

IGK

Heat Recovery Unit



DOĞU HVAC: INNOVATING TODAY SUSTAINING TOMORROW



IGK
Heat Recovery Unit

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HEAT RECOVERY UNIT

GENEL SPECIFICATIONS



A Heat Recovery Unit is a ventilation system that recovers the energy from exhaust air discharged from conditioned spaces and uses it to precondition the incoming fresh air. By improving indoor air quality while minimizing energy losses, it provides an efficient HVAC solution.

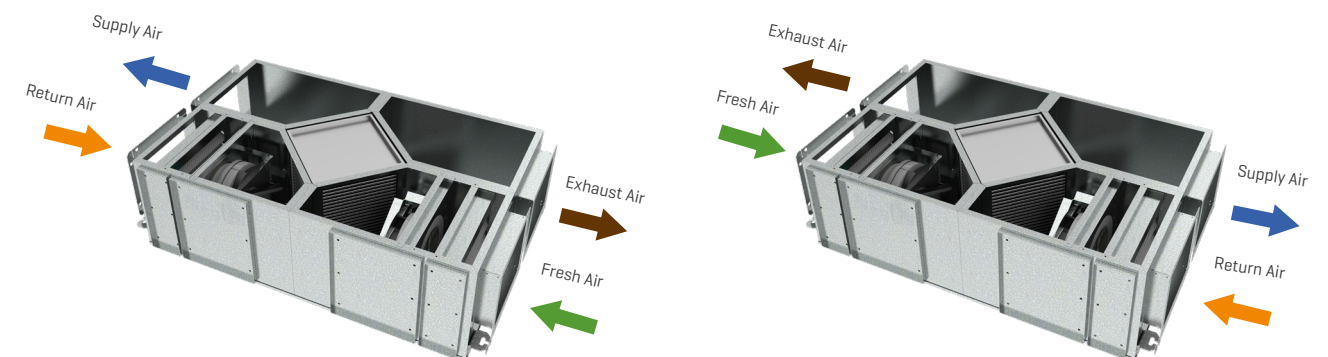
The unit transfers the thermal energy carried by the exhaust air to the incoming outdoor fresh air through a heat recovery exchanger. In this way, the fresh air is supplied to the space at a more suitable temperature, reducing overall energy consumption. It is suitable for use in offices, residential buildings, schools, hospitals, shopping centers, and similar commercial facilities. The system, supported by high-efficiency fans, a heat recovery exchanger, and optional heating components, offers long service life with low noise levels, high efficiency, and reliable operation.

OPERATING PRINCIPLE

A Heat Recovery Unit exhausts stale air from the indoor environment while simultaneously supplying fresh air from outside. These two air streams pass through the heat recovery exchanger inside the unit, where heat transfer occurs without mixing. The energy from the exhaust air is transferred to the incoming fresh air.

After the heat transfer process, the conditioned fresh air is supplied to the space, while the stale air is discharged outdoors. Through this process, indoor air is continuously renewed and energy losses are significantly reduced. The automation system controls airflows and operating modes to ensure balanced and efficient operation of the unit.

Thanks to the heat recovery system, energy savings are achieved, operating costs are reduced,



COMPONENTS

① FILTERS

Filters capture dust, dirt, and airborne particles, ensuring clean indoor air quality. They protect system components and contribute to more efficient and longer-lasting operation. Thanks to their easily replaceable design, maintenance procedures are simple and practical. The unit is equipped with one stage of G4 class [ISO Coarse] filters on both the exhaust air and fresh air inlets.

② FANS

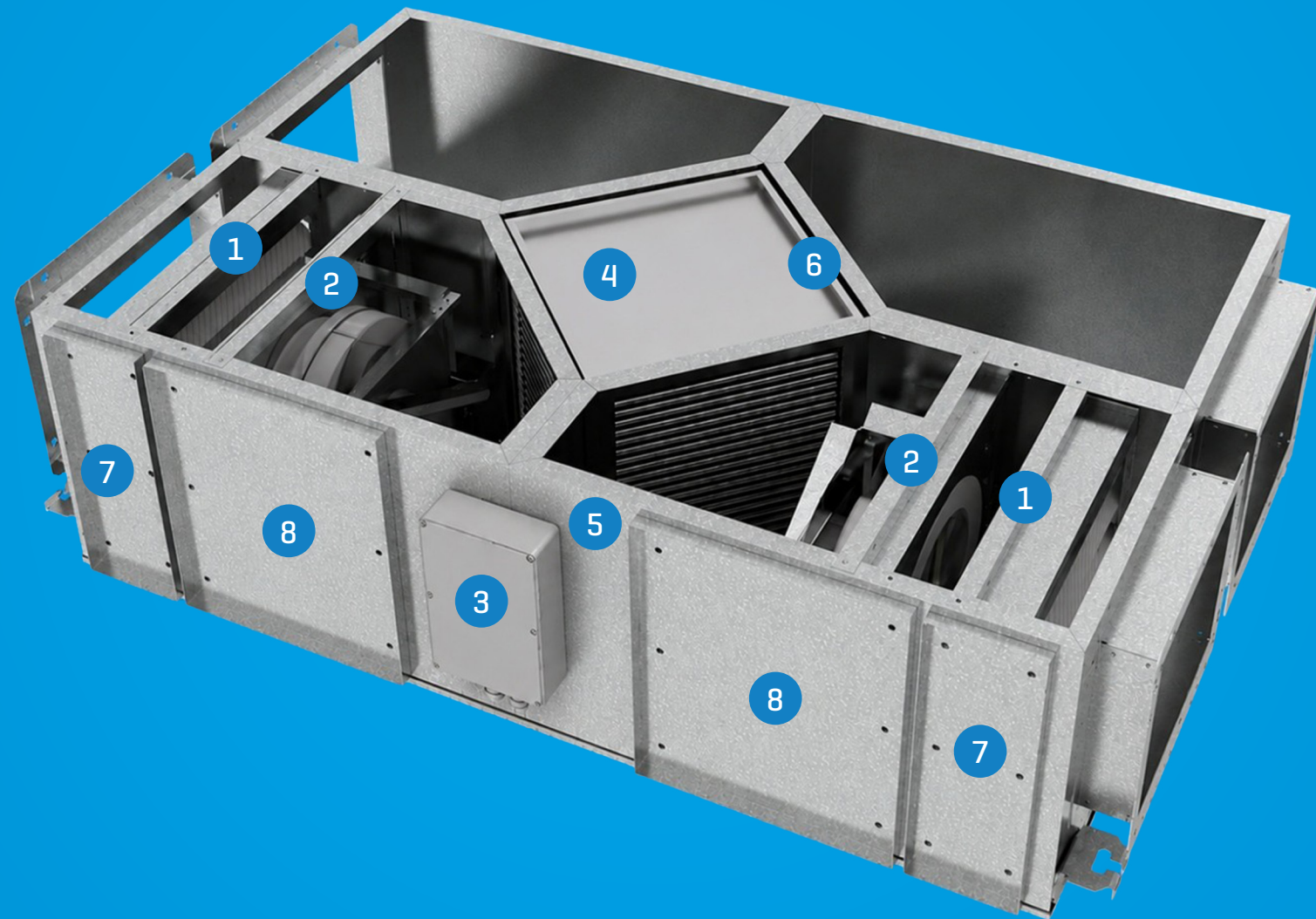
Fans ensure efficient air circulation and continuous renewal of indoor air, creating a comfortable and healthy environment. Supply fans deliver clean and conditioned air into the space, while exhaust fans remove polluted and used air from the indoor environment. AC fans are used as standard, while optional EC fans provide higher energy efficiency and quieter operation.

③ AUTOMATION PANEL

The automation panel is the central unit responsible for the complete electrical and operational control of the unit. Based on the data received from the fresh air temperature sensor, it automatically activates the optional ducttype heating equipment when required. Weekly scheduling can be configured via the LCD display. Air quality-based control can be provided with the optional CO2 sensor. Optionally, the unit can be integrated with fresh air intake and exhaust dampers. A humidity sensor is available as an option. In addition, the panel can optionally control hydronic coils and DX coils [VRF MASTER]. Monitoring and communication are available via the Modbus communication protocol.

④ HEAT RECOVERY EXCHANGER

The heat recovery exchanger enables heat transfer between the exhaust air discharged from the indoor environment and the fresh outdoor air supply without air mixing. By transferring the thermal energy contained in the exhaust air to the incoming fresh air, it ensures efficient air renewal while reducing energy consumption. The unit is equipped with an aluminum cross-flow heat recovery exchanger.



⑤ CASING

The casing protects all mechanical and electrical components against external influences. Its robust construction ensures long service life. Designed with thermal and acoustic insulation, it contributes to safe and quiet operation. The casing is manufactured as a single-skin structure using 275 g/m² galvanized steel sheet.

