1. PURPOSE

This standard lists various types of weld studs.

2. SCOPE

This standard contains weld studs based on ISO 13918, Fiat 10456 and local manufacturer and user requirements

3. ACRONYMS/DEFINITIONS

3.1 ACRONYMS

ISO—International Organization for Standardization

3.2 DEFINITIONS

None

4. RELATED DOCUMENTS

4.1 RELATED STANDARDS

ISO 13918—Welding Studs and ceramic ferrules for arc stud welding
ISO 262—General Purpose Screw Threads
ISO 965—General Purpose Screw Threads
Iveco 18-1103—Zinc-Nickel Electrolytic Coating for Ferrous Metal Parts
Fiat 10456—Welding Studs Metric Thread
Fiat 10457—Welding Studs Metric Special Threads
Fiat 52605/02—Property Classes of Special of Special Service Fasteners
Fiat 9.57430—Copper Plating of Ferrous Metal Parts

4.2 REPLACED STANDARDS

Case BM-090—Weld Studs- General Specifications
Case BM-091—Weld Studs

5. MATERIAL

High welding quality low carbon steel
Mechanical Properties (as cold drawn); Ultimate Tensile – 380 MPa

6. FINISH

Weld studs are not normally plated due to objectionable effects of certain plating on the welding process. However, where requirements dictate, studs may be supplied in accordance to that designated by the part number and the CNH Fastener Finish Specification STPA020. Where copper finish “COP” is listed, it needs to be per Fiat 9.57430.

7. WORKMANSHIP

Weld studs shall be free from burrs, seams, laps, loose scale, irregular surfaces and any defects affecting their serviceability.

8. TORQUE SPECIFICATIONS

For general weld stud torque specifications, refer to Engineering Specification Case ES-B7003.

9. THREADS

Threads shall be cold rolled and conform to ISO metric thread tolerance class 6g.

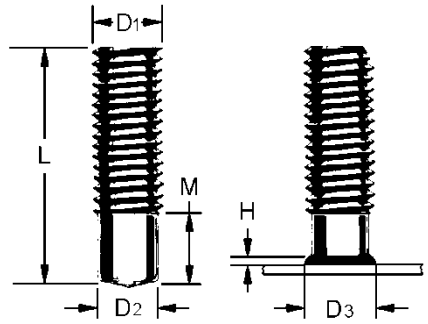
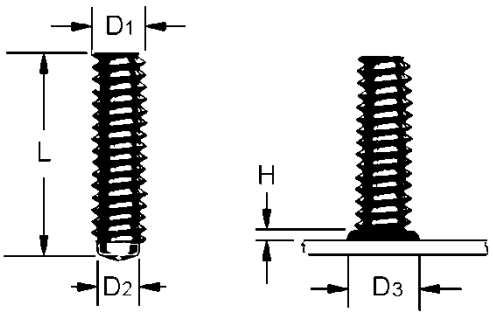
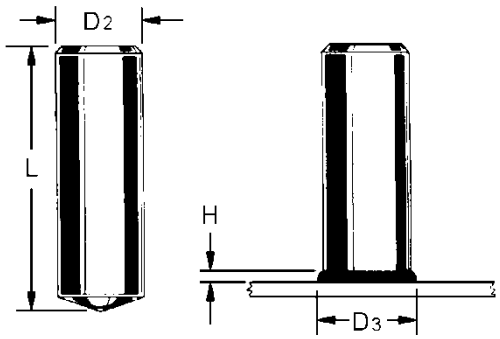
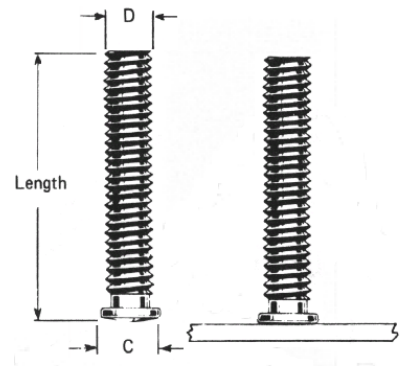
10. DIMENSIONS

All dimensions in this standard are in millimeters. The length dimension is the overall length of the stud before weld. The after weld length will be shorter dependent upon the style and size of the stud.

11. CROSS REFERENCE

For cross reference listing of company part numbers, go to PARTsolutions.

