Operation and Service Manual

for HERMetic Sampler GT-Chem

Portable Closed Sampling Device

Note: before using the instrument please read this book.

MED-D DNV Certified Company

Certified System ISO 9001 QMI-SAI Global

This document is subject to changes without notice.
Check updates on www.tanksystem.com or contact us at tanksystem@honeywell.com

1 Table of contents

2 Recommandation for safe use

1. This Operation and Service Manual is a guide in order to help the user to operate the instrument to our best knowledge.

2. Nevertheless the maker disclaims all responsibility and liability for damage resulting from the use of the equipment regardless of the cause of the damage.

3. **Attention is drawn to the possible hazard due to electrostatic charges which may be present in the tank.** This may happen in particular with static accumulator liquids, i.e. liquids which have low conductivity of 50 picoSiemens/metre (pS/m) or less.

4. **It is very important that the instrument is grounded to the tank before the probe is introduced into the tank and remains grounded until after complete withdrawal from the tank.**

    4.1. If the instrument is installed with the quick connect coupler, grounding is effected through the quick connect coupler and the mating nipple of the valve provided that these parts are kept clean and free from corrosion in order to guarantee electrical conductivity. If a grease is used for this purpose, it must be one which contains graphite.

    4.2. If the instrument is not connected to the mating deck valve, the instrument has to be also earthed by means of the grounding cable and clamp.

5. **It is anticipated that the user will have specific operating methods laid down to ensure safety when using this type of apparatus. In this case the user's instructions shall be strictly observed.**

6. **In the absence of such instructions the following should be noted:**

    6.1. If a metal sounding pipe is fitted beneath the deck valve or tank is inerted, then ullaging, etc. is permissible at any time with no restriction.

    6.2. If there is no sounding tube or tank is not inerted, the following precautions shall be taken:

        6.2.1. If the cargo is not a static accumulator liquid, i.e. its conductivity is more than 50 pS/m, then ullaging is permitted provided that the instrument is properly grounded and earthed before the probe is inserted into the tank and remains earthed until the probe has been removed from the tank.

        6.2.2. If the cargo is a static accumulator liquid, i.e. its conductivity is less than 50 pS/m, then ullaging is permitted provided that:

            6.2.2.1. The instrument is properly grounded and earthed before the probe is inserted into the tank and remains earthed until the probe has been removed from the tank.
            6.2.2.2. The apparatus is not introduced into a tank until at least 30 minutes have elapsed after completion of any loading operation or stopping the injection of inert gas.

    6.3. For further guidance refer to International Safety Guide for Oil Tankers and Terminals (ISGOTT), ISBN ISBN 1-85606-291-7, Fifth Edition 2006, or consult the appropriate Legislative Authority for the installation.

7. **This product and his use is / may be related to international, national, local or company regulations or standards. It is the customer / user responsibility to ensure that the way to use the device complies with such applicable regulations or standards.**

8. **This device is a protable product. It must not be permanently installed on the tank and must be disconnected after use and stored in a safe and dry area.**

3 General information

3.1 Shipment note

The following parts should be included in the shipment:

- 1 instrument;
- 1 Allen key 1.3 mm;
- 1 or more bottles as ordered;
- 1 Operation and Service Manual.

3.2 Initial inspection

Check the contents of the shipment for completeness and note whether any damage has occurred during transport. Carry out the “Initial test before installing the instrument” to verify the good functioning. If the contents are incomplete, or if there is damage, not use the device. A claim should be filled with the carrier immediately, and Enraf Tanksystem SA Sales or Service organization should be notified in order to facilitate the repair or replacement of the instrument.

3.3 Documentation discrepancies

The design of the instrument is subject to continuous development and improvement. Consequently, the instrument may incorporate minor changes in detail from the information contained in the manual.

3.4 Warranty

12 months after installation but max. 18 months after delivery ex works.

The Vendor undertakes to remedy any defect resulting from faulty design materials or workmanship. The Vendor's obligation is limited to the repair or replacement of such defective parts by his own plant or one of his authorized service stations. The Purchaser shall bear the cost and risk of transportation of defective parts and repaired parts supplied in replacement of such defective parts.

When returned to Enraf Tanksystem SA or any of its agreed Service Stations equipment must be contamination-free. If it is determined that the Purchasers equipment is contaminated, it will be returned to the Purchaser at the Purchasers expense. Contaminated equipment will not be repaired, replaced, or covered under any warranty until such time that the said equipment is decontaminated by the Purchaser.

The Purchaser shall notify by fax, telex or in writing of any defect immediately upon discovery, specifying the nature of the defect and/or the extend of the damage caused thereby.

Where no other conditions have been negotiated between the Vendor and the Purchaser "General Conditions 188" of United Nations shall apply.

This equipment has been certified as non-electrical equipment for potentially explosive atmospheres for only those classes or categories of hazardous areas stated on the instrument label, bearing the mark of the applicable approval authority. No other usage is authorized.

Unauthorized repair or component replacement by non original spare parts by the Purchaser will void this guarantee and may impair the good functioning of the instrument.

In no event shall Enraf Tanksystem SA be liable for indirect, incidental or consequential loss or damage or failure of any kind connected with the use if its products or failure of its products to function or operate properly.

Enraf Tanksystem SA do not assume the indemnification for any accident or damage caused by the operation of its product and the warranty is limited to the replacement of parts or complete goods.

3.5 Certification

Enraf Tanksystem SA is an ISO 9001 certified company by QMI and MED-D by Det Norske Veritas Certification GmbH.

The equipment has been approved as non-electrical equipment for potentially explosive atmospheres by the following authorities :

ATEX
KEMA 06ATEX 0027
II 1 G c IIB T6 (Ta -20 to +80°C)

If you need a copy of any of this certificate please contact:

Enraf Tanksystem SA
Rue de l'industrie 2
1630 Bulle, SWITZERLAND

Telephone : +41-26-91 91 500
Telefax : +41-26-91 91 505
Web site : www.tanksystem.com
E-mail : tanksystem@honeywell.com

3.6 Spare parts

Substitution of components may impact safety. Use only original spare parts.

When ordering spares identify the spare part by TS number and description. Refer to section “Drawings”.

Some spares might be repairable; in this case send part to any authorized service center or to the factory.

In case of urgency replacement units can be available while stocks last.

3.7 Service and Repair

The customer should take care of the freight and customs clearance charges. If units are sent on "freight collect " the charges will be invoiced to the customer.

When returning units or parts for repair to the factory please fill out a service request form (see next page).

Traceability information are engraved on a plate fixed to the sampler. The serial number of the unit is as follows:
AC followed by a 4 digits number.

When returned to Enraf Tanksystem SA equipment must be contamination-free. If it is determined that the customers equipment is contaminated, it will be returned to the customer at the customers expense. Contaminated equipment will not be repaired until such time that the customer decontaminates the said equipment.

Service Request

Customer's address: .....
.....
.....
.....
.....

Telephone: .....

Telex: .....

Fax: .....

Type of unit or part: .....
.....

Serial number : **AC**.....

Short description of defective unit or part: .....
.....
.....
.....

Do you want a quotation before repair is started:.....yes / no.....

Repaired unit has to be returned to the following address:
.....
.....
.....
.....
.....

4 Worldwide Service Stations network

The updated list can be found on our website www.tanksystem.com

COUNTRY	ADDRESS	TELEPHONE/FAX/E-MAIL
SWITZERLAND	ENRAF TANKSYSTEM SA 2, rue de l'Industrie CH-1630 BULLE	Tel : +41-26-91 91 500 Fax : +41-26-91 91 505 Tanksystem@honeywell.com
CANADA	PYLON ATLANTIC A Div. Of Pylon Electronics Inc. 31 Trider Crescent., DARTMOUTH, N.S. B3B 1V6	Tel : +1-902-4683344 Fax : +1-902-4681203 halifax_csr@pylonelectronics.com
CHINA	HUA HAI EQUIPMENT & ENGINEERING CO LTD Factory 7, Lane 1365, East Kang Qiao Road Kang Qiao Industrial Zone, Pu Dong SHANGHAI, P.C. 201315	Tel : +86-21-68183183 Fax : +86-21-68183115 huahaish@huahaiee.com
GREECE	SPANMARIN 86, Filonos Street GR-185 36 PIRAEUS	Tel : +30-210-4294498 Fax : +30-210-4294495 spanmarin@ath.forthnet.gr
JAPAN	DAIWA HANBAI CORPORATION LTD 2-10-31, Mitejima, Nishiyodogawa-ku OSAKA 555-0012	Tel : +81-6-64714701 Fax : +81-6-64729008 daiwa471@silver.ocn.ne.jp
KOREA	World Ocean CO., LTD Rm1001, Hae-deok Bldg., 1212-11 Choryang-dong Dong-Gu BUSAN	Tel : +82-51-462-2554/5 Fax : +82-51-462-0468 marine@worldocean.co.kr
MEXICO	URBAN DEL GOLFO S.A. DE C.V. Ave. Ejército Mexicano 1902 Col. Loma del Gallo 89460 CD. MADERO, TAMPS. MEXICO	Tel : +52-833-2170190 Fax : +52-833-2170190 urbansa@prodigy.net.mx
NETHERLANDS	B.V. TECHNISCH BUREAU UITTENBOGAART Brugwachter 13 NL-3034 KD ROTTERDAM	Tel : +31-10-4114614 Fax : +31-10-4141004 info@tbu.nl

The updated list can be found on our website www.tanksystem.com

COUNTRY	ADDRESS	TELEPHONE/FAX/E-MAIL
PORTUGAL	CONTROLIS Soc. Com. Equipamentos de Controlo, Lda. Rua Conceiçao Sameiro Antunes, 26E 2800-379 COVA DA PIEDADE	Tel : +351-21-2740606 Fax : +351-21-2740897 controlis@netc.pt
RUSSIA	NPP "GERDA" Vilisa Latsisa str. 17 Building 1 125480 MOSCOW	Tel : +7-495-7558845 Fax : +7-495-7558846 info@gerda.ru
SINGAPORE	HUBBELL INT'L (1976) PTE LTD 322 Thomson Road SINGAPORE 307665	Tel : +65-6-2557281 Tel : +65-6-2550464 Fax : +65-6-2532098 hubbell@mbox2.singnet.com.sg
SPAIN	E.N.I. Electronica y Neumatica Industrial, S.A. C/Jon Arrospide, 20 (Int.) 48014 BILBAO	Tel : +34-94-4746263 Fax : +34-94-4745868 eni.tecnica@eni.es
SWEDEN	INSTRUMENTKONTROLL Lars Petersson AB Varholmsgatan 1 414 74 GÖTEBORG	Tel : +46-31-240510 Tel : +46-31-240525 Fax : +46-31-243710 Info@instrumentkontroll.se
TURKEY	YEDI DENIZ Setustu, Izzetpasa Yok.1 TR 34427 Kabatas ISTANBUL	Tel : +90.212.251 64 10 / 3 lines Fax : +90.212.251 05 75 servicestation@yedideniz.net
UNITED ARAB EMIRATES	MARITRONICS TRADING L.L.C. P.O. Box 6488 Shed # 72, Jadaf Ship Docking Yard DUBAI	Tel : +971-4-3247500 Fax :+971-4-3242500 service@maritronics.com
UNITED KINGDOM	ENERGY MARINE (INTERNATIONAL) LTD. 12 Clipstone Brook Industrial Estate Cherrycourt Way LEIGHTON BUZZARD, BEDS LU7 4TX	Tel : +44-1525-851234 Fax :+44-1525-852345 info@engmar.com
U.S.A / TEXAS	HONEYWELL HERMETIC 4522 Center Street DEER PARK, TX 77536	Tel : +1-281-930 1777 Fax : +1-281-930 1222 Toll free call in the USA: 1-800-900 1778 hermetic@honeywell.com

5 Description

5.1 General

The **HERMetic Samplers** are designed for closed sampling of liquids or chemicals, which present a Fire-, Health- or Air pollution Hazard. The gas tight construction of these units avoids a pressure release from the tank and exposure to fumes during operation.
The equipment is designed and certified for use in potentially explosive atmospheres area.

5.2 Sampling types

Several kinds of samples can be realised with this sampler. To get different samples, 4 bottles are available: Zone bottle, Spot bottle, Running bottle and Bottom bottle.

The Zone bottle allows sampling of the upper level inside the tank.

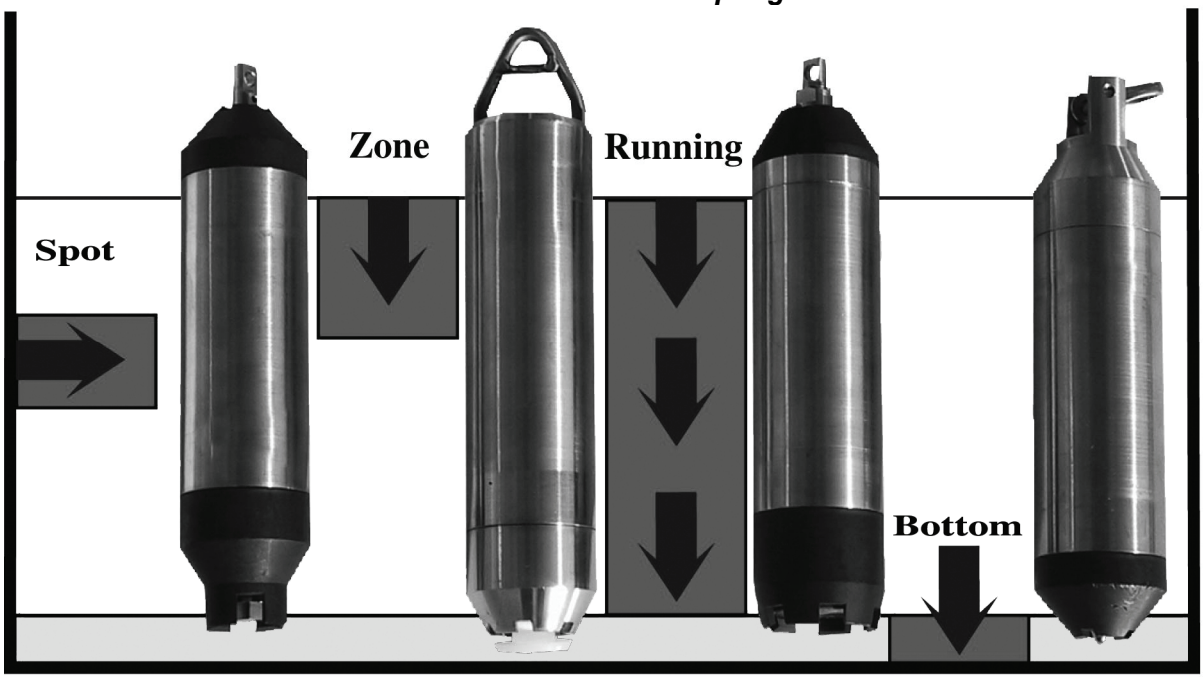
The Spot bottle allows sampling at a determinate hight.

The running bottle allows sampling all along the displacement of the bottle inside the tank.

The Bottom bottle allows sampling of the tank bottom.

As far as the kinds of sampling are concerned, please refer to ISO 3170 “Petroleum liquids – Manual sampling”.

Different kinds of samplings



All these bottle are interchangeable, please refer to § 6.1.
For specific application, other bottles exist. For further information, please contact.

The sampler is delivered as standard with zone sampling bottle. All other sampling bottle are available as option.

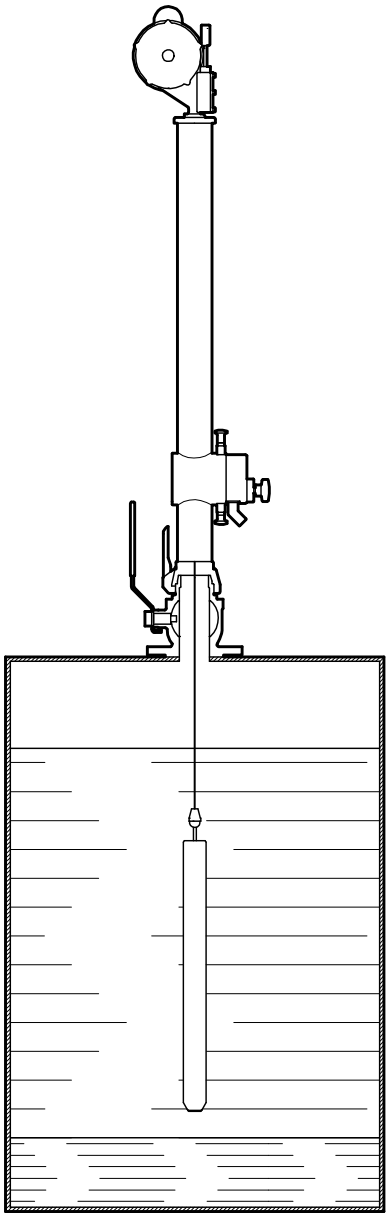
5.3 Sampling principle

5.3.1 Connection and grounding system

All HERMetic products are easy to connect. Indeed, all HERMetic devices are equipped with a quick coupler for connection on a HERMetic ball valve.

Place the unit on the appropriate valve and activate the locking system. Depending on the locking system, either rotate the collar and actuate the lever or pull on the sleeve.

If the instrument is connected to genuine HERMetic valve, grounding is effected through the quick connect coupler and the mating nipple of the valve. No additional grounding strap is necessary. For further information, please refer to §2 “Recommandation for safe use”.



5.3.2 Sampling method

The sample is taken by a vertical move of the bottle inside the fluid.

The bottle is linked with a graduated tape. A reading window allows to monitor the bottle location.

