CATALOGUE

IFHT / IFFT

LEADERSHIP & INNOVATION

CATALOGUE
IFHT-IFFT

Soler&Palau
Ventilation Group

ANSI/AMCA STANDARD 250-22

Laboratory methods for testing the performance of Jet Fans.

The operation of a Jet Fan is influenced by several factors, such as friction on the tunnel walls, inlet and outlet losses, flow resistance, gradients, and wind effects at the tunnel entrances. These elements contribute to a pressure drop along the tunnel. This pressure drop is compensated by the pressure increase generated by the Jet fans, which results from the transfer of momentum between the airflow expelled by the fan and the airflow inside the tunnel.

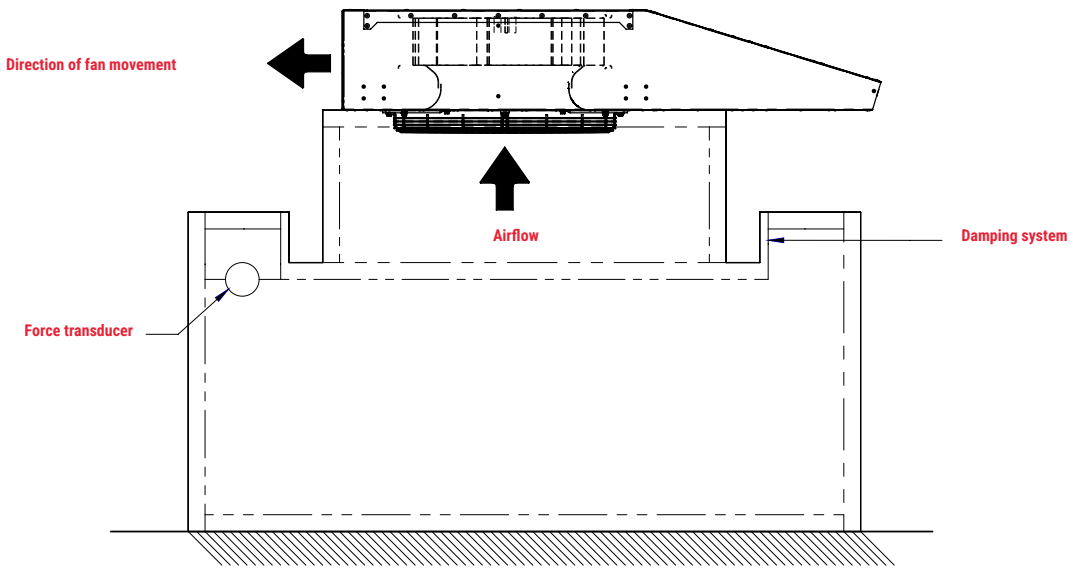
Since it is impossible to directly measure the momentum of the airflow expelled by the fan, thrust is measured instead. The rate of change of momentum is equal and opposite to the thrust, making thrust the key performance parameter in this context. This method allows for an accurate representation of the fan's capacity to see the flow behavior in the tunnel.

The performance of the IFHT / IFFT equipment series was obtained in accordance with the ANSI/AMCA 250-22 standard, Installation Figure 4C.

The thrust measurement design shown in Figure 4C uses a supported method that includes a damping system and a force transducer to accurately measure the thrust generated by the fan.

The damping system is used to support and absorb the thrust generated by the fan's airflow. These springs allow for an accurate measurement of the force exerted without interfering with the natural behavior of the fan during testing.

The force transducer is a highly accurate measurement device that converts the applied force (in this case, the thrust) into a proportional electrical signal. The load cell is installed in such a way that it can measure the thrust directly and reliably.



Installation Figure 4C

IFHT / IFFT

Centrifugal Jet Fan, designed to move large volumes of air in parking lots and tunnels.

IFHT Model: capable of operating immersed at 400°C / 2h and 300°C / 2h for smoke extraction in case of emergencies and for the reduction of pollution levels in underground parking lots.

