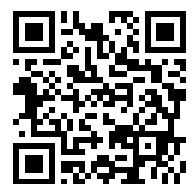




**COMEX
GROUP**
TUTTO UN ALTRO CLIMA



LEADER

HELICAL FAN HEATER

ABOUT US ...technological innovation since 1986



OUR MISSION

Founded in 1986 as a manufacturer of industrial furnaces, **Comex Group** has built its history on a fundamental value: technological innovation.

Many years of experience in the heating and air-conditioning sectors, combined with the continuous acquisition of know-how on new technologies and applications, have enabled the company to apply solutions that are always up-to-date using heat pump systems, solar cooling, heat recovery, thermal power stations and, most recently, air sanitation.

Research and innovation have distinguished the company in the heating and air conditioning sector with important advantages for **Comex Group** customers in the areas of energy saving, safety and environmental protection.

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The data in this brochure should be regarded as indicative and not binding.
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LEADER

The standard helical fan coil

The fan heater is designed for heating or air-conditioning any industrial or commercial environment, in fact, the careful design allows it to be inserted even in prestigious environments.

The LEADER has an electrical protection rating of IP 44, IP 54 and filter < 10 microns for purification from suspended dust, and is available in 10 models with different flow rates and air throw speeds.

This makes it possible to meet environmental compliance requirements for all kinds of activities.



LEADER

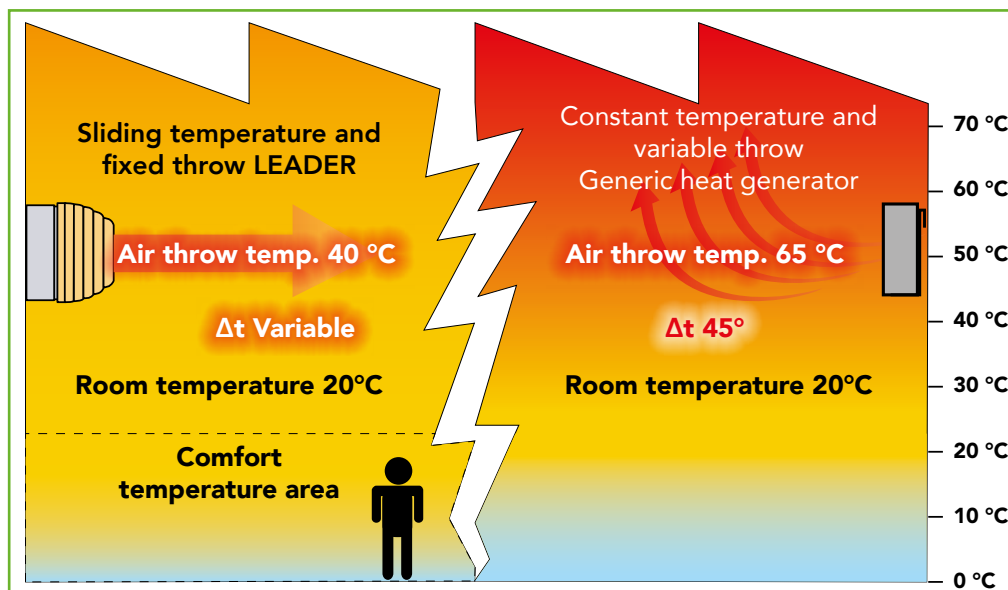
Why is LEADER an ideal solution?

1 BECAUSE IT ALLOWS WELL-BEING AND ENERGY SAVINGS

2 BECAUSE IT HEATS UP VERY QUICKLY

3 BECAUSE IT IS EASY TO INSTALL

Hot air rises to the top because it is less dense and lighter than cold air, which allows hot air balloons to rise off the ground. In very tall industrial buildings, this is a serious problem because in order to get the optimum temperature to human height, a large amount of warm air must first be allowed to rise to the ceiling, resulting in waste and lack of comfort.



The amount of rising air depends on the temperature difference (Δt) between the hot air produced by the system and the air in the room.

The greater the difference, the greater the amount of heat rising to the ceiling.

