



Our recognized professionalism and traditional reliability have gained Tequivent Ltd an increasing loyal clientele and we are committed to servicing our customers throughout the globe.

Backed by more than 40 years of specialised technical and hands on experience we have gained an international reputation for high quality, well designed purpose built machines. Our primary objective is to offer a complete range of reliable products that meet the increasing demands of our clients' specific needs. In order to stay competitive and relevant we offer products to the highest standard at a competitive price that meets all European specifications and regulations.

In addition to standard production items our highly flexible production enables us to produce special fans upon request, each built to the same exacting standard but to specific individual needs. Please contact us for any design modification you may require.

We can facilitate the design and application of our fans into your products and provide seasoned advice to individual problems and needs. We are at your disposal for such requests.

We can also provide full technical drawings and detailed fan curves when required.

We have a purpose built facility in South Wales with convenient transport links around the UK.

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### **FAN SELECTION**

The main parameters for fan selection are: flow rate, pressure, efficiency and rotational speed.

### **FLOW RATE**

The flow rate is the volume of the air taken in over a certain period of time and it is normally expressed in m³/s, cfm or m³/h.

$$Q_v = v A 3600$$
 where:  $Q_v = Flow rate in m^3/h$ 

v = Average fluid speed in m/s

A = Outlet section in m<sup>2</sup>

### **PRESSURE**

The total pressure a fan can generate is the algebraic sum of the static and dynamic pressures and is normally expressed in mmH<sub>2</sub>O or Pa.

The static pressure is that portion of the total pressure related to the fluid itself, no matter what its air speed: it is the potential energy that overcomes the resistance exerted by the circuit as the fluid passes through.

The dynamic pressure is derived from the kinetic effect of the moving fluid and is a function of the speed and density of that fluid.

$$P_d = \frac{\gamma}{2g} V^2$$

where:  $P_d = Dynamic pressure in mmH^20$ 

γ = Specific gravity of the fluid

g = Gravity acceleration (9,81 m/s<sup>2</sup>)

v = Average fluid speed in m/s

### **EFFICIENCY**

The mechanical energy produced by the fan motor is always greater than the energy the fan imparts to fluid taken up. The percentage ratio between the latter and former is the efficiency.

$$\eta = \frac{Qv Pt}{102 PA}$$

where  $\eta = Efficiency$ 

Qv = Capacity in m<sup>3</sup>/s

 $P_t = Total pressure in mmH^20$ 

 $P_A$  = Absorbed power in Kw

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### **FAN LAWS**

The performance of a fan can be drawn from the variation in rpm "n".

1) The fan being equal, the variation in flow rate "Q<sub>v</sub>" is proportional to the ratio of rpm.

$$Q_{v}1 = Qv \frac{n1}{n}$$

2) The fan being equal, the variation in pressure "P" is directly proportional to the square of the rpm.

$$\mathsf{P}_1 = P \, \left[ \, \frac{\mathsf{n} \, \mathsf{1}}{n} \, \right]^2$$

3) The fan being equal, the variation in absorbed power "P<sub>A</sub>" is directly proportional to the cube of the rpm.

$$P_{A1} = P_A \left[ \frac{n1}{n} \right]^3$$

For fans belonging to the same series, performance can be determined according to the variation in impeller diameter.

1) Rpm being equal, the variation in flow rate " $Q_v$ " is proportional to the cube of the impeller diameter ratio.

$$Q_v 1 = Qv \left[ \frac{D1}{D} \right]^3$$

2) Rpm being equal, the variation in pressure "P" is proportional to the square of the impeller diameter ratio.

$$\mathsf{P}_1 = P \, \left[ \, \frac{\mathsf{D}1}{} \, \right]^2$$

3) Rpm being equal, the variation in absorbed power "P<sub>A</sub>" is proportional to the impeller diameter ratio raised to a power of five.

$$P_{A1} = P_A \left[ \frac{D1}{D} \right]^5$$



### **WORKING DIAGRAMS**

The pressure produced by the fan is not constant, it varies according to the flow rate.

Therefore, to use the fan correctly, you need to know the pressure that corresponds to each flow rate. Together these values give the working diagram.

### **VARIATION IN PERFORMANCE**

The performance in the working diagrams refers to a fluid having a density of 1,226 kg/m<sup>3</sup> which corresponds to air at a temperature of 15°C and at a barometric pressure of 760 mmHg (sea level).

When the temperature of the barometric pressure change, the air density, and consequently the fan performance, varies.

The flow rate does not vary.

The total, static and dynamic pressures vary proportionally to changes in density.

Moreover, the absorbed power varies proportionally to changes in density.

Since barometric pressure varies with altitude, it is clear that altitude affects fan performance.

Therefore, if the fan is to be installed under conditions other than those indicated in the working diagrams, before choosing the machine, make the necessary corrections to the performance requirements and check them against the diagrams.

All you need to do is just multiply the pressure and absorbed power values by the coefficients in the table below:

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	ALTEZZ	A IN METRI S	SUL L <b>I</b> VELLO	DEL MARE	ELE	VATION IN I	METERS ABO	OVE SEA LE	VEL
Temperatura de∎'aria in °C	0	500	1000	1500	2000	2500	3000	3500	4000
Air temperature in °C	PRESSIO	ONE BAROM	ETRICA IN T	ORR (mmHg	) BAR	ROMETRIC P	RESSURE IN	TORR (mm	Hg)
	760	720	680	640	600	560	530	500	470
0	1,293	1,225	1,156	1,088	1,020	0,952	0,901	0,850	0,799
15	1,266	1,161	1,096	1,032	0,967	0,903	0,854	0,806	0,758
50	1,093	1,035	0,977	0,920	0,862	0,805	0,762	0,719	0,676
100	0,947	0,896	0,846	0,797	0,747	0,697	0,660	0,622	0,585
150	0,835	0,790	0,746	0,702	0,659	0,615	0,582	0,549	0,516
200	0,745	0,707	0,667	0,628	0,589	0,550	0,520	0,491	0,461
250	0,675	0,639	0,604	0,568	0,533	0,497	0,471	0,444	0,417
300	0,616	0,583	0,551	0,519	0,486	0,454	0,429	0,405	0,381
350	0,567	0,537	0,507	0,477	0,447	0,417	0,395	0,373	0,350

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### **WORKING POINT**

The pressure needed to overcome pressure losses and the required flow rate give the working point along the curve.

It is always best for this point to be situated toward the centre of the curve, the best operating zone.

- 1) With the opening closed, that is with zero flow rate.
- 2) With the opening free, that is with zero static pressure; in this case total and dynamic pressure coincide.

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### **REQUIRED FLOW RATE**

To determine the flow rate required to ventilate an area, calculate the volume of the room and multiply it by the number of air exchanges.

### **AIR EXCHANGES PER HOUR**

The term air exchanges indicates how many times an hour the air in a specific area must be changed to ensure satisfactory ventilation.

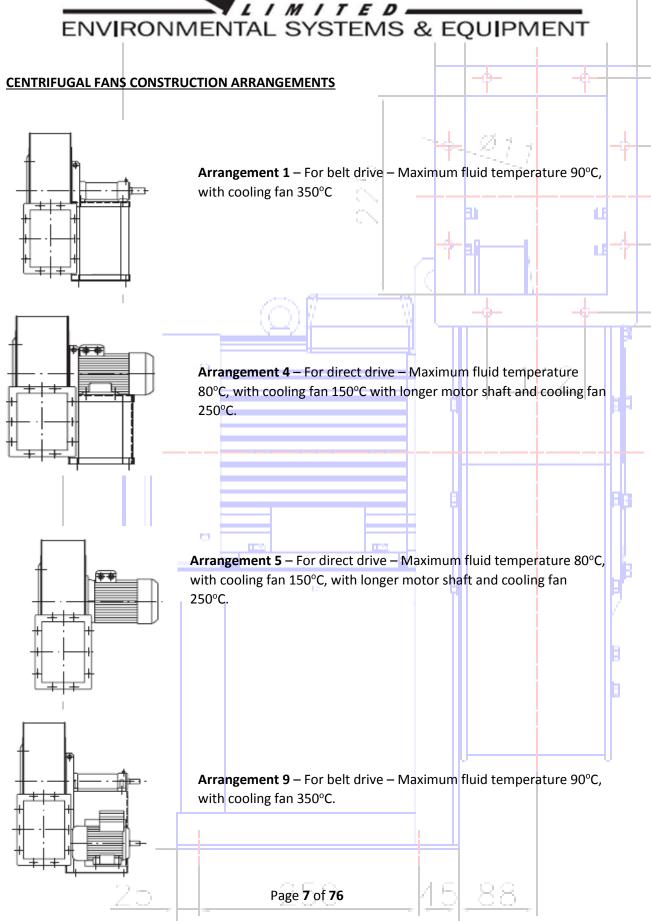
For your information the number of suggested air exchanges per hour is listed below:

Assembly rooms	4-8	Dye works		20 - 30	Living rooms	3-6
Bakeries	20 - 30	Electroplating sl	hops	10 - 12	Mushroom houses	6 - 10
Banks/Building Societies	4 - 8	Engine rooms	•	15 - 30	Offices	6 - 10
Bathrooms	6 - 10	Entrance halls &	corridors .	3 - 5	Paint shops (not cellulose)	10 - 20
Bedrooms	2-4	Factories and w	vorkshops	8 - 10	Photo & X-ray darkrooms	10 - 15
Billiard Rooms *	6-8	Foundries		15 - 30	Public house bars	12 minimum
Boiler Rooms	15 - 30	Garages		6-8	Recording control rooms	15 - 25
Cafes and coffee bars	10 - 12	Glasshouses		25 - 60	Recording studios	10 - 12
Canteens	8 - 12	Gymnasiums		6 minimum	Restaurants	8 - 12
Cellars	3 - 10	Hairdressing sa	lons	10 - 15	Schoolrooms	5-7
Changing Rooms Main area	6 - 10	Hospitals	- sterilising	15 - 25	Shops and supermarkets	8 - 15
Changing Rooms Shower area	15 - 20		- wards	6-8	Shower baths	15 - 20
Churches	1 - 3	Kitchens	<ul> <li>domestic</li> </ul>	15 - 20	Stores & warehouses	3-6
Cinemas & theatres *	10 - 15		# - commercial	30minimum	Squash courts	4 minimum
Club rooms	12 minimum	Laboratories		6 - 15	Swimming baths	10 - 15
Compressor rooms	10 - 20	Laundrettes		10 - 15	Toilets	6 - 10
Conference rooms	8 - 12	Laundries		10 - 30	Utility rooms	15 - 20
Dairies	8 - 10	Lavatories		6 - 15	Welding shops	15 - 30
Dance halls	12 minimum	Lecture theatres		5 - 8		
Dental surgeries	12 - 15	Libraries		3-5		

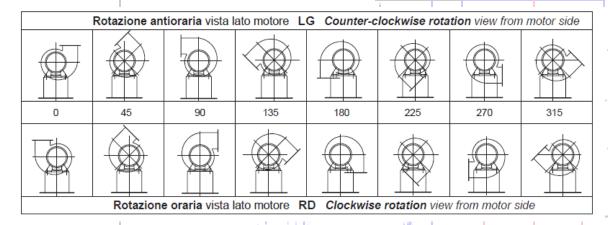
### **NOISE LEVEL**

The noise level values indicated in the catalogue are expressed in dB(A) and are measured in an open area 1.5 meters from the fan operating with the highest output flow rate and connected to inlet and outlet pipe connections according to UNI standards.

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### **DISCHARGE DIRECTIONS**



Please note that the discharge directions are referred to by the foot mounting on B3/B5 motors

The terminal box is used as a reference when there is not a foot mounting present – on B5 motors.

### **UNITS OF MEASURE**

Since not all countries use the same units of measure, a table of conversions is presented below to make consultation easier.

Flow rate:

Cubic meters per second

Cubic feet per minute

1 m³/s

 $= 60 \text{ m}^3/\text{m} = 3600 \text{ m}^3/\text{h}$ 

1cfm

=  $0.000472 \text{ m}^3/\text{s} = 1.7 \text{ m}^3/\text{h}$ 

Pressure:

Millimeters of water column

Millibar Pascal

Torr

Inches of water column

1 mmH20

= 9.81 Pa

1 mbar

 $= 0,001 \text{ bar} = 10.2 \text{ mmH}^20$ 

1 Pa

 $= 0,102 \text{ mmH}^20$ 

1 mmHg

 $= 13.6 \text{ mmH}^20$ 

1 inwg

 $= 25.4 \text{ mmH}^20$ 

Power:

Horse powers

1 Hp

= 735.5 w = 0.7355 Kw

Kwatt

1 Kw

= 1000 w = 1.36 Hp

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### **HOW TO ORDER**

When placing an order, to ensure correct identification of the fan, always indicate the following:

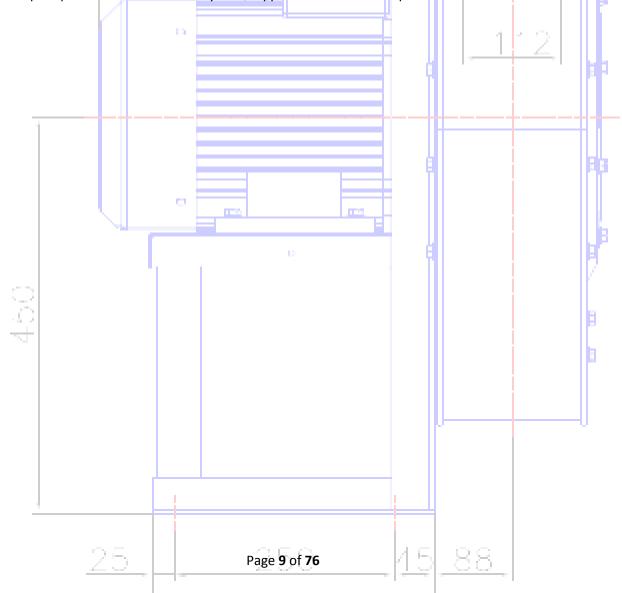
- 1) Type of fan chosen, including duty point we will confirm the motor size.
- 2) Supply voltage and frequency.
- 3) Position and discharge.
- 4) Any requested accessories.
- 5) Any special construction requirements.

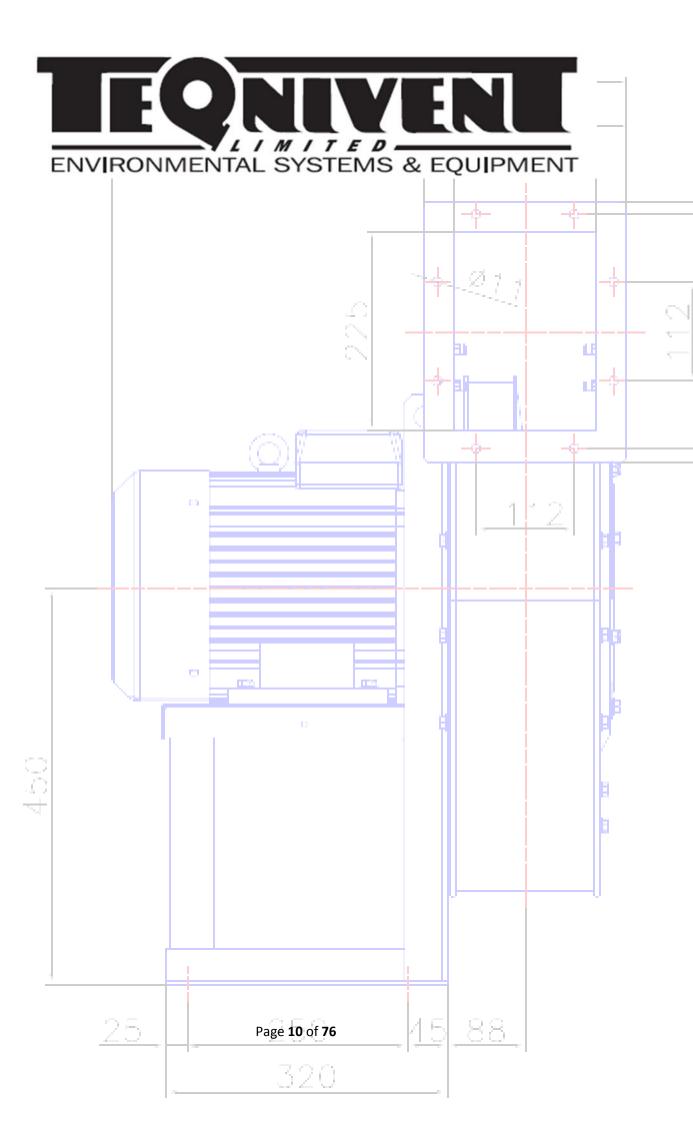
### **WARRANTY**

All our products have a 12-month warranty starting from the date of purchase.

