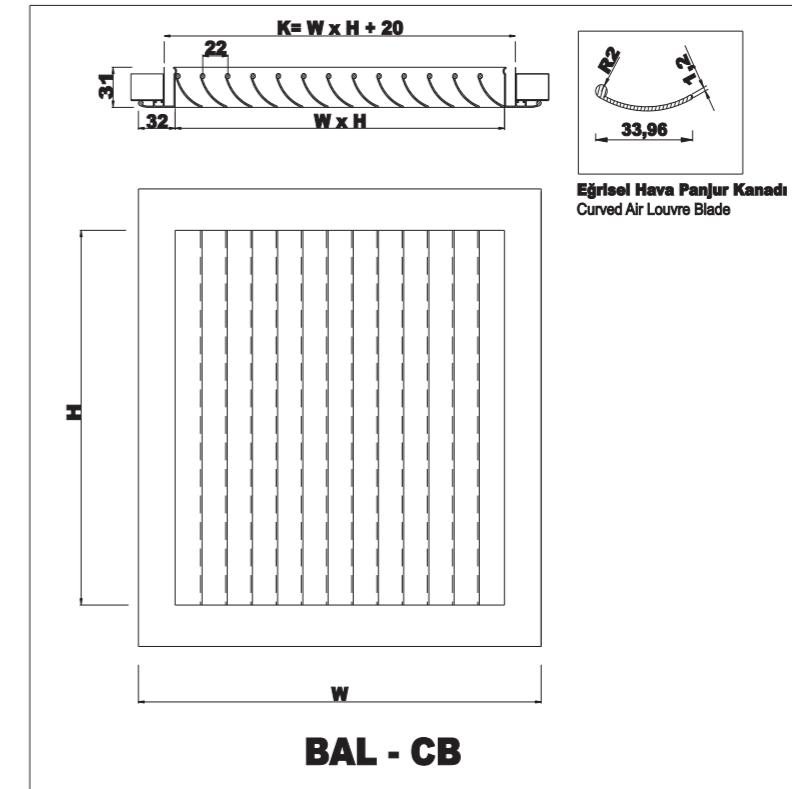
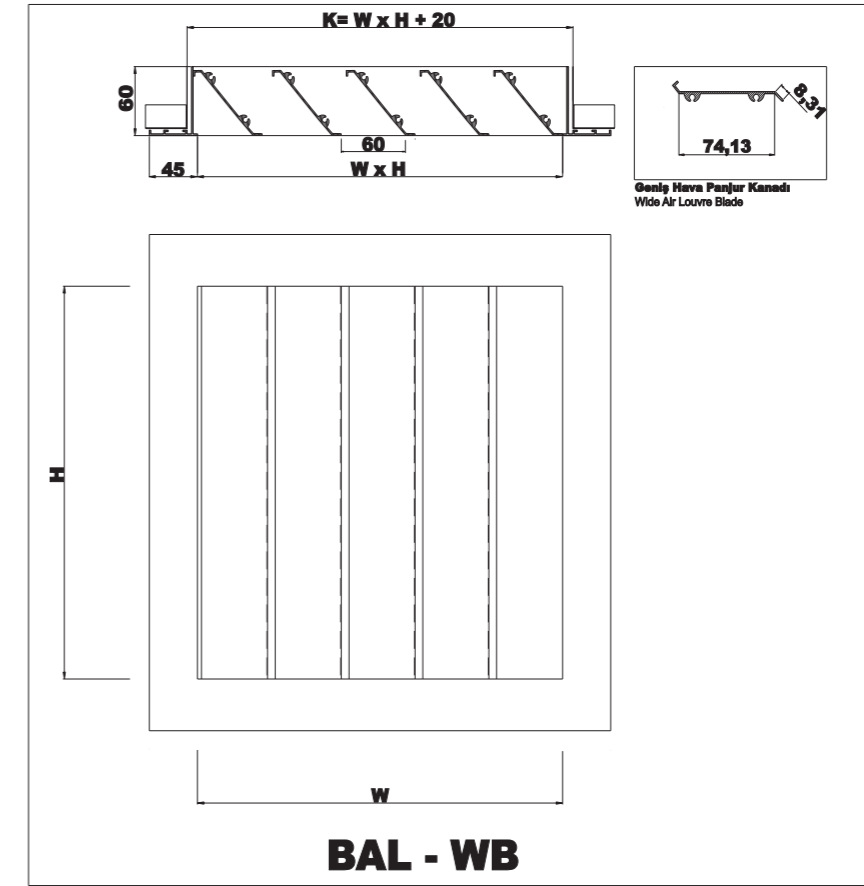