⑥ HEAT EXCHANGER SERVICE COVERS

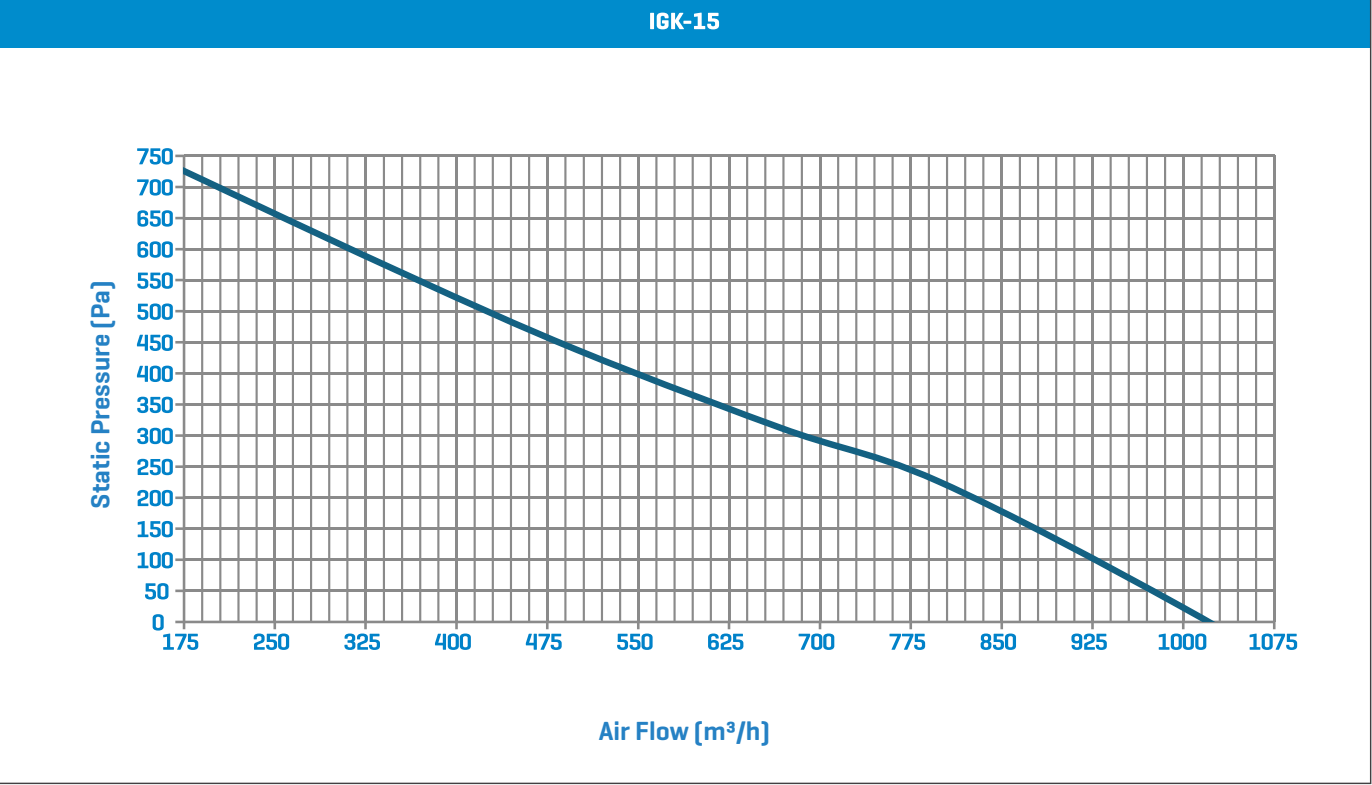
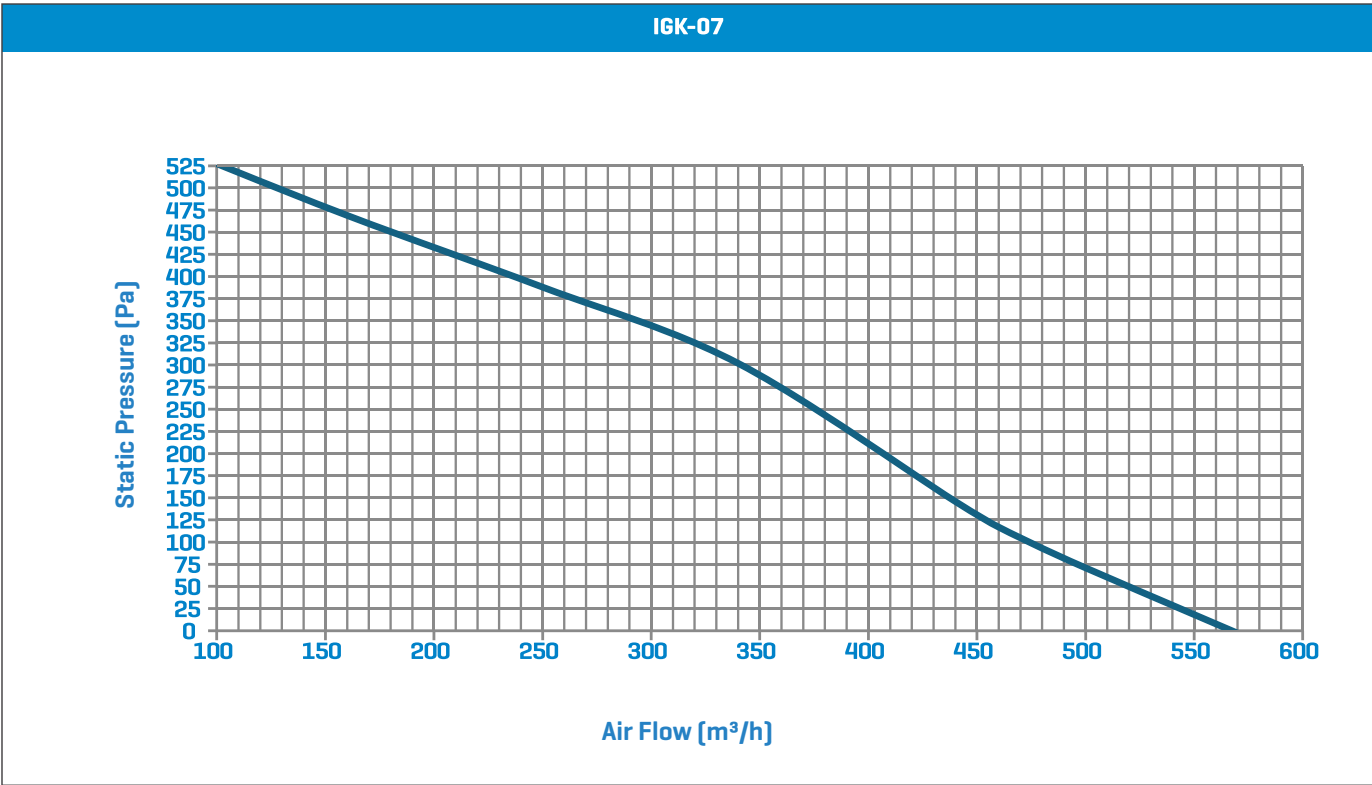
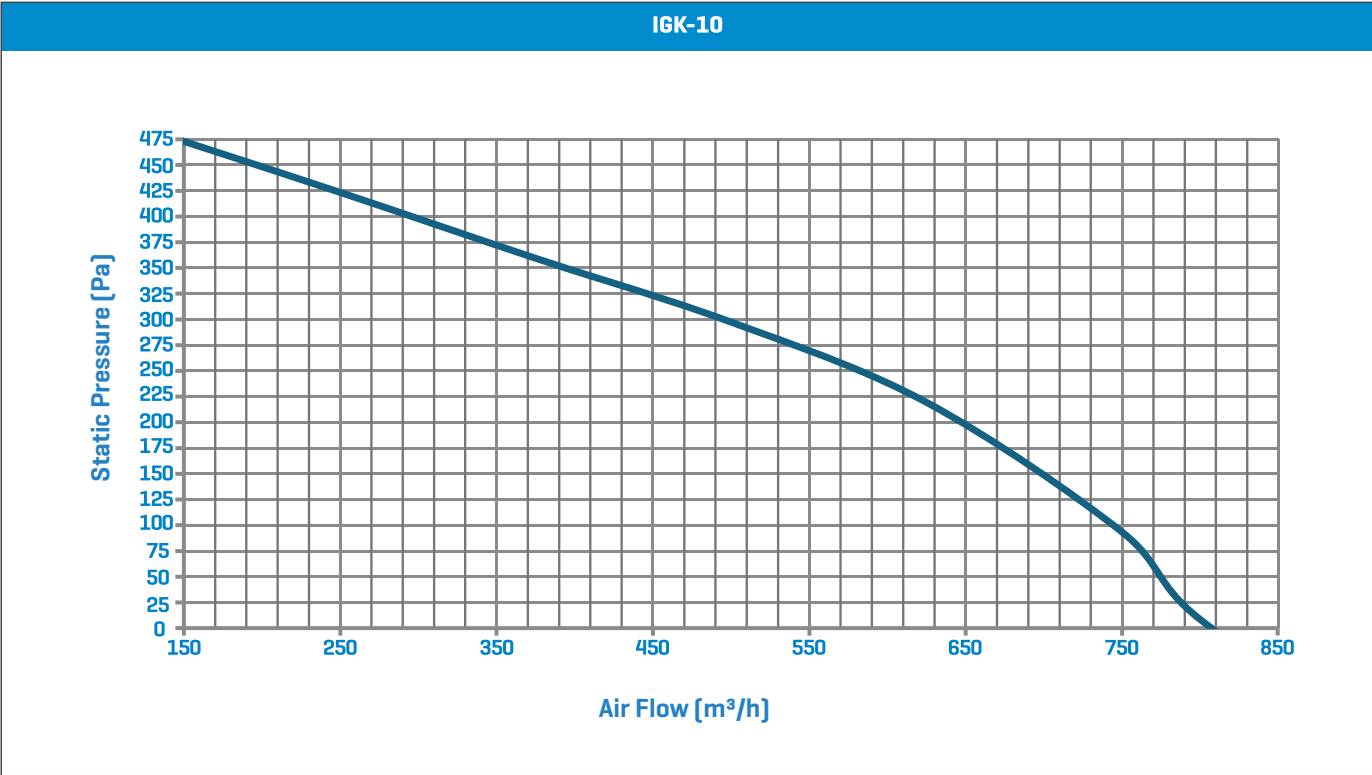
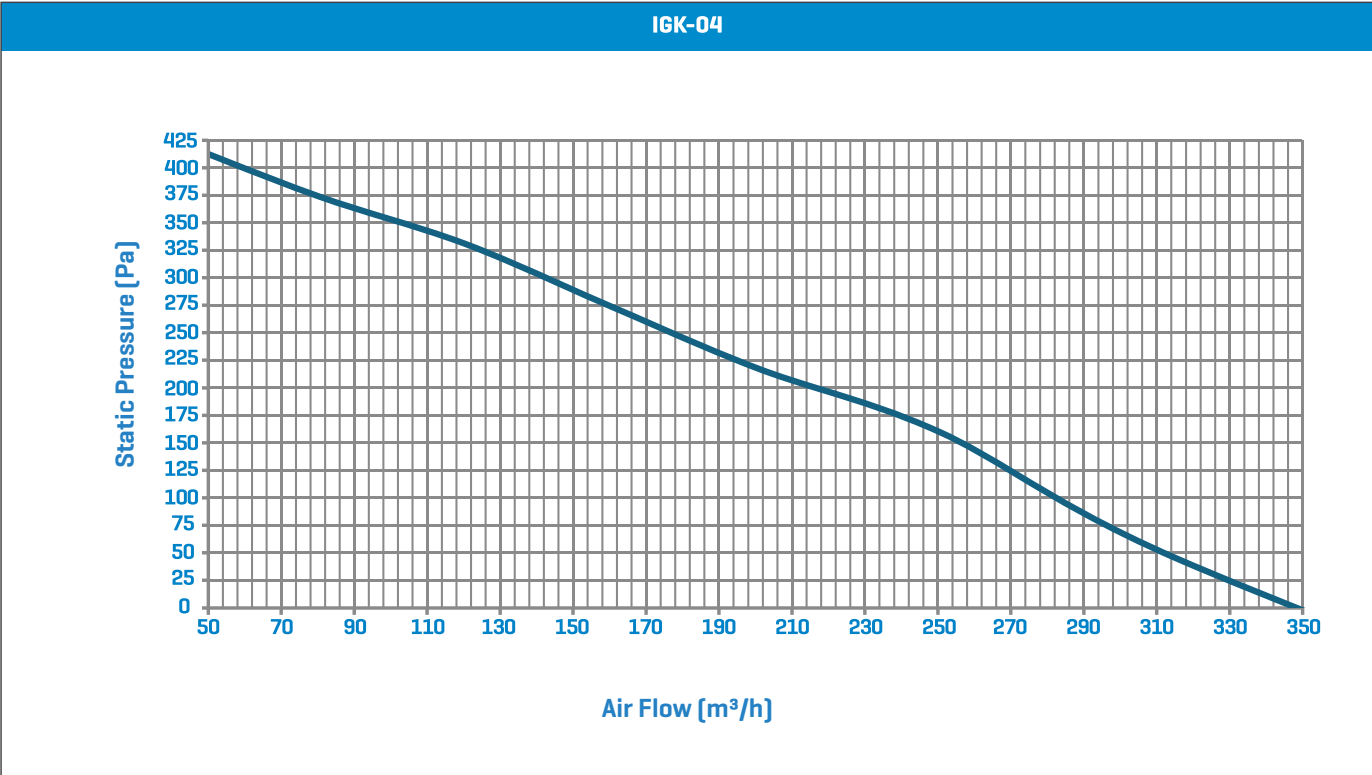
The heat exchanger service covers are designed to provide quick and easy access to the heat exchanger. Thanks to their removable structure, cleaning, maintenance, and servicing operations can be carried out quickly and conveniently. This design reduces service time and improves operational convenience.

