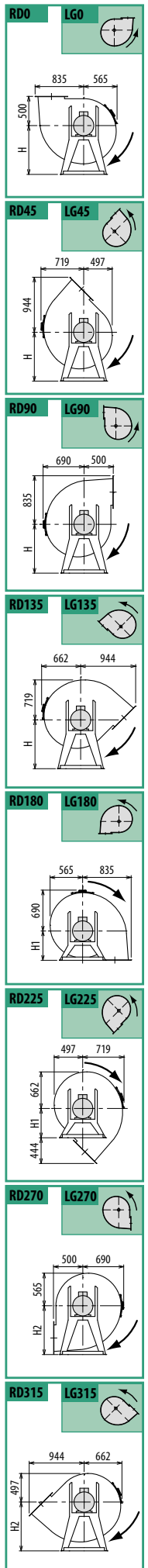
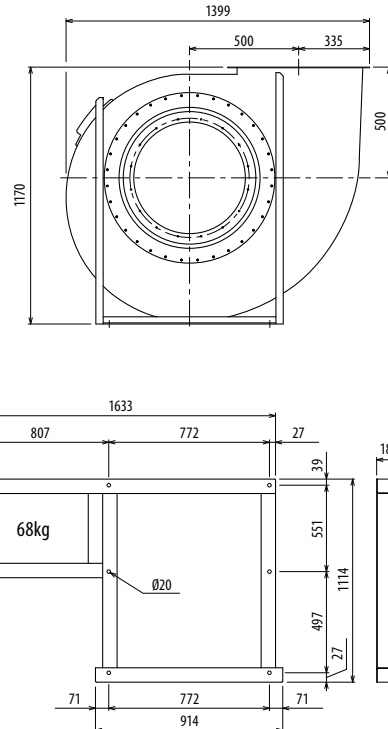
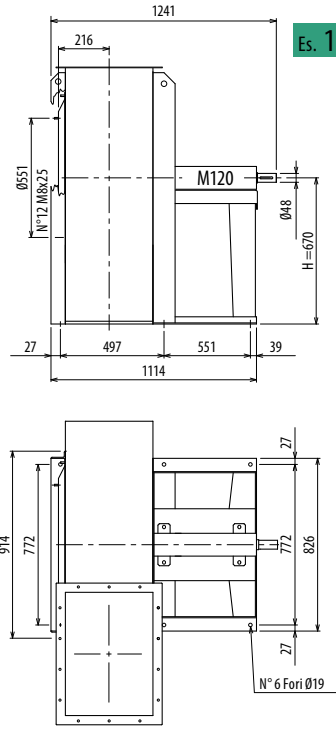
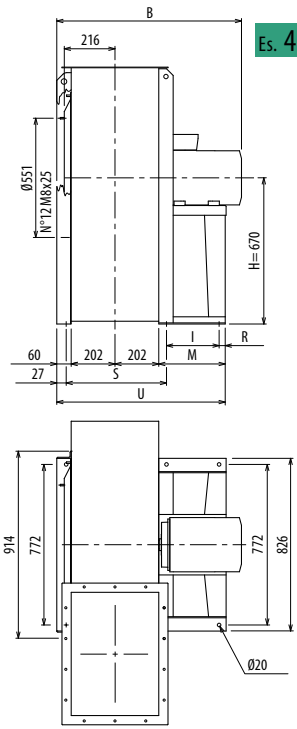
Ulteriori informazioni e quote:

- Ulérieures informations et cotes:
- Further information and sizes:
- Weitere Infos und Größen:
- Más informaciones y medidas:

TIPO • Type		PESO Weight Kg	PD² Kg f x m²	B	I	H	H1	H2	J	K	M	R	S	U	Ø
VENTILATORE Fan	MOTORE Motor														
ZM630/4R	132 M4	202	5,8	792	237	750	450	750	337	372	337	59	436	755	12
ZM630/4	160 M4	250	6,5	897	337	750	450	750	395	440	437	49	446	855	14
ZM630/T		235	6,5			750	450	750							