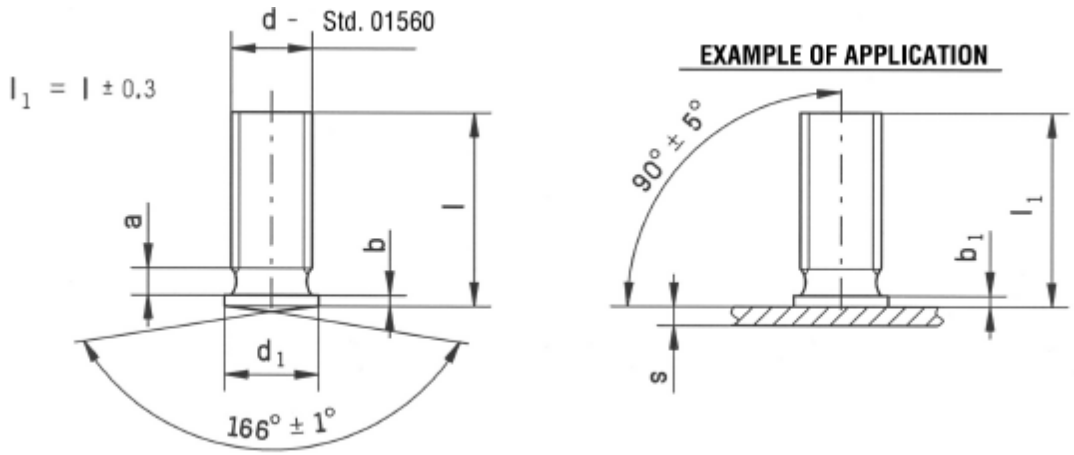
Weld Studs - Nelson

	Size D1	D2	M	Fillet Weld D3	Fillet Weld H
Standard Threaded Stud – Nelson MPF Series or Equivalent					
	M6	5.3	3.50	9.0	2.8
	M8	7.1	6.90	9.9	2.8
	M10	8.90	8.80	12.5	3.4
	M12	10.8	9	14.5	4.5
	M16	14.6	13.50	17.8	5.8
Full Threaded Stud – Nelson MD Series or Equivalent					
	M6	5.3		9.1	3.0
	M8	7.1		11.0	3.5
	M10	8.99		12.3	4.0
	M12	10.8		16	4.5
	M16	14.6		20.5	7.0
No Thread Stud – Nelson NBL Series or Equivalent					
		D2	L	Fillet Weld D3	Fillet Weld H
		6	18	9.1	3.0
		8	23	11.0	4.0
		10	23	13.0	4.0
		12	24	16.0	4.5
Standard Threaded Stud – Nelson ATC Series or Equivalent					
	D (MM)	C (mm)	Min. L (MM)		
	3	5	8		
	4	6	8		
	5	7	8		
	6	8	10		
	8	10	12		
	10	12	14		

Size and Pitch	Length	Finish	Standard Threaded MPF Series	Full Threaded MD Series	No Thread NBL Series	Standard Thread ATC Series
5 X 0.8	12	COP				48019487
6 X 1	15	PLN				
6 X 1	16	PLN				51670352
6 X 1	22	PLN		*48072336		
6 X 1	27	PLN		86634391		
6 X 1	33	PLN		48136215		
6 X 1	33	PLN		*91745918		
6 X 1	40	PLN	47511230			
6 X 1	50	PLN				91835177
8 X 1.25	23	PLN	87519783	86632985	47706556	47601682
8 X 1.25	23	PLN		*48072319		
8 X 1.25	28	PLN				
8 X 1.25	30	PLN	87672174			
8 X 1.25	33	PLN	86639952			
8 X 1.25	38	PLN				
8 X 1.25	48	PLN		87016124		
8 X 1.25	55	PLN	47906434			
8 X 1.25	63	PLN	87552808			
10 X 1.5	23	PLN		87635860	47706665	
10 X 1.5	28	PLN	47511215	87016125		
10 X 1.5	29.5	COP				84165565
10 X 1.5	33	PLN				
10 X 1.5	38	PLN	86642484			
10 X 1.5	43	PLN				
10 X 1.5	48	PLN				
10 X 1.5	68	PLN				
10 X 1.5	75	PLN	90414918			
10 X 1.5	83	PLN	87519777			
12 X 1.75	25	PLN		84388494		
12 X 1.75	28	PLN				
12 X 1.75	33	PLN				
12 X 1.75	38	PLN		87515836		
12 X 1.75	55	PLN		84382753		
16 X 2	43	PLN	92070908			

*Stainless Steel (SST) per ASTM A276, A493

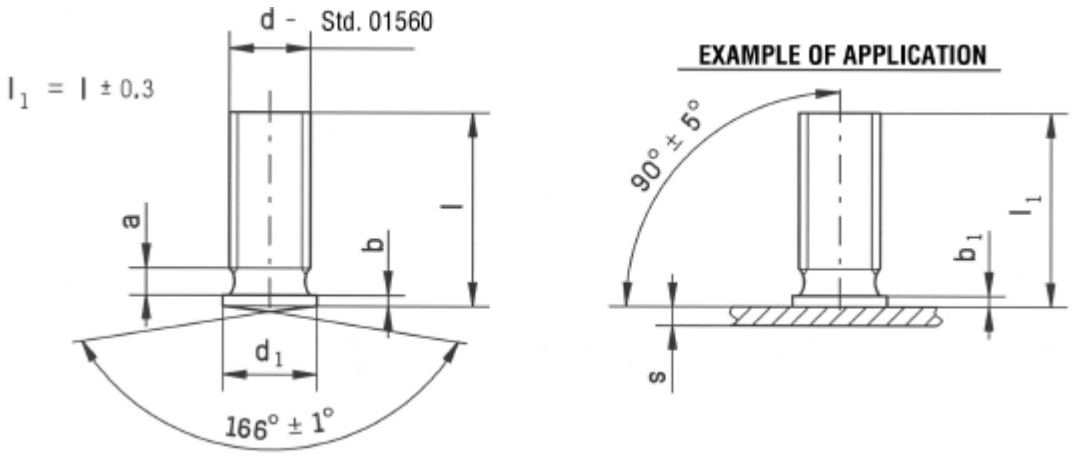
Weld Studs – Fiat 10456
Material-R50 SD STAB per 52605/02



