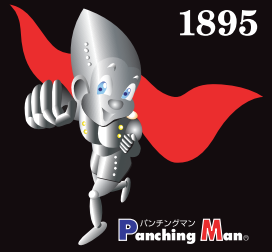
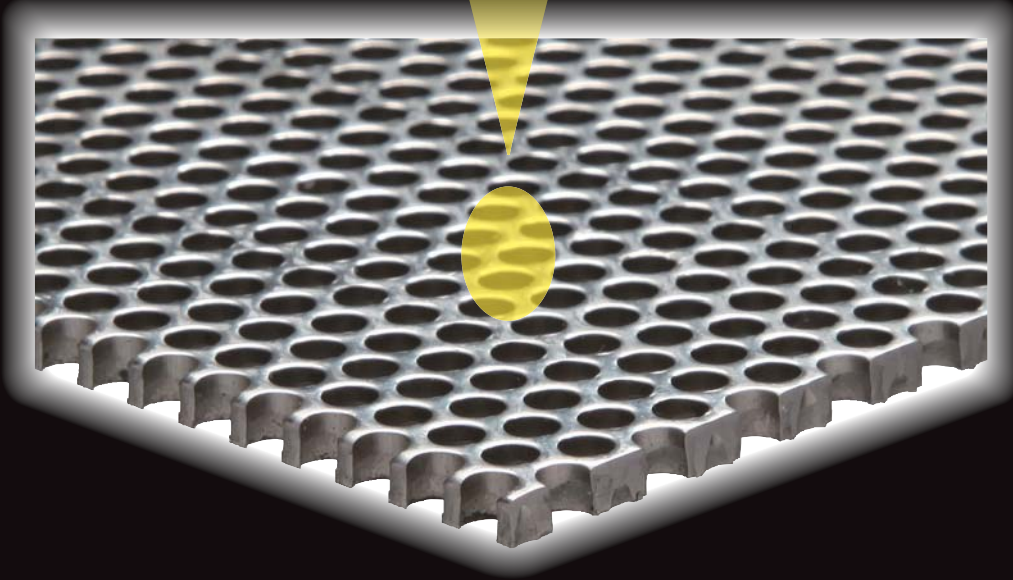