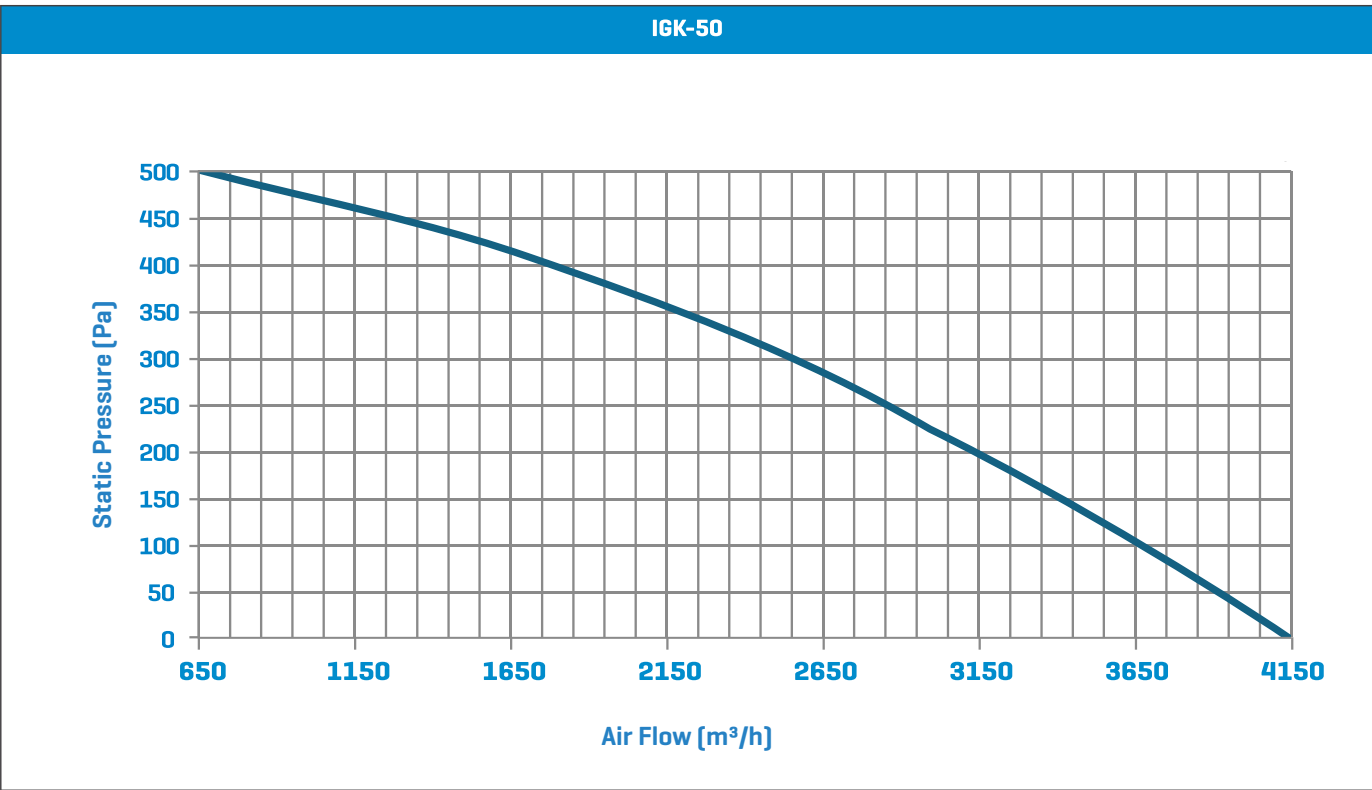
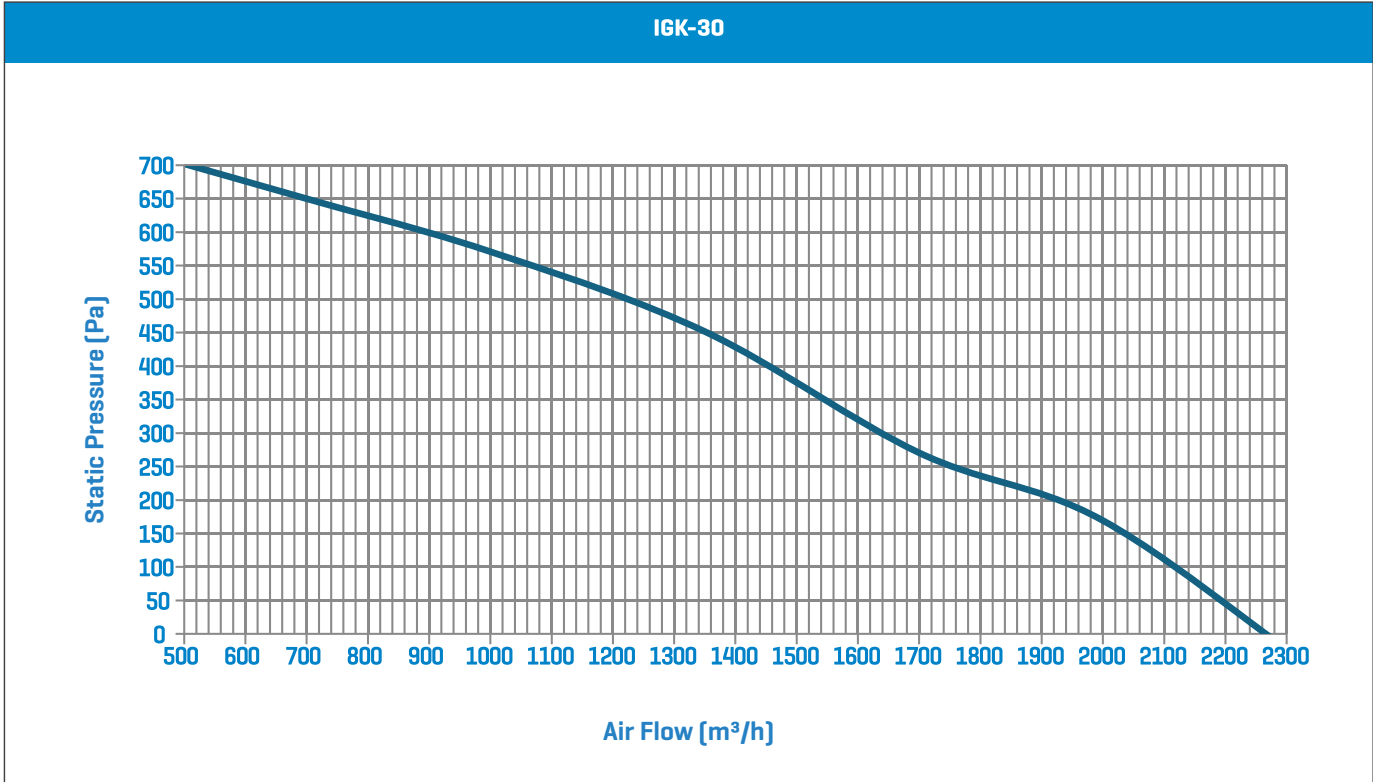
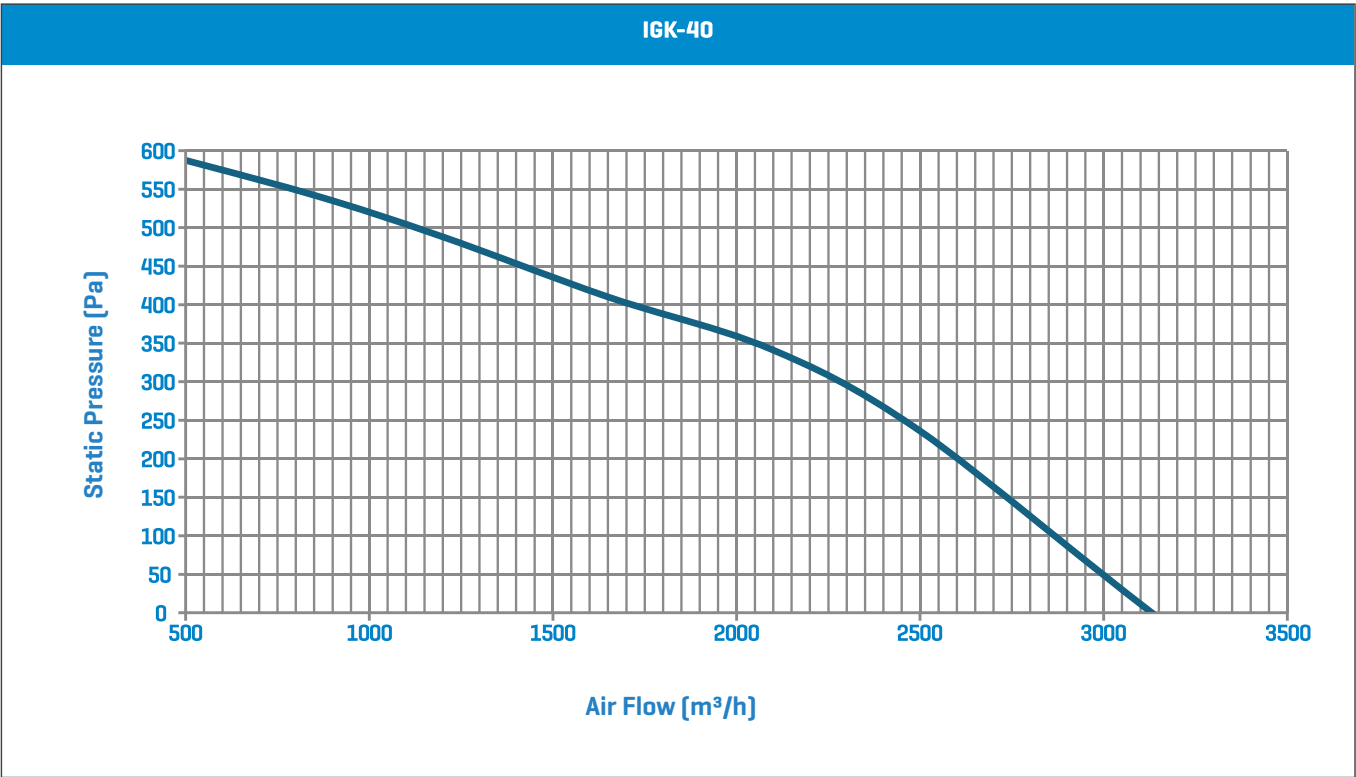
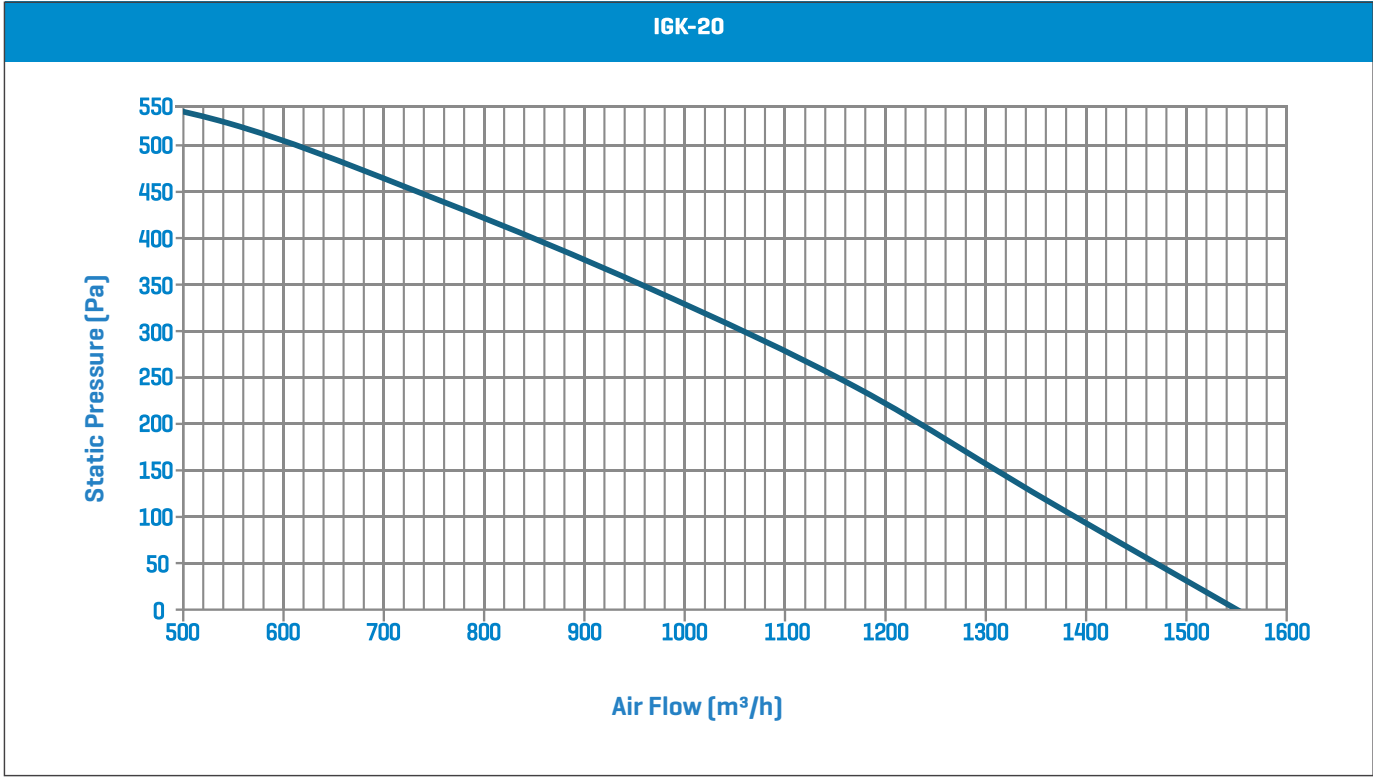
⑦ FILTER SERVICE COVERS

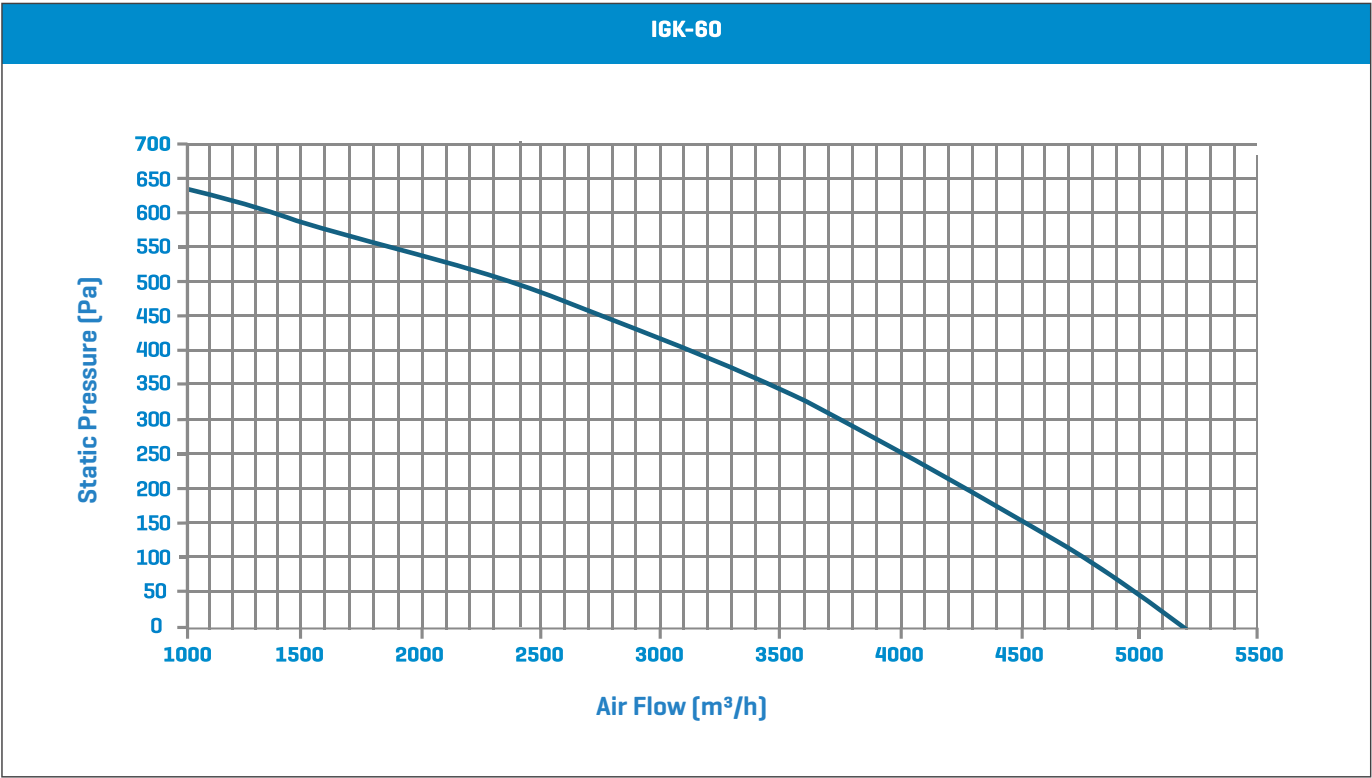
The filter service covers are designed to provide fast and easy access to the filters. Their removable structure allows filter replacement, cleaning, and maintenance operations to be performed conveniently. This design reduces service time and improves operational convenience.

⑧ FAN SERVICE COVERS

The fan service covers are designed to provide quick and easy access to the fans. Thanks to their removable structure, fan replacement, maintenance, and servicing operations can be performed conveniently. This design reduces service time and improves operational convenience.

