

Fitting End, Dimensions, Fluid Systems Port Connection, Metric

FSC 4730

RATIONALE

MA2093 has been reaffirmed to comply with the SAE five-year review policy.

1. SCOPE:

1.1 Type:

This design standard specifies the dimensions of the externally threaded fitting end to be assembled into an internally threaded fluid system port, using an elastomeric o-ring for sealing. Fitting end dimensions and o-ring sizes agree with ISO 7320-1985.

1.2 Application:

Primarily for use in aerospace fluid systems. Fittings with externally threaded ends in accordance with this design standard are intended to be assembled into an MA 2012 port.

2. APPLICABLE DOCUMENTS:

2.1 SAE Publications:

Available from SAE, 400 Commonwealth Drive, Warrendale, PA 15096-0001.

MA1370 Screw Threads - MJ Profile, Metric
MA2010 Packing, Preformed - O-Ring Seal, Standard Sizes & Size Codes, Metric
MA2012 Port Connection Internal, Straight Thread, Metric

2.2 ANSI Publications:

Available from American National Standards Institute, 1430 Broadway, New York, NY 10018.

ANSI B4.2-1978 Preferred Metric Limits and Fits
ANSI Y14.5M-1982 Dimensioning and Tolerancing
ANSI Y14.36-1978 Surface Texture Symbols
ANSI/ASME B46.1-1985 Surface Texture (Surface Roughness, Waviness, and Lay)

SAE Technical Standards Board Rules provide that: "This report is published by SAE to advance the state of technical and engineering sciences. The use of this report is entirely voluntary, and its applicability and suitability for any particular use, including any patent infringement arising therefrom, is the sole responsibility of the user."

SAE reviews each technical report at least every five years at which time it may be revised, reaffirmed, stabilized, or cancelled. SAE invites your written comments and suggestions.

Copyright © 2012 SAE International

All rights reserved. No part of this publication may be reproduced, stored in a retrieval system or transmitted, in any form or by any means, electronic, mechanical, photocopying, recording, or otherwise, without the prior written permission of SAE.

TO PLACE A DOCUMENT ORDER: Tel: 877-606-7323 (inside USA and Canada)
Tel: +1 724-776-4970 (outside USA)
Fax: 724-776-0790
Email: CustomerService@sae.org
http://www.sae.org

SAE WEB ADDRESS:

**SAE values your input. To provide feedback
on this Technical Report, please visit
<http://www.sae.org/technical/standards/MA2093>**

3. REQUIREMENTS:

3.1 Sealing Principle and Assembly of the Port Fitting:

The fluid coupling connection is composed of three elements:

- the port, including an internal thread, defined in MA2012;
- the fitting end, including an external thread and a groove intended to receive the o-ring seal, defined in this standard (see Figure 1).
- the o-ring seal, size code provided in Table 1.

3.2 Fitting End:

See Figure 1 and Table 1. Dimensions and tolerances are in millimeters. Unless otherwise specified, surfaces to be 3.2 micrometers Ra, symbols per ANSI Y14.36, and requirements per ANSI/ASME B46.1.

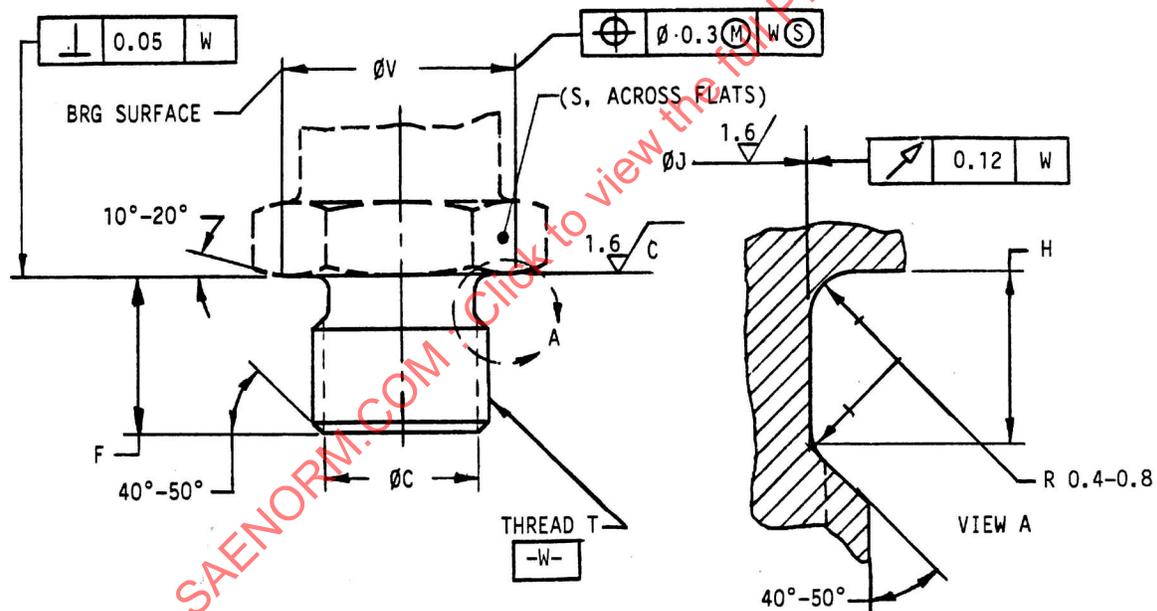


FIGURE 1 - Fitting End Configuration