

Operation and Service Manual for HERMetic DIP2 all versions



Note :
before using the
instrument please
read this book.



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

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2. Recommendation for safe use

The HERMetric DIP Type 2 is designed for checking that the bottom of closed and inerted tanks is dry and free of deposits after crude oil washing. It consists of a graduated brass/stainless steel weight attached to a graduated stainless steel tape wound up on reel and an adapter for connecting a HERMetric valve. The operation is carried out with reduced escape of gas from the tank to the atmosphere.

The I.M.O. requirements on Tanker Safety and Pollution Prevention, 1978 - resolution A.446 (XI) - § 4.4.4 :

“Means such as level gauges, hand dipping, and stripping system performance gauges as referred to in paragraph 4.4.8. shall be provided for checking that the bottom of cargo tanks are dry after the crude oil washing. Suitable arrangements for hand dipping must be provided at the aftermost portion of a cargo tank and in three other suitable locations.”

This Operation and Service Manual is a guide in order to help the user to operate the instrument safely and correctly.

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

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.

This device is a portable 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 Disclaimer

This manual is designed and written to provide information with regard to the subject matter involved. Enraf Tanksystem SA makes no warranty, express or implied, that it is fit for any purpose whatsoever; or to the absolute sufficiency of the material presented.

Enraf Tanksystem SA assumes no responsibility for any inaccuracies in reproduction or errors in interpretation of any authority. Enraf Tanksystem SA reserves the right to modify or amend this manual, without prior notification, but Enraf Tanksystem SA assumes no responsibility to update or issue corrections.

3.2 Shipment note

The following parts should be included in the shipment:

- 1 instrument;
- 1 Operation and Service Manual.

3.3 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, do 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.

3.4 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.

3.5 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.

This warranty does not apply to those items which by their nature are subject to deterioration or consumption in normal service, and which must be cleaned, or replaced on a routine basis.

When returned to Enraf Tanksystem SA 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 Purchaser decontaminates the said equipment.

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.

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.

This warranty is expressly in lieu of any and all other warranties and representations expressed or implied, and all other obligations or liabilities on the part of the Vendor (Enraf Tanksystem SA) including but not limited to, the warranty of merchantability or fitness for a particular purpose.

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.

3.6 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).

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:
.....
.....

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 Conceição 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. Operation

1. install the HERMetric DIP2 on the HERMetric valve via the quick coupling device.
2. Open the valve.
3. Lower the dipping rod into the tank down to reaching the bottom. Looking to the tape graduation and feeling the weight dropping off the hand line will allow the operator to evaluate when the level indicating rod is reaching the tank bottom.
4. Once the rod is touching the bottom of the tank, the presence of deposits can be determined by giving out slightly more tape.
5. If the dip remains in the vertical position, that means it has penetrated deposits.
6. If it tilts on the side, no deposits are present, providing they are not too hard for the dip to penetrate in or not too soft for the dip to remain standing up.
7. After this check rewind the dipping rod into its storage tube.
8. Close the valve.
9. Disconnect the DIP2.
10. Clean the DIP 2 before the next check..

6. Maintenance

6.1 Care

For long service life, maintain the HERMetric DIP 2 clean and well lubricated and, when not in use, store it in a dry and protected location.

