FabricAir

Innovating the HVAC industry since 1973

FabricAir®
Combi 70

FabricAir® Combi 70 is a permeable, flame-retardant, Oeko-Tex 100 certified fabric. It is a strong and durable fabric; machine washable and retains its dimensions after washing (max. 0.5% shrinkage). The permeability is uniform (max. 5% variation) and achieved by thermo-fixation.

This fabric is rated for cleanrooms and associated controlled environments: Cleanliness Class 3 (ISO 14644-1 Table 1). It comes with a 10-year warranty and is supplied in 9 standard colors, with the option of printed custom colors and custom patterns. All flow models, as well as shape retention options are available and it is compatible with the FabricAir® VarioDuct™.

FEATURES AVAILABLE	
Washable	Yes
Warranty, years	10
Non-permeable	Yes
Flame Retardant	Yes

STANDARD COLORS AVAILABLE	
3000 White	
3001 Blue	
3002 Orange	
3003 Dark Gray	
3004 Black	
3005 Red	
3006 Light Gray	
3007 Green	
3008 Tan	

COLORS AND PATTERNS AVAILABLE	
Dye colors available	No
Coloring by Surface Print	Yes
Seamless Pattern by surface print	Yes
Artwork, print	Yes
Logos, print	Yes
Lettering, print	Yes

DATA: FabricAir® Combi 70

PROPERTIES

Fabric type:	Polyester	
Weight:	290 g/m²	EN ISO 12127:1997
Thickness:	0,45 mm	EN ISO 5084:1996
Permeability:	40 (±5%) m³/m²/h at 120 Pa	EN ISO 9237:1995
Strength - Warp:	2700 N	EN ISO 13934-1
Strength - Weft:	900 N	EN ISO 13934-1
Shrinkage:	0,5% Max.	EN ISO 5077
Heat resistance - continuous:	from -40°Cto +140°C	
Heat resistance - softening:	+240°C	

CODE COMPLIANCE

Reaction to fire (European Union):	B-s1,d0	EN 13501-1
Reaction to fire (Denmark):	Yes	DS 428
Reaction to fire (France):	M1	NFP 92:507
Reaction to fire (Republic of China):	B-s1,d0,t1	GB 8624
Reaction to fire (USA):	Yes	UL 723
Reaction to fire (Canada):	Yes	ULC s102.2
Cleanrooms and associated controlled environments:	Class 3	EN ISO 14644-1

PERFORMANCE CERTIFICATES

Safety Air Dispersion Systems:	Yes	UL 2518

ADDITIONAL APPROVALS

OEKO-TEX®:	Yes	OEKO-TEX® Standard 100

OPTIONAL FABRICAIR INNOVATIONS

All-in-One:	Yes	
360° hoops:	Yes	

smart air solutions.

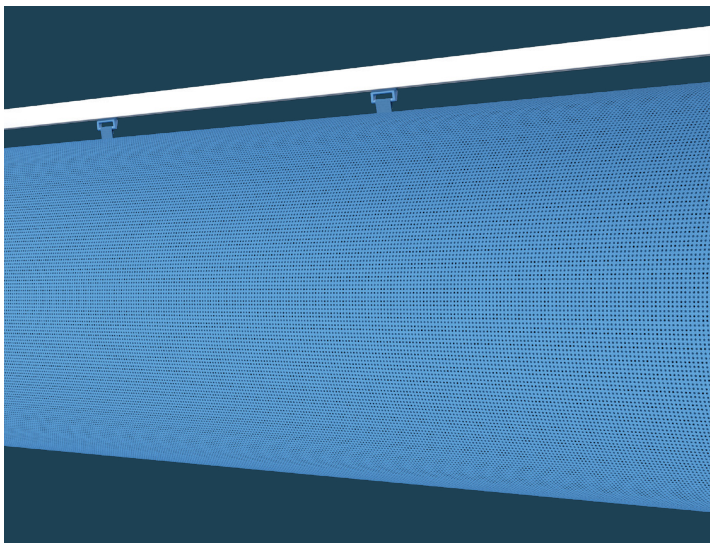
MicroFlow™

With MicroFlow™, the air exits the duct via laser-cut micro-perforations on a larger percentage of the duct's surface area. When used as the primary flow model, the perforated area covers between 25 % to 100 % of the duct's surface area.

