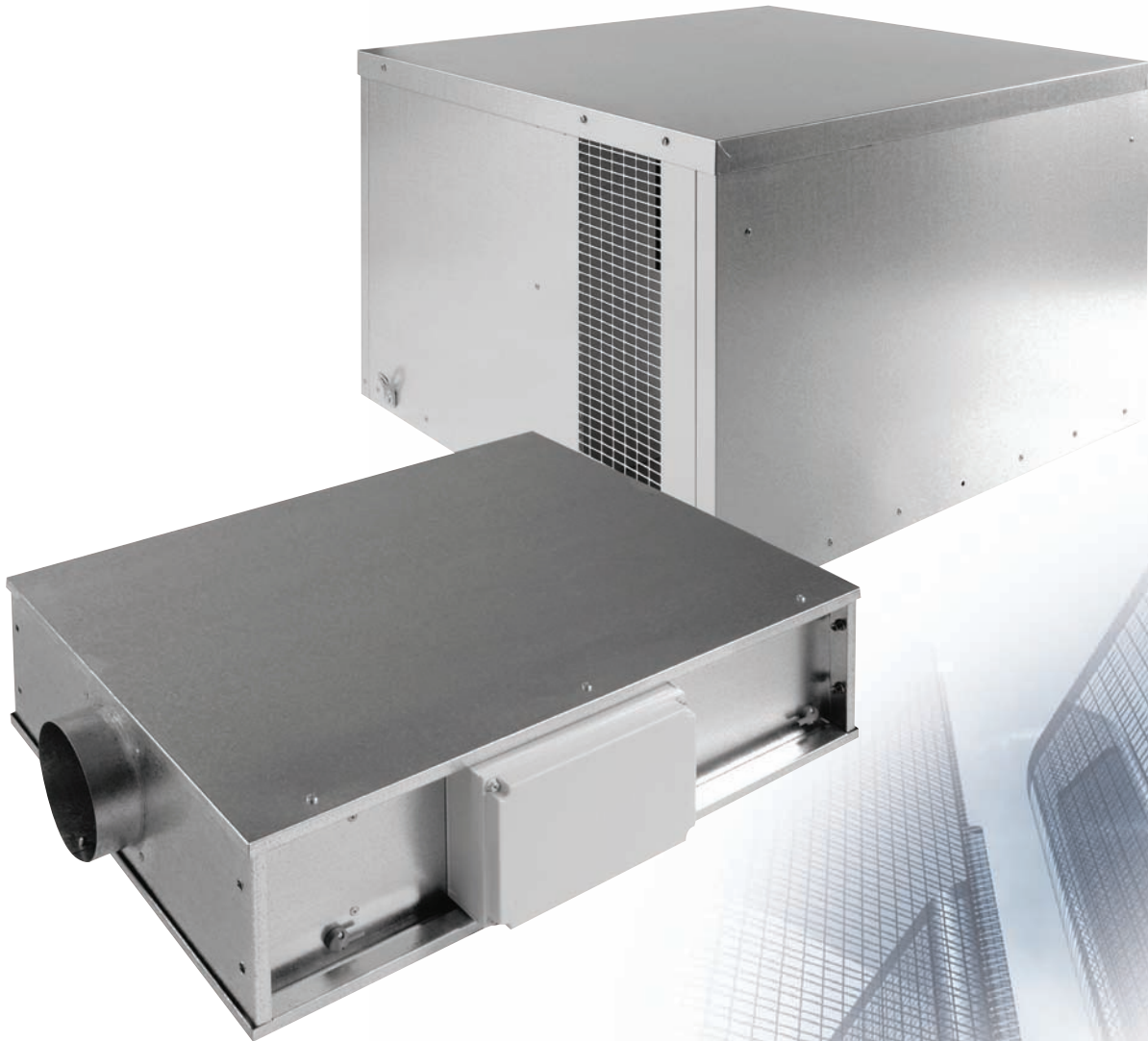


## CONSTANT PRESSURE SINGLE FANS

ENERGY SAVING CENTRAL EXTRACT SYSTEM THAT PRECISELY  
VENTILATES INDIVIDUAL ROOMS DEPENDING ON  
THEIR REQUIREMENTS.



## BENEFITS

### QUIETEST SYSTEMS

Nuaire's unique integrated silencer means that your systems acoustic requirements both induct (suction side) and breakout are maintained whilst saving space on site.

### QUIET OPERATION

Does not generate noise by throttling back on balancing dampers required in conventional systems.

### TRUE DEMAND VENTILATION

Only the areas requiring ventilation receive ventilation.

### SAVES ENERGY

Up to 70% saving over conventionally controlled central systems.

- Not needlessly extracting conditioned air
- Fan speed/motor power dictated by demand requirement.

### UNIQUE DIRECT ACTING MULTI-POSITION DAMPER/GRILLE

Ensures operation only when room occupied with integrated PIR.

### PRE-WIRED

All components assembled, wired and tested at the Nuaire manufacturing facility.  
- Simply plug and go.

### ENHANCED CAPITAL ALLOWANCE COMPLIANT

Immediate benefits to your client.

### INTEGRATED SILENCER

Sizes 6 and 9.

### DUCT MOUNTED VERSION OF DAMPER

For unobtrusive flexibility.

### TWIN OR SINGLE

Twin or single fan options are available.

### WARRANTY

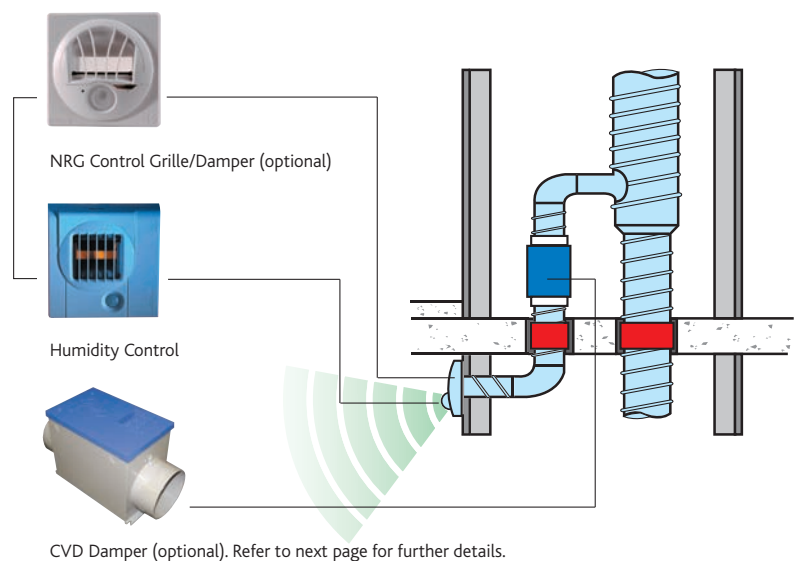
Ecosmart Constant Pressure fans have a 5 year warranty.

Note: For further details on Constant Pressure single fan options, please contact Nuaire.

Note: These units have the pressure sensor configured for extract application. For supply applications please contact Nuaire.

### WHAT IS CONSTANT PRESSURE?

Constant Pressure Variable Volume systems (CPVV) are systems of fans, controls & sensors installed in a ducted system. The system is intended to provide continuous background ventilation when the served space is unoccupied and will automatically increase the ventilation rate when occupied to the design requirement.



**PERFORMANCE - CVD DAMPER**

A nominal pressure drop must be allowed in order to ensure adequate airflow through the damper.

To ensure the airflow pattern through the damper produces consistent readings; the pressure drop across the damper should not exceed the recommended value.

Recommended values are listed in the table below and shown in the performance envelope of each damper.

| Code   | Nominal design pressure | Maximum across damper* |
|--------|-------------------------|------------------------|
| CVD100 | 60Pa                    | 120Pa                  |
| CVD125 | 70Pa                    | 140Pa                  |
| CVD150 | 80Pa                    | 160Pa                  |
| CVD200 | 90Pa**                  | 200Pa                  |

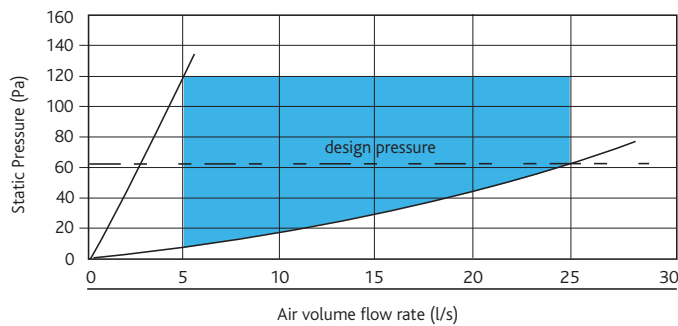
\*Recommended maximum operating pressure to ensure the damper would work within calibration limits.