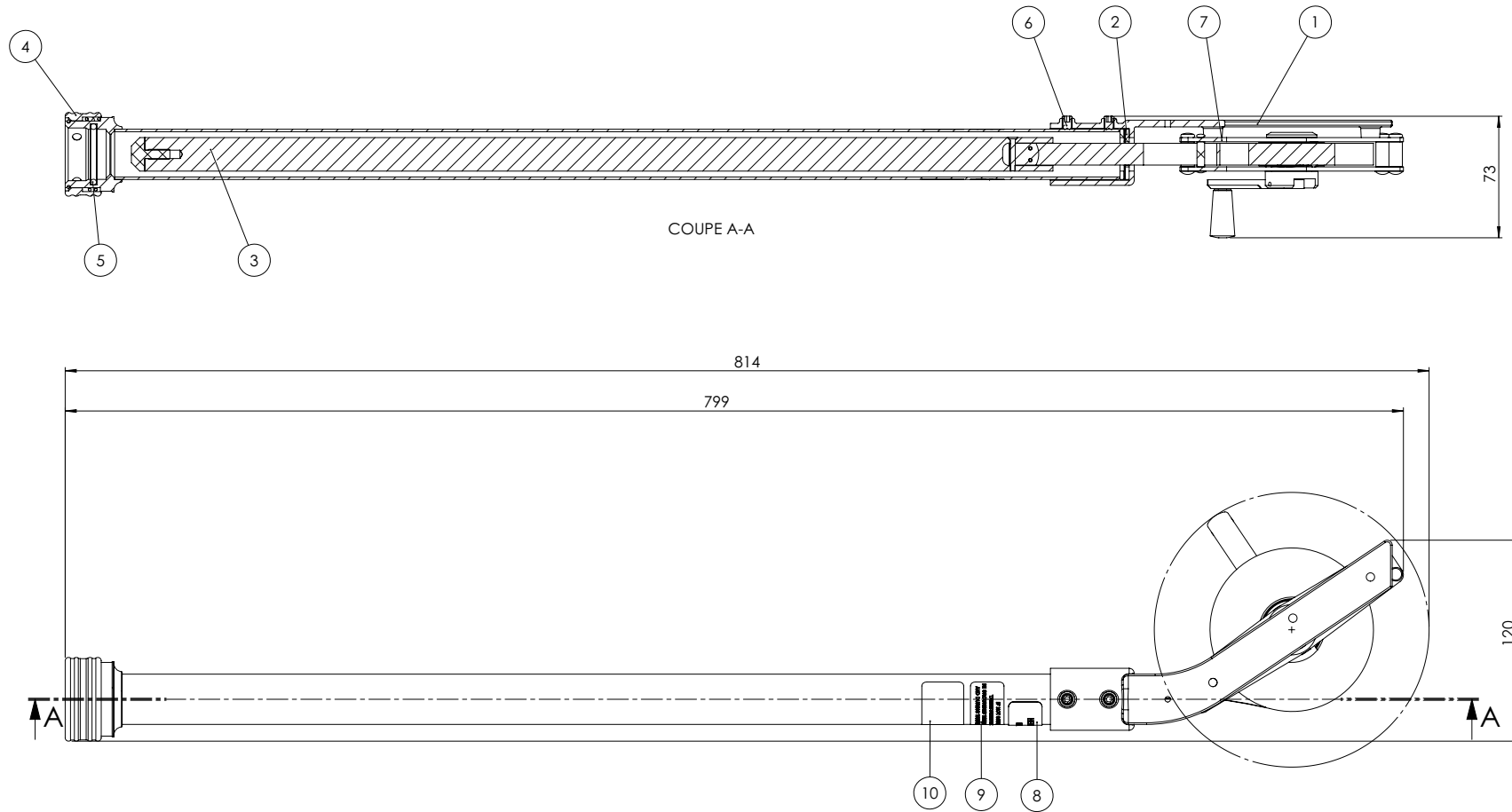
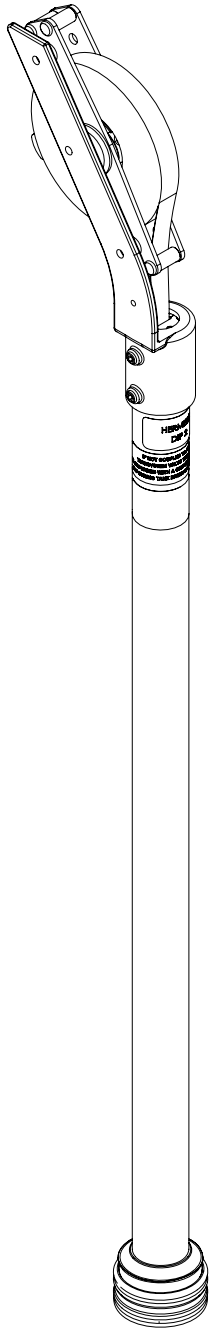
The spring loaded coupling and mating Valve quick-connect nipple must be kept free of corrosion.