ZM

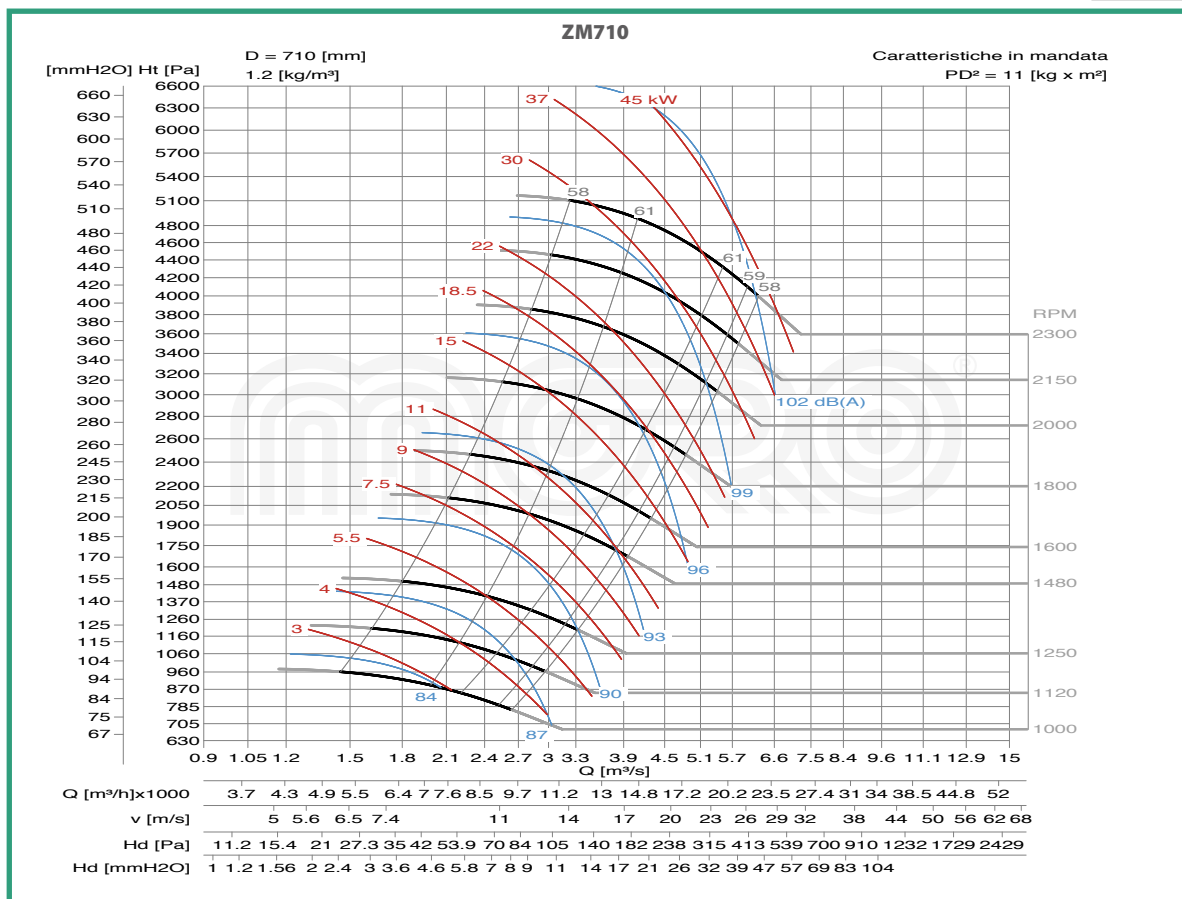
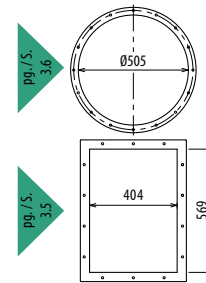


Il ventilatore non è orientabile - Peso in tabella comprensivo di motore

- Le ventilateur n'est pas orientable
- The fan is not revolvable
- Der Ventilator ist nicht drehbar
- El ventilador no es orientable
- Further information and sizes: Weitere Infos und Größen: Más informaciones y medidas:
- Le poids dans le tableau inclut le moteur
- The weight indicated in the table includes motor
- Gewichtsangabe in Tabelle inkl. Motor
- El peso en la tabla incluye el motor

TIPO - Type		PESO Weight Kg	PD <sup>2</sup> Kgf x m <sup>2</sup>	B	I	H	H1	H2	R	S	M	U
VENTILATORE Fan	MOTORE Motor											
ZM710/4R	160 M4	358	10	942	316	670	500	850	49	497	436	889
ZM710/4	160 L4	370	11	942	316	670	500	850	49	497	436	889
ZM710/T		350	11			670	500	850				

Ulteriori informazioni e quote:  
 ■ Ultérieures informations et cotes:  
 ■ Further information and sizes:  
 ■ Weitere Infos und Größen:  
 ■ Más informaciones y medidas:

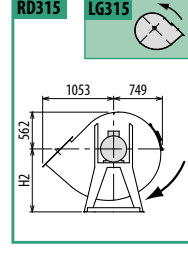
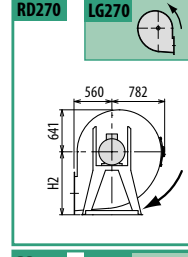
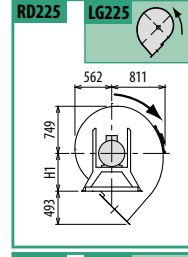
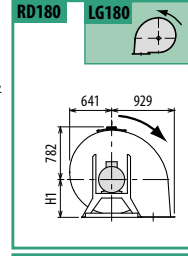
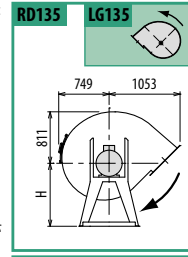
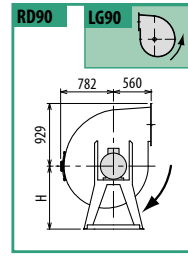
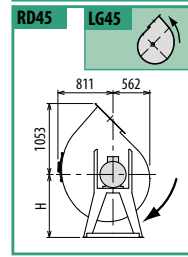
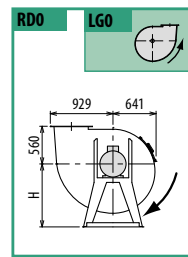
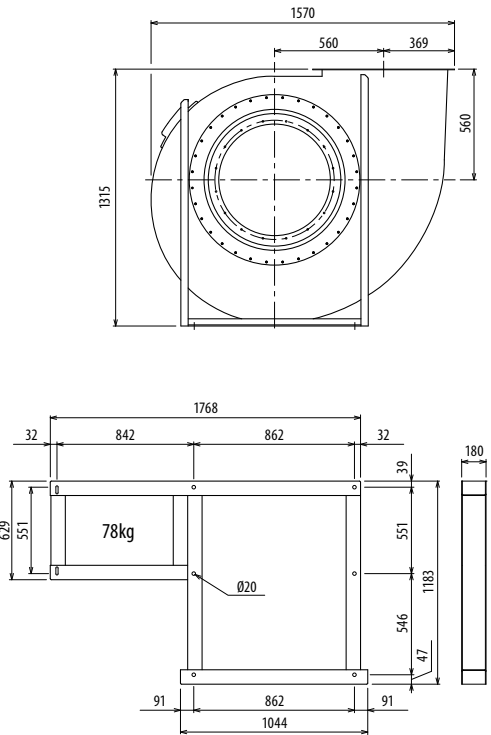
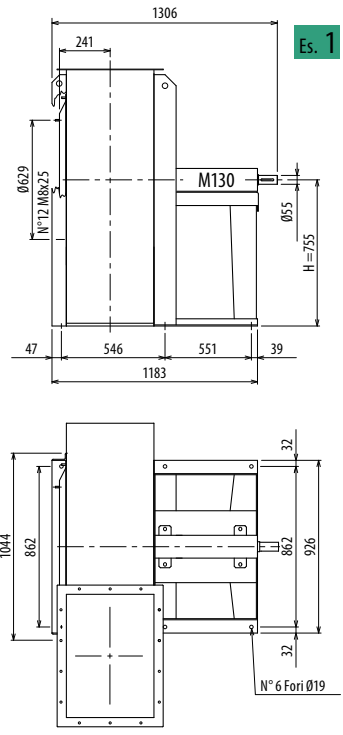
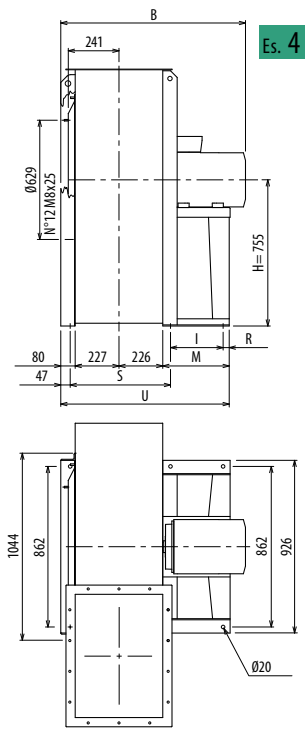