For complete explanation of sampling procedures, please refer to §6 “Operation”.

Important note: to avoid contamination of the sample taken by the sampler itself, check and clean the unit and the bottle prior to use. Clean the unit with an appropriate cleaner without impacting the unit or contamination risk of the next sample.

5.3.3 Liquid transfer

After sampling, the liquid can be transferred into a laboratory bottle through a transfer valve.

The transfer of the liquid from the sampling bottle to a laboratory bottle occurs by gravity.

The opening of the bottle valve is realized by unlocking the distribution block to its transfer position and by lowering the sampling bottle until its sitting on the ball of the valve.

A pump can be used to accelerate and complete the transfer of the fluid.

6 Operation

6.1 Checking before use

Before using the sampler :

- Check the good state of the device.
- Check the cleanliness of the unit (sampler and bottle) to prevent any contamination of the sample.
- Inspect the bottle tape end for breaks, kinks and wear. If there is some damage, replace the tape before use.
- Check of the attachment of the hook locking device on the tape.
- Check the closure of the hook locking device according to Fig. 1. The swivel hook has to be locked in use.

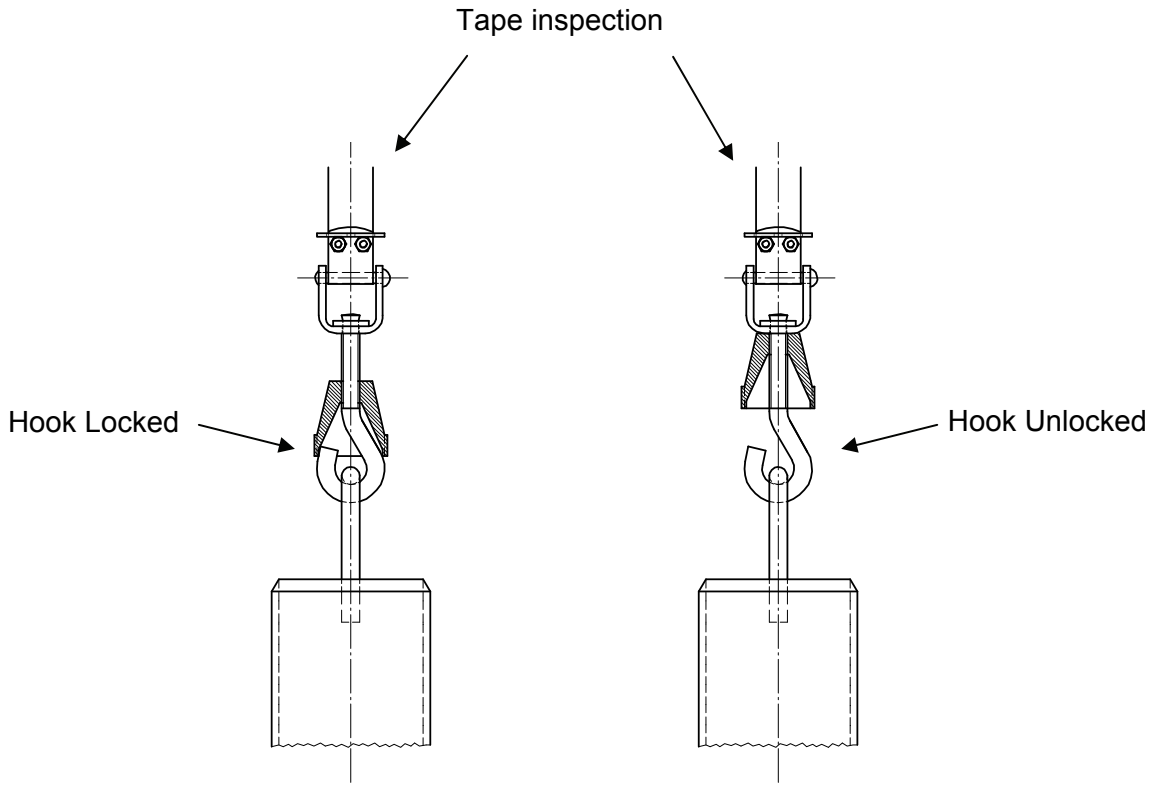


Fig. 1

Nota: Clean the instrument of any excess of liquid after use. Remove the carter winder and clean the storage tube. This cleaning must be done very properly, in particular when corrosive liquids are gauged, such as strong acids or caustic soda for instance.

Store the instrument in a dry location.

6.2 OPERATING SAMPLER GT CHEM with ZONE SAMPLING BOTTLE :

	ND	TS	DESCRIPTION
	30293	10374	Zone bottle 0,43 l. FFKM assy

1. Install sampler with sampling bottle on top of 2” valve by means of quick connect coupling. (In case air in sampler housing could cause contamination in tank it is recommended to purge sampler after it has been installed).

2. Prepare hose connection from distribution block to laboratory bottle.

3. Open 2” ball valve

4. Unlock distribution block by pulling stopper, turn and lock distribution block in sampling position (Sampling position is marked with one dot on distribution block).

5. Lower bottle at a speed of at least 0,5 m/sec.
   If lowering speed is too low, liquid will not flow through bottle as ball resistance to flowing has to be higher than ball weight to keep open bottom of container.

6. Stop bottle at level where sample is to be taken.

7. Lift bottle back into sampler housing; turn the crank until getting a catch that keeps the tape fully tight.

8. Unlock distribution block and turn it by 90° and lock it in transfer position. (Transfer position is marked with 3 dots on distribution block).

9. Lower sampling bottle until it is sitting on distribution block. This will open valve of sampling bottle. Liquid will flow from sampling bottle into distribution block and sampler housing.

10. Pull handle of transfer valve and liquid will flow by gravity to laboratory bottle.

11. When laboratory bottle is full, close transfer valve, lift sampling bottle and turn the crank until getting a catch that keeps the tape fully tight, turn distribution block in drainage position and lower sampling bottle again. (Drainage position is marked with 2 dots on distribution block).

12. Close 2” ball valve.

13. Remove sampler from ball valve.

14. In order to clean sampling device distribution block can be removed by unlocking pin at bottom and at top of distribution block. Top part of sampler housing can be removed as well and sampling bottle detached from tape. If tape requires cleaning it has to be unwound, preferably on another reel.

    Note: if the block in 8 or 11 does not turn, check that the bottle is lifted up totally.

6.3 OPERATING SAMPLER GT CHEM with BOTTOM SAMPLING BOTTLE :

	ND	TS	DESCRIPTION
O	20247	20132	Bottom bottle 0.40 l FFKM assy

1. Install sampler with sampling bottle on top of 2” valve by means of quick connect coupling. (In case air in sampler housing could cause contamination in tank it is recommended to purge sampler after it has been installed).

2. Prepare hose connection from distribution block to laboratory bottle.

3. Open 2” ball valve

4. Unlock distribution block by pulling stopper, turn and lock distribution block in sampling position (Sampling position is marked with one dot on distribution block).

5. Lower bottom bottle to reach tank bottom.

6. When bottle bottom valve hits tank bottom bottle fills up automatically.

7. Lift bottle back into sampler housing; turn the crank until getting a catch that keeps the tape fully tight.

8. Unlock distribution block and turn it by 90° and lock it in transfer position. (Transfer position is marked with 3 dots on distribution block).

9. Lower sampling bottle until it is sitting on distribution block. This will open valve of sampling bottle. Liquid will flow from sampling bottle in distribution block and sampler housing.

10. Pull handle of transfer valve and liquid will flow by gravity to laboratory bottle.

11. When laboratory bottle is full, close transfer valve, lift sampling bottle and turn the crank until getting a catch that keeps the tape fully tight, turn distribution block in drainage position and lower sampling bottle again. (Drainage position is marked with 2 dots on distribution block).

12. Close 2” ball valve.

13. Remove sampler from ball valve.

14. In order to clean sampling device distribution block can be removed by unlocking pin at bottom and at top of distribution block. Top part of sampler housing can be removed as well and sampling bottle detached from tape. If tape requires cleaning it has to be unwound, preferably on another reel.

Note: if the block in 8 or 11 does not turn, check that the bottle is lifted up totally.

6.4 OPERATING SAMPLER GT CHEM with SPOT SAMPLING BOTTLE :

	ND	TS	DESCRIPTION
O	20253	20134	Spot bottle 0.40 l. FFKM

1. Install sampler with sampling bottle on top of 2” valve by means of quick connect coupling. (In case air in sampler housing could cause contamination in tank it is recommended to purge sampler after it has been installed).

2. Prepare hose connection from distribution block to laboratory bottle.

3. Open 2” ball valve

4. Unlock distribution block by pulling stopper, turn and lock distribution block in sampling position (Sampling position is marked with one dot on distribution block).

5. Lower spot bottle to the level where sample is to be taken.

6. Stop bottle at this level and shake it rapidly up and down about 10 times on a 200 mm stroke. This movement has a pumping effect as the ball opens and closes bottom of container.

7. Lift bottle back into sampler housing; turn the crank until getting a catch that keeps the tape fully tight.

8. Unlock distribution block and turn it by 90° and lock it in transfer position. (Transfer position is marked with 3 dots on distribution block).

9. Lower sampling bottle until it is sitting on distribution block. This will open valve of sampling bottle. Liquid will flow from sampling bottle into distribution block and sampler housing.

10. Pull handle of transfer valve and liquid will flow by gravity to laboratory bottle.

11. When laboratory bottle is full, close transfer valve, lift sampling bottle and turn the crank until getting a catch that keeps the tape fully tight, turn distribution block in drainage position and lower sampling bottle again. (Drainage position is marked with 2 dots on distribution block).

12. Close 2” ball valve.

13. Remove sampler from ball valve.

14. In order to clean sampling device distribution block can be removed by unlocking pin at bottom and at top of distribution block. Top part of sampler housing can be removed as well and sampling bottle detached from tape. If tape requires cleaning it has to be unwound, preferably on another reel.

Note: if the block in 8 or 11 does not turn, check that the bottle is lifted up totally.

6.5 OPERATING SAMPLER GT CHEM with RUNNING SAMPLING BOTTLE :

	ND	TS	DESCRIPTION
O	20216	20117	Running bottle 0.40 l. FFKM

0. Calibration plug on top of running bottle has to be adjusted according to liquid to be sampled. The plug is properly set up when the transferred quantity of liquid falls between 70 and 85% of the capacity of the sampling bottle, i.e. between 0.3 and 0.35 l (API MPMS Chapter 8.1, § 8.3.3.3).

1. Install sampler with sampling bottle on top of 2” valve by means of quick connect coupling. (In case air in sampler housing could cause contamination in tank it is recommended to purge sampler after it has been installed).

2. Prepare hose connection from distribution block to laboratory bottle.

3. Open 2” ball valve

4. Unlock distribution block by pulling stopper, turn and lock distribution block in sampling position (Sampling position is marked with one dot on distribution block).

5. Lower running bottle regularly to appropriate depth but do not hit tank bottom to keep bottom plug closed all the time.

6. When appropriate depth has been reached lift running bottle back into Sampler housing at the same regular speed. Turn the crank until getting a catch that keeps the tape fully tight.

7. Unlock distribution block and turn it by 90° and lock it in transfer position. (Transfer position is marked with 3 dots on distribution block).

8. Lower sampling bottle until it is sitting on distribution block. This will open valve of sampling bottle. Liquid will flow from sampling bottle into distribution block and sampler housing.

9. Pull handle of transfer valve and liquid will flow by gravity to laboratory bottle.

10. When the transfer is completed, check that the transferred liquid falls between the two marks 0.3 and 0.35 l in order to comply with API MPMS Chapter 8.1 requirements. Close the transfer valve. Lift sampling bottle and turn the crank until getting a catch that keeps the tape fully tight, turn distribution block in drainage position and lower sampling bottle again. (Drainage position is marked with 2 dots on distribution block).

11. Close 2” ball valve.

12. Remove sampler from ball valve.

13. In order to clean sampling device distribution block can be removed by unlocking pin at bottom and at top of distribution block. Top part of sampler housing can be removed as well and sampling bottle detached from tape. If tape requires cleaning it has to be unwound, preferably on another reel.

Note: if the block in 7 or 10 does not turn, check that the bottle is lifted up totally.

7 Care & Maintenance

7.1 Safety warning

As this equipment has been certified as non-electrical equipment for potentially explosive atmospheres. Specific precautions have to be taken regarding maintenance of the device. The user can exchange parts and modules if following points are observed :

1. Never carry out any repair or trouble shooting in an hazardous area.

2. Substitution of components may impact safety. Use only original spare parts.

3. Work shall be done only by maintenance personel who has experience with equipment certified for use in potentially explosive atmosphere.

The design of the equipment is modular, i.e. in case of damage, check which modules or spare parts have to be replaced. Order new parts according to enclosed drawings and specific item number TS -----. The instrument consists of the following modules:

- Mechanical parts
- Tape assembly
- Tape cleaner

7.2 Care

Clean the instrument of any excess of liquid after use. Remove the carter winder and clean the storage tube. This cleaning must be done very properly, in particular when corrosive liquids are sampled, such as strong acids or caustic soda for instance.

Store the instrument in a dry location.

Check periodically whether the general state of the device is still OK.

Check periodically whether all the sealings are still OK. O-rings of distribution block and 2” quick connect coupling are of first importance for gastightness.
Check periodically the gas-tightness of the unit up to 0.3 bars with an appropriate leak detector.

Check the tape wiper for wear.

Clean periodically the sampling bottle. Check the valves of sampling bottles for liquid leakage.

Check periodically the tape for kinks.

Check periodically the bearings state. Bearings have limited lifespan.

Check periodically (at least every 6 months) the continuity of grounding by measuring the electrical resistance between the hook lock (or the sampling bottle) and the quick connect coupler. Resistance should not exceed 100 Ω.

7.3 Cleaning of the sampler

It is required to fit the cleanliness level with the sample goals. Where appropriate, dismantle the sampler and clean the parts with an appropriate cleaner to prevent any contamination of the sample by the sampler itself.

7.3.1 Carter winder

To clean HERMetic Sampler, carter winder can be easily removed as well and sampling bottle detached from tape.

7.3.2 Distribution bloc

In order to clean sampling device, distribution block can be removed by unlocking pin at bottom and at top of distribution block.

7.3.3 Tape cleaning

If tape requires cleaning it has to be unwound. Clean it during its winding-up operation on the winder.

7.4 Tape wiper adjustment or replacement

Check the wear of the wiper. If necessary, adjust it or replace it.

- Unscrew the 2 wing screws to remove the carter winder.
- Dismantle the wiper holder by unscrewing the 2 screws.
- Remove the wiper of its box.
- Use the Allen key 1.3 mm to set the 2 wipers screws properly or exchange it..
- Put back the wiper holder and tighten the 2 screws.
- Reassemble the carter winder on the storage tube and tighten the 2 wing screws.

7.5 Tape replacement

- Remove the carter winder from the sampler (2 screws M5x20);
- Remove the tape wiper;
- Unwind totally the old tape;
- Remove the cover for winder (5 screws M4x10 side opposite to crank);
- Slacken the tape from the core;
- Remove it and unscrew the screw M4x30 tightening to the core;
- Put the new tape;
- Fasten the tape to the core with screw M4x30;
- Wind the new tape;
- Put back the cover for winder and tighten the 5 screws M4x10;
- Put back and adjust the tape wiper;
- Put back the carter winder and tighten the 2 screws M5x20;
- Check the tape winder for gas tightness (0.3 bar, 4.4 psi) before using again.

7.6 Bearings

Bearings are involved in the electrical safety of this device. In case of exchange, use only original spare parts.

8 Specifications

General Specifications

Tape length	up to 50 m/164 ft
Tape graduation	Metric/English
Tape resolution	1 mm / 1/16”
Tape accuracy	±6.3mm/30 m (±1/4”/100 ft approx.) ±10.3mm/50m (±2/5”/164 ft approx)
Maximum tank pressure	Atmospheric pressure ±0.3 bar (4.4 psi)
Liquid density	up to 8kg/dm³
Ambient temperature range	-20°C to 80 °C (-4°F to 176°F)
Maximum liquid temperature	80°C (176°F)
Mechanical coupling	Q2 (2”)
Weight	8.8 kg approx.
Dimensions	1020 x 120 x 240 mm approx.

Meets ISO 3170 “Petroleum liquids – Manual sampling”

Hazardous environments approvals

ATEX	KEMA 06ATEX 0027 II 1 G c IIB T6 (Ta -20 to +80°C)
Tape cleaning device	Adjustable tape cleaner
Available bottles	Zone, bottom, spot, running sampling bottles
Maintenance	modular design / easy exchange of parts

Specifications subject to change without notice.

9 Drawings & Declaration of Conformity

These documents are enclosed in following pages.

9.1 Sampler

O = Option, according to specific order.

	ND	TS	DESCRIPTION
	20190	10048	Sampler 2” GT FFKM assy
	30384	10362	Plug FFKM assy
	20281	10316	Carter winder FFKM assy
	30592	10317	Body assy
	30545	10314	Crank assy FFKM
	30237	10535	Wiper PTFE
	40520	10368	Tape assy w/o winder 30m
	40803	10389	Tape assy w/o winder 35m
	41023	20613	Kit inlet valve FFKM
	30293	10374	Zone bottle 0,43 l. FFKM assy
O	20247	20132	Bottom bottle 0.40 l FFKM assy
O	20253	20134	Spot bottle 0.40 l. FFKM
O	20216	20117	Running bottle 0.40 l. FKKM

9.2 Valves

Important: Valves are supplied separately from Samplers. There are not included in Sampler scope of supply.