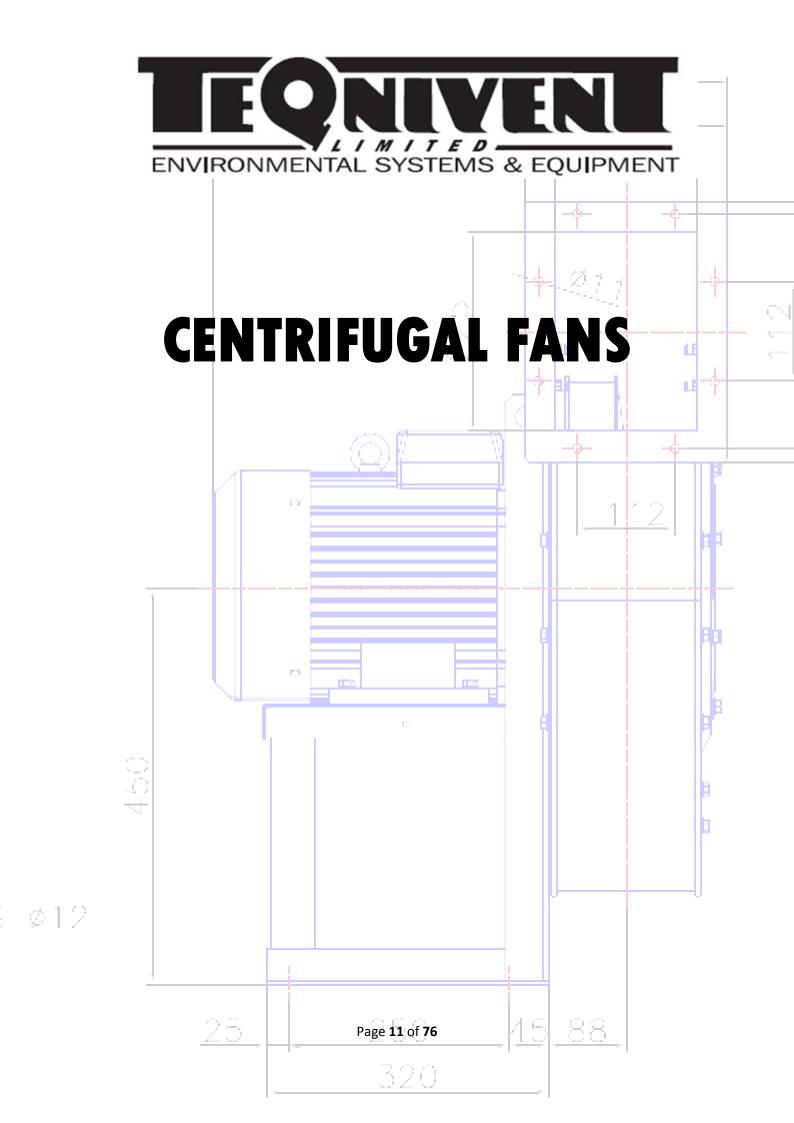
The warranty covers all parts of the machine except those subject to wear or accidental damage. It covers spare parts and labour for every unit shipped back to us at the purchasers cost.

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The Series **U/HC** centrifugal fans are designed to take up fumes or even slightly dusty air at **temperatures** of up to a maximum 80°C.

These fans are used for all domestic and industrial applications requiring the removal of large volumes of ducted air.

The outlet of the spot-welded steel sheet **spiral casings** are fitted with securing flanges. The special holes make it possible to orient the fan discharge angle in 45° steps by rotating either clockwise RD or counter-clockwise LG (see discharge direction table).

The steel sheet **impellers** with forward curved "Sirocco"-type blades, have been carefully balanced, both statically and dynamically, and are connected directly to the motor shaft.

The **motors** installed are asynchronous, three-phase or single-phase, 2 or 4 poles, B5, self-ventilated, designed for continuous service and are UNEL and IEC compliant.

### **ACCESSORIES**

RP	inlet	protection net	
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RA onlet spigot

RF inlet flanged fitting

CA inlet counter-flange

**FL** inlet filter

**SF** throttle valve

**SI** iris flow control

**RM** outlet protection net

**CM** outlet counter-flange

**QT** outlet square-round joint

**BA** motor support base



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### **SPECIAL VERSIONS**

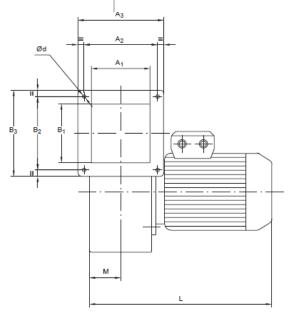
- AI made of stainless steel AISI 304 to extract corrosive fumes
- AS anti-spark version in accordance with ANIMA-COAER standards (table NV105)
- **HZ** manufactured to work at Hz. 60
- **HT** conveyed fluid temperature up to a maximum of 250oC (this version is made with longer shaft motor and extra cooling fan)
- **TH** high protection for use in tropical climate with high degree of humidity
- EX ATEX version zone 1 zone 2 (GAS) and zone 21 zone 22 (DUST) U/HC 102 excluded

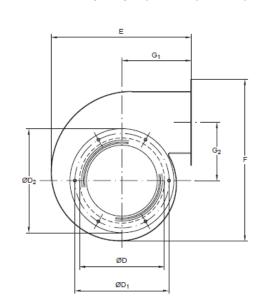
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## ENVIRONMENTAL SYSTEMS & EQUIPMENT

### OVERALL DIMENSIONS





ALC: YES

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Ventilatore Fan Tipo/Type	A <sub>1</sub>	B <sub>1</sub>	A <sub>2</sub>	B <sub>2</sub>	<b>A</b> <sub>3</sub>	B <sub>3</sub>	ød	øD	øD <sub>1</sub>	øD <sub>2</sub>	Е	F	G₁	G <sub>2</sub>	L	М	kg
U/HC 102	60	60	76	76	90	90	7	90	109	120	158	180	79	68	217	33	2,3
U/HC 122	80	80	96	96	115	115	8,2	119	136	150	205	238	93	84	254	43	4,2
U/HC 142	90	90	112	112	130	130	8,2	129	155	170	219	252	109	92	271	48	5,6
U/HC 152	108	108	137	137	160	160	8,2	150	175	190	252	290	129	98	301	57	7,1
U/HC 161															306		8,1
U/HC 162	108	108	137	137	160	160	8,2	148	175	190	252	290	129	98	329	57	9
U/HC 164															290		7,1
U/HC 181															341		11,7
U/HC 182	118	118	147	147	170	170	8,2	169	200	215	288	334	142	118	358	63	13,2
U/HC 184															313		7,8
U/HC 201															377		15,9
U/HC 202	137	137	171	171	200	200	8,2	189	220	242	327	376	162	136	400	73	21
U/HC 204															337		9,7

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## ENVIRONMENTAL SYSTEMS & EQUIPMENT **MODELS AND PERFORMANCES** U/HC 102 U/HC 122 U/HC 142 10 25 50 75 100 125 150 175 200 225 250 100 150 200 250 300 350 400 450 500 1111U/HC 152 U/HC 161 - U/HC 162 U/HC 181 - U/HC 182 U/HC 201 = U/HC 202 U/HC 164 100 pt 60 100 200 300 400 500 600 700 pt-ps mmH<sub>2</sub>O U/HC 204 30 25 20 15 10 400 600 800 1000 1200 1400 1600 ø12 Page **14** of **76**



The **U/AR** series centrifugal fans are designed to convey both fumes and air, even slightly dusty, at **temperatures** of up to a maximum 80°C.

These fans are **used** for ventilation and conditioning, and generally when systems require high flow rates at medium pressure.

The steel sheet **spiral casings** are of adequate thickness and have been carefully rimmed and welded. These fans have a base for the motor and the discharge angle can be adjusted in 45° steps by rotating either clockwise RD or counter-clockwise LG (see discharge direction table).

The welded steel sheet **impellers** have high performance forward-curved blades. Each impeller has been perfectly balanced, both statically ad dynamically, and is directly connected to the motor shaft.

The **motors** installed are asynchronous, three-phase or single-phase, B3, self-ventilated, with IP55 protection, designed for continuous service and are UNEL and IEC compliant.

### **ACCESSORIES**

RP	inlet	protection	net
111	111100	protection	1100

**GA** inlet isolating joint

**RA** inlet spigot

**RF** inlet flanged fitting

**CA** inlet counter-flange

**FL** inlet filter

**SF** throttle valve

RM discharge finger guard

**GM** feed vibration-damping joint

**CM** discharge counter-flange

QT discharge square-round joint

**SM** discharge silencer

TS drain plug

PI inspection door

**AV** vibration dampers

### **SPECIAL VERSIONS**



AS anti-spark version in accordance with ANIMA-COAER standards (table NV105)

**HZ** manufactured to work at Hz. 60

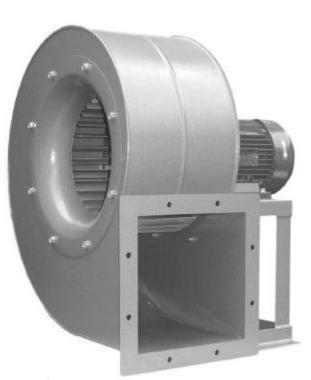
**HT** conveyed fluid temperature up to a maximum of 250oC (this version is made with longer shaft motor and extra cooling fan)

**SB** arrangement 5 with motor type B5 or B3/B5 without motor support base

**TH** high protection for use in tropical climate with high degree of humidity

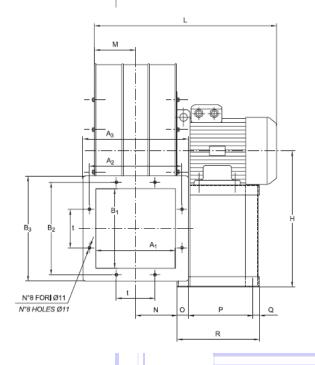
TR belt drive, 9 or 12 arrangement

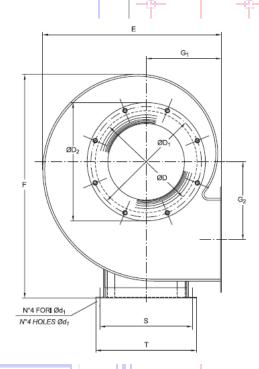
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### OVERALL DIMENSIONS



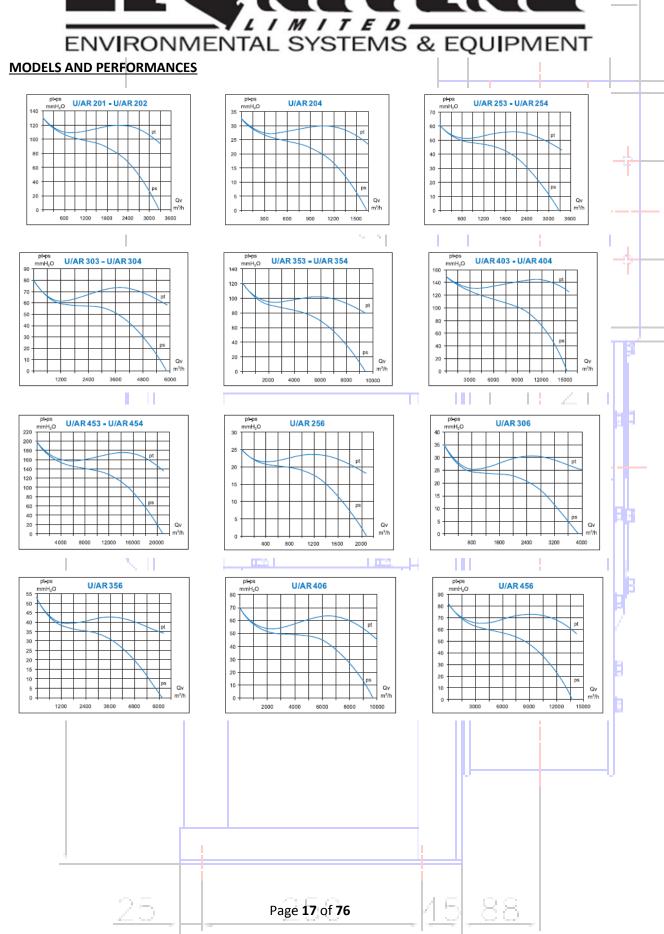


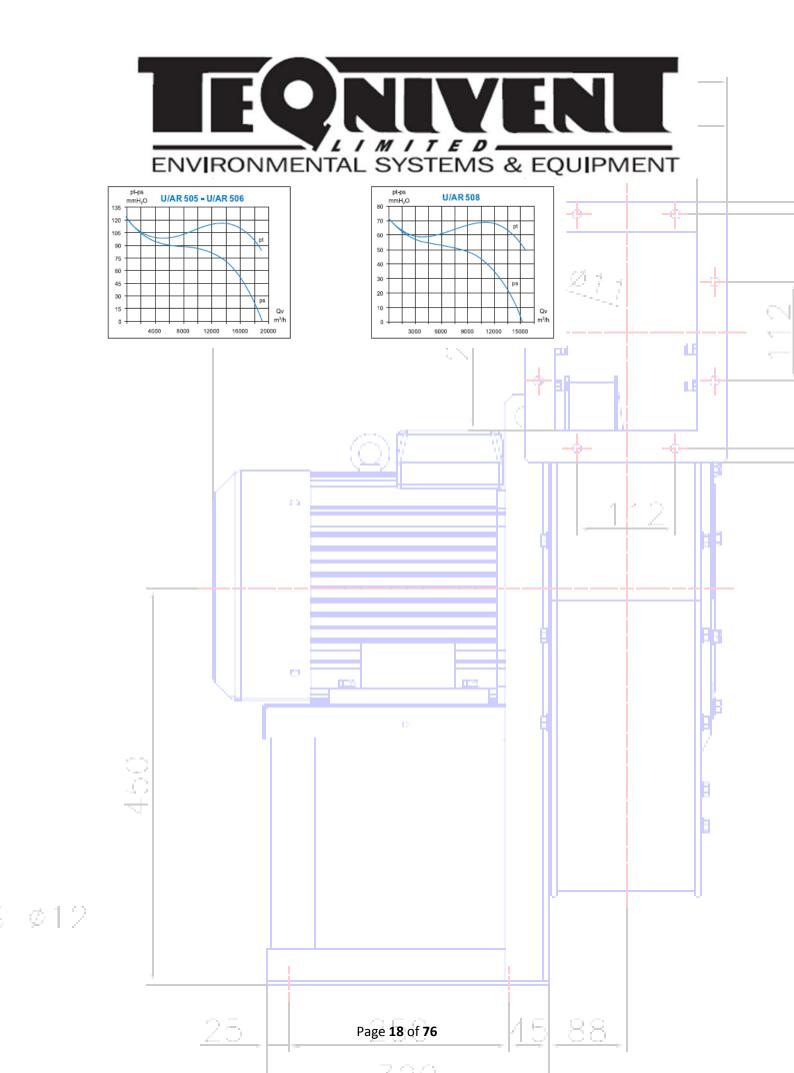
I				ш																ш						
Ventilatore / Fan Tipo / Type	A <sub>1</sub>	B <sub>1</sub>	A <sub>2</sub>	B <sub>2</sub>	$A_3$	B <sub>3</sub>	t	øD	øD <sub>1</sub>	øD <sub>2</sub>	Ε	F	G <sub>1</sub>	G <sub>2</sub>	H	L	М	z	0	Р	Q	R	s	Т	ød <sub>1</sub>	kg
U/AR 201																400			50	125	15	190	215	234	11	21
U/AR 202	156	156	181	181	210	210	80	205	241	265	367	435	181	143	270	420	82	83	60	137	18	215	245	274	12	27
U/AR 204																360			50	125	15	190	215	234	11	18
U/AR 253																410										22
U/AR 254	184	184	215	215	245	245	90	255	292	320	424	516	201	169	315	420	97	97	50	125	15	190	215	234	11	23
U/AR 256																410										21
U/AR 303																500			60	137	18	215	245	274	12	38
U/AR 304	230	230	270	270	310	310	110	285	332	365	522	645	230	216	400	520	119	121	00	137	10	213	240	214	12	41
U/AR 306																475			50	125	15	190	215	234	11	32
U/AR 353																600			35	200	25	260	300	332		58
U/AR 354	270	270	310	310	350	350	120	360	405	440	604	734	266	252	450	000	140	141	33	200	20	200	300	552	12	63
U/AR 356																570			60	137	18	215	245	274		47
U/AR 403																740		163	45	250		320	360	392		103
U/AR 404	310	310	360	360	410	410	150	405	448	485	695	870	295	303	530	140	160	100	40	200	25	OLO	000	002	12	115
U/AR 406																650		161	35	200		260	300	332		80
U/AR 453																780			45	250	25	320	360	392	12	132
U/AR 454	350	350	400	400	450	450	180	455	497	535	757	930	320	328	560	870	180	183	55	340	30	425	400	442	14	175
U/AR 456																780			45	250	25	320	360	392	12	108
U/AR 505																810			45	250	25	320	360	392	12	139
U/AR 506	380	380	430	430	480	480	210	505	551	585	826	1036	346	362	630	910	195	198	55	340	30	425	400	442	14	181
U/AR 508																810			45	250	25	320	360	392	12	138

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# EQUIVEN







The **U/ARP** series centrifugal fans are suited to convey air, even slightly dusty, at **temperatures** of up to a maximum 80°C. These have narrower but larger diameter blades for higher pressure development.

