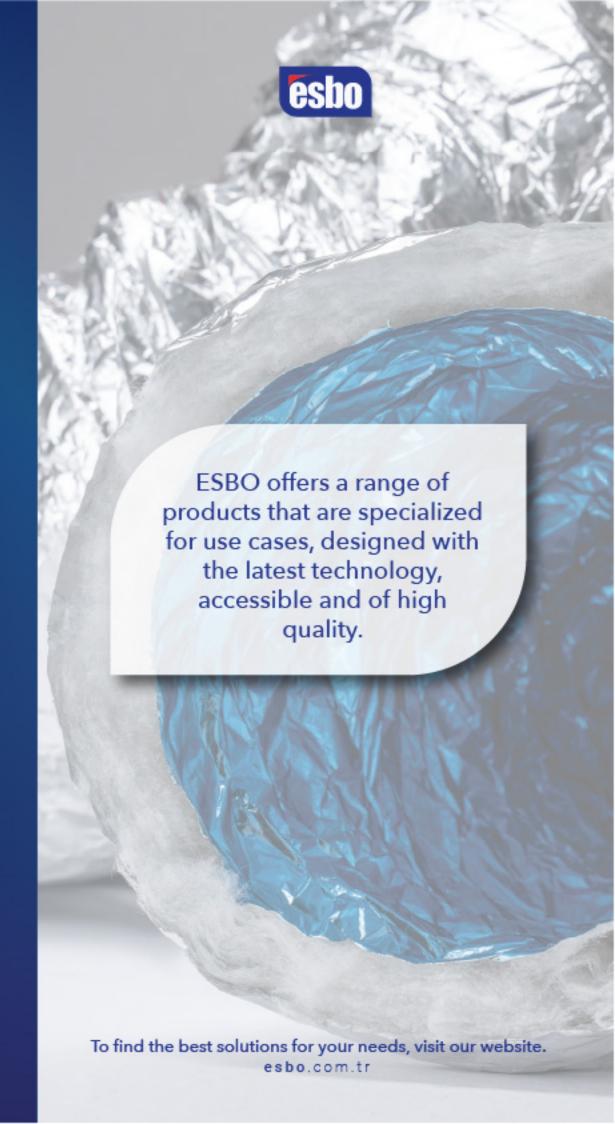


# Unique, Quality, Next-Gen



# esbo

izol esbo

eko esho

eko esbo

lux esbo

MO esho

now esbo

met esbo

gr esho 70

gr esbo 100

gr esbo

luxyr esbo

combi esbo

Globally Patented Products
International Certificates
Industry Leading Innovative Solutions
Professional Technical Team
Constant R&D Efforts







Add-on Features



sono

Perforated inner surface designed for sound insulation.



hygienic

According to the results of Ekoteks laboratory, it has 99.9% antimicrobial properties.



guard



#### FULLY LAMINATED ALUMINUM FLEXIBLE AIR DUCT



Fully lamination prevents the product from gathering or dusting and forming a thermal bridge.

It can be customized according to different use cases with its design that allows modification.



This product, which is flame-retardant (M1) from the factory, withstands a pressure of 5.000 Pa according to TSE standards



izolesbo is airtight, resistant to stretching and impact.



Standard packaging is 10 meters.



It is unique in its field thanks to its fully laminated self-isolation.



It is an environmentally friendly product produced within the framework of the ESBO sustainability program.



It is not affected by humidity and does not cause allergic effects.

#### Material

Aluminum + Polyester

#### Insulation Material

Fiberwool - 20 mm 270 gr/m<sup>2</sup>

#### Outer Jacket

Aluminum + Polyester

#### Operating Air Velocity

Max. 30 m/s

#### Diameter Range

Ø 102 mm - Ø 356 mm

#### Temperature Range -30°C / +150°C

Operating Pressure Max. 5.000 Pa

#### Standart Lenght

10 m

#### Fire Classification

Flame Retardant (M1)









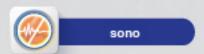




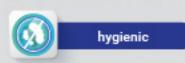




#### Add-on Features



Perforated inner surface designed for sound insulation.



According to the results of Ekoteks laboratory, it has 99.9% antimicrobial properties.





# FULLY LAMINATED ALUMINUM FLEXIBLE AIR DUCT



Fully lamination prevents the product from gathering or dusting and forming a thermal bridge.



It can be customized according to different use cases with its design that allows modification.



This product, which is flame-retardant (M1) from the factory, withstands a pressure of 5.000 Pa according to TSE standards.



IZOLESBO is airtight, resistant to stretching and impact.



Standard packaging is 7,5 meters.



It is unique in its field thanks to its fully laminated self-isolation.



It is an environmentally friendly product produced within the framework of the ESBO sustainability program.



It is not affected by humidity and does not cause allergic effects.