Keep the duct velocity as low as possible to ensure the system produces the lowest energy usage, preferably below 5m/s.

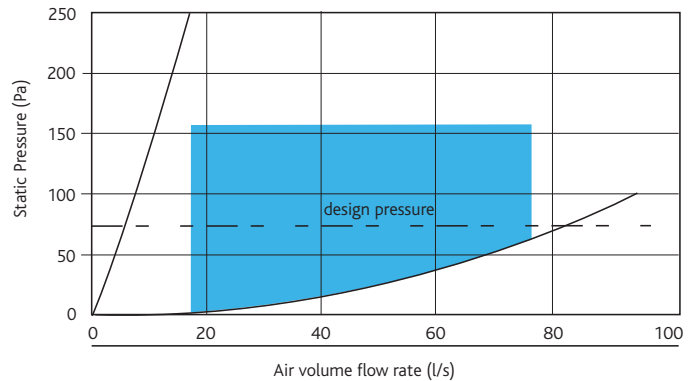
\*\*Allow 90Pa for duties below 100l/s and 150Pa for duties between 100l/s and 125l/s.

Please refer to our commissionary guide 671405 for more detail regarding constant pressure systems.

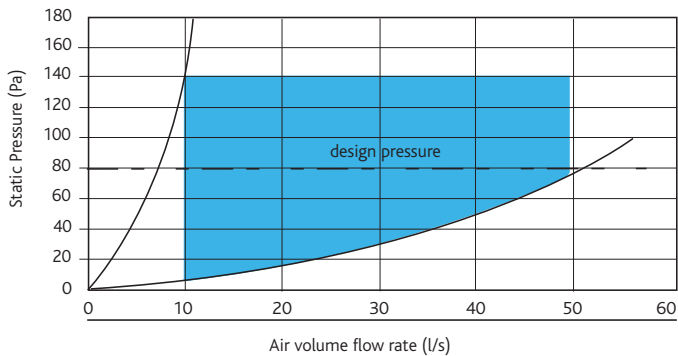
Performance envelope for CVD100



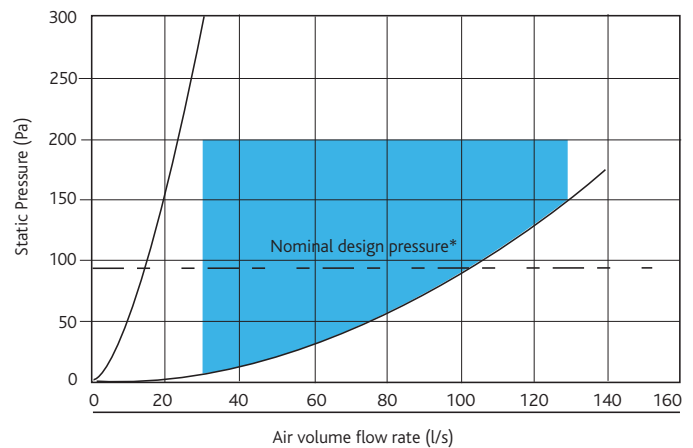
Performance envelope for CVD150



Performance envelope for CVD125

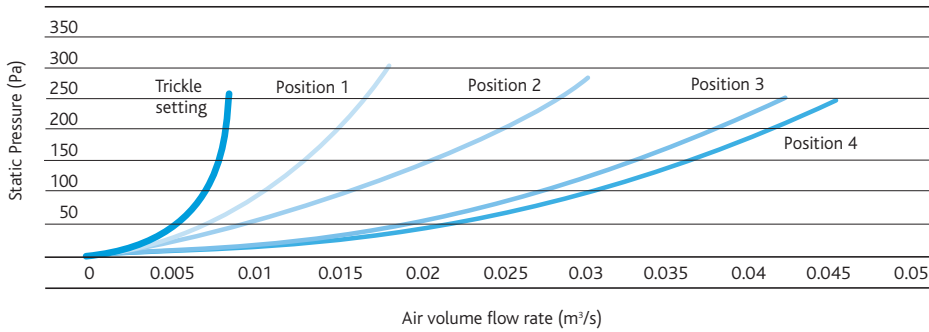


Performance envelope for CVD200

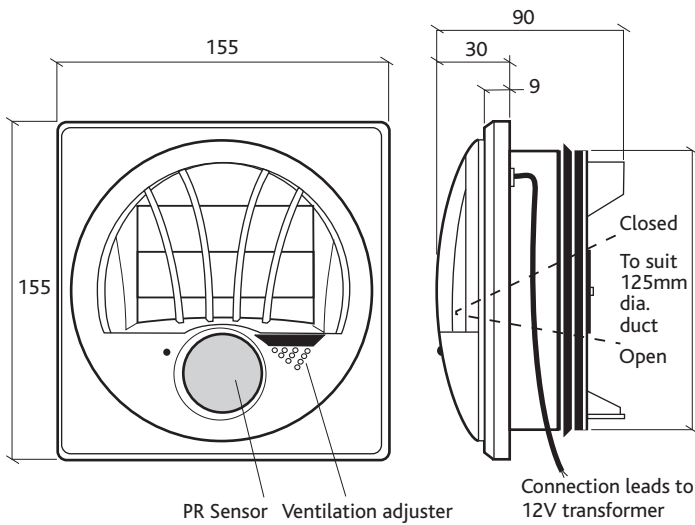


PERFORMANCE - NRG MOTORISED GRILLE/DAMPER

Motorised grille/damper type NRG Acoustic Information



DIMENSIONS NRG GRILLE DAMPER

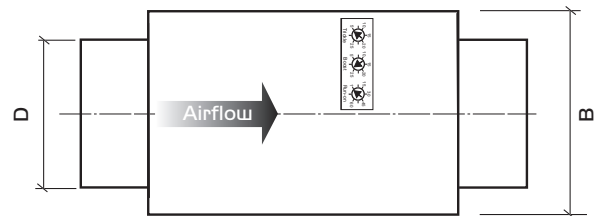


DIMENSIONS CVD DAMPERS

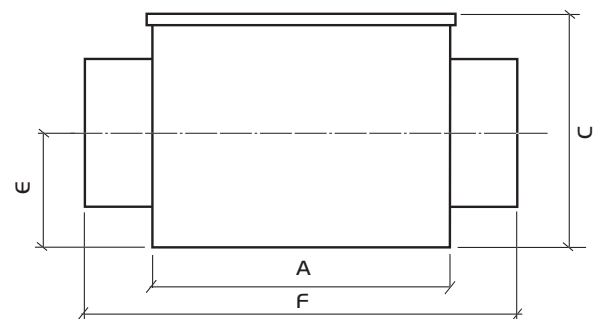
Dimensions in mm.

| Code   | A   | B   | C   | D   | E   | F   | Weight Kg |
|--------|-----|-----|-----|-----|-----|-----|-----------|
| CVD100 | 221 | 128 | 165 | 100 | 69  | 295 | 2         |
| CVD125 | 300 | 180 | 195 | 125 | 75  | 400 | 3.5       |
| CVD150 | 300 | 200 | 220 | 150 | 90  | 400 | 3.7       |
| CVD200 | 300 | 230 | 275 | 200 | 115 | 400 | 4         |

