

STEEL DOWEL BARS - S355

Participation bars

DESCRIPTION AND USE

Isoplam® Participation Bars are disposable elements made of smooth round bars in S355 steel and are CE certified according to EN 10025-2/2019 standard.

They have a length of 60 cm and diameters ranging from 12 to 25 mm.

The bar is used as a load sharing bar between two concrete slabs in industrial flooring and has the function of counteracting vertical movements and supporting horizontal ones.

It is placed astride a joint.

If they are used with Isoplam Construction Joints, the bar is housed in the hole provided for it. In this case, the bar is supplied covered, for half of its length, by a plastic sheath blocked at the end by a plastic cap. The sleeve with the cap has the function of preventing the fresh concrete from binding to the portion of the bar, allowing the latter to slide for half inside the sleeve itself. The other half of the bar, on the other hand, will be anchored to the concrete of the adjacent plate. In this way, by placing several bars parallel to each other at a distance of 50 cm from each other, two adjacent concrete slabs will move freely horizontally along the axis of the bars themselves but not vertically.

TYPES AND SIZES

Isoplam Bars are made in various diameter sizes according to the height of the construction joints. Each 3 m Isoplam Construction Joint provides for the insertion of 6 bars.

Customized size bars can be made to order.

The table provides indications for the most used bars:

Construction Joint Height	Bar diameter	Bar length
$h \leq 10$ cm	Ø 14 mm	60 cm
$11 \text{ cm} \leq h \leq 16$ cm	Ø 16 mm	60 cm
$17 \text{ cm} \leq h \leq 20$ cm	Ø 18 mm	60 cm
$h \geq 21$ cm	Ø 20 mm	60 cm

Below are the resistances of the bars:

Ø [mm]	Taglio P _{SH} [kN]	Flessione P _{B,MAX} [kN]				
		C25/30	C28/35	C30/37	C32/40	C35/45
12	21.68	7.98	8.32	8.54	8.74	9.03
14	29.51	11.24	11.75	12.07	12.37	12.80
16	38.54	15.07	15.78	16.22	16.64	17.24
18	48.78	19.47	20.41	21.00	21.56	22.35
20	60.22	24.43	25.64	26.39	27.11	28.14
22	72.87	29.97	31.46	32.41	33.31	34.59
25	94.10	39.33	41.33	42.60	43.80	45.53

IMPORTANT

ISOPLAM S.R.L.

Via E. Mattei, 4 – Z. I. Maser (TV) – Italy Tel. (+39) 0423 925023 www.isoplam.it
UNI EN ISO 9001:2015 certified company Rev. of 16/07/2025



All information contained in this sheet is based on the best practical and laboratory experiences. It is the customer's responsibility to verify that the product is suitable for the intended use. The manufacturer accepts no liability for the results of incorrect applications. This sheet replaces and cancels the previous ones.
Isoplam products are intended for professional use. Isoplam Srl periodically organizes courses for its customers who request them. Anyone who uses these products without being authorized to do so does so at their own risk.