

DC Directive

DCPD 15603-012

Quality Manual for Suppliers

Edition: 2019-05-06
Respons. office: DCEM/QMM-Brn
Reference: -
Refer. edition: -

General requirements on suppliers of steel structures, pipe sets and blocks

Second edition

Table of contents

	Page
1 Aim	1
2 Scope	2
3 General Requirements on Suppliers	2
3.1 Quality Assurance and Product Liability	2
3.2 Environment, Occupational Health and Safety	2
4 Requirements on Products and Processes	2
4.1 Welding.....	2
4.2 Anticorrosive Protection	2
4.3 Identification, Product Marking and Traceability	3
5 Requirements for Tests	3
6 Acceptance at Supplier's Premises	3
7 Output Check	3
8 Complaints and Procedure for Non-Compliant Products	3
9 Documentation	4
10 Requirements on Packaging and Product Delivery	4
11 Supporting documents	5
A Amendments	5
B Former editions	5
C Terminology and abbreviations	5
Enclosure 1: Master TIP	6

1 Aim

This document follows *Purchasing conditions* that all suppliers of Bosch Rexroth, spol. s r. o. must observe and that can be downloaded here: <https://www.boschrexroth.com/cs/cz/home/nakup-a-logistika> .

The Quality Manual for suppliers states essential requirements to be met by suppliers of steel structures, pipe sets and blocks in compliance with guidelines and standards that are binding for them. In case of any doubts, the supplier must contact the company Bosch Rexroth, spol. s r. o.

Document language:	en	Translation:	cs → en	Dept.:	DCEM/QMM-Brn
Original language:	cs	Date:	2019-06-05	Name:	Manuál kvality pro dodavatele

In case of doubt the original language edition of this instruction applies.

Name of company		<i>created</i>	<i>checked</i>	<i>approved</i>
Bosch Rexroth spol. s r. o.	Dept.:	DCEE/QMM-Brn	DCEM/QMM-Brn	DCEM/TER-Brn
Těžební 2, 62700, Brno	Name:	Králíčková D.	Salajka I.	Klimpar L.
Czech Republic	BWN:	CZ1	CZ1	CZ1

Valid edition only in the Intranet. Any kind of copies are not subject to the change service.



2 Scope

S	Areas	Description
P	DCEE/SCZ	Business & Service Unit of Bosch Rexroth Brno
P	DCEM-Brn	Customization Center of Bosch Rexroth Brno
Status (S): P = Obligatory		

3 General Requirements on Suppliers

3.1 Quality Assurance and Product Liability

The supplier is obligated to comply with quality management requirements according to ISO 9001 and to follow the instructions stated in *Quality Assurance Agreement (QAA)* that can be downloaded here: <https://www.boschrexroth.com/cs/cz/home/nakup-a-logistika> .

The supplier must comply with all legislative and normative requirements that are related to the product, and must have processes and inspection systems designed so that only perfect products conforming to specifications are delivered. Inspections, if any, executed by Bosch Rexroth, spol. s r. o. do not relieve the supplier of their responsibility for defects detected later. The supplier is responsible for the quality of products during their lifetime.

Any changes and modifications from a specification must be approved in advance by Bosch Rexroth, spol. s r. o. in a written form. Changes must be recorded in production documentation that will be delivered together with a product (see Section 9 Documentation for more details).

3.2 Environment, Occupational Health and Safety

Suppliers must observe legal and other requirements related to environmental protection and protection of occupational health and safety. Within order signing, the supplier undertakes to comply with *N 2580-1 Prohibition and Declaration of Substances* that relates to the ban on using hazardous substances (e.g. lead, cadmium, hexavalent chromium, etc.).

In case of a rework done by the external company in premises of Bosch Rexroth, spol. s r. o., the supplier must follow *Rules for visitors and external companies, EF coordinators* that are available at: <https://www.boschrexroth.com/cs/cz/home/nakup-a-logistika> .

4 Requirements on Products and Processes

4.1 Welding

For welding, the requirements specified in guideline *DCPD-15643-009 Welding Rules for Production of Units* or *AB 10301 Welding specifications for power units* must be observed.

4.2 Anticorrosive Protection

4.2.1 Painting

The supplier must comply with requirements determined for painting stated in the drawing documentation. Unless otherwise indicated, all parts must be painted by specified painting systems from CHING. Painting modifications, if any, must be approved in advance by Purchase Dpt. or Design Dpt.

Parts and surfaces that are not painted, unless the drawing specification states otherwise:

- Stainless steel parts
- Zinc-coated or otherwise galvanized parts (zinc-coating, nickel, chromium, etc.)
- Plastic and rubber parts
- Sealing and functional surfaces
- Threads

The surface must be properly prepared before painting to ensure adhesion of the painting system. Before painting, all surfaces must be free from impurities (welding spatter, abrasive materials from blasting, iron scales, etc.) since even a slight contamination may cause subsequent serious damages to the hydraulic system.