Plan view

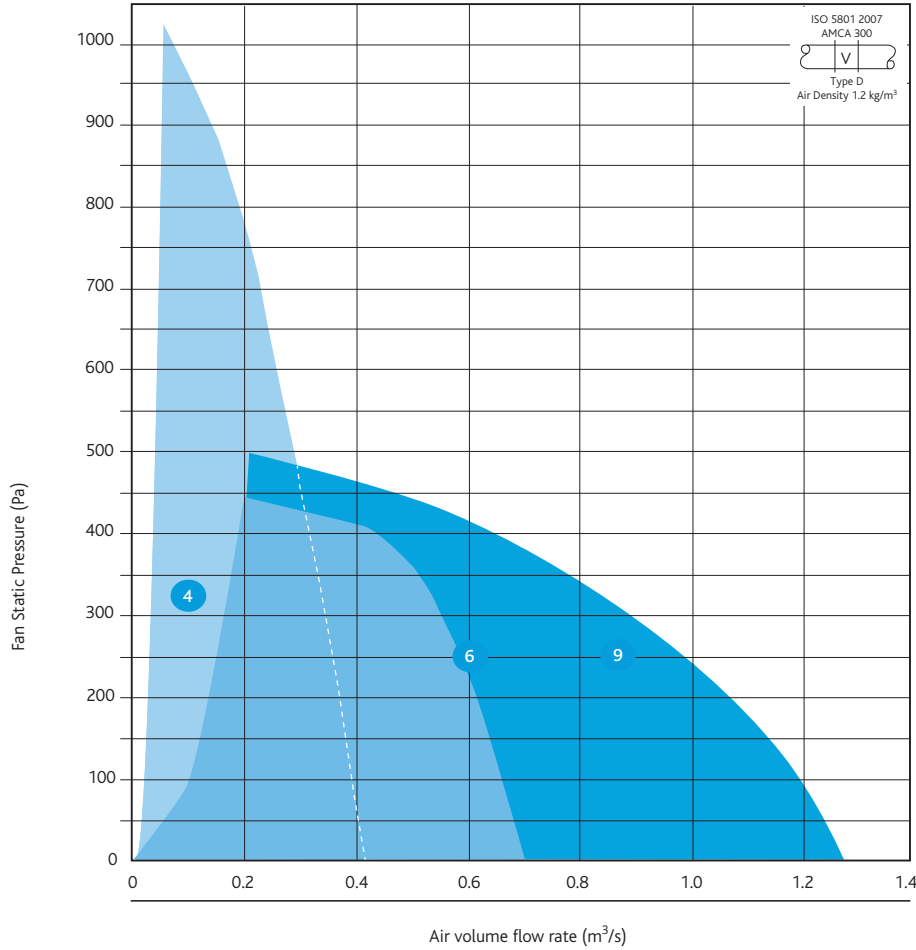


Side view

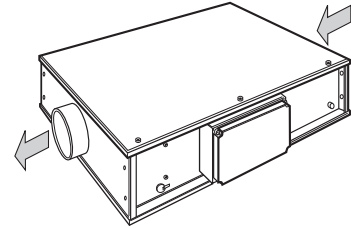


**PERFORMANCE - CONSTANT PRESSURE SINGLE FANS**

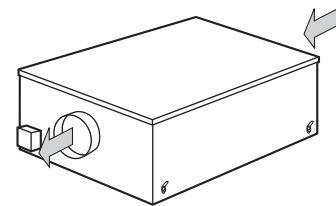
**ESXCP Single Fans 4-9**



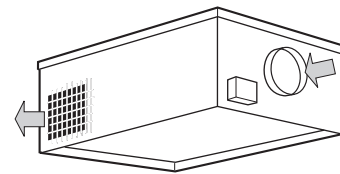
**Casing**



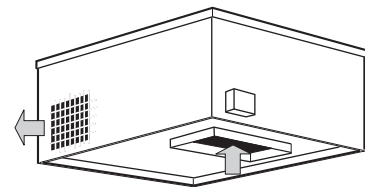
**ESXCP Internal In-line Single Fans**



**ESXCP-X External In-line Single Fans**



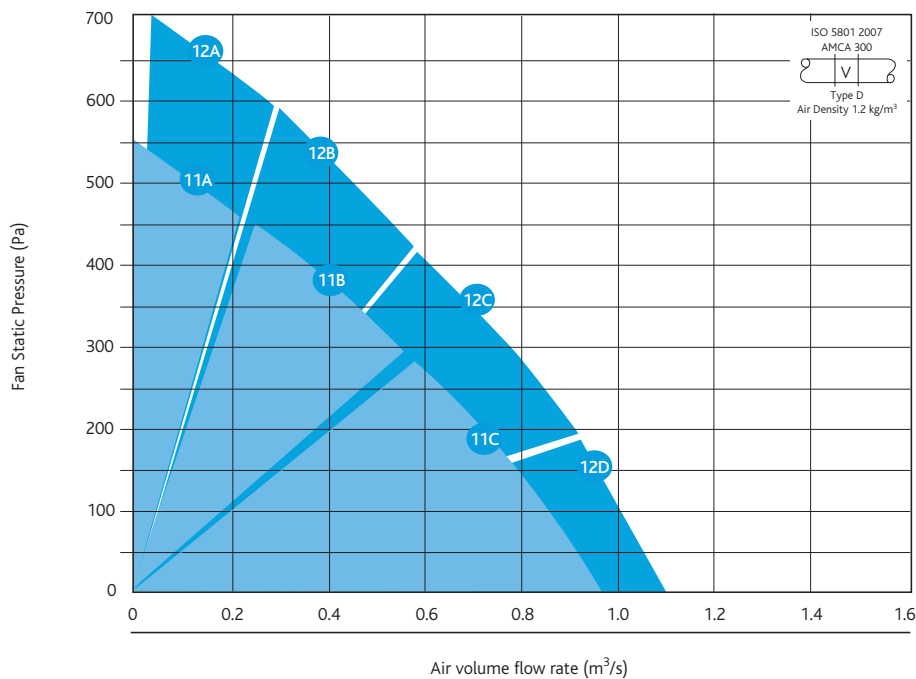
**ESXCP-R Roof Single Fans with end inlet and side discharge**



**ESXCP-B Roof Single Fans with bottom inlet and side discharge**

NB: Ecosmart Single fans sizes 11-19 inc must not be mounted more than 5° from the horizontal.

**ESXCP Single Fans 11A-12D**



**Code descriptions**

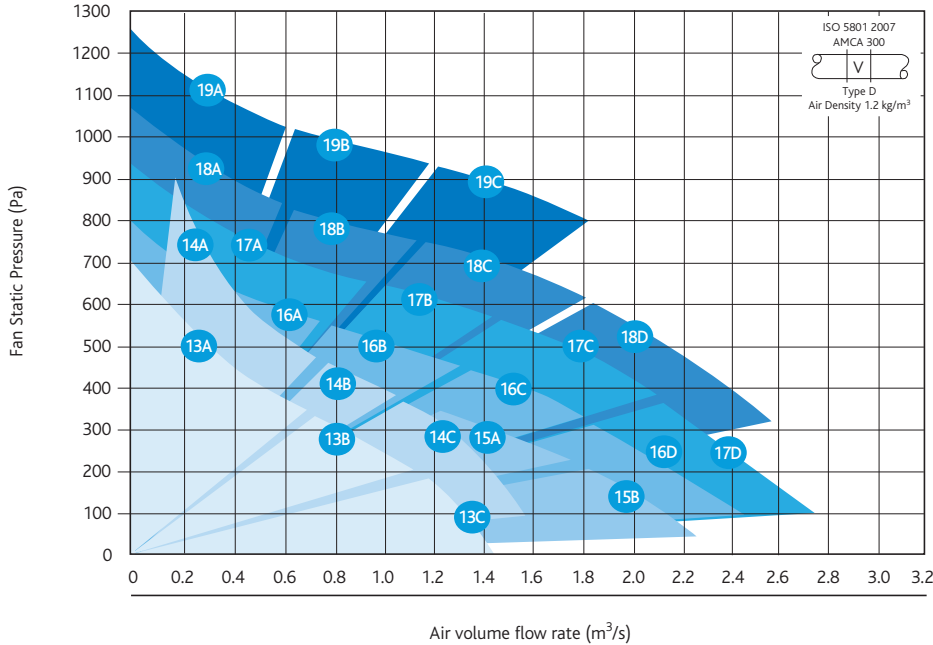
**ESXCP 11 B - B**



1. Ecosmart Constant Pressure Single range
2. Case size
3. A, B, C & D refer to motor & pulley combination
4. No suffix - internal in-line unit  
 X - External in-line unit  
 R - Back inlet, grille outlet external roof mounted unit  
 B - Bottom inlet

PERFORMANCE - CONSTANT PRESSURE SINGLE FANS CONT.