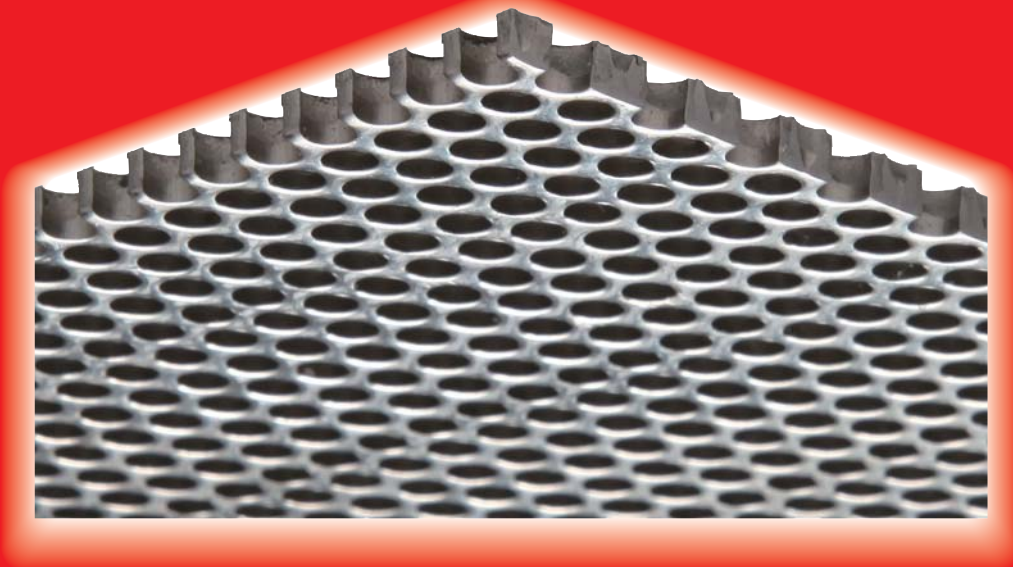
1895



Going Beyond
The Limits



SUPER PUNCHING™



PERFORATED METALS **OKUTANI**
OKUTANI WIRE NETTING, MFG, CO., LTD.
KOBE JAPAN



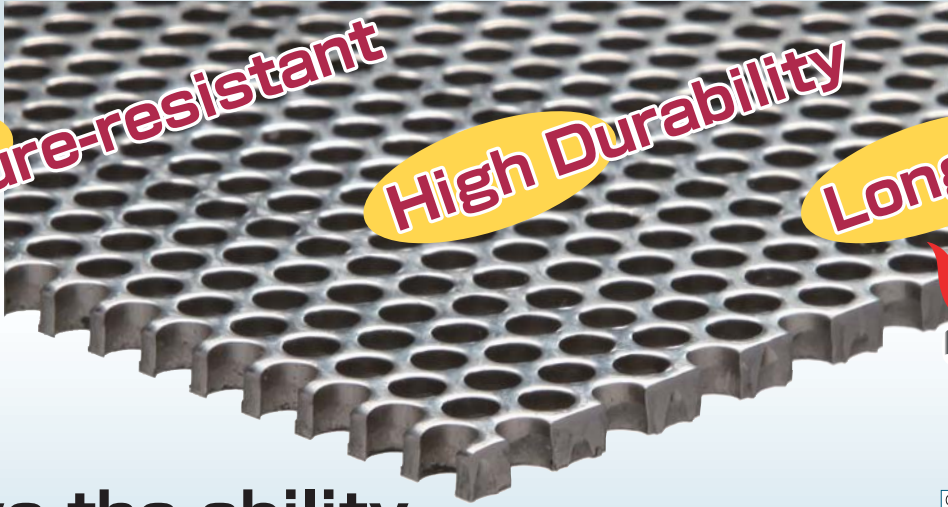
Featuring One-of-a-Kind Technology

SUPER PUNCHING™ Debut!!

High Pressure-resistant

High Durability

Long-Lasting



We have the ability to bore holes with diameters smaller than the thickness of the metal sheet.

About SUPER PUNCHING™

- We have the ability to bore holes with diameters smaller than the thickness of the metal sheet.
- Smaller pitch size than ever before! We can punch press small pitch sizes.
- Strengthen the metal by thickening the sheet and retaining the hole diameters.

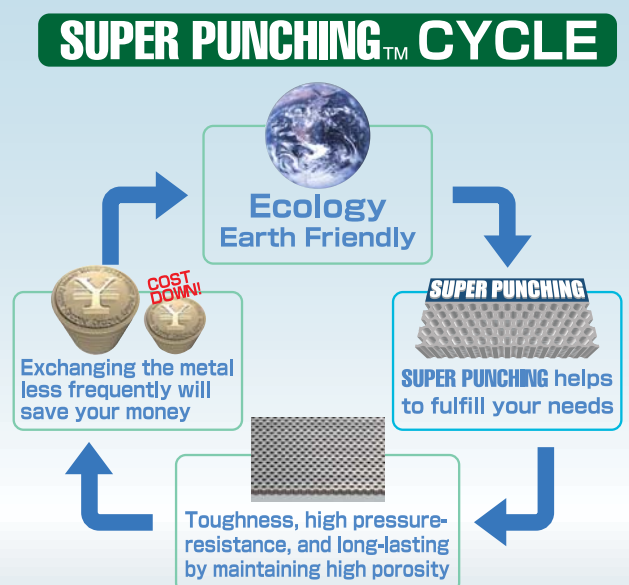


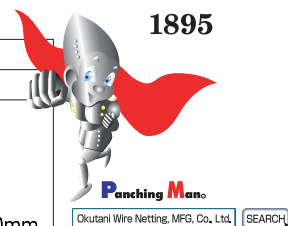
◀ SUPER PUNCHING was featured on Business & Technology Daily Newspaper (June 12th, 2009)

Super Punched workpieces are for

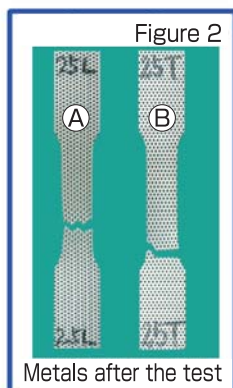
- Products that need high-pressure resistance, and high durability.
- Times when you can't use standard punched metal workpieces.
- Nuclear plant, Crude-processing plants, Wastewater treatment plant.
- Aircrafts, Watercrafts, Trains.
- Granulater, Crusher.
- Trommel.