MicroFlow™ has the smallest near-zone of all of the perforated fabrics available; the near-zone will not extend beyond 300 mm [≈12 in].

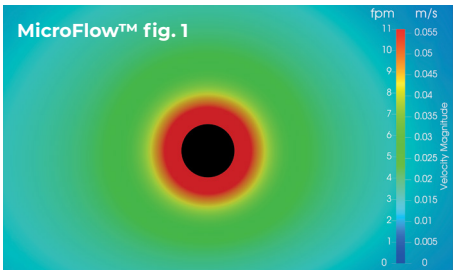
MicroFlow™ is used for thermal displacement with low velocity air dispersion in rooms with low to medium ceiling heights. The dispersed air falls slowly to the floor, shifting the hot air up and out, thus creating a pleasant and comfortable indoor environment in the occupied zone. Due to the extended near-zone, MicroFlow™ enables a larger ΔT than FabFlow™ without causing drafts.

As a primary flow model, the typical application is comfort ventilation where the ducts are placed relatively close to the occupied zone. It is often found in the food industry, offices, schools and the graphics and pharmaceutical industries.

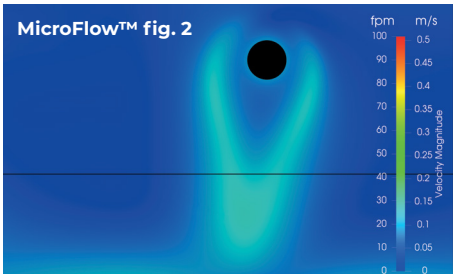


Examples of CFD simulations with MicroFlow™ at 3 m [≈10 ft] above floor level. The occupied zone is indicated by the black line 1,8 m [≈6 ft] above floor level. When the cold air exits the duct, it moves downward due to thermodynamic forces and merges into a uniform airflow that gains momentum as it moves away from the duct.

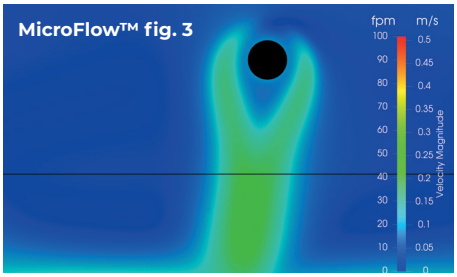
ΔT impact on air pattern - increased cooling capacity



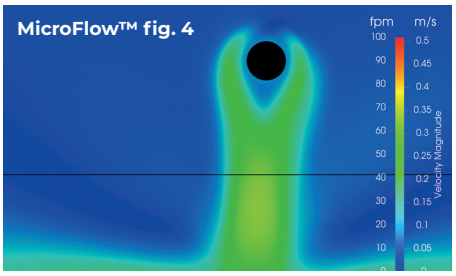
Air discharge through MicroFlow™ of permeability 200 m³/h/m² [10 CFM/ft²] at 120 Pa [0.48 inwg]. Isothermal conditions.



Air permeability 200 m³/h/m² [10 CFM/ft²] at 120 Pa [0.48 inwg], cooling with ΔT of -1 K [-1.8°F]. High level of comfort is achieved.



Air permeability 200 m³/h/m² [10 CFM/ft²] at 120 Pa [0.48 inwg], cooling with ΔT of -3 K [-5.4°F]. Increased cooling capacity and draft still avoided.



Air permeability 200 m³/h/m² [10 CFM/ft²] at 120 Pa [0.48 inwg], cooling with ΔT of -5 K [-9.0°F]. Micro-perforation enables a higher cooling capacity while keeping the occupied zone draft-free.

