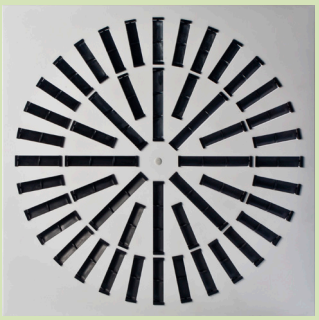
# HSWD

## SWİRL DİFÜZÖR
*Swirl Diffusers*



### TANIM
- **HSWD-A:** Ayarlanabilir, Dairesel Kanatlı ve Kare Ön Tablalı Swirl Difüzör.
- **HSWD-B:** Ayarlanabilir, Kare Kanatlı ve Kare Ön Tablalı Swirl Difüzör.
- **HSWD-C:** Ayarlanabilir, Dairesel Kanatlı ve Dairesel Ön Tablalı Swirl Difüzör.
- **HSWD-D:** Ayarlanabilir, Merkezden Kaçık, Dairesel Kanatlı ve Kare Ön Tablalı Swirl Difüzör.

### MALZEME
Ürün ön tablası DKP sacdan, kanatlar ise plastikten imal edilmektedir.

### UYGULAMA
HSWD model swirl difüzörler yüksek hava debisi gerektiren 2,5 – 4 mt tavan yüksekliğine sahip mekanlar için uygundur. Şartlandırılmış havanın türbülans (Swrill) etkisiyle homojen olarak dağıtımını, kirli mahal havasının ise emişini gerçekleştiren iklimlendirme elemanıdır. HSWD model swrill difüzörlerin ön çerçevesi kare veya yuvarlak imal edilip hareketli plastik kanatlar yerleştirilir. Hava yönlendirmesi kanatların elle yatay veya dikey atış yapacak şekilde ayarlanmasıyla değiştirilebilir. Her kanat arasında serbest geçiş alanı sabit olduğundan basınç kaybı ve ses seviyeinde değişikliğe neden olmaz. Difüzörler asma tavan ve plenium kutu montajına uygundur .

### YÜZEY KAPLAMA
- Elektrostatik toz boya (Standart renkler RAL9010 ve RAL9016)
- İsteğe bağlı olarak RAL kodundaki diğer tüm renklerde temin edilmektedir.

### MONTAJ
- Plenum kutusuna köprülü montaj.

### AKSESUARLAR
- PK: Plenum kutusu

### *DESCRIPTION*
- ***HSWD-A:*** *Swirl Diffuser With Adjustable Radial Blades and Square Faceplate.*
- ***HSWD-B:*** *Swirl Diffuser With Adjustable Square Blades and Square Faceplate.*
- ***HSWD-C:*** *Swirl Diffuser With Adjustable Radial Blades and Radial Faceplate.*
- ***HSWD-D:*** *Swirl Diffuser, Blades off Center With Adjustable Radial Blades and Square Faceplate.*

### *MATERIAL*
*Product faceplate is manufactured from DKP sheet and blades are manufactured from plastic.*

### *APPLICATION*
*HSWD model Swirl Diffusers are suitable for premises with 2.5 to 4 metre ceiling height where high air pressure is required. This is the air-conditioning component that ensures that the conditioned air is distributed homogenously by means of the swirling effect and the used air is returned. The faceplate of HSWD model Swirl Diffusers are manufactured either in square or round shape and plastic blades are affixed. Air deflection is accomplished by adjusting the blades either in a horizontal or vertical direction by hand. As the air passage gap between the blades is fixed, pressure loss and fluctuations in sound levels is prevented. Diffusers are suitable for suspended ceiling or plenum box installation.*

### *SURFACE COATING*
- *Electrostatic powder coating (Standard colours are RAL 9010 and RAL 9016)*
- *As an option all the colours in other RAL codes can be provided.*