HAVA PANJURU (BAL) AIR LOUVRE

- Model:** *BAL – WB : Geniş kanatlı hava panjuru.
*BAL – CB : Eğrisel kanatlı hava panjuru.
*BAL – CHC : Eğrisel kanatlı kol kumandalı hava panjuru.
- Malzeme:** Ürün çerçeve ve kanatlarının tamamı ekstrüzyon yöntemiyle üretilmiş alüminyum profilden imal edilmektedir.
- Teknik Özellikler :** Hava panjurları, banyo, tuvalet, depo, hangar, otopark gibi mekanların havalandırması için olduğu gibi, sıcak hava apareylerinden sıcak hava üflenmesinde de kullanılmaktadırlar. Ayrıca, havalandırma kanallarında emiş ve egzost amacıyla kullanılmakta ve sistemi yağmur ve yaprak gibi dış ortam koşullarına karşı korumaktadırlar.
- Kaplama Tipleri:** *Elektrostatik toz boya (Standart renkler RAL 9010 ve RAL 9016)
*Alüminyum eloksal
*Diğer renkler fırın boya ile sağlanmakta olup, bunlar RAL 1013, 1014, 9001, 9002, 9003, 9011, 9018'dir.
- Montaj Tipleri:** Vidalı montaj.
- Aksesuarlar:** 12 x 12 mm galvanizli tel kafes.

- Model:** *BAL – WB : Air louver with wide blades.
*BAL – CB : Air louver with curved blades.
*BAL – CHC : Air louver with handle controlled curved blades.
- Material:** All of the product frame and blades are manufactured from extruded aluminium profile.
- Technical Properties:** Air louvres are used for ventilation of places such as bathroom, toilet, warehouse, hangar, car park, and for supply of hot air from the heating units, as well. Also, they are used for purpose of suction and exhaust in the ventilation ducts and they prevent the system against the outside conditions such as rain and leaf.
- Coating Types:** *Electrostatic powder coating (Standard colors are RAL 9010 and RAL 9016)
*Aluminium anodized
*Other colors are provided with enamel paint and these are RAL 1013,1014, 9001, 9002, 9003, 9011, 9018.
- Installation Types:** Fixing with screw.
- Accessories:** 12 x 12 mm galvanized wire mesh.