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SUSPENSIONS

Introduction to Type 08

Single Cable Drop Suspended H-Rail

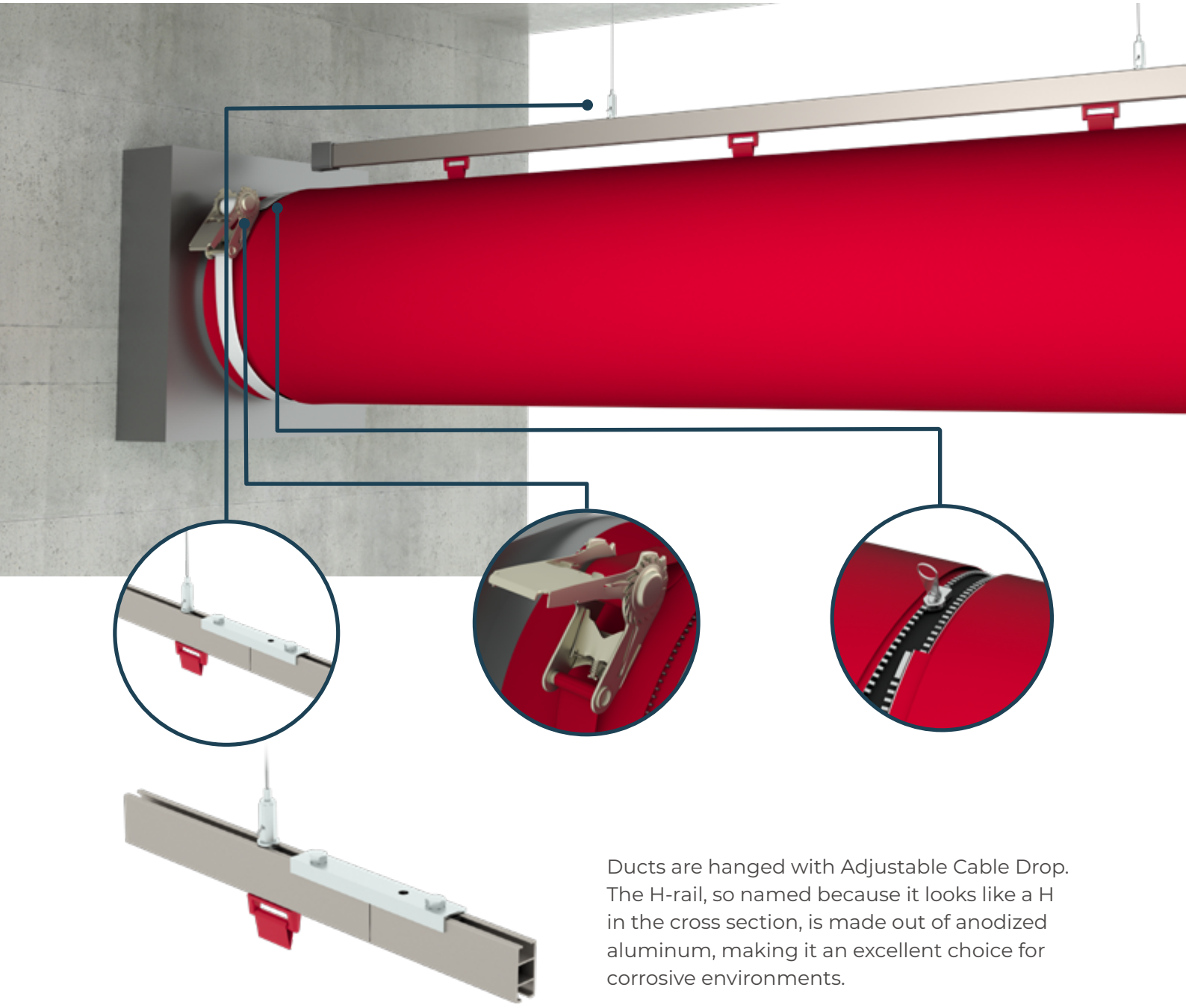
- Aesthetically pleasing installation
- Stable installation
- Great for larger diameters with retention system