These fans are **used** in all the industrial applications requiring medium pressures and flow rates.

The thick steel sheet **spiral casings** are rimmed and welded. These fans have a base for the motor and the discharge angle can be adjusted in 45° steps by rotating either clockwise RD or counterclockwise LG (see discharge direction table).

The steel sheet **impellers** have forward-curved blades. They are carefully balanced, both statically and dynamically, and are directly connected to the motor shaft.

The **motors** installed are asynchronous, three-phase or single-phase, 2 poles, B3, with IP55 protection, self-ventilated, designed for continuous service and are UNEL and IEC compliant.

### **ACCESSORIES**

RP	inlet	protectio	n net
	111100	protectio	11111

**GA** intaking vibration-damping joint

**RA** intaking joint

**RF** inlet flanged fitting

**CA** inlet counter-flange

**FL** inlet filter

**SA** inlet silencer

**SF** throttle valve

**RM** outlet protection net

**GM** feed vibration-damping joint

**CM** outlet counter-flange

**QT** outlet square-round joint

**SM** outlet silencer

TS discharge plug

**PI** inspection door

**AV** vibration dampers

AI made of stainless steel AISI 304 to extract corrosive fumes

**AS** anti-spark version in accordance with ANIMA-COAER standards (table NV105)

**HZ** manufactured to work at Hz. 60

**HT** conveyed fluid temperature up to a maximum of 250oC (this version is made with longer shaft motor and extra cooling fan)

SB arrangement 5 with motor type B5 or B3/B5 without motor support base

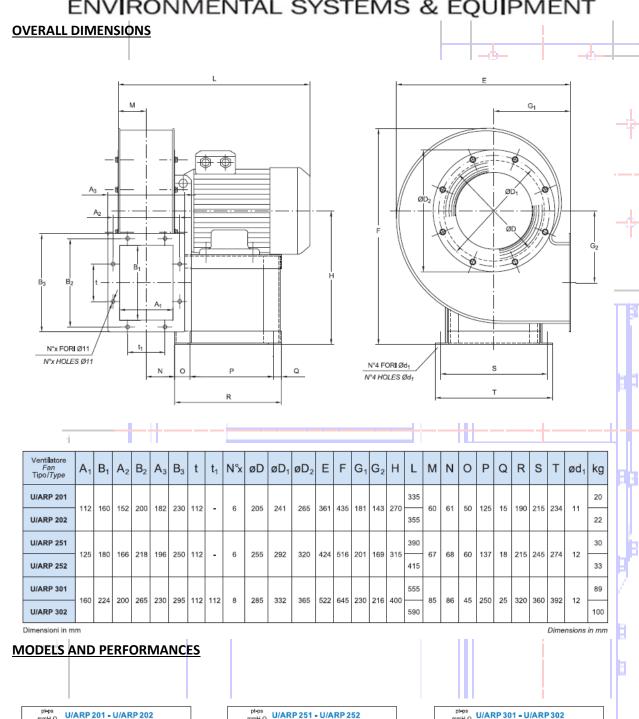
**TH** high protection for use in tropical climate with high degree of humidity

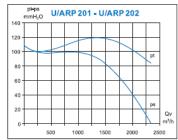
**TR** belt drive, 9 or 12 arrangement

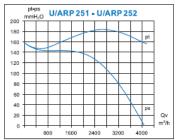
EX ATEX version zone 1 – zone 2 (GAS) and zone 21 – zone 22 (DUST)

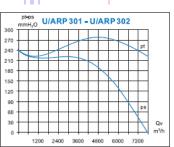
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ENVIRONMENTAL SYSTEMS & EQUIPMENT









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The **U/AP** series centrifugal fans are designed to take up fumes or air, even slightly dusty, at temperatures of up to a maximum 80°C.

These fans are employed in all industrial plants where medium-to-high pressure values are required.

The steel sheet **spiral casings** are pressed and spot-welded or rimmed and welded and the outlet is fitted with a securing flange to make any pipe-connections easier. These fans can be directed in 45° steps by rotating either clockwise RD or counter-clockwise LG (see discharge direction table).

The spot-welded steel sheet **impellers** with forward-curved "Sirocco"-type blades have been carefully balanced, both statically and dynamically, and are connected directly to the motor shaft.

The **motors** installed are asynchronous, three-phase or single-phase, 2 poles, B5, with IP55 protection, self-ventilated, designed for continuous service and are UNEL and IEC compliant.

### **ACCESSORIES**

<b>RP</b> inlet protectio
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**RA** intaking joint

**RF** inlet flanged fitting

**CA** inlet counter-flange

**FL** inlet filter

**SA** inlet silencer

**SF** throttle valve

**SI** iris flow control

**RM** outlet protection net

**CM** outlet counter-flange

**QT** outlet square-round joint

**SM** outlet silencer

**BA** motor support base

### **SPECIAL VERSIONS**

Al made of stainless steel AISI 304 to extract corrosive fumes

AS anti-spark version in accordance with ANIMA-COAER standards (table NV105)

**HZ** manufactured to work at Hz. 60

**HT** conveyed fluid temperature up to a maximum of 250oC (this version is made with longer shaft motor and extra cooling fan)

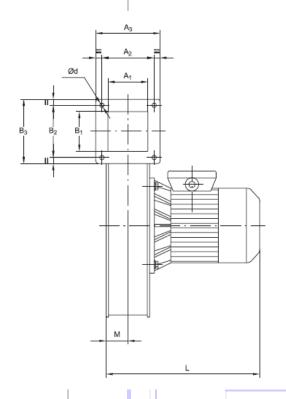
**TH** high protection for use in tropical climate with high degree of humidity

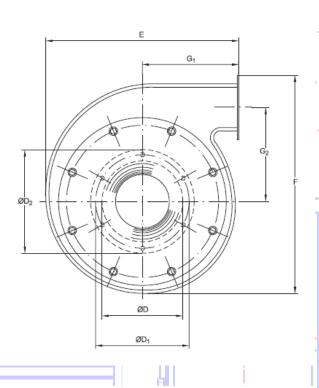
EX ATEX version zone 1 – zone 2 (GAS) and zone 21 – zone 22 (DUST)

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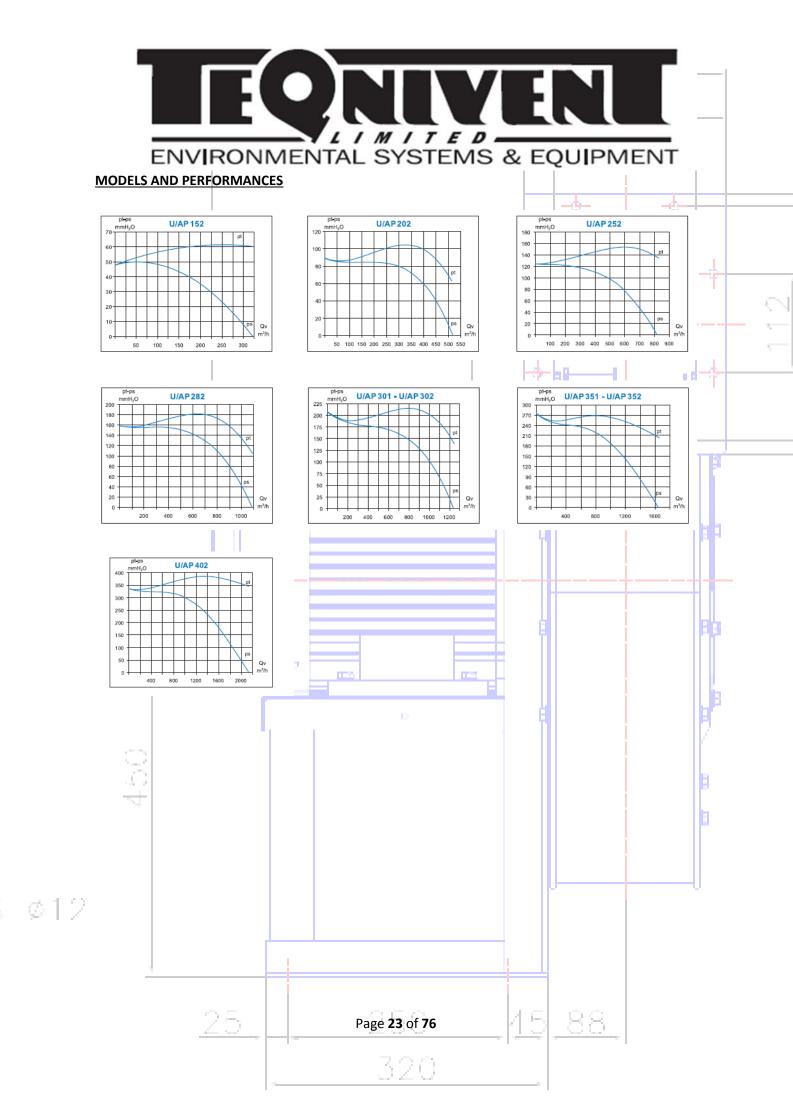
Ventilatore Fan Tipo/Type	A <sub>1</sub>	B <sub>1</sub>	A <sub>2</sub>	B <sub>2</sub>	$A_3$	$B_3$	ød	øD	øD <sub>1</sub>	øD <sub>2</sub>	E	F	G <sub>1</sub>	G <sub>2</sub>	L	М	kg
U/AP 152	54	54	76	76	90	90	7	148	175	190	222	254	104	100	228	30	4,3
U/AP 202	67	67	86	86	110	110	8,2	119	136	150	271	328	128	146	255	37	6,8
U/AP 252	70	70	95	95	120	120	9	148	175	190	348	380	167	146	268	39	11,5
U/AP 282	84	84	110	110	135	135	9	148	175	190	416	450	200	178	308	46	16
U/AP 301	0.4	0.4	440	110	405	405			475	400	440	450		470	308	40	18
U/AP 302	84	84	110	110	135	135	9	148	175	190	416	450	200	178	325	46	19,5
U/AP 351															353		29
U/AP 352	90	90	115	115	140	140	9	169	200	215	494	531	240	214	378	49	31,5
U/AP 402	90	90	115	115	140	140	9	189	220	242	555	607	263	264	420	49	54

Dimensioni in mm

Ø12

Dimensions in mm

25 Page 22 of 76 15 88 320





The **U/RF** series centrifugal fans are designed to take up air, both clean and dusty, at **temperatures** of up to a maximum 80°C.

These fans are **used** in all industrial applications requiring medium-to-high pressures; furthermore they can also be used as pneumatic conveyors of granular, but not stringy, materials.

The strong steel sheet **spiral casings** are rimmed and welded. Special holes make it possible to direct the fan discharge angle in 45°C steps by rotating either clockwise RD or counter-clockwise LG (see discharge direction table).

The welded steel sheet **impellers** with forward open blades have been carefully balanced, both statically and dynamically, and are connected directly to the motor shaft.

The **motors** installed are asynchronous, three-phase or single-phase, 2 poles, B5 with IP55 protection, self-ventilated, designed for continuous service and are UNEL and IEC compliant.

### **ACCESSORIES**

**RP** inlet protection net

**RA** intaking joint

**RF** inlet flanged fitting

**CA** inlet counter-flange

**FL** inlet filter

**SA** inlet silencer

**SF** throttle valve

**SI** iris flow control

**RM** outlet protection net

**CM** outlet counter-flange

**QT** outlet square-round joint

**SM** —outlet silencer

**BA** motor support base

N.B.: For further information see accessories section

### **SPECIAL VERSIONS**

- AI made of stainless steel AISI 304 to extract corrosive fumes
- AS anti-spark version in accordance with ANIMA-COAER standards (table NV105)
- **HZ** manufactured to work at Hz. 60
- **HT** conveyed fluid temperature up to a maximum of 250oC (this version is made with longer shaft motor and extra cooling fan)
- TH high protection for use in tropical climate with high degree of humidity
- EX ATEX version zone 1 zone 2 (GAS) and zone 21 zone 22 (DUST)

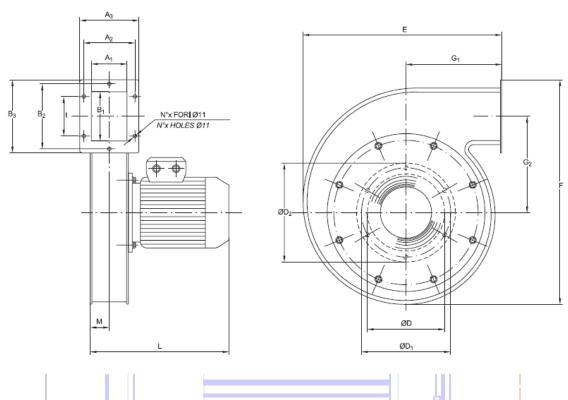
Page **24** of **76** 











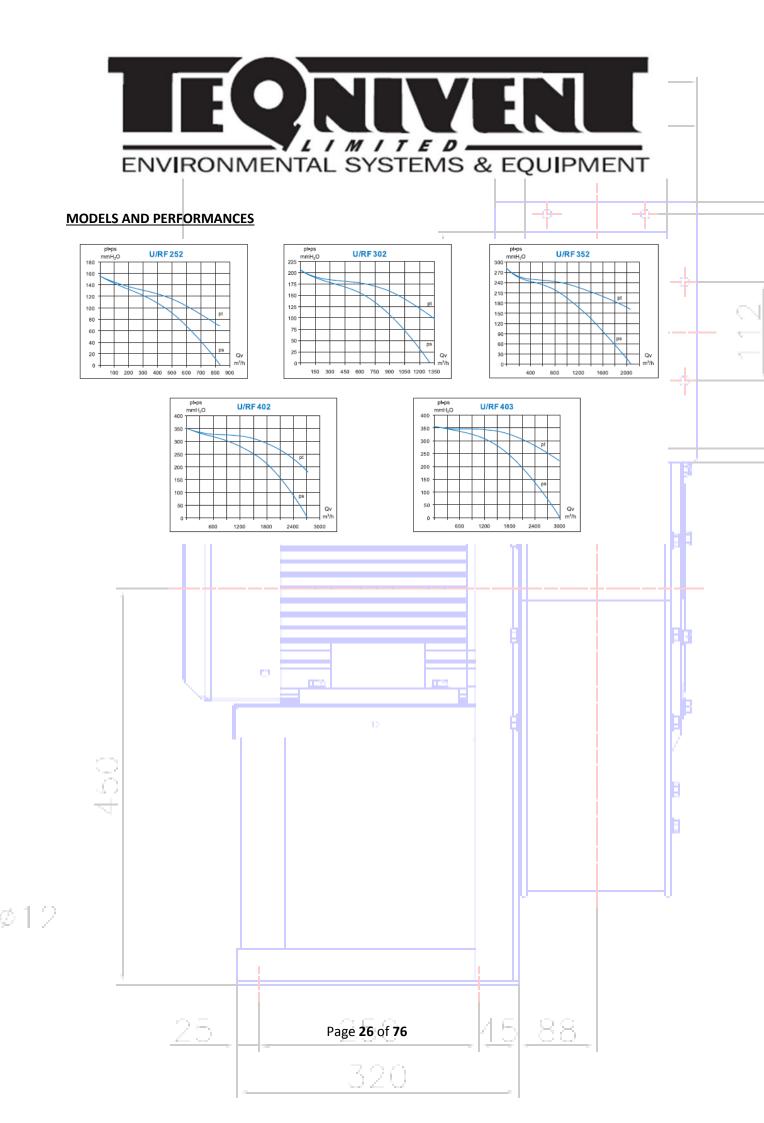
Ventilatore Fan Tipo/Type	A <sub>1</sub>	B <sub>1</sub>	A <sub>2</sub>	B <sub>2</sub>	$A_3$	$B_3$	t	N°x	øD	øD₁	øD <sub>2</sub>	Е	F	G₁	G <sub>2</sub>	L	М	kg
U/RF 252	71	100	100	125	131	160	-	4	148	175	190	395	450	177	193	270	40	14,7
U/RF 302	80	112	112	140	140	172	-	4	169	200	215	440	510	211	214	305	45	20
U/RF 352	90	125	130	165	150	185	100	6	189	220	242	505	570	238	240	355	50	31,3
U/RF 402	100	140	141	182	170	210	112	6	189	220	242	550	617	258	248	390	55	37,8
U/RF 403	100	140	141	182	170	210	112	6	205	241	265	550	617	258	248	426	55	46

Dimensioni in mm

ø12

Dimensions in mm







The **U/TM** series centrifugal fans are designed to take up air, even very dusty and containing suspended materials, at **temperatures** of up to a maximum 80°C.

These fans are **used** in all the industrial plants requiring medium-to-high pressures, e.g. the pneumatic conveyance of granulates, shavings or trimmings.

The strong steel sheet **spiral casings** are rimmed and welded. These fans are provided with a base for the motor and the discharge angle can be adjusted in 45° steps by rotating either clockwise RD or counter-clockwise LG (see discharge direction table).

The welded steel sheet **impellers** with forward open blades have been carefully balanced, both statically and dynamically. These have been designed to convey material.