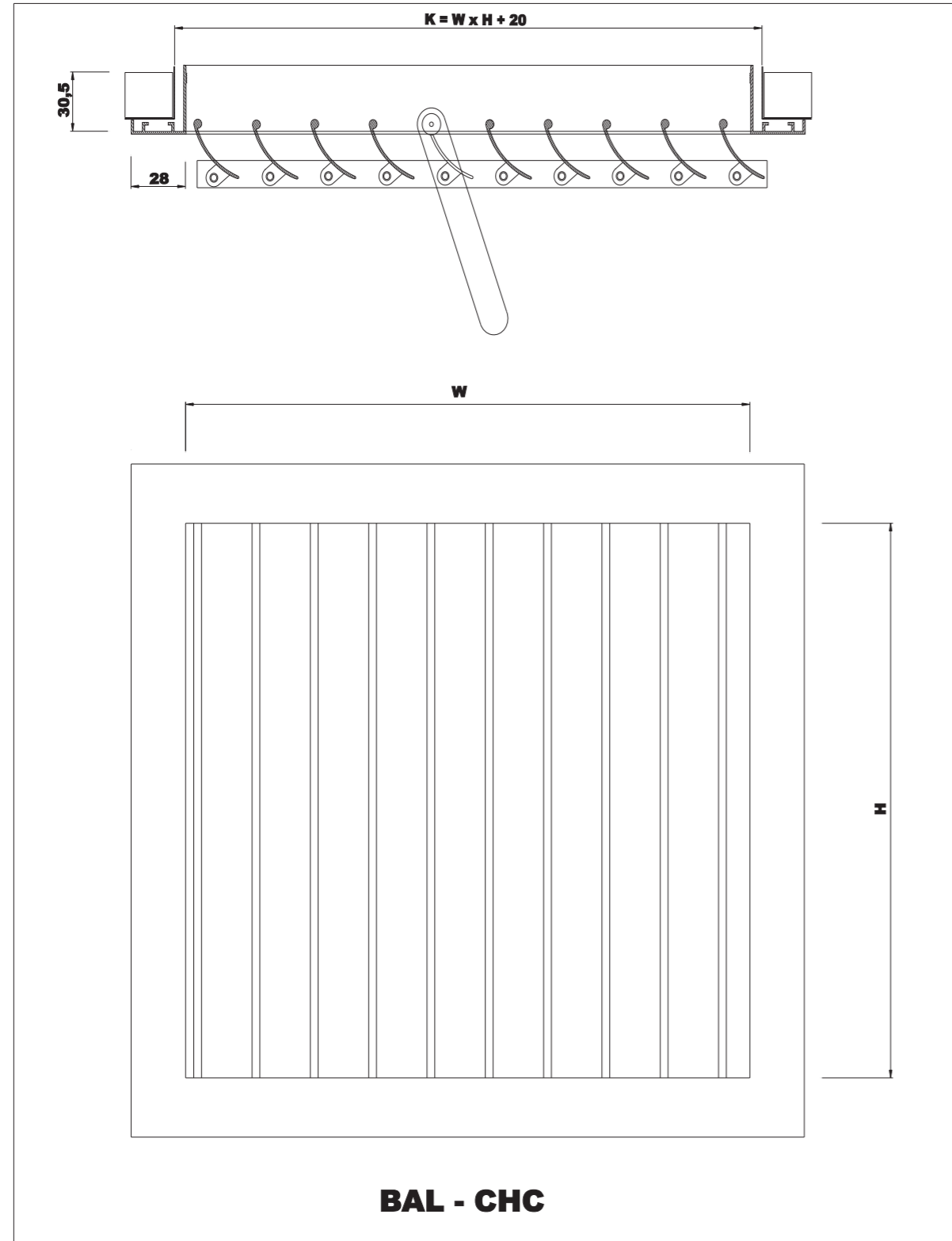
Hava Panjuru Teknik Detayları Air Louvre Technical Details



W (mm) : Boğaz genişliği (Neck width)
H (mm) : Boğaz yüksekliği (Neck height)