Click or Scan

Animation

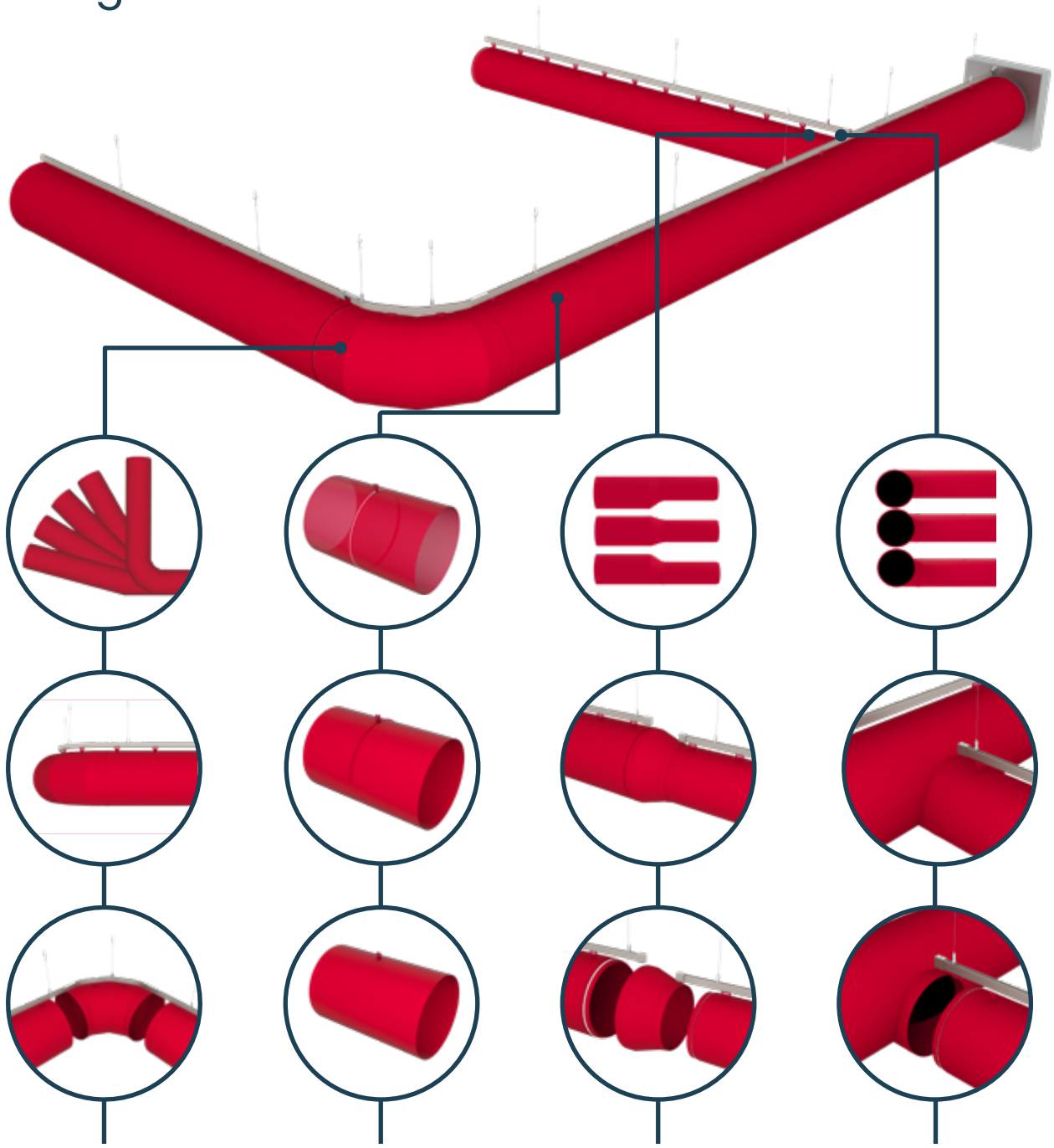
Click or Scan

Drawings



Ducts are hanged with Adjustable Cable Drop. The H-rail, so named because it looks like a H in the cross section, is made out of anodized aluminum, making it an excellent choice for corrosive environments.