The **motors** installed are asynchronous, three-phase, 2 poles, B3, with IP55 protection, self-ventilated, designed for continuous service and are UNEL and IEC compliant.

### **ACCESSORIES**

RP	inlet	protectio	n net
	111100	protectio	11111

GA intaking vibration-damping joint

**RA** intaking joint

**RF** inlet flanged fitting

**CA** inlet counter-flange

**FL** inlet filter

**SA** inlet silencer

**SF** throttle valve

**RM** outlet protection net

**GM** feed vibration-damping joint

**CM** outlet counter-flange

**QT** outlet square-round joint

**SM** outlet silencer

TS discharge plug

PI inspection door

**BA** motor support base

AI made of stainless steel AISI 304 to extract corrosive fumes

AS anti-spark version in accordance with ANIMA-COAER standards (table NV105)

**HZ** manufactured to work at Hz. 60

HT conveyed fluid temperature up to a maximum of 250oC (this version is made with longer shaft motor and extra cooling fan)

**SB** arrangement 5 with motor type B5 or B3/B5 without motor support base

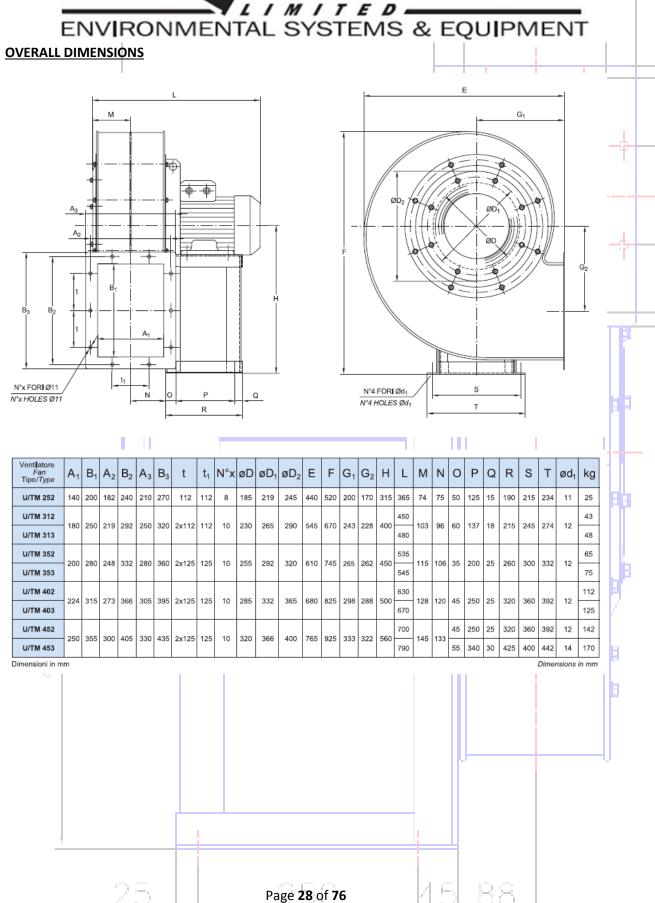
**TH** high protection for use in tropical climate with high degree of humidity

**TR** belt drive, arrangement 9 & ATEX Capability

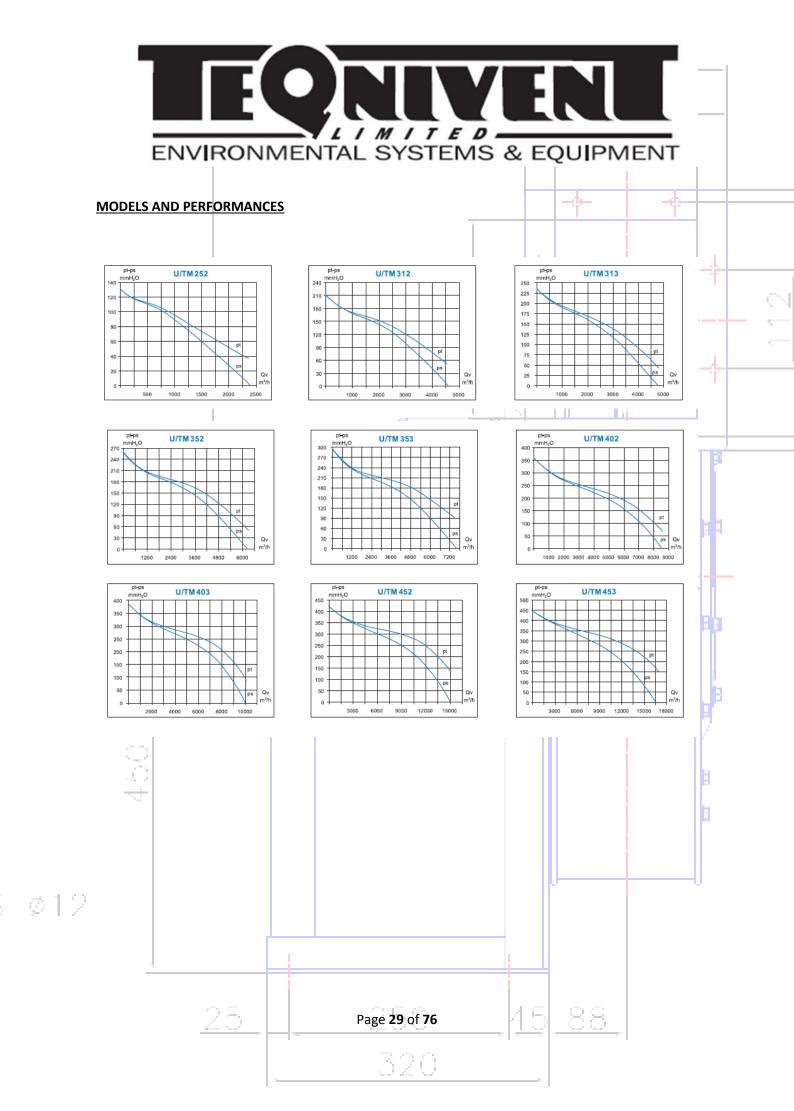
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ø12





The **U/DS** series double inlet fans are designed to convey air at **temperatures** of up to a maximum 80°C.

These fans are **used** in industrial plants requiring quick forced ventilation.

The steel sheet **impellers** with forward curved blades have been carefully balanced, both statically and dynamically, and are connected directly to the motor shaft.

Models **U/DS 142** and **202** are equipped with one double intake impeller, while models **U/DS 162** and **182** have two simple intake impellers.

The **motors** installed are asynchronous, three-phase or single-phase, 2 poles, with IP54 protection, designed for intermittent service.

### **ACCESSORIES**

**RP** inlet protection net

**RA** intaking joint

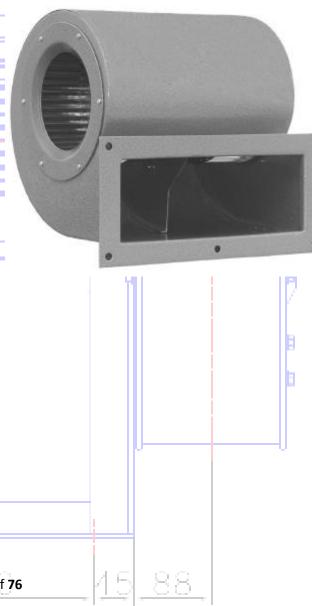
**RF** inlet flanged fitting

CA inlet counter-flange

N.B.: For further information see accessories section

### **SPECIAL VERSIONS**

HZ manufactured to work at Hz. 60

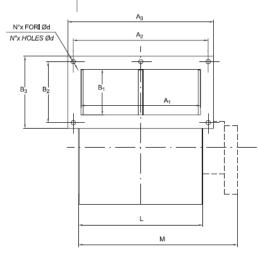


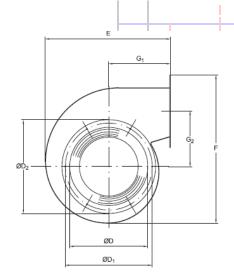
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## ENVIRONMENTAL SYSTEMS & EQUIPMENT

### **OVERALL DIMENSIONS**





Ventilatore/Fan Tipo/Type	A <sub>1</sub>	B <sub>1</sub>	A <sub>2</sub>	B <sub>2</sub>	A <sub>3</sub>	B <sub>3</sub>	N°x	ød	øD	øD <sub>1</sub>	øD <sub>2</sub>	Е	F	G <sub>1</sub>	G <sub>2</sub>	L	М	kg
U/DS 142	177	95	200	60	220	90	4	9	129	155	170	217	235	109	92	180	247	6
U/DS 162	275	105	310	140	335	166	5	10	169	200	215	288	340	142	125	284	-	10,5
U/DS 182	275	105	310	140	335	166	5	10	169	200	215	288	340	142	125	284	-	11
U/DS 202	275	105	310	140	335	166	5	10	189	220	242	288	340	142	125	286	-	13

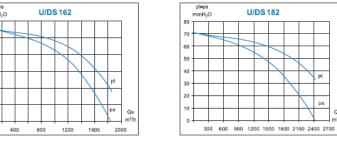
Dimensioni in mm

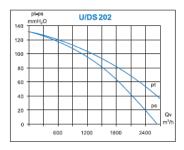
Ø12

### **MODELS AND PERFORMANCES**









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Dimensions in mm



The **U/HF** series centrifugal fans are designed to take up air at **temperatures** of up to a maximum 80°C.

These fans are widely **used** to ventilate and cool electric motors. They are also equipped with an inlet filter to prevent any impurities in the air from depositing inside the motors.

The strong steel sheet **spiral casings** are fitted with a securing flange on the outlet, they are supplied to rotate counter-clockwise LG (see discharge direction table).

The steel sheet **impellers** with forward curved blades have been perfectly balanced both statically and dynamically, and are connected directly to the motor shaft.

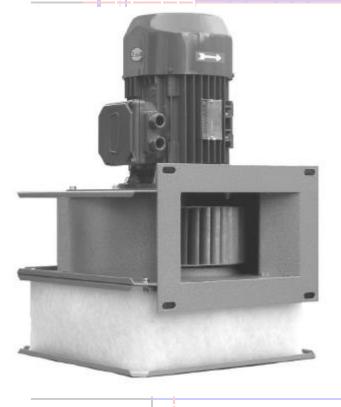
The **motors** are asynchronous, three-phase, 2 poles, B5, with IP55 protection, self-ventilated, designed for continuous service and are UNEL and IEC compliant.

### **SPECIAL VERSIONS**

ø 12

**HZ** manufactured to work at Hz. 60

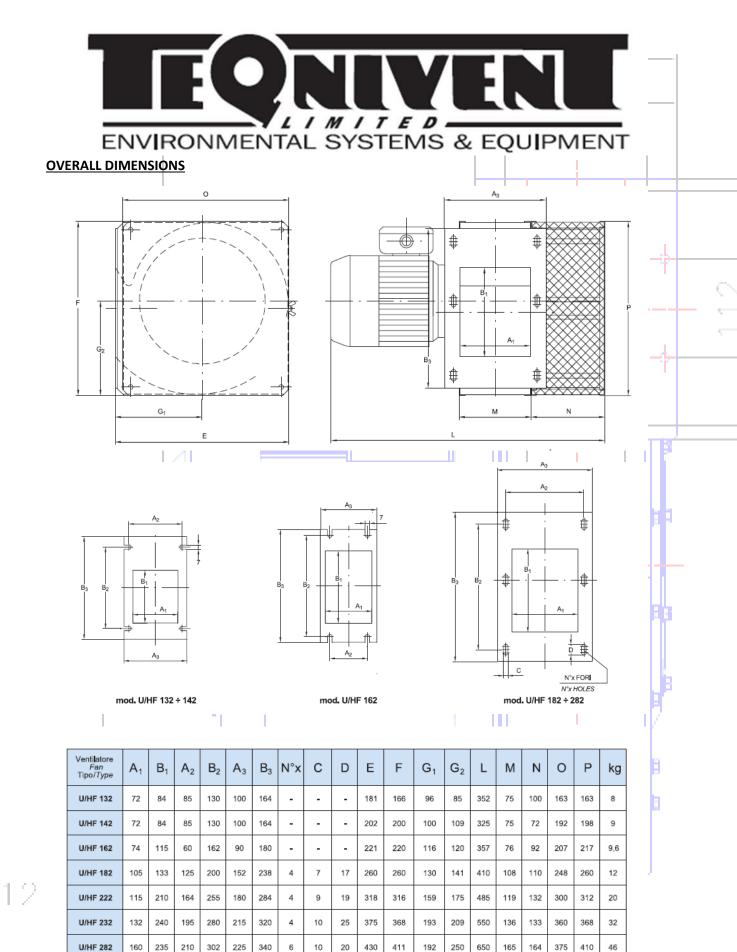
TH high protection for use in tropical climate with high degree of humidity





25 H

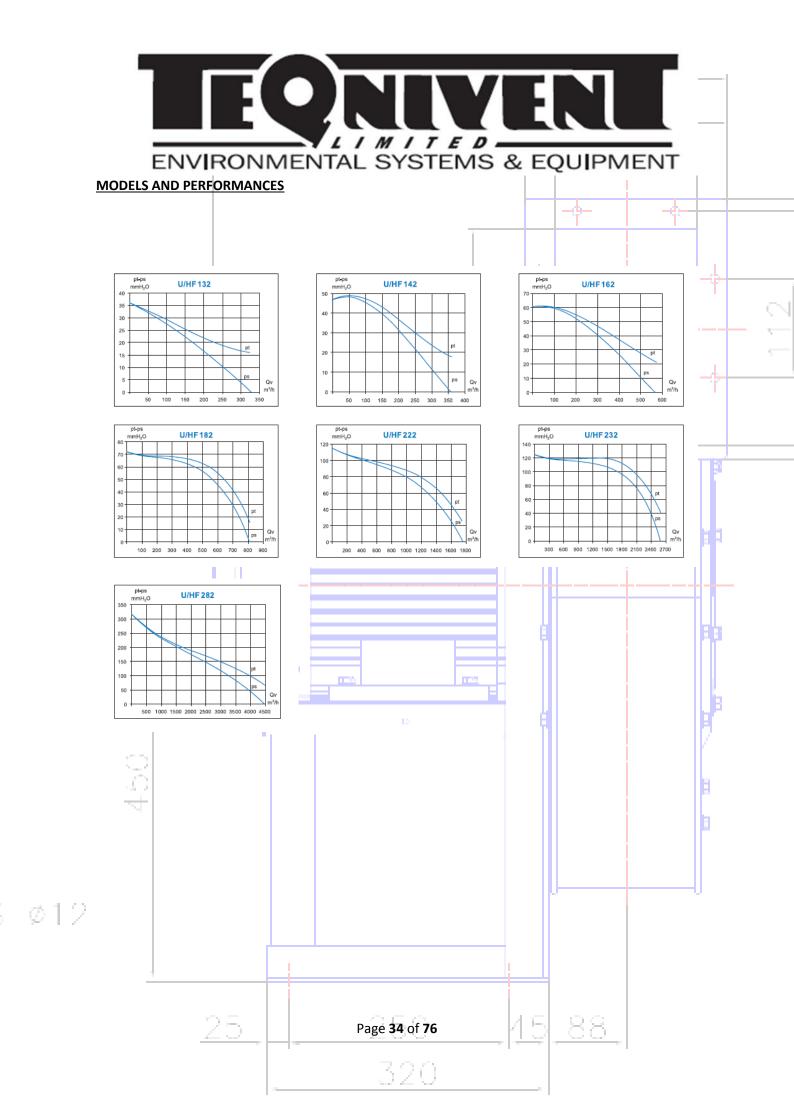
Page **32** of **76** 



Dimensioni in mm

Dimensions in mm

<u> 25_</u>	Page <b>33</b> of <b>76</b>	_[45	_88_
	320		





The **U/CB** series centrifugal fans are designed to take up clean or slightly dusty air at **temperatures** of up to a maximum 80°C.

These fans are **used** for ventilation and air conditioning plants and generally in industrial applications requiring high flow rates.

The strong steel sheet **spiral casings** are rimmed and welded. These fans are have a base for the motor and the discharge angle can be regulated in 45° steps by rotating either clockwise RD or counter-clockwise LG (see discharge direction table).

The welded steel sheet **impellers** with backward-curved blades have been carefully balanced, both statically and dynamically.

The **motors** installed are asynchronous, three-phase, B3, with IP55 protection, self-ventilated, designed for continuous service and are UNEL and IEC compliant.