#### Material

Aluminum + Polyester

#### Insulation Material

Rubber - 6 mm 35 kg/m<sup>3</sup>

#### Outer Jacket

Aluminum + Polyester

#### Operating Air Velocity 30 m/s

Diameter Range Ø 102 mm - Ø 610 mm

#### Temperature Range -30°C / +150°C

Operating Pressure Max. 5.000 Pa

#### Standart Length 7,5 m

Fire Classification Flame Retardant (M1)

















fully laminated

Self-isolated product technology.



polyethylene

Fully laminated coated polyethylene insulation material on the duct



Add-on Features



sono

Perforated inner surface designed for sound insulation.



hygienic

According to the results of Ekoteks laboratory, it has 99.9% antimicrobial properties.



guard



#### FULLY LAMINATED ALUMINUM FLEXIBLE AIR DUCT



Fully lamination prevents the product from gathering or dusting and forming a thermal bridge.



It can be customized according to different use cases with its design that allows modification.



Withstands a pressure of 5.000 Pa according to TSE standards.



IZOLESBO is airtight, resistant to stretching and impact.



Standard packaging is 7,5 meters.



It is unique in its field thanks to its fully laminated self-isolation.



It is an environmentally friendly product produced within the framework of the ESBO sustainability program.



It is not affected by humidity and does not cause allergic effects.

#### Material

Aluminum + Polyester

#### Insulation Material

Polyethylene - 6 mm 55 kg/m3

#### Outer Jacket

Aluminum + Polyester

#### Operating Air Velocity 30 m/s

Diameter Range Ø 102 mm - Ø 610 mm

#### Temperature Range -30°C / +150°C

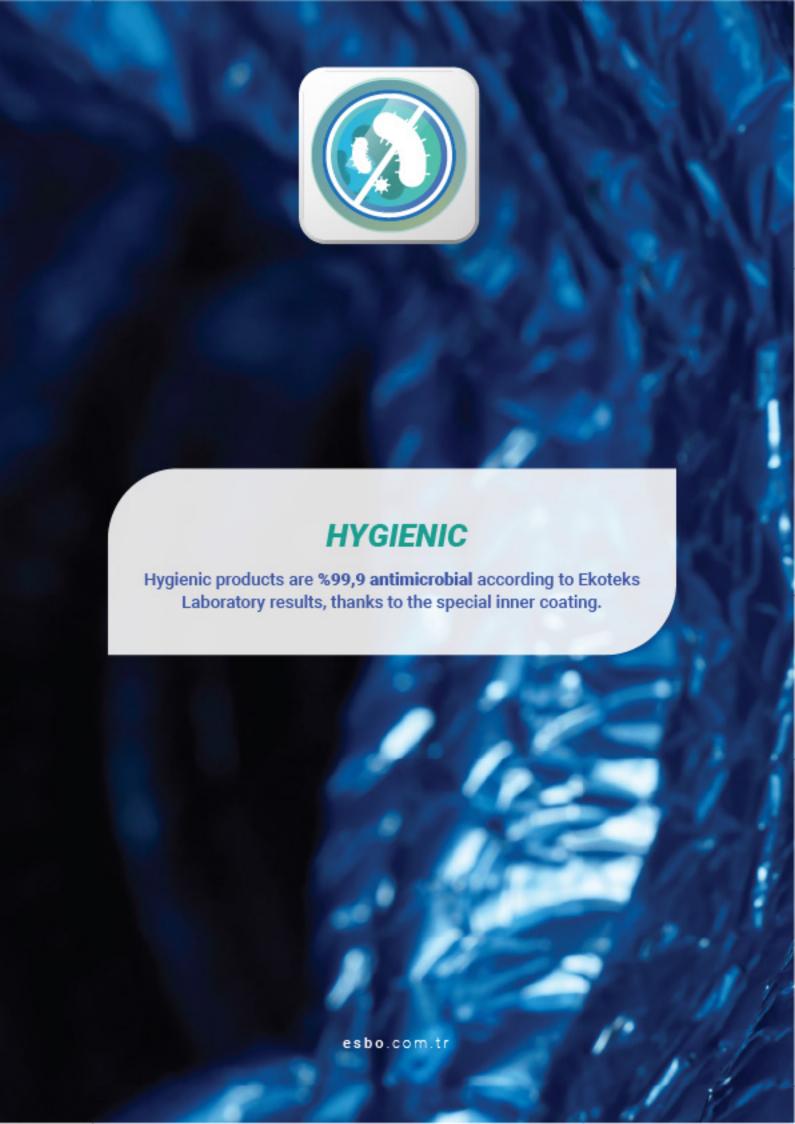
Operating Pressure Max. 5.000 Pa

#### Standart Length 7,5 m

Fire Classification











Heat insulation design



#### Add-on Features



sono

Perforated inner surface designed for sound insulation.



uninsulated

Standard flexible air duct



hygienic

According to the results of Ekoteks laboratory, it has 99.9% antimicrobial properties.



guard



#### ALUMINUM FLEXIBLE AIR DUCT

oo It can be customized according to different use cases with its design that allows modification.

Withstands a pressure of 5.000 Pa according to TSE standards.

EKOESBO is airtight, resistant to stretching and impact.

Standard packaging is 10 meters.

Varies according to customer demand.

It is an environmentally friendly product produced within the framework of the ESBO sustainability program.