# DIMENSIONI D'INGOMBRO E PESI/CURVE DI FUNZIONAMENTO

# ZM800



■ DIMENSIONS D'ENCOMBREMENT ET POIDS/COURBES DE FONCTIONNEMENT ■ OVERALL DIMENSIONS AND WEIGHT/WORKING CURVES  
 ■ AUSMAßE UND GEWICHTE/FUNKTIONSKURVEN ■ DIMENSIONES QUE OCUPA Y PESOS/CURVAS DE FUNCIONAMIENTO



Il ventilatore non è orientabile - Peso in tabella comprensivo di motore

■ Le ventilateur n'est pas orientable  
Le poids dans le tableau inclut le moteur

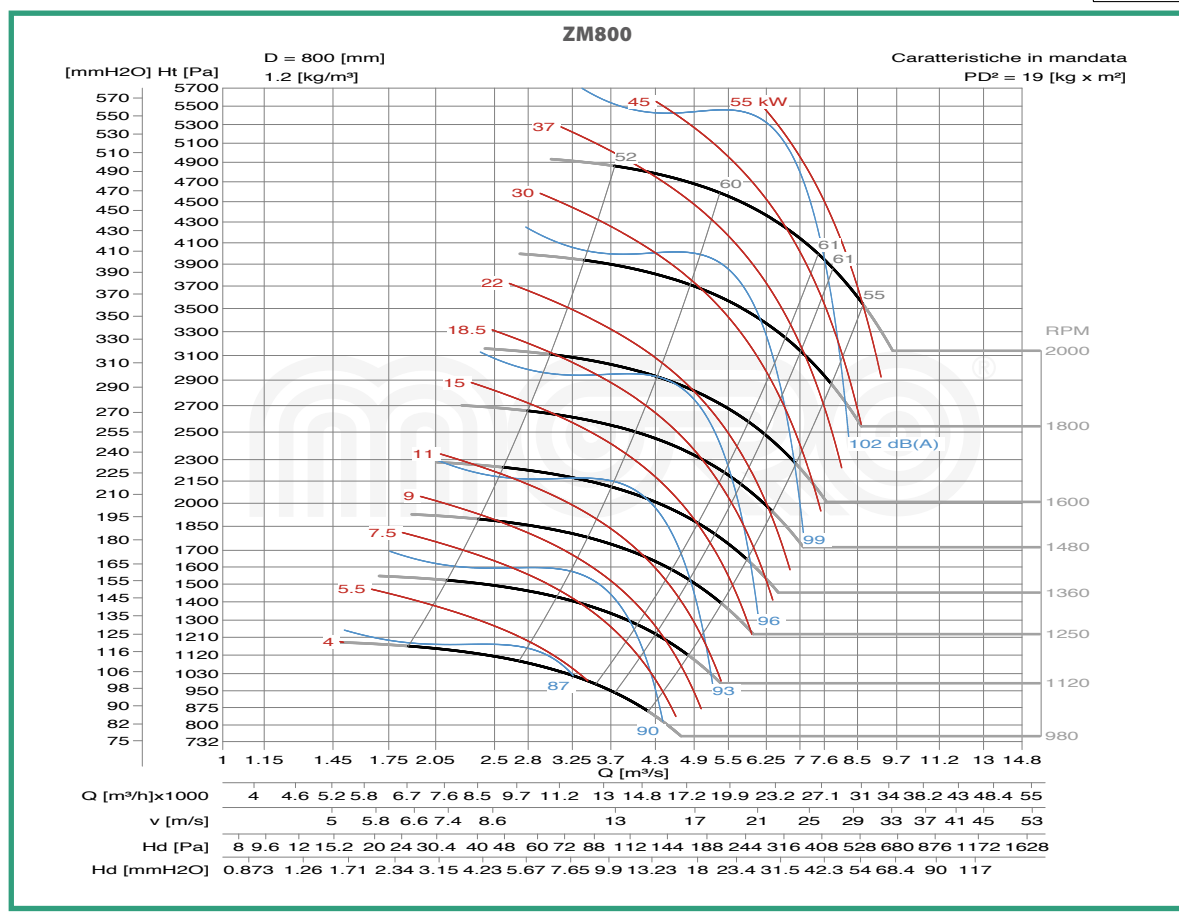
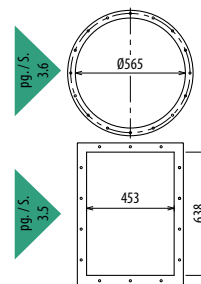
■ The fan is not revolvable  
The weight indicated in the table includes motor