ESXCP Single Fans 13A-19C



CONSTANT PRESSURE INTERNAL SINGLE FANS ESXCP

| ELECTRICAL, SOUND & WEIGHT |       |      |                        |               |              |   |        |         |         |         |         |                      |                |      |
|----------------------------|-------|------|------------------------|---------------|--------------|---|--------|---------|---------|---------|---------|----------------------|----------------|------|
| Code/<br>Curve             | Phase | RPM  | Motor<br>power<br>(kW) | FLC<br>(amps) | SC<br>(amps) | Induct inlet Sound Power levels dB re 1pW<br>(+ correction for open outlet) |        |         |         |         |         | Breakout<br>dB(A)@3m | Weight<br>(Kg) |      |
|                            |       |      |                        |               |              | 125   | 250    | 500     | 1K      | 2K      | 4K      |                      |                | 8K   |
| ESXCP4                     | 1     | 3600 | 0.52                   | 3.1           | 3.1          | 78(+8)  | 72(+6) | 60(+20) | 52(+24) | 46(+29) | 40(+30) | 31(+30)              | 45             | 62   |
| ESXCP6                     | 1     | 1300 | 1.23                   | 7.6           | 7.6          | 77(+4)  | 70(+9) | 56(+15) | 52(+18) | 49(+19) | 46(+19) | 38(+23)              | 43             | 63   |
| ESXCP9                     | 1     | 1065 | 1.6                    | 7.4           | 7.4          | 74(+8)  | 71(+9) | 70(+13) | 67(+19) | 67(+20) | 63(+22) | 56(+22)              | 47             | 125  |
| ESXCP11A                   | 3     | 1225 | 0.37                   | 1.3           | 1.3          | 73(+1)  | 67(+7) | 62(+10) | 63(+11) | 55(+9)  | 49(+11) | 45(+9)               | 46             | 77.5 |
| ESXCP11B                   | 3     | 1225 | 0.55                   | 1.7           | 1.7          | 74(+2)  | 68(+7) | 64(+9)  | 65(+10) | 57(+8)  | 52(+9)  | 48(+7)               | 48             | 82.4 |
| ESXCP11C                   | 3     | 1225 | 0.75                   | 2.1           | 2.1          | 75(+2)  | 70(+8) | 65(+9)  | 66(+10) | 58(+6)  | 53(+8)  | 50(+6)               | 49             | 84.4 |
| ESXCP12A                   | 3     | 1400 | 0.55                   | 1.3           | 1.3          | 75(-1)  | 71(+4) | 66(+7)  | 66(+9)  | 58(+7)  | 51(+8)  | 45(+5)               | 48             | 82.4 |
| ESXCP12B                   | 3     | 1400 | 0.75                   | 2.1           | 2.1          | 74(+3)  | 70(+8) | 65(+10) | 66(+12) | 58(+9)  | 51(+11) | 44(+9)               | 50             | 84.4 |
| ESXCP12C                   | 3     | 1400 | 1.1                    | 2.9           | 2.9          | 77(+2)  | 73(+7) | 67(+10) | 69(+10) | 60(+8)  | 54(+10) | 47(+11)              | 51             | 90.4 |
| ESXCP12D                   | 3     | 1400 | 1.5                    | 3.7           | 3.7          | 79(0)   | 75(+5) | 69(+8)  | 70(+9)  | 61(+7)  | 56(+8)  | 52(+6)               | 52             | 96.4 |
| ESXCP13A                   | 3     | 1085 | 0.75                   | 2.1           | 2.1          | 70(+5)  | 67(+8) | 67(+8)  | 63(+8)  | 56(+8)  | 57(+7)  | 51(+7)               | 48             | 116  |
| ESXCP13B                   | 3     | 1085 | 1.1                    | 2.9           | 2.9          | 72(+5)  | 68(+8) | 69(+8)  | 65(+8)  | 58(+8)  | 59(+7)  | 54(+7)               | 50             | 116  |
| ESTCP13C                   | 3     | 1085 | 1.5                    | 3.7           | 3.7          | 73(+4)  | 69(+7) | 70(+7)  | 64(+9)  | 59(+7)  | 61(+5)  | 55(+6)               | 50             | 125  |
| ESXCP14A                   | 3     | 1225 | 1.1                    | 2.9           | 2.9          | 73(+5)  | 68(+7) | 68(+7)  | 62(+10) | 56(+8)  | 58(+6)  | 48(+7)               | 48             | 116  |

Fan size 11 to 19 inc. are belt drive and cannot be mounted at an angle no greater than 5°. Please contact your local Nuair Technical Sales Engineer or the Technical Department to discuss your application requirements. Breakout dB(A)@3m is hemispherical free field. The electrical and sound information in the table is nominal.

**CONSTANT PRESSURE INTERNAL SINGLE FANS ESXCP CONT.**

| <b>ELECTRICAL, SOUND &amp; WEIGHT</b> |       |      |                        |               |              |   |        |         |         |         |         |         |                    |                |
|---------------------------------------|-------|------|------------------------|---------------|--------------|---|--------|---------|---------|---------|---------|---------|--------------------|----------------|
| Code/<br>Curve                        | Phase | RPM  | Motor<br>power<br>(kW) | FLC<br>(amps) | SC<br>(amps) | Induct inlet Sound Power levels dB re lpW<br>(+ correction for open outlet) |        |         |         |         |         |         | Breakout<br>dBA@3m | Weight<br>(Kg) |
|                                       |       |      |                        |               |              | 125   | 250    | 500     | 1K      | 2K      | 4K      | 8K      |                    |                |
| ESXCP14B                              | 3     | 1225 | 1.5                    | 3.7           | 3.7          | 74(+5)  | 68(+9) | 68(+10) | 63(+11) | 57(+10) | 59(+8)  | 49(+12) | 50                 | 125            |
| ESXCP14C                              | 3     | 1225 | 2.2                    | 5.4           | 5.4          | 75(+5)  | 70(+9) | 71(+9)  | 65(+11) | 60(+9)  | 62(+7)  | 55(+9)  | 52                 | 134            |
| ESXCP14D                              | 3     | 1225 | 3                      | 6.9           | 6.9          | 76(+4)  | 72(+7) | 73(+7)  | 67(+9)  | 62(+7)  | 64(+5)  | 58(+6)  | 53                 | 140            |
| ESXCP15A                              | 3     | 925  | 2.2                    | 5.4           | 5.4          | 80(+6)  | 79(+2) | 78(+9)  | 76(+8)  | 73(+7)  | 70(+6)  | 64(+9)  | 60                 | 168.7          |
| ESXCP15B                              | 3     | 925  | 3                      | 6.9           | 6.9          | 83(+8)  | 81(+3) | 79(+9)  | 78(+9)  | 76(+9)  | 74(+10) | 68(+12) | 62                 | 174.6          |
| ESXCP16A                              | 3     | 1040 | 1.5                    | 3.7           | 3.7          | 80(+5)  | 80(+1) | 75(+8)  | 75(+7)  | 73(+6)  | 71(+6)  | 67(+8)  | 57                 | 159.6          |
| ESXCP16B                              | 3     | 1040 | 2.2                    | 5.4           | 5.4          | 81(+8)  | 81(+3) | 76(+12) | 76(+11) | 74(+9)  | 71(+9)  | 68(+9)  | 61                 | 168.7          |
| ESXCP16C                              | 3     | 1040 | 3                      | 6.9           | 6.9          | 81(+7)  | 82(+2) | 77(+11) | 77(+10) | 74(+8)  | 71(+9)  | 68(+8)  | 61                 | 174.6          |
| ESXCP16D                              | 3     | 1040 | 4                      | 10            | 10           | 84(+7)  | 82(+1) | 80(+10) | 79(+9)  | 77(+8)  | 75(+9)  | 70(+8)  | 63                 | 193.6          |
| ESXCP17A                              | 3     | 1160 | 2.2                    | 5.4           | 5.4          | 83(+4)  | 81(0)  | 75(+7)  | 76(+7)  | 74(+5)  | 73(+5)  | 69(+6)  | 57                 | 168.7          |
| ESXCP17B                              | 3     | 1160 | 3                      | 6.9           | 6.9          | 84(+5)  | 82(+1) | 76(+12) | 77(+9)  | 75(+8)  | 73(+7)  | 70(+7)  | 61                 | 174.6          |
| ESXCP17C                              | 3     | 1160 | 4                      | 10            | 10           | 84(+4)  | 83(0)  | 77(+11) | 78(+8)  | 75(+7)  | 73(+7)  | 70(+6)  | 61                 | 193.6          |
| ESXCP17D                              | 3     | 1160 | 5.5                    | 12            | 12           | 85(+4)  | 83(-1) | 80(+10) | 80(+7)  | 77(+7)  | 76(+7)  | 71(+6)  | 62                 | 231.6          |
| ESXCP18A                              | 3     | 1260 | 2.2                    | 5.4           | 5.4          | 83(+3)  | 84(-1) | 78(+7)  | 80(+5)  | 76(+5)  | 75(+4)  | 69(+5)  | 60                 | 168.7          |
| ESXCP18B                              | 3     | 1260 | 3                      | 6.9           | 6.9          | 84(+4)  | 83(-2) | 79(+9)  | 80(+5)  | 77(+6)  | 74(+5)  | 69(+7)  | 61                 | 174.6          |
| ESXCP18C                              | 3     | 1260 | 4                      | 10            | 10           | 84(+4)  | 83(-1) | 79(+8)  | 80(+5)  | 77(+5)  | 74(+6)  | 69(+7)  | 61                 | 193.6          |
| ESXCP18D                              | 3     | 1260 | 5.5                    | 12            | 12           | 85(+4)  | 83(-1) | 81(+8)  | 81(+5)  | 78(+5)  | 76(+6)  | 71(+7)  | 62                 | 231.6          |
| ESXCP19A                              | 3     | 1440 | 3                      | 6.9           | 6.9          | 90(+2)  | 83(-2) | 82(+5)  | 80(+4)  | 79(+5)  | 78(+3)  | 73(+4)  | 61                 | 174.6          |
| ESXCP19B                              | 3     | 1440 | 4                      | 10            | 10           | 87(-2)  | 82(-1) | 81(+5)  | 79(+5)  | 79(+3)  | 77(+2)  | 73(+3)  | 60                 | 193.6          |
| ESXCP19C                              | 3     | 1440 | 5.5                    | 12            | 12           | 86(+1)  | 84(0)  | 82(+6)  | 81(+6)  | 79(+3)  | 77(+3)  | 73(+3)  | 62                 | 231.6          |

