

FIRE SAFETY CERTIFICATION

FIRE PERFORMANCE

No. **APF-1151**

LGAI TECHNOLOGICAL CENTER S.A. (APPLUS), according to the requirements of the SPC-117 certifies the Fire Performances following the Classification and Testing standard for:

| | |
|---|--|
| Product | FIRE RESISTING VENTILATION DUCTS "GI-120" |
| Company | PROGULF AIRCONDITIONING INDUSTRIES LLC. DUBAI INVESTMENT PARK 2, PO BOX: 37945 DUBAI, UAE |
| Manufactured | PROGULF AIRCONDITIONING INDUSTRIES LLC. DUBAI INVESTMENT PARK 2, PO BOX: 37945 DUBAI, UAE |
| Classification and testing standards | BS 476-24:1987: "Fire tests on building materials and structures. Method for determination of the fire resistance of ventilation ducts". |
| Product Details and Test Report | Please check at the technical annex file nº 21-22512-1679 ER1 |



LGAI has performed the product initial tests and the initial assessment of the management system. Periodically, the entity does a follow-up assessment of the management system.

Renovation of the initial certificate issued on 04th May 2020

Valid until 31st May 2025

Bellaterra, 3rd May 2024

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|---|--|
| LGAI Technological Center, S.A. Xavier Ruiz Peña Product Conformity B. U., Managing Director | |
| You can check the validity of this certificate on our website: www.appluslaboratories.com/certified_products | |

This document is not valid without its technical annex, whose number coincides with the number of certificate.



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CERTIFIED PERFORMANCE

Ventilation duct:

| Performance | Time (minutes) |
|-------------|----------------|
| Stability | 120 |
| Integrity | 120 |

Smoke extraction duct:

| Performance | Time (minutes) |
|-------------|----------------|
| Stability | 120 |
| Integrity | 120 |

Product Application

- Product trade name: GI-120
- Type of duct: A and B.
- Horizontal and vertical installation.
- Rectangular and circular ductwork
- Material: GI, Stainless Steel or Mild Steel.
- Intumescent seals between duct sections:
 - Intumescent gasket reference "Arboseal Intumescent Tape" or "Firewall FG 15X3 Intumescent Tape".
 - Intumescent sealant reference "Arbosil XL1075" or "Firewall FS 240".

Rectangular GI Steel ductwork with RSA channel

| Longer side (mm) | Height (mm) | Thickness (mm) | Standard Length (mm) | Hanger Spacing (mm) | Stiffener | | Cross Joint | Clamp (mm) | Bearer | Drop Rod (mm) |
|------------------|-------------|----------------|----------------------|---------------------|-------------------|---------------|----------------|------------|------------------|---------------|
| | | | | | Intermediate | Internal | Type / Rating | | | |
| 400 | 200 | 0,6 | 1220 | 1220 | - | - | SOF 20x20 x0,7 | 300 | RSA 40x40 x4 | 8 |
| 600 | 300 | 0,6 | 1220 | 1220 | - | - | SOF 20x20 x0,7 | 300 | RSA 40x40 x4 | 8 |
| 800 | 400 | 0,7 | 1220 | 1220 | - | Ø12mm x 3 ut | SOF 20x20 x0,7 | 300 | RSA 50x50 x5 | 8 |
| 1000 | 500 | 0,8 | 1220 | 1220 | - | Ø12mm x 3 ut | SOF 20x20 x0,7 | 300 | RSA 50x50 x5 | 10 |
| 1200 | 600 | 0,8 | 1220 | 1220 | SOF 30 x 30 x 0,8 | Ø12mm x 6 ut | SOF 30x30 x0,8 | 300 | RSA 60x60 x8 | 10 |
| 1600 | 800 | 0,9 | 1220 | 1220 | SOF 30 x 30 x 0,8 | Ø12mm x 6 ut | SOF 30x30 x0,8 | 300 | RSA 80x80 x8 | 10 |
| 2000 | 1000 | 1,0 | 1220 | 1220 | SOF 30 x 30 x 0,8 | Ø14mm x 9 ut | SOF 30x30 x0,8 | 300 | C-channel 76x38 | 12 |
| 2500 | 1250 | 1,0 | 1220 | 1220 | RSA 40 x 40 x 4 | Ø14mm x 12 ut | SOF 40x40 x1,2 | 300 | C-channel 102x51 | 12 |
| 3000 | 1500 | 1,0 | 1220 | 1220 | RSA 40 x 40 x 4 | Ø14mm x 12 ut | SOF 40x40 x1,2 | 300 | C-channel 127x64 | 14 |

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Rectangular GI Steel ductwork with Slotted channel

| Longer side (mm) | Height (mm) | Thickness (mm) | Standard Length (mm) | Hanger Spacing (mm) | Stiffener | | Cross Joint | Clamp (mm) | Bearer | Drop Rod (mm) |
|------------------|-------------|----------------|----------------------|---------------------|-------------------|---------------|----------------|------------|-----------------------|---------------|
| | | | | | Intermediate | Internal | Type / Rating | | | |
| 400 | 200 | 0,6 | 1220 | 1220 | - | - | SOF 20x20 x0,7 | 300 | S-Channel 41x21 x2,5 | 8 |
| 600 | 300 | 0,6 | 1220 | 1220 | - | - | SOF 20x20 x0,7 | 300 | S-Channel 41x21 x2,5 | 8 |
| 800 | 400 | 0,7 | 1220 | 1220 | - | Ø12mm x 3 ut | SOF 20x20 x0,7 | 300 | S-Channel 41x21 x2,5 | 8 |
| 1000 | 500 | 0,8 | 1220 | 1220 | - | Ø12mm x 3 ut | SOF 20x20 x0,7 | 300 | S-Channel 41x41 x2,5 | 10 |
| 1200 | 600 | 0,8 | 1220 | 1220 | SOF 30 x 30 x 0,8 | Ø12mm x 6 ut | SOF 30x30 x0,8 | 300 | S-Channel 41x41d x2,5 | 10 |
| 1600 | 800 | 0,9 | 1220 | 1220 | SOF 30 x 30 x 0,8 | Ø12mm x 6 ut | SOF 30x30 x0,8 | 300 | C-channel 76x38 | 10 |
| 2000 | 1000 | 1,0 | 1220 | 1220 | SOF 30 x 30 x 0,8 | Ø14mm x 9 ut | SOF 30x30 x0,8 | 300 | C-channel 76x38 | 12 |
| 2500 | 1250 | 1,0 | 1220 | 1220 | RSA 40 x 40 x 4 | Ø14mm x 12 ut | SOF 40x40 x1,2 | 300 | C-channel 102x51 | 12 |
| 3000 | 1500 | 1,0 | 1220 | 1220 | RSA 40 x 40 x 4 | Ø14mm x 12 ut | SOF 40x40 x1,2 | 300 | C-channel 127x64 | 14 |

Rectangular Stainless Steel ductwork: Cross joints SOF profiles

| Longer side (mm) | Height (mm) | Thickness (mm) | Standard Straight Length (mm) | Hanger Spacing (mm) | Stiffener | | Cross Joint | Clamp (mm) | Bearer | Drop Rod (mm) |
|------------------|-------------|----------------|-------------------------------|---------------------|-----------------|--------------|----------------|------------|------------------|---------------|
| | | | | | Intermediate | Internal | Type / Rating | | | |
| 600 | 300 | 0,8 | 1220 | 1220 | - | - | SOF 20x20 x0,7 | 300 | RSA 40x40 x4 | 8 |
| 1200 | 600 | 0,8 | 1220 | 1220 | - | - | SOF 30x30 x0,8 | 300 | RSA 60x60 x8 | 8 |
| 1600 | 800 | 0,9 | 1220 | 1220 | RSA 30 x 30 x 3 | Ø12mm x 3 ut | SOF 30x30 x0,8 | 300 | RSA 80x80 x8 | 10 |
| 2000 | 1000 | 1,0 | 1220 | 1220 | RSA 30 x 30 x 3 | Ø12mm x 3 ut | SOF 40x40 x1,2 | 300 | C-channel 76x38 | 12 |
| 3000 | 1500 | 1,0 | 1220 | 1220 | RSA 40 x 40 x 4 | Ø12mm x 6 ut | SOF 40x40 x1,2 | 300 | C-channel 102x51 | 14 |

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Rectangular Stainless Steel ductwork: Cross joints RSA profiles