Hava Panjuru Teknik Detayları

Air Louvre Technical Details



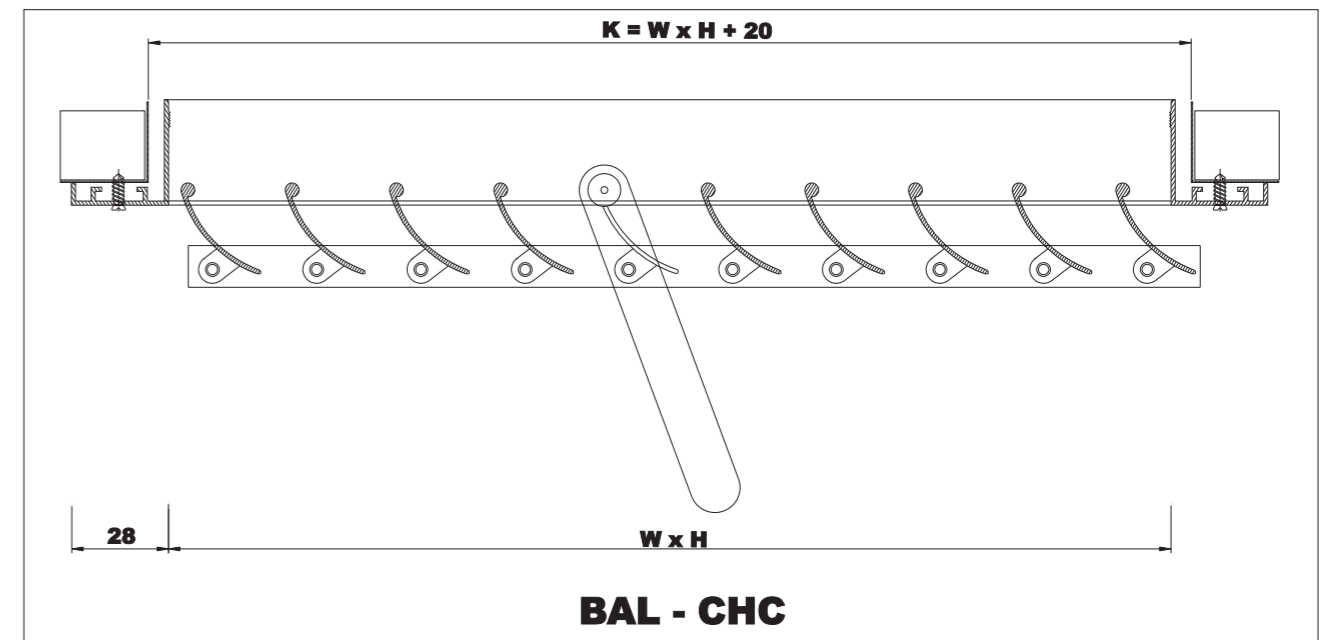
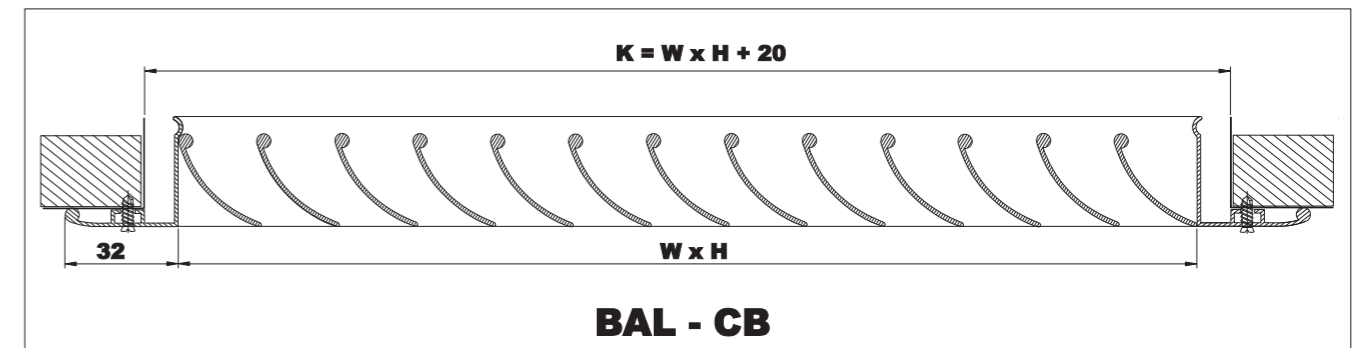
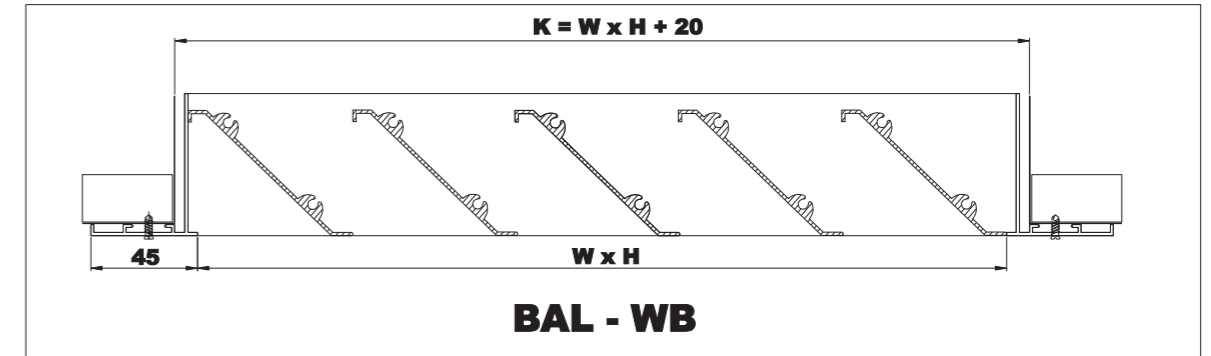
W (mm) : Boğaz genişliği (Neck width)
H (mm) : Boğaz yüksekliği (Neck height)