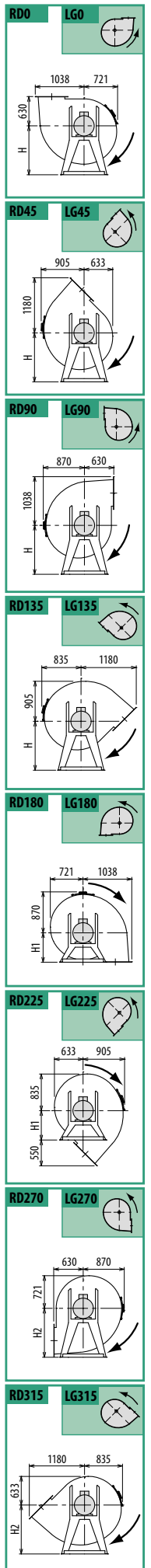
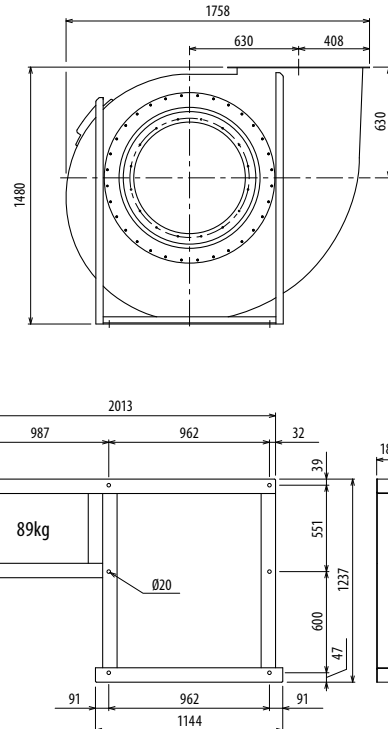
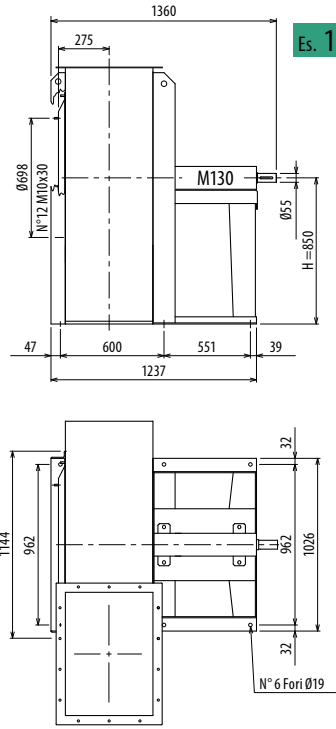
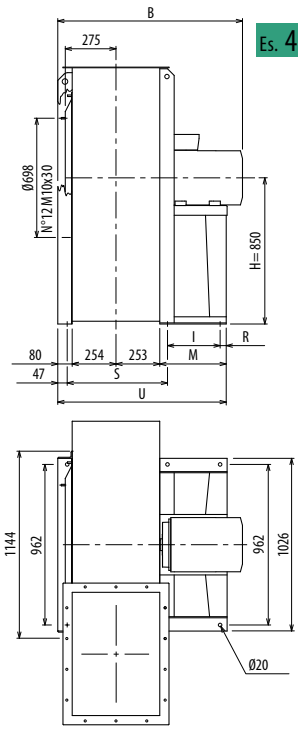
■ Der Ventilator ist nicht drehbar  
Gewichtsangabe in Tabelle inkl. Motor

■ El ventilador no es orientable  
El peso en la tabla incluye el motor

Ulteriori informazioni e quote:  
 ■ Ulérieures informations et cotes:  
 ■ Further information and sizes:  
 ■ Weitere Infos und Größen:  
 ■ Más informaciones y medidas:

TIPO - Type		PESO Weight Kg	PD <sup>2</sup> Kgf x m <sup>2</sup>	B	I	H	H1	H2	R	S	M	U
VENTILATORE Fan	MOTORE Motor											
ZM800/4R	180 M4	526	17	1092	361	755	560	950	39	546	460	993
ZM800/4	200 L4	639	19	1200	401	755	560	950	39	546	500	1033
ZM800/T		420	19			755	560	950				