Fan size 11 to 19 inc. are belt drive and cannot be mounted at an angle of no greater than 5°.  
Please contact your local Nuair Technical Sales Engineer or the Technical Department to discuss your application requirements.  
Breakout dBA@3m is hemispherical free field. The electrical and sound information in the table is nominal.

CONSTANT PRESSURE EXTERNAL SINGLE FANS ESXCP-X

ELECTRICAL, SOUND & WEIGHT

| Code/<br>Curve | Phase | RPM  | Motor<br>power<br>(kW) | FLC<br>(amps) | SC<br>(amps) | Induct inlet Sound Power levels dB re 1pW<br>(+ correction for open outlet) |         |         |         |         |         |         | Breakout<br>dBA@3m | Weight<br>(Kg) |
|----------------|-------|------|------------------------|---------------|--------------|---|---------|---------|---------|---------|---------|---------|--------------------|----------------|
|                |       |      |                        |               |              | 125   | 250     | 500     | 1K      | 2K      | 4K      | 8K      |                    |                |
| ESXCP4-X       | 1     | 3600 | 0.52                   | 3.1           | 3.1          | 77(+9)  | 73(+5)  | 66(+14) | 64(+12) | 60(+15) | 55(+15) | 50(+11) | 45                 | 77             |
| ESXCP6-X       | 1     | 1300 | 1.23                   | 7.6           | 7.6          | 71(+5)  | 63(+4)  | 55(+12) | 58(+13) | 58(+13) | 55(+13) | 48(+12) | 47                 | 70             |
| ESXCP9-X       | 1     | 1065 | 1.6                    | 7.3           | 7.3          | 72(+13)   | 66(+19) | 61(+18) | 60(+18) | 60(+17) | 57(+19) | 51(+18) | 50                 | 133            |
| ESXCP11A-X     | 3     | 1225 | 0.37                   | 2.1           | 2.1          | 73(+1)  | 67(+7)  | 62(+10) | 63(+11) | 55(+9)  | 49(+11) | 45(+9)  | 46                 | 77.5           |
| ESXCP11B-X     | 3     | 1225 | 0.55                   | 1.7           | 1.7          | 74(+2)  | 68(+7)  | 64(+9)  | 65(+10) | 57(+8)  | 52(+9)  | 48(+7)  | 48                 | 82.4           |
| ESXCP11C-X     | 3     | 1400 | 0.75                   | 2.1           | 2.1          | 75(+2)  | 70(+8)  | 65(+9)  | 66(+10) | 58(+6)  | 53(+8)  | 50(+6)  | 49                 | 90.4           |
| ESXCP11D-X     | 3     | 1225 | 1.1                    | 2.9           | 2.9          | 77(+0)  | 73(+5)  | 66(+8)  | 67(+9)  | 58(+7)  | 53(+8)  | 50(+6)  | 49                 | 90.4           |
| ESXCP12A-X     | 3     | 1400 | 0.55                   | 1.7           | 1.7          | 75(-1)  | 71(+4)  | 66(+7)  | 66(+9)  | 58(+7)  | 51(+8)  | 45(+5)  | 48                 | 82.4           |
| ESXCP12B-X     | 3     | 1400 | 0.75                   | 2.1           | 2.1          | 74(+3)  | 70(+8)  | 65(+10) | 66(+12) | 58(+9)  | 51(+11) | 44(+9)  | 50                 | 84.4           |
| ESXCP12C-X     | 3     | 1400 | 1.1                    | 2.9           | 2.9          | 77(+2)  | 73(+7)  | 67(+10) | 69(+10) | 60(+8)  | 54(+10) | 47(+11) | 51                 | 90.4           |
| ESXCP12D-X     | 3     | 1400 | 1.5                    | 3.7           | 3.7          | 79(0)   | 75(+5)  | 69(+8)  | 70(+9)  | 61(+7)  | 56(+8)  | 52(+6)  | 52                 | 96.4           |
| ESXCP13A-X     | 3     | 1085 | 0.75                   | 2.1           | 2.1          | 70(+5)  | 67(+8)  | 67(+8)  | 63(+8)  | 56(+8)  | 57(+7)  | 51(+7)  | 48                 | 116            |
| ESXCP13B-X     | 3     | 1085 | 1.1                    | 2.9           | 2.9          | 72(+5)  | 68(+8)  | 69(+8)  | 65(+8)  | 58(+8)  | 59(+7)  | 54(+7)  | 50                 | 116            |
| ESXCP13C-X     | 3     | 1085 | 1.5                    | 3.7           | 3.7          | 73(+4)  | 69(+7)  | 70(+7)  | 64(+9)  | 59(+7)  | 61(+5)  | 55(+6)  | 50                 | 125            |
| ESXCP14A-X     | 3     | 1225 | 1.1                    | 2.9           | 2.9          | 73(+5)  | 68(+7)  | 68(+7)  | 62(+10) | 56(+8)  | 58(+6)  | 48(+7)  | 48                 | 116            |
| ESXCP14B-X     | 3     | 1225 | 1.5                    | 3.7           | 3.7          | 74(+5)  | 68(+9)  | 68(+10) | 63(+11) | 57(+10) | 59(+8)  | 49(+12) | 50                 | 125            |
| ESXCP14C-X     | 3     | 1225 | 2.2                    | 5.4           | 5.4          | 75(+5)  | 70(+9)  | 71(+9)  | 65(+11) | 60(+9)  | 62(+7)  | 55(+9)  | 52                 | 134            |
| ESXCP14D-X     | 3     | 1225 | 3                      | 6.9           | 6.9          | 76(+4)  | 72(+7)  | 73(+7)  | 67(+9)  | 62(+7)  | 64(+5)  | 58(+6)  | 53                 | 140            |
| ESXCP15A-X     | 3     | 925  | 2.2                    | 5.4           | 5.4          | 80(+6)  | 79(+2)  | 78(+9)  | 76(+8)  | 73(+7)  | 70(+6)  | 64(+9)  | 60                 | 168.7          |
| ESXCP15B-X     | 3     | 925  | 3                      | 6.9           | 6.9          | 83(+8)  | 81(+3)  | 79(+9)  | 78(+9)  | 76(+9)  | 74(+10) | 68(+12) | 62                 | 174.6          |
| ESXCP16A-X     | 3     | 1040 | 1.5                    | 3.7           | 3.7          | 80(+5)  | 80(+1)  | 75(+8)  | 75(+7)  | 73(+6)  | 71(+6)  | 67(+8)  | 57                 | 159.6          |
| ESXCP16B-X     | 3     | 1040 | 2.2                    | 5.4           | 5.4          | 81(+8)  | 81(+3)  | 76(+12) | 76(+11) | 74(+9)  | 71(+9)  | 68(+9)  | 61                 | 168.7          |
| ESXCP16C-X     | 3     | 1040 | 3                      | 6.9           | 6.9          | 81(+7)  | 82(+2)  | 77(+11) | 77(+10) | 74(+8)  | 71(+9)  | 68(+8)  | 61                 | 174.6          |
| ESXCP16D-X     | 3     | 1040 | 4                      | 10            | 10           | 84(+7)  | 82(+1)  | 80(+10) | 79(+9)  | 77(+8)  | 75(+9)  | 70(+8)  | 63                 | 193.6          |
| ESXCP17A-X     | 3     | 1160 | 2.2                    | 5.4           | 5.4          | 83(+4)  | 81(0)   | 75(+7)  | 76(+7)  | 74(+5)  | 73(+5)  | 69(+6)  | 57                 | 168.7          |
| ESXCP17B-X     | 3     | 1160 | 3                      | 6.9           | 6.9          | 84(+5)  | 82(+1)  | 76(+12) | 77(+9)  | 75(+8)  | 73(+7)  | 70(+7)  | 61                 | 174.6          |
| ESXCP17C-X     | 3     | 1160 | 4                      | 10            | 10           | 84(+4)  | 83(0)   | 77(+11) | 78(+8)  | 75(+7)  | 73(+7)  | 70(+6)  | 61                 | 193.6          |
| ESXCP17D-X     | 3     | 1160 | 5.5                    | 12            | 12           | 85(+4)  | 83(-1)  | 80(+10) | 80(+7)  | 77(+7)  | 76(+7)  | 71(+6)  | 62                 | 231.6          |
| ESXCP18A-X     | 3     | 1260 | 2.2                    | 5.4           | 5.4          | 83(+3)  | 84(-1)  | 78(+7)  | 80(+5)  | 76(+5)  | 75(+4)  | 69(+5)  | 60                 | 168.7          |
| ESXCP18B-X     | 3     | 1260 | 3                      | 6.9           | 6.9          | 84(+4)  | 83(-2)  | 79(+9)  | 80(+5)  | 77(+6)  | 74(+5)  | 69(+7)  | 61                 | 174.6          |
| ESXCP18C-X     | 3     | 1260 | 4                      | 10            | 10           | 84(+4)  | 83(-1)  | 79(+8)  | 80(+5)  | 77(+5)  | 74(+6)  | 69(+7)  | 61                 | 193.6          |
| ESXCP18D-X     | 3     | 1260 | 5.5                    | 12            | 12           | 85(+4)  | 83(-1)  | 81(+8)  | 81(+5)  | 78(+5)  | 76(+6)  | 71(+7)  | 62                 | 231.6          |
| ESXCP19A-X     | 3     | 1440 | 3                      | 6.9           | 6.9          | 90(+2)  | 83(-2)  | 82(+5)  | 80(+4)  | 79(+5)  | 78(+3)  | 73(+4)  | 61                 | 174.6          |
| ESXCP19B-X     | 3     | 1440 | 4                      | 10            | 10           | 87(-2)  | 82(-1)  | 81(+5)  | 79(+5)  | 79(+3)  | 77(+2)  | 73(+3)  | 60                 | 193.6          |
| ESXCP19C-X     | 3     | 1440 | 5.5                    | 12            | 12           | 86(+1)  | 84(0)   | 82(+6)  | 81(+6)  | 79(+3)  | 77(+3)  | 73(+3)  | 62                 | 231.6          |