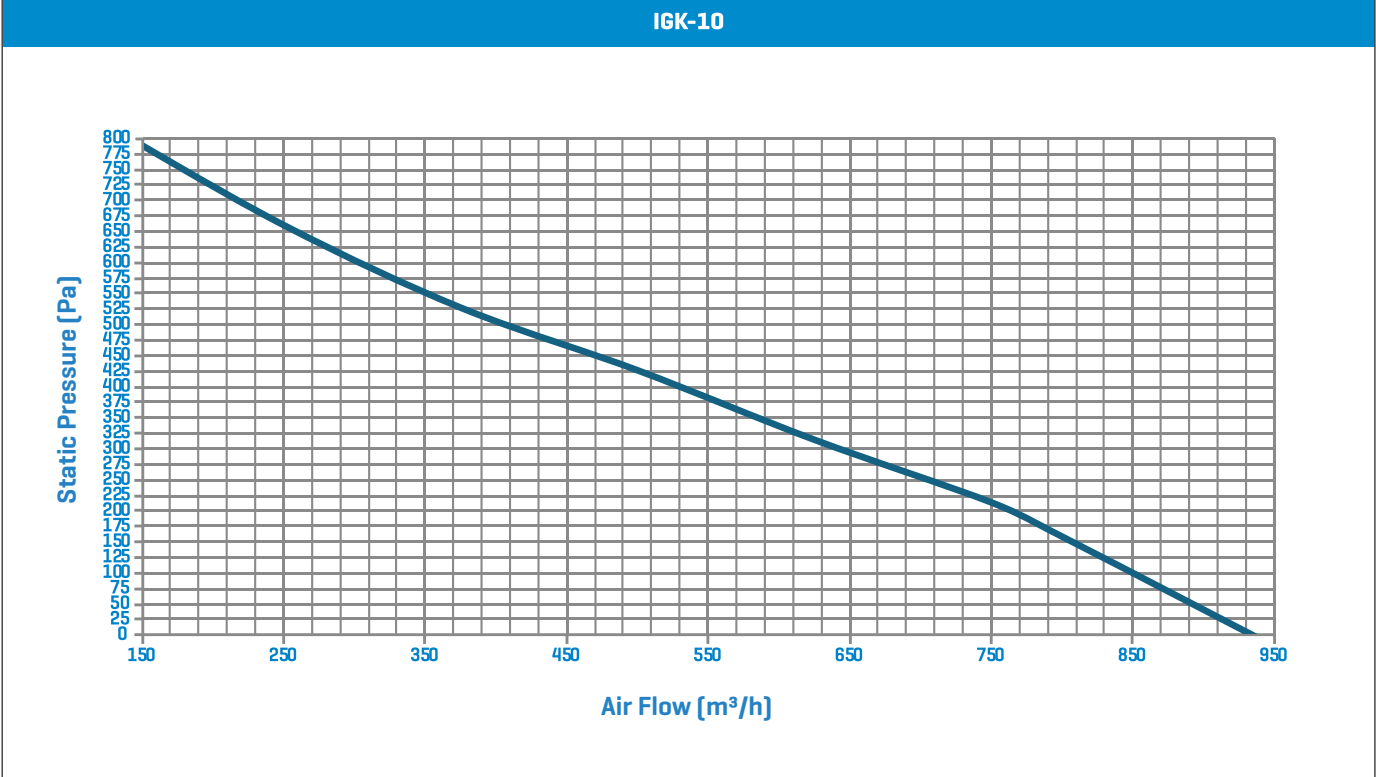
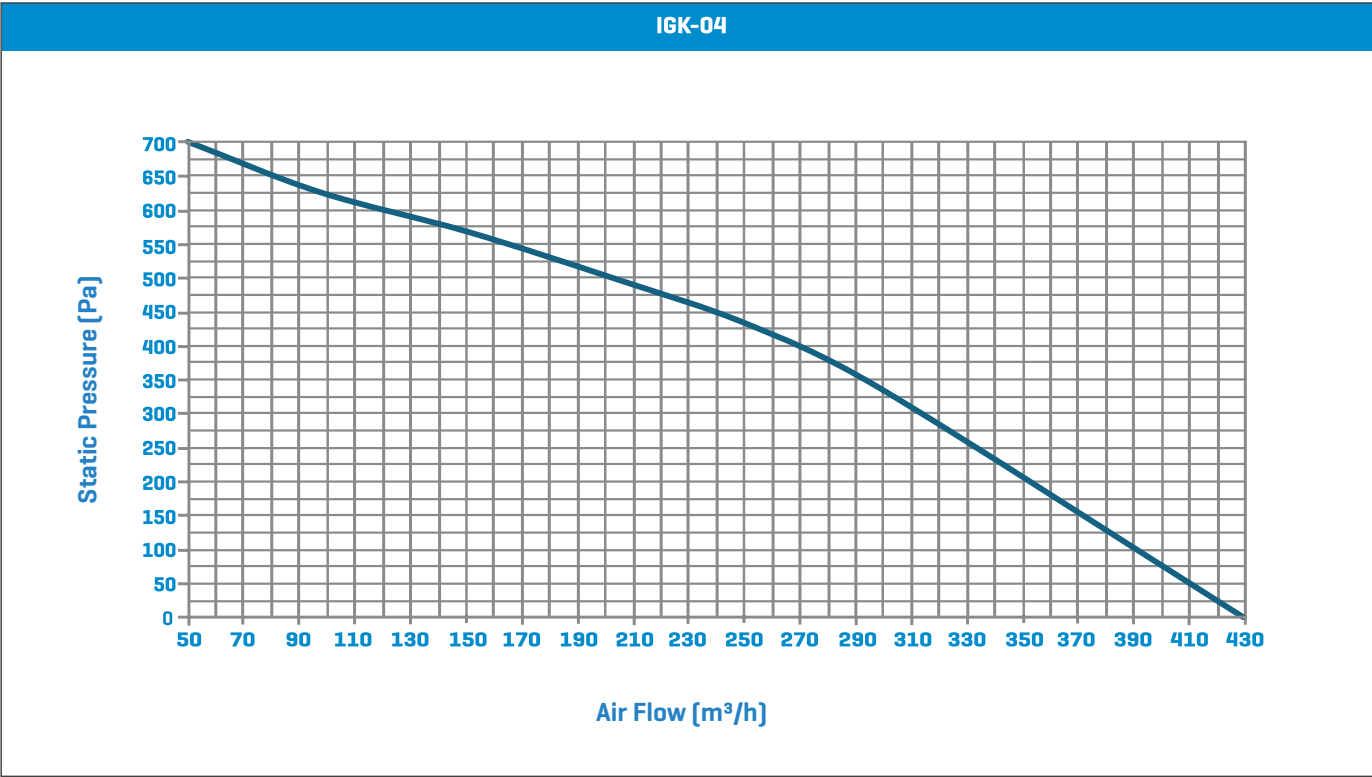


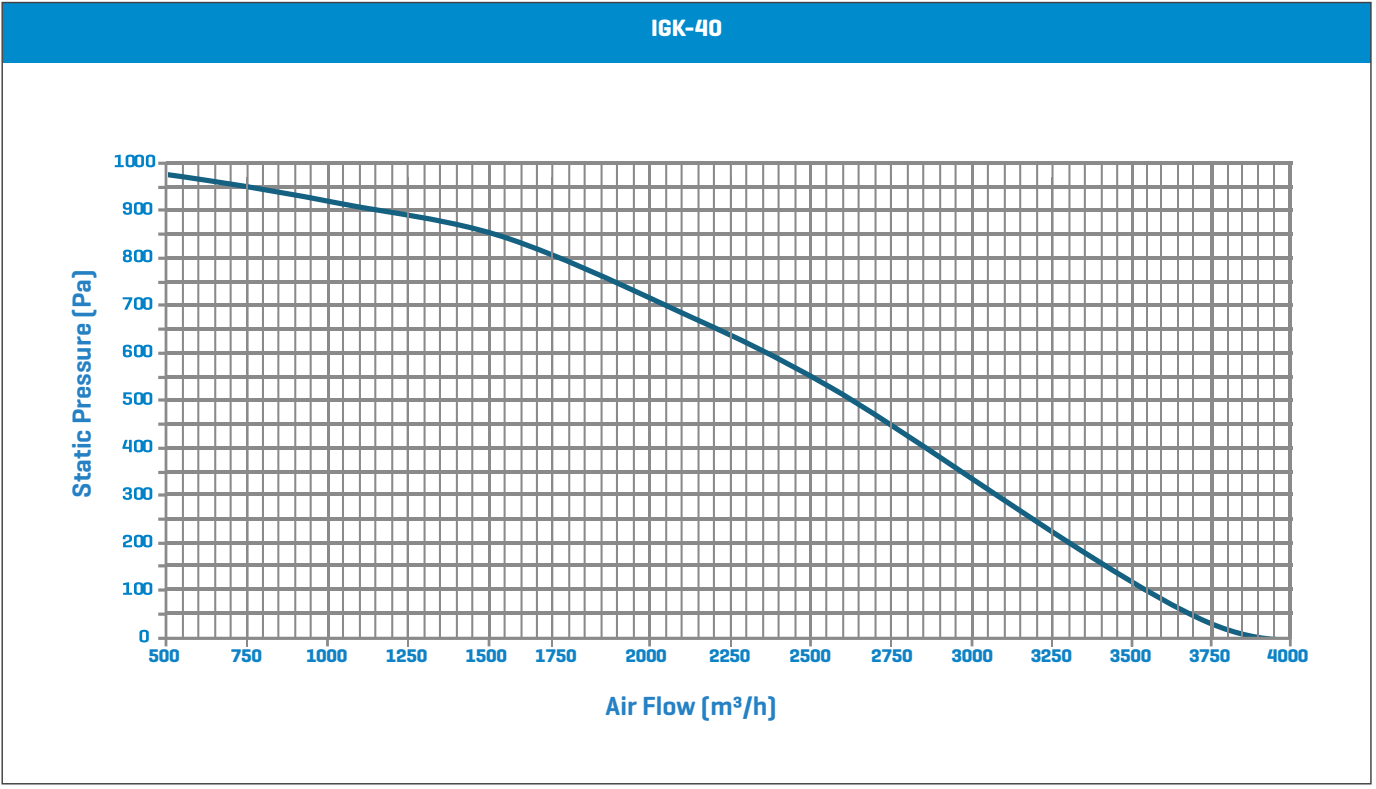
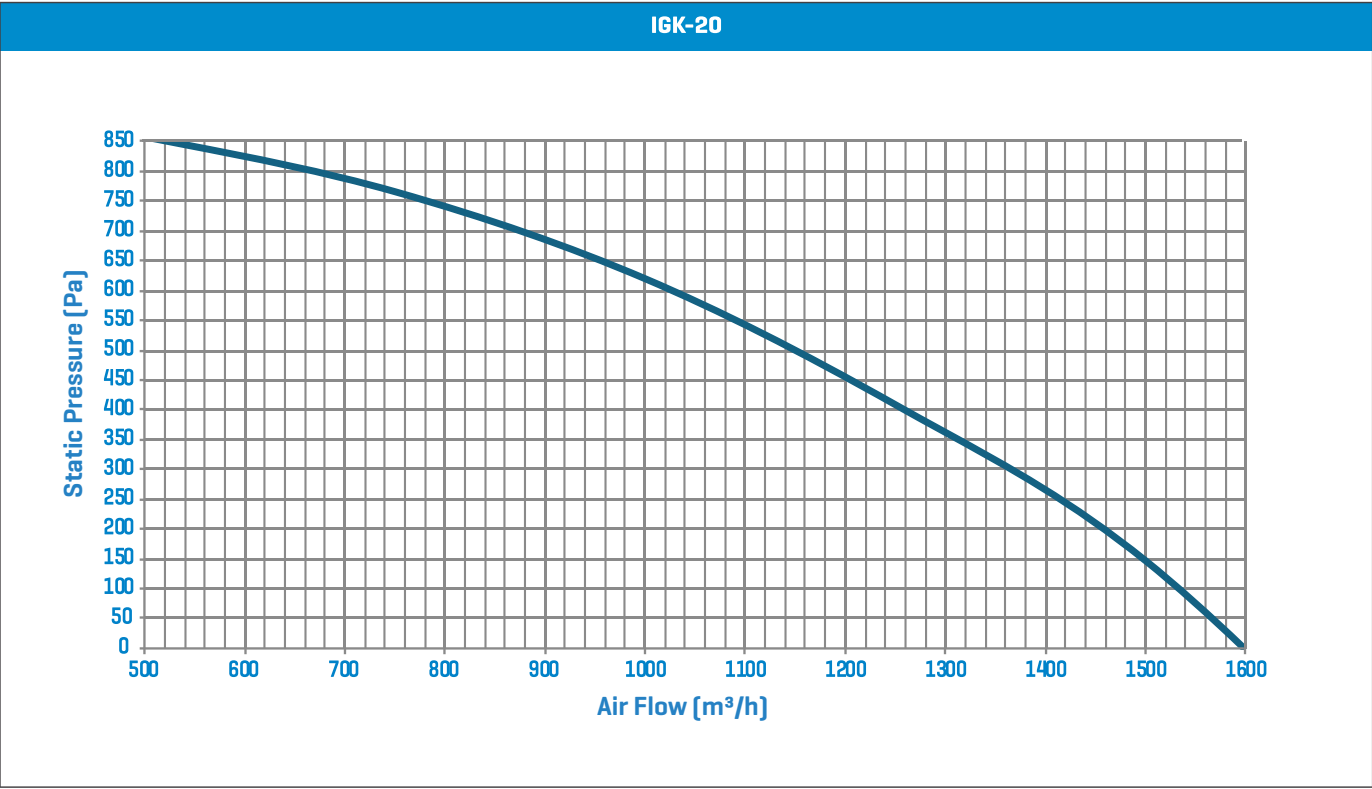
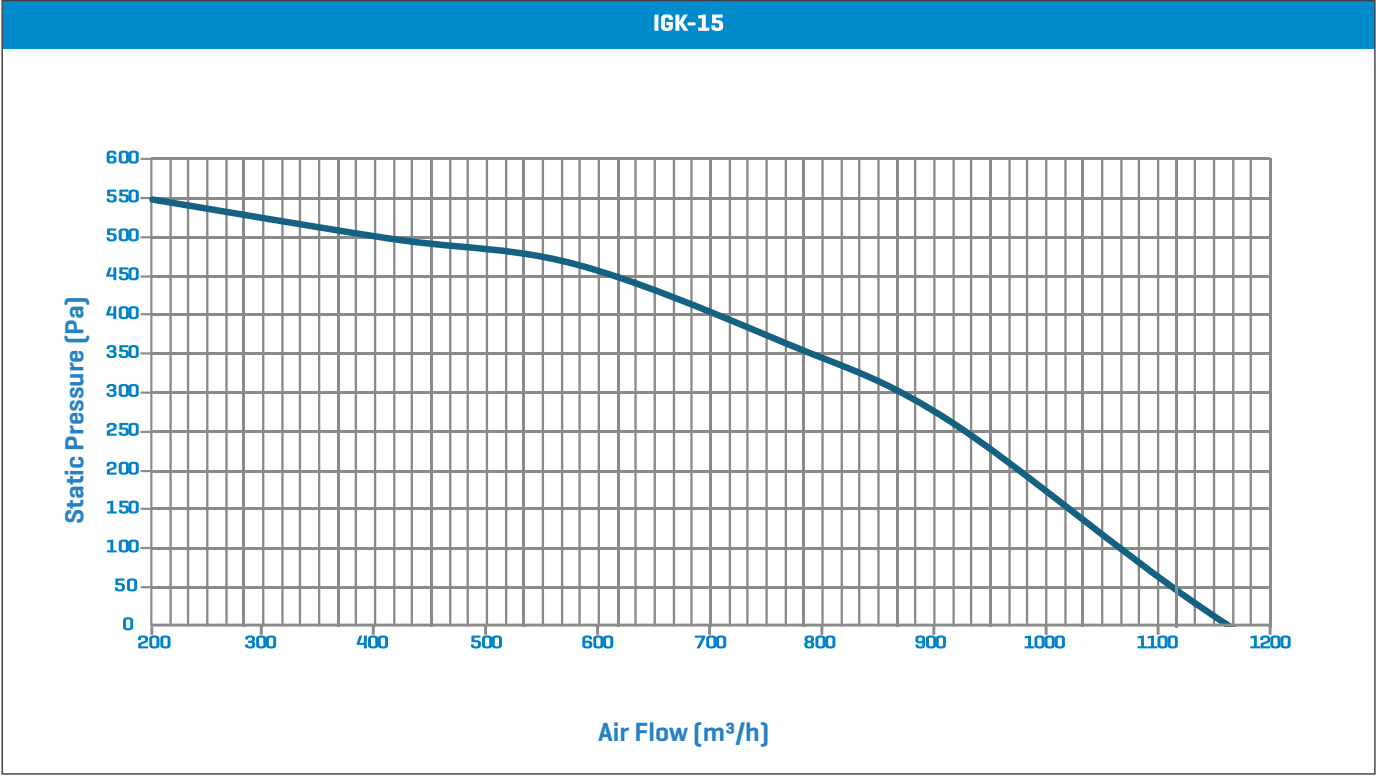
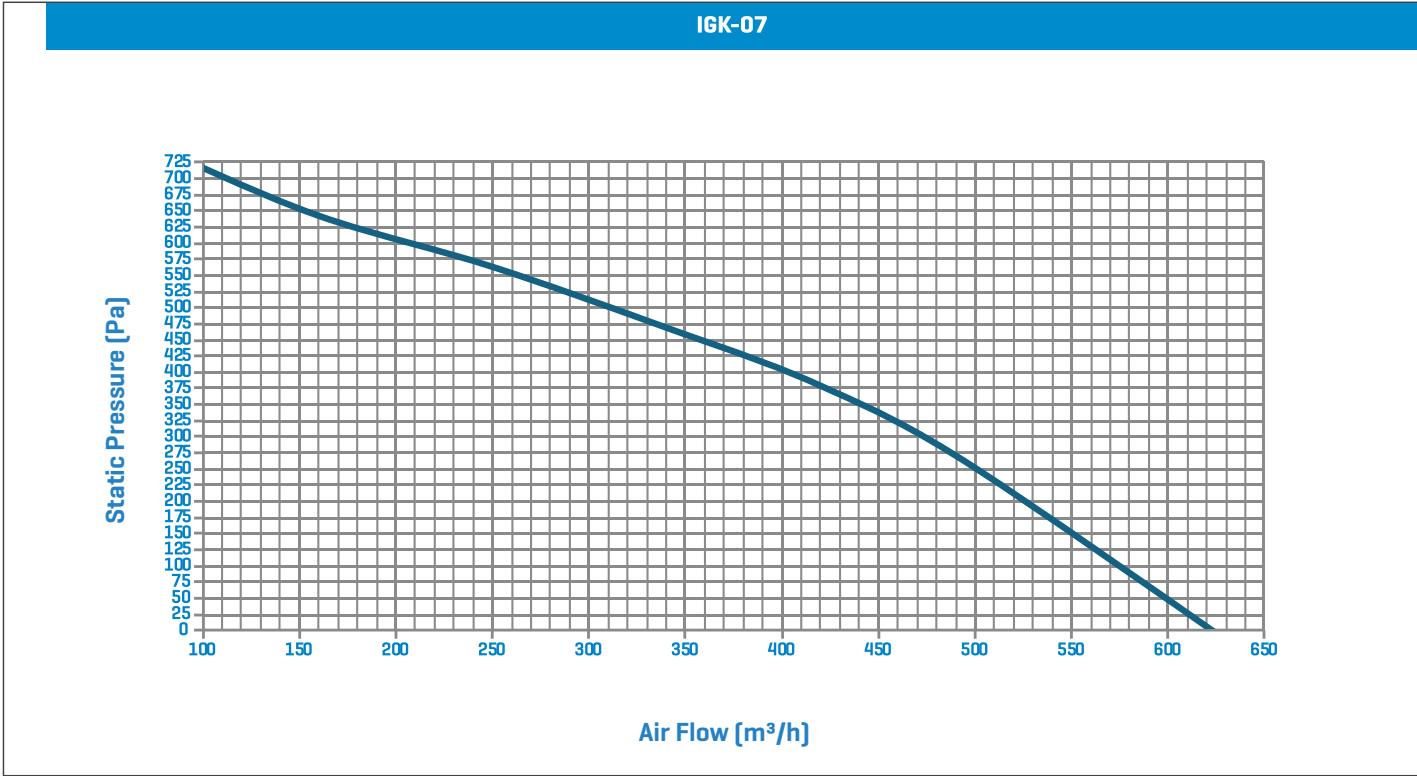