IFFT Model: designed to move large amounts of air in parking lots where the handling of high temperatures is not required.

Illustrative image IFHT / IFFT

FEATURES

- Thrust force 44, 62, and 82N.
- Backward-curved galvanized steel impeller, balanced in accordance with ISO 1940-1 G6.3.
- Galvanized steel casing with two mounting supports. Terminal box or isolation switch available upon request.
- Protection guard on the inlet.
- Fan certified according to standard EN 12101-3, for 400°C/2h and 300°C/2h.
- Three-phase motors with IP55 protection rating.
- Ambient operating temperature from -20°C to 40°C for IFFT models.

400°C/2h — Certified according to EN 12101-3 standard. Certification No. 0370-CPD-0672 0370-CPD-1481

300°C/2h — Certified according to EN 12101-3 standard. Certification No. 0370-CPD-0673 0370-CPD-1422

amca WORLDWIDE CERTIFIED RATINGS — JET FAN THRUST AND SOUND — AIR MOVEMENT AND CONTROL ASSOCIATION INTERNATIONAL, INC.

APLICATIONS

EXTRACTION OF COMMON POLLUTANTS · SMOKE DISSIPATION · PARKING LOTS · ENTRANCE TUNNELS · EMERGENCY SMOKE EXTRACTION

IFHT NOMENCLATURE

Model	Model Number of poles	Thrust	Motor power (kW)	Temperature of motor	Motor Voltage (V)	Electrical Connection
IFHT= High temperature	4/8	44	1.5/0.21	3 = 300°C	230	Caja de Bornes = C
	4/8	62	2.5/0.45	4 = 400°C	460	Interruptor 300°C =I3
	4/8	82	2.5/0.45		380	Interruptor 400°C = I4

IFFT NOMENCLATURE

Modelo	Model Number of poles	Thrust	Motor power (kW)	Motor Voltage (V)
IFFT= High temperature	4/8	44	1.5/0.21	230
	4/8	62	2.5/0.45	460
	4/8	82	2.5/0.45	380

TECHNICAL SPECIFICATIONS IFHT

Model	Motor power (kW)	No. of poles	Motor (KW)	Motor Voltage V	Electrical connection	Speed RPM	Thrust N	Airflow m3/h/CFM	Total Sound Level dB(A)	Approx. Weight (Kg)
IFHT-4/8-50N	1.5/0.21	4/8	300°C	230	Terminal box	1690/855	44/13	5760 / 3390	74/59	76
				460	Terminal box					
				230	Isolation Switch 300°C					
				460	Isolation Switch 300°C					
			400°C	230	Terminal box					
				460	Terminal box					
				380	Terminal box					
				230	Isolation Switch 400°C					
				460	Isolation Switch 400°C					
				380	Isolation Switch 400°C					
IFHT-4/8-75N	2.5/0.45		300°C	230	Terminal box	1730/875	62/19	7764 / 4570	76/61	120
				460	Terminal box					
				230	Isolation Switch 300°C					
				460	Isolation Switch 300°C					
			400°C	230	Terminal box					
				460	Terminal box					
				380	Terminal box					
				230	Isolation Switch 400°C					
				460	Isolation Switch 400°C					
				380	Isolation Switch 400°C					
IFHT-4/8-100N	2.5/0.45		300°C	230	Terminal box	1730/875	82/24	8672 / 5104	77/63	120
				460	Terminal box					
				230	Isolation Switch 300°C					
				460	Isolation Switch 300°C					
			400°C	230	Terminal box					
				460	Terminal box					
				380	Terminal box					
				230	Isolation Switch 400°C					
				460	Isolation Switch 400°C					
				380	Isolation Switch 400°C					

* Thrust and airflow measured in accordance with ANSI/AMCA 250-22, Installation Figure 4C.
*Sound level at 3 meters, free field.