It is not affected by humidity and does not cause allergic effects.

Standard insulation material is glasswool 25 mm (R-4.2). Can also be 40 mm (R-6), 50 mm (R-8) and fiberwool according to customer demand.

Material Aluminum + Polyester

Insulation Material Glasswool - 16 kg/m<sup>3</sup>

Outer Jacket Aluminum + Polyester

Operating Air Velocity 30 m/s

Diameter Range Ø 76 mm - Ø 610 mm

Temperature Range -30°C / +80°C

Operating Pressure Max. 5.000 Pa

Standart Length 10 m

Fire Classification







Heat insulation design



#### Add-on Features



sono

Perforated inner surface designed for sound insulation.



uninsulated

Standard flexible air duct



hygienic

According to the results of Ekoteks laboratory, it has 99.9% antimicrobial properties.



guard



## ALUMINUM FLEXIBLE AIR DUCT

It can be customized according to different use cases with its design that allows modification.

Withstands a pressure of 5.000 Pa according to TSE standards.

EKOESBO Plus is airtight, resistant to stretching and impact.

Standard packaging is 10 meters.

Varies according to customer demand.

It is an environmentally friendly product produced within the framework of the ESBO sustainability program.

It is not affected by humidity and does not cause allergic effects.

Standard insulation material is glasswool 25 mm (R-4.2). Can also be 40 mm (R-6), 50 mm (R-8) and fiberwool according to customer demand.

Material Aluminum + Polyester

Insulation Material Glasswool - 16 kg/m<sup>3</sup>

Outer Jacket Aluminum + Polyester

Operating Air Velocity 30 m/s

Diameter Range Ø 76 mm - Ø 610 mm

Temperature Range -30°C / +120°C

Operating Pressure Max. 5.000 Pa

Standart Length 10 m

Fire Classification



# 12.000 m<sup>2</sup> of manufacturing facilities

Esbo flexible air ducts are manufactured at ISIL Inc.'s 12,000 m² facility in Istanbul. These products are exported to over 50 countries across the globe.

# R&D and Innovation

Esbo's R&D department drives the development of its entire product line and production technology. Continual investment in new technologies, guided by IŞIL Inc.'s commitment to "Sustainable Development" reinforces Esbo's position as the market's leading innovation-oriented brand.





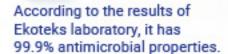
#### Add-on Features



sono

Perforated inner surface designed for sound insulation.





hygienic



It plays an active role in protection from the danger of coronavirus.

Standard flexible air duct



## FLAME RETARDANT ALUMINUM FLEXIBLE AIR DUCT

It can be customized according to different use cases with its design that allows modification.



This product, which is flame-retardant (M1) from the factory, withstands a pressure of 5.000 Pa according to TSE standards.



LUXESBO is airtight, resistant to stretching and impact.



Standard packaging is 10 meters. Varies according to customer demand



It is an environmentally friendly product produced within the framework of the ESBO sustainability program.



It is not affected by humidity and does not cause allergic effects.



Standard insulation material is glasswool 25 mm (R-4.2). Can also be 40 mm (R-6), 50 mm (R-8) and fiberwool according to customer demand. Material Aluminum + Polyester

Insulation Material Glasswool - 16kg/m<sup>3</sup>

Outer Jacket Aluminum + Polyester

Operating Air Velocity 30 m/s

Çap Aralığı Ø 76 mm - Ø 610 mm

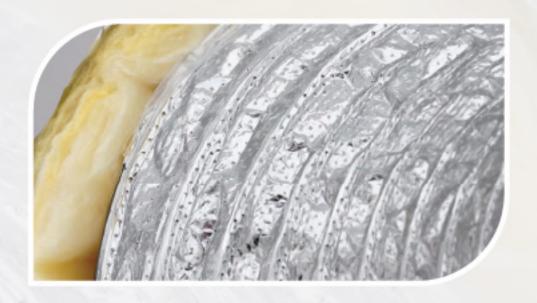
> Temperature Range -30°C / +150°C

Operating Pressure Max. 5.000 Pa

Standart Length 10 m

Fire Classification Flame Retardant (M1)



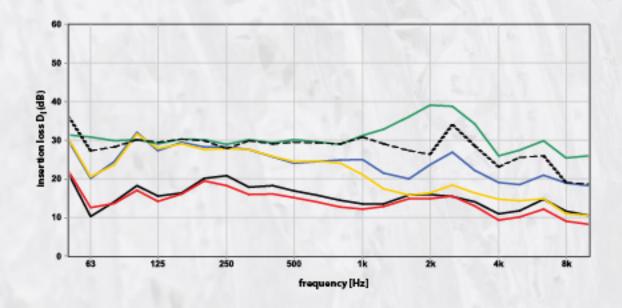


#### SONO

### Flexible air ducts that **provide sound insulation** thanks to their perforated designs on their inner surfaces.

	NR.	Rec-Nr.	DESCRIPTION
_	- 2	#72	Invoeg; LUXESBO Sono 1,1 m rond 203 (flush rond 200)
-	- 3	#73	Invoeg: M0ESBO Sono 1,1 m rond 203 (flush rond 200)
-	- 4	#74	Invoeg: LUXESBO Sono 2 m rond 203 (flush rond 200)
	- 5	#75	Invoeg; M0ESBO Sono 2 m rond 203 (flush rond 200)
	- 6	#76	Invoeg: LUXESBO Sono 3 m rond 203 (flush rond 200)
	- 7	#77	Invoeq: M0ESBO Sono 3 m rond 203 (flush rond 200)

