

NAVISTAR, INC.		
Material, Parts, and Process Specifications (MPAPS)		NUMBER: MPAPS S-BM-32.101-GS/PL
		Former Designation: ESP-BM-32.101-GS
TITLE: Projection Weld Studs with Pilot Point - Metric Series (Noun Code 0810)		CURRENT REV No.: 1608
		DATE: Aug. 2016
WRITTEN/EDITED BY: A. Bourdon	APPROVED BY: R. Goluch	SUPERSEDES: Rev 1506 - June 2015
PRINTED COPIES OF THIS DOCUMENT MUST BE VERIFIED FOR CURRENT REVISION		
<i>This specification may involve hazardous materials, equipment, and procedures. This specification does not purport to address all of the safety issues associated with its use. The user is responsible to consult appropriate safety and health practices and to determine the applicability of regulatory limits prior to use.</i>		

- 1.0 GENERAL:** There are no national or international standards on this product. The specifications are based on suppliers' manufacture and user requirements.
- Metric dimensioned projection standard weld studs may be found MPAPS S-BM-30.101- GS/PL.
- 2.0 RESTRICTED CHEMICAL SUBSTANCES:** Effective January 1, 2007, all product supplied to the requirements of this specification must comply with the requirements of the MPAPS B-50 specification.
- 3.0 POLICY FOR SELECTING PARTS FOR NEW DESIGN:** Approved parts are so designated to reduce variety of parts and assure maximum availability, interchangeability, and cost savings in volume buying.

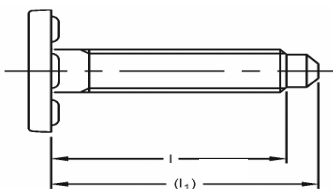
For new design, parts shall be selected from "Approved" part list only.

Material: Steel

Finish: Plain (PLN) with Fluorocarbon coating per MPAPS G-4524

Type of Head: Three Projections under Head

4.0 NOMINAL SIZES & LENGTH INCREMENTATION:



Nominal Length (l)	Nominal Sizes		
	6	8	10
12	X		
16	X	X	X
20	X	X	X
25	X	X	X
30	X	X	X
35	X	X	X
40		X	X
45			X
50			X

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5.0 HEAD: The bearing surface of the head will be at right angles to the axis of the shank within 2 degrees.

6.0 LENGTH: The length of weld studs will be measured as indicated in the illustration for each type.

The tolerance for length will be as follows:

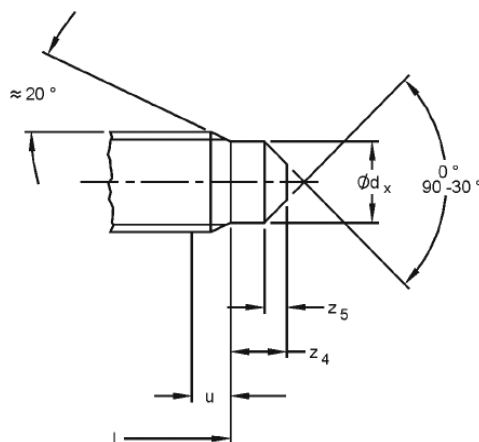
Up to and including 25 mm = ± 0.35 mm

Over 25 mm thru 50 mm = ± 0.42 mm

Over 50 mm = ± 0.50 mm

7.0 POINTS: Projection weld studs covered by this specification are furnished with a pilot point with truncated cone.

8.0 TYPE U3 PROJECTION WELD STUDS:



Dimensions in millimeters:

Nominal Size	M6	M8	M10
d_x max	4.5	6.1	7.8
d_x min	4.3	5.9	7.6
z_4 $\begin{matrix} +IT17 \\ 0 \end{matrix}$	3	4	5
z_5 max	2	2.5	3
z_5 min	1	1.5	1.5

The 20 degree angle applies only to the portion of the point below the root diameter of the thread.

Note: l is the nominal length of the fastener. Incomplete thread u is less than or equal to twice the pitch.

9.0 THREADS: Thread form, diameters, and associated pitches are in accordance with ISO Recommendations for coarse pitch series. Threads will be made to the tolerances of the medium class of fit (6g) for plain or unplated screws as shown in ISO R965/11, General Purpose Metric Screw Threads. Full formed thread will extend to within one and one half pitches of the projection under the head.

10.0 MARKING: Weld studs may carry some form of manufacturer identification on top of head. Each stud will show an "M" embossed or indented on top of head to designate this product as metric.

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