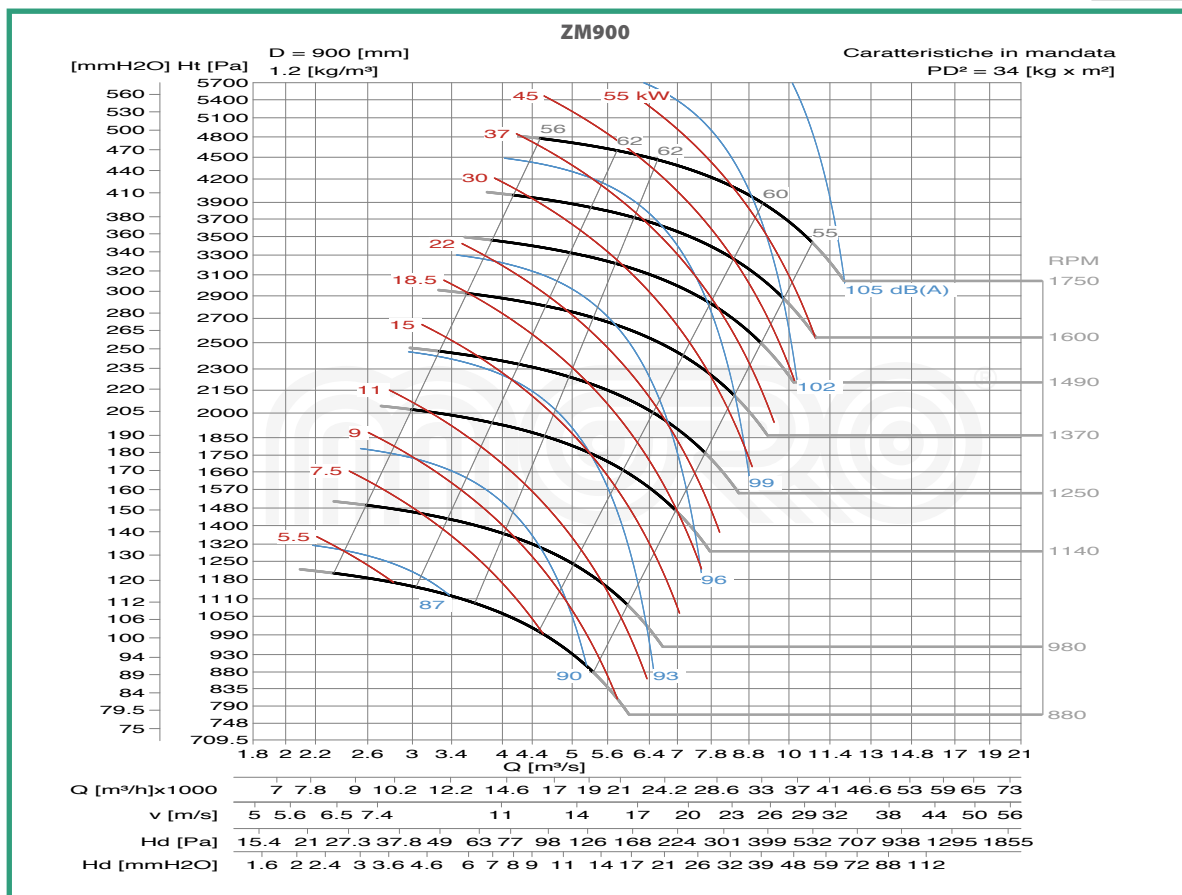
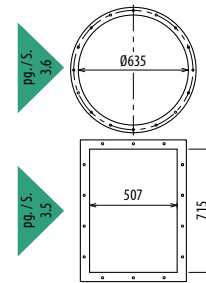


Il ventilatore non è orientabile - Peso in tabella comprensivo di motore

- Le ventilateur n'est pas orientable
- The fan is not revolvable
- Der Ventilator ist nicht drehbar
- El ventilador no es orientable
- Further information and notes: Ulérieures informations et cotes: Weitere Infos und Größen: Más informaciones y medidas:
- Le poids dans le tableau inclut le moteur
- The weight indicated in the table includes motor
- Gewichtsangabe in Tabelle inkl. Motor
- El peso en la tabla incluye el motor

TIPO - Type		PESO Weight Kg	PD <sup>2</sup> Kgf x m <sup>2</sup>	B	I	H	H1	H2	R	S	M	U
VENTILATORE Fan	MOTORE Motor											
ZM900/4R	225 S4	782	32	1236	441	850	630	1060	39	600	540	1127
ZM900/4	225 M4	817	34	1296	441	850	630	1060	39	600	540	1127
ZM900/T		515	34			850	630	1060				

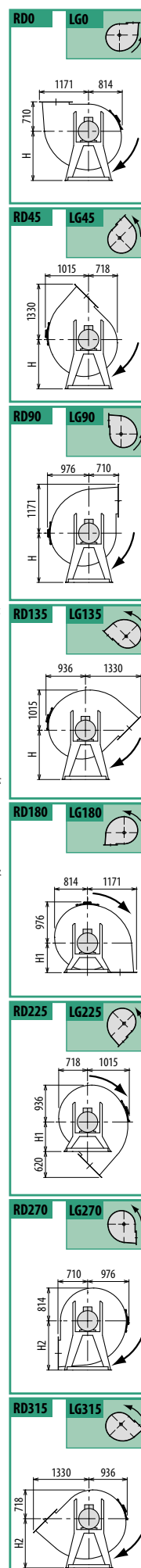
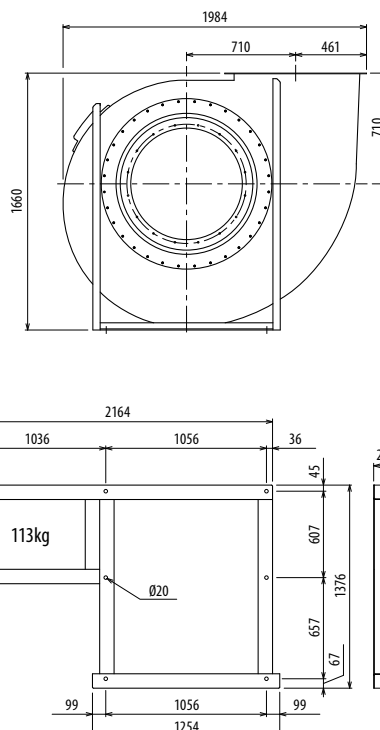
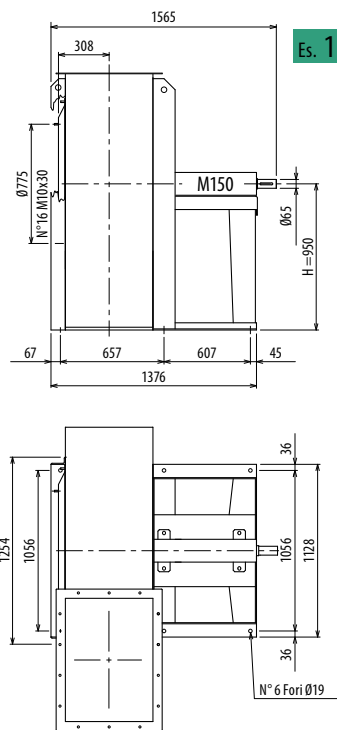
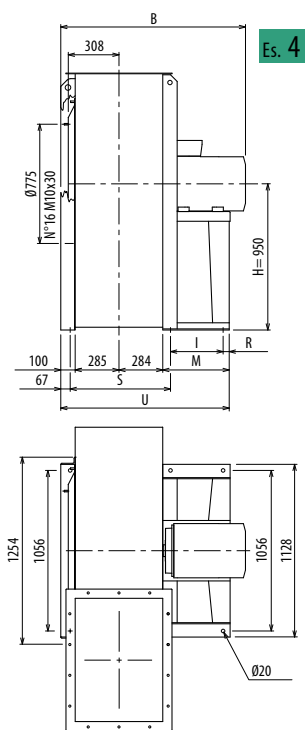
Ulteriori informazioni e quote:  
 ■ Ulérieures informations et cotes:  
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# DIMENSIONI D'INGOMBRO E PESI/CURVE DI FUNZIONAMENTO