### **ACCESSORIES**

RP	inlet protection net
111	inict protection net

**GA** intaking vibration-damping joint

**RA** intaking joint

**RF** inlet flanged fitting

**CA** inlet counter-flange

**FL** inlet filter

**SF** throttle valve

**SD** Dapo flow regulator

**RM** outlet protection net

**GM** feed vibration-damping joint

**CM** outlet counter-flange

**SM** outlet silencer

**TS** discharge plug

PI inspection door

**AV** vibration dampers



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32n

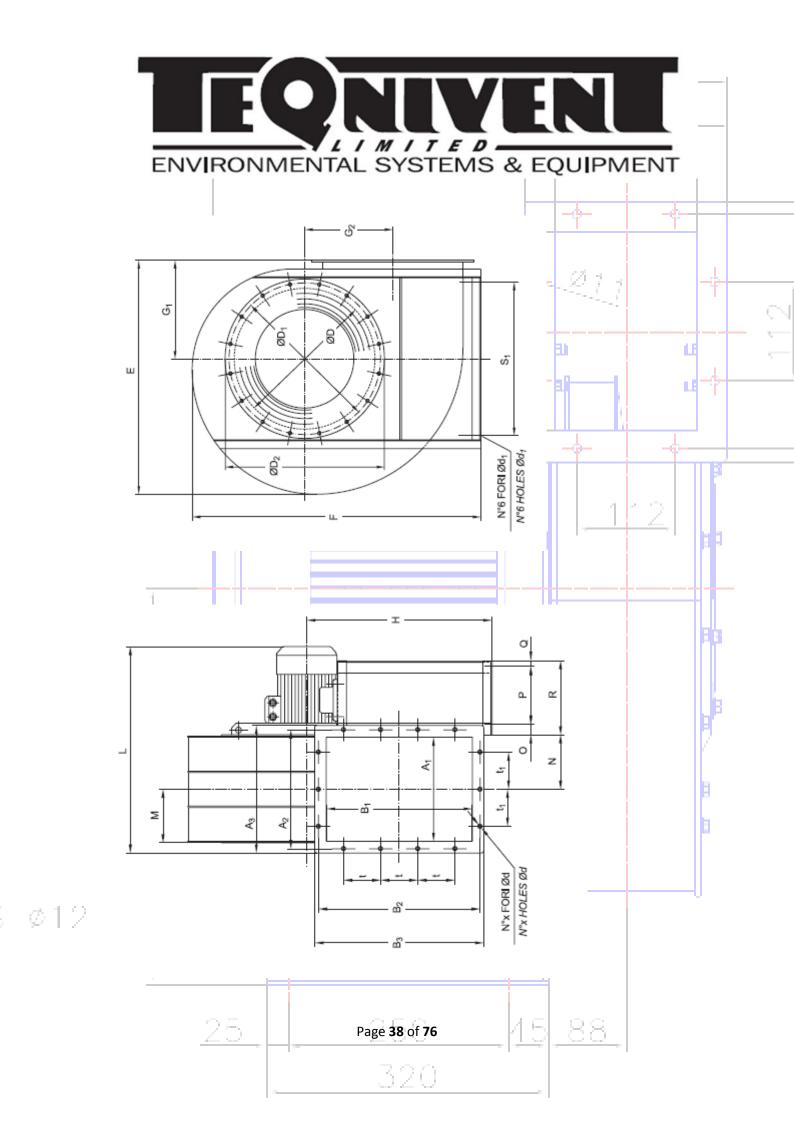


## **ENVIRONMENTAL SYSTEMS & EQUIPMENT SPECIAL VERSIONS** ΑI made of stainless steel AISI 304 to extract corrosive fumes AS anti-spark version in accordance with ANIMA-COAER standards (table NV105) manufactured to work at Hz. 60 ΗZ conveyed fluid temperature up to a maximum of 250oC (this version is made with longer HT shaft motor and extra cooling fan) SB arrangement 5 with motor type B5 or B3/B5 without motor support base Œ TH high protection for use in tropical climate with high degree of humidity TR belt drive, 9 or 12 arrangement ΕX ATEX version zone 1 – zone 2 (GAS) and zone 21 – zone 22 (DUST) Page **36** of **76**



### **OVERALL DIMENSIONS**

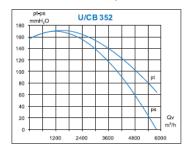
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Ventilatore Fan Tipo/Type	U/CB 352	U/CB 353	U/CB 354	U/CB 355	U/CB 402	U/CB 403	U/CB 404	U/CB 452	U/CB 454	U/CB 455	U/CB 502	U/CB 503	U/CB 504	U/CB 505	U/CB 506	U/CB 507	U/CB 564	U/CB 565	U/CB 566	U/CB 567	U/CB 634	U/CB 635	U/CB 636	U/CB 637	U/CB 714	U/CB 715	U/CB 716	U/CB 717	U/CB 804	U/CB 805	U/CB 806	U/CB 807	U/CB 904	U/CB 905	U/CB 906	U/CB 907	U/CB 1004	U/CB 1005	U/CB 1007	imensioni in mm

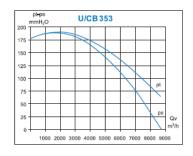


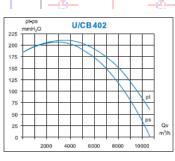
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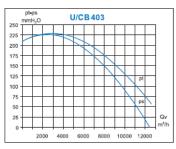
ENVIRONMENTAL SYSTEMS & EQUIPMENT

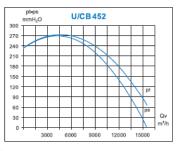
### **MODELS AND PERFORMANCES**

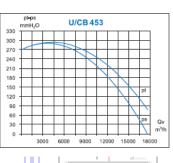


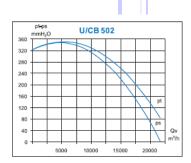


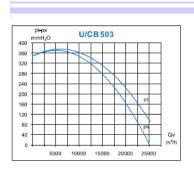


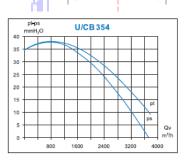


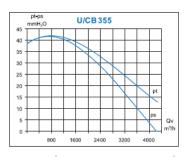


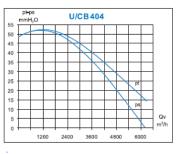


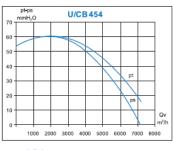


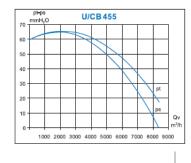


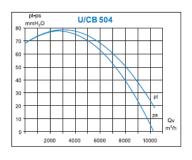


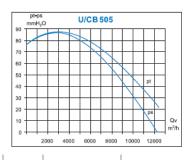












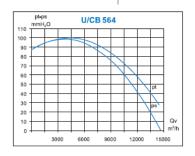
Page **39** of **76** 

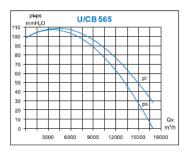
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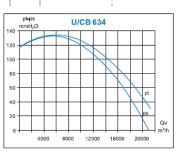
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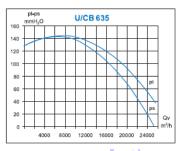
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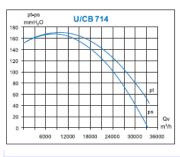
### ENVIRONMENTAL SYSTEMS & EQUIPMENT

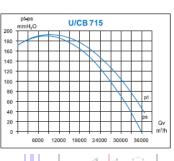


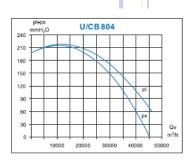


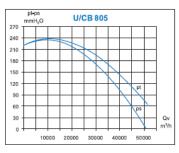


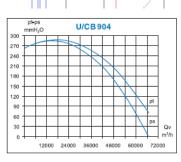


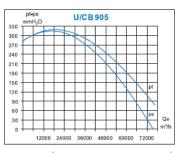


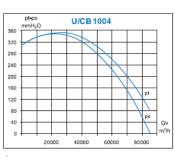


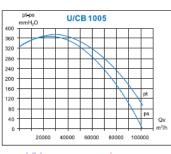


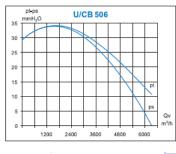


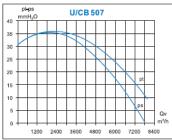


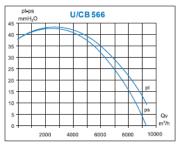












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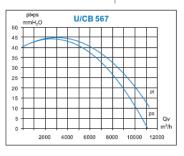
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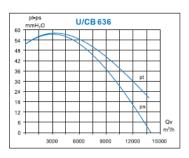
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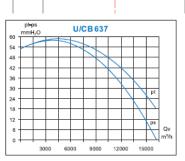
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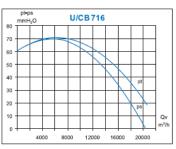
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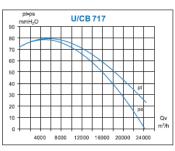
### ENVIRONMENTAL SYSTEMS & EQUIPMENT

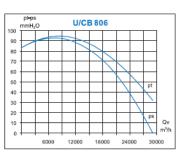


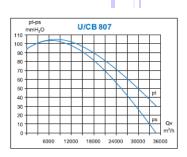


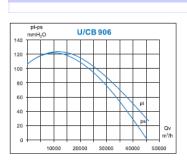


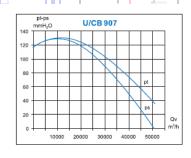


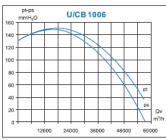


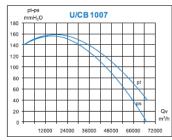


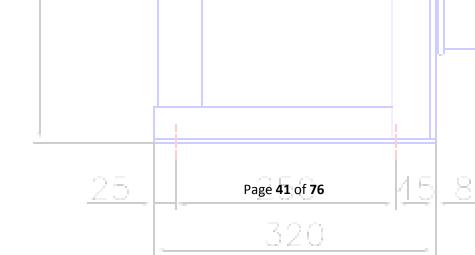














The **U/PB** series centrifugal fans are designed to take up air and convey air, even if dusty, at **temperatures** of up to a maximum 80°C.

These fans are **used** in industrial plants requiring medium-to-high pressures; furthermore they can also be used to convey solid materials, except strings, mixed with air.

The strong steel sheet **spiral casings** are rimmed and welded. These fans also have a base for the motor and the discharge angle can be regulated in 45° steps by rotating either clockwise RD or counter-clockwise LG (see discharge direction table).

The strong welded steel sheet **impellers** with high performance, backward-curved blades, have been carefully balanced both statically and dynamically.

The **motors** installed are asynchronous, three-phase or single-phase, 2 or 4 poles, B3, with IP55 protection, self-ventilated, designed for continuous service and are UNEL and IEC compliant.

### **ACCESSORIES**

**RP** inlet protection net

**GA** intaking vibration-damping joint

**RA** intaking joint

**RF** inlet flanged fitting

CA inlet counter-flange

FL inlet filter

**SA** inlet silencer

**SF** throttle valve

**SD** Dapo flow regulator

**RM** outlet protection net

**GM** feed vibration-damping joint

**CM** outlet counter-flange

**QT** outlet square-round joint

**SM** outlet silencer

**TS** discharge plug

**PI** inspection door

**AV** vibration dampers

AI made of stainless steel AISI 304 to extract corrosive fumes

AS anti-spark version in accordance with ANIMA-COAER standards (table NV105)

**HZ** manufactured to work at Hz. 60

HT conveyed fluid temperature up to a maximum of 250oC (this version is made with longer shaft motor and extra cooling fan)

SB arrangement 5 with motor type B5 or B3/B5 without motor support base

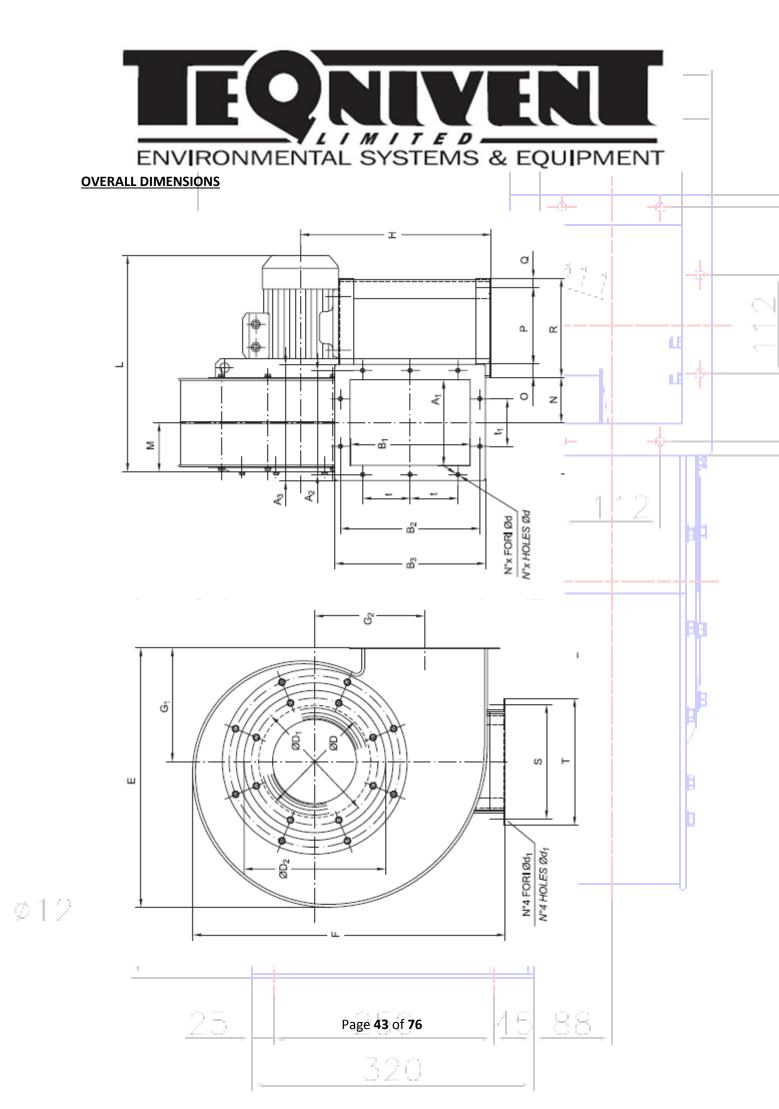
**TH** high protection for use in tropical climate with high degree of humidity

TR belt drive, 9 or 12 arrangement

EX ATEX version zone 1 – zone 2 (GAS) and zone 21 – zone 22 (DUST)

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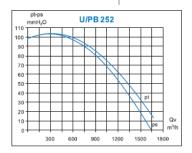


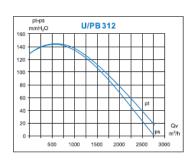
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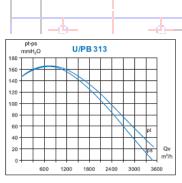
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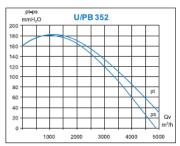
ENVIRONMENTAL SYSTEMS & EQUIPMENT