Manufacturers of hot air equipment maintain this difference, whatever the temperatures involved.

Room air 0°C, throw air 45°C, room air 20°C, throw air 65°C.

In this way, the stratification of hot air upwards gets worse by the hour because the hotter air is less dense.

On the other hand, the LEADER combined with the CLIMAIR COND works at a flowing water temperature, (see illustration): Ambient air at 0°C and Launch air at 40°C, which in time becomes Ambient air at 20°C and Launch air always at 40°C.

The advantage obtained is evident, both in costs and in well-being, because the stratification of the hot air at the top improves hour by hour by decreasing the temperature difference between throw and room.

LEADER - Main characteristics



LEADER 15/25



LEADER 35/45



LEADER 70

The LEADER series of indoor fan coil units are designed for heating and air conditioning any industrial and commercial environment, in fact, the care taken in the design allows them to be inserted even in prestigious environments.

The LEADER with IP 44, IP 54 electrical protection rating and < 10 micron filter for purification from suspended dust, is available in 10 models with different flow rates and air throw speeds.

This makes it possible to meet environmental compliance requirements for all types of activities.

LEADER - Main characteristics

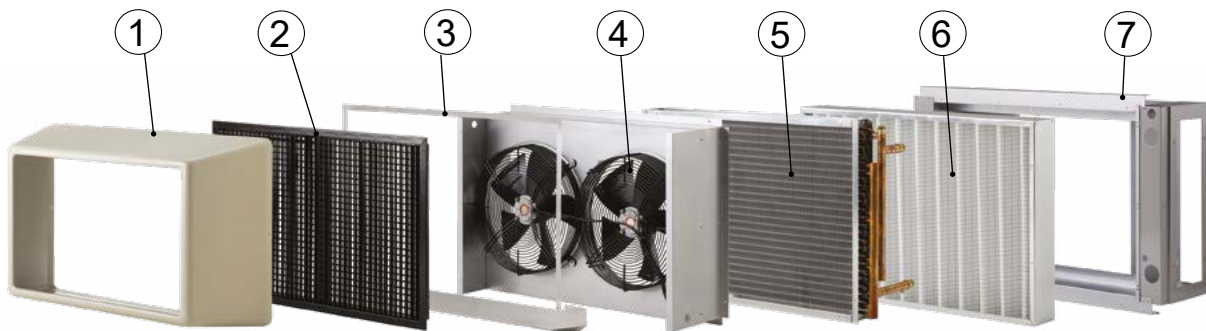
- Available in 10 models, they make it possible to proportion the throws, speed and volumes of treated air according to the specific needs of each individual plant
- Combined with Climair heat generators with external probe and sliding temperature on the exchanger, they reduce the stratification coefficient inversely to the increase in internal temperature
- LEADER units are designed for both wall and ceiling installation
- They can be equipped with variable speed control to adjust plant set-up times or compensate for continuous extractions
- Complete availability of control and management panels for every type of application

LEADER - Technical characteristics

- Leader casing in ABS and galvanised steel
- Leader prepared for wall or ceiling installation
- Vertical air outlet orientation
- Dual speed fan with variable air flow at minimum speed
- Leader degree of protection IP54

Optionals

- Leader also available in Leader C version (not ceiling mounted)
- Bi-directional orientation of outlet air
- Filter for purification from suspended dust
- Flexible boiler-thermal fan connection kit
- Electrical expansion panel for controlling more than one Leader



1. ABS LEADER casing
2. Vertical outlet air grille (standard) or bi-directional (optional)
3. Condensate collection tray (for C version)
4. Dual-speed fan with variable air flow at minimum speed
5. Copper and aluminium exchanger with very high efficiency and quality
6. Up to 6 micron efficiency filter for purification of suspended dust (optional)
7. Supporting structure made of galvanised steel and with quality materials and components

For further information on use, plant design, etc., please contact the Comex Group technical department.

