INCH-POUND
MIL-DTL-24402/3A(SH)
11 February 2014
SUPERSEDING
MIL-F-24402/3(SH)
3 April 1990

DETAIL SPECIFICATION SHEET

FILTER HOUSINGS, HYDRAULIC, THREE ELEMENTS

This specification is approved for use by the Naval Sea Systems Command, Department of the Navy, and is available for use by all Departments and Agencies of the Department of Defense.

The requirements for acquiring the product described herein shall consist of this specification sheet and MIL-DTL-24402.

CLASSIFICATION. Filter housings covered by this specification sheet shall be designated using part or identifying numbers (PINs) as follows:

M	**24402**	**/3**	**N**	**B**	**-**	**WXYZ**
Prefix to indicate a military specification	Specification number	Applicable specification sheet	Type	Element size		Indicator form

Examples: M24402/3NB-G150 is a three-element housing without bypass relief using Size B elements and provided with a gauge-type differential pressure indicator with a minimum range of 150 lb/in² differential.

M24402/3RB is a three-element housing with bypass relief using Size B elements and provided without a differential pressure indicator.

FILTER ASSEMBLY TYPE. The filter assembly type shall be designated by one of the following letters to indicate whether or not a bypass relief is installed:

N - No bypass relief.

R - Bypass relief installed.

ELEMENT SIZE. The element configuration and size shall be designated by the following:

B - Size B in accordance with SAE-J2321/2 as identified by PIN J2321/2-7-F.

DIFFERENTIAL PRESSURE INDICATOR FORM. This dash number suffix is included in the part number when the filter assembly is to be acquired or used with a specific type of differential pressure indicator. See MIL-DTL-24402/5 for indicator dash numbers. For logistic support purposes, assemblies will be acquired and stocked without differential pressure indicators. In such cases, indicators will be ordered separately using the part number shown on MIL-DTL-24402/5.

PART NUMBER CROSS REFERENCE. Table I provides a cross reference between old (MIL-F-24402D and earlier) and new part numbers.

TABLE I. Cross reference of part numbers.

New part numbers [1/]	Old part numbers [2/]
M24402/3NB	M24402-3N-BF-0
M24402/3RB	M24402-3R-BF-0

NOTES:

1/ If a differential pressure indicator is to be acquired with the filter assembly, add the appropriate indicator dash number suffix from MIL-DTL-24402/5.

2/ Add E, G, or M depending on the form of differential pressure indicator acquired with the filter assembly, as follows:

E - Electrical with mechanical pop-up indicator.

G - Gauge type indicator.

M - Mechanical pop-up indicator.

SUBSTITUTION OF ASSEMBLIES. Assemblies with corresponding old and new part numbers may be used interchangeably provided the correct differential pressure indicator is used.

REQUIREMENTS.

a. Configuration. The filter assemblies shall meet the dimensional requirements shown on figure 1.

(1) Construction requirements. Filter assemblies shall be constructed in accordance with UG of the ASME Boiler and Pressure Vessel Code, Section VIII. Failure of any one bolt or locking element in the head closure shall not result in the failure of other elements and the release of the closure or parts of the closure. The closure shall permit visual external observation to ensure that the holding elements are in good condition and are in full engagement when the closure is in the closed position.

b. Maximum rated operating pressure. The filter assemblies shall have a maximum rated operating pressure of 400 lb/in².

c. Rated flow capacity. The filter assemblies shall have a rated flow capacity of 150 gallons per minute.

d. Performance.

(1) Bypass relief requirements. Type R assemblies shall have bypass relief valve settings as specified in table II.

TABLE II. Bypass relief valve setting.

Test condition	Pressure (lb/in²)	Test fluid temperature (°F [°C])	Leakage rate (ounces/min [mL/min])
			MIL-PRF-17331
(a) Cracking pressure			
(1) Qualification	150 minimum	104 (40) maximum	0.34 (10) minimum
(2) Conformance	Not more than 5 lb/in² higher than the actual cracking pressure for the qualification assembly.	68 to 140 (20 to 60)	0.34 (10) minimum
(b) Full flow (qualification only)	200 maximum	104 (40) maximum	N/A
(c) Reseat pressure			
(1) Qualification	120 minimum	104 (40) minimum	0.20 (6) maximum
(2) Conformance	120 minimum	68 to 140 (20 to 60)	0.20 (6) maximum

(2) Fatigue impulse rating. The fatigue impulse requirement and test of the general specification do not apply.

(3) Proof pressure. The filter assemblies shall withstand a proof pressure of 900 lb/in².