The supplier must comply with the minimum thickness of the painting system that is specified in the drawing documentation. The maximum thickness of paint is usually specified as triple the thickness of the specified layer; however, 500 µm should not be exceeded (risk of paint peel-off).

All pipes that are a part of the tank must also be painted inside.



After painting, the marking must still be readable (weld markings, material number, etc.) on the material.

The paint must be supplied without evident visual defects and damage (orange peel, paint runs, imprints, scratches, etc.).

4.2.2 Preservation

All non-treated steel surfaces (threads, sealing surfaces, machined surfaces, pipe set interiors, etc.) must be protected against corrosion by an appropriate preservative.

4.3 Identification, Product Marking and Traceability

Supplied materials must be visibly marked by a material number and a manufacturer's identification. Marking is performed by stamping directly on the product. To mark pipe sets, an anti-stress die or an anti-stress micro punch are used to prevent possible adverse effects on mechanical properties of the material. The marking area is defined in the drawing or may be selected by the supplier. However, it must always be located on an accessible and visible place and must not extend to sealing or functional surfaces.

In case that a certificate in accordance with EN 10204 3.1 is requested, the product must be clearly linked to such certificate (e.g. by a heat number stamping, etc.). The heat number must always be stamped on machined blocks.

The aim is to ensure traceability and to be able to ensure 100% linking of the certificate to the supplied part.

Additionally, when marking and identifying pipe sets, the regulation *DCPD 15659-005 Packaging instructions* must be taken into a consideration.

If the product is delivered in a packaging, it must be labelled by an identification label containing at least an order number, drawing number and a quantity.

5 Requirements for Tests

The minimum scope of required tests and records is specified in the TIP (Test and Inspection Plan) document.

As a standard, the supplier must perform tests according to Master TIP for suppliers (see Enclosure 1). If specific tests are required, these tests are requested in the drawing documentation or with reference to TIP for an actual order.

6 Acceptance at Supplier's Premises

After previous agreement and a date confirmation, Bosch Rexroth, spol. s r.o. is entitled to perform acceptance of the product directly at supplier's plant at any production stage. If the supplier is not able to prepare the product for acceptance in agreed term, the supplier must inform Bosch Rexroth, spol. s r. o. in advance, at least 24 hours in advance.

Otherwise, the supplier may be charged with a compensation for incurred costs related to unsuccessful or unrealized acceptance.

7 Output Check

In addition to standard checks performed by the supplier, each product must be checked before dispatch in compliance with Checklist *DCFR 32077-001 Outgoing goods inspection HPU-Steel construction / DCFR 32077-002 Checklist for Outgoing Goods Inspection – pipe sets*, where a supplier records the results and which is dispatched together with a product. Any deviations must be approved by Bosch Rexroth, spol. s r. o. in advance and must be reported in the checklist.

Frequent defects are described in *DCGP 32077-003 Good Practice HPU*.

8 Complaints and Procedure for Non-Compliant Products

If there is a non-compliance detected after a delivery, a complaint is issued by Bosch Rexroth, spol. s r. o. and a prompt correction of defects is required.

Non-compliant is any delivery that does not comply with specifications (order, drawing, Bosch Rexroth, spol. s r. o. standards, other documents), is incomplete, or supplied without requested documentation (certificates, delivery notes, outgoing goods checklists etc.).



The first supplier's reaction is requested within 24 hours after the complaint is issued. The supplier is requested to process a statement containing causes and implemented measures. In justified cases, an 8D report may be requested.

If, time or organizational reasons lead to prompt rework of the supplied product, Bosch Rexroth, spol. s r. o. reserves the right to arrange a repair on its own costs without any prior approval from the supplier. The supplier will be then invoiced for incurred costs of such a rework.

If a product is sent back to a supplier, the product is accompanied with a *FR 15659-009 Material dispatch note for external processing*. After a rework, the supplier will send the product back with this dispatch note and a delivery note.

9 Documentation

A supplier has to deliver requested documentation together with a product or to send it before a product is dispatched, to Mailbox.BrnPLOGDepartment@boschrexroth.cz. A subject of an e-mail must contain a material number and an order number.

Required documentation:

- Drawing documentation of the real status (As-Built)
- Outgoing checklist *DCFR 32077-001 Outgoing goods inspection HPU-Steel construction / DCFR 32077-002 Checklist for Outgoing Goods Inspection – Pipe Sets*
- Required certificates
- Other documents required in an order

As-Built drawing documentation and drawing documentation for changes must be sent to the address of Mailbox.BrnpEND@boschrexroth.cz.