LEADER - Technical Data

ΔT MAX. SPEED = 10°C - AMBIENT TEMPERATURE = 16°C							
LEADER MODEL			15	25	35	45	70
TOTAL HEAT OUTPUT	Max speed	kW	22,7	28,2	46,8	58,64	80,4
	Min speed	kW	14,8	24,8	30,2	51,3	69,6
AIR FLOW	Max speed	m³/h	1.900	2.750	3.800	5.500	11.500
	Min speed	m³/h	950	2.150	1.900	4.300	8.500
AIR TEMPERATURE	Input	°C	16	16	16	16	16
	Max speed out	°C	50,8	46	52	47,3	36,5
	Min speed out	°C	61,7	49,8	62,7	51	40
AIR THROW	Max speed	m	16	20	16	20	25
	Min speed	m	12	17	12	17	17
AIR CIRCUIT PRESSURE DROP	Max speed	mbar	0,29	0,55	0,29	0,55	0,48
	Min speed	mbar	0,09	0,36	0,09	0,36	0,29
WATER CIRCULATION FLOW RATE		l/h	1.944	2.412	4.032	5.040	6.912
WATER TEMPERATURE	Input	°C	80	80	80	80	80
	Max speed out	°C	70	70	70	70	70
	Min speed out	°C	73,5	71,2	73,6	71,3	71,4
WATER CIRCUIT PRESSURE DROP		mbar	107	161	494	748	457
HYDRAULIC, ELECTRICAL CHARACTERISTICS - OVERALL DIMENSIONS							
HYDRAULIC CONNECTIONS	In/Out	"M	¾	¾	¾	¾	1
POWER SUPPLY VOLTAGE		V/Hz	230/50	230/50	230/50	230/50	230/50
ELECTRICAL POWER CONSUMPTION	Max	W	110	180	220	360	500
PROTECTION DEGREE		IP	IP44	IP44	IP44	IP44	IP54
DIMENSIONS	H	mm	736	736	736	736	820
	W	mm	748	748	1.148	1.148	1.650
	D	mm	618	618	618	618	700
WEIGHT		kg	40	40	64	64	93
NOISE LEVEL	Max speed	dB(A)	48	52	50	54	73
	Min speed	dB(A)	45	49	47	51	65

ΔT MAX. SPEED = 15°C - AMBIENT TEMPERATURE = 16°C							
LEADER MODEL			15	25	35	45	70
TOTAL HEAT OUTPUT	Max speed	kW	20,9	26	44,2	55,1	75,4
	Min speed	kW	14,1	23,1	29,3	48,7	65,9
AIR FLOW	Max speed	m³/h	1.900	2.750	3.800	5.500	11.500
	Min speed	m³/h	950	2.150	1.900	4.300	8.500
AIR TEMPERATURE	Input	°C	16	16	16	16	16
	Max speed out	°C	48,3	43,7	50	45,4	35,3
	Min speed out	°C	59,7	47,5	61	49,3	38,8
AIR THROW	Max speed	m	16	20	16	20	25
	Min speed	m	12	17	12	17	17
AIR CIRCUIT PRESSURE DROP	Max speed	mbar	0,29	0,55	0,29	0,55	0,48
	Min speed	mbar	0,09	0,36	0,09	0,36	0,29
WATER CIRCULATION FLOW RATE		l/h	1.188	1.476	2.520	3.168	4.320
WATER TEMPERATURE	Input	°C	80	80	80	80	80
	Max speed out	°C	65	65	65	65	65
	Min speed out	°C	69,8	66,6	70	66,8	66,9
WATER CIRCUIT PRESSURE DROP		mbar	56	64	217	327	203
HYDRAULIC, ELECTRICAL CHARACTERISTICS - OVERALL DIMENSIONS							
HYDRAULIC CONNECTIONS	In/Out	"M	¾	¾	¾	¾	1
POWER SUPPLY VOLTAGE		V/Hz	230/50	230/50	230/50	230/50	230/50
ELECTRICAL POWER CONSUMPTION	Max	W	110	180	220	360	500
PROTECTION DEGREE		IP	IP44	IP44	IP44	IP44	IP54
DIMENSIONS	H	mm	736	736	736	736	820
	W	mm	748	748	1.148	1.148	1.650
	D	mm	618	618	618	618	700
WEIGHT		kg	40	40	64	64	93
NOISE LEVEL	Max speed	dB(A)	48	52	50	54	73
	Min speed	dB(A)	45	49	47	51	65