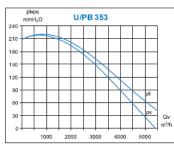
### **MODELS AND PERFORMANCES**



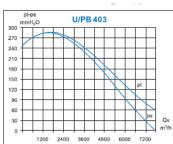


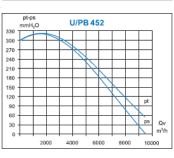


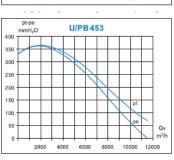


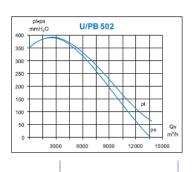


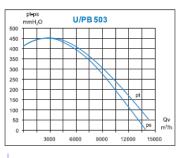


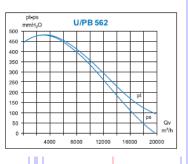


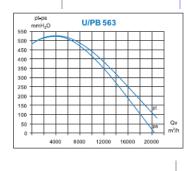


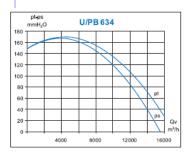


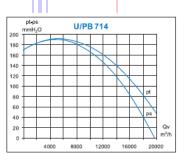






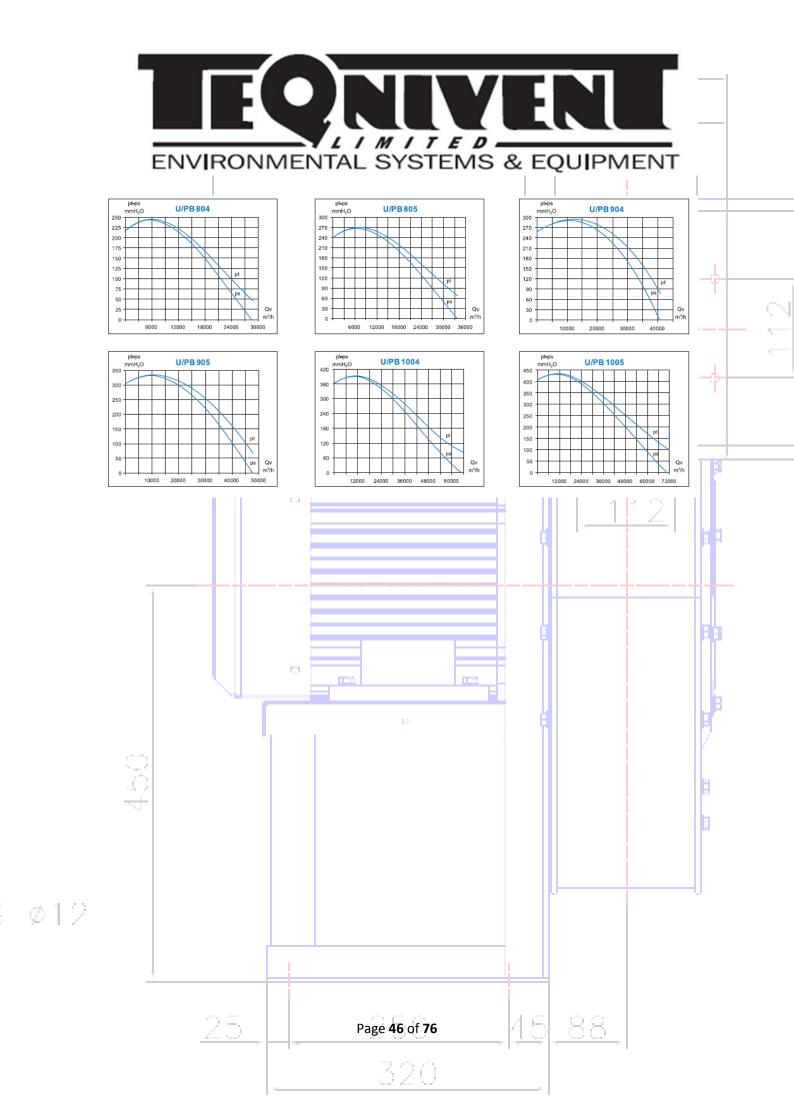






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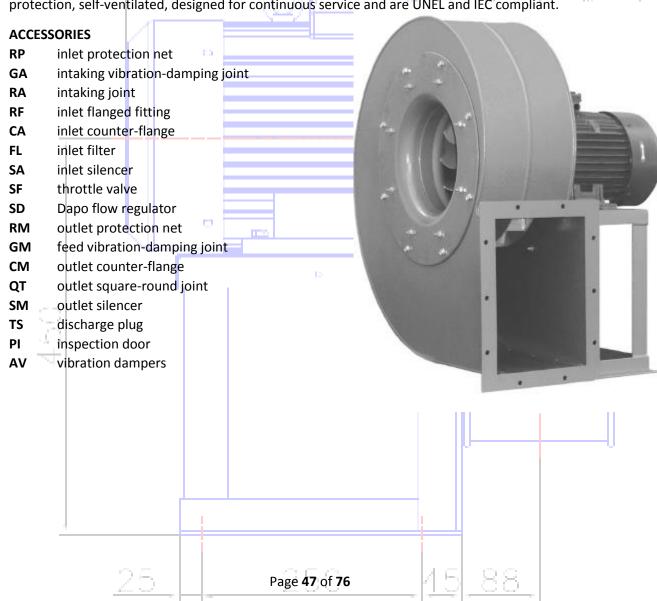
The **U/PBM** series centrifugal fans are designed to take up air, even if dusty, at **temperatures** of up to a maximum 80°C.

They are generally **used** in the industrial plants requiring medium-to-high pressure; they can also be used to convey solid materials, except strings, mixed with air.

The strong steel sheet **spiral casings** are rimmed and welded. These fans also have a motor support base and the discharge angle can be adjusted in 45° steps by rotating either clockwise RD or counterclockwise LG (see discharge direction table).

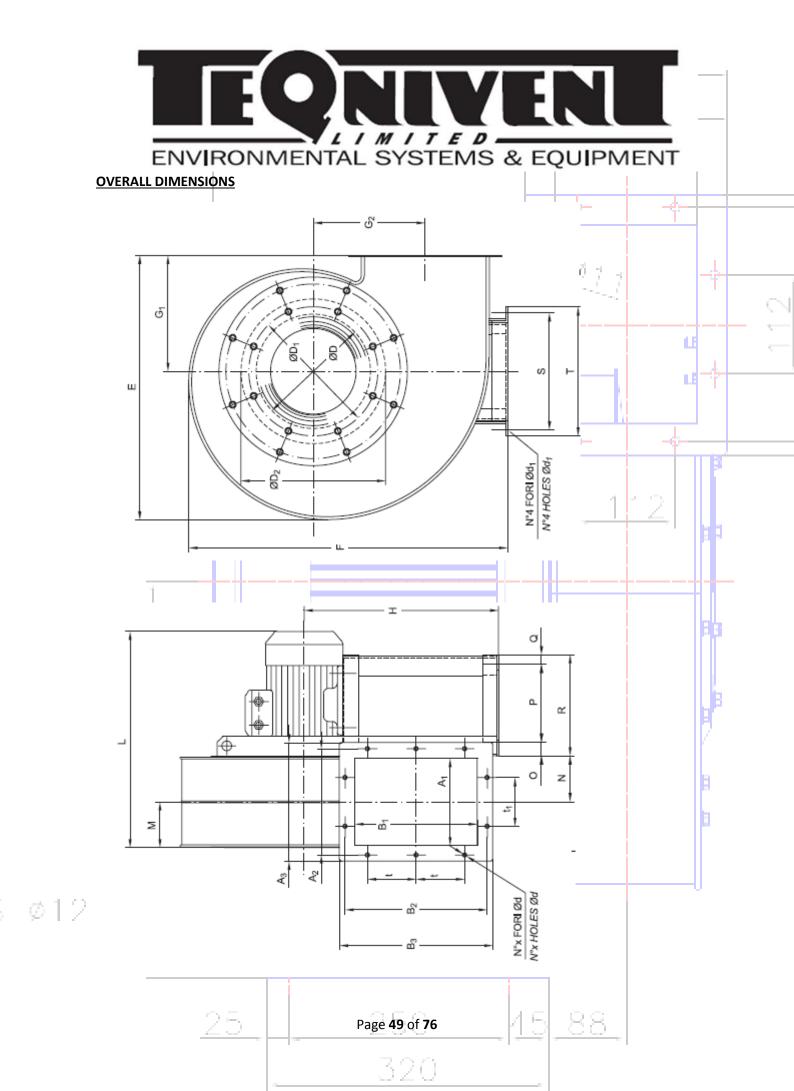
The steel sheet **impellers** with high performance, backward-curved blades, have been balanced both statically and dynamically.

The **motors** installed are asynchronous, three-phase or single-phase, 2 or 4 poles, B3 with IP55 protection, self-ventilated, designed for continuous service and are UNEL and IEC compliant.





### **ENVIRONMENTAL SYSTEMS & EQUIPMENT SPECIAL VERSIONS** ΑI made of stainless steel AISI 304 to extract corrosive fumes AS anti-spark version in accordance with ANIMA-COAER standards (table NV105) manufactured to work at Hz. 60 ΗZ conveyed fluid temperature up to a maximum of 250oC (this version is made with longer HT shaft motor and extra cooling fan) SB arrangement 5 with motor type B5 or B3/B5 without motor support base Œ TH high protection for use in tropical climate with high degree of humidity TR belt drive, 9 or 12 arrangement ΕX ATEX version zone 1 – zone 2 (GAS) and zone 21 – zone 22 (DUST) Page **48** of **76**





### ENVIRONMENTAL SYSTEMS & EQUIPMENT

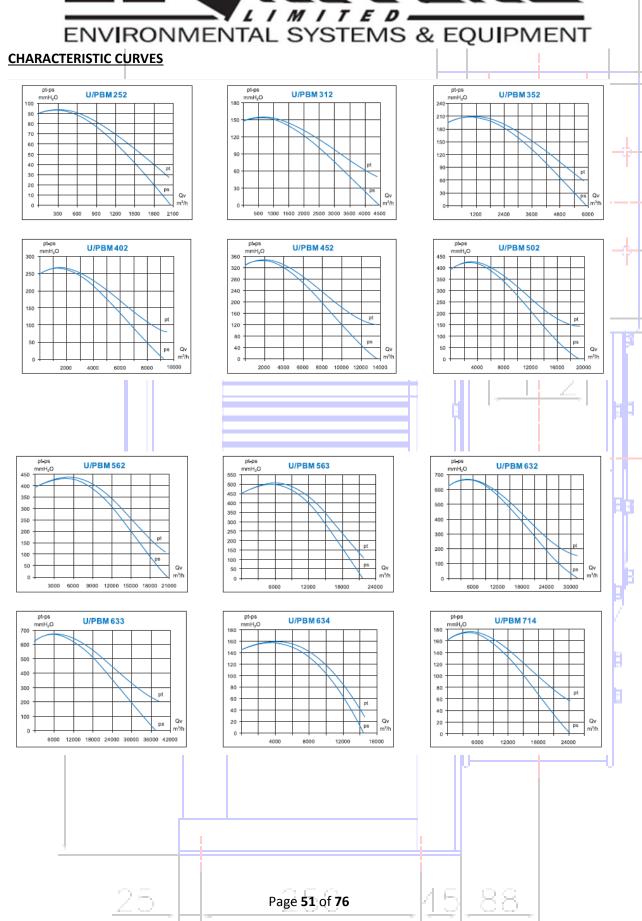
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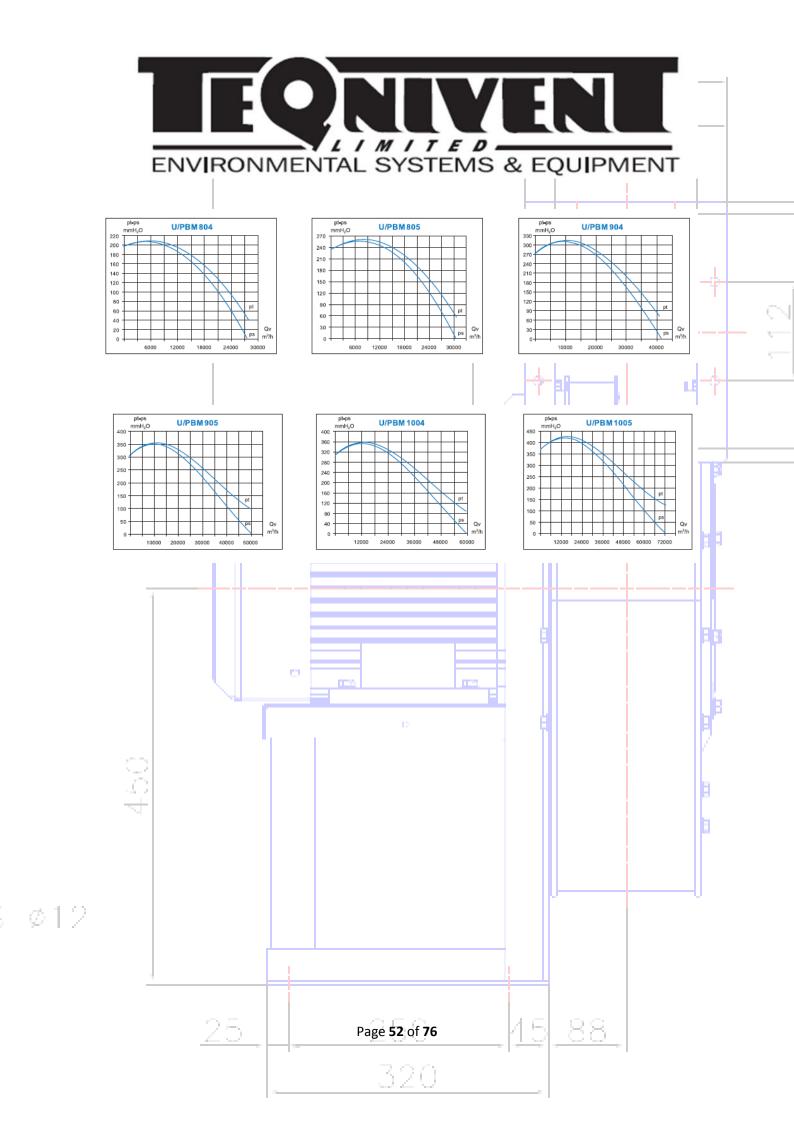
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The **U/MPR** series centrifugal fans are designed to take up air, even if dusty, at **temperatures** of up to a maximum 80°C.

They are used in all the industrial applications requiring medium-to-high pressure and low noise.

The strong steel sheet **spiral casings** are rimmed and welded. These fans also have a base for the motor and the discharge angle can be adjusted in 45° steps by rotating either clockwise RD or counter-clockwise LG (see discharge direction table).

The spot-welded **impellers** with high performance, backward-curved blades, have been carefully balanced both statically and dynamically.

The **motors** installed are asynchronous, three-phase or single-phase, 2 poles, B3, with IP55 protection, self-ventilated, designed for continuous service and are UNEL and IEC compliant.

### **ACCESSORIES**

**RP** inlet protection net

**GA** intaking vibration-damping joint

**RA** intaking joint

**RF** inlet flanged fitting

**CA** inlet counter-flange

**FL** inlet filter

**SA** inlet silencer

**SF** throttle valve

**RM** outlet protection net

**GM** feed vibration-damping joint

**CM** outlet counter-flange

**QT** outlet square-round joint

**SM** outlet silencer

**TS** discharge plug

**PI** inspection door

**AV** vibration dampers





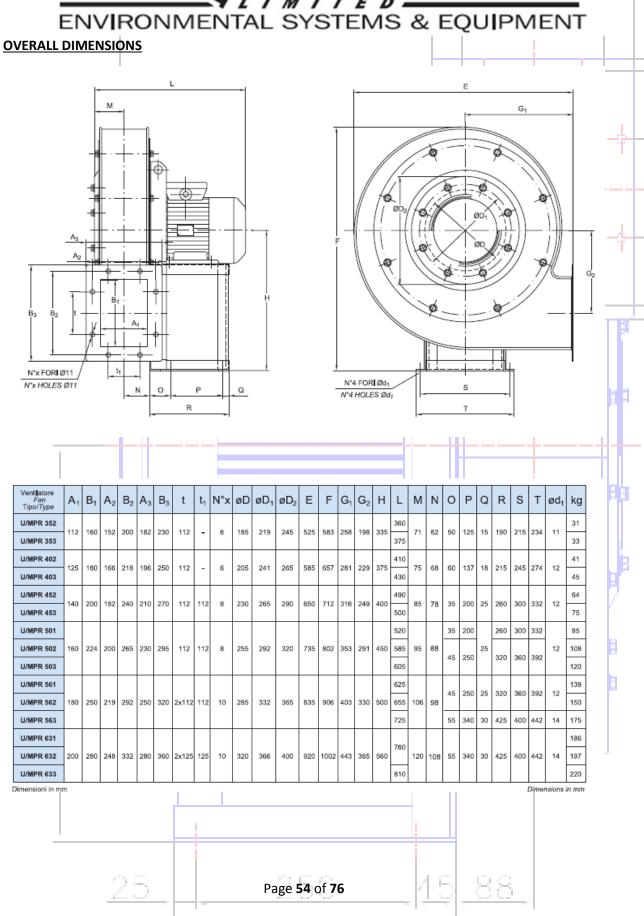
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### **SPECIAL VERSIONS**

- AI made of stainless steel AISI 304 to extract corrosive fumes
- **AS** anti-spark version in accordance with ANIMA-COAER standards (table NV105)
- **HZ** manufactured to work at Hz. 60
- HT conveyed fluid temperature up to a maximum of 250oC (this version is made with longer shaft motor and extra cooling fan)
- SB arrangement 5 with motor type B5 or B3/B5 without motor support base
- TH high protection for use in tropical climate with high degree of humidity
- TR belt drive, 9 or 12 arrangement
- **EX** ATEX version zone 1 zone 2 (GAS) and zone 21 zone 22 (DUST)

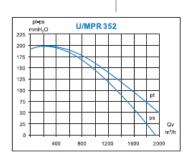
Page **53** of **76** 

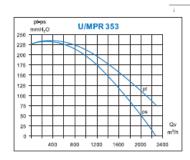


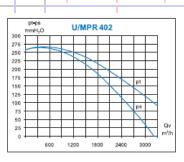


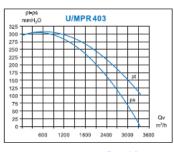
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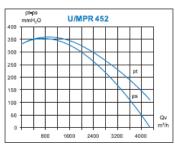
ENVIRONMENTAL SYSTEMS & EQUIPMENT

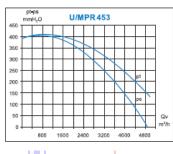


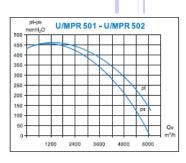


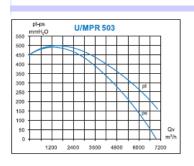


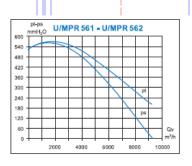


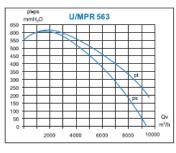


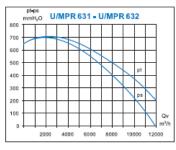


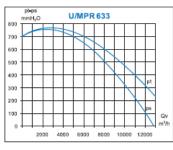












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The **U/APE** series centrifugal fans are designed to take up air, even if dusty, at **temperatures** of up to a maximum 80°C.