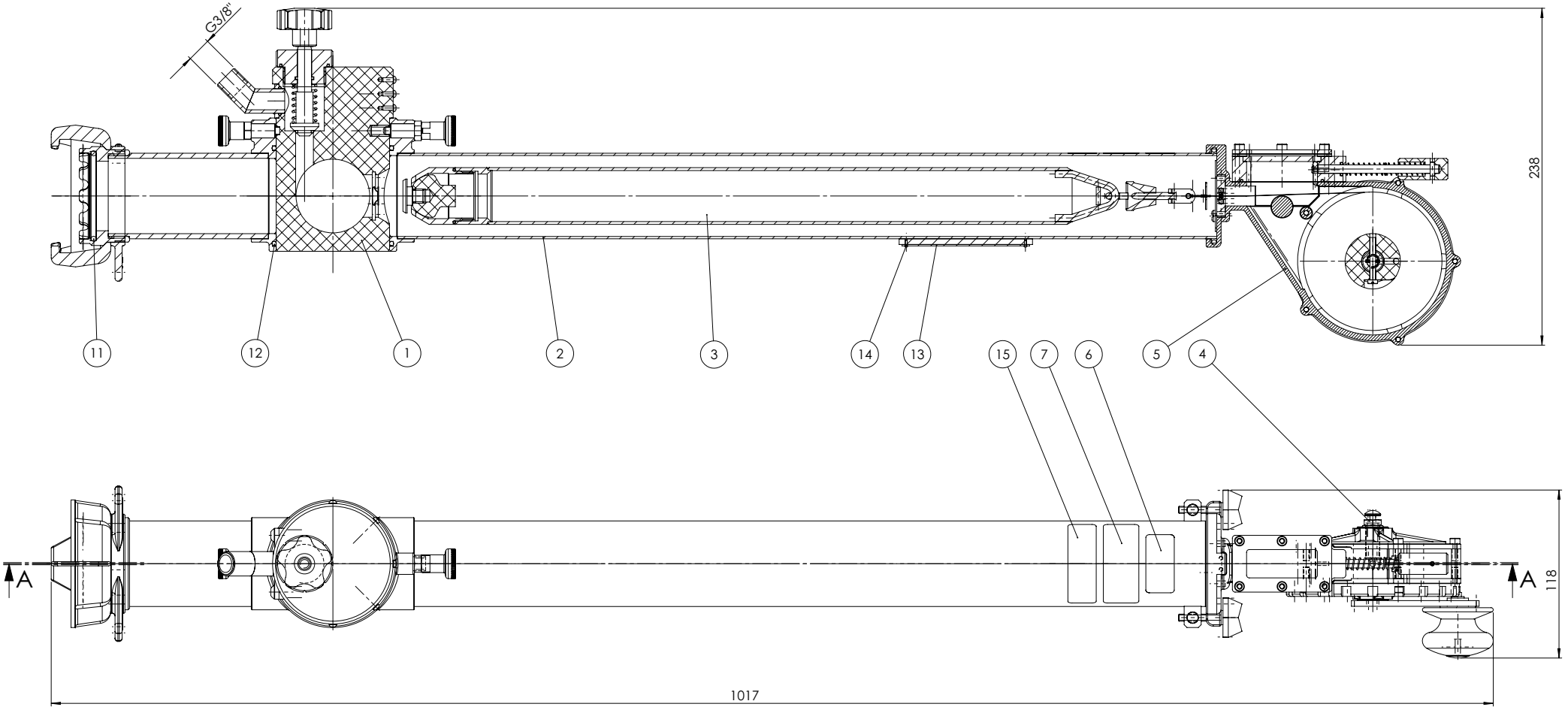
	ND	TS	DESCRIPTION
	20291	10083	Valve C2-SS-W, 2” flange DUJ, weather cap
	20287	10082	Valve C2-SS-SEC, 2” flange DUJ, security cover
	20288	10081	Valve C2-SS-BL, 2” flange DUJ, blind cover
	30391	10076	Valve C2-SS-W, 2" female, weather cap
	30374	10078	Valve C2-SS-SEC, 2" female, security cover
	30596	10085	Valve C2-SS-BL G2" Female, blind cover

9.3 Declaration of Conformity

ATEX Certified Product

No modifications permitted without the approval of the "authorised person"

COUPE A-A



Item	Qty	Weight	Description	Material	TS	ND
1	1	1193.6	Plug FFKM assy		10362	30384
2	1	3572.3	Body assy		10317	30592
3	1	983.4	Zone bottle 0.43l. FFKM assy		10374	30293
4	1	12.5	Kit inlet valve FFKM		20613	41023
5	1	2356.4	Carter winder FFKM assy		10316	20281
6	1	0.1	Label "Sampler"		50005	40344
7	1	0.2	Label " Enraf Tanksystem"		50006	40343
8	1	6640.0	Carrying case S2GT	Wood	50338	30338
9	1	0.0	Sachet PEBD 90x75		50335	
10	1	0.0	Hexagon key 1.3mm	Steel	50350	ISO2936
11	1	1.9	O-Ring ø56.74x3.53	FFKM	20538	
12	2	1.8	O-Ring ø80x3	FFKM	20523	
13	1	14.4	Identification plate TS 10048 AC-nnnn	1.4301	50088	41315
14	2	0.1	Round head grooved pin 1.4x4	A2	40760	DIN1476
15	1	0.1	Sticker " Earth strap"	-	50072	41143

TOLERANCES UNLESS OTHERWISE SPECIFIED									
Norm.Size	Over		6	30	100	300	1000		
Fit	To	6	30	100	300	1000	2000	Angles	
Fine	±	0,05	0,1	0,15	0,2	0,3	0,5	0,1°	

REMOVE ALL BURRS AND SHARP EDGES

Drawn: CPI 10.02.2009 | Control:

Weight: 14778.7 Eff.

1:2

Sampler 2" GT

Sampler 2" GT FFKM assy

ISSUE 4 : 14.8.2008

MPSA YYYN

Replacement for: ND | Replaced by: ND

TS 10048

ND 20190

REF ND

Enraf Tanksystem SA
RUE DE L'INDUSTRIE 2 CH-1630 BULLE
Tel. +41 26 91 91 500 - Fax +41 26 91 91 505

ATEX Certified Product

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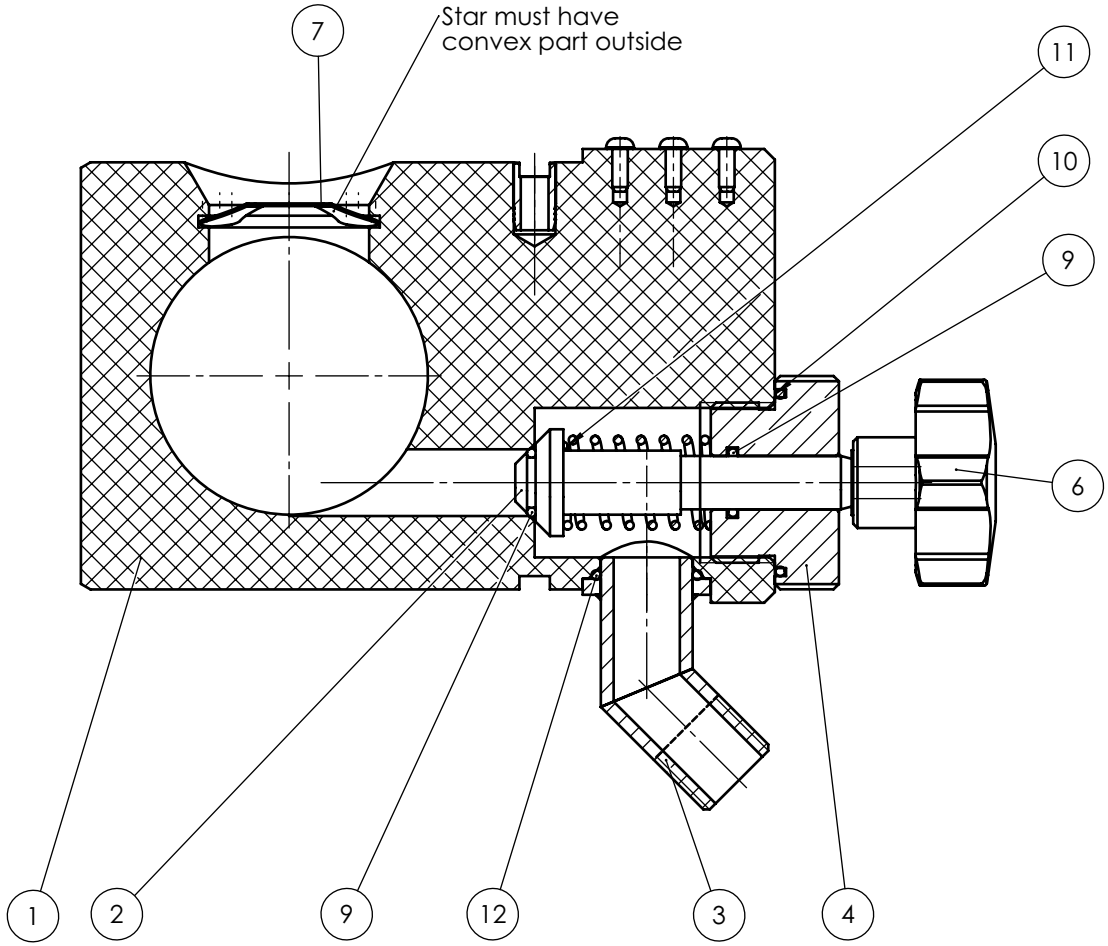

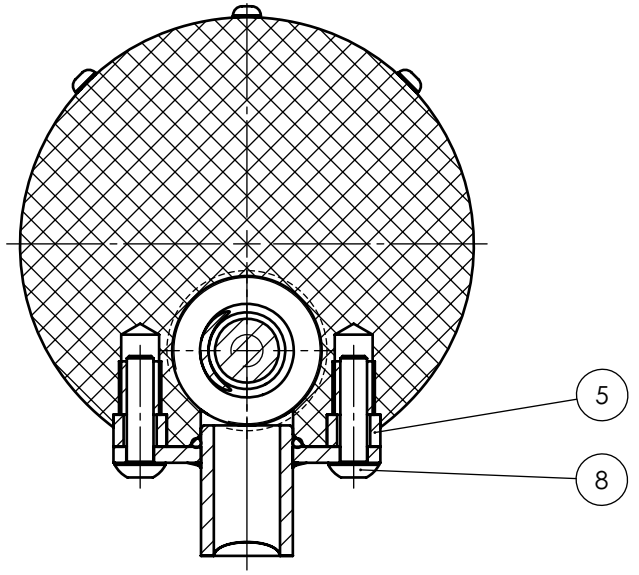

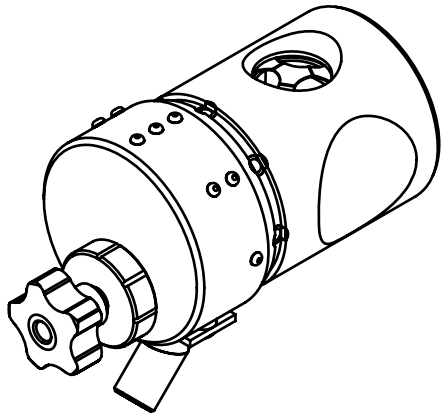

Item	Qty	Weight	Description	Material	TS	ND
1	1	992.0	Plug		20013	30234
2	1	55.7	Spindle	1.4435	20015	40445
3	1	63.4	Elbow G 3/8"	1.4435	20016	40446
4	1	43.4	Nut	PTFE 25% car	20017	40447
5	2	2.2	Spacer	1.4435	-	40448
6	1	24.0	Lobe knobs	-	20512	
7	1	3.2	Star	1.4301	20122	40939
8	2	3.0	Socket button head cap screw M5x20	A2	40756	ISO7380
9	2	0.1	O-Ring ø9.25x1.78	FFPM	20527	
10	1	0.3	O-Ring ø31.47x1.78	FFPM	20528	
11	1	5.8	Spring	1.4310	20515	
12	1	0.1	O-Ring ø17.17x1.78	FFPM	20531	

TOLERANCES UNLESS OTHERWISE SPECIFIED

Norm.Size	Over		6	30	100	300	1000	Angles
Fit	To	6	30	100	300	1000	2000	
Fine	±	0,05	0,1	0,15	0,2	0,3	0,5	0,1°

REMOVE ALL BURRS AND SHARP EDGES

Weight: 1193.6 Eff.

ISSUE 2 : 7.8.2008

1:1

Drawn: UPR 08.08.2008

Control:

MPSA YYYN

Replacement for: ND

Replaced by: ND

Sampler 2" GT

Plug FFKM assy

TS 10362

ND 30384

REF ND 20190

Enraf Tanksystem SA
RUE DE L'INDUSTRIE 2 CH-1630 BULLE
Tel. +41 26 91 91 500 - Fax +41 26 91 91 505

ATEX Certified Product

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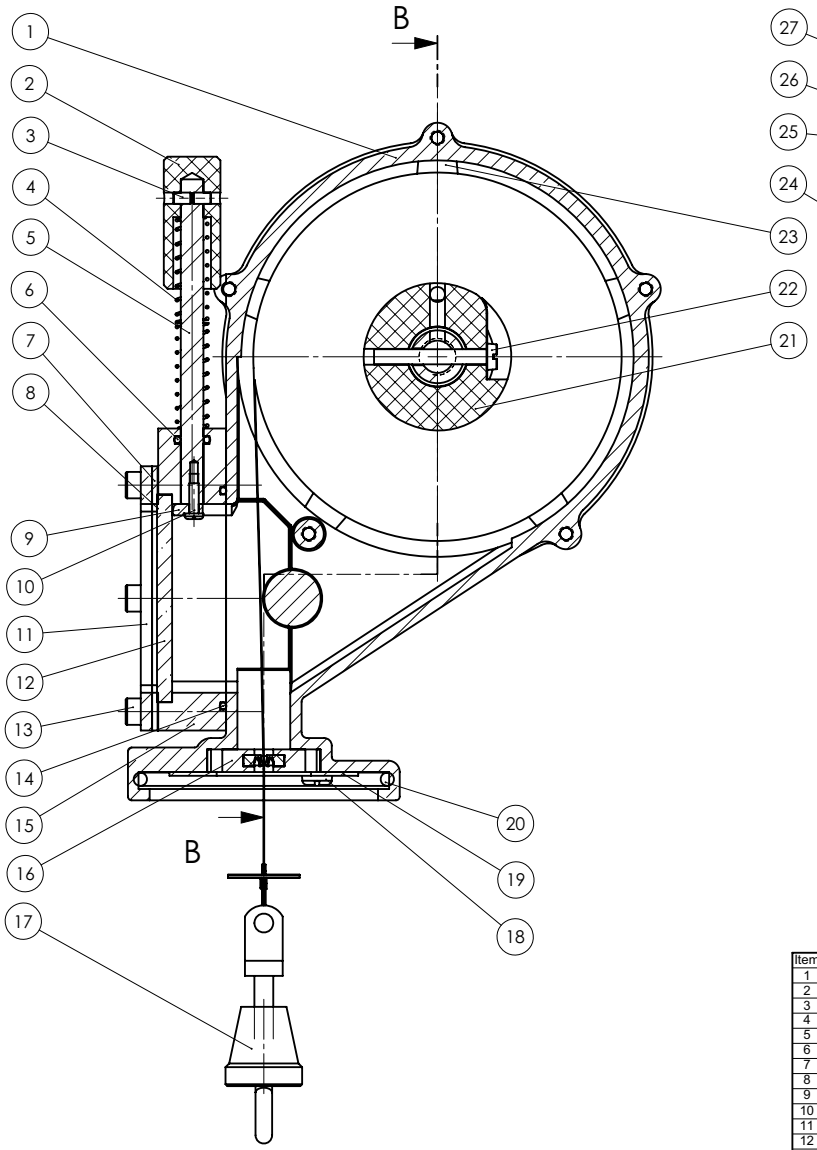
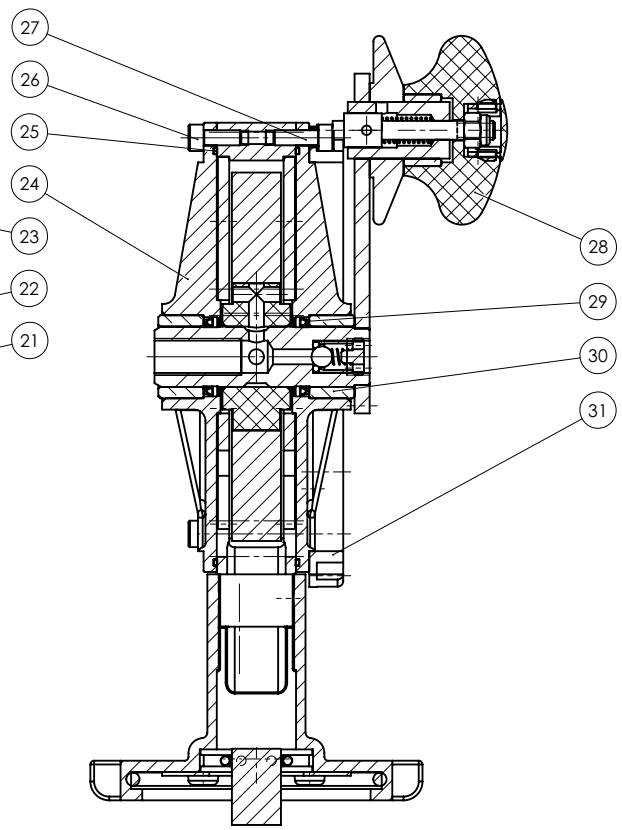
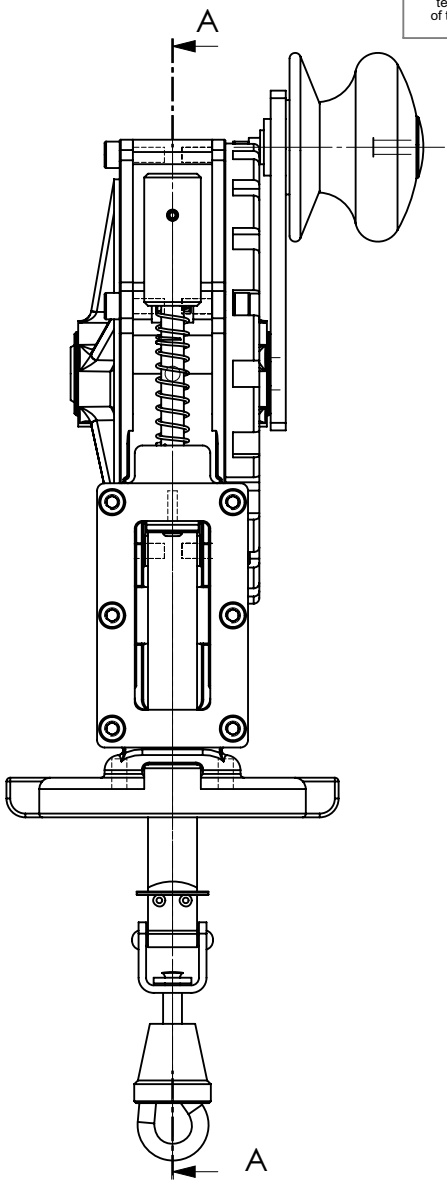
COUPE A-A