Rec.	nr								
#72	13,3	16,6	19,4	16,9	13,8	15,7	12,1	11,9	dB
#73	14,5	15,6	17,6	15,1	12,6	15,1	10,5	9,5	dB
#74	23,3	29,2	28,1	24,7	23,5	22,6	19,6	19,2	dB
#75	23,4	29,2	27,6	24,9	20,0	16,7	15,0	11,7	dB
#76	30,6	29,8	29,7	29,7	30,7	37,8	28,0	26,6	dB
#77	29,2	30,0	29,1	29,3	29,5	28,2	25,2	20,2	dB







#### Add-on Features



sono

Perforated inner surface designed for sound insulation.



Standard flexible air duct



hygienic

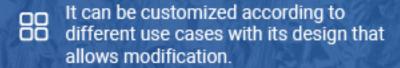
According to the results of Ekoteks laboratory, it has 99.9% antimicrobial properties.

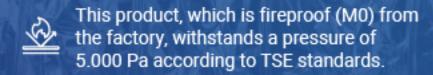


guard



#### FIREPROOF ALUMINUM FLEXIBLE AIR DUCT





- M0ESBO is airtight, resistant to stretching and impact.
- Standard packaging is 10 meters.

  Varies according to customer demand
- It is an environmentally friendly product produced within the framework of the ESBO sustainability program.
- It is not affected by humidity and does not cause allergic effects.
  - Standard insulation material is glasswool 25 mm (R-4.2). Can also be 40 mm (R-6), 50 mm (R-8) and fiberwool according to customer demand.

Material Aluminum + Polyester

Insulation Material Glasswool - 16kg/m<sup>3</sup>

Outer Jacket Aluminum + Polyester

Operating Air Velocity 30 m/s

Diameter Range Ø 76 mm - Ø 610 mm

> Temperature Range -30°C / +250°C

> Operating Pressure Max. 5.000 Pa

Standart Length 10 m

Fire Classification Fireproof (M0)







Heat insulation design



economic

High quality with affordable prices.



#### Add-on Features



sono

Perforated inner surface designed for sound insulation.



uninsulated

Standard flexible air duct



hygienic

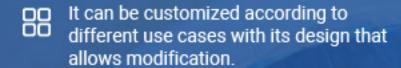
According to the results of Ekoteks laboratory, it has 99.9% antimicrobial properties.

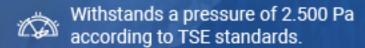


guard



# ECONOMIC METALLIZED POLYESTER FLEXIBLE AIR DUCT





- METESBO is airtight, resistant to stretching and impact.
- Standard packaging is 10 meters.

  Varies according to customer demand.
- It is an environmentally friendly product produced within the framework of the ESBO sustainability program.
- It is not affected by humidity and does not cause allergic effects.
  - Standard insulation material is glasswool 25 mm (R-4.2). Can also be 40 mm (R-6), 50 mm (R-8) and fiberwool according to customer demand.

Material Metallized Polyester

Insulation Material Glasswool - 16 kg/m<sup>3</sup>

Outer Jacket Metallized Polyester

Operating Air Velocity 30 m/s

Diameter Range Ø 76 mm - Ø 610 mm

Temperature Range -30°C / +80°C

Operating Pressure Max. 2.500 Pa

Standart Length 10 m

Fire Classification







Heat insulation design



Add-on Features

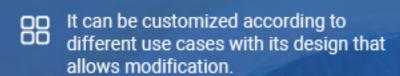


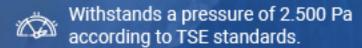
uninsulated

Standard flexible air duct



# PVC FLEXIBLE AIR DUCT (70 MICRON)





- GRESBO is airtight, resistant to stretching and impact.
- Standard packaging is 6 meters.

  Varies according to customer demand.
- It is an environmentally friendly product produced within the framework of the ESBO sustainability program.
- It is not affected by humidity and does not cause allergic effects.
- Standard insulation material is glasswool 25 mm (R-4.2). Can also be 40 mm (R-6), 50 mm (R-8) and fiberwool according to customer demand

Material PVC - 70 micron

Insulation Material Glasswool - 16 kg/m<sup>3</sup>

Outer Jacket LDPE Film - 45 micron

Operating Air Velocity 30 m/s

Diameter Range Ø 76 mm - Ø 610 mm

Temperature Range -30°C / +80°C

Operating Pressure Max. 2.500 Pa

> Standart Length 6 m

Fire Classification







Heat insulation design



Add-on Features

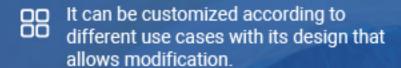


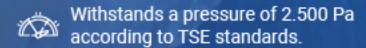
uninsulated

Standard flexible air duct



# PVC FLEXIBLE AIR DUCT (100 MICRON)





- GRESBO is airtight, resistant to stretching and impact.
- Standard packaging is 10 meters.