These fans are **used** in the industrial systems requiring high pressures and low flow rates. Furthermore they can also be used for pneumatic conveyance.

The strong steel sheet **spiral casings** are rimmed and welded. These fans also have a base for the motor and the discharge angle can be adjusted in 45° steps by rotating either clockwise RD or counter-clockwise LG (see discharge direction table).

The welded steel sheet **impellers** with forward-curved blades have been carefully balanced both statically and dynamically, and are connected directly to the motor shaft.

The **motors** installed are asynchronous, three-phase or single-phase, 2 pole, B3, with IP55 protection, self-ventilated, designed for continuous service and are UNEL and IEC compliant.

### **ACCESSORIES**

**RP** inlet protection net

**GA** intaking vibration-damping joint

**RA** intaking joint

**RF** inlet flanged fitting

CA inlet counter-flange

FL inlet filter

**SA** inlet silencer

**SF** throttle valve

**RM** outlet protection net

**GM** feed vibration-damping joint

**CM** outlet counter-flange

**QT** outlet square-round joint

**SM** outlet silencer

**TS** \_\_discharge plug

**AV** vibration dampers

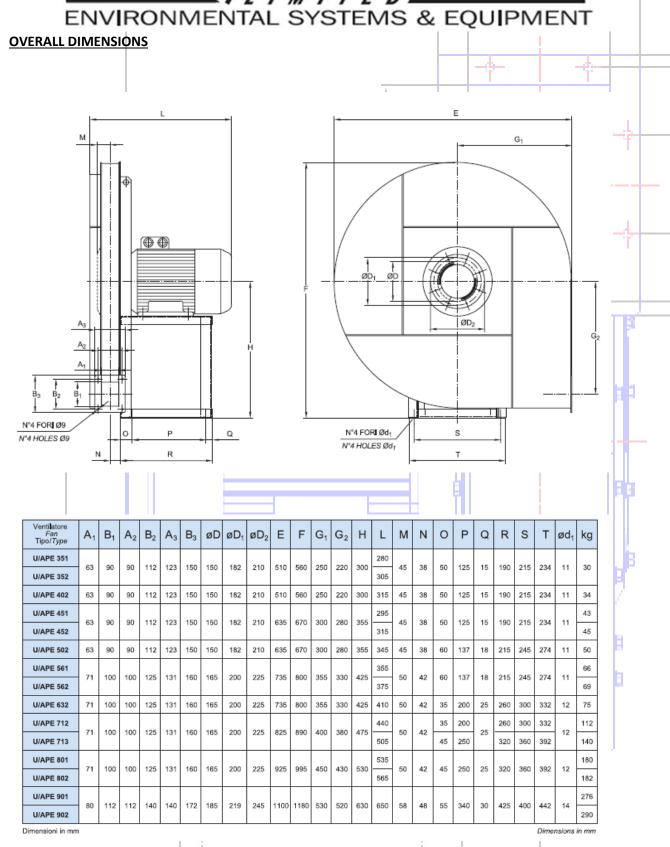


### **SPECIAL VERSIONS**

- AI made of stainless steel AISI 304 to extract corrosive fumes
- **AS** anti-spark version in accordance with ANIMA-COAER standards (table NV105)
- **HZ** manufactured to work at Hz. 60
- HT conveyed fluid temperature up to a maximum of 250oC (this version is made with longer shaft motor and extra cooling fan)
- SB arrangement 5 with motor type B5 or B3/B5 without motor support base
- **TH** high protection for use in tropical climate with high degree of humidity
- TR belt drive, 9 or 12 arrangement
- EX ATEX version zone 1 zone 2 (GAS) and zone 21 zone 22 (DUST)

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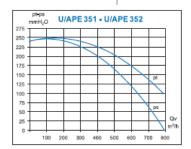


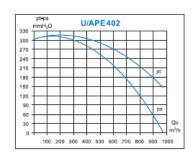
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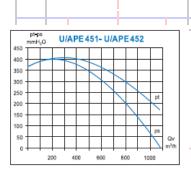
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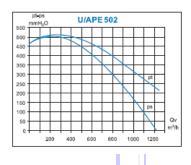
### ENVIRONMENTAL SYSTEMS & EQUIPMENT

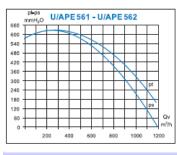
### **MODELS AND PERFORMANCES**

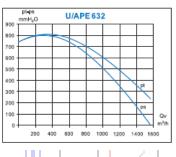


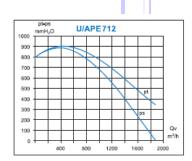


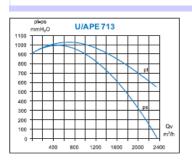


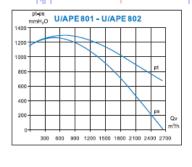


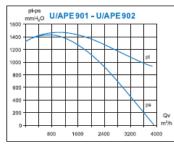


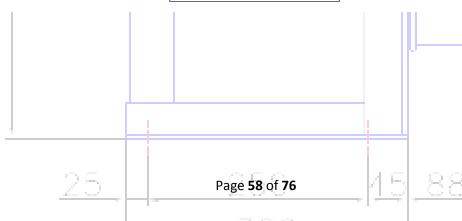














The **U/APR** series centrifugal fans are designed to take up air, even very dusty, at **temperatures** of up to a maximum 80°C.

They are **used** in all the industrial plants requiring very high pressures. Furthermore these fans can also be used to convey air containing granular, but not stringy, material.

The strong steel sheet **spiral casings** are rimmed and reinforced with steel profiles. These fans also have a base for the motor and the discharge angle can be adjusted in 45° steps by rotating either clockwise RD or counter-clockwise LG (see discharge direction table).

The welded steel sheet **impellers** with radial blades have been perfectly balanced both statically and dynamically and are connected directly to the motor shaft.

The **motors** installed are asynchronous, three-phase or single-phase, 2 poles, B3, with IP55 protection, self-ventilated, designed for continuous service and are UNEL and IEC compliant.

### **ACCESSORIES**

**RP** inlet protection net

**GA** intaking vibration-damping joint

**RA** intaking joint

**RF** inlet flanged fitting

CA inlet counter-flange

FL inlet filter

**SA** inlet silencer

**SF** throttle valve

**RM** outlet protection net

**GM** feed vibration-damping joint

**CM** outlet counter-flange

**QT** outlet square-round joint

**SM** outlet silencer

**TS** \_\_discharge plug

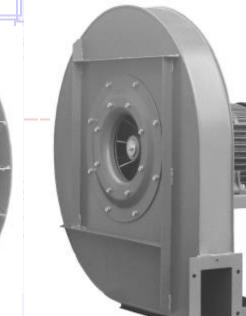
**AV** vibration dampers

### SPECIAL VERSIONS

- AI made of stainless steel AISI 304 to extract corrosive fumes
- **AS** anti-spark version in accordance with ANIMA-COAER standards (table NV105)
- **HZ** manufactured to work at Hz. 60
- HT conveyed fluid temperature up to a maximum of 250oC (this version is made with longer shaft motor and extra cooling fan)
- SB arrangement 5 with motor type B5 or B3/B5 without motor support base
- **TH** high protection for use in tropical climate with high degree of humidity
- TR belt drive, 9 or 12 arrangement
- EX ATEX version zone 1 zone 2 (GAS) and zone 21 zone 22 (DUST)

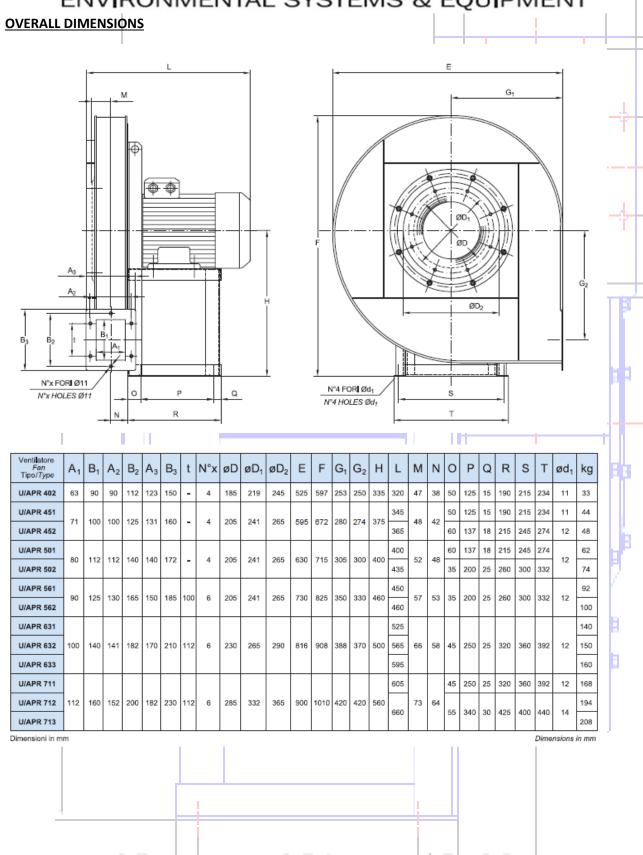
Page **59** of **76** 



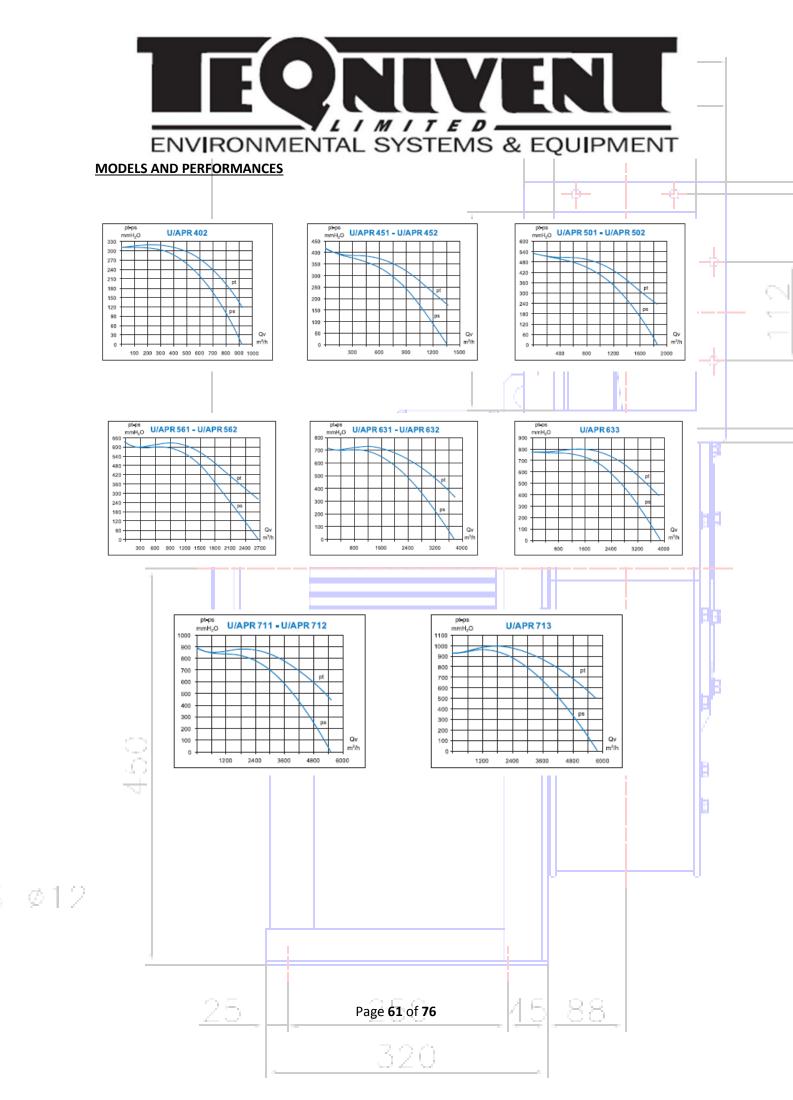




**ENVIRONMENTAL SYSTEMS & EQUIPMENT** 



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The **U/APF** series centrifugal fans are designed to take up air, even if dusty, at **temperatures** of up to a maximum 80°C.

These high performance, high pressure fans are used in exhaust, drying and pressurization systems.

The strong steel sheet **spiral casings** are rimmed, welded and reinforced with steel profiles. These fans also have a base for the motor and the discharge angle can be regulated in 45° steps by rotating either clockwise RD or counter-clockwise LG (see discharge direction table).

The welded steel sheet **impellers** with forward-curved blades, have been balanced both statically and dynamically, and are connected directly to the motor shaft.

The **motors** installed are asynchronous, three-phase, 2 poles, B3, with IP55 protection, self-ventilated, designed for continuous service and are UNEL and IEC compliant.

### **ACCESSORIES**

**RP** inlet protection net

**GA** intaking vibration-damping joint

**RA** intaking joint

**RF** inlet flanged fitting

CA inlet counter-flange

**FL** inlet filter

**SA** inlet silencer

**SF** throttle valve

**RM** outlet protection net

**GM** feed vibration-damping joint

**CM** outlet counter-flange

**QT** outlet square-round joint

**SM** outlet silencer

**TS** \_\_discharge plug

**AV** vibration dampers

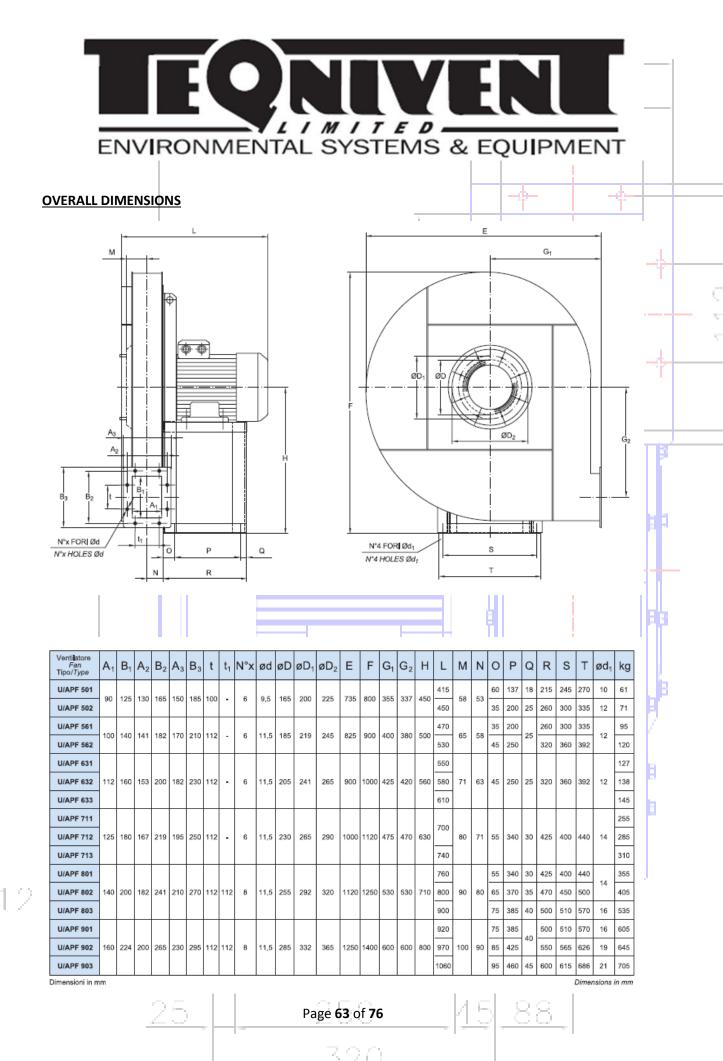
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### SPECIAL VERSIONS

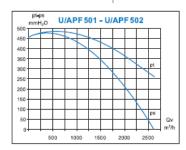
- AI made of stainless steel AISI 304 to extract corrosive fumes
- **AS** anti-spark version in accordance with ANIMA-COAER standards (table NV105)
- **HZ** manufactured to work at Hz. 60
- HT conveyed fluid temperature up to a maximum of 250oC (this version is made with longer shaft motor and extra cooling fan)
- SB arrangement 5 with motor type B5 or B3/B5 without motor support base
- **TH** high protection for use in tropical climate with high degree of humidity
- TR belt drive, 9 or 12 arrangement
- EX ATEX version zone 1 zone 2 (GAS) and zone 21 zone 22 (DUST)

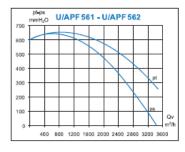
Page **62** of **76** 



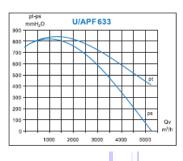
# ENVIRONMENTAL SYSTEMS & EQUIPMENT

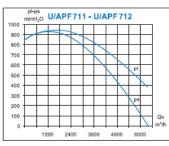
### **MODELS AND PERFORMANCES**

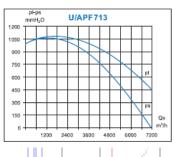


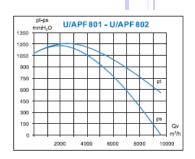


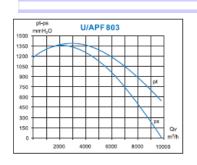


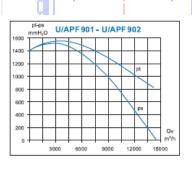


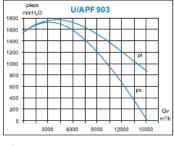


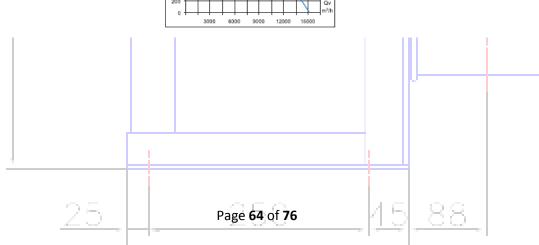














The **U/HPG** series centrifugal fans are designed to convey air, clean or dirty, at **temperatures** of up to a maximum 80°C.