d	l	d1 (+/- 0.3)	a max.	b (+/- 0.2)	b1 (+/- 0.2)	Finish	Part Number
M3	16	4	1.0	0.5	0.7	COP	92717874
M4	8	5	1.4	0.6	0.8	PLN	11097110
M4	8	5	1.4	0.6	0.8	ZND	11097111
M5	10	6	1.6	0.7	0.9	PLN	14153710
M5	10	6	1.6	0.7	0.9	ZND	14153711
M5	10	6	1.6	0.7	0.9	COP	14153719
M5	12	6	1.6	0.7	0.9	ZND	14153811
M5	12	6	1.6	0.7	0.9	COP	14153819
M5	20	6	1.6	0.7	0.9	COP	14153919
M5	25	6	1.6	0.7	0.9	COP	14155219
M6	10	7	2.0	0.8	1.0	PFL	14154213
M6	10	7	2.0	0.8	1.0	COP	14154219
M6	12	7	2.0	0.8	1.0	ZND	14154311
M6	12	7	2.0	0.8	1.0	PFL	14154313
M6	12	7	2.0	0.8	1.0	COP	14154319
M6	14	7	2.0	0.8	1.0	ZND	14154411
M6	14	7	2.0	0.8	1.0	*ZnNi	90441974
M6	14	7	2.0	0.8	1.0	PFL	14154413
M6	16	7	2.0	0.8	1.0	ZND	14154511
M6	16	7	2.0	0.8	1.0	PFL	14154513
M6	20	7	2.0	0.8	1.0	ZND	14154711
M6	20	7	2.0	0.8	1.0	PFL	14154713
M6	20	7	2.0	0.8	1.0	COP	14154719
M6	25	7	2.0	0.8	1.0	PFL	14154813
M6	30	7	2.0	0.8	1.0	ZND	14154911
M6	30	7	2.0	0.8	1.0	PFL	14154913

*ZnNi – Zinc Nickel per Iveco 18-1103 Fe/ZnNi 7 IV

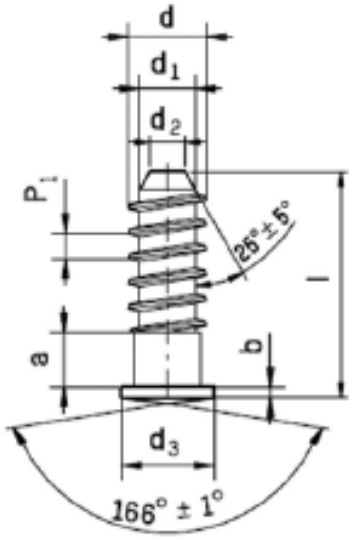
Weld Studs – Fiat 10456 (cont'd)
Material-R50 SD STAB per 52605/02

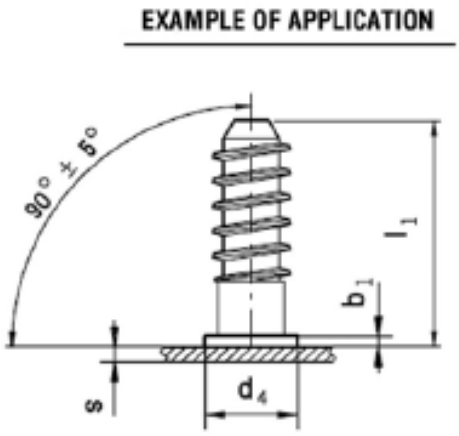


d	l	d1 (+/- 0.3)	a max.	b (+/- 0.2)	b1 (+/- 0.2)	Finish	Part Number
M8	12	9	2.5	1.0	1.2	ZND	14152811
M8	12	9	2.5	1.0	1.2	PFL	14152813
M8	12	9	2.5	1.0	1.2	COP	14152819
M8	16	9	2.5	1.0	1.2	PLN	47802304*
M8	25	9	2.5	1.0	1.2	ZND	14153311
M8	25	9	2.5	1.0	1.2	PFL	14153313
M8	25	9	2.5	1.0	1.2	COP	14153319
M8	30	9	2.5	1.0	1.2	ZND	14153411
M8	30	9	2.5	1.0	1.2	PFL	14153413

* Size not in Fiat 10456 but based on the standard.

Weld Studs – Fiat 10457
Material-R50 SD STAB per 52605/02





d	l	a	b	d1	d2	d3	P1	Finish	Part Number
5	9.2	2.3	0.7	3.6	2.5	6	1.6	COP	14122719
5	16.5	3.0	0.7	3.6	2.5	6	1.6	COP	14123119