We deliver worldwide.



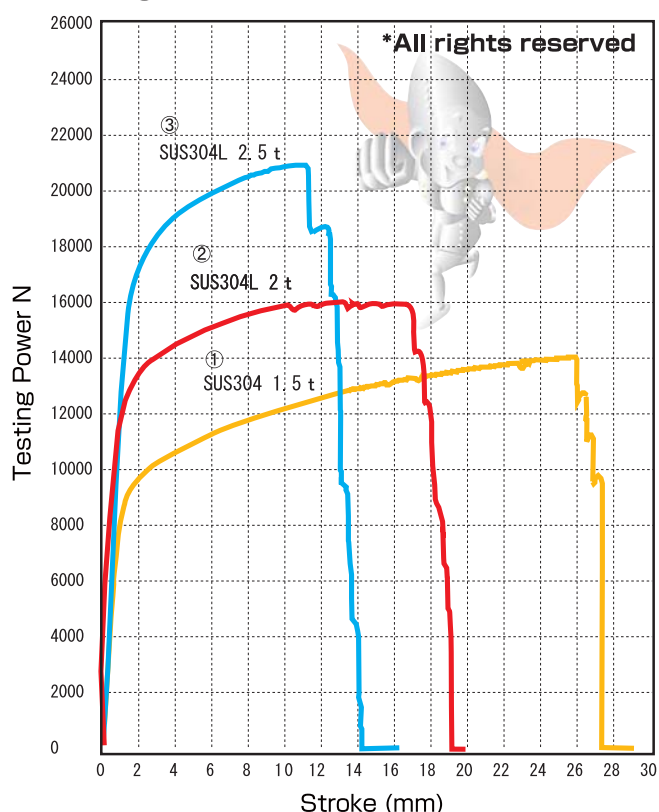


1. Purpose	Test for the stretching strength of SUPER PUNCHING
2. Models used for the test	① SUS304, ②・③ SUS 304L used for the test
3. Test Methods	Picture on Figure 1 : Metal at the test ◎ Stretch test (1) Test machine used : AG-X 100kN (Shimadzu) (2) Conditions of the Stretch Test (a) Test : 3 metal sheets (d) Size of Testing Metal : W 25mm L 210mm (b) Temperature : RT (23°C) Thickness ① 1.5mm (material: SUS304) (c) Speed : 30%/min ② 2.0mm (material: SUS304L) (3) (A,B) two ways to test for each material ③ 2.5mm (material: SUS304L)
4. Test Result	Test results are shown in the figures and tables Figure 1. Metal during the test Table 1. Results of the stretch test Figure 2. Metals after the test

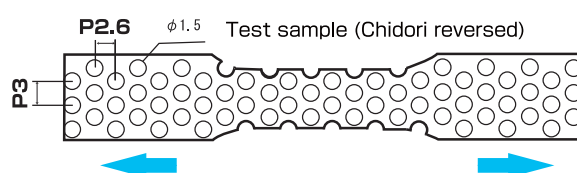
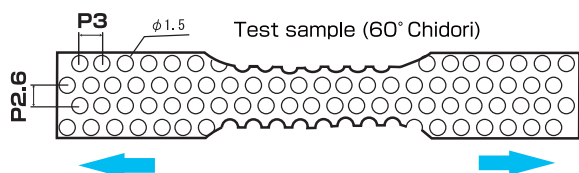
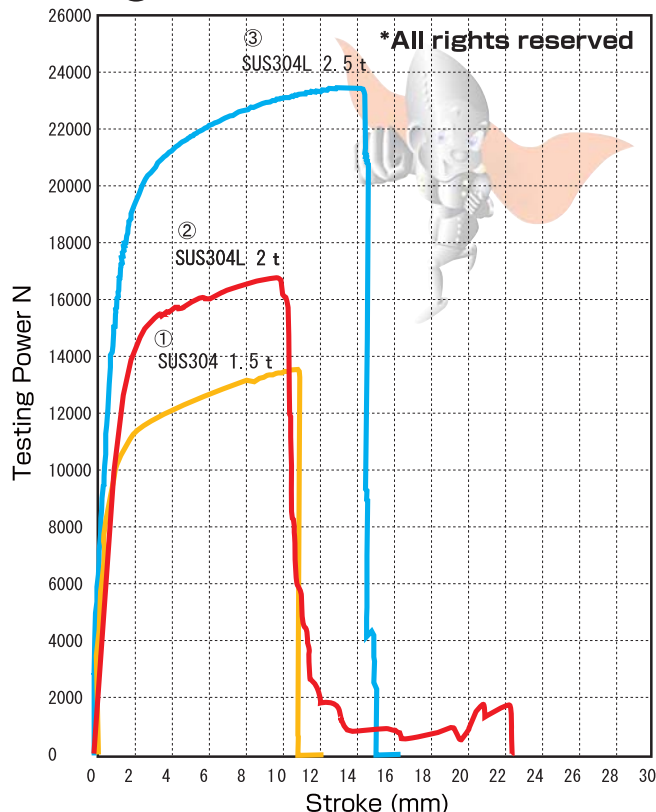