They are **used** in all industrial plants requiring high pressures. They can be used for pneumatic conveyance.

The strong steel sheet **spiral casings** are rimmed, welded and reinforced with profiles. These fans also have a motor support base and the discharge angle can be regulated in 45° steps by rotating either clockwise RD or counter-clockwise LG (see discharge direction table).

The welded steel sheet **impellers** with high performance backward-curved blades, have been perfectly balanced both statically and dynamically and are connected directly to the motor shaft.

The **motors** are asynchronous, three-phase, 2 poles, B3, with IP55 protection, self-ventilated, designed for continuous service and are UNEL and IEC compliant.

### **ACCESSORIES**

<b>RP</b> inlet protection net	RP	inlet	protect	tion	net
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**GA** intaking vibration-damping joint

**RA** intaking joint

**RF** inlet flanged fitting

**CA** inlet counter-flange

**FL** inlet filter

**SA** inlet silencer

**SF** throttle valve

**RM** outlet protection net

**GM** feed vibration-damping joint

**CM** outlet counter-flange

**QT** outlet square-round joint

**SM** outlet silencer

TS discharge plug

PI inspection door

**AV** vibration dampers

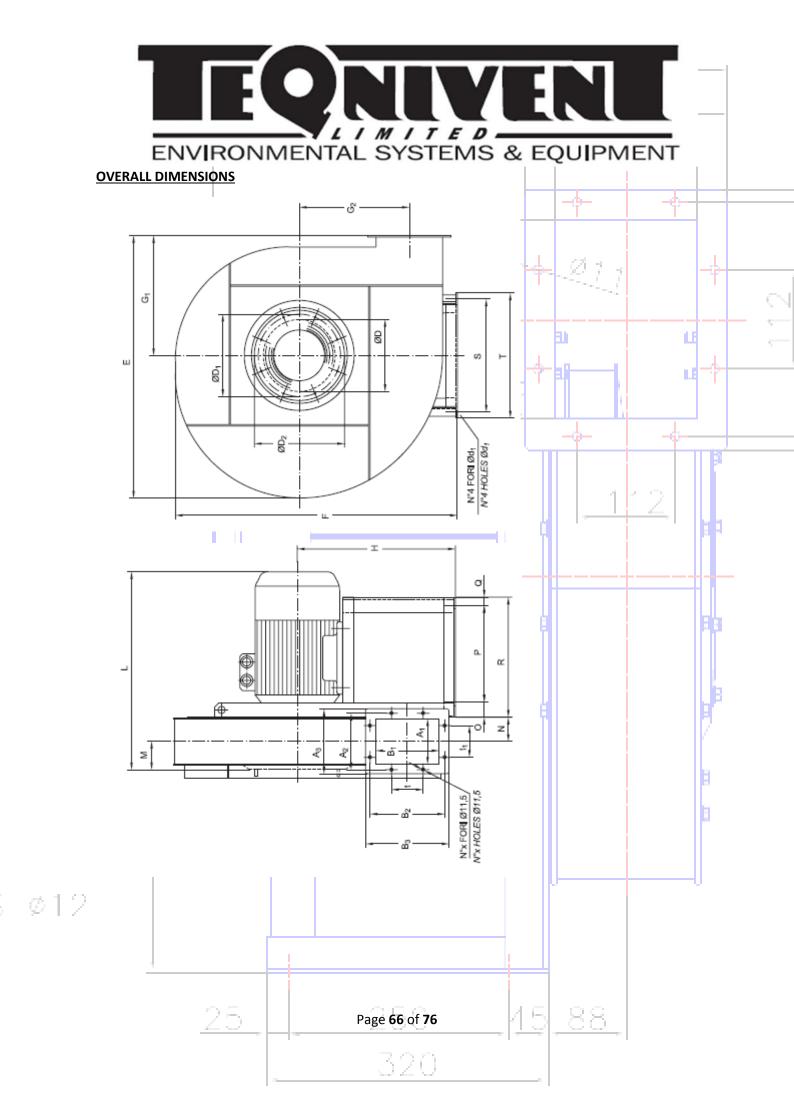
**SPECIAL VERSIONS** 





- AI made of stainless steel AISI 304 to extract corrosive fumes
- AS anti-spark version in accordance with ANIMA-COAER standards (table NV105)
- **HZ** manufactured to work at Hz. 60
- **HT** conveyed fluid temperature up to a maximum of 250oC (this version is made with longer shaft motor and extra cooling fan)
- SB arrangement 5 with motor type B5 or B3/B5 without motor support base
- **TH** high protection for use in tropical climate with high degree of humidity
- **TR** belt drive, 9 or 12 arrangement

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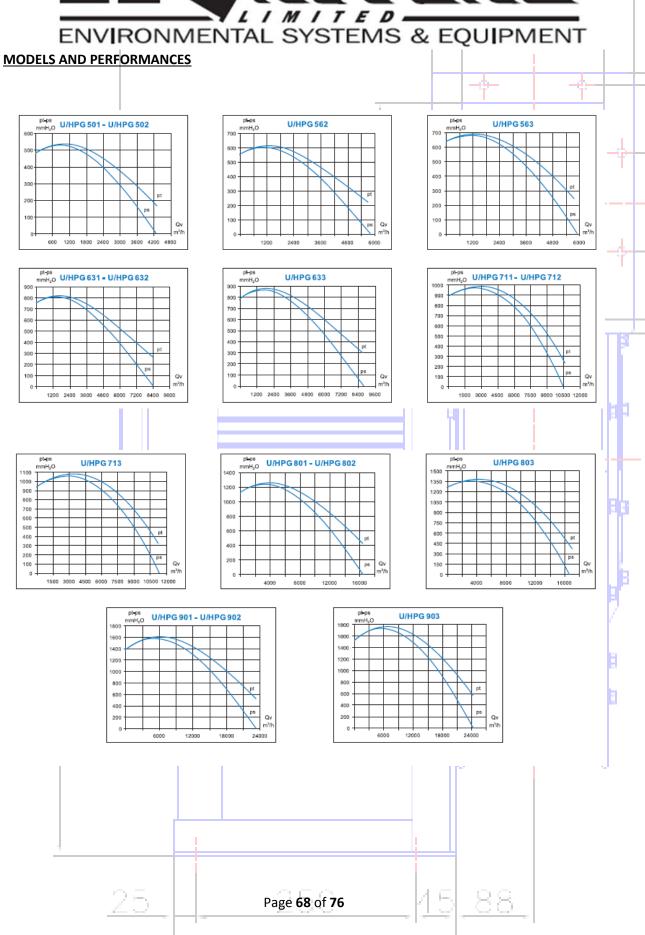




### ENVIRONMENTAL SYSTEMS & EQUIPMENT

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# ECNIVEN





The **U/HPH** series fans are designed to convey air, even containing suspended solid particles, at **temperatures** of up to a maximum 80°C.

This high performance series is generally **used** in industrial applications requiring high pressure and high flow rates.

The particularly strong steel sheet **spiral casings** are rimmed, welded and reinforced with profiles. These fans also have a motor support base and the discharge angle can be regulated in 45° steps by rotating either clockwise RD or counter-clockwise LG (see discharge direction table).

The steel sheet **impellers** with backward-curved blades, have been perfectly balanced both statically and dynamically.

The **motors** are asynchronous, three-phase, 2 pole, B3, with IP55 protection, self-ventilated, designed for continuous service and are UNEL and IEC compliant.

### **ACCESSORIES**

**RP** inlet protection net

**GA** intaking vibration-damping joint

**RA** intaking joint

**RF** inlet flanged fitting

CA inlet counter-flange

FL inlet filter

**SA** inlet silencer

**SF** throttle valve

**RM** outlet protection net

**GM** feed vibration-damping joint

**CM** outlet counter-flange

**QT** outlet square-round joint

**SM** outlet silencer

**TS** \_\_discharge plug

**PI** inspection door

**AV** vibration dampers

### **SPECIAL VERSIONS**

AI made of stainless steel AISI 304 to extract corrosive fumes

**AS** anti-spark version in accordance with ANIMA-COAER standards (table NV105)

**HZ** manufactured to work at Hz. 60

HT conveyed fluid temperature up to a maximum of 250oC (this version is made with longer shaft motor and extra cooling fan)

SB arrangement 5 with motor type B5 or B3/B5 without motor support base

**TH** high protection for use in tropical climate with high degree of humidity

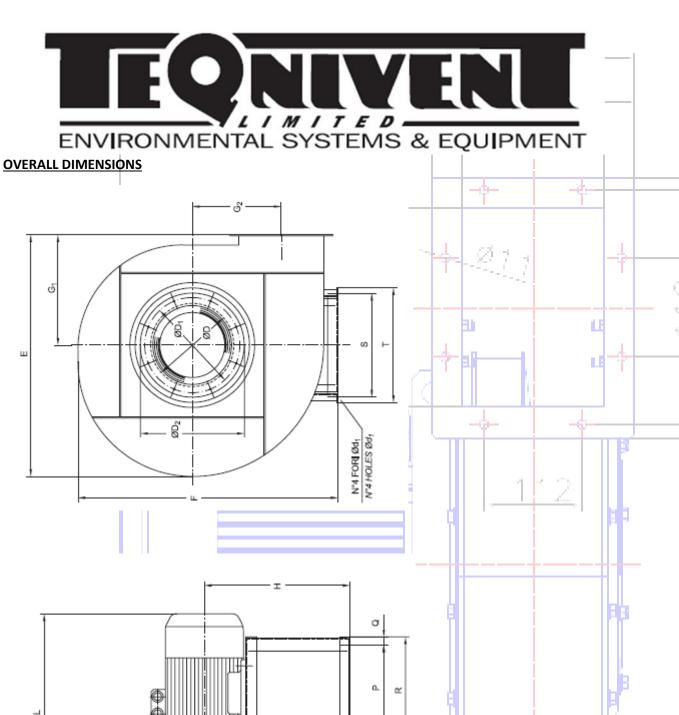
TR belt drive, 9 or 12 arrangement

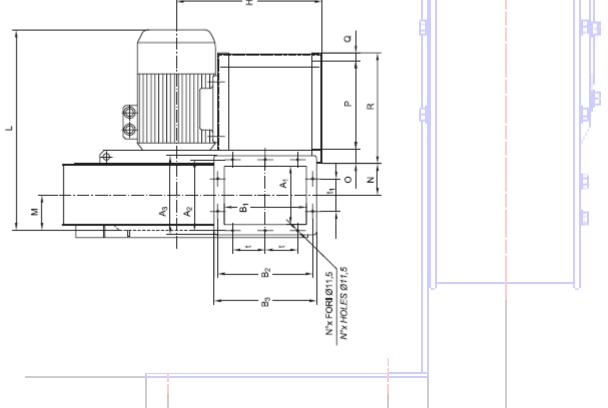
**EX** ATEX version zone 1 – zone 2 (GAS) and zone 21 – zone 22 (DUST)

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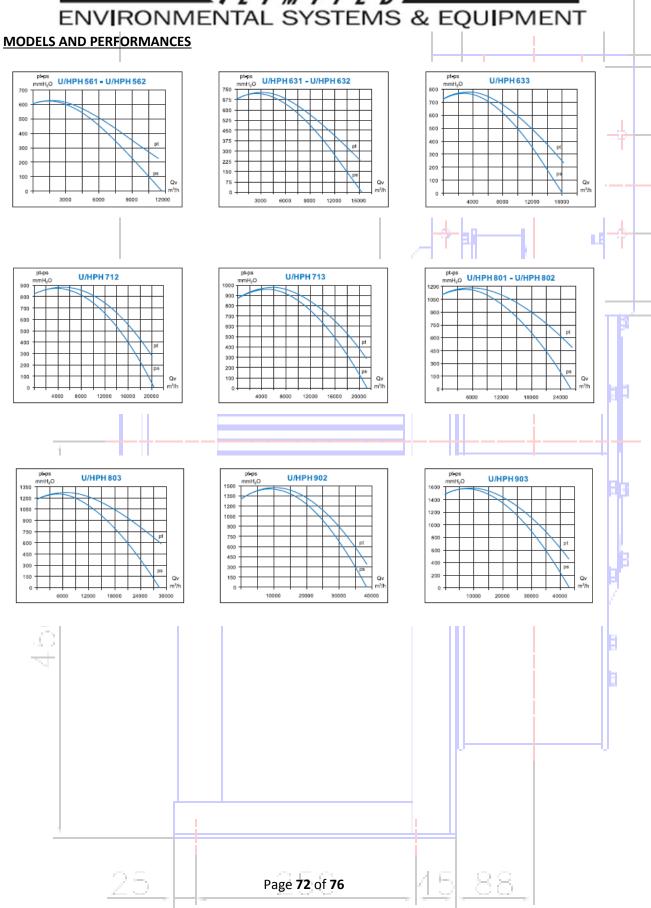
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# ENVIRONMENTAL SYSTEMS & EQUIPMENT ELS AND PERFORMANCES POST SHARE U/HPH 631 - U/HPH 632 POST SHARE U/HPH 633 POST SHARE U/HPH 633





The **U/AT** series smoke exhausts are designed to take up air and fumes, even if dusty, at **temperatures** of up to a maximum 250°C.

These centrifugal exhaust fans are particularly **used** in industrial and civil plants requiring better chimney draught.

The special design of the strong steel sheet **casings** makes it easy to install the fan on the side of the chimney. These fans can rotate clockwise RD and counter-clockwise LG (see discharge direction table).

The welded steel sheet **impellers** with radial blades have been perfectly balanced, both statically and dynamically and are connected directly to the motor shaft.

The **motors** installed are asynchronous, three-phase or single-phase, B5, self-ventilated, with IP55 protection, designed for continuous service and are equipped with an extra cooling impeller.

### **ACCESSORIES**

**RP** inlet protection net

**RA** intaking joint

**RF** inlet flanged fitting

**CA** inlet counter-flange

**CM** outlet counter-flange

### **SPECIAL VERSIONS**

AI made of stainless steel AISI 304 to extract corrosive fumes

**AS** anti-spark version in accordance with ANIMA-COAER standards.

**HZ** manufactured to work at Hz. 60

TH high protection for use in tropical climate with high degree of humidity

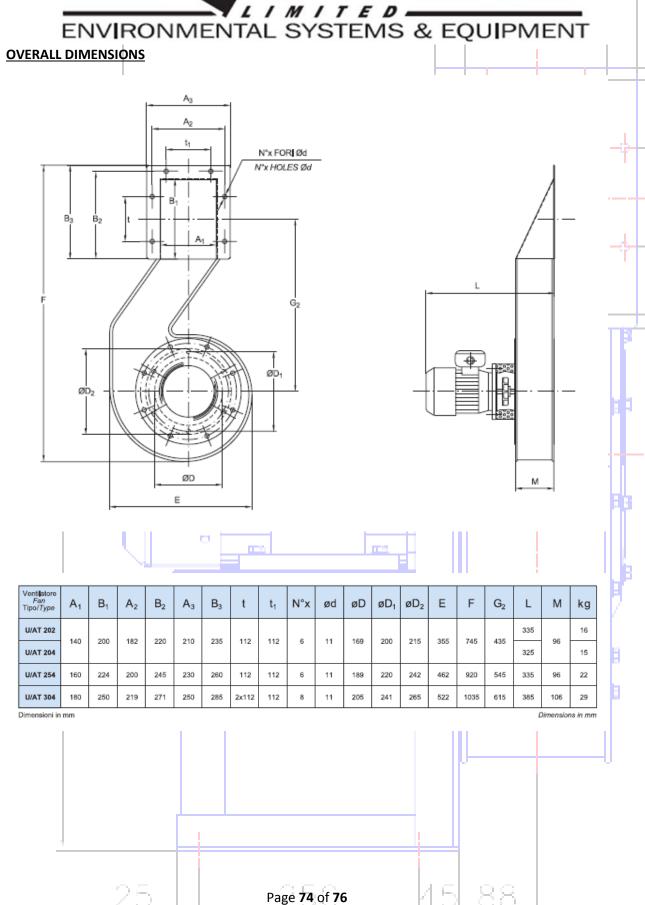
**EX** ATEX version zone 1 – zone 2 (GAS) and zone 21 – zone 22 (DUST)



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# ENVIRONMENTAL SYSTEMS & EQUIPMENT