COUPE B-B





Item	Qty	Weight	Description	Material	TS	ND
1	1	578.8	Carter winder	CF8M	20602	20277
2	1	9.0	Push button	PTFE 25% car	20022	40452
3	2	1.0	Socket set screw M3x5	A2	40850	DIN 913
4	2	0.8	Spring of wiper	1.4310	12611	
5	1	18.9	Axle of wiper	AISI 316	20023	40453
6	1	0.1	O-Ring ø6.07x1.78	FFPM	20526	
7	1	2.6	Gasket for sight & cover	Caoutchouc	20029	40459
8	1	0.2	Gasket for sight glass	FEP	21036	40985
9	1	0.6	Wiper	PTFE	12097	30700
10	1	2.0	Slotted pan head mach. screw M2.5x8	A2	40705	ISO1580
11	1	41.2	Frame of sightglass	1.4301	20024	40454
12	1	13.2	Sightglass	Verre	20026	40456
13	6	4.0	Socket head cap screw M4x30	A2	40310	DIN 912
14	1	0.4	O-Ring ø44.17x1.78	FFPM	20046	
15	1	57.3	Sightglass holder	PVDF	21046	30524
16	1	5.5	Wiper PTFE		10535	30237
17	1	688.8	Tape assy w/o winder 30m		10368	40520
18	2	1.0	Slotted pan head mach. screw M4x5	A2	40701	ISO1580
19	1	11.6	Wiper holder	AISI 316	20028	40458
20	1	2.0	O-Ring ø61.91x3.53	FFPM	20524	
21	1	27.1	Tape holder	PTFE 25% car	21041	40989
22	1	3.0	Slotted cheese head mach. screw M4x30	A2	40800	ISO1207
23	2	19.9	Washer	PTFE 25% car	20607	41014
24	2	287.5	Cover	CF8M	20603	30539
25	2	1.1	Gasket	PTFE	20604	41012
26	5	2.0	Socket head cap screw M4x10	A2	40302	DIN 912
27	5	2.0	Socket head cap screw M4x12	A2	40303	DIN 912
28	1	214.7	Crank assy FFKM		10314	30545
29	2	0.2	FOI Forseal ring ø16	PTFE 25% car	21059	
30	2	17.6	Bearing 16x22x12	Bronze	21062	
31	1	23.8	Washer		20606	30540

TOLERANCES UNLESS OTHERWISE SPECIFIED

Norm.Size	Over		6	30	100	300	1000	Angles
Fit	To	6	30	100	300	1000	2000	
Fine	±	0,05	0,1	0,15	0,2	0,3	0,5	0,1°

REMOVE ALL BURRS AND SHARP EDGES

Weight: 2356.8 Eff.

1:1

Drawn: UPR 12.08.2008

Control:

ISSUE 1 : 12.8.2008

MPSA YYYN

Replacement for: ND

Replaced by: ND

Sampler 2" GT

Carter winder FFKM assy

TS 10316

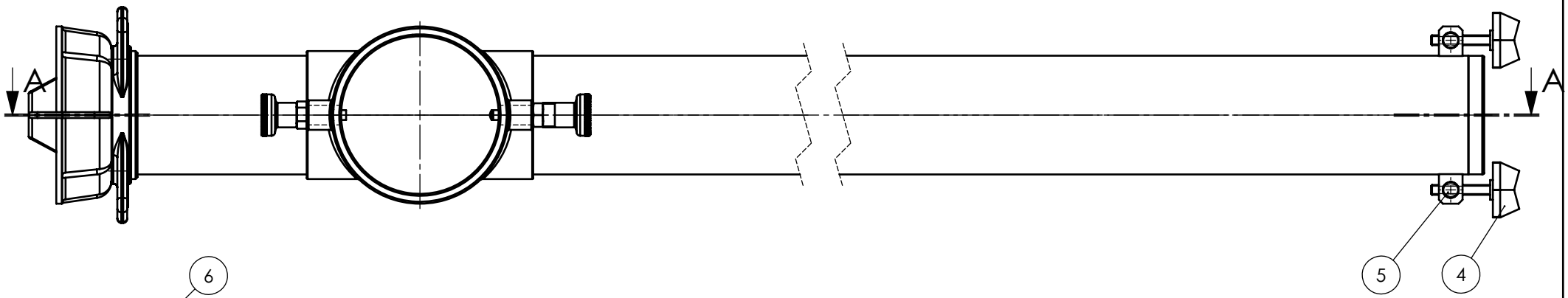
ND 20281

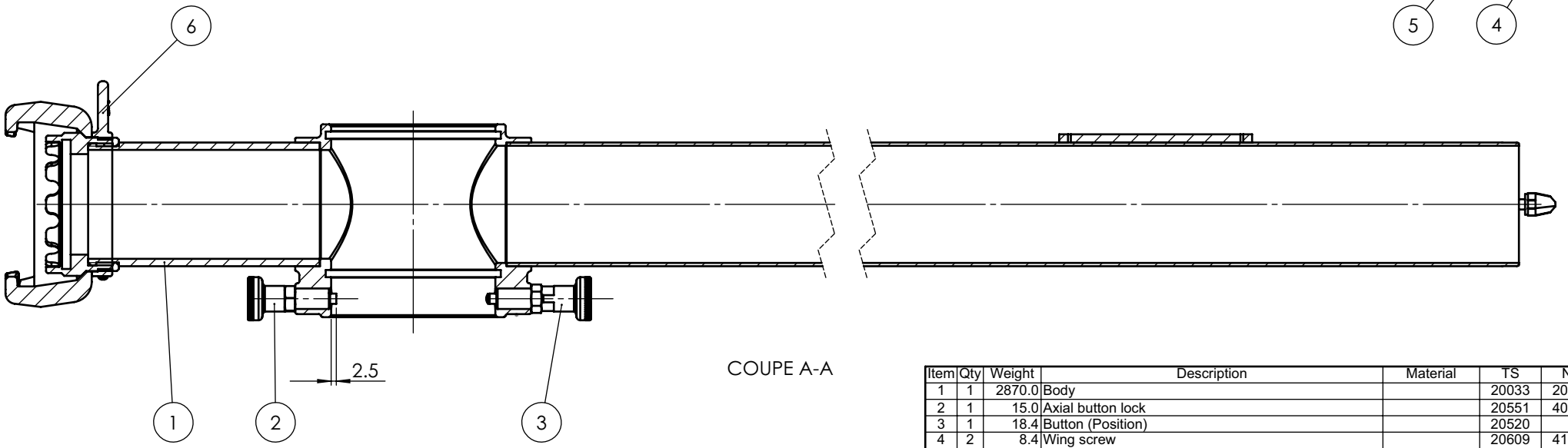
REF ND 20158/20190

Enraf Tanksystem SA
RUE DE L'INDUSTRIE 2 CH-1630 BULLE
Tel. +41 26 91 91 500 - Fax +41 26 91 91 505

ATEX Certified Product

No modifications permitted without the approval of the "authorised person"





COUPE A-A

Item	Qty	Weight	Description	Material	TS	ND
1	1	2870.0	Body		20033	20139
2	1	15.0	Axial button lock		20551	40790
3	1	18.4	Button (Position)		20520	
4	2	8.4	Wing screw		20609	41019
5	2	5.5	Pivot	A1	20605	41013
6	1	640.9	Female quick coupler		20537	30303

TOLERANCES UNLESS OTHERWISE SPECIFIED

Norm.Size	Over		6	30	100	300	1000	Angles
Fit	To	6	30	100	300	1000	2000	
Fine	±	0,05	0,1	0,15	0,2	0,3	0,5	0,1°

Weight: 3572.3 Eff.

ISSUE 1 : 21.08.2008

REMOVE ALL BURRS AND SHARP EDGES

1:2

MPSA YYYN

Drawn: UPR 21.08.2008

Control:

Replacement for: ND

Replaced by: ND

Sampler 2" GT

Body assy

TS 10317

ND 30592

REF ND 20189/20190

Enraf Tanksystem SA
RUE DE L'INDUSTRIE 2 CH-1630 BULLE
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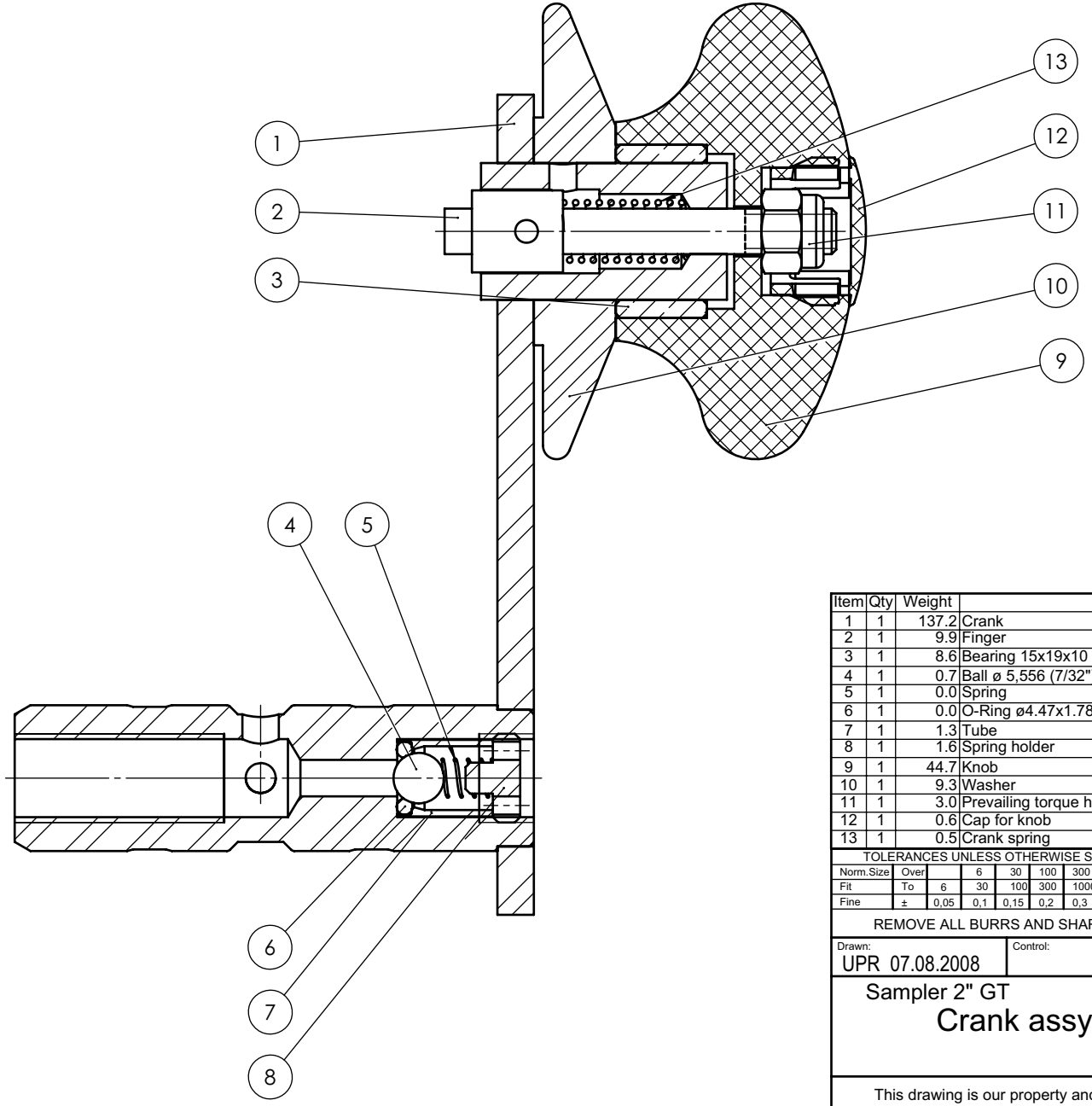

Item	Qty	Weight	Description	Material	TS	ND
1	1	137.2	Crank	1.4401	21034	30521
2	1	9.9	Finger	1.4401	21047	40991
3	1	8.6	Bearing 15x19x10	Bronze	21049	
4	1	0.7	Ball ø 5,556 (7/32")	1.4435	11129	
5	1	0.0	Spring	1.4310	20103	
6	1	0.0	O-Ring ø4.47x1.78	FFPM	21050	
7	1	1.3	Tube	1.4401	20099	40804
8	1	1.6	Spring holder	1.4401	20105	40808
9	1	44.7	Knob	PF 31	21048	40992
10	1	9.3	Washer	PE-HD	11052	40563
11	1	3.0	Prevailing torque hex nut M5	A2	40009	DIN 985
12	1	0.6	Cap for knob	PE-HD	11054	40182
13	1	0.5	Crank spring	1.4310	11500	

TOLERANCES UNLESS OTHERWISE SPECIFIED

Norm.Size	Over		6	30	100	300	1000	Angles
Fit	To	6	30	100	300	1000	2000	
Fine	±	0,05	0,1	0,15	0,2	0,3	0,5	0,1°

REMOVE ALL BURRS AND SHARP EDGES

Weight: 214.7 Eff.

2:1

ISSUE 1 : 7.8.2008

MPSA YYYN

Drawn: UPR 07.08.2008

Control:

Replacement for: ND

Replaced by: ND

Sampler 2" GT

Crank assy FFKM

TS 10314

ND 30545

REF ND 20281

Enraf Tanksystem SA
RUE DE L'INDUSTRIE 2 CH-1630 BULLE
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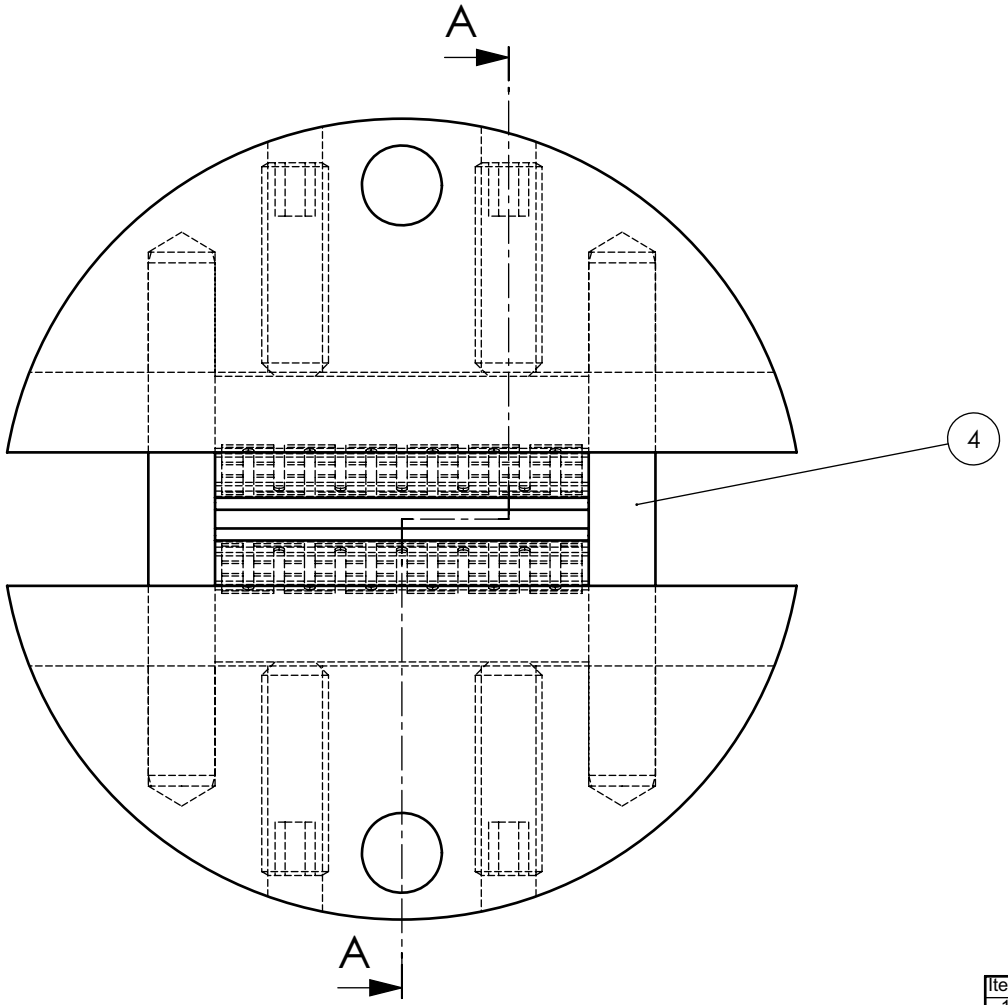
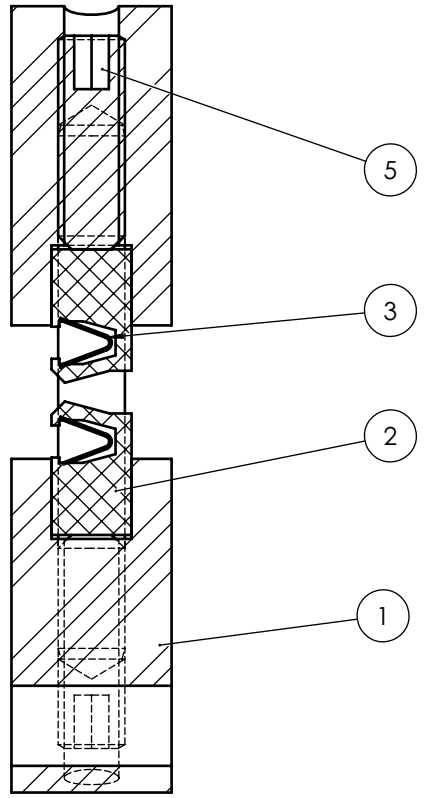
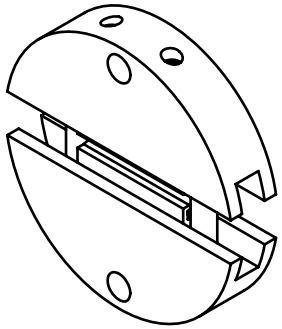