Example of duct system configuration



Elbows

We provide custom elbows in any degree and size.

Shape Retention

Our ducts come with your selected Shape Retention solution: All-in-One or Internal 360° Hoops. The 360° hoops are hidden inside the duct whereas All-in-One 180° hoops are sewn on the exterior. Shape retaining hardware is removable for laundering.

Reductions

Concentric and eccentric reducers are available.

Branches

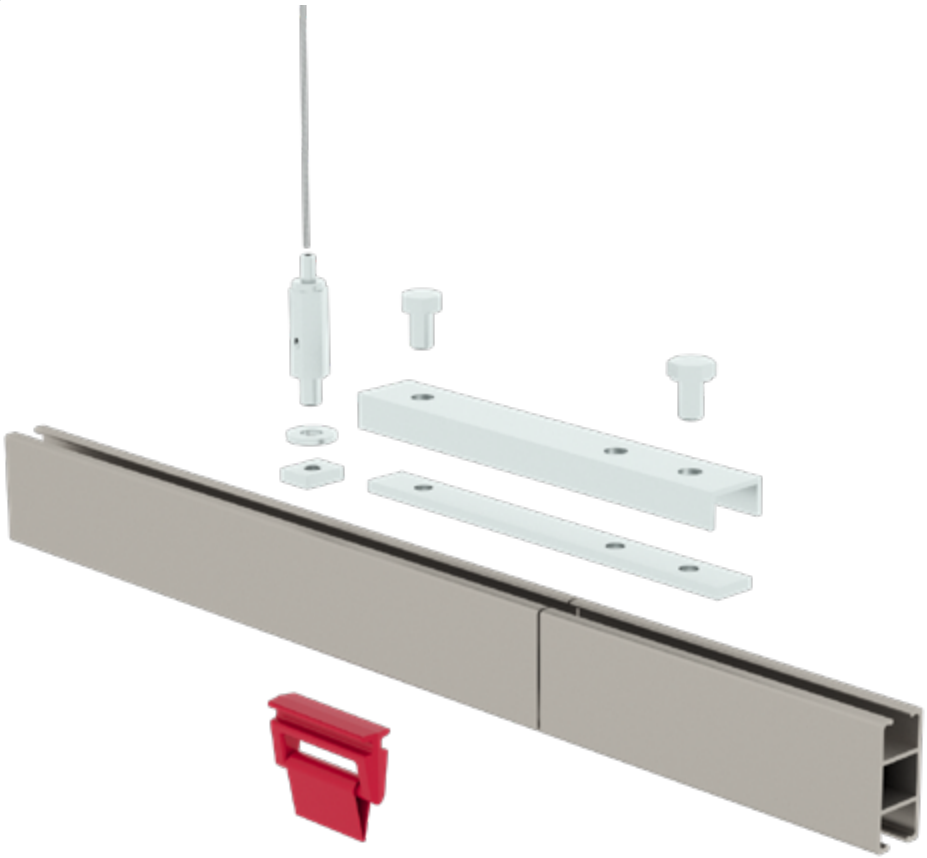
Concentric and eccentric branch take-offs are available.

Options available for Type 08

H-RAIL for Type 08

When assembling an H-rail system the pieces of H-rail are joined together by using a metal connector that is fastened to each rail using set screws. The duct will have sliders or a bulb edge to slide into the H-rail at the appropriate locations for both single and double H-rail configurations. The rails are bent to the exact angle that is needed to suit the elbows in your FabricAir duct system.

Carril en H



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