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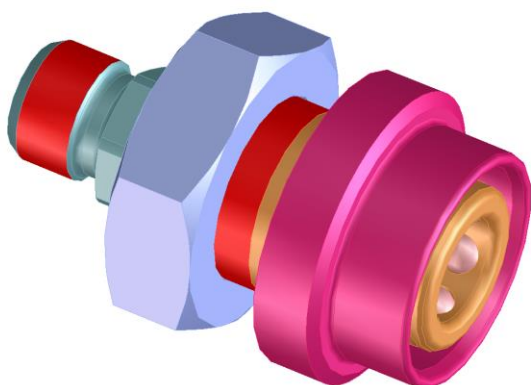
This operating instruction is not
subject to the updating

Quick coupling n.b. 5

1-UM-005-0-WR013-01-4-R0

**1-UM-005-0-WR013-01-4-R0
(special version Z02)**

1-UM-005-2-WR013-01-4-R0



This coupling is a quality product, in which special attention has been paid to high functionality, ease of operation, safety and reliability. As an item of technical equipment this coupling is intended for use in the commercial, industrial area and for operators, who have been trained by specialists in the handling of technical systems / tools.

Customer care:

As part of our individual customer care we will be happy to assist you in questions relating to use and operation and on any problems encountered.

Service and maintenance:

In order to maintain the high technical performance capability and reliability of your coupling over many years, we recommend regular inspection and maintenance.

We can thereby offer you optimum support by our Customer Service department and the conclusion of a service and maintenance contract. Please ask for a quotation.

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Table of Contents

1 Table of Contents

1	TABLE OF CONTENTS.....	3
2	GENERAL.....	4
3	WARRANTY.....	5
3.1	GENERAL	5
3.2	REPLACEMENT PARTS	5
4	SAFETY INSTRUCTION	6
5	PRODUCT DESCRIPTION	7
5.1	INTENDED USE	7
5.2	TECHNICAL DATA	7
6	INSTALLATION MANUAL	9
7	OPERATING INSTRUCTION	10
7.1	COUPLING PROCESS	10
7.2	UNCOUPLING PROCESS	10
8	MAINTENANCE AND FUNCTIONAL TEST.....	11
8.1	MAINTENANCE:	11
8.2	FUNCTIONAL TESTING:.....	12
9	TEST.....	13
10	LUBRICATION.....	14
11	STORAGE	14
12	SHUT-DOWN.....	14
13	INDEX.....	15

2 General

This operating instruction contains all regulations for operation, commissioning and maintenance of the coupling.

All information and notes in this operating instruction were collated while taking into consideration the valid regulations, the current engineering related status of development as well as our many years of experience and acquired knowledge.


Translations of this operating instruction were also produced according to the best of knowledge.

However, we cannot assume liability for any translation errors.

The German version provided for this operating instruction is considered the authoritative version.

The actual scope of delivery can deviate from the explanations and graphic representations described herein under certain circumstances, e.g. in the case of special designs, utilization of additional order options or because of state-of-the-art technical alterations.

If you have any questions, please contact WALTHER-PRÄZISION.

-  This operating instruction must be read carefully before starting work on or with the equipment, in particular before commissioning!
WALTHER-PRÄZISION assumes no liability for damage or faults arising from non-compliance with the instructions in this operating instruction.

The operating instruction must be kept directly with the equipment and be accessible to all persons who work on or with the equipment.

It is not permitted for the operating instruction to be passed to third parties and if applicable this will incur damage compensation.

All other rights reserved.

Before commissioning the device must be checked for being not defective and its technically perfect function.

The German version is the original.

We reserve the right to make technical alterations to the product within the context of improving the usage properties and further development.

The operating instruction remains our property.

Any reproduction, use by or communication to third parties incurs a penalty and will be pursued by court action (copyright law against unfair competition, BGB [German Civil Code]).