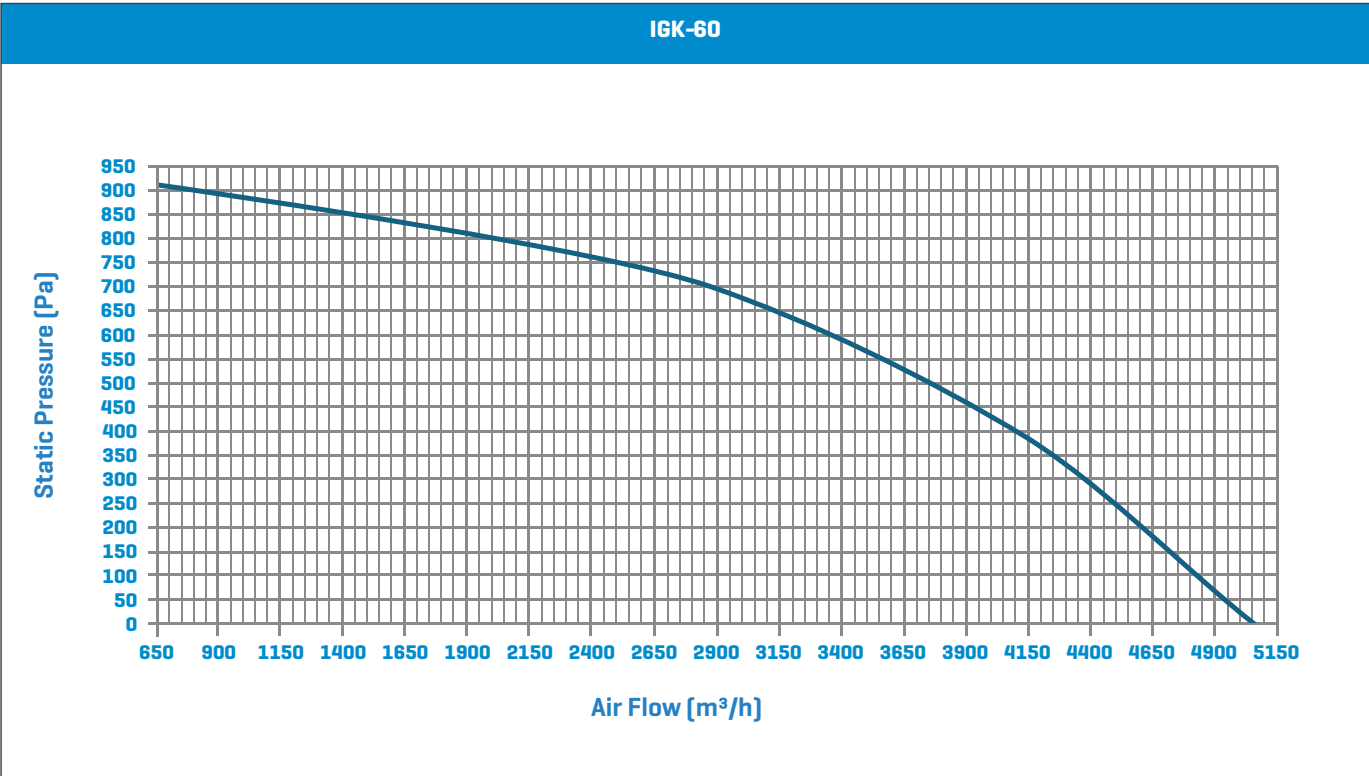
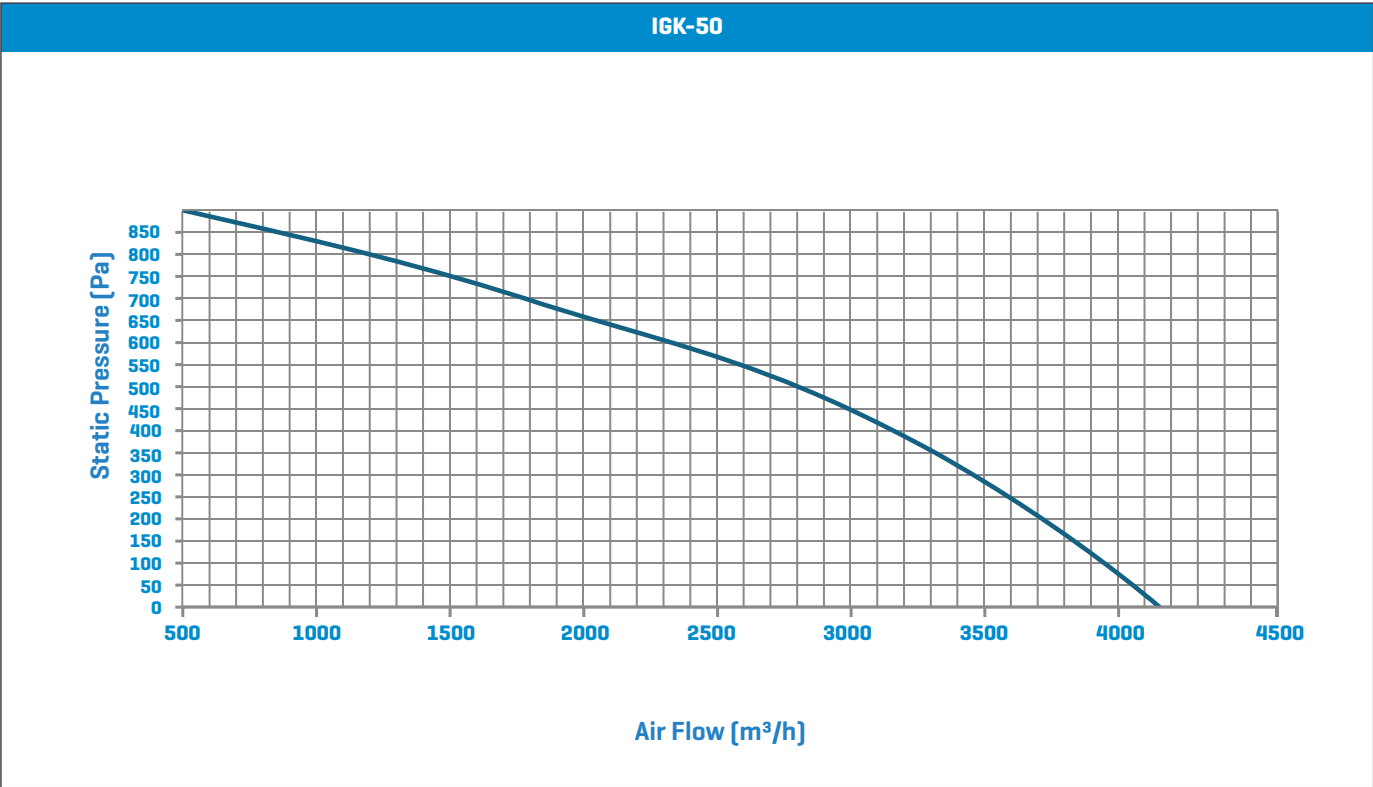
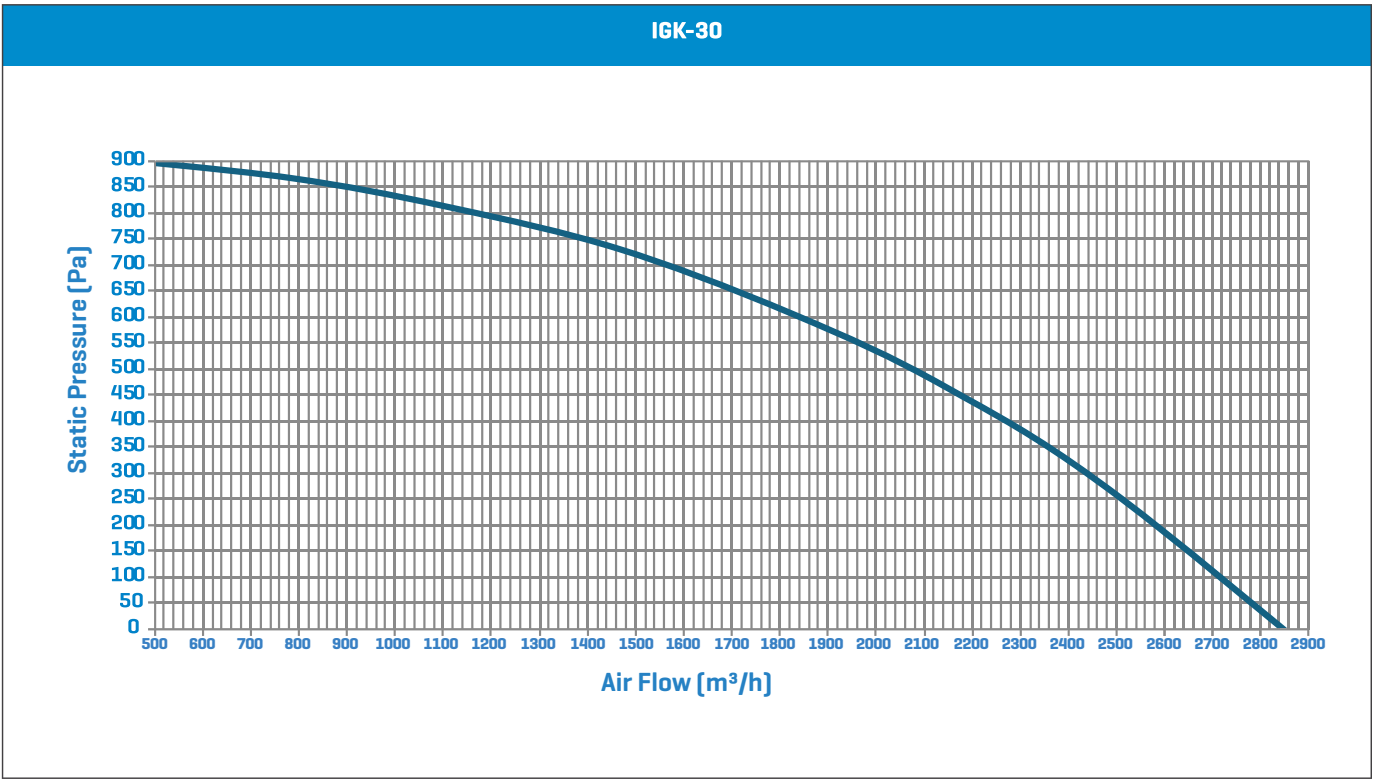


