

Quality Requirements

Final Product Dimensional Control
General Requirements

RIG/PLANT		
ADDITIONAL CODE	SDRL CODE	TOTAL PGS 5
REMARKS		
MAIN TAG NUMBER		DISCIPLINE
CLIENT PO NUMBER		
CLIENT DOCUMENT NUMBER		

REFERENCE TM01169	REFERENCE DESCRIPTION Quality Clause	
<p>This document contains proprietary and confidential information which belongs to National Oilwell Varco; it is loaned for limited purposes only and remains the property of National Oilwell Varco. Reproduction, in whole or in part; or use of this design or distribution of this information to others is not permitted without the express written consent of National Oilwell Varco. This document is to be returned to National Oilwell Varco upon request and in any event upon completion of the use for which it was loaned. © Copyright National Oilwell Varco - 2021</p>	<p>National Oilwell Varco LP 10353 Richmond Avenue Houston TX 77042 UNITED STATES Phone +1 713 346 7500</p>	
	DOCUMENT NUMBER 103188878	REV 2

REVISION HISTORY

Rev	Date	Reason for issue	Prepared	Checked	Approved
2	09-Jun-2022	Approved for Use	LFLO	ROMK	HAH
1	25-Oct-2021	Approved for Use	LFLO	ROMK	HAH
0	19-Feb-2020	Approved for Use	KD	HAH	LUMO

CHANGE DESCRIPTION

Revision	Change description
2	Revision to update system metadata. No content change
1	Updated section 1.3
0	Initial release

TABLE OF CONTENTS

1 FINAL PRODUCT DIMENSIONAL CONTROL..... 4

 1.1 General..... 4

 1.2 Tolerances..... 4

 1.3 Documentation..... 4

2 CONTROL OF MONITORING AND MEASURING DEVICES 4

 2.1 General..... 4

 2.2 Calibration..... 5

 2.3 Personnel 5

1 FINAL PRODUCT DIMENSIONAL CONTROL

1.1 General

The Supplier shall carry out dimensional control in accordance with tolerances specified in the drawings.

If no tolerances are specified in the engineering documentation, ISO 2768-m for machined products and EN ISO 13920 Class A and E for welded products shall apply.

1.2 Tolerances

Tolerances for overall dimensions, special components, and interface points to equipment or to other structures will be specified on IFC drawings.

All dimensions with specified tolerance shall be verified, recorded, and reported and be a part of the final fabrication documentation.

All deviations or out of tolerances on the drawing shall be approved by a technical query or deviation/change request.

1.3 Documentation

All dimensional control shall be recorded and documented according to recognized standards or practices for clarity and shall include the dimension and tolerance as specified, as well as actual values with indications of deviations.

The reporting may be in the Suppliers own format unless otherwise provided by NOV. Company reserves the right to comment and accept / reject the submitted dimensional control reports.

All measurements shown on drawings shall be measured and written in their respective place in the table. Copy of the drawing used shall be included in this document. Any comment shall be listed.

2 CONTROL OF MONITORING AND MEASURING DEVICES

2.1 General

The organization shall establish procedures for control for monitoring and measuring equipment to be carried out in a manner consistent with monitoring and measuring requirements.

When the equipment is provided from a source external to the organization, including third party, proprietary, employee- and customer-owned equipment, the organization shall verify that the equipment is suitable and provide evidence of conformity to the requirements of this section.

Measuring devices shall be selected based on the accuracy needed and suitable for the application. As example, a tape measure is not suitable to control final dimension of machined surfaces as well as very long distances.

2.2 Calibration

All measuring equipment shall be calibrated and certified with traceability to international standards.

Calibration certificates shall be available for review by NOV representative or certifying authority.

If no National/International Reference standard is available, the supplier shall define methods of calibration in a documented procedure that is accompanied by a calibration certificate which references that procedure.

2.3 Personnel

All personnel performing dimensional control activities directly affecting material and product quality shall be qualified in accordance with the manufacturer's documented procedures.