(4) Housing pressure drop. At the maximum rated flow with MIL-PRF-17331 fluid, the housing pressure drop with minimum restriction dummy elements installed shall not exceed 35 lb/in² differential.

(5) Burst pressure. The filter assemblies shall withstand a burst pressure of 1,600 lb/in² in accordance with NFPA T2.6.1.

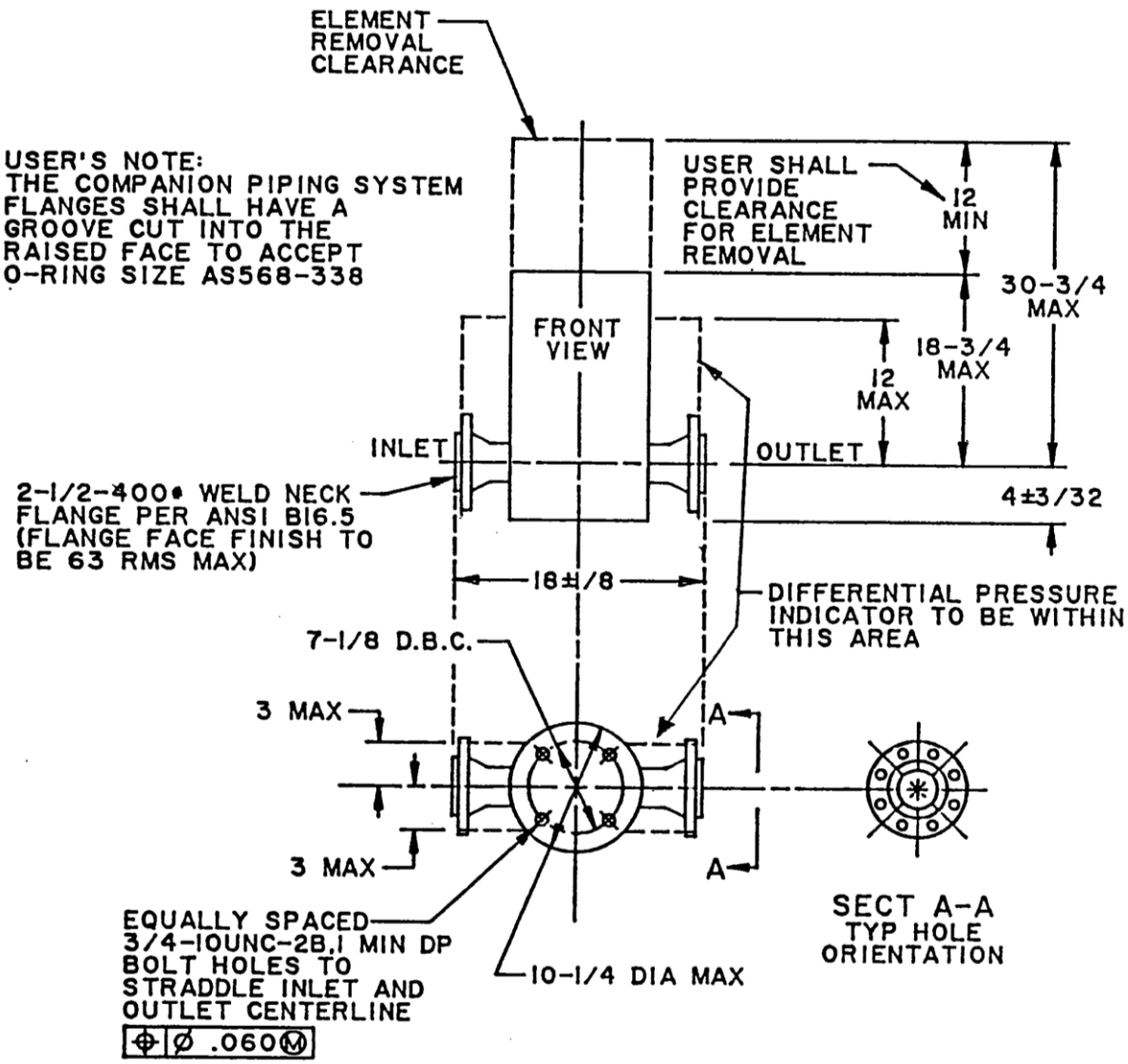

FIGURE 1. Three-element filter housing outline dimensions.

CHANGES FROM PREVIOUS ISSUE. Marginal notations are not used in this revision to identify changes with respect to the previous issue due to the extent of the changes.

Preparing activity:
Navy – SH
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NOTE: The activities listed above were interested in this document as of the date of this document. Since organizations and responsibilities can change, you should verify the currency of the information above using the ASSIST Online database at https://assist.dla.mil.