TECHNICAL DATA AC FAN										
Unit Models		IGK-04	IGK-07	IGK-10	IGK-15	IGK-20	IGK-30	IGK-40	IGK-50	IGK-60
Unit Features	m³/h	345	610	910	1125	1580	2350	3150	4155	5250
Air Flow [150 Pa ESP]Total	m³/h	255	495	800	985	1350	2000	2500	4140	5190
Power	W	128	270	414	424	634	1006	916	1388	2600
Sound Pressure Level	db[A]	48	59	63	58	65	64	65	67	68

Note: Sound pressure level values are 1 meter from the unit.



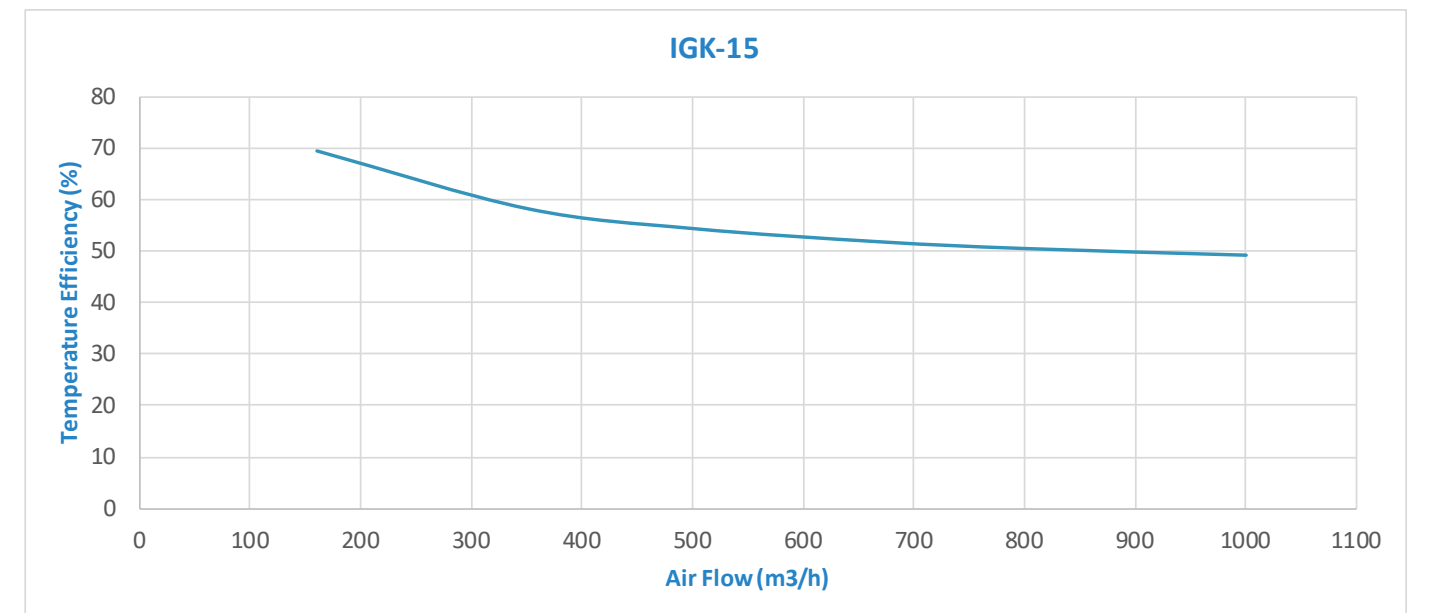
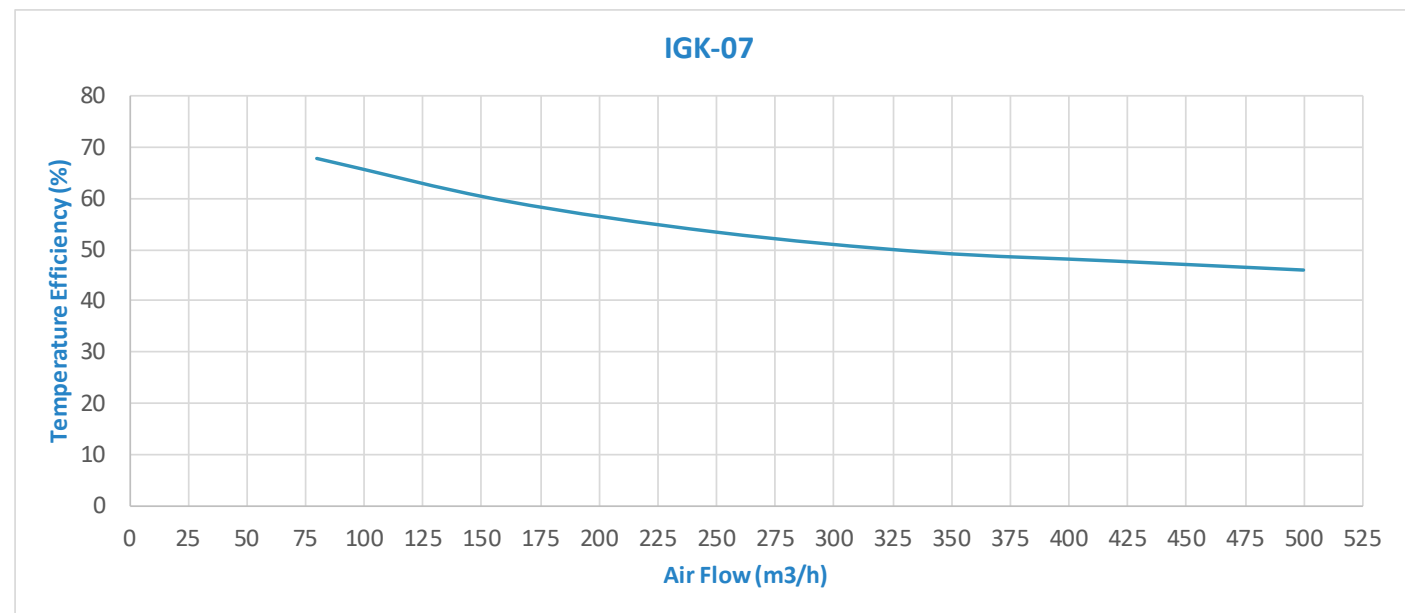
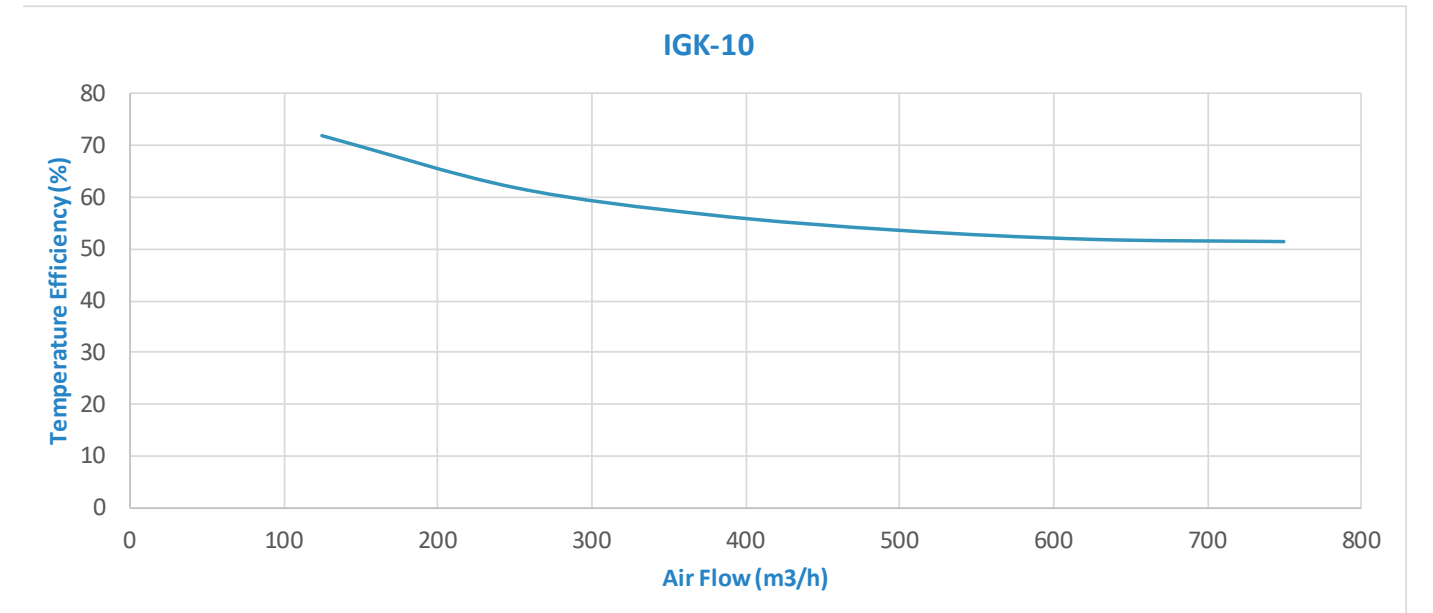
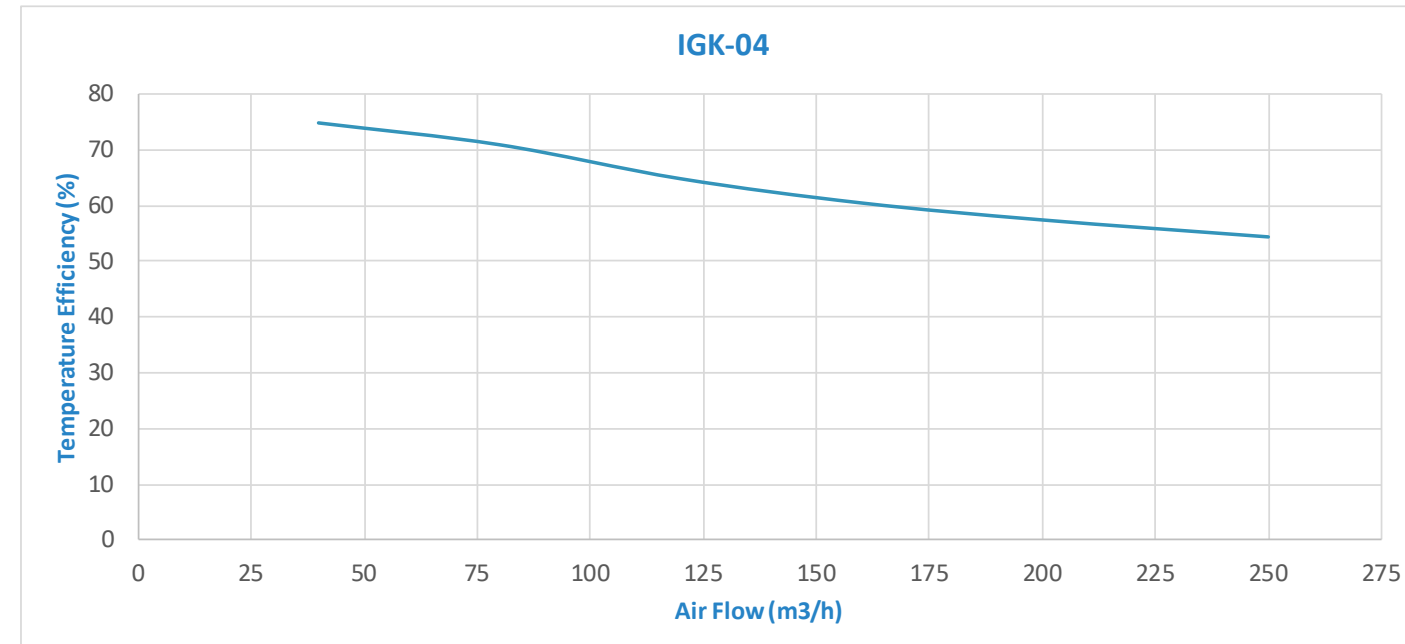