All rights reserved in the case of a patent award (Paragraph 7, Section 1 of the patent law - PG) or entry as a patented design (Paragraph 5, Section 4 of the patented design law - GMG).

3 Warranty

3.1 General

The warranty is in accordance with:

The regulations agreed upon in the purchase contract and

The "General terms and conditions for delivery and service" of WALTHER-PRÄZISION using the version valid at the time the purchase contract came into force.

Generally excluded from the warranty are consumables.

Typical consumables in products from WALTHER-PRÄZISION are, for example:

- Seals
- Springs
- Electrical plugged contacts
- Electrical cables and hoses which are subject to regular alternating bending or torsional stresses.

Components that are not normally subject to wear under the conditions to be expected (environmental and usage) may become consumables if the described product is not operated according to the intended purpose or is operated with a disregard for the specifications in the operating instructions.

For example, electrical cables with sheathing that has been destroyed by extreme exposure to welding sparks would not fall under the warranty.

In addition, wear to other components caused by unusual environmental conditions, not expressly coordinated with WALTHER-PRÄZISION, for example, high temperatures, dusts with an abrasive effect, high humidity or corrosive vapours and gases are not covered by the warranty.

Cycle, time or load dependant specifications for the replacement of certain components of the described product within the framework of maintenance are not warranty-relevant durability statements, they are instead recommendations designed as preventive maintenance to avoid standstill times during production.

3.2 Replacement parts

Only original parts from WALTHER-PRÄZISION are to be used.

These are to be installed according to their intended purpose.

When using third-party items or parts that have not been approved by WALTHER-PRÄZISION, all warranties, guarantees and service claims are voided without notification.

Safety Instruction

4 Safety Instruction

Using these couplings does not release the customer from his obligation to comply with the pertinent work safety regulations e.g. operational safety regulations, etc. The duty to take due care by the operator of the couplings includes planning measures to ensure proper operation and monitoring their implementation.

Hazard notes

If the wrong product has been selected or if there is improper use or maintenance has been omitted, then hazards arise and personal injuries and material damage can occur from:

- hazardous emission of fluid or individual particles/coupling parts.
- function impairments of connected systems or tools.
- the metal parts of coupling and adaptor are not thermally protected. In case of high media temperatures the contact with these parts can lead to combustion. According to the ambient temperature valve handle and ring grip can also become very hot. For that reason sufficiently long protective gloves must be worn in these cases.

The operator must in particular make sure that

- the couplings are only used according to the intended purpose.
- the couplings are only operated in a perfect, functioning condition.
- the operating manual is always in a legible condition and is available in its entirety to operating personnel.
- the operating personnel are sufficiently acquainted with the working method and the safety notes for the coupling.
- no safety devices must be removed and/or deactivated during operation of the couplings.
- before installing or dismantling the couplings, you have made sure that the couplings have not been pressurized.

After completing assembly and installation work and before commissioning the coupling, the following items have to be observed:

Check once again that all screw connections are securely fitted.

Before commissioning the couplings, a function test must be carried out (see maintenance and function test).

Product description

5 Product description

The coupling connection comprises:

- | | |
|-------------------------|---------------------------|
| - self-sealing coupling | 1-UM-005-0-.....-.....-R0 |
| - self-sealing adaptor | 1-UM-005-2-.....-.....-R0 |

5.1 Intended Use

- The self-sealing coupling serves only to connect two lines.
- The two coupling halves should be connected and disconnected in depressurized condition only.
- The connection and disconnection process is carried out manually.
- The self-sealing coupling has a standard bulkhead screw connection; as a special version the self-sealing coupling is also available without bulkhead screw connection.
- 5 different round keys (R1 – R5)
- R0 means: without non interchangeable round key, all self-sealing adaptors with the keys R1-R5 may be connected to the self-sealing coupling R0, self-sealing adaptor R0 only fitting for self-sealing coupling R0 (see drawing).
- Optionally, the unit is available without valves.
- The coupling has an automatic lock, i.e.

one hand operation

- The coupling is particularly suitable for the following media/applications
Gases, liquids, vacuum in connected condition
laboratory equipment, medical equipment, nuclear power
- For all other possible media Walther Präzision should be consulted.