  Varies according to customer demand.
- It is an environmentally friendly product produced within the framework of the ESBO sustainability program.
- It is not affected by humidity and does not cause allergic effects.

Standard insulation material is glasswool 25 mm (R-4.2). Can also be 40 mm (R-6), 50 mm (R-8) and fiberwool according to customer demand.

Material PVC - 100 micron

Insulation Material Glasswool - 16 kg/m<sup>3</sup>

Outer Jacket LDPE Film - 90 micron

Operating Air Velocity 30 m/s

Diameter Range Ø 76 mm - Ø 610 mm

Temperature Range -30°C / +80°C

Operating Pressure Max. 2.500 Pa

Standart Length 10 m

Fire Classification



# INSULATION

















Features that provide thermal insulation with rubber, polyethylene, glass wool or fiber insulation











Heat insulation design



polypropylene

Non-woven Polypropylene fabric cloth



Add-on Features

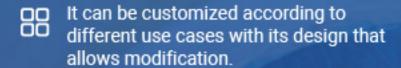


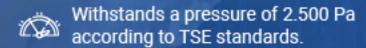
uninsulated

Standard flexible air duct



# NON-WOVEN POLYPROPYLENE FABRIC CLOTH FLEXIBLE AIR DUCT





- NOWESBO is resistant to stretching and impact.
- Standard packaging is 10 meters.

  Varies according to customer demand.
- It is an environmentally friendly product produced within the framework of the ESBO sustainability program.
- It is not affected by humidity and does not cause allergic effects.
- Standard insulation material is glasswool 25 mm (R-4.2). Can also be 40 mm (R-6), 50 mm (R-8) and fiberwool according to customer demand.

#### Material

Non-woven Polypropylene fabric cloth

Insulation Material Glasswool - 16 kg/m<sup>3</sup>

Outer Jacket Aluminum + Polyester

Operating Air Velocity 25 m/s

Diameter Range Ø 76 mm - Ø 610 mm

Temperature Range -30°C / +140°C

Operating Pressure Max. 2.500 Pa

Standart Length 10 m

Fire Classification





moisture barrier

Exterior surface that is not affected by moisture



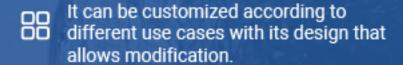
uninsulated

Standard flexible air duct





#### MOISTURE BARRIER PVC + ALUMINUM FLEXIBLE AIR DUCT



Withstands a pressure of 5.000 Pa according to TSE standards.

COMBIESBO is airtight, resistant to stretching and impact.

Standard packaging is 10 meters.

Varies according to customer demand

It is an environmentally friendly product produced within the framework of the ESBO sustainability program.

It is not affected by humidity and does not cause allergic effects.

Material Aluminum + PVC

Insulation Material

Outer Jacket

Operating Air Velocity 30 m/s

Diameter Range Ø 76 mm - Ø 610 mm

Temperature Range -30°C / +120°C

Operating Pressure Max. 5.000 Pa

Standart Length 10 m

Fire Classification







Heat insulation design



300 denier PVC

300 denier, particle and tear-resistant inner duct



Add-on Features



uninsulated

Standard flexible air duct



#### PARTICLE RESISTANT FLEXIBLE AIR DUCT (300 DENIER)

It can be customized according to different use cases with its design that allows modification.

Withstands a pressure of 10.000 Pa according to TSE standards.

GRESBO is airtight, resistant to stretching and impact.

Standard packaging is 10 meters.

Varies according to customer demand

It is an environmentally friendly product produced within the framework of the ESBO sustainability program.

It is not affected by humidity and does not cause allergic effects.

Standard insulation material is glasswool 25 mm (R-4.2). Can also be 40 mm (R-6), 50 mm (R-8) and fiberwool according to customer demand.

Material PVC-300 denier polyester fabric

> Insulation Material Glasswool - 16 kg/m<sup>3</sup>

Outer Jacket Aluminum + Polyester / PVC

Operating Air Velocity 30 m/s

Diameter Range Ø 76 mm - Ø 610 mm

Temperature Range -30°C / +80°C

Operating Pressure Max. 10.000 Pa

Standart Length 10 m

Fire Classification







insulated

Heat insulation design



750 denier PVC

750 denier, particle and tear-resistant inner duct



Add-on Features



uninsulated

Standard flexible air duct



## PARTICLE RESISTANT FLEXIBLE AIR DUCT (750 DENIER)

It can be customized according to different use cases with its design that allows modification.

Withstands a pressure of 10.000 Pa according to TSE standards.

LUXGRESBO is airtight, resistant to stretching and impact.

Standard packaging is 10 meters.

Varies according to customer demand

It is an environmentally friendly product produced within the framework of the ESBO sustainability program.

It is not affected by humidity and does not cause allergic effects.