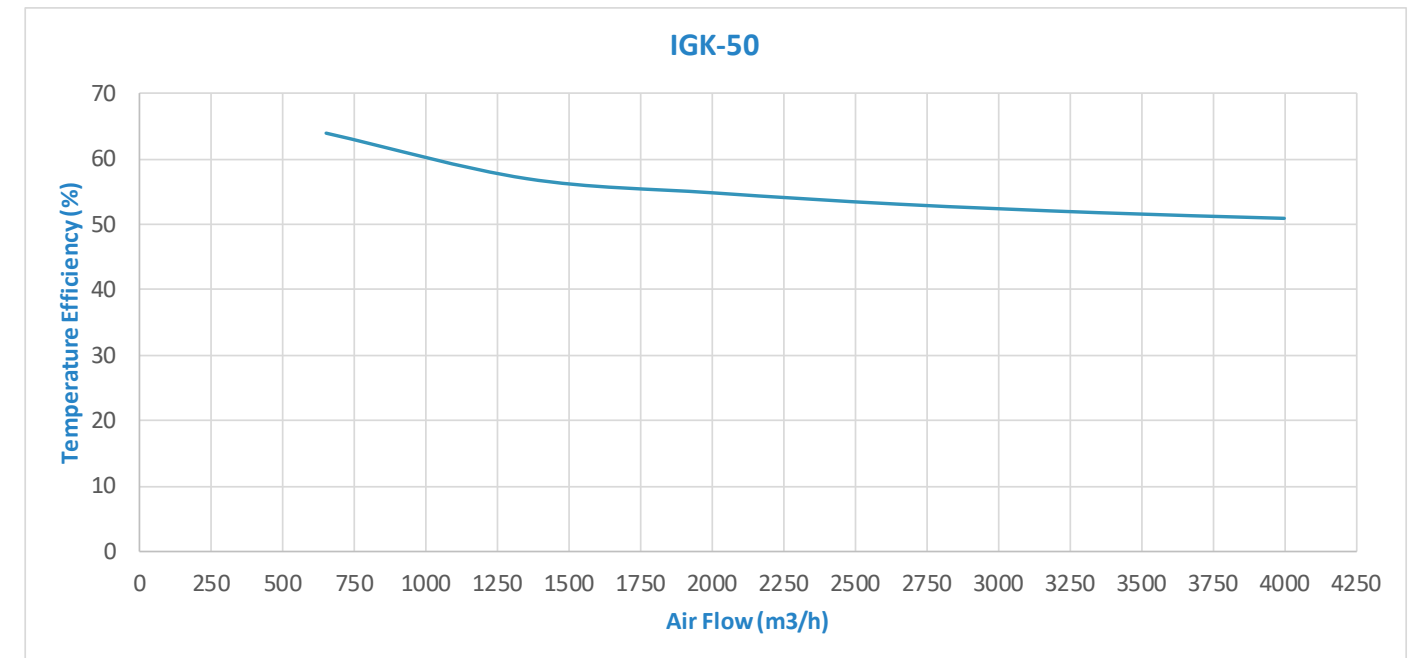
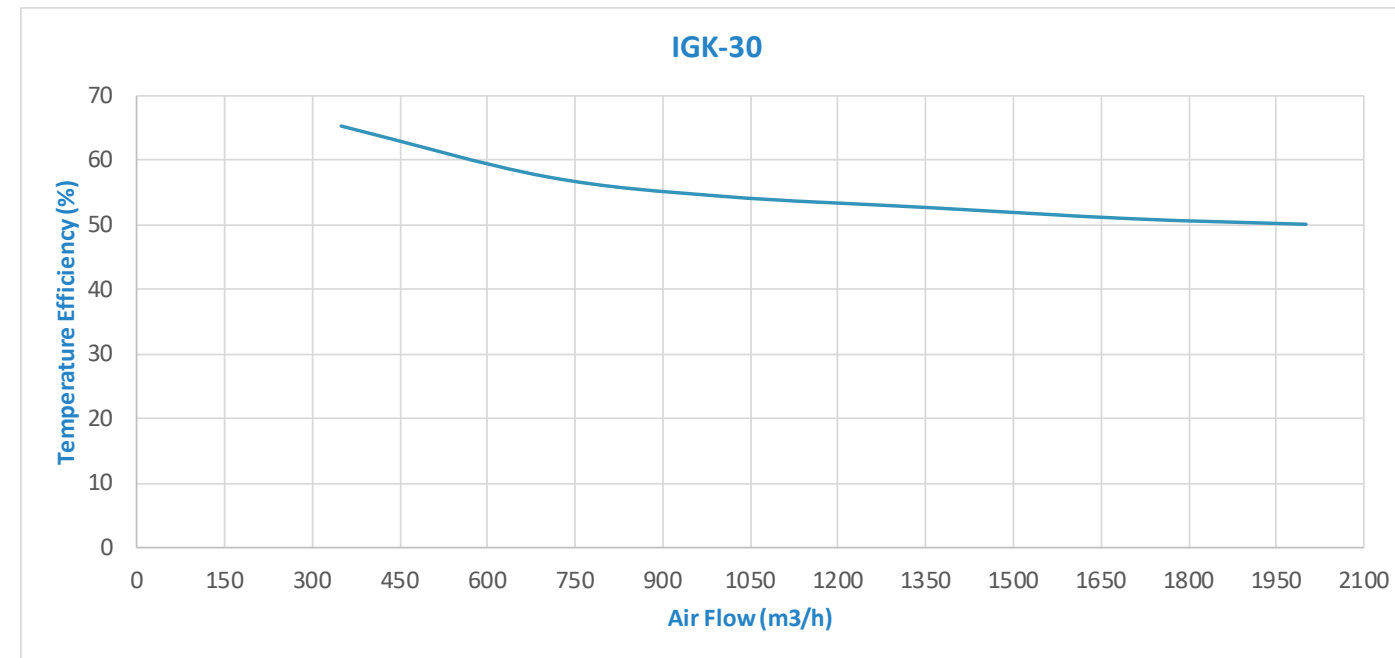
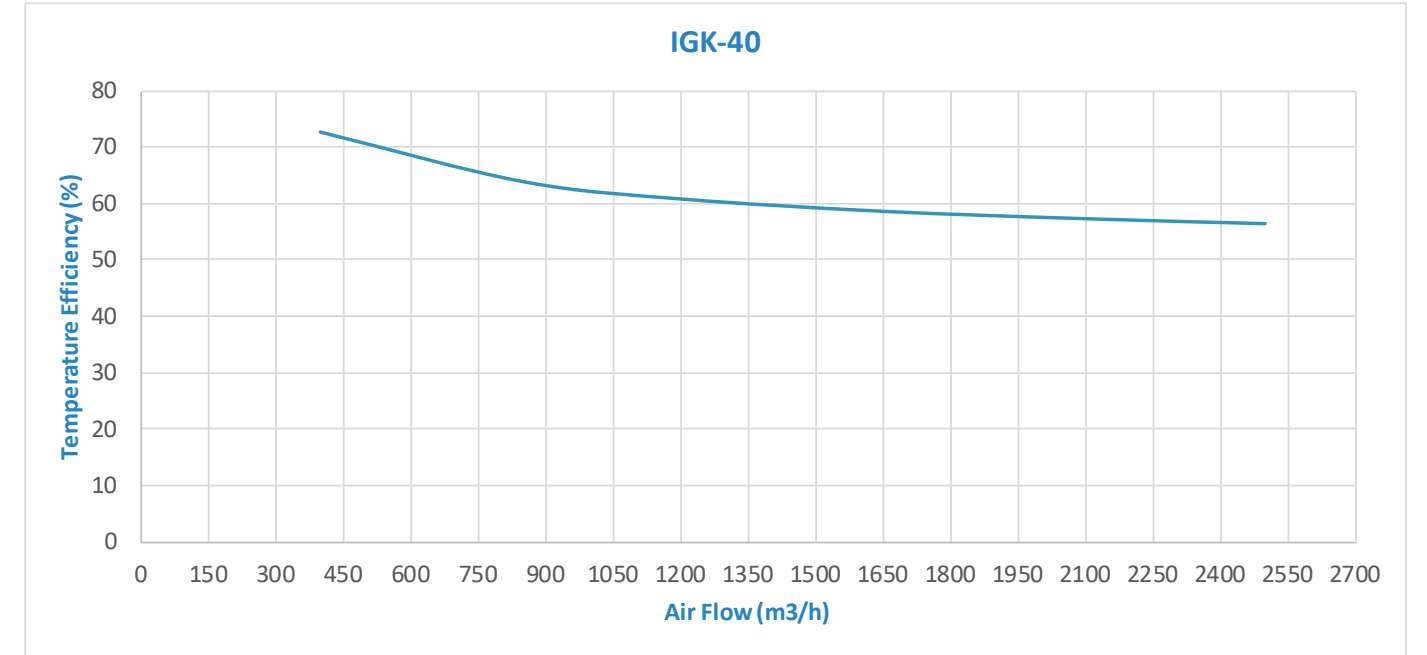
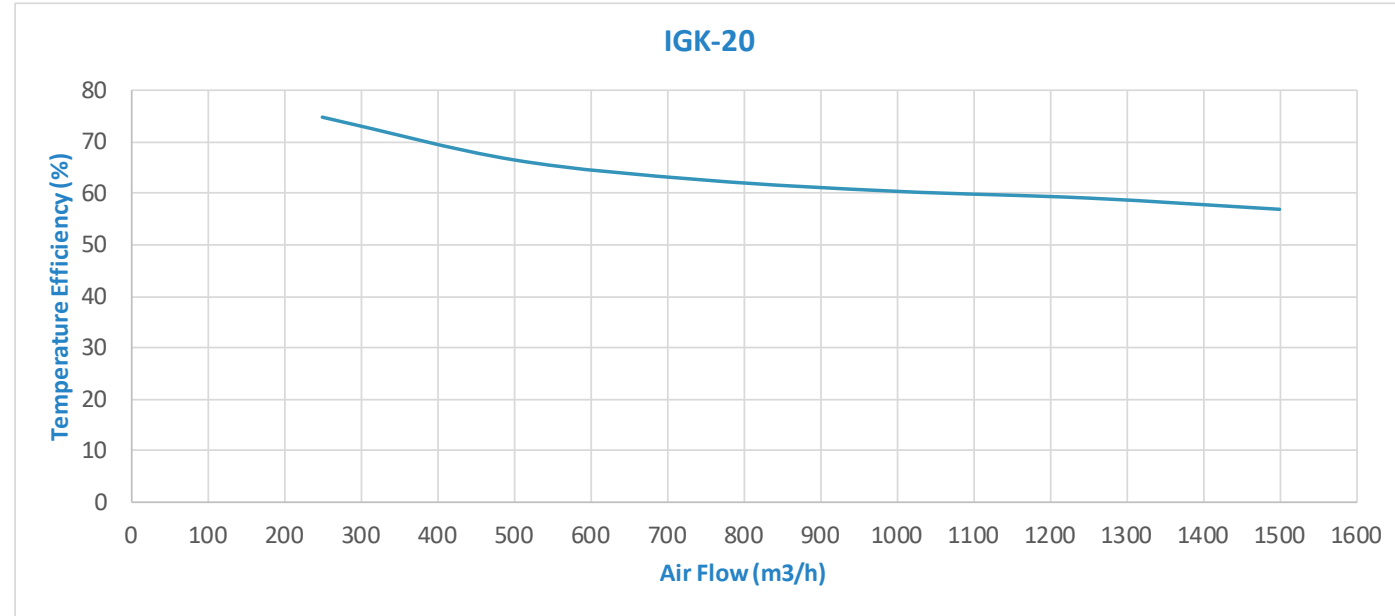
TECHNICAL DATA EC FAN										
Unit Features		IGK-04	IGK-07	IGK-10	IGK-15	IGK-20	IGK-30	IGK-40	IGK-50	IGK-60
Air Flow [0 Pa External Pressure]	m³/h	430	630	930	1160	1580	2700	3800	4400	5550
Air Flow [150 Pa External Pressure]	m³/h	380	540	805	1000	1510	2350	3400	4000	5100
Total Power	W	166	230	336	340	770	1000	1580	1500	2640
Sound Pressure Level	db[A]	47	57	60	56	63	61	62	66	66
Voltage	V	230-1	230-1	230-1	230-1	230-1	230-1	230-1	230-1	380-3

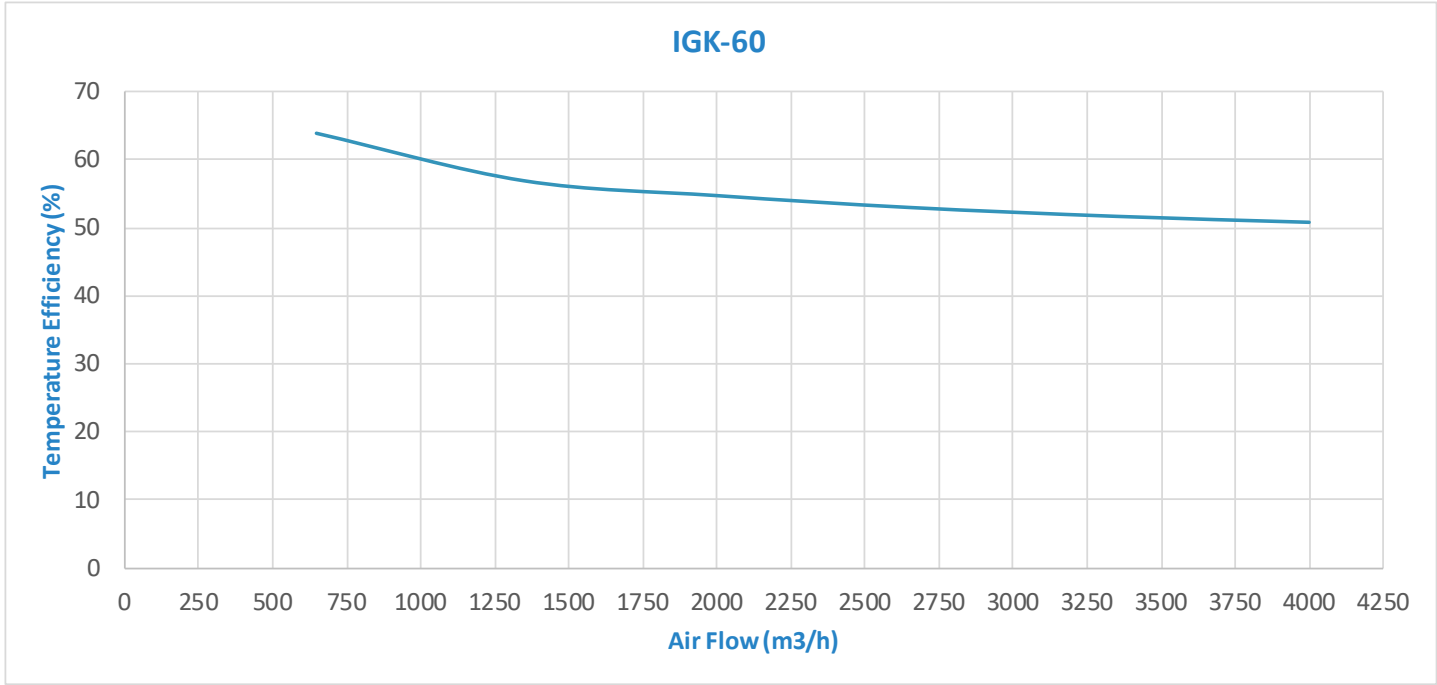
Note: Sound pressure level values are 1 meter from the unit.