Fan size 11 to 19 inc. are belt drive and cannot be mounted at an angle no greater than 5°.  
 Please contact your local Nuair Technical Sales Engineer or the Technical Department to discuss your application requirements.  
 Breakout dBA@3m is hemispherical free field. The electrical and sound information in the table is nominal.

**CONSTANT PRESSURE EXTERNAL SINGLE FANS ESXCP-R AND B**

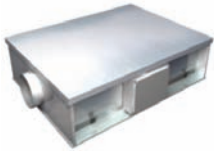
| <b>ELECTRICAL, SOUND &amp; WEIGHT</b> |       |      |                        |               |              |   |         |         |         |         |         |         |                                       |                |
|---------------------------------------|-------|------|------------------------|---------------|--------------|---|---------|---------|---------|---------|---------|---------|---------------------------------------|----------------|
| Code/<br>Curve                        | Phase | RPM  | Motor<br>power<br>(kW) | FLC<br>(amps) | SC<br>(amps) | Induct inlet Sound Power levels dB re lpW<br>(+ correction for open outlet) |         |         |         |         |         |         | Open inlet<br>(Open outlet)<br>dBA@3m | Weight<br>(Kg) |
|                                       |       |      |                        |               |              | 125   | 250     | 500     | 1K      | 2K      | 4K      | 8K      |                                       |                |
| ESXCP4                                | 1     | 3600 | 0.52                   | 3.1           | 3.1          | 77(0)   | 73(+4)  | 66(+17) | 64(+20) | 60(+24) | 55(+25) | 50(+24) | 69                                    | 80             |
| ESXCP6                                | 1     | 1300 | 1.23                   | 7.6           | 7.6          | 71(+5)  | 63(+4)  | 55(+12) | 58(+13) | 58(+13) | 55(+13) | 48(+12) | 43                                    | 70             |
| ESXCP9                                | 1     | 960  | 1.6                    | 9.44          | 9.44         | 72(+13)   | 66(+19) | 61(+18) | 60(+18) | 60(+17) | 57(+19) | 51(+18) | 59                                    | 133            |
| ESXCP11A                              | 3     | 1225 | 0.37                   | 1.3           | 1.3          | 73(-3)  | 67(+3)  | 62(+9)  | 63(+11) | 55(+9)  | 49(+11) | 45(+9)  | 47(+11)                               | 77.5           |
| ESXCP11B                              | 3     | 1225 | 0.55                   | 1.7           | 1.7          | 74(-2)  | 68(+4)  | 64(+8)  | 65(+10) | 57(+8)  | 52(+9)  | 48(+7)  | 49(+10)                               | 82.4           |
| ESXCP11C                              | 3     | 1225 | 0.75                   | 2.1           | 2.1          | 75(-2)  | 70(+4)  | 65(+8)  | 66(+10) | 58(+6)  | 53(+8)  | 50(+6)  | 51(+9)                                | 84.4           |
| ESXCP11D                              | 3     | 1225 | 1.1                    | 2.9           | 2.9          | 77(-4)  | 73(+2)  | 66(+7)  | 67(+9)  | 58(+7)  | 53(+8)  | 50(+6)  | 52(+8)                                | 90.4           |
| ESXCP12A                              | 3     | 1400 | 0.55                   | 1.7           | 1.7          | 75(-5)  | 71(+1)  | 66(+6)  | 66(+9)  | 58(+7)  | 51(+8)  | 45(+5)  | 51(+8)                                | 82.4           |
| ESXCP12B                              | 3     | 1400 | 0.75                   | 2.1           | 2.1          | 74(-1)  | 70(+5)  | 65(+9)  | 66(+12) | 58(+9)  | 51(+11) | 44(+9)  | 50(+11)                               | 84.4           |
| ESXCP12C                              | 3     | 1400 | 1.1                    | 2.9           | 2.9          | 77(-2)  | 73(+4)  | 67(+9)  | 69(+10) | 60(+8)  | 54(+10) | 47(+11) | 53(+10)                               | 90.4           |
| ESXCP12D                              | 3     | 1400 | 1.5                    | 3.7           | 3.7          | 79(-4)  | 75(+2)  | 69(+7)  | 70(+9)  | 61(+7)  | 56(+8)  | 52(+6)  | 54(+9)                                | 96.4           |
| ESXCP13A                              | 3     | 1085 | 0.75                   | 2.1           | 2.1          | 70(+5)  | 67(+8)  | 67(+8)  | 63(+8)  | 56(+8)  | 57(+7)  | 51(+7)  | 50(+6)                                | 116            |
| ESXCP13B                              | 3     | 1085 | 1.1                    | 2.9           | 2.9          | 72(-1)  | 68(+6)  | 69(+8)  | 65(+8)  | 58(+8)  | 59(+7)  | 54(+7)  | 52(+7)                                | 116            |
| ESXCP13C                              | 3     | 1085 | 1.5                    | 3.7           | 3.7          | 73(-2)  | 69(+5)  | 70(+7)  | 64(+9)  | 59(+7)  | 61(+5)  | 55(+6)  | 52(+7)                                | 125            |
| ESXCP14A                              | 3     | 1225 | 1.1                    | 2.9           | 2.9          | 73(-1)  | 68(+5)  | 68(+7)  | 62(+10) | 56(+8)  | 58(+6)  | 48(+7)  | 50(+8)                                | 116            |
| ESXCP14B                              | 3     | 1225 | 1.5                    | 3.7           | 3.7          | 74(-1)  | 68(+7)  | 68(+10) | 63(+11) | 57(+10) | 59(+8)  | 49(+12) | 50(+10)                               | 125            |
| ESXCP14C                              | 3     | 1225 | 2.2                    | 5.4           | 5.4          | 75(-1)  | 70(+7)  | 71(+9)  | 65(+11) | 60(+9)  | 62(+7)  | 55(+9)  | 53(+9)                                | 134            |