5.2 Technical data

Temperature

Connected and disconnected condition (no relative movement)

In the connected and disconnected condition the unit is tight from -20 °C to 100 °C. However, this data is subject to the seal quality as well as the environment variables as e.g. humidity, installation situation etc.

Connection and disconnection (existing relative movement)

A connection and disconnection at temperatures below 15 °C is only possible to a limited extent.

However, this data is subject to the seal quality as well as the environment variables as e.g. humidity, installation situation etc.

6 Installation manual

The coupling is to be integrated into the line network while taking into account the general accident prevention guidelines so that:

- perfect operation is guaranteed in accordance with the operating instruction.
- external damage to the unit and all mobile parts is excluded.

Before installing the coupling in a pipeline network, make sure that the pipeline network has been sufficiently rinsed/blown through and/or cleaned.



After completing the installation work, perform a function test both depressurised and under working pressure, as described in the operating instructions.

Operating instruction

7 Operating instruction

The coupling may only be used for the operating conditions specified under point product description in order to avoid critical injury to personnel and damage to the coupling during operation.

7.1 Coupling process

Before each coupling process a visible check of the coupling and the adaptor has to be made. Damaged parts must be changed in case of observable, visible damages or deformations.

The coupling is equipped with an automatic lock, i.e. one-hand operation.

For coupling the self-sealing adaptor behind the locking sleeve or the self-sealing coupling in the end plug area is taken up with one hand and pushed axially centred on the counter piece until the end stop.

During the coupling the locking sleeve snaps in forward without the aid of the operator.

Now the self-sealing coupling and the self-sealing adaptor are locked mechanically. Available valves are opened during the coupling process and thus the passage is released.

CAUTION



It must be ensured that the locking sleeve is in the final position, i.e. is flush in front with the locking inner sleeve, otherwise there is no proper locking.

7.2 Uncoupling process

For disconnection, the self-sealing adaptor must be held at both handles (the ball of the thumb at the rear handle, fingers at the front handle), the locking sleeve is pulled back with the front handle and the connection is separated.

After separation the locking sleeve slips in its starting position re-connection.

It is the same position in connected and disconnected state.

Existing valves lock automatically upon disconnection so that no escape of media is possible.

Caution!

In case of an available pressure in the line connected by the coupling system a strong separation impulse - depending on the pressure - can be effective onto the coupling system during disconnection. For that reason the movable part of the coupling (free half) is to be firmly held in the hand to avoid injuries.

Maintenance and functional test

8 Maintenance and functional test

The WALTHER – coupling units are to be handled in such a way exterior damage to the elements as well as to all moving parts is prevented.

In order to minimise activation forces and to extend the lifetime of the coupling unit, we recommend lightly lubricating the connecting surfaces if this is permitted (see lubrication instructions).

In order to always ensure the functionality of the coupling unit and thus the protection of the operator, maintenance and functional testing must be carried out independantly of the operating instructions and at a suitable interval.

Note!

In the event of maintenance that is carried out by neither WALTHER-PRÄZISION nor by personnel trained by WALTHER-PRÄZISION, the warranty of WALTHER-PRÄZISION is voided. This does not apply when maintenance is carried out by personnel trained by WALTHER-PRÄZISION.

Note!

In the event of media that is hazardous to health a coupling unit returned to WALTHER-PRÄZISION must be sent in a fully cleaned state. No media hazardous to health may be released from the coupling unit during the dismantling process. The sending party (customer) is responsible for this.

8.1 Maintenance:

- With the coupling unit in the decoupled state, carry out an external visual check for damages and contamination.
- Contamination in the functional area that can be accessed from the outside (seal region, activation elements) must be removed by wiping.