If grease is used for this purpose, it must be one which contains graphite.

When ordering spare parts, always state the drawing and the item number.

7. Drawings

	ND	TS	DESCRIPTION
	20194	10035	Dip 2 30 meters
	20195	10036	Dip 2 40 meters
	30866	19019	Frame assy tape 30 m
	30867	19020	Frame assy tape 40 m
	40798	10370	Tape assy w/o winder 30 m
	41161	10393	Tape assy w/o winder 40 m
	41376	19021	Frame with crank assy
	30419	19506	Dipping rod assy
	41039	22564	Adaptor 1 1/2"



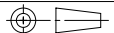
Item	Qty	Weight	Description	Material	TS	ND
1	1	288.0	Winder holder	CF8M	19007	30605
2	1	3.3	Tape wiper assy		10506	30153
3	1	1181.6	Dipping rod assy		19506	30419
4	1	870.1	Storage tube 1"		19006	30597
5	1	1.0	O-Ring ø 29.7 x 3,5	FKM	11132	
6	2	10.0	Socket set screw M6 x 8	A2	40851	DIN913
7	1	931.1	Frame assy tape 30 m		19019	30866
8	1	0.1	Label "DIP 2"	-	50010	40348
9	1	0.1	Sticker "Earth strap"	-	50072	41143
10	1	0.2	Label "Enraf Tanksystem"	-	50006	40343

TOLERANCES UNLESS OTHERWISE SPECIFIED

Norm. Size	To	Over	6	30	100	300	1000	Angles	Weight:
Fit			± 0.05	± 0.1	± 0.15	± 0.2	± 0.3	± 0.5	3277.4 Eff.
Fine			± 0.05	± 0.1	± 0.15	± 0.2	± 0.3	± 0.5	0.1"

REMOVE ALL BURRS AND SHARP EDGES

Drawn: CPI 13.03.2008 Control: 1:2

MPSA 1000 

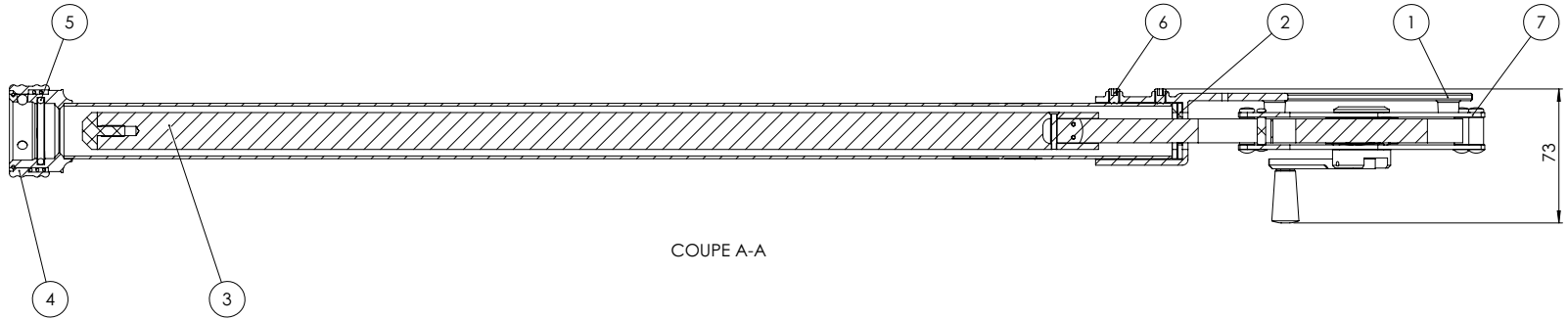
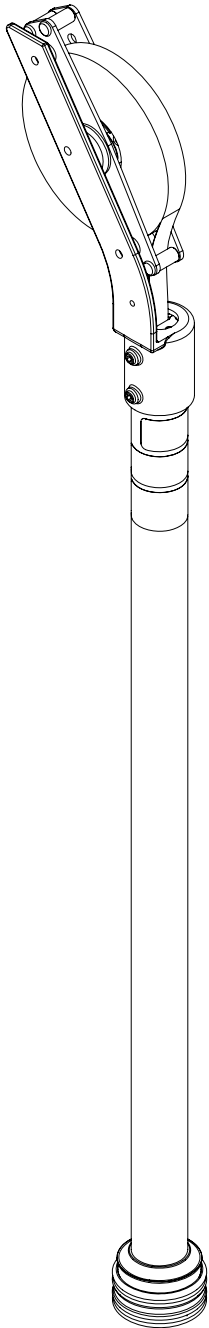
Replacement for: ND Replaced by: ND

