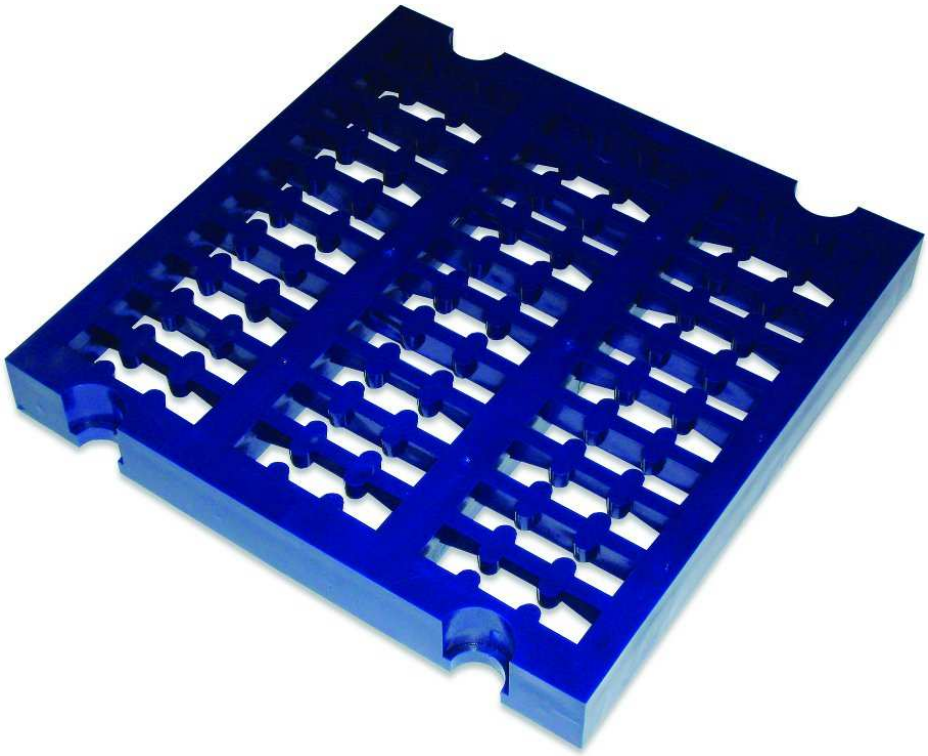
Industria Metalmecánica Rivet S.A.
La Estera 418
Lampa, Santiago
Chile

Tel +56-2-4891030
Fax +56-2-4891031
info@rivet.cl
www.rivet.cl

Modular Polyurethane Screens
Technical Information



Industria Metalmecánica Rivet S.A.
La Estera 418
Lampa, Santiago
Chile
Tel +56-2-4891030
Fax +56-2-4891031
info@rivet.cl
www.rivet.cl

Rivet Modular Polyurethane Screens

1. Features

The polyurethane modular screens Rivet for vibrating sieves are designed considering our many decades of experience in the classifying process. After a complex design process, which included finite elements analysis, we offer a product with the following advantages.

1.1 Longer lifespan

The unique feature of two central reinforcement elements, with the two lateral reinforcement and the presence of corbels in the critical points of wear and bending, allow to diminish the stresses in the screen, considerably extending its lifespan.

