



fire door hinges technical data

Available in a selection of variants, Nico fire door hinges meet a broad range of performance requirements, including Certifire approval.

Where on-site removal of the door is necessary, there are a choice of hinge patterns each offering individual installation and performance characteristics. For more secure applications, the 4815 and 4817 fixed pin hinges with dual bearings are available – with radius corners for machine preparation or square corners for on-site installation.

Incorporating low-friction bearings to assist in the ease of door operation, LoadPro is the recommended choice for high efficiency specifications where conformity with the door opening resistance criteria of DDA (Disability Discrimination Act) is paramount.

Nico's range of steel and stainless steel hinges can also be used for fire resistance applications with adjusted door weights of 40 to 120kg. While requiring periodic lubrication to maintain maximum efficiency, the hinges offer a low cost solution to minimum fire door requirements, making them ideal for domestic, social housing and light commercial projects.

HINGE SELECTION

To assist in the correct hinge selection for a particular application, the tables and diagrams show recommended hinge positioning for optimum performance, as well as indicating the variables which should be applied to actual door dimensions when selecting hinges for extra high or wide doors, or when used in conjunction with standard or back-check door closers.

- Determine weight of the door including hardware
- Make adjustment for width of door (see Table 1)
- Make adjustment for type of door closer (see Table 2)

TABLE 1		
Door Height	Door Width	Adjustment
2000mm	up to 1000mm	None
2000mm	up to 1050mm	+10%
2000mm	up to 1100mm	+18%
2000mm	up to 1150mm	+26%
2000mm	up to 1200mm	+33%
2000mm	up to 1250mm	+40%

TABLE 2	
Closer	Adjustment
Standard Closer Fitted	+20%
Back-Check Closer Fitted	+75%

- Calculate adjusted weight; select hinge (see Table 3 - Page 2)

TABLE 3
Hinge

Hinge	Grade	Max Adjusted Door Weight: 3 Hinges
4515, 4535, 4532	7	40kg
4513, 4710	10	60kg
4715	11	80kg
4717, 4718, 1815	12	100kg
Mild Steel		
4720m 4722, 5315	13	120kg
4817, 4815		
Stainless Steel		

INTUMESCENT SELECTION

All fire tests on Nico hinges were carried out using 'Interdens' intumescent pads, which are made from mono ammonium phosphate in a glass fibre carrier.

To comply with the fire test certification all Nico fire hinges should be fitted with the same amount and type of intumescent material that was used during fire testing. As detailed below.

Using a different type or thickness of intumescent material than that used during testing could invalidate the test evidence for that hinge and therefore potentially the whole doorset.

Hinge Intumescent Requirement

30 minute timber based doorsets		
Model	Sizes	Intumescent Protection Required
4513	89mm x 89mm x 2.6mm	1mm Interdens
4515	101mm x 73mm x 2.6mm	1mm Interdens
4535	101mm x 73mm x 2.6mm	1mm Interdens
4532	101mm x 90mm x 2.6mm	1mm Interdens
4710	85mm x 76mm x 2.6mm	1mm Interdens
4715	98mm x 84mm x 2.6mm	1mm Interdens
4717	98mm x 84mm x 3mm	1mm Interdens
4718	98mm x 84mm x 3mm	1mm Interdens
4815	102mm x 89mm x 3mm	1mm Interdens
4815R	102mm x 89mm x 3mm	1mm Interdens
4817	107mm x 77mm x 3mm	1mm Interdens
5315	102mm x 76mm x 3mm	1mm Interdens
60 minute timber based doorsets		
Model	Sizes	Intumescent Protection Required
4515	101mm x 73mm x 2.6mm	1mm Interdens
4535	101mm x 73mm x 2.6mm	1mm Interdens
4542	101mm x 90mm x 2.6mm	1mm Interdens
4715	98mm x 84mm x 2.6mm	1mm Interdens
4720	110mm x 98mm x 3mm	1mm Interdens
4722	110mm x 84mm x 3mm	1mm Interdens
4815	102mm x 89mm x 3mm	1mm Interdens
4817	107mm x 77mm x 3mm	1mm Interdens
5315	102mm x 76mm x 3mm	1mm Interdens
120 minute timber based doorsets		
Model	Sizes	Intumescent Protection Required
5315	102mm x 76mm x 3mm	N/A



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