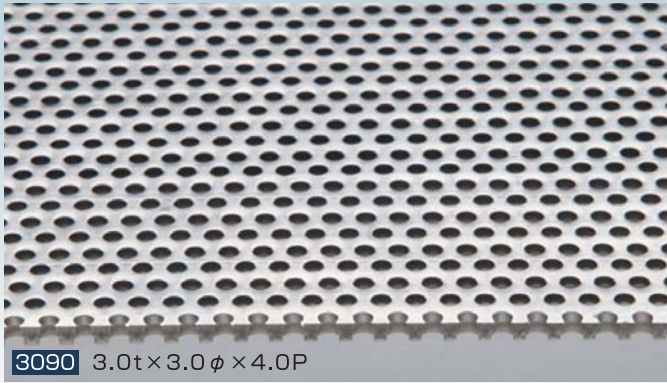
Results of stretch test					Table 1	
	Material	Thickness (t)	Size of Metal (measured)		Temperature (°C)	Maximum testing power N
			Width (mm)	Thickness (mm)		
①	SUS304	1.5 A	25.02	1.46	RT (23°C)	13941
		1.5 B	25.02	1.47		13513
②	SUS304L	2.0 A	25.02	1.92		16066
		2.0 B	25.02	1.93		17054
③	SUS304L	2.5 A	25.02	2.44		20891
		2.5 B	25.02	2.46		23496
Standard applied		Stretch test JIS Z 2241 (98)				