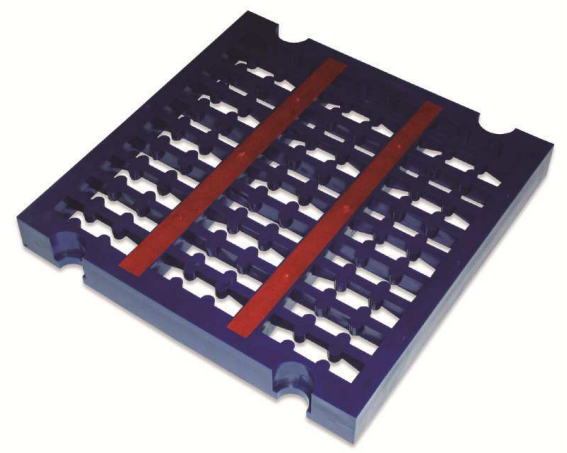


Fig 1. Double central reinforcement

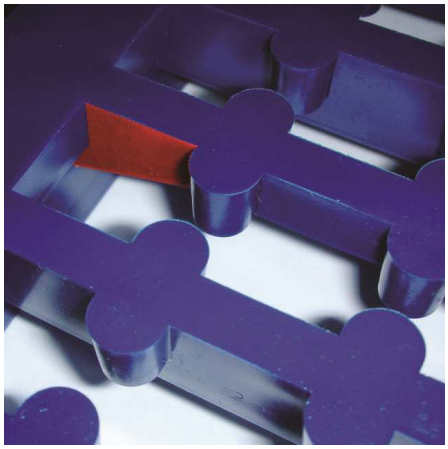


Fig 2. Reinforcing corbel

1.2 Larger effective area

The optimization of geometry and disposition of openings increases the useful area of the modules between 5% and 20%.

1.3 Higher efficiency and stricter tolerances

The quality of the material and the manufacturing process (plastic injection moulding) assures the correct dimensions of the openings, improving the efficiency of the sieving process.

Industria Metalmecánica Rivet S.A.
La Estera 418
Lampa, Santiago
Chile
Tel +56-2-4891030
Fax +56-2-4891031
info@rivet.cl
www.rivet.cl

1.4 Better non-blinding performance

The lower height of the nerves and the difference of height between adjacent inferior nerves, increase the amplitude of oscillation and generate a difference of amplitude between adjacent elements that strengthens the non-blinding effect.

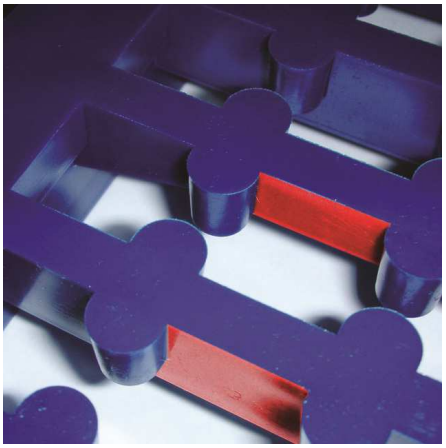


Fig 3. Adjacent nerves of different height

1.5 Availability and delivery time

The screens are injected in a modern machine in our own facilities, making the delivery time short.

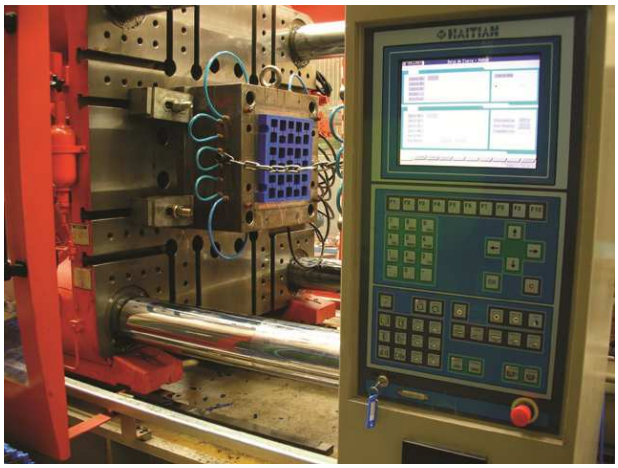


Fig 4. Injection process of a polyurethane modular screen

Industria Metalmecánica Rivet S.A.
La Estera 418
Lampa, Santiago
Chile
Tel +56-2-4891030
Fax +56-2-4891031
info@rivet.cl
www.rivet.cl