COUPE A-A



Item	Qty	Weight	Description	Material	TS	ND
1	2	2.3	Wiper holder	PVDF	12043	30236
2	2	0.3	Wiper	PTFE 25% car	12041	40424
3	2	0.0	Spring for wiper PTFE	1.4310	12042	41351
4	2	0.0	Rod 2.5x20	A2	40211	DIN 7
5	4	0.0	Socket set screw M2.5x8	A4	40858	DIN 913

TOLERANCES UNLESS OTHERWISE SPECIFIED

Norm.Size	Over		6	30	100	300	1000	Angles
Fit	To	6	30	100	300	1000	2000	
Fine	±	0,05	0,1	0,15	0,2	0,3	0,5	0,1°

REMOVE ALL BURRS AND SHARP EDGES

Weight: 5.5 Eff.

5:1

ISSUE 1 : 8.8.2007

MPSA 1000

Drawn: UPR 08.08.2007

Control:

Replacement for: ND

Replaced by: ND

Sampler 2" GT

Wiper PTFE

TS 10535

ND 30237

REF ND 20137/20152/20178

Enraf Tanksystem SA
RUE DE L'INDUSTRIE 2 CH-1630 BULLE
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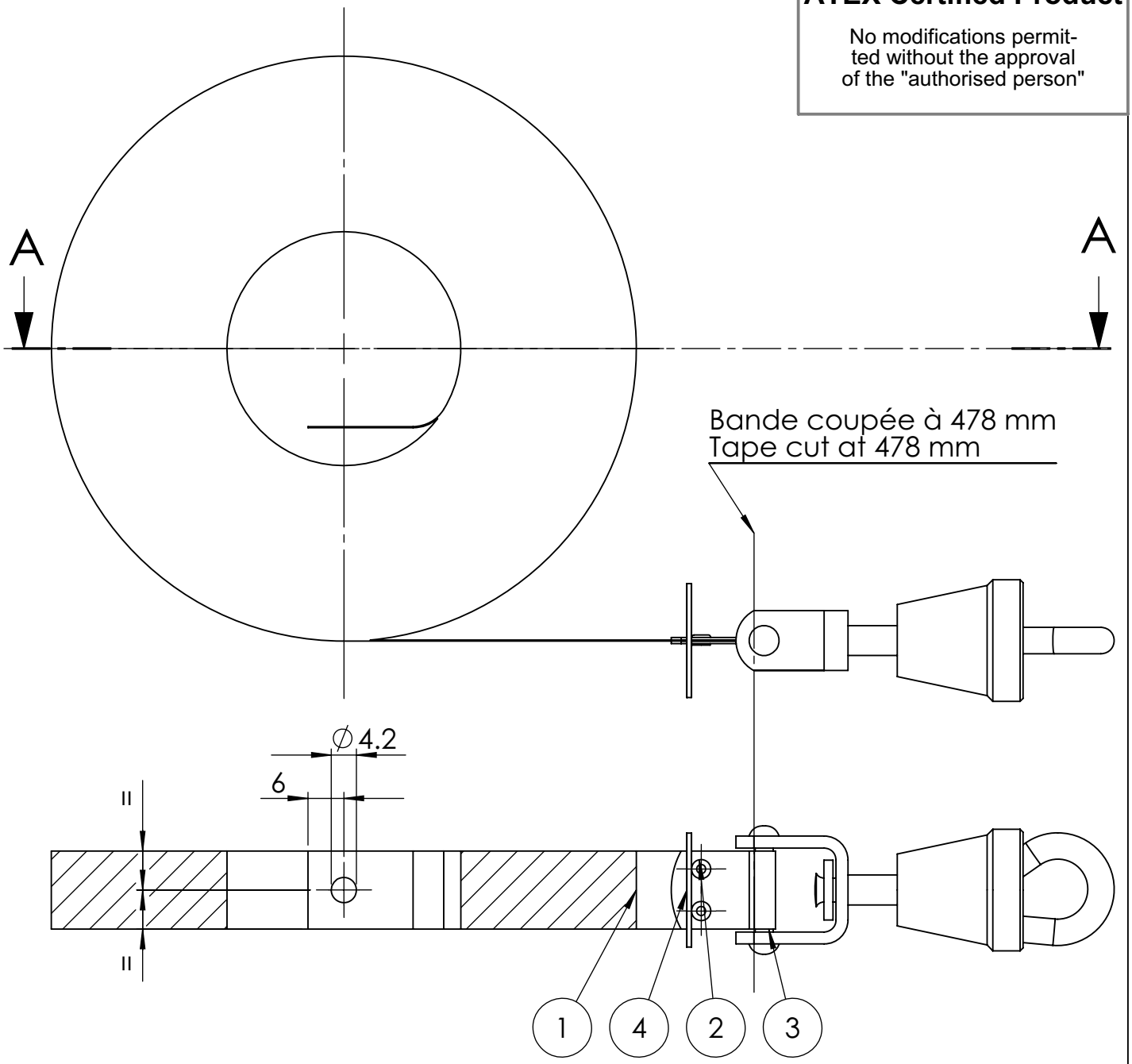


Item	Qty	Weight	Description	Material	TS	ND
1	1	643.3	Tape 30 m Metric/inch	1.4021	19503	
2	2	0.0	Rivet ø 2 x 2.1	A2	-	41367
3	1	42.1	Swivel hook with clasp		20502	40793
4	1	1.7	Washer for tape connector	1.4301	11238	41200

TOLERANCES UNLESS OTHERWISE SPECIFIED									
Norm.Size	Over		6	30	100	300	1000	Angles
Fit	To	6	30	100	300	1000	2000	
Fine	±	0,05	0,1	0,15	0,2	0,3	0,5	0,1°

REMOVE ALL BURRS AND SHARP EDGES

Drawn: CPI 24.06.2008

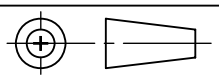
Control:

Weight: 687.2 Eff.

1:1

ISSUE 1 : 23.06.2008

MPSA 1000



Replacement for: ND

Replaced by: ND

Sampler 2" GT

Tape assy w/o winder 30m

TS 10368

ND 40520

REF ND 20280/20281

Enraf Tanksystem SA
RUE DE L'INDUSTRIE 2 CH-1630 BULLE
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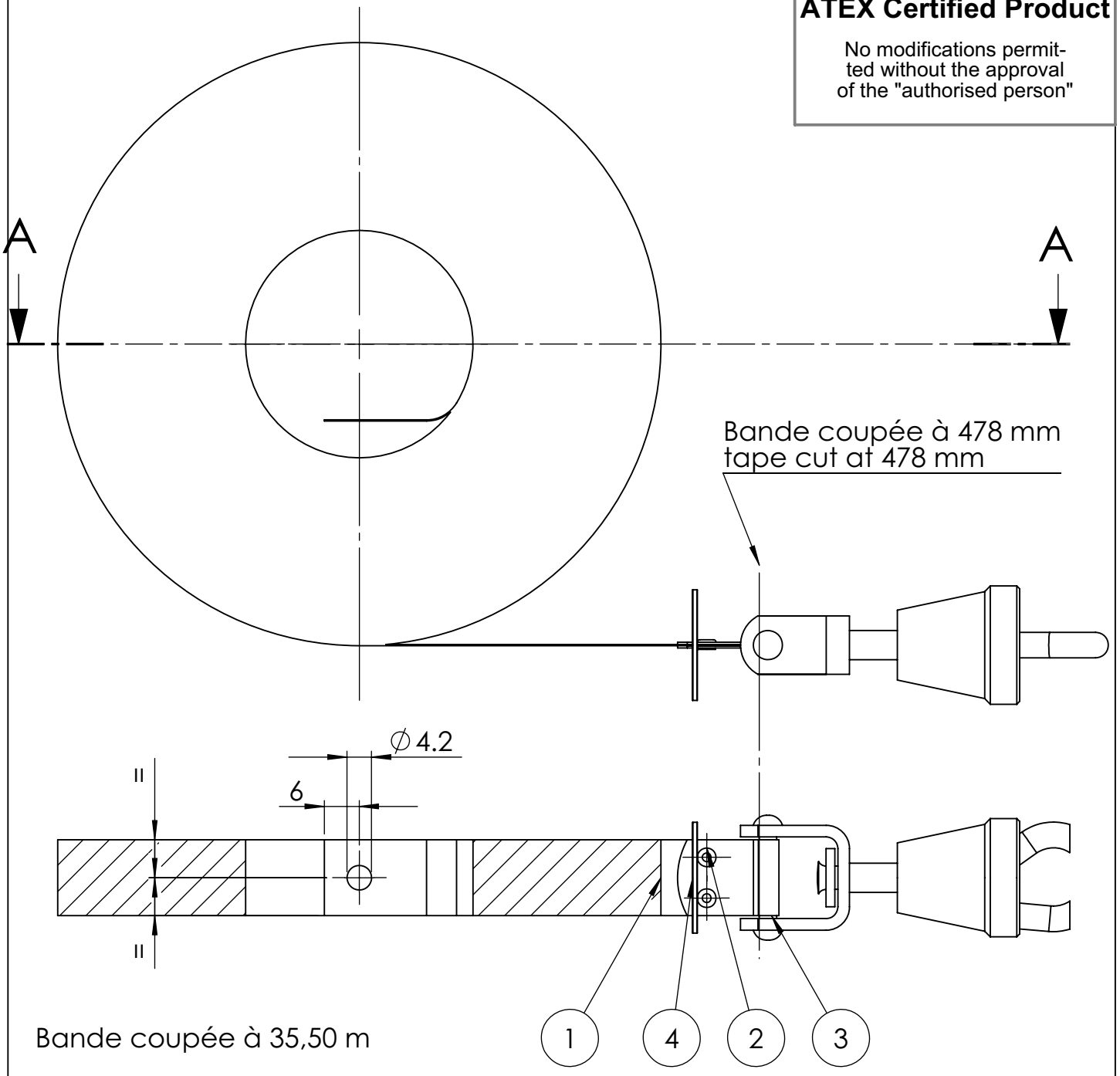

Bande coupée à 35,50 m

Item	Qty	Weight	Description	Material	TS	ND
1	1	738.4	Tape 40m Metric/inch	1.4021	19505	
2	2	0.0	Rivet ø 2 x 2.1	A2	-	41367
3	1	42.1	Swivel hook with clasp		20502	40793
4	1	1.7	Washer for tape connector	1.4301	11238	41200

TOLERANCES UNLESS OTHERWISE SPECIFIED									
Norm.Size	Over		6	30	100	300	1000	Angles
Fit	To	6	30	100	300	1000	2000	
Fine	±	0,05	0,1	0,15	0,2	0,3	0,5	0,1°

REMOVE ALL BURRS AND SHARP EDGES

Drawn: CPI 24.06.2008

Control:

Weight: 782.3 Eff.

1:1

ISSUE 1 : 23.06.2008

MPSA 1000

Replacement for: ND

Replaced by: ND

Sampler 2" GT

Tape assy w/o winder 35m

TS 10389

ND 40803

REF ND 30564/20320

Enraf Tanksystem SA
RUE DE L'INDUSTRIE 2 CH-1630 BULLE
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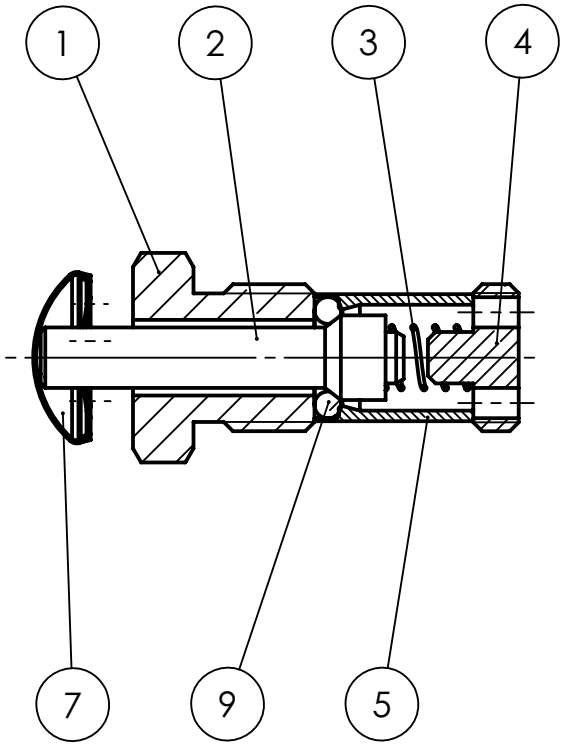

Item	Qty	Weight	Description	Material	TS	ND
1	1	6.5	Relief valve seat	1.4401	20101	40806
2	1	2.7	Valve rod	AISI 316	21035	40984
3	1	0.0	Spring	1.4310	20103	
4	1	1.6	Spring holder	1.4401	20105	40808
5	1	1.3	Tube	1.4401	20099	40804
9	1	0.0	O-Ring ø4.47x1.78	FFPM	21050	
7	1	0.4	Starlock ø4	1.4310	40910	
8	1	6.0	Sachet PEBD 90x75		50335	

TOLERANCES UNLESS OTHERWISE SPECIFIED

Norm.Size	Over		6	30	100	300	1000	Angles
Fit	To	6	30	100	300	1000	2000	
Fine	±	0,05	0,1	0,15	0,2	0,3	0,5	0,1°

REMOVE ALL BURRS AND SHARP EDGES

Drawn: UPR 12.08.2008

Control:

Weight: 12.5 Eff.