10 Requirements on Packaging and Product Delivery

The supplier must comply with *Supplier Logistics Manual* that may be downloaded here: <https://www.boschrexroth.com/cs/cz/home/nakup-a-logistika>.

For pipe sets, *DCPD 15659-005 Packaging instructions* must be observed.

All delivered products must be marked with a material number, order number and must be supplied with a delivery note. Loose parts must be attached to the material they belong to and must be properly marked. It is forbidden to deliver loose parts for more products mixed together. The supplier must deliver products that are in a state that is manageable for unloading by a fork-lift truck (sufficiently supported, e.g. attached to a pallet or to beams). The carrier will deliver goods with a delivery note where the carrier will get a confirmation on the quantity of received transport units (e.g. boxes, pallets, etc.); however, this does not mean compliance with quantity or type of particular delivery items. Packaging must prevent depreciation, destruction and excessive contamination of products during transport.

Dispatch of an incomplete delivery is possible only after prior approval of Bosch Rexroth, spol. s r. o. The list of missing parts and the date of their delivery must be recorded in *DCFR 32077-001 Outgoing goods inspection HPU-Steel construction / DCFR 32077-002 Checklist for Outgoing Goods Inspection*.

Parts delivered later must be unambiguously marked by a label (A4) containing the text of "Additional Delivery" + material number and order number of the original part.



11 Supporting documents

Column "Note": - = please consider document

Publication	Edition	Title	Note
AB 10301	-	Welding specifications for power units – General technical requirements	-
DCPD 15643-009	-	Welding Rules for Production of Units – General technical requirements	-
DCCS 06001-130	-	Principles on the Product Safety of Hydraulic Power Units – Sheet metal and steel constructions incl. delivery and order specification	-
DCFR 32077-001	-	Outgoing goods inspection HPU – Steel construction – Checklist for outgoing goods / form for suppliers	-
DCFR 32077-002	-	Checklist for Outgoing Goods Inspection – Inspection and Testing of Tube Sets at a Manufacturer	-
DCGP 32077-003	-	Good Practice HPU – Steel construction	-
DCPD 15659-005	VA 15659-005	Packaging instructions – Pipe sets (Article D51*)	

A Amendments

Modification of standard references and Master TIP.

B Former editions

DCPD 15603-012	Quality Manual for Suppliers	2019-01-04
----------------	------------------------------	------------

C Terminology and abbreviations

Terms

- 8D Report = 8 Discipline Report – method used for identification and elimination of problems and their recurrence
- As-Built = drawing documentation of the real status
- Non-conformity (non-complying product) = failure to comply with requirements for a product, e.g. legislative and normative requirements, non-compliance with specifications, incompleteness, missing documents, etc.

Abbreviations

- TIP = Test and Inspection Plan

2020-02-14 - SOCOS



Enclosure 1: Master TIP

Test and inspection plan (TIP)



Název projektu / Projectname:	Master TIP pro dodavatele / Master TIP for supplier	Datum / Date:	
Zakázka / Order:		Revize / Revision:	
Zákazník / Customer:		Vydal / issued by:	
Předmět zakázky / Item description		Číslo dokumentu / Document No.	TIP_10_01_Master TIP pro dodavatele_xlsm