TECHNICAL SPECIFICATIONS IFFT

Model	Motor power (kW)KW	No. of Poles	Motor Voltage (V)	Electric connection	Speed RPM	Thrust N	Airflow m3/h/ CFM	Sound Pressure	Approx. Weight (Kg)
IFFT-4/8-50N	1.5/0.21	4/8	230	Isolation switch	1690/855	44/13	5760 / 3390	74/58	76
			460						
			380						
IFFT-4/8-75N	2.5/0.45		230		1730/875	62/19	7764 / 4570	76/61	120
			460						
			380						
IFFT-4/8-100N	2.5/0.45		230		1730/875	82/24	8672 / 5104	77/63	120
			460						
			380						

*Thrust and airflow measured in accordance with ANSI/AMCA 250-22, Installation Figure 4C.
*Sound level at 3 meters, free field.
*Sound pressure level at 3 meters in free field.
*Speed and power values are nominal.

amca WORLDWIDE CERTIFIED RATINGS
JET FAN THRUST AND SOUND
AIR MOVEMENT AND CONTROL ASSOCIATION INTERNATIONAL, INC.

Soler & Palau S.A. de C.V. certifies that the IFHT / IFFT series shown herein is licensed to bear the AMCA Seal. The ratings shown are based on tests and procedures performed in accordance with AMCA Publication 211 and AMCA Publication 311 and comply with the requirements of the AMCA Certified Ratings Program.

ACOUSTIC CHARACTERISTICS

IFHT / IFFT (4 poles)

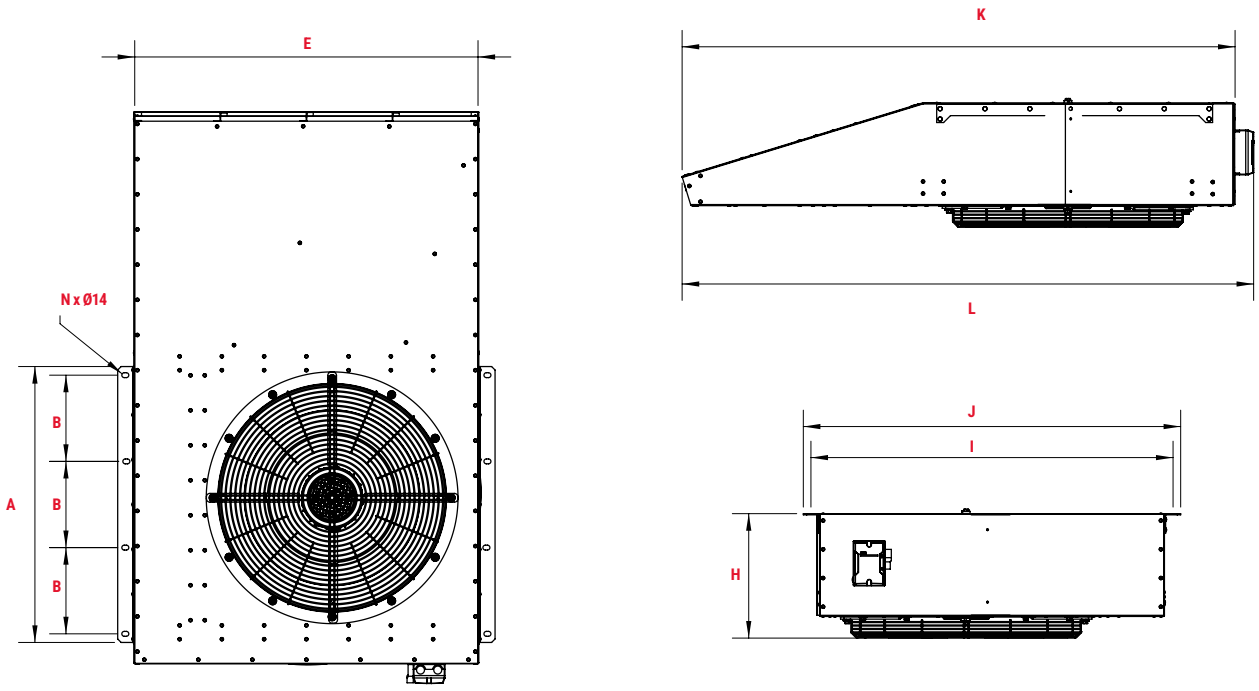
Modelo	63	125	250	500	1000	2000	4000	8000	LwA
50	60.2	72.9	90.4	87.6	86.3	83.1	78	69.2	94
75	66	76.6	89.1	90.2	90.1	87.1	82.9	83.2	96
100	74	78.6	88.8	93	90.9	87	81.6	76.4	97