**HERMetic Dip 2
Dip 2 30 meter**

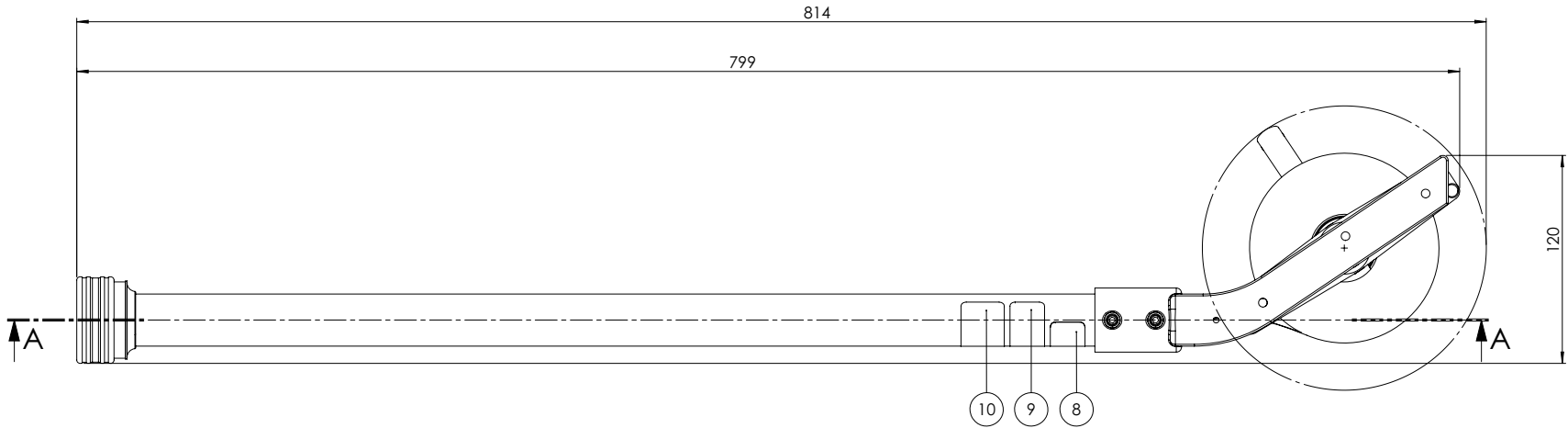
TS 10035
ND 20194
REF ND

This drawing is our property and must not without our permission be copied or made available to others. The receiver is responsible for every misuse.