VERİM EĞRİLERİ

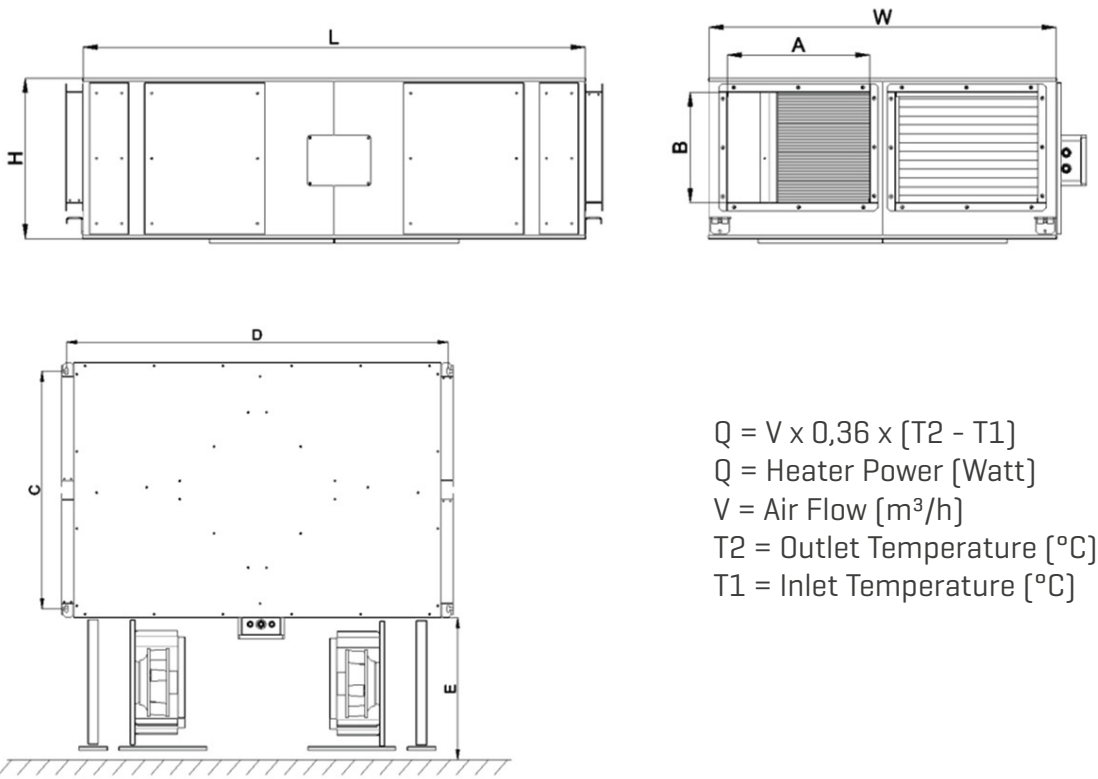


VERİM EĞRİLERİ





MODELS	Unit	L	W	H	A	B	C	D	E	Weight
		mm	mm	mm	mm	mm	mm	mm	mm	kg
	IGK-04	960	600	305	200	150	530	1026	320	35
	IGK-07	980	650	355	230	200	580	1046	350	45
	IGK-10	1120	720	355	260	210	650	1086	400	55
	IGK-15	1160	800	385	300	240	730	1126	440	60
	IGK-20	1430	980	450	390	300	910	1496	550	105
	IGK-30	1590	1100	510	450	350	1030	1656	610	130
	IGK-40	1900	1126	620	510	460	1156	1966	660	160
	IGK-50	1930	1300	675	550	520	1230	1996	700	210
	IGK-60	1930	1300	675	550	520	1230	1996	700	210



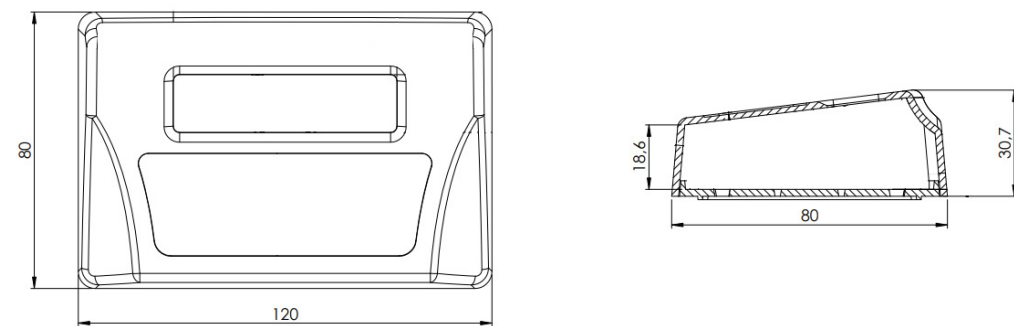
	Unit	Capacity				L	W	H	A	B	C	D	E	Weight	ELECTRICAL HEATER
		Airflow	Pressure	Airflow	Pressure										
MODELS	IGK-04	345	0	250	150	960	600	305	200	150	530	1026	320	35	1kW-1Stg
	IGK-07	620	0	500	150	980	650	355	230	200	580	1046	350	45	2kW-1Stg
	IGK-10	910	0	800	150	1120	720	355	260	210	650	1086	400	55	3kW-2Stg
	IGK-15	1125	0	1000	150	1160	800	385	300	240	730	1126	440	60	4kW-2Stg
	IGK-20	1570	0	1350	150	1430	980	450	390	300	910	1496	550	105	6kW-3Stg
	IGK-30	2350	0	2000	150	1590	1100	510	450	350	1030	1656	610	130	9kW-3Stg
	IGK-40	3100	0	2500	150	1900	1126	620	510	460	1156	1966	660	160	10kW-3Stg
	IGK-50	4155	0	3500	150	1930	1300	675	550	520	1230	1996	700	210	15kW-3Stg
	IGK-60	5550	0	5000	150	1930	1300	675	550	520	1230	1996	700	210	15kW-3Stg

CONTROL PANEL OF HRU WITH AC FAN

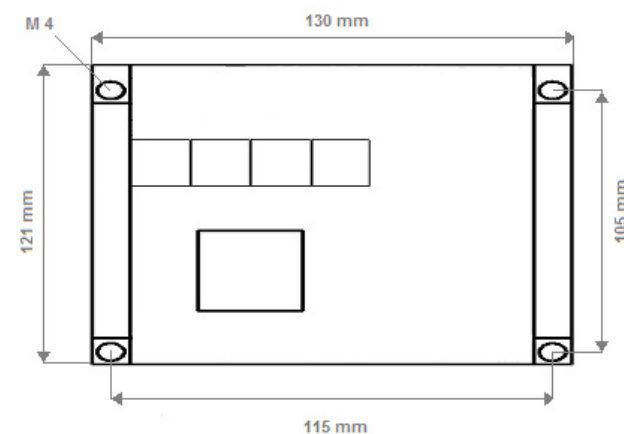
The control panel has been specifically designed to meet all the operational requirements of heat recovery units, providing advanced control and monitoring functions. As energy costs continue to rise, energy efficiency has become increasingly important in HVAC systems. The control panel helps optimize unit performance, contributing to significant energy savings and reduced operating costs.

- Turkish menu
- Stylish and simple LCD display control unit
- 220V AC supply
- Real-time room temperature monitoring
- User-friendly screen interface
- Summer or winter mode
- Automatic or manual operation
- Fan stage monitoring in manual mode
- Communication capability between the control panel and the heat recovery unit over distances of up to 50 meters

DCP-6 [Room Panel]



M1002 [Control Card]

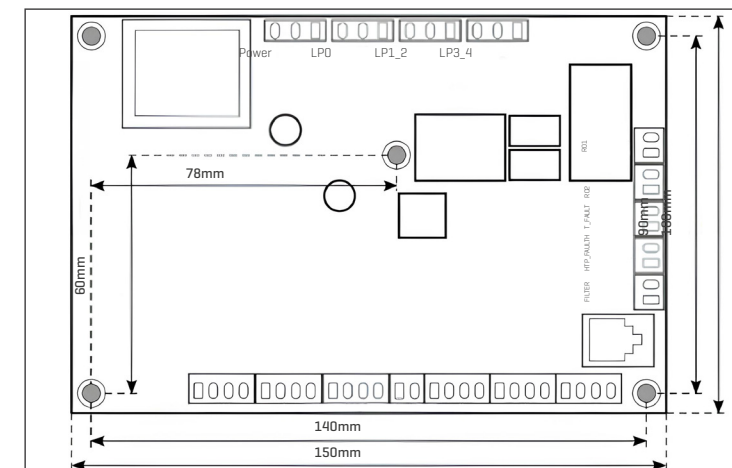
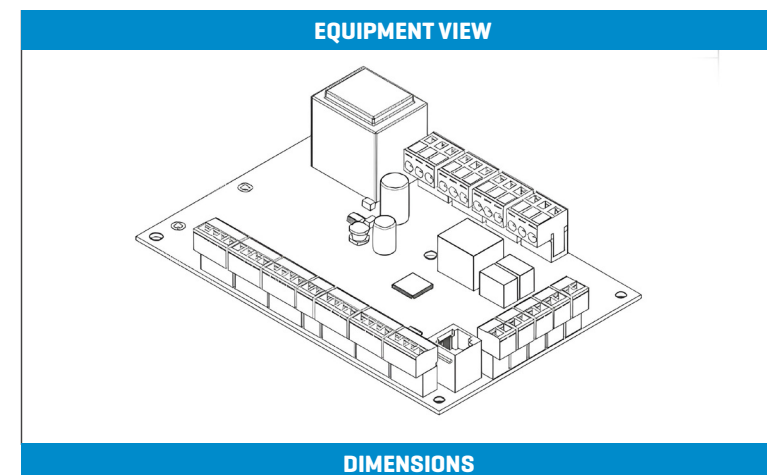


CONTROL PANEL OF HRU WITH EC FAN

The control panel has been specifically designed to meet all the operational requirements of heat recovery units, providing advanced control and monitoring functions. As energy costs continue to rise, energy efficiency has become increasingly important in HVAC systems. The control panel helps optimize unit performance, contributing to significant energy savings and reduced operating costs.

- Stylish and simple LCD display control unit
- Real-time room temperature monitoring
- User-friendly screen interface
- Weekly programming
- Fan stage monitoring in manual mode
- 3-stage EC fan speed control
- Communication capability between the control panel and the heat recovery unit over distances of up to 50 meters

LCD ROOM PANEL



SUSTAINABILITY SOLUTIONS AT DOĞU HVAC

GOOD HEALTH and WELL-BEING



We offer supplementary health insurance to our employees to promote healthy living. We also plan health-focused initiatives such as smoking cessation programs.

QUALITY EDUCATION



Through the DOĞU HVAC CLUB project, we organize technical tours of our factory, participate in career events, and provide sponsorships to support the skill development of university and technical high school students.

GENDER EQUALITY



In 2024, we increased female employment in our administrative and production departments. This step aims to contribute to gender equality by offering a workplace with equal rights for all employees.

AFFORDABLE and CLEAN ENERGY



Our R&D center's 2,500 m² solar panels and 0.6 MW annual capacity solar energy systems reduce our carbon footprint. We generate our electricity, ensuring a reliable, sustainable, and accessible clean energy source.

DECENT WORK and ECONOMIC GROWTH



Decent Work and Economic Growth: As an employer brand, our primary goal is to protect our employees' rights and create a workplace founded on equality and justice for all employees.

SUSTAINABLE CITIES and COMMUNITIES



We enhance indoor air quality with environmentally friendly and energy-efficient products, ensuring adherence to European standards.

RESPONSIBLE CONSUMPTION and PRODUCTION



We minimize waste through lean production policies and emphasize recycling, simultaneously increasing efficiency in our production processes.

CLIMATE ACTION



We support environmental protection through our eco-friendly, sustainable, energy-efficient product lines and R&D efforts focused on reducing waste that could contribute to climate change.

PEACE, JUSTICE and STRONG INSTITUTIONS



We value transparency and accountability, working with associations like ISKAV to prevent corruption and unfair competition, aligning with sectoral ethical values.



Venues Breathe With Us



Scan to watch our
promotional video

