Introduction to PRIHODA Fabric Duct
Why Prihoda Fabric Duct?

• **Cleanliness without compromise**
  This is the only duct system that can be perfectly cleaned. By machine-washing, with the option to add disinfectant.

• **Hygienic**
  Anti-Bacterial (optional)
Why Prihoda Fabric Duct?

• Doesn’t need insulation
• Doesn’t need air outlets
• Lighter weight than GI duct
• Fast to install
• Long Life
Ecological
Why Prihoda Fabric Duct?

• The air flow you need

There is practically no form of air distribution that it cannot be achieved.
Why Prihoda Fabric Duct?

• Comfortable Air Distribution
  Ability to attain the comfort speed of air at selected distances

![Diagram showing air distribution parameters](image-url)
Why Prihoda Fabric Duct?

• 24.5% More Efficient than Conventional System

According to a 10-month-long study performed by the Iowa State University’s Mechanical Engineering Dept., titled “Thermal Comparison Between Ceiling Diffusers and Fabric Ductwork Diffusers for Green Buildings,” proved fabric duct has a 24.5%-% efficiency differential, because it heats rooms faster and more uniformly to satisfy temperature setpoints when compared to metal duct/diffusers. This results in reduced mechanical equipment runtime, thus saving energy in the process. The study is available for free at www3.me.iastate.edu/bglab.
Simulation of Draft from Ceiling Diffusers
Simulation of Air distribution using Prihoda Fabric Duct
Why Prihoda Fabric Duct?

- It needs less Fan / AHU Power than for the conventional systems
Why Prihoda Fabric Duct?

SAFETY!!!

• Antistatic design
• Fire Resistance according to:
  ➢ UL2518
  ➢ UL723
  ➢ NFPA 90A 25/50 approved
  ➢ EN 13501-1: 2003
  ➢ B-s1,d0
Plastic nozzle  Fabric nozzle
Why Prihoda Fabric Duct?

• **Aesthetic / Artistic**
  Any Pantone / RAL reference
  Any Pattern or Text
Operation of Fabric Ducts

It always holds true that: \[ V = A + B + C + D + E + F + G \]
Operation of Fabric Ducts

Uniform / Directional Micro-Perforation

Perforation

Small Nozzles

Large Nozzles
Micro-Perforation

- Laser cut 0.2mm - 0.4mm perforations
- Infinitely configurable on duct surface from 360° uniform to precision direction
Operation of Fabric Ducts

Uniform / Directional Micro-Perforation

Perforation

Small Nozzles

Large Nozzles
Fabric Pockets
Deflection of outgoing airflow

Orthogonal outlet due to fabric pockets
Operation of Fabric Ducts

Uniform / Directional Micro-Perforation

Perforation

Small Nozzles

Large Nozzles
Case Study
Operation of Fabric Ducts

Uniform / Directional Micro-Perforation

Perforation

Small Nozzles

Large Nozzles
Prihoda Fabric Duct Characteristics
## Characteristics

<table>
<thead>
<tr>
<th>Letter</th>
<th>Shape</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>C</td>
<td>CIRCULAR</td>
<td>The standard shape, easy maintenance, preferentially recommended.</td>
</tr>
<tr>
<td>H</td>
<td>HALF-ROUND</td>
<td>For use where there is not enough space for circular diffuser and aesthetic applications</td>
</tr>
<tr>
<td>Q</td>
<td>QUARTER-ROUND</td>
<td>For use where there is not enough space for circular diffuser, in aesthetic applications and if the diffuser is to be installed in the corner of a room.</td>
</tr>
<tr>
<td>SG</td>
<td>SEGMENT</td>
<td>For use where there is not enough height for a half-round diffuser.</td>
</tr>
<tr>
<td>SC</td>
<td>SECTOR</td>
<td>Available if the room corner construction requires a different shape to quarter round.</td>
</tr>
<tr>
<td>XH</td>
<td>COMBINED HALF - ROUND (X - NUMBER OF HALFROUNDS)</td>
<td>An alternative half round diffusers allowing higher air volumes.</td>
</tr>
<tr>
<td>S</td>
<td>SQUARE</td>
<td>This shape requires a special suspension structure (provided) to clamp and support all corners.</td>
</tr>
<tr>
<td>T</td>
<td>TRIANGULAR</td>
<td>The triangular shape is maintained by placing a heavy weight at the bottom of the duct to maintain tension on the walls of the material.</td>
</tr>
</tbody>
</table>
Prihoda Bonus Fabric Return Duct!!!
Type of Installation

<table>
<thead>
<tr>
<th>Installation no.</th>
<th>Cross section view</th>
<th>Type of suspender</th>
<th>Additional accessories designation [see cross section view chart below]</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td></td>
<td>without mounting material and hooks or embossed strips.</td>
<td></td>
</tr>
<tr>
<td>1</td>
<td></td>
<td>wire</td>
<td>D, F, K, M</td>
</tr>
<tr>
<td>2</td>
<td></td>
<td>wire</td>
<td>D, F, K, M</td>
</tr>
<tr>
<td>3</td>
<td></td>
<td>profile, velcro</td>
<td>A, B, C, G, J, L, L, H</td>
</tr>
<tr>
<td>4</td>
<td></td>
<td>profile</td>
<td>B, C, G</td>
</tr>
<tr>
<td>5</td>
<td></td>
<td>suspended profile</td>
<td>A, B, C, G, I, D, E, EK, L, M</td>
</tr>
<tr>
<td>6</td>
<td></td>
<td>suspended profile</td>
<td>A, C, G, I, D, E, EK, L, M</td>
</tr>
<tr>
<td>7</td>
<td></td>
<td>tensioner</td>
<td>D, F, H can be added to all other installation types</td>
</tr>
<tr>
<td>8</td>
<td></td>
<td>profile, velcro</td>
<td>A (always used for triangular shaped ducts), B, C, G, L, H, J</td>
</tr>
<tr>
<td>9</td>
<td></td>
<td>profiles</td>
<td>A, D, E, EK, L, M</td>
</tr>
<tr>
<td>10</td>
<td></td>
<td>profiles</td>
<td>A, D, E, EK, L, M</td>
</tr>
<tr>
<td>11</td>
<td></td>
<td>profiles</td>
<td>A, E, G, K, L, M</td>
</tr>
</tbody>
</table>

[Images of various installation components and accessories are shown, including hooks, aluminium profiles, plastic coated wire, and profile connectors.]

[Additional components and accessories are described in the text, but not shown in the image.]
Applications
Winch

The whole Fabric Duct can be installed from one end of the installation using a Prihoda winch. This significantly simplifies installation and removal. This system is particularly useful where the fabric ducts are mounted over swimming pools or technical machinery where access is limited.

CONDITIONS OF USE: The winch system is suitable for installations 5, 5D, 5F, 5I, 5DI, 5FI exclusively.
Spinneys Supermarket (Beirut)
- Proposed Design was Conventional GI Round duct
- All internally Insulated
- All Black Painted
- Total Duct length including Tees & Elbows was around 900 m
- Total nbr of round diffusers was: 201
- Total Area of insulation 1600m²

WE ONLY INSTALLED 400 M OF FABRIC DUCT