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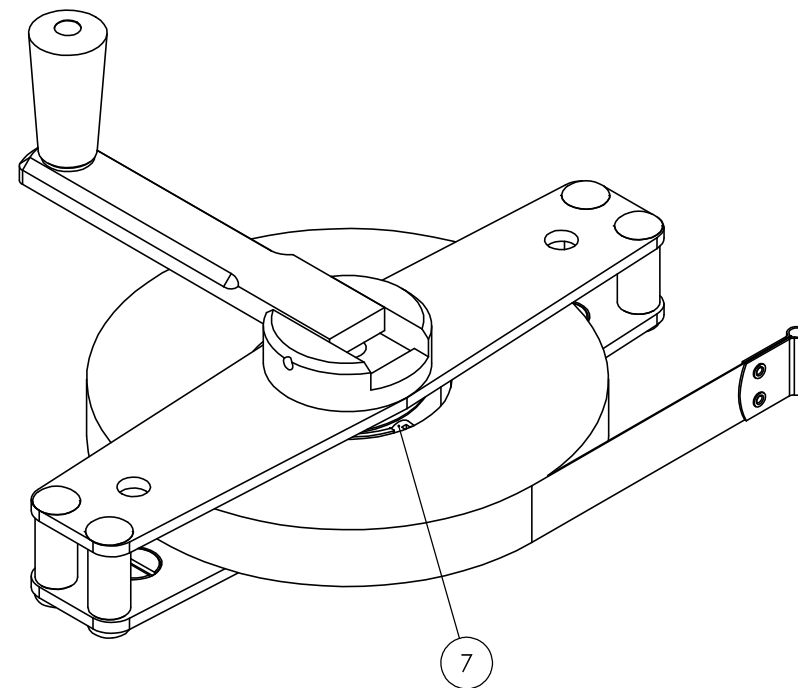
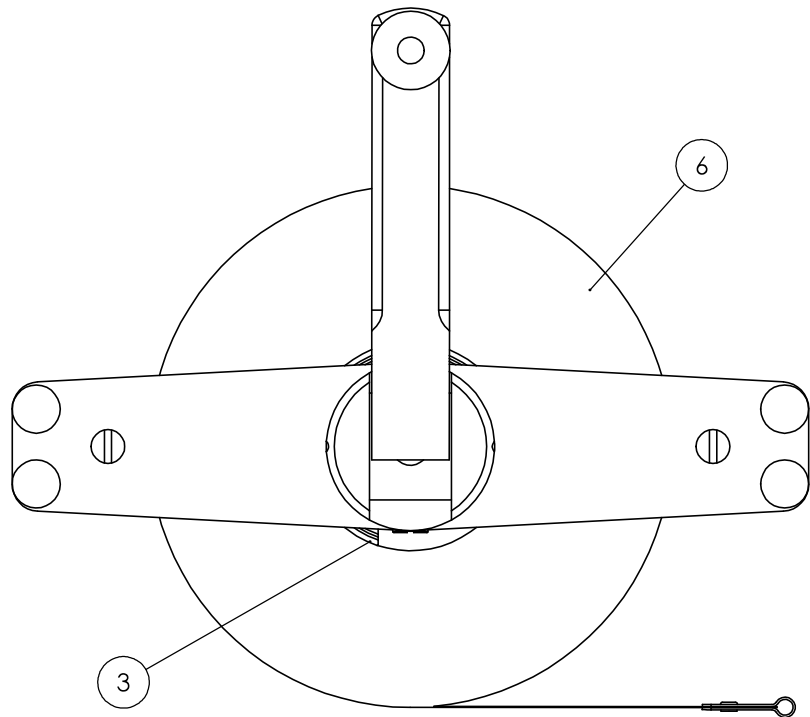
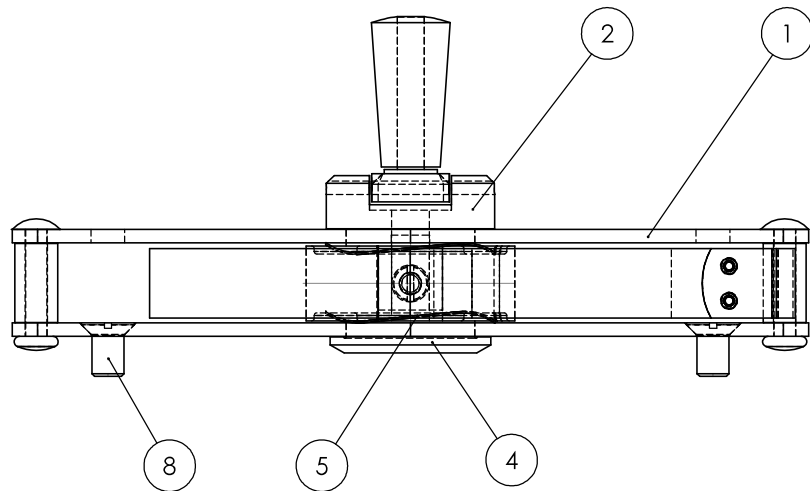