Ⓐ Stretch Force test Stroke Graph

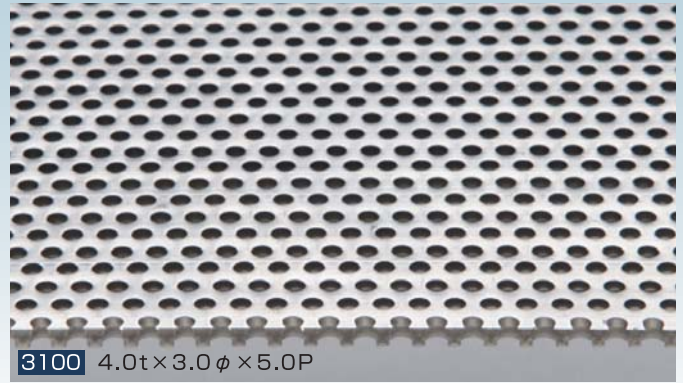


Ⓑ Stretch Force test Stroke Graph

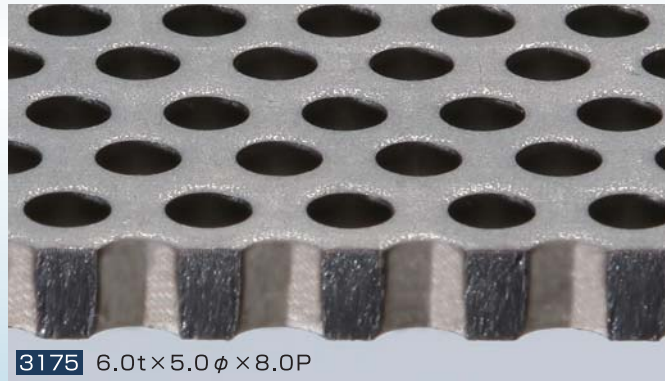




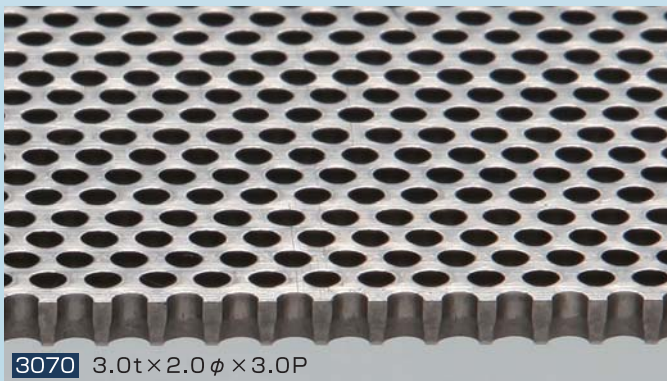
3090 3.0t × 3.0φ × 4.0P



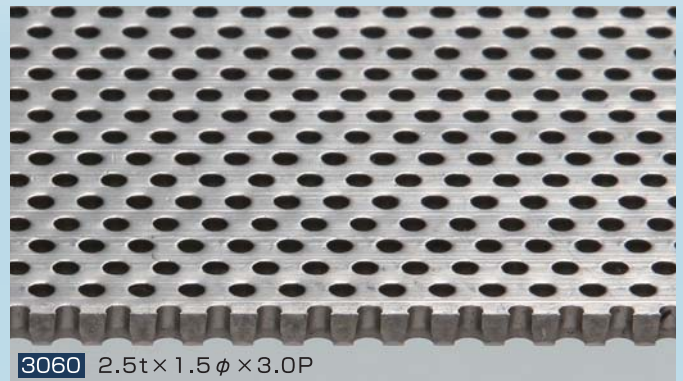
3100 4.0t × 3.0φ × 5.0P



3175 6.0t × 5.0φ × 8.0P



3070 3.0t × 2.0φ × 3.0P



3060 2.5t × 1.5φ × 3.0P

List of SUPER PUNCHING™ Standard Models

Model	Thickness	Punch Diameter	Pitch	Porosity
3010	1.0t	0.75φ	1.5	22.5%
3015	1.0t	0.75φ	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	1.0φ	2.0	22.5%
3028	1.2t	1.0φ	3.0	10.0%
3030	1.5t	1.0φ	3.0	10.0%
3033	1.5t	1.0φ	2.5	14.4%
3040	2.0t	1.2φ	2.4	22.5%
3045	2.0t	1.5φ	3.0	22.5%
3050	2.0t	2.0φ	3.0	40.0%
3060	2.5t	1.5φ	3.0	22.5%
3065	2.5t	2.0φ	3.5	29.4%

Model	Thickness	Punch Diameter	Pitch	Porosity
3070	3.0t	2.0φ	3.0	40.0%
3075	3.0t	2.0φ	4.0	22.5%
3080	3.0t	2.5φ	5.0	22.5%
3090	3.0t	3.0φ	4.0	50.6%
3095	3.0t	4.0φ	5.0	57.6%
3100	4.0t	3.0φ	5.0	32.4%
3105	4.0t	3.5φ	6.0	30.6%
3110	4.0t	4.0φ	6.0	40.0%
3150	5.0t	4.0φ	8.0	22.5%
3155	5.0t	4.5φ	9.5	20.2%
3170	6.0t	4.5φ	10.5	16.5%
3175	6.0t	5.0φ	8.0	35.2%
3180	6.0t	6.0φ	9.0	40.0%

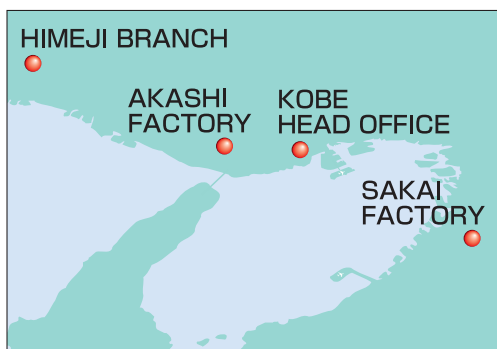
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KOBE HEAD OFFICE / SHOWROOM



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