2:1

ISSUE 1 : 12.8.2008

MPSA YYYN

Replacement for: ND

Replaced by: ND

Sampler 2" GT

Kit inlet valve FFKM

TS 20613

ND 41023

REF ND 20190

Enraf Tanksystem SA
RUE DE L'INDUSTRIE 2 CH-1630 BULLE
Tel. +41 26 91 91 500 - Fax +41 26 91 91 505

ATEX Certified Product

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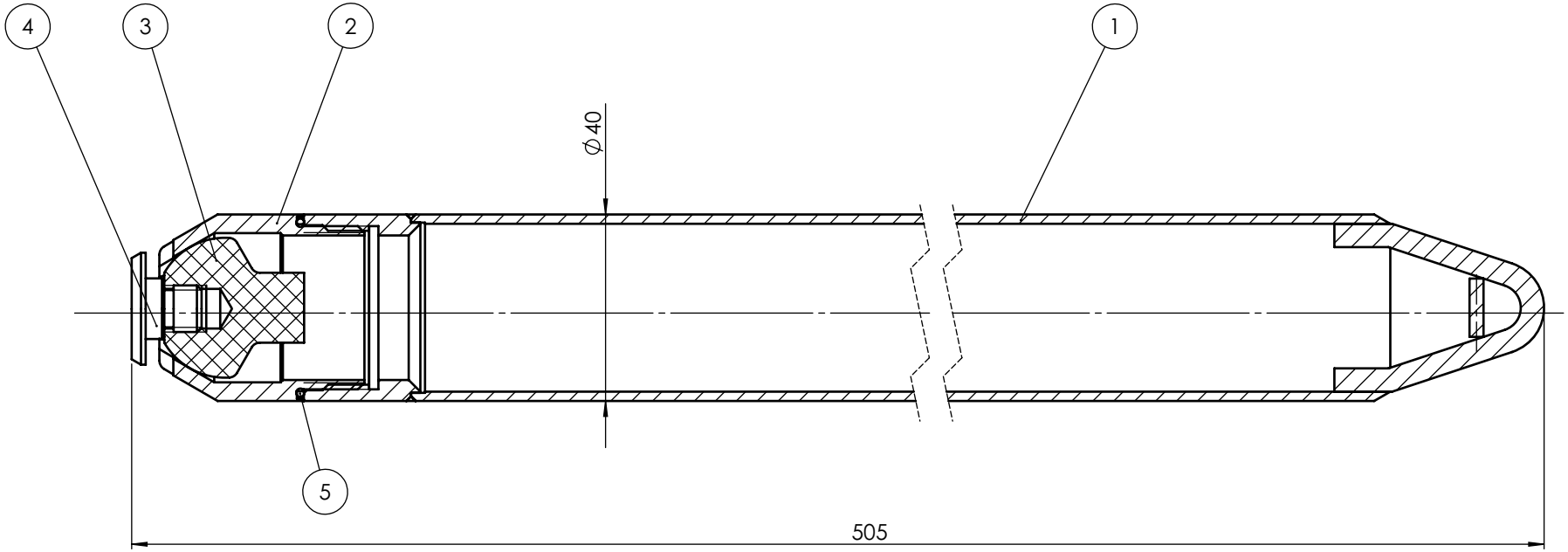


Item	Qty	Weight	Description	Material	TS	ND
1	1	841.1	Bottle 0,43 l.	1.4435	20048	30294
2	1	113.1	Seat	1.4435	20049	40592
3	1	24.7	Bottom valve	PTFE	20050	41062
4	1	4.2	Valve screw	PVDF	20051	40593
5	1	0.3	O-Ring ø34.65x1.78	FFPM	20045	

TOLERANCES UNLESS OTHERWISE SPECIFIED

Norm.Size	Over		6	30	100	300	1000	Angles
Fit	To	6	30	100	300	1000	2000	
Fine	±	0,05	0,1	0,15	0,2	0,3	0,5	0,1°

REMOVE ALL BURRS AND SHARP EDGES

Weight: 983.4 Eff.

1:1

ISSUE 2 : 13.8.2008

MPSA YYYN

Drawn: UPR 13.08.2008

Control:

Replacement for: ND

Replaced by: ND

Sampler 2" GT

Zone bottle 0.43l. FFKM assy

TS 10374

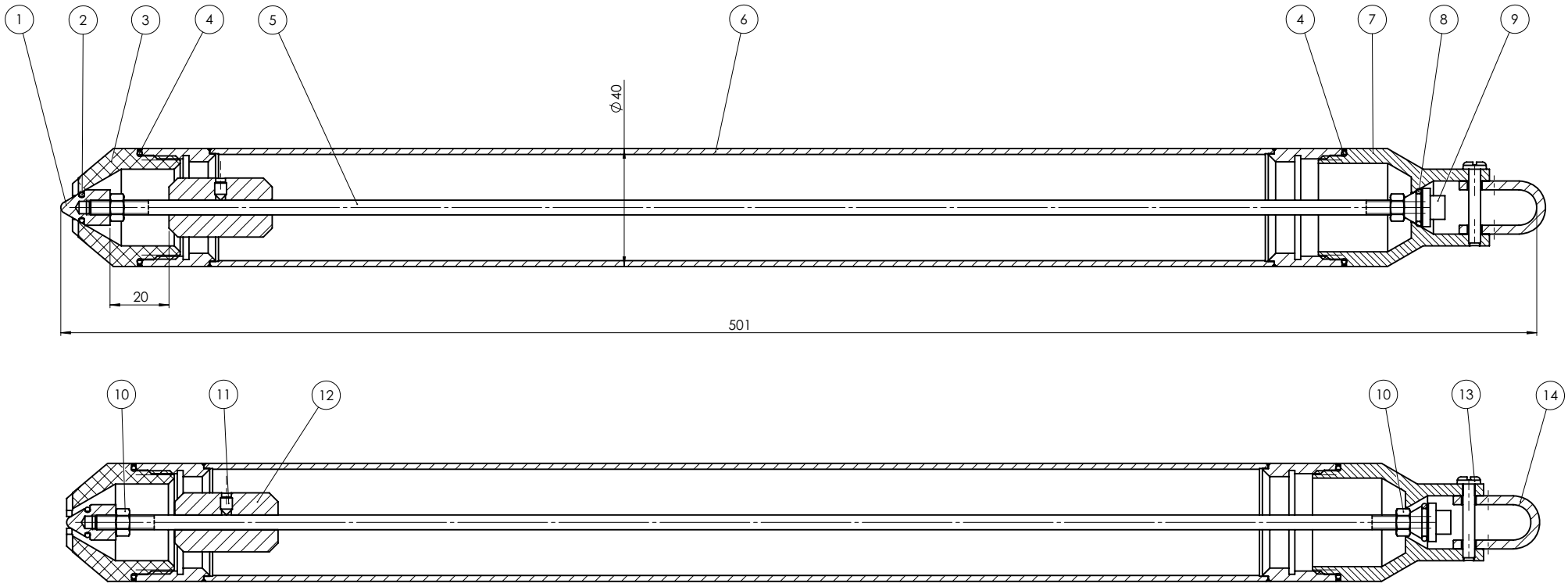
ND 30293

REF ND 20158

Enraf Tanksystem SA
RUE DE L'INDUSTRIE 2 CH-1630 BULLE
Tel. +41 26 91 91 500 - Fax +41 26 91 91 505

ATEX Certified Product

No modifications permitted without the approval of the "authorised person"



Item	Qty	Weight	Description	Material	TS	ND
1	1	8.8	Bottom valve	1.4401	20125	40962
2	1	0.1	O-Ring ø6.75x1.78	FFPM	12057	
3	1	39.2	Seat	PTFE 25% car	20131	30495
4	2	0.3	O-Ring ø34.65x1.78	FFPM	20045	
5	1	71.1	Rod	1.4401	20126	40963
6	1	806.7	Bottle 0,40 l.	1.4432	20112	30462
7	1	149.5	Top cover	1.4401	20128	30494
8	1	0.1	O-Ring ø9.25x1.78	FFPM	20527	
9	1	7.5	Upper valve	1.4401	20130	40961
10	2	2.0	Hex nut M5	A2	40005	ISO4032
11	1	2.0	Socket set screw M4x6	A2	40862	DIN 914
12	1	77.9	Load	1.4401	20127	40964
13	1	3.0	Slotted pan head mach. screw M4x25	A2	40703	ISO1580
14	1	8.5	Clip	1.4301	20129	40965

TOLERANCES UNLESS OTHERWISE SPECIFIED

Norm.Size	Over		6	30	100	300	1000	Angles
Fit	To	6	30	100	300	1000	2000	
Fine	±	0,05	0,1	0,15	0,2	0,3	0,5	0,1°

REMOVE ALL BURRS AND SHARP EDGES

Weight: 1170.8 Eff.

1:1

ISSUE 1 : 05.09.2008

MPSA YYYN

Drawn: UPR 05.09.2008

Control:

Replacement for: ND

Replaced by: ND

Sampler 2" GTN Chem

Bottom bottle 0.40l FFKM assy

TS 20132

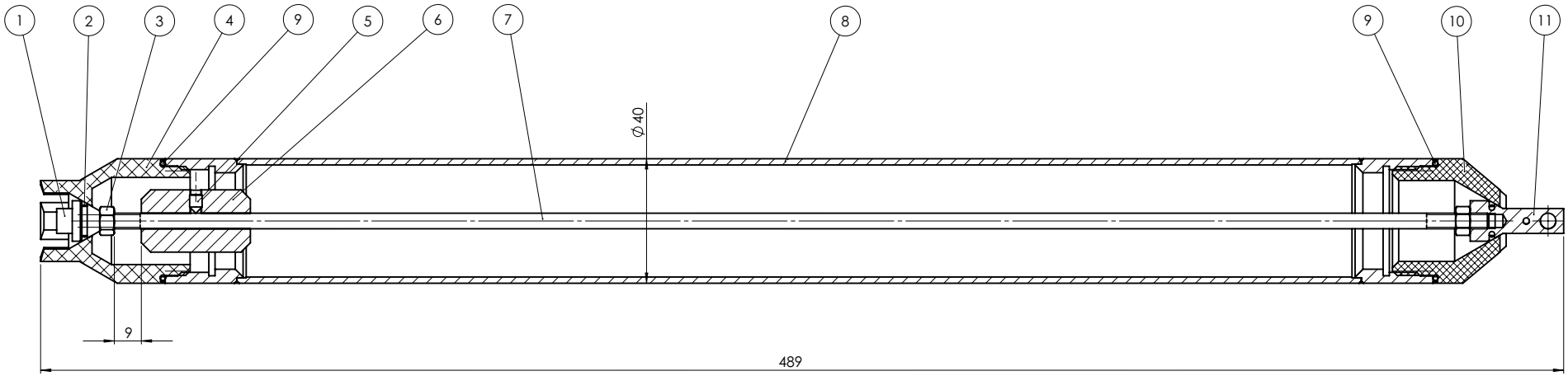
ND 20247

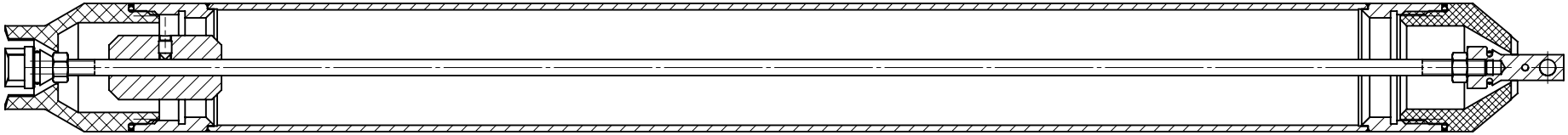
REF ND

Enraf Tanksystem SA
RUE DE L'INDUSTRIE 2 CH-1630 BULLE
Tel. +41 26 91 91 500 - Fax +41 26 91 91 505

ATEX Certified Product

No modifications permitted without the approval of the "authorised person"





Item	Qty	Weight	Description	Material	TS	ND
1	1	7.5	Upper valve	1.4401	20130	40961
2	2	0.1	O-Ring ø6.75x1.78	FFPM	12057	
3	2	2.0	Hex nut M5	A2	40005	ISO4032
4	1	43.5	Spot cover	PTFE 25% car	20135	30509
5	1	2.0	Socket set screw M4x6	A2	40862	DIN 914
6	1	77.9	Load	1.4401	20127	40964
7	1	71.1	Rod	1.4401	20126	40963
8	1	806.7	Bottle 0,40 l.	1.4432	20112	30462
9	2	0.3	O-Ring ø34.65x1.78	FFPM	20045	
10	1	39.2	Seat	PTFE 25% car	20131	30495
11	1	13.2	Spot upper valve	1.4401	20136	40976

TOLERANCES UNLESS OTHERWISE SPECIFIED									
Norm.Size	Over		6	30	100	300	1000	Angles
Fit	To	6	30	100	300	1000	2000	
Fine	±	0,05	0,1	0,15	0,2	0,3	0,5	0,1°

REMOVE ALL BURRS AND SHARP EDGES

Weight: 1060.2 Eff.

1:1

ISSUE 1 : 05.09.2008

MPSA YYYN

Drawn: UPR 05.09.2008

Control:

Replacement for: ND

Replaced by: ND

Sampler 2" GTN Chem

Spot bottle 0.40 l. FFKM

TS 20134

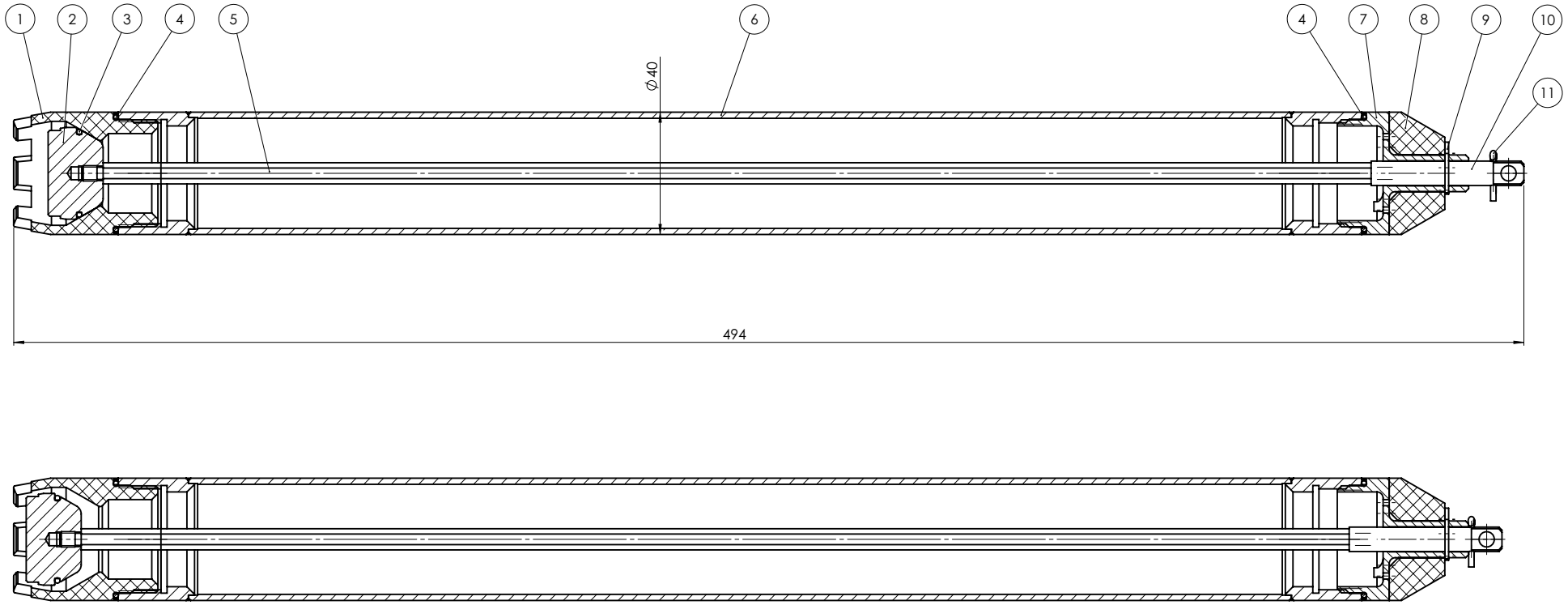
ND 20253

REF ND

Enraf Tanksystem SA
RUE DE L'INDUSTRIE 2 CH-1630 BULLE
Tel. +41 26 91 91 500 - Fax +41 26 91 91 505

ATEX Certified Product

No modifications permitted without the approval of the "authorised person"



Item	Qty	Weight	Description	Material	TS	ND
1	1	46.0	Seat	PTFE 25% car	20114	30472
2	1	80.7	Bottom plug	1.4401	20115	40896
3	1	0.2	O-Ring ø25.12x1.78	FFPM	12060	
4	2	0.3	O-Ring ø34.65x1.78	FFPM	20045	
5	1	105.5	Stem	1.4401	20116	40897
6	1	806.7	Bottle 0,40 l.	1.4432	20112	30462
7	1	67.0	Calibration plug	1.4401	20118	30473
8	1	22.9	Cap	PTFE 25% car	20113	30463
9	1	3.0	Circlip ø10	AISI 431	40909	DIN6799
10	1	16.5	Coupling stem	1.4401	20119	40898
11	1	0.0	Cotter pin 2x10	A2	40218	DIN 94

TOLERANCES UNLESS OTHERWISE SPECIFIED

Norm.Size	Over		6	30	100	300	1000	Angles
Fit	To	6	30	100	300	1000	2000	
Fine	±	0,05	0,1	0,15	0,2	0,3	0,5	0,1°

REMOVE ALL BURRS AND SHARP EDGES

Weight: 1146.3 Eff.