IFHT / IFFT (8 poles)

Modelo	63	125	250	500	1000	2000	4000	8000	LwA
50	46	64	69	72	72	70	65	58	76
75	48	68	70	72	74	70	65	58	78
100	50	68	72	75	76	72	66	59	80

*Sound level measured in accordance with standard ANSI/AMCA 300-14, Figure 1 Installation A.

DIMENSIONS



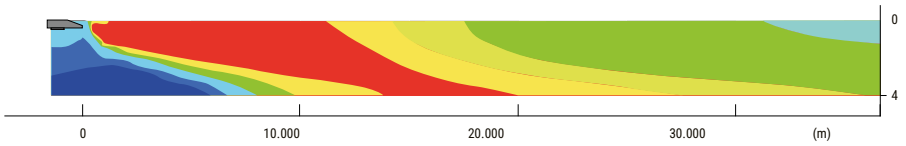
Model	A	B	E	H	I	J	K	L	N
IFHT / IFFT -4/8-50N	600	275	800	272	844	890	1232	1298	3
IFHT/ IFFT -4/8-75N	800	250	1000	337	1044	1090	1600	1666	4
IFHT/IFFT -4/8-100N	800	250	1000	337	1044	1090	1600	1666	4

Dimensions in mm

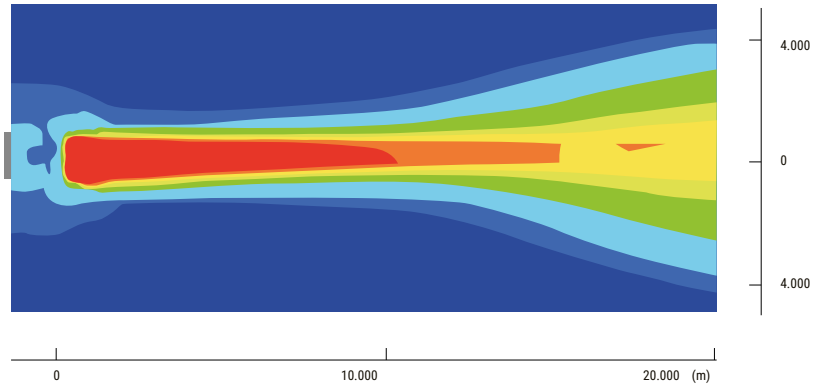
IFHT-50 4P

IFHT-50 4P	
Distance m	**Speed m / s**
0	16.271
2	4.967
4	4.431
6	3.926
8	3.585
10	3.125
12	2.716
14	2.388
16	2.234
18	2.176
20	2.097
22	2.001
24	1.91
26	1.845
28	1.76
30	1.685
32	1.62
34	1.561
36	1.519
38	1.466
40	1.416
42	1.372
44	1.337
46	1.316
48	1.295
50	1.273

SIDE VIEW



TOP VIEW



Maximum thrust calculated in accordance with ASHRAE Standard 70.

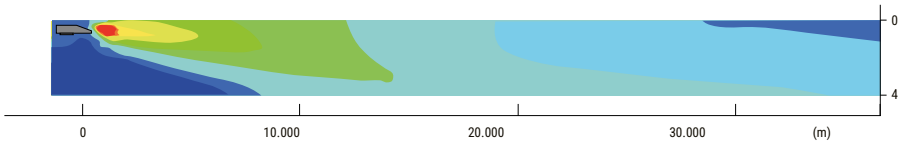
Data obtained at standard conditions at maximum operating speed.