In the event of damaged, cracked or corroded parts, the coupling unit must be removed and sent to WALTHER-PRÄZISION for repair (see Note).

In the event of worn, brittle or overaged seals as well as serious contamination, it is the decision of the customer whether they wish to send the coupling unit WALTHER-PRÄZISION or whether they wish to repair it themselves (see Note).

Maintenance and functional test

8.2 Functional testing:

As described in the operating instructions, the coupling unit is coupled, pressure is applied and it is decoupled and this process is carried out multiple times.

In doing so, the following should be taken into consideration:

- Proper, easy functionality when coupling and decoupling.
- Sealing of the coupling unit in the coupled and decoupled state.

In the event of damaged, cracked or corroded parts, the coupling unit must be removed and sent to WALTHER-PRÄZISION for repair (see Note).

In the event of worn, brittle or overaged seals as well as serious contamination, it is the decision of the customer whether they wish to send the coupling unit to WALTHER-PRÄZISION or whether they wish to repair it themselves (see Note).

Note!

**When repairing, a pressure and sealing test must always be carried out.
This may also be completed by means of the working process.
The procedure and scope of this test is described in the "Test" section.**

9 Test

The testing of the low-pressure coupling is carried out on either a test rig or in the pipeline system.

The testing of low-pressure couplings does not free the operator from the observation of work safety directives, for example, company health and safety regulations etc.

The duty of care of the tester of low-pressure couplings is to plan measures to ensure safe testing and to proof and maintain such.

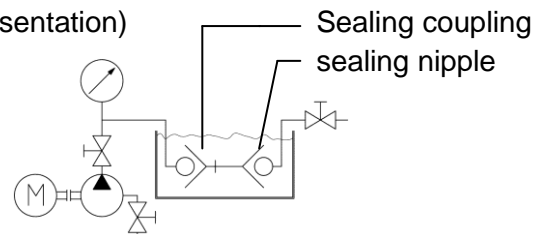
There are a number of methods that may be used to check a low-pressure coupling for proper sealing.

The description here uses the example of an immersion test.

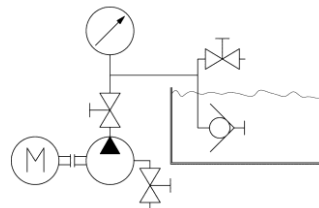
The test pressure should be an absolute 2 bar.

- Test set-up and procedure (schematic representation)

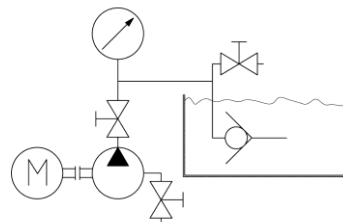
Test 1: Sealing coupling and
 Coupled sealing nipple



Test 2: Sealing coupling de-coupled



Test 3: Sealing nipple de-coupled



- Description:

In accordance with the diagrams the unit is placed under pressure and fully submerged under water in a container and is kept under water.

- Result:

In the immersion test the observation time indicates the leakage rate.

Leakage rate (mbar*l/s)	10^{-2}	10^{-3}	10^{-4}	10^{-6}
T (time required for a bubble of 4 mm in diameter to form)	3 seconds	30 seconds	5 minutes	6 to 7 hours

For example, A leakage rate of 10^{-3} mbar*l/s is present when no more than one bubble with a diameter of 4 mm forms within 30 seconds.

After the test, dry the unit as quickly as possible in warm air (recommendation: 45 – 55°C, for approximately 30 minutes with air flow and up to 2 hours with still air)

- Documentation:

Tests must be documented with entries for test pressure < 1, test media and name/date/signature.

10 Lubrication

In order to minimise the activation forces and to extend the lifetime of the coupling, we recommend cleaning and lightly greasing the connecting surfaces at suitable intervals as long as there is no risk that contamination in the vicinity will cause increased wear in combination with grease.

Lubrication is not carried out if the application does not permit it (e.g. in medical technology).