### *ASSEMBLY*
- *Bridge installation to plenum box.*

### *ACCESSORIES*
- ***PK:*** *Plenum box*

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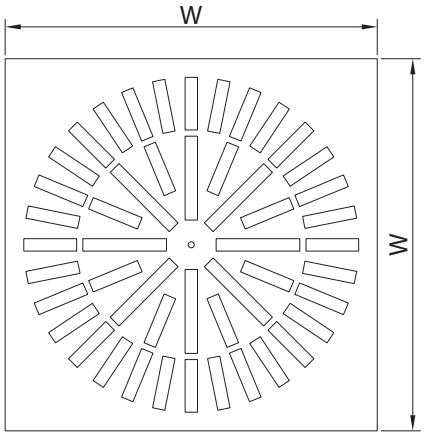
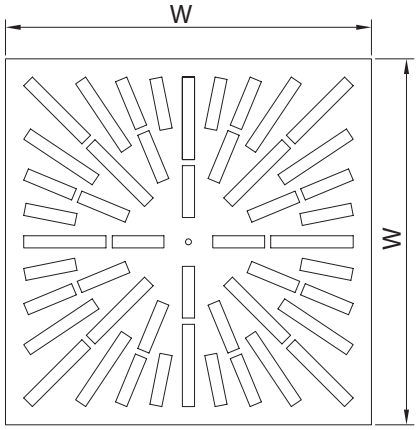
**SWIRL DİFÜZÖR ÖLÇÜLERİ ve EFEKTİF ALANLARI**
*SWIRL DIFFUSERS DIMENSIONS and EFFECTIVE AREAS*

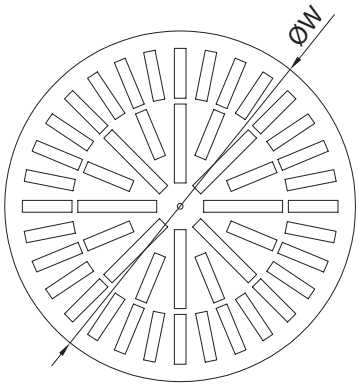
HSWD-A



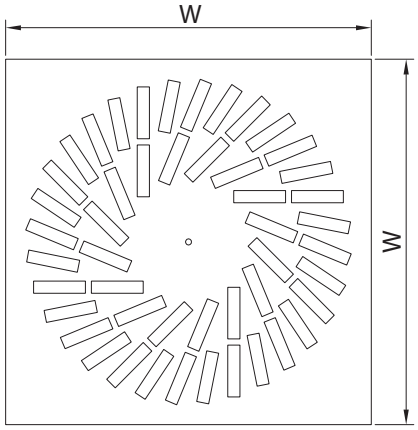

HSWD-B




HSWD-C




HSWD-D




| HSD-A / HSD-D | | | | | |
|---|---|---|---|---|---|
| | WxW (mm) | | | | |
| | 310x310 | 400x400 | 500x500 | 600x600 | 800x800 |
| Anma Çapı | 0.020 | 0.035 | 0.076 | 0.089 | 0.146 |

| HSD-B | | | | | |
|---|---|---|---|---|---|
| | WxW (mm) | | | | |
| | 310x310 | 400x400 | 500x500 | 600x600 | 800x800 |
| Anma Çapı | 0.031 | 0.039 | 0.080 | 0.110 | 0.167 |

| HSD-C | | | | | |
|---|---|---|---|---|---|
| | ØW (mm | | | | |
| | 310 | 400 | 500 | 600 | 800 |
| Anma Çapı | 0.020 | 0.035 | 0.076 | 0.089 | 0.146 |