Speed: m/s **Distance: m**

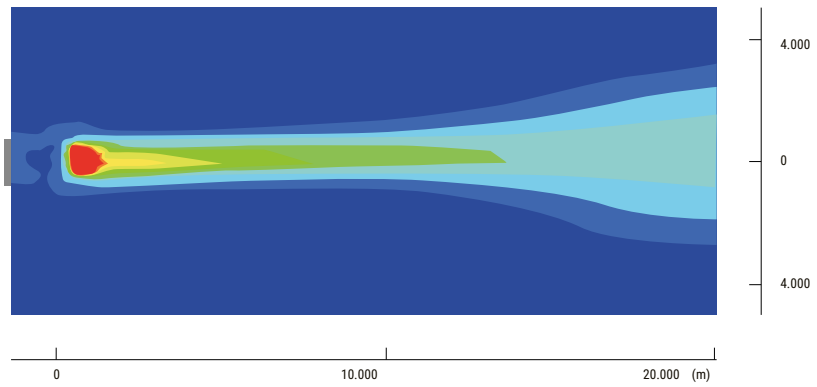
IFHT-50 8P

IFHT-50 8P	
Distance m	**Speed m / s**
0	7.834
2	2.476
4	2.177
6	1.899
8	1.723
10	1.494
12	1.284
14	1.138
16	1.077
18	1.045
20	1.004
22	0.963
24	0.918
26	0.886
28	0.894
30	0.817
32	0.789
34	0.762
36	0.741
38	0.715
40	0.694
42	0.681
44	0.665
46	0.649
48	0.628
50	0.611

SIDE VIEW



TOP VIEW



Maximum thrust calculated in accordance with ASHRAE Standard 70.

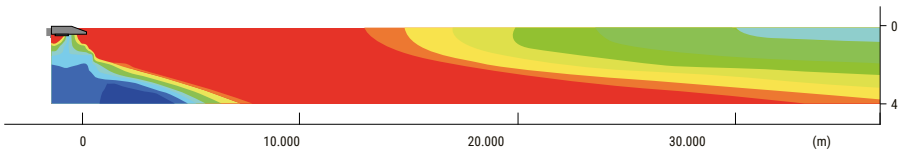
Data obtained at standard conditions at maximum operating speed.

Speed: m/s **Distance: m**

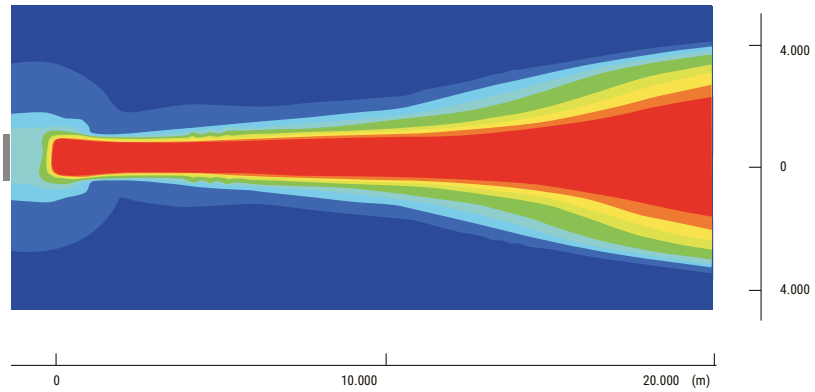
IFHT-75 4P

IFHT-75 4P	
Distance m	**Speed m / s**
0	21.582
2	9.08
4	7.8
6	5.831
8	4.352
10	3.854
12	3.606
14	3.456
16	3.353
18	3.284
20	3.183
22	3.045
24	2.898
26	2.751
28	2.609
30	2.492
32	2.368
34	2.252
36	2.152
38	2.06
40	1.986
42	1.911
44	1.842
46	1.781
48	1.727
50	1.685

SIDE VIEW



TOP VIEW



Maximum thrust calculated in accordance with ASHRAE Standard 70.