Standard insulation material is glasswool 25 mm (R-4.2). Can also be 40 mm (R-6), 50 mm (R-8) and fiberwool according to customer demand.

Material PVC-750 denier polyester fabric

> Insulation Material Glasswool - 16 kg/m<sup>3</sup>

Outer Jacket Aluminum + Polyester / PVC

Operating Air Velocity 30 m/s

Diameter Range Ø 76 mm - Ø 610 mm

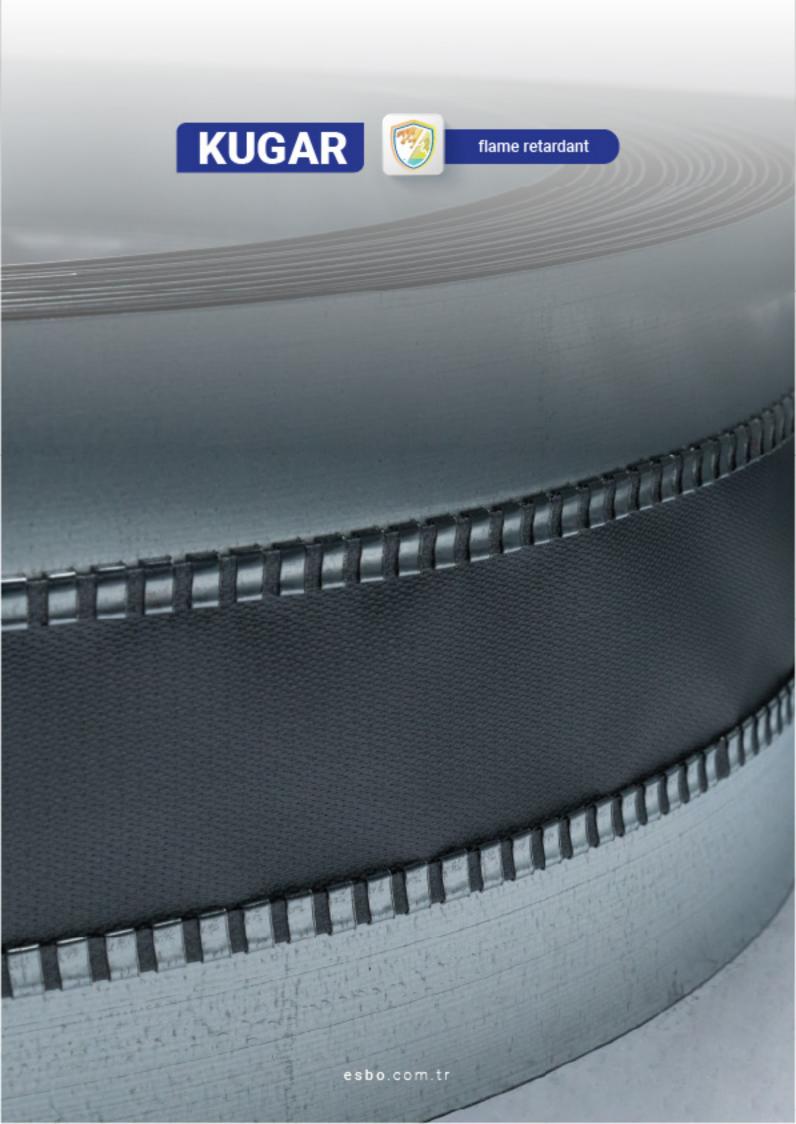
Temperature Range -30°C / +80°C

Operating Pressure 10.000 Pa

Standart Length 10 m

Fire Classification





### **PVC** KUGAR





KUGAR with 750 denier PVC material, galvanized or stainless steel sheet options for use in duct applications.



0,40 mm galvaniz / stainless sheet, 750-PVC denier polyester fabric



This product, which is flame retardant from the factory, is resistant to temperatures up to 80°C.



Airtight, resistant to stretching and impact.



PVC KUGAR product is airtight and resistant to UV rays.



Standard packaging is 25 meters.



It is an environmentally friendly product produced within the framework of the KUGAR sustainability program.



It is not affected by humidity and does not cause allergic effects.