## HSWD-A / HSD-C / HSD-D SWIRL DİFÜZÖR KOLAY SEÇİM TABLOSU

*HSWD-A / HSD-C / HSD-D SWIRL DIFFUSERS QUICK SELECTION TABLE*

| HSD-A / HSD-C / HSD-D | | | | | | |
|---|---|---|---|---|---|---|
| | | Anma Çapı | | | | |
| V ($m^3$/h) | | 0.020 | 0.035 | 0.076 | 0.089 | 0.146 |
| 100 | ueff. (m/s) | 1.4 | | | | |
| | X0,1(m) | 1.9 | | | | |
| | X0,25 (m) | 0.8 | | | | |
| | ΔPt (Pa) | 7 | | | | |
| | SPL (dBA) | <20 | | | | |
| 125 | ueff. (m/s) | 1.7 | | | | |
| | X0,1(m) | 2.3 | | | | |
| | X0,25 (m) | 1 | | | | |
| | ΔPt (Pa) | 10 | | | | |
| | SPL (dBA) | 21 | | | | |
| 150 | ueff. (m/s) | 2.1 | | | | |
| | X0,1(m) | 2.7 | | | | |
| | X0,25 (m) | 1.2 | | | | |
| | ΔPt (Pa) | 13 | | | | |
| | SPL (dBA) | 23 | | | | |
| 175 | ueff. (m/s) | 2.4 | 1.4 | | | |
| | X0,1(m) | 3.1 | 2.6 | | | |
| | X0,25 (m) | 1.4 | 1.4 | | | |
| | ΔPt (Pa) | 19 | 15 | | | |
| | SPL (dBA) | 28 | 25 | | | |
| 200 | ueff. (m/s) | 2.8 | 1.6 | | | |
| | X0,1(m) | 3.5 | 2.9 | | | |
| | X0,25 (m) | 1.6 | 1.5 | | | |
| | ΔPt (Pa) | 24 | 20 | | | |
| | SPL (dBA) | 32 | 28 | | | |
| 250 | ueff. (m/s) | 3.5 | 2.0 | | | |
| | X0,1(m) | 4.8 | 3.4 | | | |
| | X0,25 (m) | 2.1 | 1.9 | | | |
| | ΔPt (Pa) | 37 | 30 | | | |
| | SPL (dBA) | 36 | 33 | | | |
| 300 | ueff. (m/s) | 4.2 | 2.4 | 1.1 | | |
| | X0,1(m) | 5.5 | 4.0 | 2.7 | | |
| | X0,25 (m) | 2.5 | 2.1 | 1.4 | | |
| | ΔPt (Pa) | 50 | 39 | 9 | | |
| | SPL (dBA) | 42 | 37 | 24 | | |
| 420 | ueff. (m/s) | | 3.3 | 1.5 | 1.3 | |
| | X0,1(m) | | 4.7 | 3.5 | 3.2 | |
| | X0,25 (m) | | 2.6 | 1.9 | 1.6 | |
| | ΔPt (Pa) | | 74 | 18 | 13 | |
| | SPL (dBA) | | 46 | 32 | 23 | |

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*Swirl Diffusers*

## HSWD-A / HSD-C / HSD-D SWIRL DİFÜZÖR KOLAY SEÇİM TABLOSU
*HSWD-A / HSD-C / HSD-D SWIRL DIFFUSERS QUICK SELECTION TABLE*

| HSD-A / HSD-C / HSD-D | | | | | | |
|---|---|---|---|---|---|---|
| | | Anma Çapı | | | | |
| V ($m^3$/h) | | 0.020 | 0.035 | 0.076 | 0.089 | 0.146 |
| 500 | ueff. (m/s) | | | 1.8 | 1.6 | |
| | X0,1(m) | | | 4.2 | 3.9 | |
| | X0,25 (m) | | | 2.3 | 2.0 | |
| | ΔPt (Pa) | | | 26 | 16 | |
| | SPL (dBA) | | | 37 | 27 | |
| 600 | ueff. (m/s) | | | 2.2 | 1.9 | |
| | X0,1(m) | | | 4.5 | 4.3 | |
| | X0,25 (m) | | | 2.5 | 2.3 | |
| | ΔPt (Pa) | | | 34 | 23 | |
| | SPL (dBA) | | | 41 | 32 | |
| 750 | ueff. (m/s) | | | 2.7 | 2.3 | 1.4 |
| | X0,1(m) | | | 5.2 | 5.0 | 4.1 |
| | X0,25 (m) | | | 2.8 | 2.6 | 2.1 |
| | ΔPt (Pa) | | | 60 | 32 | 11 |
| | SPL (dBA) | | | 47 | 38 | 23 |
| 800 | ueff. (m/s) | | | 2.9 | 2.5 | 1.5 |
| | X0,1(m) | | | 5.7 | 5.3 | 4.3 |
| | X0,25 (m) | | | 3.0 | 2.8 | 2.2 |
| | ΔPt (Pa) | | | 75 | 39 | 13 |
| | SPL (dBA) | | | 48 | 41 | 25 |
| 950 | ueff. (m/s) | | | | 3.0 | 1.8 |
| | X0,1(m) | | | | 6.4 | 4.9 |
| | X0,25 (m) | | | | 3.1 | 2.5 |
| | ΔPt (Pa) | | | | 55 | 18 |
| | SPL (dBA) | | | | 46 | 31 |
| 1100 | ueff. (m/s) | | | | | 2.1 |
| | X0,1(m) | | | | | 5.3 |
| | X0,25 (m) | | | | | 2.7 |
| | ΔPt (Pa) | | | | | 25 |
| | SPL (dBA) | | | | | 36 |
| 1200 | ueff. (m/s) | | | | | 2.3 |
| | X0,1(m) | | | | | 5.9 |
| | X0,25 (m) | | | | | 3.0 |
| | ΔPt (Pa) | | | | | 27 |
| | SPL (dBA) | | | | | 39 |
| 1450 | ueff. (m/s) | | | | | 2.8 |
| | X0,1(m) | | | | | 6.9 |
| | X0,25 (m) | | | | | 3.4 |
| | ΔPt (Pa) | | | | | 36 |
| | SPL (dBA) | | | | | 45 |
| 1700 | ueff. (m/s) | | | | | 3.2 |
| | X0,1(m) | | | | | 8 |
| | X0,25 (m) | | | | | 4 |
| | ΔPt (Pa) | | | | | 49 |
| | SPL (dBA) | | | | | 49 |