| Longer side (mm) | Height (mm) | Thickness (mm) | Standard Straight Length (mm) | Hanger Spacing (mm) | Stiffener | | Cross Joint | Clamp (mm) | Bearer | Drop Rod (mm) |
|------------------|-------------|----------------|-------------------------------|---------------------|-----------------|--------------|---------------|------------|------------------|---------------|
| | | | | | Intermediate | Internal | Type / Rating | | | |
| 600 | 300 | 0,8 | 1220 | 1220 | - | - | RSA 25x25 x3 | 300 | RSA 40x40 x4 | 8 |
| 1200 | 600 | 0,8 | 1220 | 1220 | - | - | RSA 25x25 x3 | 300 | RSA 60x60 x8 | 8 |
| 1600 | 800 | 0,9 | 1220 | 1220 | RSA 30 x 30 x 3 | Ø12mm x 3 ut | RSA 30x30 x3 | 300 | RSA 80x80 x8 | 10 |
| 2000 | 1000 | 1,0 | 1220 | 1220 | RSA 30 x 30 x 3 | Ø12mm x 3 ut | RSA 30x30 x3 | 300 | C-channel 76x38 | 12 |
| 3000 | 1500 | 1,0 | 1220 | 1220 | RSA 40 x 40 x 4 | Ø12mm x 6 ut | RSA 40x40 x4 | 300 | C-channel 102x51 | 14 |

Rectangular Mild Steel ductwork: Cross joints SOF profiles

| Longer side (mm) | Height (mm) | Thickness (mm) | Standard Straight Length (mm) | Hanger Spacing (mm) | Stiffener | | Cross Joint | Clamp (mm) | Bearer | Drop Rod (mm) |
|------------------|-------------|----------------|-------------------------------|---------------------|-----------------|---------------|----------------|------------|------------------|---------------|
| | | | | | Intermediate | Internal | Type / Rating | | | |
| 600 | 300 | 1,2 | 1220 | 1220 | - | - | SOF 20x20 x0,7 | 300 | RSA 50x50 x5 | 8 |
| 1200 | 600 | 1,2 | 1220 | 1220 | - | Ø12mm x 6 ut | SOF 30x30 x0,8 | 300 | RSA 60x60 x10 | 10 |
| 2000 | 1000 | 1,2 | 1220 | 1220 | RSA 30 x 30 x 3 | Ø14mm x 9 ut | SOF 30x30 x0,8 | 300 | C-channel 76x38 | 12 |
| 3000 | 1500 | 1,2 | 1220 | 1220 | RSA 40 x 40 x 4 | Ø14mm x 12 ut | SOF 40x40 x1,2 | 300 | C-channel 127x64 | 14 |

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Rectangular Mild Steel ductwork: Cross joints RSA profiles

| Longer side (mm) | Height (mm) | Thickness (mm) | Standard Straight Length (mm) | Hanger Spacing (mm) | Stiffener | | Cross Joint | Clamp (mm) | Bearer | Drop Rod (mm) |
|------------------|-------------|----------------|-------------------------------|---------------------|-----------------|---------------|---------------|------------|------------------|---------------|
| | | | | | Intermediate | Internal | Type / Rating | | | |
| 600 | 300 | 1,2 | 1220 | 1220 | - | - | RSA 25x25 x3 | 300 | RSA 50x50 x5 | 8 |
| 1200 | 600 | 1,2 | 1220 | 1220 | - | Ø12mm x 6 ut | RSA 25x25 x3 | 300 | RSA 60x60 x10 | 10 |
| 2000 | 1000 | 1,2 | 1220 | 1220 | RSA 30 x 30 x 3 | Ø14mm x 9 ut | RSA 30x30 x3 | 300 | C-channel 76x38 | 12 |
| 3000 | 1500 | 1,2 | 1220 | 1220 | RSA 40 x 40 x 4 | Ø14mm x 12 ut | RSA 30x30 x3 | 300 | C-channel 127x64 | 14 |

Circular/Round Ductwork GI, Mild and Stainless Steel

| Diameter (mm) | Thickness (mm) | Standard Straight Length (mm) | Hanger Spacing (mm) | Stiffener | | Cross Joint | Clamp (mm) | Bearer | Drop Rod (mm) |
|---------------|----------------|-------------------------------|---------------------|-------------------|--------------|----------------|------------|--------------|---------------|
| | | | | Intermediate | Internal | Type / Rating | | | |
| 400 | 0,6 | 1220 | 1000 | - | - | Coupling | 300 | RSA 40x40 x4 | 8 |
| 600 | 0,6 | 1220 | 1000 | - | - | SOF 20x20 x0,7 | 300 | RSA 40x40 x4 | 8 |
| 800 | 0,7 | 1220 | 1000 | - | Ø12mm x 3 ut | SOF 20x20 x0,7 | 300 | RSA 50x50 x5 | 8 |
| 1000 | 0,8 | 1220 | 1000 | - | Ø12mm x 3 ut | SOF 20x20 x0,7 | 300 | RSA 50x50 x5 | 10 |
| 1250 | 0,8 | 1220 | 1000 | SOF 30 x 30 x 0,8 | Ø12mm x 6 ut | SOF 30x30 x0,8 | 300 | RSA 60x60 x8 | 10 |