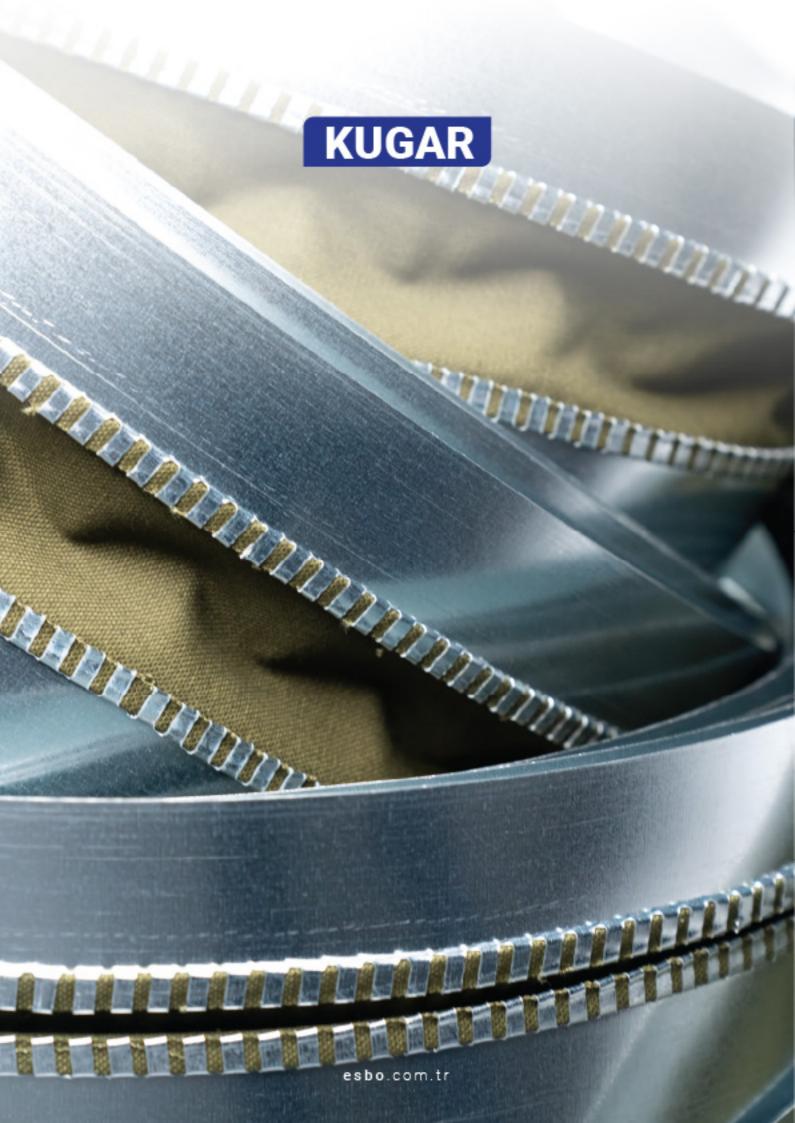
Material PVC

Sheet Galvanise / Stainless

Temperature Range -30°C / +80°C

Standart Length 25 m

Fire Classification Flame Retardant



## **CANVAS KUGAR**





KUGAR with moisture-proof canvas weaving, galvanized or stainless steel options for use in duct applications.



0,40 mm galvaniz / stainless sheet, 500 gr/m² moisture-proof canvas woven fabric



Is resistant to temperatures up to 80°C.



Airtight, resistant to stretching and impact.



Canvas KUGAR product is airtight and resistant to UV rays.



Standard packaging is 25 meters.



It is an environmentally friendly product produced within the framework of the ESBO sustainability program.



It is not affected by humidity and does not cause allergic effects.