LEADER - Technical Data

ΔT MAX. SPEED = 20°C - AMBIENT TEMPERATURE = 16°C							
LEADER MODEL			15	25	35	45	70
TOTAL HEAT OUTPUT	Max speed	kW	19,2	23,7	41,5	51,6	70,4
	Min speed	kW	13,4	21,3	28,3	46,1	62,2
AIR FLOW	Max speed	m³/h	1.900	2.750	3.800	5.500	11.500
	Min speed	m³/h	950	2.150	1.900	4.300	8.500
AIR TEMPERATURE	Input	°C	16	16	16	16	16
	Max speed out	°C	45,7	41,4	48	43,5	34
	Min speed out	°C	57,7	45	59,7	47,4	37,5
AIR THROW	Max speed	m	16	20	16	20	25
	Min speed	m	12	17	12	17	17
AIR CIRCUIT PRESSURE DROP	Max speed	mbar	0,29	0,55	0,29	0,55	0,48
	Min speed	mbar	0,09	0,36	0,09	0,36	0,29
WATER CIRCULATION FLOW RATE		l/h	828	1.008	1.800	2.232	3.024
WATER TEMPERATURE	Input	°C	80	80	80	80	80
	Max speed out	°C	60	60	60	60	60
	Min speed out	°C	66	61,8	66,5	62,3	62,3
WATER CIRCUIT PRESSURE DROP		mbar	28	41	122	182	113
HYDRAULIC, ELECTRICAL CHARACTERISTICS - OVERALL DIMENSIONS							
HYDRAULIC CONNECTIONS	In/Out	"M	¾	¾	¾	¾	1
POWER SUPPLY VOLTAGE		V/Hz	230/50	230/50	230/50	230/50	230/50
ELECTRICAL POWER CONSUMPTION	Max	W	110	180	220	360	500
PROTECTION DEGREE		IP	IP44	IP44	IP44	IP44	IP54
DIMENSIONS	H	mm	736	736	736	736	820
	W	mm	748	748	1.148	1.148	1.650
	D	mm	618	618	618	618	700
WEIGHT		kg	40	40	64	64	93
NOISE LEVEL	Max speed	dB(A)	48	52	50	54	73
	Min speed	dB(A)	45	49	47	51	65

ΔT MAX. SPEED = 25°C - AMBIENT TEMPERATURE = 16°C							
LEADER MODEL			15	25	35	45	70
TOTAL HEAT OUTPUT	Max speed	kW	17,4	21,4	38,74	47,8	65,2
	Min speed	kW	12,7	19,7	27,2	43,2	58,1
AIR FLOW	Max speed	m³/h	1.900	2.750	3.800	5.500	11.500
	Min speed	m³/h	950	2.150	1.900	4.300	8.500
AIR TEMPERATURE	Input	°C	16	16	16	16	16
	Max speed out	°C	43	38,9	45,9	41,5	33
	Min speed out	°C	55,5	42,9	58	45,5	36
AIR THROW	Max speed	m	16	20	16	20	25
	Min speed	m	12	17	12	17	17
AIR CIRCUIT PRESSURE DROP	Max speed	mbar	0,29	0,55	0,29	0,55	0,48
	Min speed	mbar	0,09	0,36	0,09	0,36	0,29
WATER CIRCULATION FLOW RATE		l/h	612	756	1.332	1.656	2.232
WATER TEMPERATURE	Input	°C	80	80	80	80	80
	Max speed out	°C	55	55	55	55	55
	Min speed out	°C	62,1	57,6	62,5	57,6	57,6
WATER CIRCUIT PRESSURE DROP		mbar	30	24	86	105	75
HYDRAULIC, ELECTRICAL CHARACTERISTICS - OVERALL DIMENSIONS							
HYDRAULIC CONNECTIONS	In/Out	"M	¾	¾	¾	¾	1
POWER SUPPLY VOLTAGE		V/Hz	230/50	230/50	230/50	230/50	230/50
ELECTRICAL POWER CONSUMPTION	Max	W	110	180	220	360	500
PROTECTION DEGREE		IP	IP44	IP44	IP44	IP44	IP54
DIMENSIONS	H	mm	736	736	736	736	820
	W	mm	748	748	1.148	1.148	1.650
	D	mm	618	618	618	618	700
WEIGHT		kg	40	40	64	64	93
NOISE LEVEL	Max speed	dB(A)	48	52	50	54	73
	Min speed	dB(A)	45	49	47	51	65