■ DIMENSIONS D'ENCOMBREMENT ET POIDS/COURBES DE FONCTIONNEMENT ■ OVERALL DIMENSIONS AND WEIGHT/WORKING CURVES  
 ■ AUSMAßE UND GEWICHTE/FUNKTIONSKURVEN ■ DIMENSIONES QUE OCUPA Y PESOS/CURVAS DE FUNCIONAMIENTO

# ZM1000

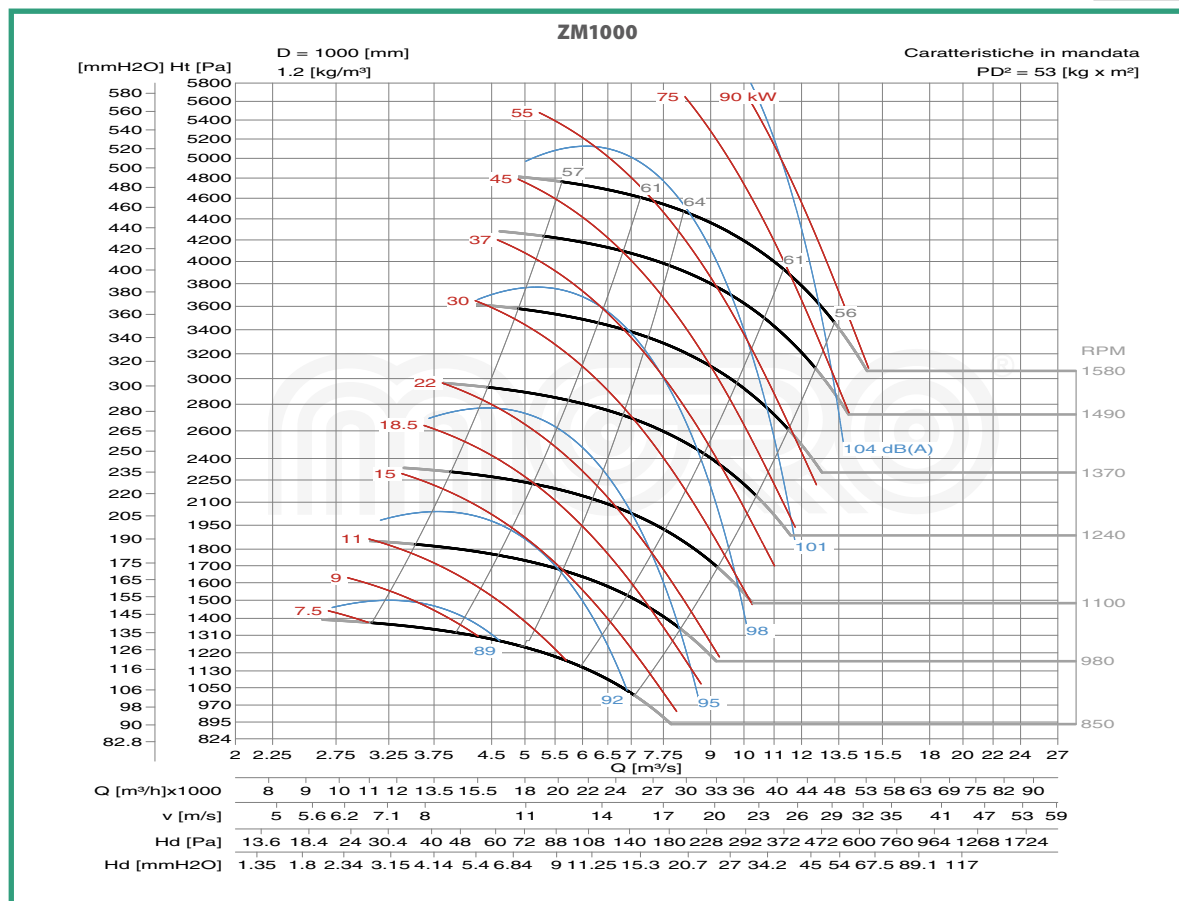
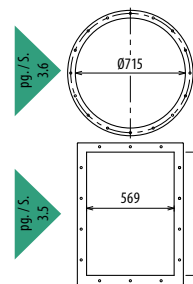