| ESXCP14D                              | 3     | 1225 | 3                      | 6.9           | 6.9          | 76(-2)  | 72(+5)  | 73(+7)  | 67(+9)  | 62(+7)  | 64(+5)  | 58(+6)  | 55(+7)                                | 140            |
| ESXCP15A                              | 3     | 925  | 2.2                    | 5.4           | 5.4          | 80(+1)  | 79(+1)  | 78(+8)  | 76(+8)  | 73(+7)  | 70(+6)  | 64(+9)  | 62(+8)                                | 168.7          |
| ESXCP15B                              | 3     | 925  | 3                      | 6.9           | 6.9          | 83(+3)  | 81(+2)  | 79(+8)  | 78(+9)  | 76(+9)  | 74(+10) | 68(+12) | 65(+9)                                | 174.6          |
| ESXCP16A                              | 3     | 1040 | 1.5                    | 3.7           | 3.7          | 80(0)   | 80(0)   | 75(+7)  | 75(+7)  | 73(+6)  | 71(+6)  | 67(+8)  | 62(+6)                                | 159.6          |
| ESXCP16B                              | 3     | 1040 | 2.2                    | 5.4           | 5.4          | 81(+3)  | 81(+1)  | 76(+11) | 76(+11) | 74(+9)  | 71(+9)  | 68(+9)  | 63(+10)                               | 168.7          |
| ESXCP16C                              | 3     | 1040 | 3                      | 6.9           | 6.9          | 81(+2)  | 82(0)   | 77(+10) | 77(+10) | 74(+8)  | 71(+9)  | 68(+8)  | 63(+9)                                | 174.6          |
| ESXCP16D                              | 3     | 1040 | 4                      | 10            | 10           | 84(+2)  | 82(-1)  | 80(+9)  | 79(+9)  | 77(+8)  | 75(+9)  | 70(+8)  | 66(+8)                                | 193.6          |
| ESXCP17A                              | 3     | 1160 | 2.2                    | 5.4           | 5.4          | 83(0)   | 81(-1)  | 75(+6)  | 76(+7)  | 74(+5)  | 73(+5)  | 69(+6)  | 63(+6)                                | 168.7          |
| ESXCP17B                              | 3     | 1160 | 3                      | 6.9           | 6.9          | 84(0)   | 82(0)   | 76(+11) | 77(+9)  | 75(+8)  | 73(+7)  | 70(+7)  | 64(+9)                                | 174.6          |
| ESXCP17C                              | 3     | 1160 | 4                      | 10            | 10           | 84(-1)  | 83(-1)  | 77(+10) | 78(+8)  | 75(+7)  | 73(+7)  | 70(+6)  | 64(+8)                                | 193.6          |
| ESXCP17D                              | 3     | 1160 | 5.5                    | 12            | 12           | 85(-1)  | 83(-2)  | 80(+9)  | 80(+7)  | 77(+7)  | 76(+7)  | 71(+6)  | 67(+7)                                | 231.6          |
| ESXCP18A                              | 3     | 1260 | 2.2                    | 5.4           | 5.4          | 83(-2)  | 84(-2)  | 78(+6)  | 80(+5)  | 76(+5)  | 75(+4)  | 69(+5)  | 66(+5)                                | 168.7          |
| ESXCP18B                              | 3     | 1260 | 3                      | 6.9           | 6.9          | 84(0)   | 83(-3)  | 79(+8)  | 80(+5)  | 77(+6)  | 74(+5)  | 69(+7)  | 66(+6)                                | 174.6          |
| ESXCP18C                              | 3     | 1260 | 4                      | 10            | 10           | 84(-1)  | 83(-2)  | 79(+7)  | 80(+5)  | 77(+5)  | 74(+6)  | 69(+7)  | 66(+6)                                | 193.6          |
| ESXCP18D                              | 3     | 1260 | 5.5                    | 120           | 120          | 85(-1)  | 83(-2)  | 81(+7)  | 81(+5)  | 78(+5)  | 76(+6)  | 71(+7)  | 67(+6)                                | 231.6          |
| ESXCP19A                              | 3     | 1440 | 3                      | 6.9           | 6.9          | 90(-1)  | 83(-2)  | 82(+5)  | 80(+4)  | 79(+5)  | 78(+3)  | 73(+4)  | 68(+4)                                | 174.8          |
| ESXCP19B                              | 3     | 1440 | 4                      | 10            | 10           | 87(-5)  | 82(-1)  | 81(+5)  | 79(+5)  | 79(+3)  | 77(+2)  | 73(+3)  | 67(+4)                                | 193.6          |
| ESXCP19C                              | 3     | 1440 | 5.5                    | 12            | 12           | 86(-2)  | 84(0)   | 82(+5)  | 81(+6)  | 79(+3)  | 77(+3)  | 73(+3)  | 68(+5)                                | 231.6          |

Fan size 11 to 19 inc. are belt drive and cannot be mounted at an angle no greater than 5°.  
Please contact your local Nuair Technical Sales Engineer or the Technical Department to discuss your application requirements.  
**Please insert R or B into code for spigot position eg. ESTCP11B-B.**

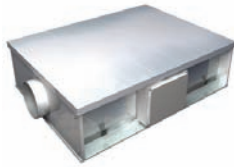
Breakout dBA@3m is hemispherical free field. The electrical and sound information in the table is nominal.

SINGLE FAN UNITS

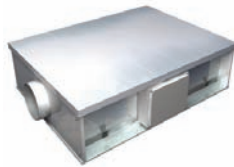
ESXCP INTERNAL FANS (CIRCULAR & RECTANGULAR SPIGOTS)



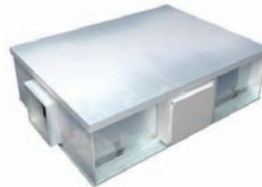
ESXCP4



ESXCP6



ESXCP9



ESXCP15 - ESXCP27

ESXCP-B (RECTANGULAR SPIGOTS) & ESXCP-R EXTERNAL FANS (CIRCULAR & RECTANGULAR SPIGOTS)



ESXCP4B



ESXCP6B



ESXCP9-10B



ESXCP11-12B



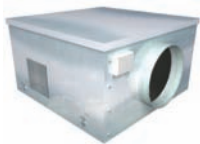
ESXCP13-14B



ESXCP15-19B



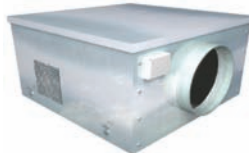
ESXCP20-26B



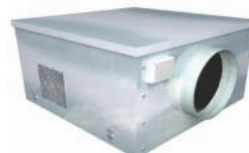
ESXCP4R



ESXCP6R



ESXCP9-10R



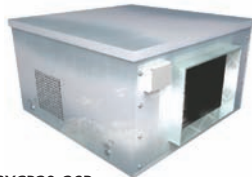
ESXCP11-12R



ESXCP13-14R



ESXCP15-19R



ESXCP20-26R

ESXCP-X EXTERNAL FANS (CIRCULAR & RECTANGULAR SPIGOTS)