1:1

ISSUE 3 : 04.09.2008

MPSA YYYN

Drawn: UPR 04.09.2008

Control:

Replacement for: ND

Replaced by: ND

Sampler 2" GTN Chem

Running bottle 0.40 l. FFKM

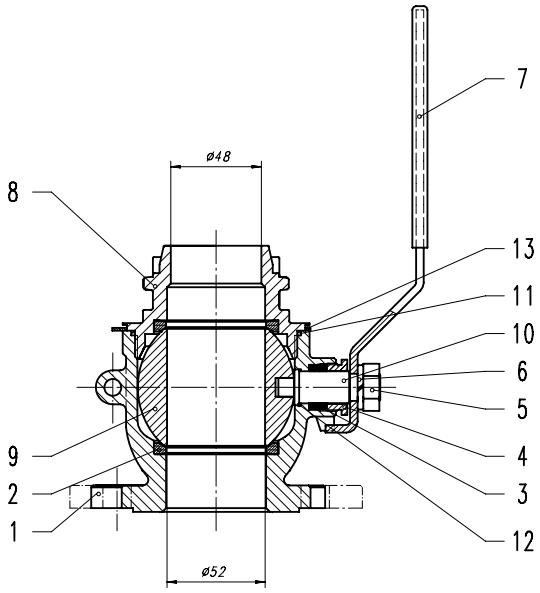
TS 20117

ND 20216

REF ND

Enraf Tanksystem SA
RUE DE L'INDUSTRIE 2 CH-1630 BULLE
Tel. +41 26 91 91 500 - Fax +41 26 91 91 505

TS 10413
ND 20283



Valve fits on flange:

DIN PN10 DN50

DIN PN16 DN50

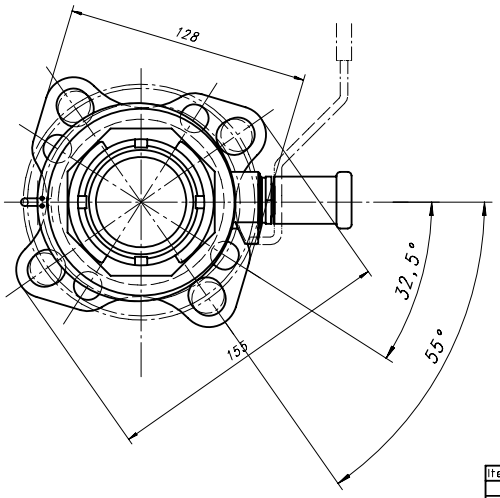
DIN PN25 DN50

DIN PN40 DN50

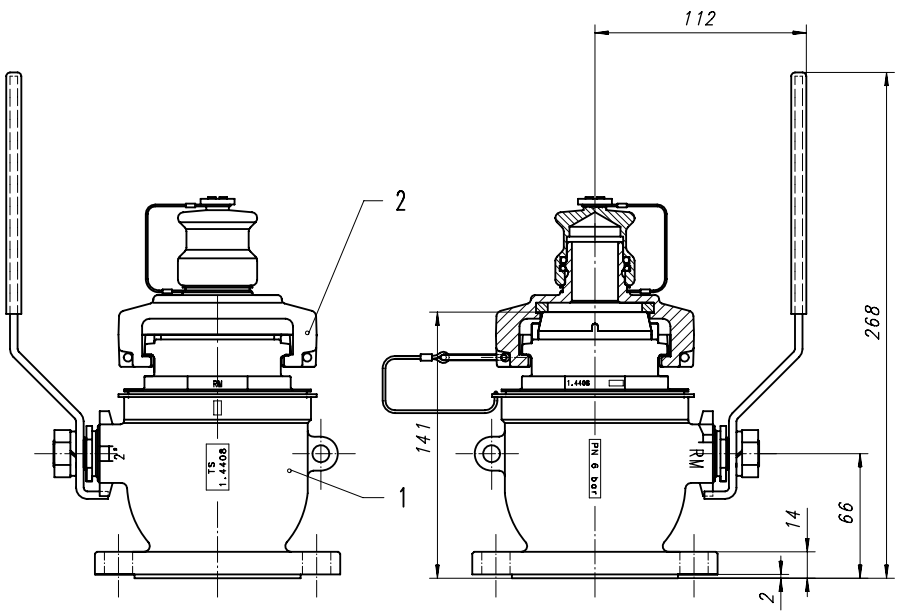
JIS 5K 50

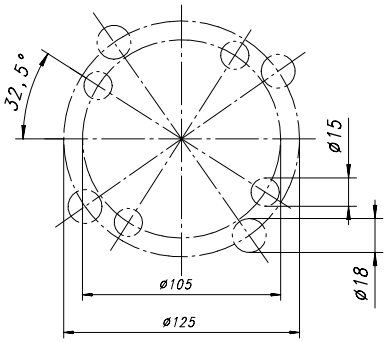
JIS 10K 50

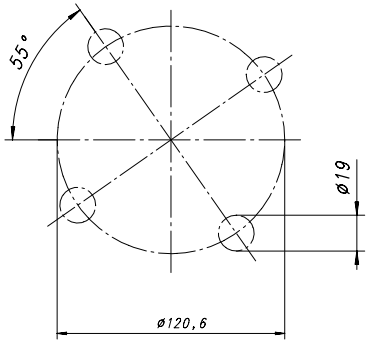
ANSI 150lbs 2"



Item	Qt	Weight	Description	Material	TS #	ND #
1	1	0	Body DUJ	1.4408	22649	-
2	2	0	Seat ø 53/66 x 6	PTFE	22630	40772
3	1	0	Stem packing ø 17/23.9 x 8.5 (2pces)	PTFE	22631	40773
4	1	0	Gland	AISI 304	22632	40774
5	1	0	Nut	AISI 304	22633	-
6	1	0	Spring washer	AISI 304	22634	-
7	1	207	Handle	AISI304/PE	22635	40775
8	1	0	End cap	1.4408	22650	-
9	1	0	Ball DIN	1.4436	22645	40780
10	1	0	Stem	AISI 316	22638	40777
11	1	0	Gasket ø 86/90 x 2.5	PTFE	22640	40778
12	1	0	Gasket ø 17/19 x 1	PTFE	22641	40779
13	1	0	Washer for cable on valve	AISI 304	22648	40996







Item	Qt	Weight	Description	Material	TS #	ND #
1	1	4480	Compact valve C2 DUJ	-	10413	20283
2	1	590	Cover with weather cap	-	10415	41040

TOLERANCES UNLESS OTHERWISE SPECIFIED

Norm.Size	Over	6	30	100	300	1000	Angles
Fit	To	6	30	100	300	1000	2000	
Fine	±	0,05	0,1	0,15	0,2	0,3	0,5	0,1°

REMOVE ALL BURRS AND SHARP EDGES

Weight: 5070 Th. 0 Eff.

1:2

Drawn: UPR 27.11.1996

Control: CPI 06.01.1997

ISSUE 2 : 16.2.1999

MPSA 3110

Replacement for: ND

Replaced by: ND

Valves

HERMetic Compact Valve C2-SS-W 2" flange DUJ

TS 10083

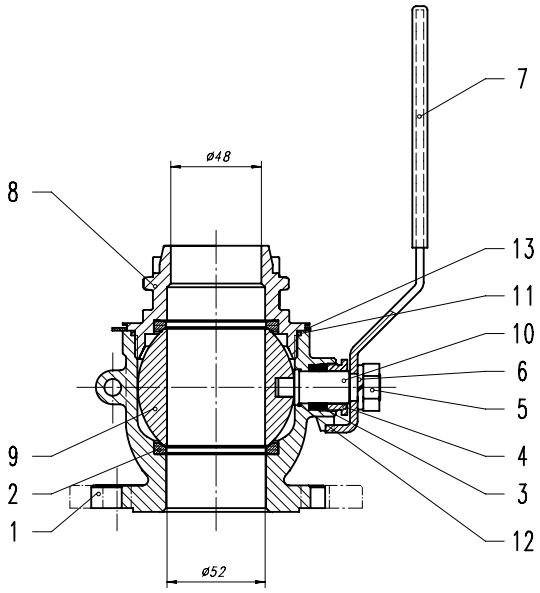
ND 20291

REF ND

Modification | Visa | Date | Is

Enraf Tanksystem SA
RUE DE L'INDUSTRIE 2 CH-1630 BULLE
Tel. +41 26 91 91 500 - Fax +41 26 91 91 505

TS 10413
ND 20283



Valve fits on flange:

DIN PN10 DN50

DIN PN16 DN50

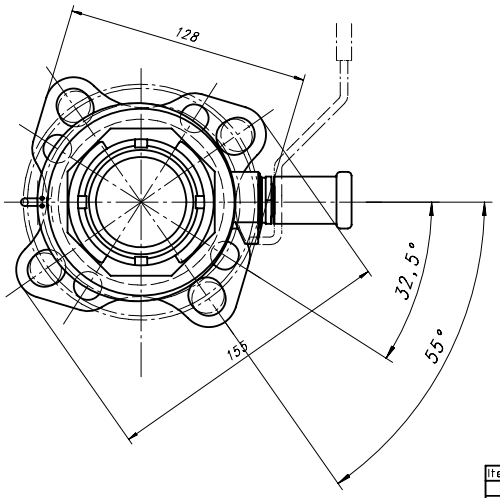
DIN PN25 DN50

DIN PN40 DN50

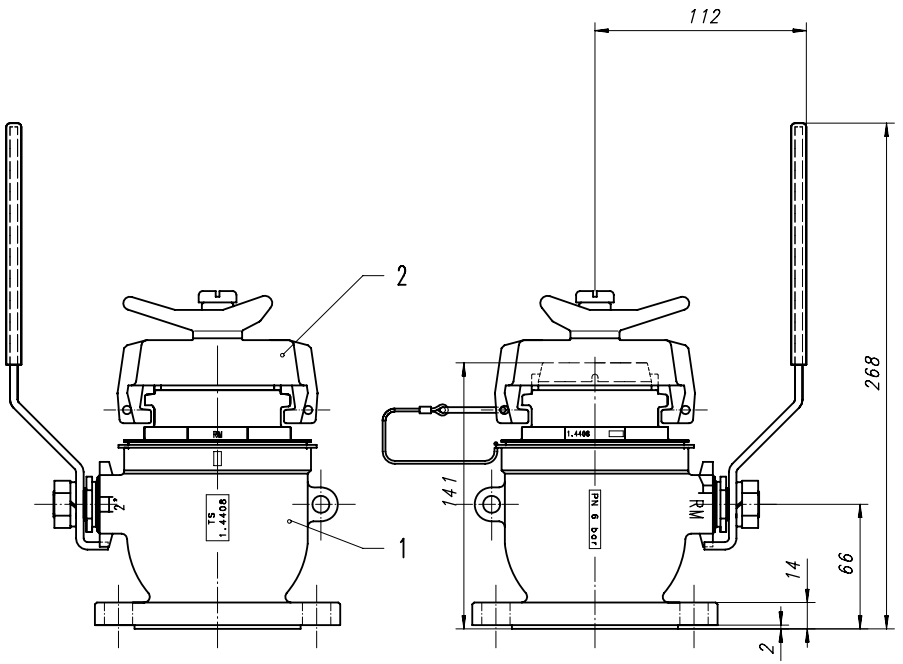
JIS 5K 50

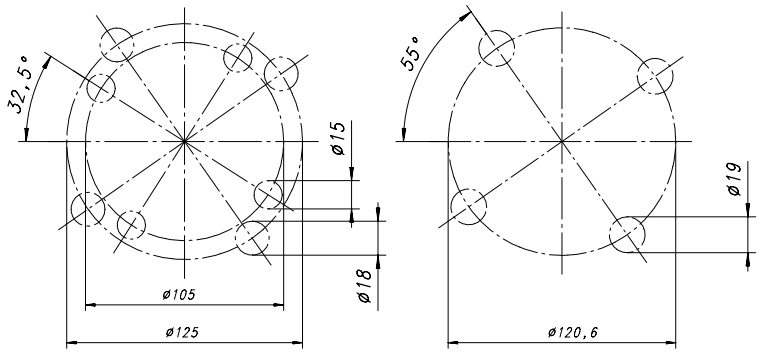
JIS 10K 50

ANSI 150lbs 2"



Item	Qt	Weight	Description	Material	TS #	ND #
1	1	0	Body DUJ	1.4408	22649	-
2	2	0	Seat ø 53/66 x 6	PTFE	22630	40772
3	1	0	Stem packing ø 17/23.9 x 8.5 (2pces)	PTFE	22631	40773
4	1	0	Gland	AISI 304	22632	40774
5	1	0	Nut	AISI 304	22633	-
6	1	0	Spring washer	AISI 304	22634	-
7	1	207	Handle	AISI304/PE	22635	40775
8	1	0	End cap	1.4408	22650	-
9	1	0	Ball DIN	1.4436	22645	40780
10	1	0	Stem	AISI 316	22638	40777
11	1	0	Gasket ø 86/90 x 2.5	PTFE	22640	40778
12	1	0	Gasket ø 17/19 x 1	PTFE	22641	40779
13	1	0	Washer for cable on valve	AISI 304	22648	40996





Item	Qt	Weight	Description	Material	TS #	ND #
1	1	4480	Compact valve C2 DUJ	-	10413	20283
2	1	957	Security cover w/lock	-	10408	40495

TOLERANCES UNLESS OTHERWISE SPECIFIED

Norm.Size	Over	0	30	100	300	1000	Angles
Fit	To	6	30	100	300	1000	2000	
Fine	±	0.05	0,1	0,15	0,2	0,3	0,5	0,1°

REMOVE ALL BURRS AND SHARP EDGES

Weight: 5437 Th. 0 Eff.

1:2

Drawn: UPR 27.11.1996 | Control: CPI 06.01.1997

ISSUE 2 : 16.2.1999

MPSA 3110

Replacement for: ND | Replaced by: ND

Valves

HERMetic Compact Valve C2-SS-SEC 2" flange DUJ

TS 10082

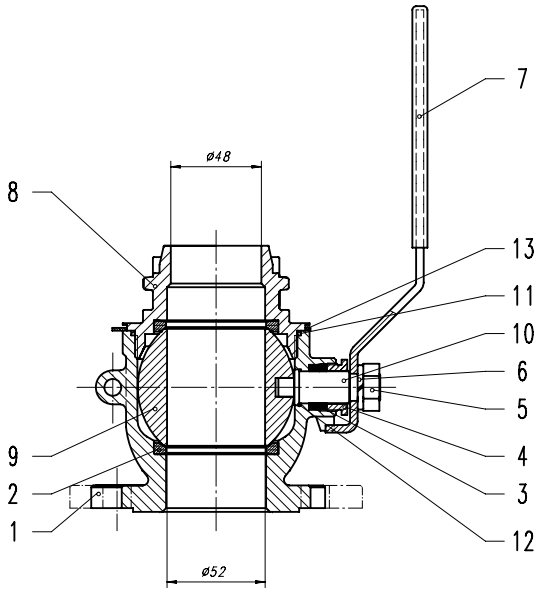
ND 20287

REF ND

Modification | Visa | Date | Is

Enraf Tanksystem SA
RUE DE L'INDUSTRIE 2 CH-1630 BULLE
Tel. +41 26 91 91 500 - Fax +41 26 91 91 505

TS 10413
ND 20283



Valve fits on flange:

DIN PN10 DN50

DIN PN16 DN50

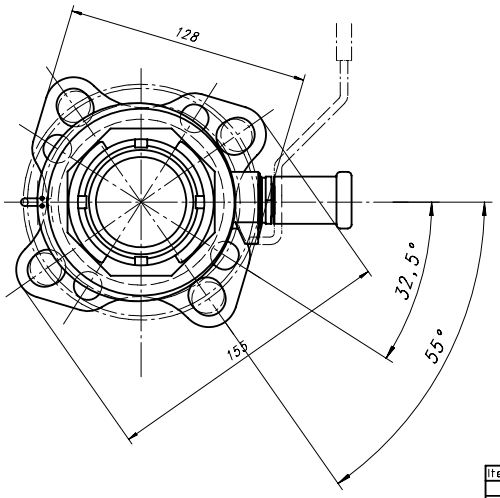
DIN PN25 DN50

DIN PN40 DN50

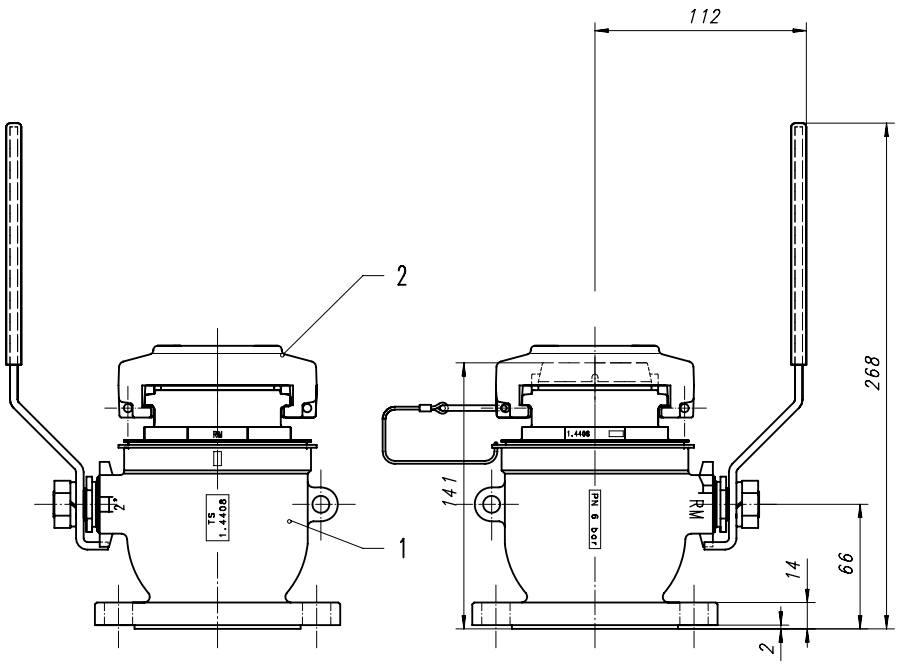
JIS 5K 50

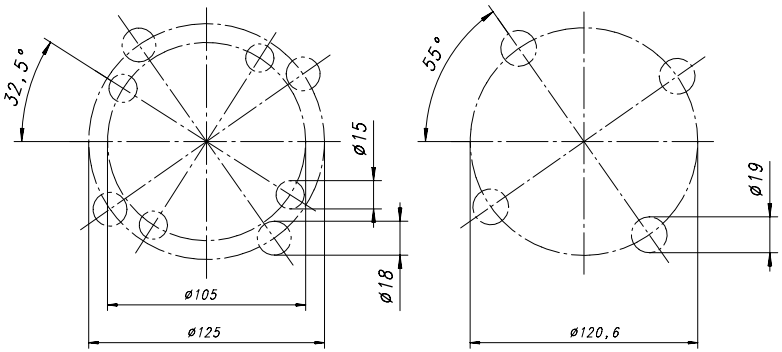
JIS 10K 50

ANSI 150lbs 2"



Item	Qt	Weight	Description	Material	TS #	ND #
1	1	0	Body DUJ	1.4408	22649	-
2	2	0	Seat ø 53/66 x 6	PTFE	22630	40772
3	1	0	Stem packing ø 17/23.9 x 8.5 (2pces)	PTFE	22631	40773
4	1	0	Gland	AISI 304	22632	40774
5	1	0	Nut	AISI 304	22633	-
6	1	0	Spring washer	AISI 304	22634	-
7	1	207	Handle	AISI304/PE	22635	40775
8	1	0	End cap	1.4408	22650	-
9	1	0	Ball DIN	1.4436	22645	40780
10	1	0	Stem	AISI 316	22638	40777
11	1	0	Gasket ø 86/90 x 2.5	PTFE	22640	40778
12	1	0	Gasket ø 17/19 x 1	PTFE	22641	40779
13	1	0	Washer for cable on valve	AISI 304	22648	40996





Item	Qt	Weight	Description	Material	TS #	ND #
1	1	4480	Compact valve C2 DUJ	-	10413	20283
2	1	370	Blind cover assy	-	10414	41034

TOLERANCES UNLESS OTHERWISE SPECIFIED

Norm.Size	Over	0	30	100	300	1000	Angles
Fit	To	6	30	100	300	1000	2000	
Fine	±	0.05	0,1	0,15	0,2	0,3	0,5	0,1°

REMOVE ALL BURRS AND SHARP EDGES

Weight: 4850 Th. 0 Eff.