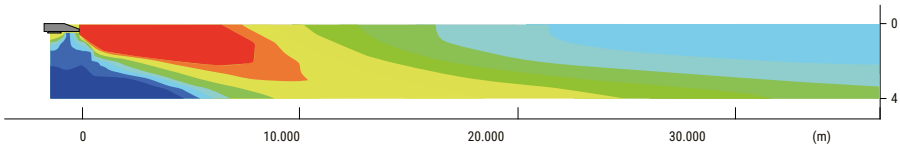
Data obtained at standard conditions at maximum operating speed.

Speed: m/s **Distance: m**

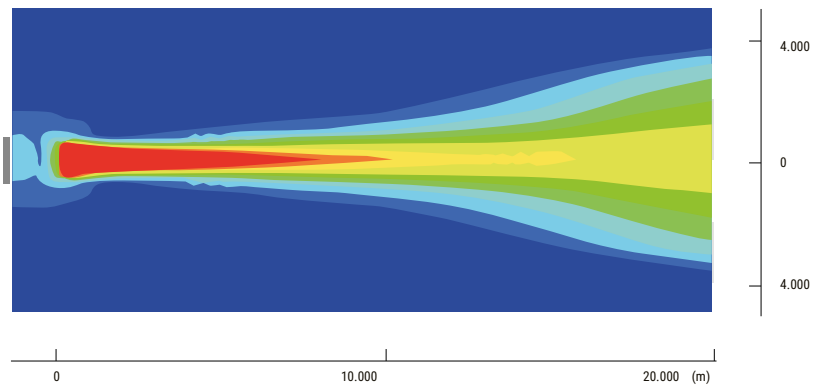
IFHT-75 8P

IFHT-75 8P	
Distance m	**Speed m / s**
0	10.848
2	4.541
4	3.902
6	2.904
8	2.17
10	1.921
12	1.798
14	1.729
16	1.671
18	1.636
20	1.586
22	1.517
24	1.444
26	1.371
28	1.301
30	1.243
32	1.181
34	1.125
36	1.074
38	1.028
40	0.991
42	0.953
44	0.919
46	0.888
48	0.861
50	0.839

SIDE VIEW



TOP VIEW



Maximum thrust calculated in accordance with ASHRAE Standard 70.

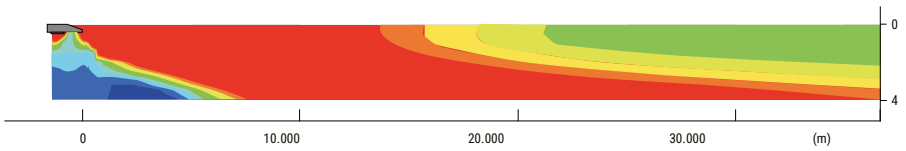
Data obtained at standard conditions at maximum operating speed.