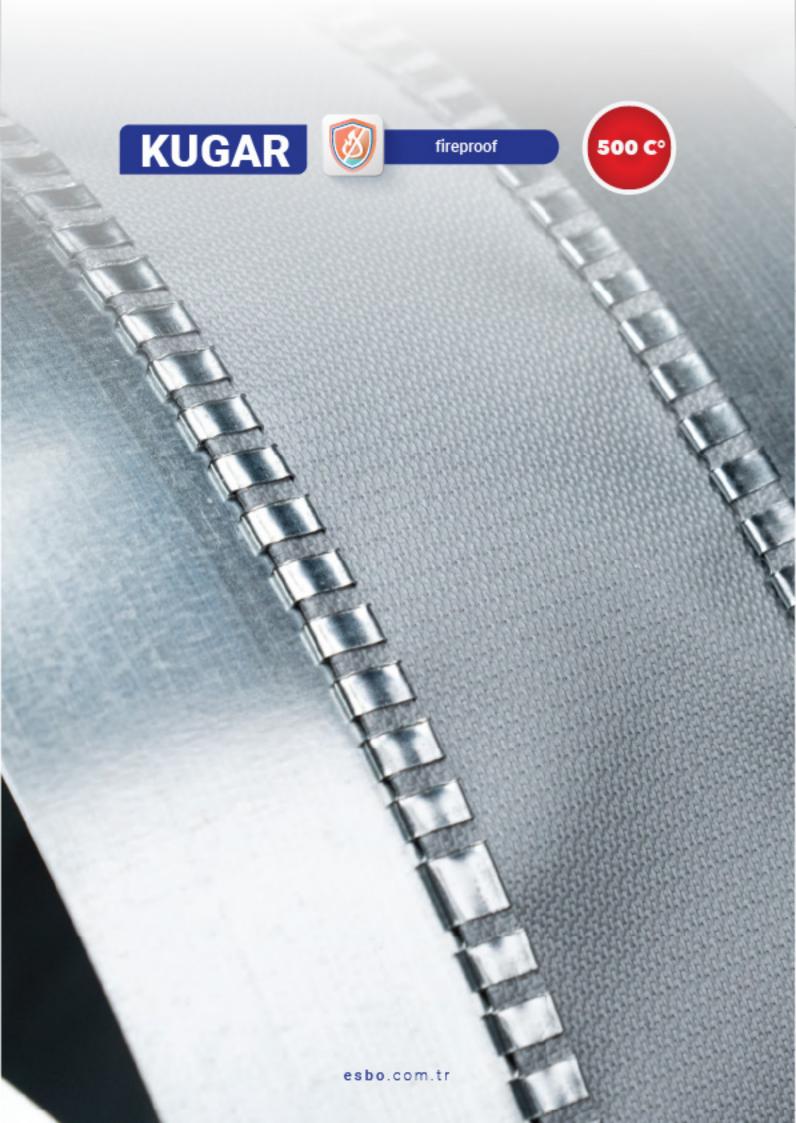
Material Canvas

Sheet Galvaniz / Stainless

Temperature Range -30°C / +80°C

Standart Length 25 m

Fire Classification



#### SILICON FIREPROOF KUGAR





KUGAR with fireproof and moisture-proof glass fiber woven canvas material, galvanized or stainless steel sheet options for use in duct applications.



570 gr/m<sup>2</sup> Silicon coated on both sides, fireproof and moisture proof glass fiber woven fabric



This product, which is fireproof from the factory, is resistant to temperatures up to 260°C.



Airtight, resistant to stretching and impact.



Silicon Fireproof KUGAR product is airtight and resistant to UV rays.



Standard packaging is 25 meters.



It is an environmentally friendly product produced within the framework of the ESBO sustainability program.



It is not affected by humidity and does not cause allergic effects.

Material Silicon

Sheet Galvaniz / Stainless

Temperature Range -30°C / +260°C

Standart Length 25 m/ kutu

Fire Classification Fireproof



#### **PU FIREPROOF** KUGAR





KUGAR with PU material on both sides, galvanized or stainless steel options for use in duct applications.



530 gr/m<sup>2</sup> PU coated on both sides, fireproof and moisture proof glass fiber woven fabric



This product, which is fireproof from the factory, is resistant to temperatures up to 100°C.



Airtight, resistant to stretching and impact.



PU Fireproof KUGAR product is airtight and resistant to UV rays.



Standard packaging is 25 meters.



It is an environmentally friendly product produced within the framework of the ESBO sustainability program.



It is not affected by humidity and does not cause allergic effects.

Material Polyurethane

Sheet Galvaniz / Stainless

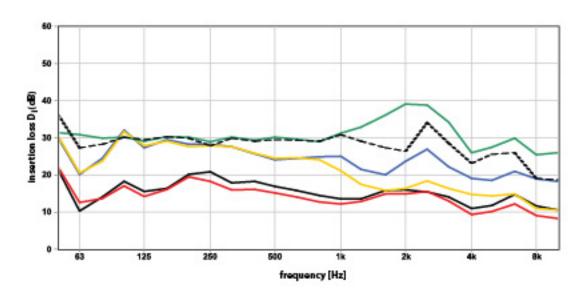
Temperature Range -30°C / +100°C

Standart Length 25 m

Fire Classification Fireproof









#### CERTIFICATES



This certificate is the classification that reports the reaction of the material to flame.



This certificate is the classification that reports the reaction of the material to flame



UL 181 Section 11 certification is the safety standard for factory-made air ducts and connectors.



Italian Class 1 certificate is a certificate issued by the Italian Ministry of Interior according to the measurement of the flame resistance of the products.



Our products with Sono feature are certified for sound insulation.



Our hygienic certified products are 99,9% antimicrobial



The EN 13501-1 European Standard is the standard that classifies the fire resistance and response of products and materials.



The EN 13501-1 European Standard is the standard that classifies the fire resistance and response of products and materials.



It is the standard for dimensions and mechanical properties for ventilation of buildings, air ducts and flexible ducts.



RoHS is the European Union's directive that restricts the use of hazardous substances in electrical and electronic equipment.



BS 476 is the British standard for combustion tests on building materials and structures.

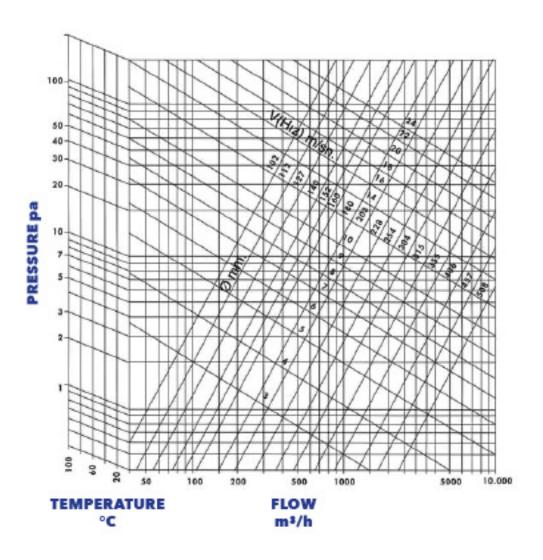


ISO 9001 is the international standard for quality control systems.



It is a certificate given to products produced in accordance with ecological product criteria.

## **PRESSURE LOSS DIAGRAM**



# ARGAS

**L+90 532 171 36 04** 

☑ info@argasgroup.com





esbo.com.tr