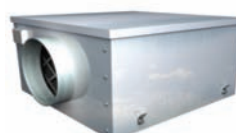
ESXCP4X



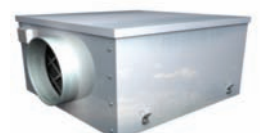
ESXCP6X



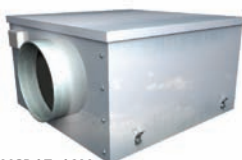
ESXCP9-10X



ESXCP11-12X



ESXCP13-14X



ESXCP15-19X

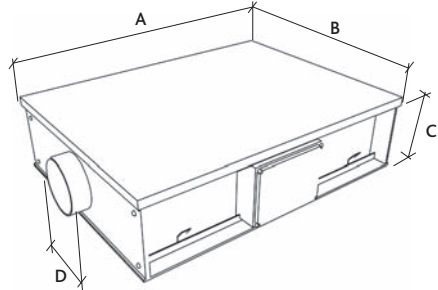


ESXCP20-26X

**DIMENSIONS**

**ESXCP INTERNAL FANS DIMENSIONS (mm)**

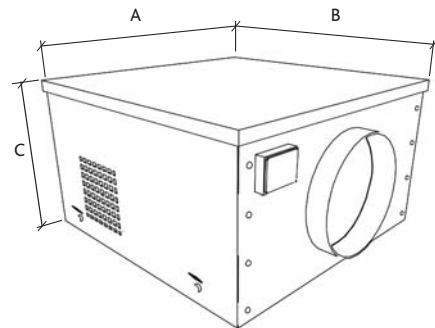
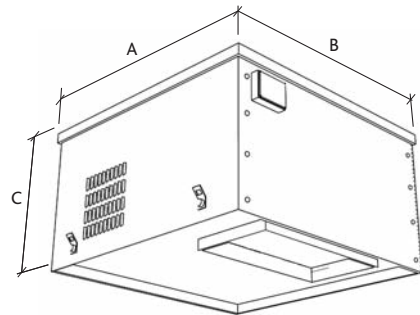
| Fan Code   | A    | B    | C   | Circular Spigot |   | Rectangular Spigot |   | Weight Kg |
|------------|------|------|-----|-----------------|---|--------------------|---|-----------|
|            |      |      |     | DØ              | E | F                  | F |           |
| ESXCP4     | 1063 | 1047 | 360 | 250             | - | -                  | - | 62        |
| ESXCP6     | 1193 | 1047 | 423 | 400             | - | -                  | - | 63        |
| ESXCP9     | 1195 | 1174 | 575 | 500             | - | -                  | - | 125       |
| ESXCP15-19 | 1430 | 1190 | 780 | 630             | - | -                  | - | 162       |



**ESXCP-B/ESXCP-R EXTERNAL FANS DIMENSIONS (mm)**

| Fan Code      | A    | B    | C   | Circular Spigot |     | Rectangular Spigot |   | Weight Kg |
|---------------|------|------|-----|-----------------|-----|--------------------|---|-----------|
|               |      |      |     | DØ              | E   | F                  | F |           |
| ESXCP4B/R     | 1165 | 980  | 575 | 250             | 305 | 152                | - | *77       |
| ESXCP6B/R     | 1165 | 980  | 575 | 400             | 305 | 152                | - | *70       |
| ESXCP9-10B/R  | 1495 | 1125 | 710 | 500             | 762 | 304                | - | 133       |
| ESXCP11-12B/R | 974  | 974  | 622 | 400             | 457 | 229                | - | *82.4     |
| ESXCP13-14B/R | 1233 | 1233 | 701 | 500             | 762 | 304                | - | 134       |
| ESXCP15-19B/R | 1430 | 1635 | 796 | 630             | 889 | 381                | - | *232      |

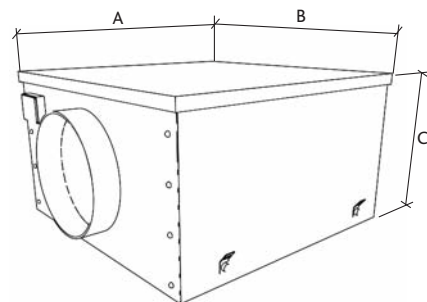
\* Approximate weight, contact Nuair for details.



**ESXCP-X EXTERNAL FANS DIMENSIONS (mm)**

| Fan Code    | A    | B    | C   | Circular Spigot |   | Rectangular Spigot |   | Weight Kg |
|-------------|------|------|-----|-----------------|---|--------------------|---|-----------|
|             |      |      |     | DØ              | E | F                  | F |           |
| ESXCP4X     | 1165 | 980  | 575 | 250             | - | -                  | - | *77       |
| ESXCP6X     | 1165 | 980  | 575 | 400             | - | -                  | - | *70       |
| ESXCP9-10X  | 1495 | 1125 | 710 | 500             | - | -                  | - | *133      |
| ESXCP11-12X | 974  | 974  | 622 | 400             | - | -                  | - | *77.5     |
| ESXCP13-14X | 1233 | 1235 | 701 | 500             | - | -                  | - | *116      |
| ESXCP15-19X | 1430 | 1190 | 780 | 630             | - | -                  | - | *174.6    |

\* Approximate weight, contact Nuair for details.



## CONSULTANTS SPECIFICATION

### CONSTANT PRESSURE EXTRACT SYSTEM

The main extract fan shall be as indicated on the drawings and in accordance with the relevant fan schedule. The vitiated air shall be extracted from the space using an energy efficient constant pressure principle via a variable air volume motorised damper/grille installed in each area, as detailed in the schedule.

### OPERATION

The extract fan shall automatically vary its speed as the system pressure varies; the variation in pressure is caused by the opening and closing of the Nuair CVD extract damper. The damper is autonomous of the fan and requires no field wiring connecting it to the fan. The damper positions are open (boost) and closed (trickle). When the damper is closed, the grille will allow approx. 8 litres/sec flow rate, as background ventilation. The inline damper has an integrated airflow sensor which continuously monitors and controls the amount of air being moved. The air volume is adjusted via minimum and maximum potentiometers on the side of the CVD damper.

The duct mounted damper CVD requires a 230V connection/power supply. Signal from 230V switch live i.e. light switch, PIR, humidistat etc.

(If the NRG grille is installed it shall be connected to a 12V ac supply via the inclusive 230V transformer unit and has an integral PIR, two position damper and overrun timer).

Once commissioned and set to work, the fan will maintain the preset pressure by varying its speed as the ventilation requirement within each area varies i.e. as dampers open and close. If the requirement exceeds the maximum or minimum limit, the fan will remain at the design/ limiting speed.

### FAN SPECIFICATION

Each acoustically lined low noise Single fan shall be fitted with an integral Ecosmart control inclusive of pressure transducer and inverter drive. The fans shall have the following energy saving and operational functions integrally installed within the fan unit, all components will be pre-wired and fitted by the manufacturer: -

- Integral operating pressure adjustment (target pressure).
- BMS interface 0 - 10V.
- Volt free run & failure/status indication.
- 4no. low voltage sockets for interconnection of remote failure indicator.

Fan, integrated Ecosmart controls and associated sensors/controllers shall be manufactured by Nuair Ltd.

### CVD FEATURES

- Optional trickle/boost flow rate.
- Externally adjusted settings.
- CVD helps balance system.
- MEMS provide precise measurements and control of flow rate.

Ecosmart Xtractor shall have a 5 year warranty.

### INSTALLATION

Mechanical installation requires mounting of the extract unit in the designated position and connection to the associated duct work.

The installer shall allow for all necessary ductwork transformations to and from the fan unit and any associated components in accordance with the manufacturers recommendations, DW 144 and general good practice.

Electrical installation requires the provision and connection of single phase electrical supply sizes 6 & 9 or three phase sizes 11 to 19 inclusive.

A volt free run/fail status indication at the fan.

A single phase supply to the duct mounted damper version CVD/NRG.

A single phase supply to the transformer feeding the grille with integrated damper and PIR, the 12V output of which is connected to the grille.

### COMMISSIONING

By the appointed commissioning engineer.

The systems should be commissioned in the normal way and the operating or target pressure (inlet side of unit only) set via a potentiometer in the integral set-up box within the fan unit. This should be adjusted until the required air volume flow rate is achieved on the approved measuring device.

The manufacturer's recommendations must be observed at all times.

NOTE: NRG & CVD should not be mixed on the same system.