The selection of the lubrication is determined by the operator of the coupling and their purchasing options.

The connecting surfaces may only be lubricated if the operating conditions permit it.

Thus:

- The lubrication must be selected in accordance with compatibility with the seal quality and material.
- Media/lubrication combinations in which the lubrication properties are changed (e.g. turns to resin) must be avoided.
- Media/lubrication combinations that prevent safe operating conditions (e.g. lubrication/oxygen) must be avoided.

The lubrication interval depends on the framework conditions and the use of the application and is determined by the operator.

11 Storage

The coupling must be stored in a way that it cannot be damaged.

To avoid damage or dirt the transportation covers must be attached on all connections.

The storage conditions of the coupling depend on the guidelines applicable to the gaskets, since improper storage can lead to deterioration of the gaskets.

The following points must be observed:

- The gaskets must be stored dry.
- For the preservation of the gaskets, the gaskets should not be stored where they are exposed to the effects of daylight.
- For protection against oxygen, the gaskets should be stored in the original packaging.

12 Shut-down

At the end of the service life the coupling or its components have to be disposed non-polluting and according to the legal regulations.

For that the local public or private disposal societies should be taken.

13 Index

A

Accident prevention guidelines.....	9
According to intended purpose.....	6
adaptor side.....	8
Applications.....	7
Assembly.....	6

B

Bubble.....	13
-------------	----

C

Cleaned.....	9
Commissioning.....	6
connected.....	6, 8
Consumables.....	5
Contact.....	2
Container.....	13
coupling.....	6
Coupling.....	7, 9, 10
Coupling connection.....	7
Couplings.....	6
Customer care, individual.....	2

D

Damage.....	6
Damage compensation.....	4
disconnected.....	8
Dismantling.....	6
Disposal societies.....	14

E

Environmental conditions.....	5
-------------------------------	---

F

Fluid.....	6
Fully cleaned state.....	11
Function.....	6
Function test.....	6

G

General.....	4
General terms and conditions for delivery and service.....	5
Guarantees, void without notification.....	5
Guidelines applicable to the gaskets.....	14

H

Hazard notes.....	6
Hazardous emission.....	6
Hydraulic oil.....	7

I

Immersion test.....	13
Implementation.....	6
Installation manual.....	9

L

Leakage rate.....	13
Legible condition.....	6
Liability.....	4
Lifetime.....	11, 14
Lubrication in accordance with compatibility with the seal quality.....	14

M

Maintenance.....	6
Maintenance Instruction.....	11
Measures.....	13
Media that is hazardous to health.....	11
Methods.....	13
Mobile parts.....	9

N

No liability.....	4
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O

Observation time.....	13
one-hand operation.....	10
Operated, not according to the intended purpose.....	5
Operated, with a disregard for the specifications.....	5
Operating instruction.....	9
Operational safety regulations.....	6
operator.....	6
Original parts.....	5

P

Parts, damaged.....	11, 12
Perfect operation.....	9
Perfect, functioning condition.....	6
personnel trained by Walther-Präzision.....	11
Pipeline network.....	9

Pressurized	6	Technical data	7
Product description	7	Test	13
Purchase contract.....	5	Test pressure.....	13
<i>R</i>		Testing.....	13
Responsibility	11	Third-party items.....	5
<i>S</i>		Tools	6
Safety devices.....	6	Translations of this operating instruction.....	4
Safety Instruction	6	Transportation covers	14
Scope of delivery, actual	4	<i>V</i>	
Screw connections.....	6	Visual check.....	11
Seal	11, 12	<i>W</i>	
Sealing test	12	Warm air	13
Service and maintenance contract.....	2	Warranty, void without notification	5
Service claims, void without notification	5	Warranty, excluded from	5
static	8	Work safety directives	13
Storage conditions.....	14	Work safety regulations	6
Systems.....	6	Working method	6
<i>T</i>		Working pressure	8
Table of Contents	3	Wrong product selection	6