Označení materiálu Material name Materialname	Popis zkoušky nebo inspekce Name of test or inspection Inspektion-/Testbeschreibung	Typ zkoušky/ Check ST-standard/standart SP - specifická/specific	Rozsah Frequency	Postup Procedure	Poznámka Note	Certifikát / Certifikat Typ dokumentu Dokument type	Zodpovědnost / Responsible			
							Dodavatel Supplier	Bosch Rexroth	Zákazník Customer	Třetí strana 3rd Part
Nádrž, vana Tank, Oil pan							x			
	Rozměrová kontrola Dimensional check	ST	100%	Výkres, Checklist DCFR 32077-001 Drawing, Checklist DCFR 32077-001		Checklist DCFR 32077-001	x			
	Kontrola lakování Painting check	ST	100%	Výkres, Checklist DCFR 32077-001 Drawing, Checklist DCFR 32077-001		Checklist DCFR 32077-001	x			
	PT Test těsnosti PT Leak test	ST	100%	EN 571-1		Checklist DCFR 32077-001	x			
	Vizuální kontrola svarů VT Visual check - welding	ST	100%	EN ISO 17637, AB 10301, DCCS 06001-130	Hodnocení dle EN ISO 5817 - tř. C (závěsná oka tř. B) Classification EN ISO 5817 - class C (lifting eyes class B)	Checklist DCFR 32077-001	x			
Rámy Baseframes							x			
	Rozměrová kontrola Dimensional check	ST	100%	Výkres, Checklist DCFR 32077-001 Drawing, Checklist DCFR 32077-001		Checklist DCFR 32077-001	x			
	Kontrola lakování Painting check	ST	100%	Výkres, Checklist DCFR 32077-001 Drawing, Checklist DCFR 32077-001		Checklist DCFR 32077-001	x			
	Vizuální kontrola svarů VT Visual check - welding	ST	100%	EN ISO 17637, AB 10301, DCCS 06001-130	Hodnocení dle EN ISO 5817 - tř. C (závěsná oka tř. B) Classification EN ISO 5817 - class C (lifting eyes class B)	Checklist DCFR 32077-001	x			
Potrubi, trubkové sady nízkotlak PN 16 Pipework, low-pressure PN 16							x	x		
	Materiálové zkoušky - trubky (černá ocel) Material certificate - pipes (black steel)	ST	Každá tavba per heat	Dle materiálové normy Acc. to material standard		Zkušební certifikát dle EN 10204 2.2 Inspection certificate EN 10204 2.2	x			
	Materiálové zkoušky - trubky (nerez) Material certificate - pipes (stainless)	ST	Každá tavba	Dle materiálové normy Acc. to material standard		Zkušební certifikát dle EN 10204 3.1 Inspection certificate EN 10204 3.1	x			
	Rozměrová kontrola Dimensional check	ST	100%	Výkres, Checklist DCFR 32077-002 Drawing, Checklist DCFR 32077-002	Platí pro trubkové sady Valid for pipesets	Checklist DCFR 32077-002	x			
	Kontrola čistoty Cleanness check	ST	100%	Checklist DCFR 32077-002		Checklist DCFR 32077-002	x			
	Kontrola značení Marking check	ST	100%	Checklist DCFR 32077-002	Platí pro trubkové sady Valid for pipesets	Checklist DCFR 32077-002	x			
	Vizuální kontrola svarů VT Visual check - welding	ST	100%	AB 10301; EN ISO 17637	Platí pro trubkové sady Valid for pipesets Hodnocení dle EN ISO 5817 - tř. C Classification EN ISO 5817 - class C	Checklist DCFR 32077-002	x	x		

2020-02-14 - SOCCS



Potrubí, trubkové sady vysokotlak > PN 16 <i>Pipework hi-pressure > PN 16</i>							x	x		
Materiálové zkoušky - trubky (černá ocel i nerez) <i>Material certificate - pipes (black steel and stainless)</i>	ST	Každá tavba <i>per heat</i>	Dle materiálové normy <i>Acc. to material standard</i>		Zkušební certifikát dle EN 10204 3.1 <i>Inspection certificate EN 10204 3.1</i>		x			
Rozměrová kontrola <i>Dimensional check</i>	ST	100%	Výkres, Checklist DCFR 32077-002 <i>Drawing, Checklist DCFR 32077-002</i>	Platí pro trubkové sady <i>Valid for pipesets</i>	Checklist DCFR 32077-002		x			
Kontrola čistoty <i>Cleanness check</i>	ST	100%	Checklist DCFR 32077-002	Platí pro trubkové sady <i>Valid for pipesets</i>	Checklist DCFR 32077-002		x			
Kontrola značení <i>Marking check</i>	ST	100%	Checklist DCFR 32077-002	Platí pro trubkové sady <i>Valid for pipesets</i>	Checklist DCFR 32077-002		x			
Rentgenová zkouška svarů (RT) <i>X-ray test of welds (RT)</i>	ST	10%	EN ISO 17636-1	Platí pro trubkové sady <i>Valid for pipesets</i> Hodnocení dle EN 10675-1stupeň 1	Protokol o zkoušce dle EN ISO 17636-1 <i>Check report EN ISO 17636-1</i>		x	x		
Vizuální kontrola svarů (VT) <i>Visual check - welding (VT)</i>	ST	100%	EN ISO 17637	Platí pro trubkové sady <i>Valid for pipesets</i> Hodnocení dle EN ISO 5817 - tř. B <i>Classification EN ISO 5817 - class B</i>	Checklist DCFR 32077-002		x	x		
Obráběné bloky <i>Machined blocks</i>							x			
Materiálové zkoušky - bloky <i>Material certificate - manifolds</i>	ST	Každá tavba <i>per heat</i>	Dle materiálové normy <i>Acc. to material standard</i>		Zkušební certifikát dle EN 10204 3.1 <i>Inspection certificate EN 10204 3.1</i>		x			
Vizuální kontrola <i>Visual check</i>	ST	100%	DCPD 32077-001		Bez záznamu <i>Without a record</i>		x			