1:2

Drawn: UPR 27.11.1996 | Control: CPI 06.01.1997

ISSUE 2 : 16.2.1999

MPSA 3110

Replacement for: ND | Replaced by: ND

Valves

HERMetic Compact Valve C2-SS-BL 2" flange DUJ

TS 10081

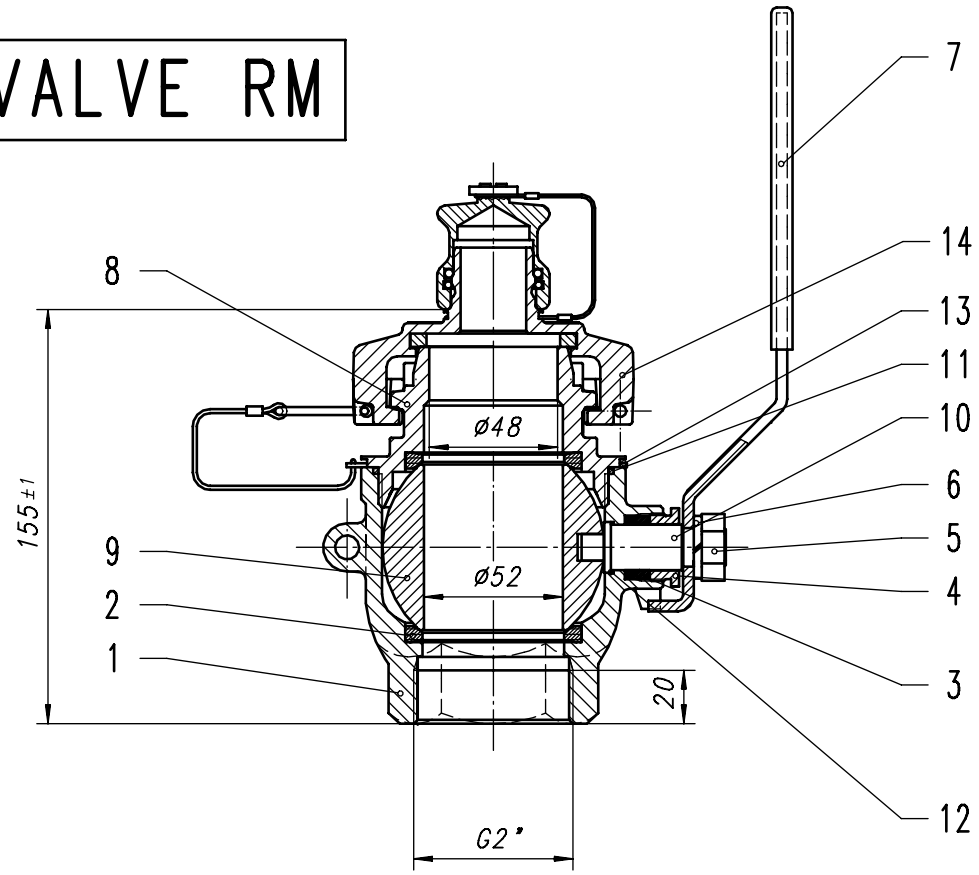
ND 20288

REF ND

Modification | Visa | Date | Is

Enraf Tanksystem SA
RUE DE L'INDUSTRIE 2 CH-1630 BULLE
Tel. +41 26 91 91 500 - Fax +41 26 91 91 505

VALVE RM



Item	Qt	Weight	Description	Material	TS #	ND #
1	1	0	Body 2" female	1.4408	22646	-
2	2	0	Seat ø 53/66 x 6	PTFE	22630	40772
3	1	0	Stem packing ø 17/23.9 x 8.5 (2pces)	PTFE	22631	40773
4	1	0	Gland	AISI 304	22632	40774
5	1	0	Nut	AISI 304	22633	-
6	1	0	Spring washer	AISI 304	22634	-
7	1	207	Handle	AISI304/PE	22635	40775
8	1	0	End cap	1.4408	22650	-
9	1	0	Ball 2"	1.4436	22645	40780
10	1	0	Stem	AISI 316	22638	40777
11	1	0	Gasket ø 86/90 x 2.5	PTFE	22640	40778
12	1	0	Gasket ø 17/19 x 1	PTFE	22641	40779
13	1	0	Washer for cable on valve	AISI 304	22648	40996

Item	Qt	Weight	Description	Material	TS #	ND #
14	1	590	Cover with weather cap	-	10415	41040

Pos.	Modification	Visa	Date	Is
13		upr	12.2.96	2

TOLERANCES UNLESS OTHERWISE SPECIFIED

Norm.Size	Over		6	30	100	300	1000	Angles
Fit	To	6	30	100	300	1000	2000	
Fine	±	0,05	0,1	0,15	0,2	0,3	0,5	0,1°

REMOVE ALL BURRS AND SHARP EDGES

Drawn: UPR 21.04.1994

Control:

Weight: 4390 Eff.

1:2

ISSUE 3 : 25.6.1999

MPSA 4110

Replacement for: ND

Replaced by: ND

Valves

HERMetic Compact Valve C2SS 2" Female

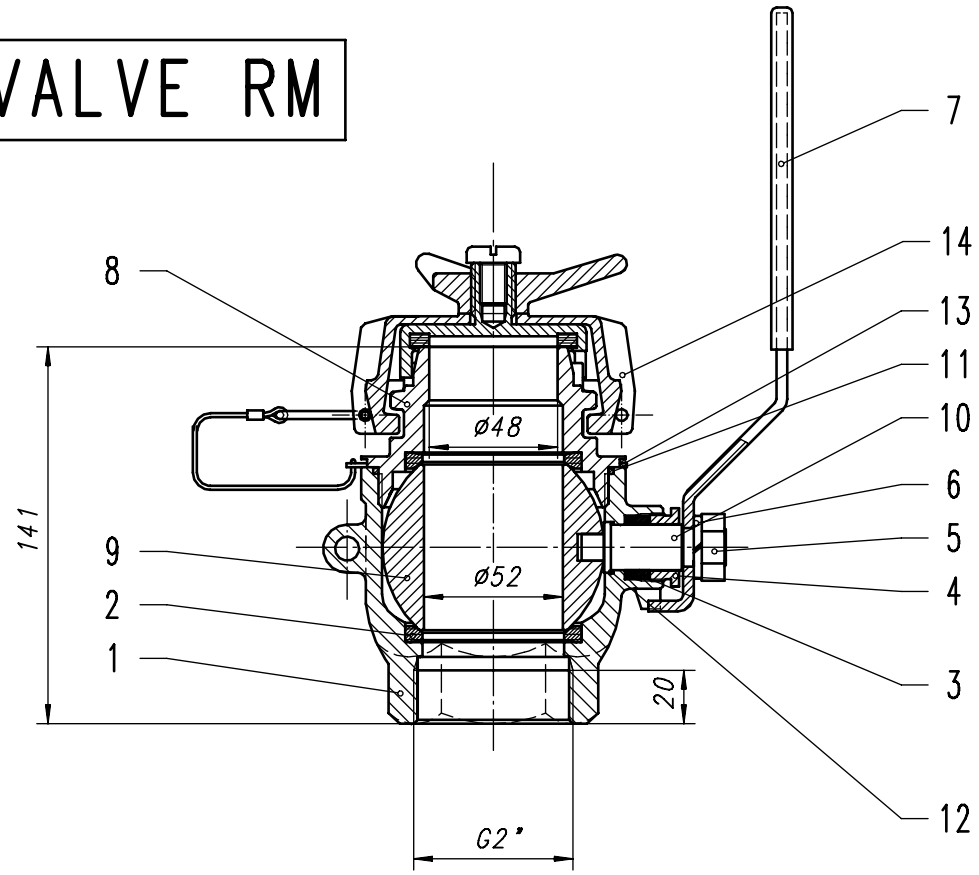
TS 10076

ND 30391

REF ND

Enraf Tanksystem SA
RUE DE L'INDUSTRIE 2 CH-1630 BULLE
Tel. +41 26 91 91 500 - Fax +41 26 91 91 505

VALVE RM



Item	Qt	Weight	Description	Material	TS #	ND #
1	1	0	Body 2" female	1.4408	22646	-
2	2	0	Seat ø 53/66 x 6	PTFE	22630	40772
3	1	0	Stem packing ø 17/23.9 x 8.5 (2pces)	PTFE	22631	40773
4	1	0	Gland	AISI 304	22632	40774
5	1	0	Nut	AISI 304	22633	-
6	1	0	Spring washer	AISI 304	22634	-
7	1	207	Handle	AISI304/PE	22635	40775
8	1	0	End cap	1.4408	22650	-
9	1	0	Ball 2"	1.4436	22645	40780
10	1	0	Stem	AISI 316	22638	40777
11	1	0	Gasket ø 86/90 x 2.5	PTFE	22640	40778
12	1	0	Gasket ø 17/17 x 1	PTFE	22641	40779
13	1	0	Washer for cable on valve	AISI 304	22648	40996

Item	Qt	Weight	Description	Material	TS #	ND #
14	1	957	Security cover w/lock	-	10408	40495

+ Pos. 13	upr	12.2.96	2
Modification	Visa	Date	Is

TOLERANCES UNLESS OTHERWISE SPECIFIED

Norm.Size	Over		6	30	100	300	1000	Angles
Fit	To	6	30	100	300	1000	2000	
Fine	±	0,05	0,1	0,15	0,2	0,3	0,5	0,1°

REMOVE ALL BURRS AND SHARP EDGES

Drawn: UPR 21.04.1994

Control:

Weight: 4746 Eff.

1:2

ISSUE 3 : 25.6.1999

MPSA 4110

Replacement for: ND

Replaced by: ND

Valves

HERMetic Compact Valve C2-SS-SEC
2" Female

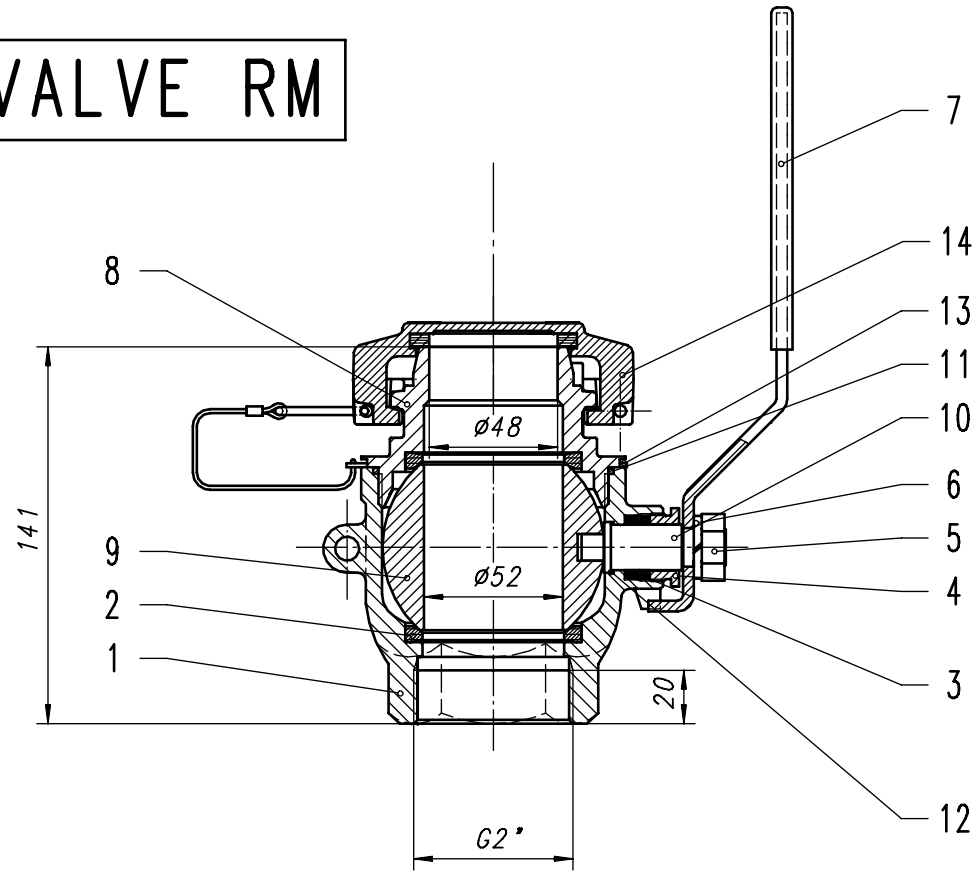
TS 10078

ND 30374

REF ND

Enraf Tanksystem SA
RUE DE L'INDUSTRIE 2 CH-1630 BULLE
Tel. +41 26 91 91 500 - Fax +41 26 91 91 505

VALVE RM



Item	Qt	Weight	Description	Material	TS #	ND #
1	1	0	Body 2" female	1.4408	22646	-
2	2	0	Seat ø 53/66 x 6	PTFE	22630	40772
3	1	0	Stem packing ø 17/23.9 x 8.5 (2pces)	PTFE	22631	40773
4	1	0	Gland	AISI 304	22632	40774
5	1	0	Nut	AISI 304	22633	-
6	1	0	Spring washer	AISI 304	22634	-
7	1	207	Handle	AISI304/PE	22635	40775
8	1	0	End cap	1.4408	22650	-
9	1	0	Ball 2"	1.4436	22645	40780
10	1	0	Stem	AISI 316	22638	40777
11	1	0	Gasket ø 86/90 x 2.5	PTFE	22640	40778
12	1	0	Gasket ø 17/19 x 1	PTFE	22641	40779
13	1	0	Washer for cable on valve	AISI 304	22648	40996

Modification | Visa | Date | Is

Item	Qt	Weight	Description	Material	TS #	ND #
14	1	370	Blind cover assy	-	10414	41034

TOLERANCES UNLESS OTHERWISE SPECIFIED

Norm.Size	Over		6	30	100	300	1000	Angles
Fit	To	6	30	100	300	1000	2000	
Fine	±	0,05	0,1	0,15	0,2	0,3	0,5	0,1°

REMOVE ALL BURRS AND SHARP EDGES

Drawn: UPR 21.04.1994

Control:

Weight: Th. 4300 Eff.

1:2

ISSUE 2 : 25.6.1999

MPSA 4110

Replacement for: ND

Replaced by: ND

Valves

HERMetic Compact Valve C2-SS-BL 2" Female

TS 10085

ND 30596

REF ND

Enraf Tanksystem SA
RUE DE L'INDUSTRIE 2 CH-1630 BULLE
Tel. +41 26 91 91 500 - Fax +41 26 91 91 505

Apparatus Identification **HERMetic Sampler Type GT / GT Chem / GTX Chem / GTN Chem / A4 / GT4**

Apparatus Classification Sampling Equipment

Statement of Conformity

Based on sample product test results using appropriate standards (industrial environment), and in accordance with the following EC Directives, we, Enraf Tanksystem SA, hereby declare under our sole responsibility that the above HERMetic Samplers are in conformity with:

EC ATEX Directive 94/9/EC, Equipment and protective systems
intended for use in potentially explosive atmospheres (ATEX).
EC Type Examination Certificate: KEMA 06ATEX0027 II 1 G c IIB T6

Sample Product Testing for ATEX

Tested by Kema Quality B.V., Utrechtseweg 310, P.O. Box 5185, 6812 AR Arnhem, The Netherlands

Standards Used EN13463-1:2001, Non-electrical equipment for potentially explosive atmopheres – Part 1: Basic method and requirements

EN13463-5:2003, Non-electrical equipment for potentially explosive atmopheres – Part 5: Protection by constructional safety

Notified Body Kema Quality B.V., Utrechtseweg 310, P.O. Box 5185, 6812 AR Arnhem, The Netherlands
Notified Body Number 0344
Report ID KEMA 2090419

Quality Assurance notification Baseefa ATEX 1536
Notified Body Baseefa, Rockhead Business Park, Staden Lane, Buxton, Derbyshire, SK17 9RZ. United Kingdom
Notified Body Number 1180

Manufacturer **ENRAF TANKSYSTEM SA,** Rue de l'Industrie 2, 1630 BULLE, Switzerland

Philippe Despagne
General Manager

Created / modified		Approved	Released	Remarks
1	2006/06/01	2006/06/08	2006/06/12	Creation
2	2007/04/02	2007/04/02	2007/04/02	Update of the ATEX references
3	2008/08/28	2008/09/03	2008/09/03	Update of the company logo - Honeywell
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