

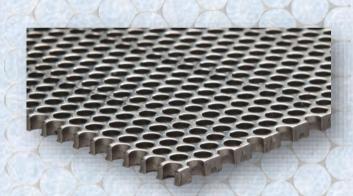
SUPER PUNCHING OKUTE Lital. Going beyond the limit

# SUPER PUNCHING.

has broken the mold.

Two Impossibles made Possible!

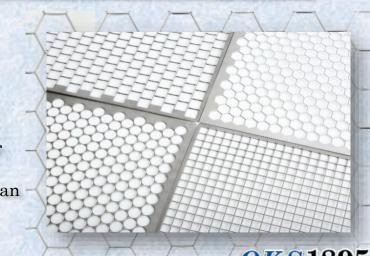
## 1. High Aspect Ratio by punching



- A new type of perforated metal from an advanced perforating technology.
- A new process allowing the holes to be smaller than the material thickness.
- Available in the most challenging metal - STAINLESS STEEL.
- A super high-ratio metal that standard perfortors can't do.

## 2. X-High Open area

- Perforated metal with X-High open area is an excellent product for filtration (sound, liquid, light, etc.) applications.
- Perforated metal with X-High open area offer a few key advantages over wire mesh.
- Our hexagonal perforation provides an extremely high open area of up to 93.7%.



OKS 1895

# 1. Smaller holes than the material thickness



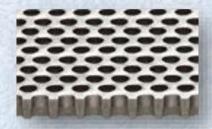
3060 2.5tx1.5\phix3.0 22.7%

Stainless steel perforated with smaller than the overall thickness of the material has been unavailable... until now.

But SUPER PUNCHING ® made it possible. Holes are smaller than material thickness. In other words, SUPER PUNCHING ® can increase material thickness with maintaining same hole size.

**SUPER PUNCHING @ o**ffers the following superior advantages compared to traditional perforating.

- 1. High pressure-resistance
- 2. High durability
- 3. Long-lasting



3070 3.0tx2.0\phix3.0 40.3%



3090 3.0tx3.0\psix4.0 51.0%



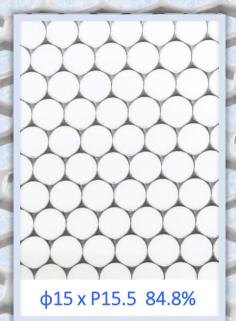
3175 6.0tx5.0\phix8.0 35.4%

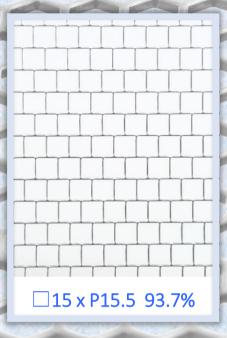
#### List of SUPER PUNCHING® Standard Tools

Model	Thickness (mm)	Hole diameter (mm)	Hole pitch (mm)	Open area (%)
3010	1.0t	0.75 <i>p</i>	1.5	22.5%
3015	1.0t	$0.75\phi$	2.0	12.7%
3020	1.0t	0.8φ	1.6	22.5%
3023	1.0t	0.9φ	2.0	18.2%
3025	1.2t	1.0 <i>φ</i>	2.0	22.5%
3028	1.2t	1.0 <i>φ</i>	3.0	10.0%
3030	1.5t	1.0 <i>φ</i>	3.0	10.0%
3033	1.5t	1.0 <i>φ</i>	2.5	14.4%
3040	2.0t	1.2 <i>φ</i>	2.4	22.5%
3045	2.0t	1.5 <i>φ</i>	3.0	22.5%
3050	2.0t	$2.0\phi$	3.0	40.0%
3060	2.5t	1.5 <i>\phi</i>	3.0	22.5%
3065	2.5t	2.0 <i>φ</i>	3.5	29.4%

Mandal	Thickness	Hole diameter	Hole pitch	Open area
Model	(mm)	(mm)	(mm)	(%)
3070	3.0t	2.0φ	3.0	40.0%
3075	3.0t	2.0φ	4.0	22.5%
3080	3.0t	2.5 <i>\phi</i>	5.0	22.5%
3090	3.0t	3.0 <i>φ</i>	4.0	50.6%
3095	3.0t	4.0 <i>φ</i>	5.0	57.6%
3100	4.0t	3.0 <i>φ</i>	5.0	32.4%
3105	4.0t	3.5 <i>\phi</i>	6.0	30.6%
3110	4.0t	4.0 <i>φ</i>	6.0	40.0%
3150	5.0t	4.0 <i>φ</i>	8.0	22.5%
3155	5.0t	4.5 <i>\phi</i>	9.5	20.2%
3170	6.0t	4.5 <i>\phi</i>	10.5	16.5%
3175	6.0t	5.0 <i>φ</i>	8.0	35.2%
3180	6.0t	6.0 <i>p</i>	9.0	40.0%

# 2. X-High Open area of up to 93.7%







<u>Up to 93.7% Open area is available</u>: SUPER PUNCHING® can achieve maximum 93.7% open area for Hexagonal holes and Square holes and 84.8% for round holes.

<u>Materials</u>: Available materials are Stainless Steel, Mild steel, Aluminium and CFRTP. <u>Advantages compared with Wire Mesh</u>: X-High Open Area offers a few key advantages over wire mesh, such as higher structural integrity and the ability to leave some surfaces without holes to prevent spillage of product.

Applications: X-High Open Area is most desirable for applications that require free flow of fluids, heat dissipation, pressure drops, acoustic absorption, and reduced weight so that it's suitable for Straightening filters, Supportive housing for air filters, Speaker covers, etc.

Material Thick	Thick	Hole	Hole size	Pitch	Dattorn	Onon area
	THICK.	shape	(mm)	(mm)	Pattern	Open area
		Round	5.0	5.50	60° staggered	74.9%
Ţ			10.0	10.50		82.2%
SUS304 1.0			15.0	15.50		84.8%
		Square	5.0	5.50	Straight	82.6%
			10.0	10.50		90.7%
	1 0mm		15.0	15.50		93.7%
	SUS304 1.0mm		5.0	5.50	60° staggered	82.6%
			10.0	10.50		90.7%
			15.0	15.50		93.7%
		Hexagon	W5.0	5.50	60° staggered	82.6%
			W10.0	10.50		90.7%
			W15.0	15.50		93.7%

Material	Thick.	Hole	Hole size	Pitch	Pattern	Open area
		shape	(mm)	(mm)		•
		Round	5.0	5.75		68.5%
SUS304 1.			6.0	6.70	60° staggered	72.7%
			10.0	10.75		78.4%
			15.0	15.75		82.2%
		Square	5.0	5.75	Straight	75.6%
			10.0	10.75		86.5%
	1.5mm		15.0	15.75		90.7%
			5.0	5.75	60° staggered	75.6%
			10.0	10.75		86.5%
			15.0	15.75		90.7%
		Hexagon	W6.0	6.70	60° staggered	80.2%
			W10.0	10.75		86.5%
			W15.0	15.75		90.7%



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Custom patterns, materials, and sizes are available.

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Movie is also available!

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