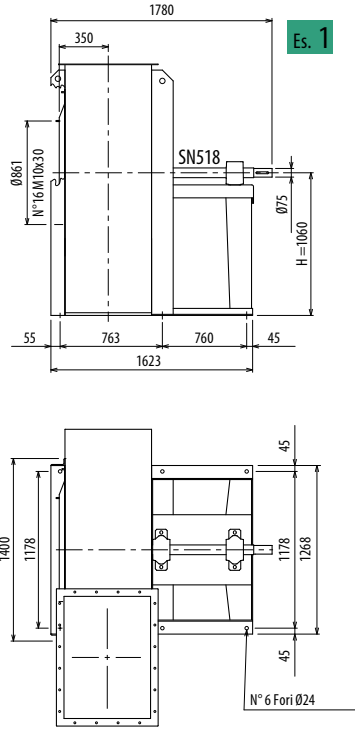
Il ventilatore non è orientabile - Peso in tabella comprensivo di motore

- Le ventilateur n'est pas orientable
  - The fan is not revolvable
  - Der Ventilator ist nicht drehbar
  - El ventilador no es orientable
- Le poids dans le tableau inclut le moteur The weight indicated in the table includes motor Gewichtsangabe in Tabelle inkl. Motor El peso en la tabla incluye el motor

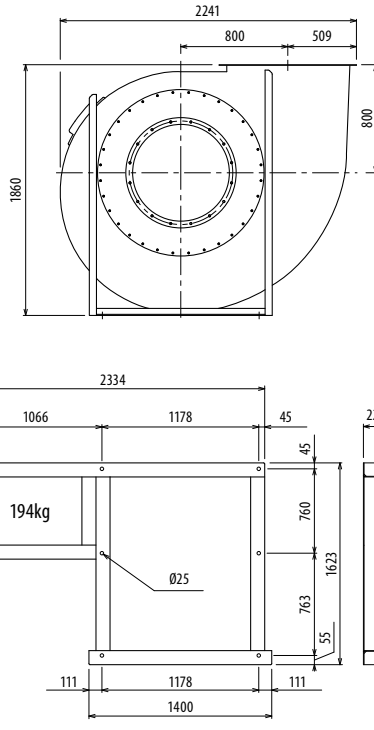
Ulteriori informazioni e quote:  
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 ■ Further information and sizes:  
 ■ Weitere Infos und Größen:  
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TIPO - Type		PESO Weight Kg	PD <sup>2</sup> Kgf x m <sup>2</sup>	B	I	H	H1	H2	R	S	M	U
VENTILATORE Fan	MOTORE Motor											
ZM1000/4R	250 M4	1083	48	1486	500	950	710	1180	45	657	600	1269
ZM1000/4	280 S4	1227	53	1489	590	950	710	1180	45	657	690	1359
ZM1000/T		732	53			950	710	1180				





Es. 1



Il ventilatore non è orientabile

■ Le ventilateur n'est pas orientable

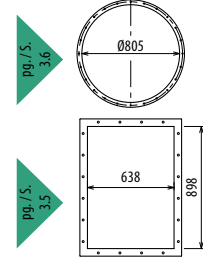
■ The fan is not revolvable

■ Der Ventilator ist nicht drehbar

■ El ventilador no es orientable

TIPO - Type		PESO Weight	PD <sup>2</sup>	B	I	H	H1	H2	R	S	M	U
VENTILATORE Fan	MOTORE Motor	Kg	Kgf x m <sup>2</sup>									
ZM1120/T		1040	120			1060	800	1320				

Ulteriori informazioni e quote:  
 ■ Ulérieures informations et cotes:  
 ■ Further information and sizes:  
 ■ Weitere Infos und Größen:  
 ■ Más informaciones y medidas:



**RD0 LG0**

**RD45 LG45**

**RD90 LG90**

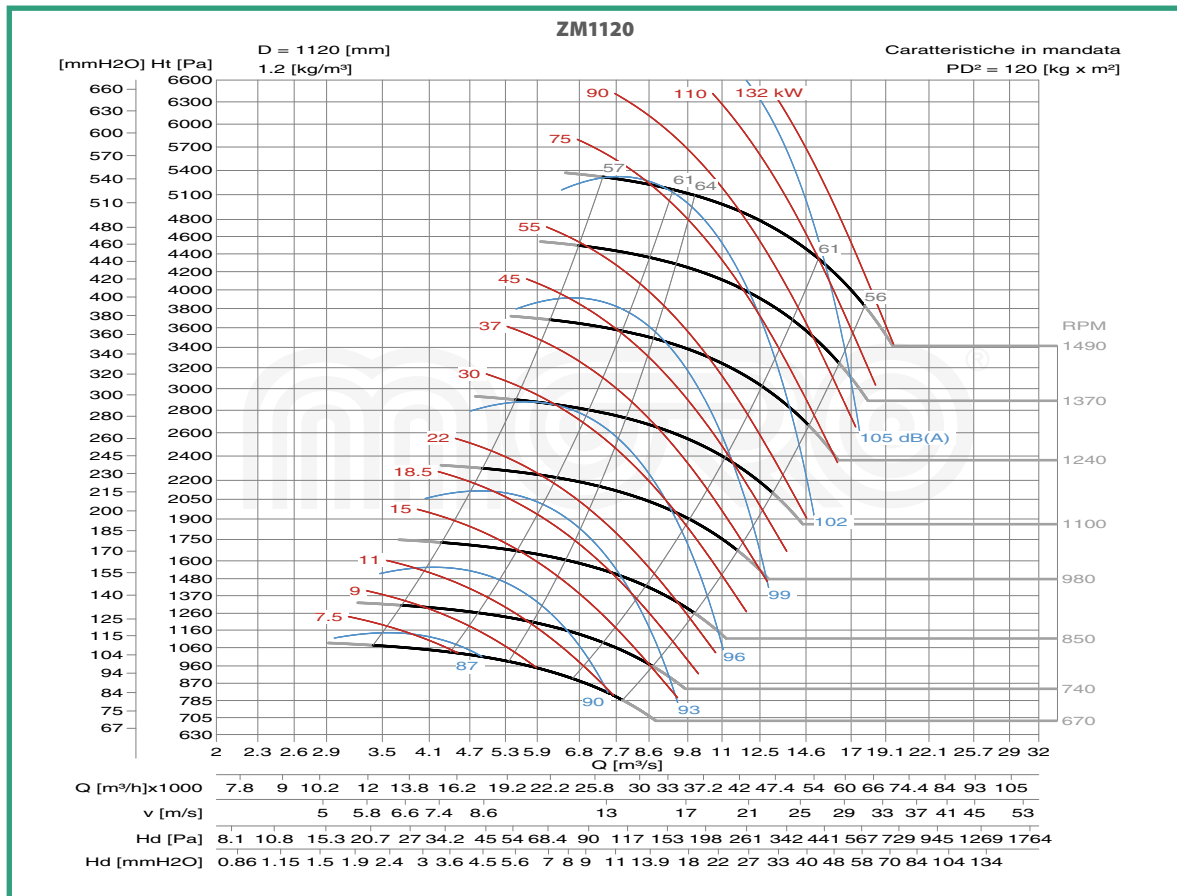
**RD135 LG135**

**RD180 LG180**

**RD225 LG225**

**RD270 LG270**

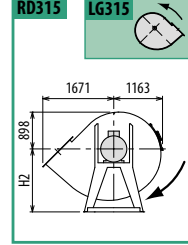
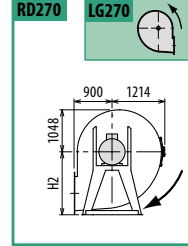
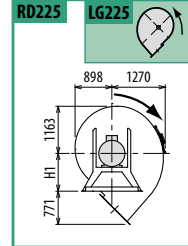
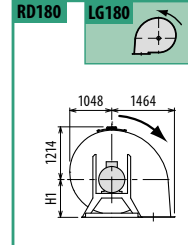
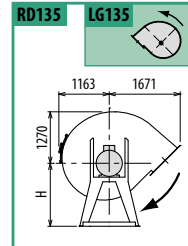
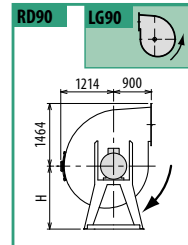
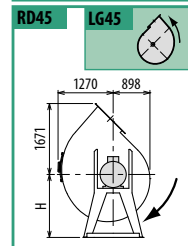
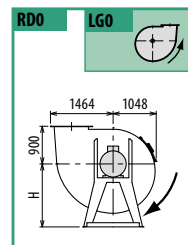
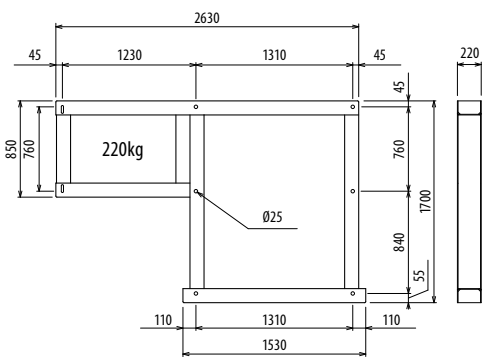
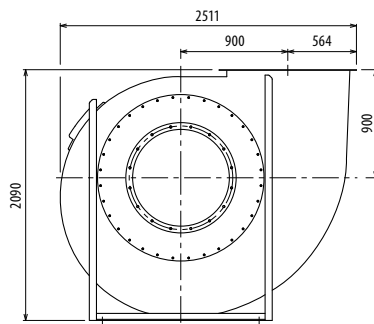
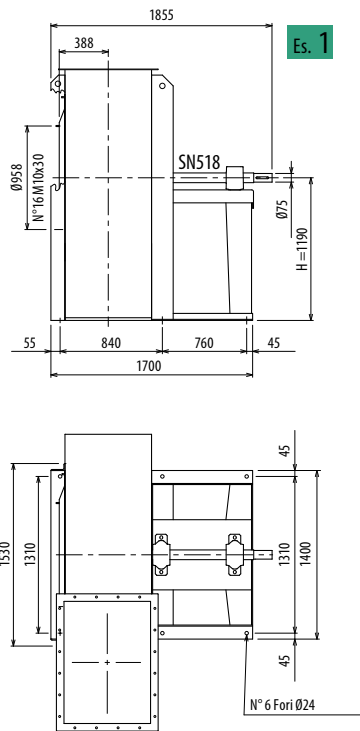
**RD315 LG315**



# DIMENSIONI D'INGOMBRO E PESI/CURVE DI FUNZIONAMENTO

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# ZM1250



Il ventilatore non è orientabile

■ Le ventilateur n'est pas orientable

■ The fan is not revolvable

■ Der Ventilator ist nicht drehbar

■ El ventilador no es orientable

TIPO - Type		PESO Weight Kg	PD <sup>2</sup> Kgf x m <sup>2</sup>	B	I	H	H1	H2	R	S	M	U
VENTILATORE Fan	MOTORE Motor											
ZM1250/T		1195	190			1190	900	1500				

Ulteriori informazioni e quote:  
 ■ Ulérieures informations et cotes:  
 ■ Further information and sizes:  
 ■ Weitere Infos und Größen:  
 ■ Más informaciones y medidas:

