



Donaldson®
SOLUCIONES DE FILTRACIÓN

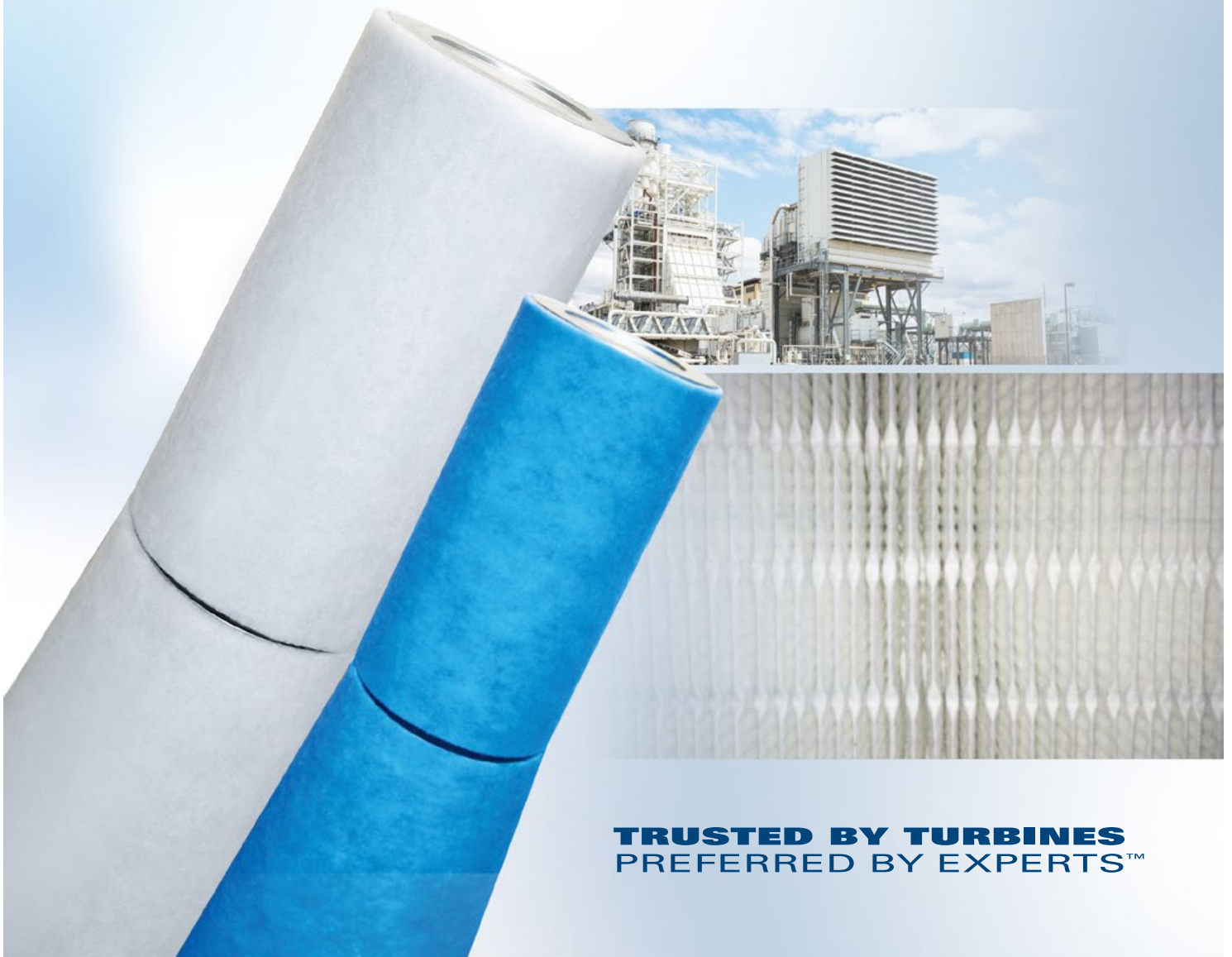
TURBO-TEK

LINE OF (H)EPA FILTRATION

Gas Turbine Systems

TURBO-TEK™

**Desempeño premium y avanzada
protección de la turbina**



TRUSTED BY TURBINES
PREFERRED BY EXPERTS™



TURBO-TEK™

Desempeño Premium y avanzada protección de la turbina en los ambientes más exigentes

La línea de productos Turbo Tek de Donaldson son construidos con la mas avanzada tecnología en ensable y media para proveer eficiencia grado (H)EPA.

Todos los elementos son altamente durables, pulsables y resistentes a la humedad.

La contrucción de la media filtrante fue diseñada para maximizar la capacidad y minimizar la restricción de operación a lo largo de toda la vida del elemento.

Nueva Generación de Medias Filtrantes Donaldson GTS

Donaldson
GTS

TURBO-TEK™ ECO
TURBO-TEK™ H₂O
TURBO-TEK™ H₂O+

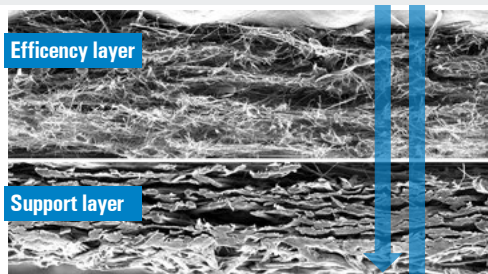


TURBO-TEK™ ECO

High Efficiency Filter

- ✓ Alta Eficiencia
- ✓ E11 : EN1822
- ✓ Alta durabilidad
- ✓ Pulsable
- ✓ Alta capacidad de retención de polvo
- ✓ Retención profunda

CONFIGURACIÓN DE LA MEDIA FILTRANTE



Flujo de aire ↓

E11 EN1822:2009



TABLE 1 Classification of EPA, HEPA and ULPA filters

| FILTER GROUP FILTER CLASS | Integral value | | Local value ^{a,b} | |
|------------------------------|----------------|-----------------|----------------------------|------------------|
| | Efficiency (%) | Penetration (%) | Efficiency (%) | Penetration (%) |
| E10 | ≥ 85 | ≤ 15 | --- ^c | --- ^c |
| E11 | ≥ 95 | ≤ 5 | --- ^c | --- ^c |
| E12 | ≥ 98,5 | ≤ 0,5 | --- ^c | --- ^c |
| H13 | ≥ 99,95 | ≤ 0,05 | ≥ 99,75 | ≥ 99,75 |
| H14 | ≥ 99,995 | ≤ 0,005 | ≥ 99,975 | ≥ 99,975 |
| U15 | ≥ 99,999 5 | ≤ 0,000 5 | ≥ 99,997 5 | ≥ 99,997 5 |
| U16 | ≥ 99,999 95 | ≤ 0,000 05 | ≥ 99,999 75 | ≥ 99,999 75 |
| U17 | ≥ 99,999 995 | ≤ 0,000 005 | ≥ 99,999 9 | ≥ 99,999 9 |

Most penetrating particle size efficiency ≤ 99.2%

^a See 7.5.2 and EN 1822-4

^b Local penetration values lower than those given in the table may be agreed between supplier and purchaser

^c Group E filters (Classes E10, E11 and E12) cannot and shall not be leak tested for classification purposes

Merv 16 ASHRAE 52.2:2007

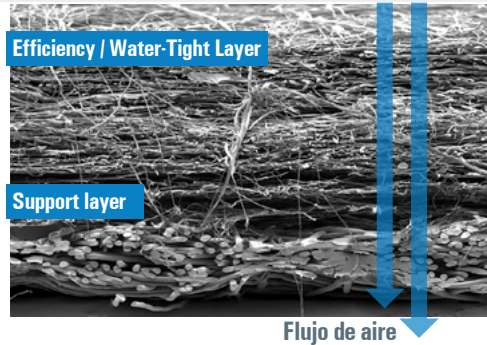


| Standard 52.2 Minimum Efficiency Reporting Value (MERV) | Composite Average Particle Size Efficiency % in Size Range, μm | | | Average ASHRAE Arrestance, % by Standard 52.1 Method | Minimum Final Resistance PA | Inches of Water | |
|--|---|------------------------|-------------------------|---|-----------------------------------|--------------------|-----|
| | Range 1 (0.3 - 1.0) | Range 2 (1.0 - 3.0) | Range 3 (3.0 - 10.0) | | | | |
| 1 | n/a | n/a | E3 < 20 | Aavg < 85 | 75 | .3 | |
| 2 | n/a | n/a | E3 < 20 | 65 ≤ Aavg < 70 | 75 | .3 | |
| 3 | n/a | n/a | E3 < 20 | 70 ≤ Aavg < 75 | 75 | .3 | |
| 4 | n/a | n/a | E3 < 20 | 75 ≤ Aavg | 75 | .3 | |
| 5 | n/a | n/a | 20 ≤ E3 < 35 | n/a | 150 | .6 | |
| 6 | n/a | n/a | 35 ≤ E3 < 50 | n/a | 150 | .6 | |
| 7 | n/a | n/a | 50 ≤ E3 < 70 | n/a | 150 | .6 | |
| 8 | n/a | n/a | 70 ≤ E3 | n/a | 150 | .6 | |
| 9 | n/a | E2 < 50 | 85 ≤ E3 | n/a | 250 | 1.0 | |
| 10 | n/a | 50 ≤ E2 < 65 | 85 ≤ E3 | n/a | 250 | 1.0 | |
| 11 | n/a | 65 ≤ E2 < 80 | 85 ≤ E3 | n/a | 250 | 1.0 | |
| 12 | n/a | 80 ≤ E2 | 90 ≤ E3 | n/a | 250 | 1.0 | |
| 13 | E1 < 75 | 90 ≤ E2 | 90 ≤ E3 | n/a | 350 | 1.4 | |
| 14 | 75 ≤ E1 < 85 | 90 ≤ E2 | 90 ≤ E3 | n/a | 350 | 1.4 | |
| 15 | 85 ≤ E1 < 95 | 90 ≤ E2 | 90 ≤ E3 | n/a | 350 | 1.4 | |
| E1: 99.4 E2: 100 E3: 100 | 16 | 95 ≤ E1 | 95 ≤ E2 | 95 ≤ E3 | n/a | 350 | 1.4 |



- ✓ Alta Eficiencia
- ✓ E10 : EN1822
- ✓ Alta Durabilidad
- ✓ 100% Sintético
- ✓ Pulsable
- ✓ Alta capacidad de retención de polvo
- ✓ Retención profunda
- ✓ Media impermeable mantiene a la turbina libre de partículas salinas deliquescentes

CONFIGURACIÓN DE LA MEDIA FILTRANTE



E11 EN1822:2009



TABLE 1 Classification of EPA, HEPA and ULPA filters

| FILTER GROUP FILTER CLASS | Integral value | | Local value ^{a,b} | |
|------------------------------|----------------|-----------------|----------------------------|-----------------|
| | Efficiency (%) | Penetration (%) | Efficiency (%) | Penetration (%) |
| E10 | ≥ 85 | ≤ 15 | ---c | ---c |
| E11 | ≥ 95 | ≤ 5 | ---c | ---c |
| E12 | ≥ 99,5 | ≤ 0,5 | ---c | ---c |
| H13 | ≥ 99,95 | ≤ 0,05 | ≥ 99,75 | ≥ 99,75 |
| H14 | ≥ 99,995 | ≤ 0,005 | ≥ 99,975 | ≥ 99,975 |
| U15 | ≥ 99,999 5 | ≤ 0,000 5 | ≥ 99,997 5 | ≥ 99,997 5 |
| U16 | ≥ 99,999 95 | ≤ 0,000 05 | ≥ 99,999 75 | ≥ 99,999 75 |
| U17 | ≥ 99,999 995 | ≤ 0,000 005 | ≥ 99,999 9 | ≥ 99,999 9 |

Most penetrating particle size efficiency ≥ 89.1%

^a See 7.5.2 and EN 1822-4

^b Local penetration values lower than those given in the table may be agreed between supplier and purchaser

^c Group E filters (Classes E10, E11 and E12) cannot and shall not be leak tested for classification purposes

Merv 16 ASHRAE 52.2:2007



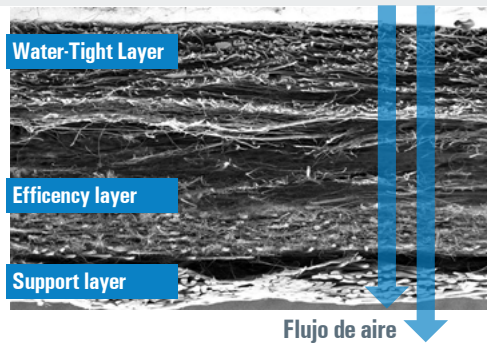
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|--|---|------------------------|-------------------------|--|-----------------------------------|--------------------|
| | Range 1 (0.3 - 1.0) | Range 2 (1.0 - 3.0) | Range 3 (3.0 - 10.0) | | | |
| 1 | n/a | n/a | E3 < 20 | Aavg < 85 | 75 | .3 |
| 2 | n/a | n/a | E3 < 20 | 65 ≤ Aavg < 70 | 75 | .3 |
| 3 | n/a | n/a | E3 < 20 | 70 ≤ Aavg < 75 | 75 | .3 |
| 4 | n/a | n/a | E3 < 20 | 75 ≤ Aavg | 75 | .3 |
| 5 | n/a | n/a | 20 ≤ E3 < 35 | n/a | 150 | .6 |
| 6 | n/a | n/a | 35 ≤ E3 < 50 | n/a | 150 | .6 |
| 7 | n/a | n/a | 50 ≤ E3 < 70 | n/a | 150 | .6 |
| 8 | n/a | n/a | 70 ≤ E3 | n/a | 150 | .6 |
| 9 | n/a | E2 < 50 | 85 ≤ E3 | n/a | 250 | 1.0 |
| 10 | n/a | 50 ≤ E2 < 65 | 85 ≤ E3 | n/a | 250 | 1.0 |
| 11 | n/a | 65 ≤ E2 < 80 | 85 ≤ E3 | n/a | 250 | 1.0 |
| 12 | n/a | 80 ≤ E2 | 90 ≤ E3 | n/a | 250 | 1.0 |
| 13 | E1 < 75 | 90 ≤ E2 | 90 ≤ E3 | n/a | 350 | 1.4 |
| 14 | 75 ≤ E1 < 85 | 90 ≤ E2 | 90 ≤ E3 | n/a | 350 | 1.4 |
| 15 | 85 ≤ E1 < 95 | 90 ≤ E2 | 90 ≤ E3 | n/a | 350 | 1.4 |
| 16 | 95 ≤ E1 | 95 ≤ E2 | 95 ≤ E3 | n/a | 350 | 1.4 |

E1: 98
E2: 99
E3: 100



- ✓ Diseño Multicapa/Multifuncional propietario de Donaldson
- ✓ Muy Alta Eficiencia
- ✓ E12 : EN1822
- ✓ Alta Durabilidad
- ✓ 100% Sintético
- ✓ Pulsable (Incluso en Hielo)
- ✓ Alta capacidad de retención de polvo
- ✓ Retención profunda
- ✓ Media impermeable
- ✓ Ideal para ambientes húmedos/corrosivos/costeros/off-shore