Speed: m/s **Distance: m**

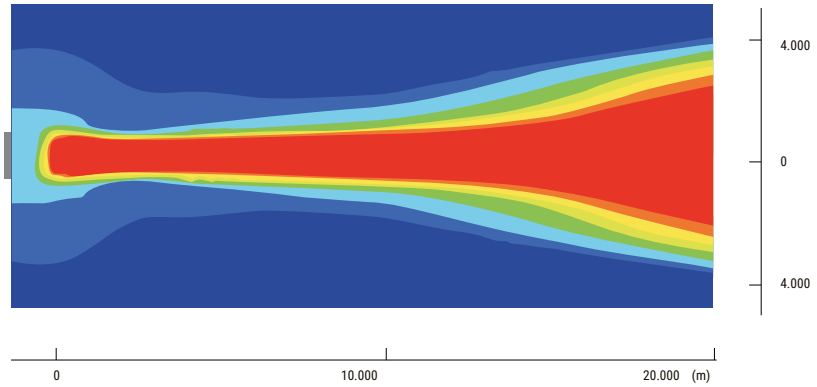
IFHT-100 4P

IFHT-100 4P	
Distance m	**Speed m / s**
0	23.977
2	9.977
4	8.569
6	6.382
8	4.768
10	4.219
12	3.952
14	3.801
16	3.678
18	3.604
20	3.495
22	3.345
24	3.184
26	3.023
28	2.866
30	2.738
32	2.601
34	2.476
36	2.364
38	2.263
40	2.184
42	2.102
44	2.028
46	1.962
48	1.902
50	1.854

SIDE VIEW



TOP VIEW



Maximum thrust calculated in accordance with ASHRAE Standard 70.

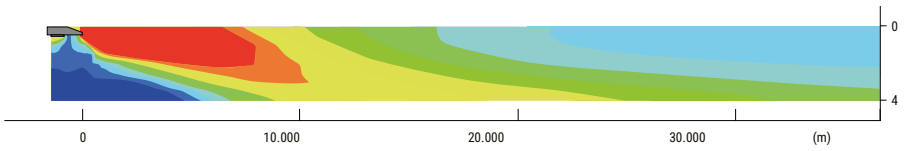
Data obtained at standard conditions at maximum operating speed.

Speed: m/s **Distance: m**

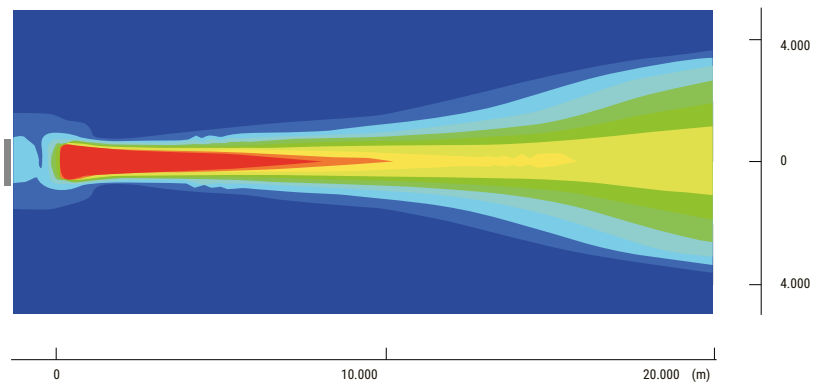
IFHT-100 8P

IFHT-100 4P	
Distance m	**Speed m / s**
0	11.963
2	4.982
4	4.236
6	3.18
8	2.384
10	2.109
12	1.974
14	1.899
16	1.834
18	1.798
20	1.743
22	1.668
24	1.587
26	1.506
28	1.429
30	1.365
32	1.297
34	1.235
36	1.179
38	1.129
40	1.089
42	1.048
44	1.011
46	0.977
48	0.946
50	0.922

SIDE VIEW



TOP VIEW



Maximum thrust calculated in accordance with ASHRAE Standard 70.

Data obtained at standard conditions at maximum operating speed.

Speed: m/s **Distance: m**

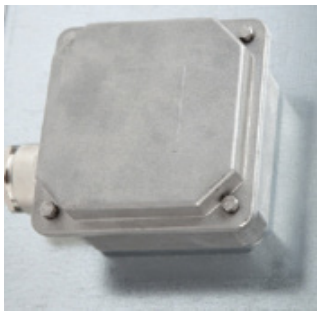
WIRING CONNECTIONS

IFHT

High-Temperature Isolation Switch

IP-65 On-Off Safety Switch, F400 or F300.

IFHT



Terminal box

IP-65 external terminal box for easy installation

IFFT

Switch

IP-65 rigid polycarbonate enclosure switch.

Soler&Palau Ventilation Group

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Issue 1, Abril 2026