Hava Panjuru Montaj Tipleri

Air Louvre Fixing Types

Vidalı Montaj

Fixing with Screw



W (mm) : Boğaz genişliği (Neck width)
H (mm) : Boğaz yüksekliği (Neck height)
K (mm) : Nominal kanal genişliği/yüksekliği (Nominal duct width/height)

BAL-WB, BAL-CB ve BAL-CHC Tipi Hava Panjuru Etketif Alanları
BAL-WB, BAL-CB and BAL-CHC Type Air Louvre Effective Areas

I - BAL - WB Tipi Hava Panjuru Etketif Alanları
BAL - WB Type Air Louvre Effective Areas

| W (mm) | A _{eff.} (m ²) | | | | | | | | | | | | | | | |
|--------|-------------------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| | H (mm) | | | | | | | | | | | | | | | |
| | 200 | 300 | 400 | 500 | 600 | 700 | 800 | 900 | 1000 | 1100 | 1200 | 1400 | 1600 | 1800 | 2000 | 2500 |
| 200 | 0,025 | 0,045 | 0,065 | 0,085 | 0,105 | 0,125 | 0,145 | 0,165 | 0,185 | 0,205 | 0,225 | 0,265 | 0,305 | 0,345 | 0,385 | 0,485 |
| 300 | 0,038 | 0,068 | 0,098 | 0,128 | 0,158 | 0,188 | 0,218 | 0,248 | 0,278 | 0,308 | 0,338 | 0,398 | 0,458 | 0,518 | 0,578 | 0,728 |
| 400 | 0,050 | 0,090 | 0,130 | 0,170 | 0,210 | 0,250 | 0,290 | 0,330 | 0,370 | 0,410 | 0,450 | 0,530 | 0,610 | 0,690 | 0,770 | 0,970 |
| 500 | 0,063 | 0,113 | 0,163 | 0,213 | 0,263 | 0,313 | 0,363 | 0,413 | 0,463 | 0,513 | 0,563 | 0,663 | 0,763 | 0,863 | 0,963 | 1,213 |
| 600 | 0,075 | 0,135 | 0,195 | 0,255 | 0,315 | 0,375 | 0,435 | 0,495 | 0,555 | 0,615 | 0,675 | 0,795 | 0,915 | 1,035 | 1,155 | 1,455 |
| 700 | 0,088 | 0,158 | 0,228 | 0,298 | 0,368 | 0,438 | 0,508 | 0,578 | 0,648 | 0,718 | 0,788 | 0,928 | 1,068 | 1,208 | 1,348 | 1,698 |
| 800 | 0,100 | 0,180 | 0,260 | 0,340 | 0,420 | 0,500 | 0,580 | 0,660 | 0,740 | 0,820 | 0,900 | 1,060 | 1,220 | 1,380 | 1,540 | 1,940 |
| 900 | 0,113 | 0,203 | 0,293 | 0,383 | 0,473 | 0,563 | 0,653 | 0,743 | 0,833 | 0,923 | 1,013 | 1,193 | 1,373 | 1,553 | 1,733 | 2,183 |
| 1000 | 0,125 | 0,225 | 0,325 | 0,425 | 0,525 | 0,625 | 0,725 | 0,825 | 0,925 | 1,025 | 1,125 | 1,325 | 1,525 | 1,725 | 1,925 | 2,425 |
| 1100 | 0,138 | 0,248 | 0,358 | 0,468 | 0,578 | 0,688 | 0,798 | 0,908 | 1,018 | 1,128 | 1,238 | 1,458 | 1,678 | 1,898 | 2,118 | 2,668 |
| 1200 | 0,151 | 0,271 | 0,391 | 0,511 | 0,631 | 0,751 | 0,871 | 0,991 | 1,111 | 1,231 | 1,351 | 1,591 | 1,831 | 2,071 | 2,311 | 2,911 |
| 1400 | 0,176 | 0,316 | 0,456 | 0,596 | 0,736 | 0,876 | 1,016 | 1,156 | 1,296 | 1,436 | 1,576 | 1,856 | 2,136 | 2,416 | 2,696 | 3,396 |
| 1600 | 0,201 | 0,361 | 0,521 | 0,681 | 0,841 | 1,001 | 1,161 | 1,321 | 1,481 | 1,641 | 1,801 | 2,121 | 2,441 | 2,761 | 3,081 | 3,881 |
| 1800 | 0,226 | 0,406 | 0,586 | 0,766 | 0,946 | 1,126 | 1,306 | 1,486 | 1,666 | 1,846 | 2,026 | 2,386 | 2,746 | 3,106 | 3,466 | 4,366 |
| 2000 | 0,251 | 0,451 | 0,651 | 0,851 | 1,051 | 1,251 | 1,451 | 1,651 | 1,851 | 2,051 | 2,251 | 2,651 | 3,051 | 3,451 | 3,851 | 4,851 |
| 2500 | 0,314 | 0,564 | 0,814 | 1,064 | 1,314 | 1,564 | 1,814 | 2,064 | 2,314 | 2,564 | 2,814 | 3,314 | 3,814 | 4,314 | 4,814 | 6,064 |