## HSWD-B SWIRL DİFÜZÖR KOLAY SEÇİM TABLOSU
*HSWD-B SWIRL DIFFUSERS QUICK SELECTION TABLE*

Aeff ($m^2$): Efektif alan
Ueff (m/s): Efektif hız
V ($m^3$/h): Hava debisi
X0,1 (m): Konfor bölgesindeki atış mesafesi – 0,1 m/s hava hızında X0,25 (m): Konfor bölgesindeki atış mesafesi – 0,25 m/s hava hızında
ΔPt (Pa): Toplam basınç kaybı
SPL (dBA): Ses seviyesi

*Effective area*
*Effective velocity*
*Air flow rate*
*Throw distance in the comfort zone – 0,1 m/s air velocity*
*Throw distance in the comfort zone – 0,25 m/s air velocity*
*Total pressure drop*
*Sound level*

| | | HSD-B | | | | |
|---|---|---|---|---|---|---|
| | | Anma Çapı | | | | |
| V ($m^3$/h) | | 310x310 | 400x400 | 500x500 | 600x600 | 800x800 |
| | ueff. (m/s) | 0.9 | | | | |
| | X0,1(m) | 2.3 | | | | |
| 100 | X0,25 (m) | 1.0 | | | | |
| | ΔPt (Pa) | 8 | | | | |
| | SPL (dBA) | <20 | | | | |
| | ueff. (m/s) | 1.2 | | | | |
| | X0,1(m) | 3.2 | | | | |
| 130 | X0,25 (m) | 1.5 | | | | |
| | ΔPt (Pa) | 10 | | | | |
| | SPL (dBA) | 20 | | | | |
| | ueff. (m/s) | 1.6 | 1.3 | | | |
| | X0,1(m) | 4.2 | 2.7 | | | |
| 180 | X0,25 (m) | 1.9 | 0.8 | | | |
| | ΔPt (Pa) | 18 | 9 | | | |
| | SPL (dBA) | 36 | 26 | | | |
| | ueff. (m/s) | 2.0 | 1.6 | | | |
| | X0,1(m) | 4.9 | 3.2 | | | |
| 220 | X0,25 (m) | 2.4 | 1.0 | | | |
| | ΔPt (Pa) | 20 | 15 | | | |
| | SPL (dBA) | 44 | 31 | | | |
| | ueff. (m/s) | 2.2 | 1.8 | | | |
| | X0,1(m) | 5.3 | 3.7 | | | |
| 250 | X0,25 (m) | 2.7 | 1.1 | | | |
| | ΔPt (Pa) | 40 | 21 | | | |
| | SPL (dBA) | 50 | 35 | | | |
| | ueff. (m/s) | | 2.1 | | | |
| | X0,1(m) | | 4.4 | | | |
| 300 | X0,25 (m) | | 1.5 | | | |
| | ΔPt (Pa) | | 32 | | | |
| | SPL (dBA) | | 39 | | | |
| | ueff. (m/s) | | 2.4 | | | |
| | X0,1(m) | | 5.1 | | | |
| 340 | X0,25 (m) | | 1.8 | | | |
| | ΔPt (Pa) | | 42 | | | |
| | SPL (dBA) | | 43 | | | |
| | ueff. (m/s) | | 3.0 | 1.5 | | |
| | X0,1(m) | | 5.8 | 3.2 | | |
| 420 | X0,25 (m) | | 2.4 | 1.8 | | |
| | ΔPt (Pa) | | 73 | 16 | | |
| | SPL (dBA) | | 44 | 30 | | |
| | ueff. (m/s) | | | 1.6 | 1.2 | |
| | X0,1(m) | | | 3.5 | 2.9 | |
| 475 | X0,25 (m) | | | 2.0 | 1.3 | |
| | ΔPt (Pa) | | | 19 | 18 | |
| | SPL (dBA) | | | 34 | 30 | |
| | ueff. (m/s) | | | 1.9 | 1.4 | |
| | X0,1(m) | | | 3.8 | 3.3 | |
| 550 | X0,25 (m) | | | 2.2 | 1.4 | |
| | ΔPt (Pa) | | | 24 | 21 | |
| | SPL (dBA) | | | 40 | 32 | |