LEADER C - Main characteristics

The LEADER C version, also combined with a cooling unit (electric chillers, absorbers), is optimally suited for air conditioning, as well as for heating industrial and commercial spaces.

For this reason, LEADER C is placed in the category of superior fan heaters, in particular the LEADER C 70 model developing a cooling power of approximately 30 kW, and an air throw of up to 25 m; it allows the summer requirements of rooms requiring high volumes of air to be satisfied, while using fewer machines and guaranteeing the customer significant savings and optimal comfort.

LEADER C - Technical Data

LEADER C MODEL			15	25	35	45	70
AIR FLOW	Max speed	m ³ /h	1.900	2.750	3.800	5.500	11.500
	Min speed	m ³ /h	950	2.150	1.900	4.300	8.500
AIR THROW	Max speed	m	16	20	16	20	25
	Min speed	m	12	17	12	17	17
WATER TEMPERATURE IN/OUT 5 - 10							
TOTAL HEAT OUTPUT	Max speed	kW	6,5	7,9	16,3	19,4	26,7
	Min speed	kW	5,2	7,4	12,3	17,9	24,4
SENSIBLE HEAT OUTPUT	Max speed	kW	5,6	7,1	12,7	15,8	21,9
	Min speed	kW	4,0	6,3	8,6	13,9	19,1
AIR TEMPERATURE	In	°C	26	26	26	26	26
	Out	°C	17,5	18,5	16,1	17,5	20
RELATIVE HUMIDITY	In	%	50	50	50	50	50
	Out	%	80	75,5	81	77,6	67,1
CIRCULATION WATER FLOW RATE		l/h	1.116	1.368	2.808	3.348	4.572
WATER CIRCUIT PRESSURE DROP		mbar	58	67	325	437	267
WATER TEMPERATURE IN/OUT 7 - 12							
TOTAL HEAT OUTPUT	Max speed	kW	5,1	6,5	13,6	16,0	22
	Min speed	kW	4,0	5,9	10,4	14,7	20
SENSIBLE HEAT OUTPUT	Max speed	kW	4,8	6,2	11,7	14,2	20
	Min speed	kW	3,4	5,6	7,9	12,5	17,5
AIR TEMPERATURE	In	°C	26	26	26	26	26
	Out	°C	18,4	19,0	17,5	18,4	21
RELATIVE HUMIDITY	In	%	50	50	50	50	50
	Out	%	78,3	74,6	79,6	76,7	66
CIRCULATION WATER FLOW RATE		l/h	864	1.116	2.340	2.736	3.780
WATER CIRCUIT PRESSURE DROP		mbar	37	57	232	311	195
HYDRAULIC, ELECTRICAL CHARACTERISTICS - OVERALL DIMENSIONS							
HYDRAULIC CONNECTIONS	In/Out	"M	¾	¾	¾	¾	1
POWER SUPPLY VOLTAGE		V/Hz	230/50	230/50	230/50	230/50	230/50
ELECTRICAL POWER CONSUMPTION	Max	W	110	180	220	360	500
PROTECTION DEGREE		IP	IP44	IP44	IP44	IP44	IP54
DIMENSIONS	H	mm	736	736	736	736	820
	W	mm	748	748	1.148	1.148	1.650
	D	mm	618	618	618	618	700
WEIGHT		kg	42	42	67	67	93
NOISE LEVEL	Max speed	dB(A)	49	53	51	55	73
	Min speed	dB(A)	46	50	48	52	65

For further information on use, plant design, etc., please contact the Comex Group technical department.

Some applications

LEADER INSTALLATIONS



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