II - BAL - CB ve BAL - CHC Tipi Hava Panjuru Etketif Alanları
BAL - CB and BAL - CHC Type Air Louvre Effective Areas

| W (mm) | A _{eff.} (m ²) | | | | | | | | | | |
|--------|-------------------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| | H (mm) | | | | | | | | | | |
| | 100 | 150 | 200 | 300 | 400 | 500 | 600 | 700 | 800 | 900 | 1000 |
| 150 | 0,011 | 0,019 | 0,026 | 0,041 | 0,056 | 0,071 | 0,086 | 0,101 | 0,116 | 0,131 | 0,146 |
| 200 | 0,015 | 0,025 | 0,035 | 0,055 | 0,075 | 0,095 | 0,115 | 0,135 | 0,155 | 0,175 | 0,195 |
| 300 | 0,023 | 0,038 | 0,053 | 0,083 | 0,113 | 0,143 | 0,173 | 0,203 | 0,233 | 0,263 | 0,293 |
| 400 | 0,031 | 0,051 | 0,071 | 0,111 | 0,151 | 0,191 | 0,231 | 0,271 | 0,311 | 0,351 | 0,391 |
| 500 | 0,038 | 0,063 | 0,088 | 0,138 | 0,188 | 0,238 | 0,288 | 0,338 | 0,388 | 0,438 | 0,488 |
| 600 | 0,046 | 0,076 | 0,106 | 0,166 | 0,226 | 0,286 | 0,346 | 0,406 | 0,466 | 0,526 | 0,586 |
| 700 | 0,054 | 0,089 | 0,124 | 0,194 | 0,264 | 0,334 | 0,404 | 0,474 | 0,544 | 0,614 | 0,684 |
| 800 | 0,061 | 0,101 | 0,141 | 0,221 | 0,301 | 0,381 | 0,461 | 0,541 | 0,621 | 0,701 | 0,781 |
| 900 | 0,069 | 0,114 | 0,159 | 0,249 | 0,339 | 0,429 | 0,519 | 0,609 | 0,699 | 0,789 | 0,879 |
| 1000 | 0,077 | 0,127 | 0,177 | 0,277 | 0,377 | 0,477 | 0,577 | 0,677 | 0,777 | 0,877 | 0,977 |

W (mm) : Boğaz genişliği (Neck width)
H (mm) : Boğaz yüksekliği (Neck height)
A_{eff.} (m²) : Etketif alan (Effective area)