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# SWİRL DİFÜZÖR
*Swirl Diffusers*

## HSWD-B SWIRL DİFÜZÖR KOLAY SEÇİM TABLOSU
*HSWD-B SWIRL DIFFUSERS QUICK SELECTION TABLE*

| | | HSD-B | | | | |
|---|---|---|---|---|---|---|
| | | Anma Çapı | | | | |
| V ($m^3$/h) | | 310x310 | 400x400 | 500x500 | 600x600 | 800x800 |
| | ueff. (m/s) | | | 2.2 | 1.6 | |
| | X0,1(m) | | | 4.1 | 3.8 | |
| 625 | X0,25 (m) | | | 2.3 | 1.6 | |
| | ΔPt (Pa) | | | 33 | 26 | |
| | SPL (dBA) | | | 44 | 34 | |
| | ueff. (m/s) | | | 2.4 | 1.8 | |
| | X0,1(m) | | | 4.5 | 4.3 | |
| 700 | X0,25 (m) | | | 2.6 | 1.8 | |
| | ΔPt (Pa) | | | 42 | 31 | |
| | SPL (dBA) | | | 48 | 37 | |
| | ueff. (m/s) | | | 3.0 | 2.1 | |
| | X0,1(m) | | | 5.0 | 4.8 | |
| 850 | X0,25 (m) | | | 2.9 | 2.4 | |
| | ΔPt (Pa) | | | 59 | 42 | |
| | SPL (dBA) | | | 49 | 41 | |
| | ueff. (m/s) | | | | 2.5 | 1.7 |
| | X0,1(m) | | | | 5.7 | 3.6 |
| 1000 | X0,25 (m) | | | | 2.5 | 2.3 |
| | ΔPt (Pa) | | | | 62 | 16 |
| | SPL (dBA) | | | | 44 | 29 |
| | ueff. (m/s) | | | | 2.8 | 1.8 |
| | X0,1(m) | | | | 6.2 | 3.8 |
| 1100 | X0,25 (m) | | | | 2.8 | 2.4 |
| | ΔPt (Pa) | | | | 72 | 18 |
| | SPL (dBA) | | | | 48 | 32 |
| | ueff. (m/s) | | | | | 2.2 |
| | X0,1(m) | | | | | 4.2 |
| 1300 | X0,25 (m) | | | | | 2.7 |
| | ΔPt (Pa) | | | | | 23 |
| | SPL (dBA) | | | | | 38 |
| | ueff. (m/s) | | | | | 2.3 |
| | X0,1(m) | | | | | 4.4 |
| 1400 | X0,25 (m) | | | | | 2.8 |
| | ΔPt (Pa) | | | | | 25 |
| | SPL (dBA) | | | | | 40 |
| | ueff. (m/s) | | | | | 2.7 |
| | X0,1(m) | | | | | 4.8 |
| 1600 | X0,25 (m) | | | | | 3.1 |
| | ΔPt (Pa) | | | | | 32 |
| | SPL (dBA) | | | | | 44 |
| | ueff. (m/s) | | | | | 3.0 |
| | X0,1(m) | | | | | 5.3 |
| 1800 | X0,25 (m) | | | | | 3.4 |
| | ΔPt (Pa) | | | | | 46 |
| | SPL (dBA) | | | | | 50 |