



## Weld Location & Control Pins

International Syalons manufacture a comprehensive range of weld location and control pins for use in resistance welding. For example, for welding captive nuts to body panels in automotive and commercial vehicle assembly. These components are available in both silicon nitride and zirconia.

### Syalon 101 and Zircalon

Syalon 101 is a grade of silicon nitride characterised by excellent thermal mechanical and wear resistant properties and is an ideal material for welding applications where high strength, thermal shock resistance and electrical insulation are required.

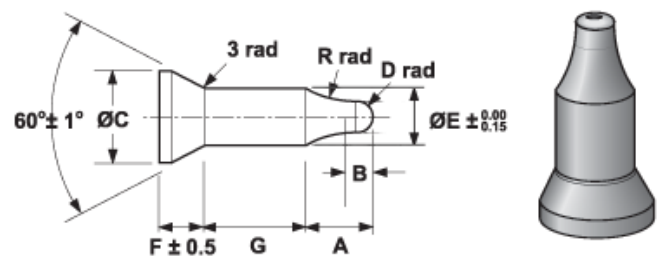
Zircalon, an advanced yttria stabilized zirconia, possesses high strength and toughness, is electrically insulating and excels where severe impact is expected. However, Zircalon is not recommended where thermal shock may occur.



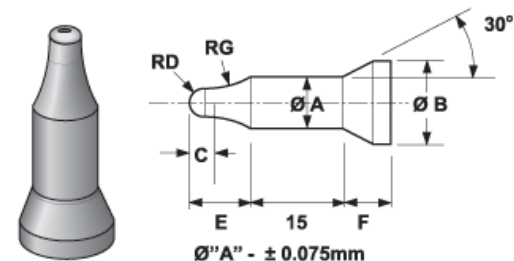
## Standard Weld Pins – Technical Information

The tables below show our range of standard pins. However, non-standard pins are also available.

Part No.	NUT SIZE	A	B	C	D	E	F	G	R
ISN 050060	M5	6	2	12	1	6.0	7.5	15	15
ISN 060070	M6	7	2	12	2	7.0	9.5	15	15
ISN 060078	M6	7	2	12	2	7.8	9.5	15	15
ISN 060088	M6	10	3	12	2	8.8	8.0	15	15
ISN 080090	M8	10	5	14	2.5	9.0	7.5	15	12.5
ISN 100110	M10	12	4	16	2.5	11.0	8.0	15	12.5
ISN 120130	M12	13	4	18	2.5	13.0	8.0	15	12.5



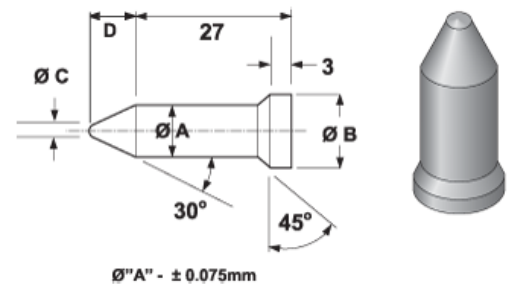
Part No.	NUT SIZE	Hole Size	A	B	C	D	E	F	G
ISN 1 DOL	M5	6.0	5.85	12	2	1.0	6	7.5	15.0
ISN 2 DOL	M6	7.0	6.85	12	2	2.0	7	8.0	15.0
ISN 2 DOL 7.2	M8 T/LESS	7.4	7.20	12	2	2.0	7	8.0	15.0
ISN 3 DOL	M6	7.5	7.35	12	2	2.0	7	8.0	15.0
ISN 4 DOL	M6	8.0	7.85	12	2	2.0	7	8.0	15.0
ISN 5 DOL	M8	9.0	8.85	12	3	2.0	9	8.0	15.0
ISN 6 DOL	M8	9.5	9.35	14	4	2.5	9	8.0	12.5
ISN 7 DOL	M8	10.0	9.85	16	4	2.5	10	8.0	12.5
ISN 815 DOL	M6	8.15	8.15	12	2	2.0	7	8.0	15.0
ISN 9 DOL	M10	11.0	10.85	16	4	2.5	11	8.0	12.5
ISN 10 DOL	M10	11.5	11.35	16	4	2.5	11	8.0	12.5
ISN 1015 DOL	M8	10.25	10.15	16	4	2.5	10	8.0	12.5
ISN 11 DOL	M10	12.0	11.85	16	4	2.5	11	8.0	12.5
ISN 12 DOL	M12	13.0	12.85	16	4	2.5	12	8.0	12.5
ISN 1215 DOL	M10	12.25	12.15	16	4	2.5	11	8.0	12.5
ISN 13 DOL	M6	8.2	8.00	12	2	2.0	7	8.0	15.0