Hava Panjuru Seçim Tablosu
Air Louvre Selection Table

| A _{eff.} (m ²) W x H (mm) | u _{eff.} (m/s) P _{tot.} (Pa) | 2,0 | 2,5 | 3,0 | 3,5 | 4,0 | 4,5 | 5,0 | 6,0 |
|---|---|--------|------|--------|--------|--------|--------|-------|--------|
| | | 10 | 30 | 45 | 62 | 82,5 | 100 | 131,3 | 187,5 |
| 0,011 150 x 100 | V (m ³ /h) | 79,2 | 99 | 118,8 | 138,6 | 158,4 | 178,2 | 198 | 237,6 |
| 0,015 200 x 100 | | 108 | 135 | 162 | 189 | 216 | 243 | 270 | 324 |
| 0,035 200 x 200 | | 252 | 315 | 378 | 441 | 504 | 567 | 630 | 756 |
| 0,045 200 x 300 | | 324 | 405 | 486 | 567 | 648 | 729 | 810 | 972 |
| 0,065 200 x 400 | | 468 | 585 | 702 | 819 | 936 | 1053 | 1170 | 1404 |
| 0,085 200 x 500 | | 612 | 765 | 918 | 1071 | 1224 | 1377 | 1530 | 1836 |
| 0,106 600 x 200 | | 763,2 | 954 | 1144,8 | 1335,6 | 1526,4 | 1717,2 | 1908 | 2289,6 |
| 0,131 150 x 900 | | 943,2 | 1179 | 1414,8 | 1650,6 | 1886,4 | 2122,2 | 2358 | 2829,6 |
| 0,176 1400 x 200 | | 1267,2 | 1584 | 1900,8 | 2217,6 | 2534,4 | 2851,2 | 3168 | 3801,6 |
| 0,201 1600 x 200 | | 1447,2 | 1809 | 2170,8 | 2532,6 | 2894,4 | 3256,2 | 3618 | 4341,6 |
| 0,250 400 x 700 | | 1800 | 2250 | 2700 | 3150 | 3600 | 4050 | 4500 | 5400 |
| 0,286 600 x 500 | | 2059,2 | 2574 | 3088,8 | 3603,6 | 4118,4 | 4633,2 | 5148 | 6177,6 |
| 0,325 1000 x 400 | | 2340 | 2925 | 3510 | 4095 | 4680 | 5265 | 5850 | 7020 |

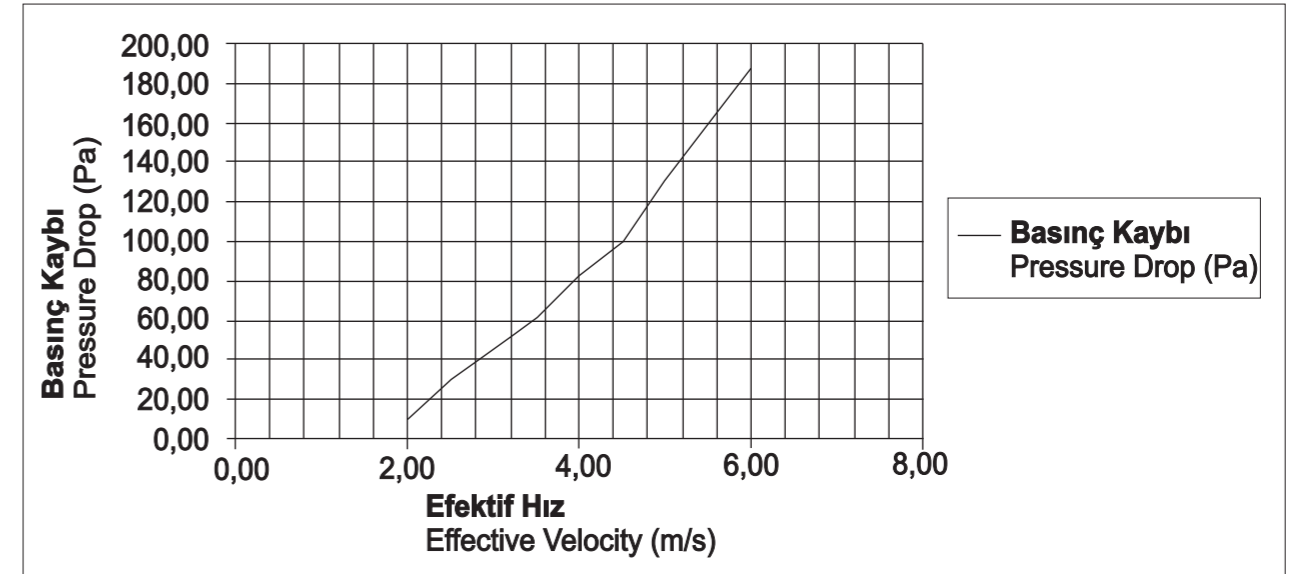
W (mm) : Boğaz genişliği (Neck width)
H (mm) : Boğaz yüksekliği (Neck height)
A_{eff.} (m²) : Etketif alan (Effective area)
u_{eff.} (m/s) : Etketif hız (Effective velocity)
V (m³/h) : Hava debisi (Air flow rate)
P_{tot.} (Pa) : Toplam basınç kaybı (Total pressure drop)