2. Geometric characteristics

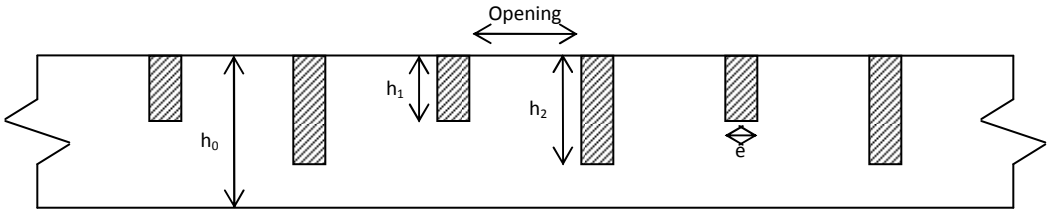


Fig 5. Dimensions description

Opening (*)	Height h_0 [mm]	Effective area [%]	Non-blinding	Nerve height h_1 [mm]	Nerve height h_2 [mm]	Nerve width e [mm]
5 mm	31	25.3	Yes	7.0	14.0	3.3
7 mm	31	32.1	Yes	8.0	12.0	3.5
3/8 in	31	24.8	Yes	20.0	20.0	6.2
1/2 in	31	39.9	Yes	8.3	12.0	4.3
1/2 in x 1 in	36	34.2	Yes	18.0	23.0	6.8
15 mm	36	32.0	Yes	21.0	24.0	8.7
17 mm	31	42.3	Yes	13.0	20.0	7.0
3/4 in	36	35.0	Yes	15.0	19.0	8.0
3/4 in	36	27.5	No	23.0	30.0	7.6
22 mm	36	37.5	Yes	18.0	24.0	11.5
1 in	36	28.2	Yes	18.0	24.0	13.0
27 mm	36	28.2	No	20.0	20.0	17.5
27 mm x 76 mm	36	39.7	No	20.0	20.0	17.5
12,7 mm x 38 mm	36	35.1	No	15.0	15.0	7.0
1.1/4 in	36	38.3	Yes	18.0	22.0	12.6
38 mm	36	38.8	No	25.0	25.0	16.0
40 mm	36	27.5	Yes	25.0	29.0	13.3
45 mm	36	34.9	No	15.0	25.0	28.0
2 in	36	44.4	No	20.0	28.0	16.0
Blind	31	0.0	n/a	5.0	10.0	5.0
Blind	36	0.0	n/a	5.0	10.0	5.0

(*) Special sizes are made upon request. Visit www.rivet.cl/modulos for an updated list of available sizes.

Industria Metalmecánica Rivet S.A.
La Estera 418
Lampa, Santiago
Chile
Tel +56-2-4891030
Fax +56-2-4891031
info@rivet.cl
www.rivet.cl

3. Polyurethane properties

Fig 6. Polyurethane pellets (picture University of California Riverside)

3.1 Mechanical properties (23 °C / 50% RH)

Property	Test condition	Unit	Standard	Value
Hardness, method A		-	ISO 868	85
Tensile strength	200 mm/min	MPa	acc. ISO 527-1,-3	40
Ultimate elongation	200 mm/min	%	acc. ISO 527-1,-3	450
Stress at 100% strain	200 mm/min	MPa	acc. ISO 527-1,-3	6.0
Stress at 300% strain	200 mm/min	MPa	acc. ISO 527-1,-3	17
Abrasion loss		mm^3	ISO 4649	30
Impact resilience		%	ISO 4662	42
Tear propagation resistance	500 mm/min	kN/m	ISO 34-1	70

3.2 Thermal properties

Property	Test condition	Unit	Standard	Value
Torsional storage modulus	-20 °C	MPa	ISO 6721-2	32
Torsional storage modulus	23 °C	MPa	ISO 6721-2	12
Torsional storage modulus	70 °C	MPa	ISO 6721-2	8.7

3.3 Other properties

Property	Test condition	Unit	Standard	Value
Density		kg/m^3	ISO 1183	1200
Injection moulding melt temperature		°C		210 – 230