CONFIGURACIÓN DE LA MEDIA FILTRANTE



E12 EN1822:2009



TABLE 1 Classification of EPA, HEPA and ULPA filters

| FILTER GROUP FILTER CLASS | Integral value | | Local value ^{a,b} | |
|------------------------------|----------------|-----------------|----------------------------|-----------------|
| | Efficiency (%) | Penetration (%) | Efficiency (%) | Penetration (%) |
| E10 | ≥ 85 | ≤ 15 | ---c | ---c |
| E11 | ≥ 95 | ≤ 5 | ---c | ---c |
| E12 | ≥ 99,5 | ≤ 0,5 | ---c | ---c |
| H13 | ≥ 99,95 | ≤ 0,05 | ≥ 99,75 | ≥ 99,75 |
| H14 | ≥ 99,995 | ≤ 0,005 | ≥ 99,975 | ≥ 99,975 |
| U15 | ≥ 99,999 5 | ≤ 0,000 5 | ≥ 99,997 5 | ≥ 99,997 5 |
| U16 | ≥ 99,999 95 | ≤ 0,000 05 | ≥ 99,999 75 | ≥ 99,999 75 |
| U17 | ≥ 99,999 995 | ≤ 0,000 005 | ≥ 99,999 9 | ≥ 99,999 9 |

Most penetrating particle size efficiency ≥ 99.8%

^a See 7.5.2 and EN 1822-4

^b Local penetration values lower than those given in the table may be agreed between supplier and purchaser

^c Group E filters (Classes E10, E11 and E12) cannot and shall not be leak tested for classification purposes

Merv 16 ASHRAE 52.2:2007



| Standard 52.2 Minimum Efficiency Reporting Value (MERV) | Composite Average Particle Size Efficiency % in Size Range, μm | | | Average ASHRAE Arrestance, %, by Standard 52.1 Method | Minimum Final Resistance PA | Inches of Water |
|--|---|------------------------|-------------------------|--|-----------------------------------|--------------------|
| | Range 1 (0.3 - 1.0) | Range 2 (1.0 - 3.0) | Range 3 (3.0 - 10.0) | | | |
| 1 | n/a | n/a | E3 < 20 | Aavg < 85 | 75 | .3 |
| 2 | n/a | n/a | E3 < 20 | 65 ≤ Aavg < 70 | 75 | .3 |
| 3 | n/a | n/a | E3 < 20 | 70 ≤ Aavg < 75 | 75 | .3 |
| 4 | n/a | n/a | E3 < 20 | 75 ≤ Aavg | 75 | .3 |
| 5 | n/a | n/a | 20 ≤ E3 < 35 | n/a | 150 | .6 |
| 6 | n/a | n/a | 35 ≤ E3 < 50 | n/a | 150 | .6 |
| 7 | n/a | n/a | 50 ≤ E3 < 70 | n/a | 150 | .6 |
| 8 | n/a | n/a | 70 ≤ E3 | n/a | 150 | .6 |
| 9 | n/a | E2 < 50 | 85 ≤ E3 | n/a | 250 | 1.0 |
| 10 | n/a | 50 ≤ E2 < 65 | 85 ≤ E3 | n/a | 250 | 1.0 |
| 11 | n/a | 65 ≤ E2 < 80 | 85 ≤ E3 | n/a | 250 | 1.0 |
| 12 | n/a | 80 ≤ E2 | 90 ≤ E3 | n/a | 250 | 1.0 |
| 13 | E1 < 75 | 90 ≤ E2 | 90 ≤ E3 | n/a | 350 | 1.4 |
| 14 | 75 ≤ E1 < 85 | 90 ≤ E2 | 90 ≤ E3 | n/a | 350 | 1.4 |
| 15 | 85 ≤ E1 < 95 | 90 ≤ E2 | 90 ≤ E3 | n/a | 350 | 1.4 |
| 16 | 95 ≤ E1 | 95 ≤ E2 | 95 ≤ E3 | n/a | 350 | 1.4 |

E1: 99.48
E2: 99.96
E3: 100