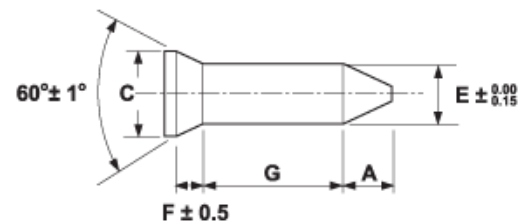


## Standard Weld Pins – Technical Information continued...

Part No.	NUT SIZE	HOLE SIZE	A	B	C	D
ISP 1	M4, M5, M6	6.00	5.85	10.0	1.5	4.3
ISP 2	M6	7.00	6.85	10.0	1.5	5.2
ISP 3	M6	7.50	7.35	12.0	2.0	5.4
ISP 4	M6	8.00	7.85	12.0	2.0	5.8
ISCP 5	M8	9.00	8.85	14.0	3.0	6.2
ISP 6	M8	9.5	9.35	14.0	3.0	6.6
ISP 7	M8	10.00	9.85	14.0	3.0	7.0
ISP 8	M8	10.50	10.35	14.0	3.0	7.5
ISP 9	M10	11.00	10.85	16.0	3.5	7.7
ISP 10	M10	11.50	11.35	16.0	3.5	8.1
ISP 11	M10, 7/16 UNF	12.00	11.85	16.0	3.5	8.5
ISP 12	M12, 7/16 UNF	13.00	12.85	16.0	4.5	8.9
ISP 13	M10	12.50	12.35	16.0	3.5	8.9
ISP 14	M14	15.00	14.86	18.0	5.0	10.4
ISP 15	M12	14.00	13.85	16.0	4.0	10.0
ISP 16	7/16 UNF	14.50	14.35	16.0	4.5	10.2
ISP 17	7/16 UNF	13.50	13.35	16.0	4.5	9.3
ISP 18	M14	15.20	15.15	17.0	5.0	10.6
ISP 24	M6	8.25	8.10	12.0	2.0	6.0
ISP 25	M6	8.40	8.15	12.0	2.0	6.1
ISP 26	M12/LESS	13.20	13.05	16.0	4.5	9.1
ISP 27	M8	8.70	8.55	12.0	2.0	6.4
ISP 28	M8	10.65	10.50	14.0	3.0	7.6
ISP 29	M8	8.15	8.05	12.0	2.0	6.0
ISP 30	M8	6.60	6.40	10.0	1.5	4.8



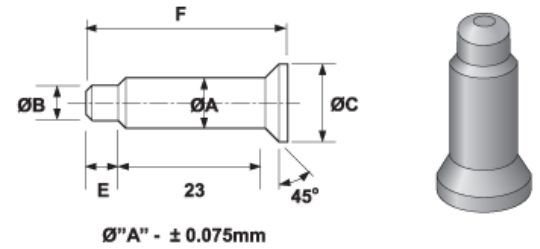
Part No.	NUT SIZE	A	C	E	F	G
ISN 04048	M4	3	12	4.8	6.5	12.0
ISN 05058	M5	3	12	5.8	7.5	12.0
ISN 06068	M6	5	12	6.8	9.5	13.9
ISN 08078	M8	6	14	7.8	9.5	13.9
ISN 08088	M8	6	14	8.8	8.0	13.9
ISN 08090	M8	6	14	9.0	7.5	13.9
ISN 10102	M10	7	16	10.2	8.0	13.9
ISN 10107	M10	7	16	10.7	8.0	13.9
ISN 12144	M12	8	18	14.4	8.0	13.9
ISN 12116	M12	8	18	11.6	8.0	13.9



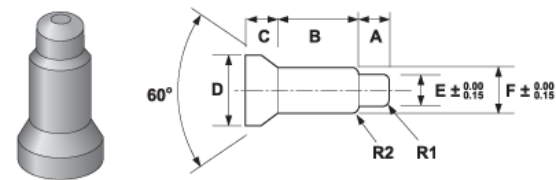


## Standard Weld Pins – Technical Information continued...

Part No.	NUT SIZE	HOLE SIZE	A	B	C	E	F
ISN 1C	M5	6.00	5.85	4.10	10.0	2.5	30.5
ISN 4C	M6	8.00	7.85	4.90	12.0	4.0	31.5
ISN 7C	M8	10.00	9.85	6.60	16.0	5.0	32.5
ISN 11C	M10	12.00	11.85	8.40	16.0	5.0	33.5
ISN 14C	M14	15.00	14.85	12.40	17.0	9.0	34.5
ISN 15C	M12	14.00	13.85	10.50	16.0	8.0	34.5
ISN 16C	M14	14.60	14.35	12.40	16.5	8.0	34.5
ISN 20C	M12F	12.70	12.50	10.50	16.0	8.0	34.5
ISN 21C	M12F	13.20	13.05	10.65	16.0	8.0	34.5
ISN 22C	BUSH	9.20	9.10	8.45	14.0	6.0	33.5
ISN 23C	M10	11.20	11.05	8.40	16.0	6.0	33.5
ISN 24C	M6	8.25	9.10	4.90	12.0	4.0	31.5
ISN 25C	M6	8.40	8.25	4.90	12.0	4.0	31.5
ISN 716TL1215	7/16TL	12.25	12.15	10.35	16.0	6.0	33.5
ISN 716TL1225	7/16TL	12.40	12.25	10.35	16.0	6.0	33.5



Part No.	NUT SIZE	A	B	C	D	E	F	R1	R2
ISN 050070	M6	4	16	7	12	5.0	7.0	2.5	1.5
ISN 050088	M6	4	16	7	12	5.0	8.8	2.5	1.5
ISN 066110	M8	7	15	7	16	6.6	11.0	3.3	MIN
ISN 084110	M10	5	16	7	16	8.4	11.0	2.0	1.5
ISN 084144	M10	5	16	7	16	8.4	14.35	2.0	1.5
ISN 085121	M10	7	14.4	7	16	8.5	12.1	2.0	1.5
ISN 095130	7/16	10	16	9	18	9.5	13.0	2.0	1.5
ISN 105130	M12	10	18	9	18	10.5	13.0	2.0	1.5
ISN 105140	M12	10	18	9	18	10.5	14.0	2.0	1.5



## Technical Support

The successful integration of ceramics into industrial and engineering systems requires close collaboration between you, the end user, and us, the materials suppliers. Our Technical Specialists are available to discuss your welding requirements in detail and assist in exploiting the significant advantages which Syalon 101 and Zircalon have to offer in this application.