Hava Panjuru Seçim Tablosu Air Louvre Selection Table

| A _{eff.} (m ²) W x H (mm) | U _{eff.} (m/s) | 2,0 | 2,5 | 3,0 | 3,5 | 4,0 | 4,5 | 5,0 | 6,0 |
|---|-------------------------|---------|-------|---------|---------|---------|---------|--------|----------|
| | P _{tot.} (Pa) | 10 | 30 | 45 | 62 | 82,5 | 100 | 131,3 | 187,5 |
| 0,425 1000 x 500 | V (m ³ /h) | 3060 | 3825 | 4590 | 5355 | 6120 | 6885 | 7650 | 9180 |
| 0,466 600 x 800 | | 3355,2 | 4194 | 5032,8 | 5871,6 | 6710,4 | 7549,2 | 8388 | 10065,6 |
| 0,525 1000 x 600 | | 3780 | 4725 | 5670 | 6615 | 7560 | 8505 | 9450 | 11340 |
| 0,725 1000 x 800 | | 5220 | 6525 | 7830 | 9135 | 10440 | 11745 | 13050 | 15660 |
| 0,877 1000 x 900 | | 6314,4 | 7893 | 9471,6 | 11050,2 | 12628,8 | 14207,4 | 15786 | 18943,2 |
| 0,977 1000 x 1000 | | 7034,4 | 8793 | 10551,6 | 12310,2 | 14068,8 | 15827,4 | 17586 | 21103,2 |
| 1,220 800 x 1600 | | 8784 | 10980 | 13176 | 15372 | 17568 | 19764 | 21960 | 26352 |
| 1,576 1400 x 1200 | | 11347,2 | 14184 | 17020,8 | 19857,6 | 22694,4 | 25531,2 | 28368 | 34041,6 |
| 2,026 1800 x 1200 | | 14587,2 | 18234 | 21880,8 | 25527,6 | 29174,4 | 32821,2 | 36468 | 43761,6 |
| 2,696 1400 x 2000 | | 19411,2 | 24264 | 29116,8 | 33969,6 | 38822,4 | 43675,2 | 48528 | 58233,6 |
| 3,106 1800 x 1800 | | 22363,2 | 27954 | 33544,8 | 39135,6 | 44726,4 | 50317,2 | 55908 | 67089,6 |
| 4,314 2500 x 1800 | | 31060,8 | 38826 | 46591,2 | 54356,4 | 62121,6 | 69886,8 | 77652 | 93182,4 |
| 6,064 2500 x 2500 | | 43660,8 | 54576 | 65491,2 | 76406,4 | 87321,6 | 98236,8 | 109152 | 130982,4 |

W (mm) : Boğaz genişliği (Neck width)
H (mm) : Boğaz yüksekliği (Neck height)
A_{eff.} (m²) : Efektif alan (Effective area)
u_{eff.} (m/s) : Efektif hız (Effective velocity)
V (m³/h) : Hava debisi (Air flow rate)
P_{tot.} (Pa) : Toplam basınç kaybı (Total pressure drop)

Hava Panjuru Basınç Kaybı Eğrisi Air Louvre Pressure Drop Diagram



u_{eff.} (m/s) : Efektif hız (Effective velocity)
P_{tot.} (Pa) : Toplam basınç kaybı (Total pressure drop)