COUPE A-A



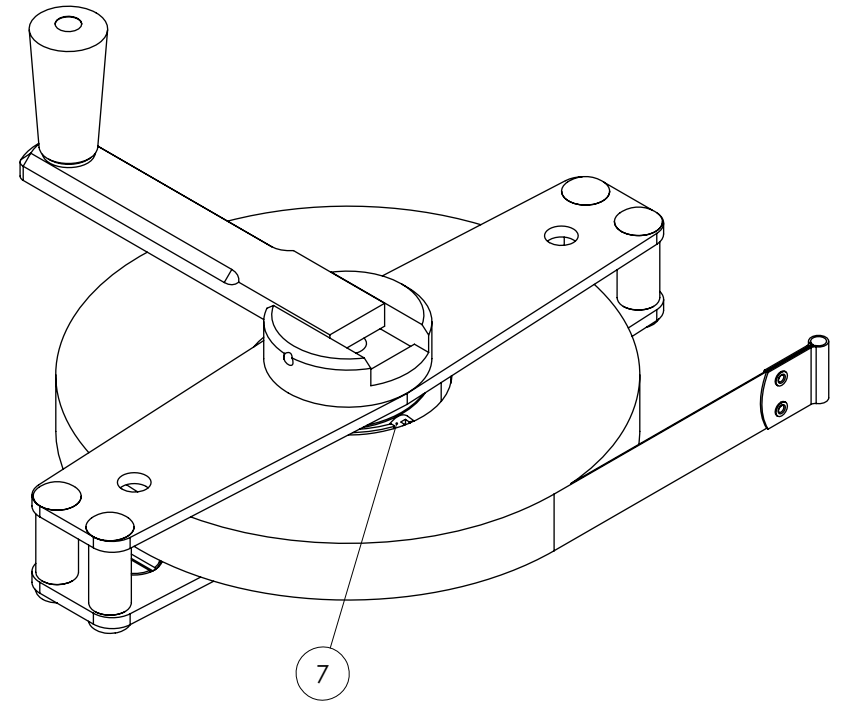
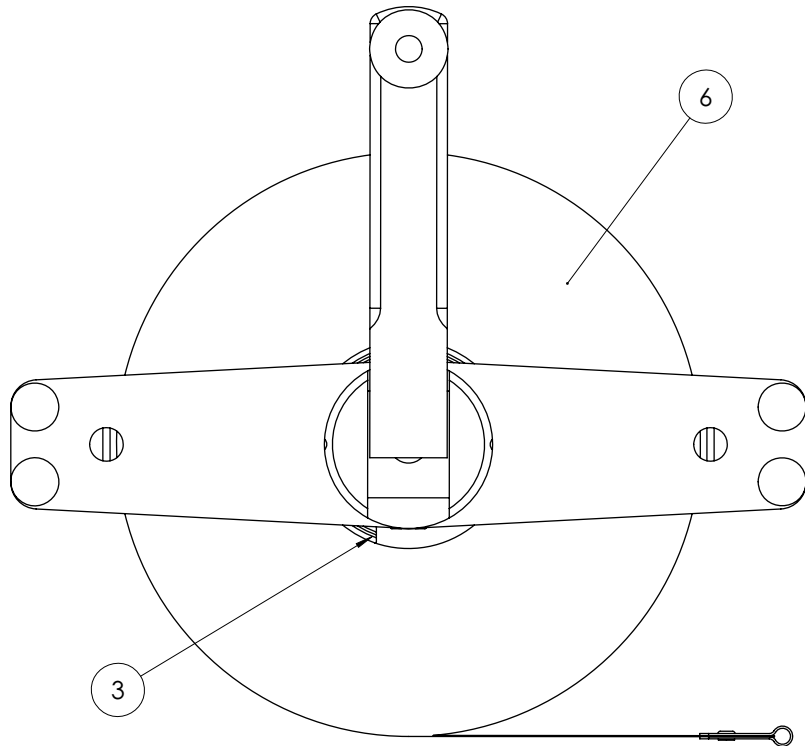
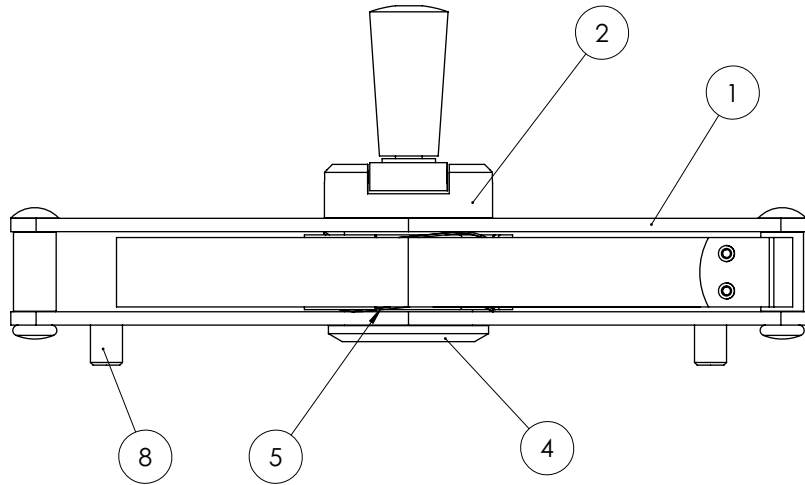
Item	Qty	Weight	Description	Material	TS	ND
1	1	288.0	Winder holder	CF8M	19007	30605
2	1	3.2	Tape wiper assy		10506	30153
3	1	1181.6	Dipping rod assy		19506	30419
4	1	870.1	Storage tube 1"		19006	30597
5	1	1.0	O-Ring ø 29,7 x 3,5	FKM	11132	
6	2	10.0	Socket set screw M6 x 8	A2	40851	DIN 913
7	1	1128.4	Frame assy tape 40 m		19020	30867
8	1	0.1	Label "DIP 2"	-	50010	40348
9	1	0.1	Sticker "Earth strap"	-	50072	41143
10	1	0.2	Label "Enraf Tanksystem"	-	50006	40343

TOLERANCES UNLESS OTHERWISE SPECIFIED				Weight: 3473.0 Eff.		ISSUE 3 : 13.03.2008	
Norm. Size	Over	6	30	100	300	1000	Angles
Fit	To	±	0.05	0.1	0.15	0.2	0.3
Fine	±	0.05	0.1	0.15	0.2	0.3	0.5
REMOVE ALL BURRS AND SHARP EDGES							
Drawn:	UPR	01.09.2008	Control:			1:2	MPSA 1000
HERMetric Dip 2 Dip 2 40 meter				Replacement for: ND		Replaced by: ND	
				TS 10036		ND 20195	
				REF ND			
This drawing is our property and must not without our permission be copied or made available to others. The receiver is responsible for every misuse.						Enraf Tanksystem SA RUE DE L'INDUSTRIE 2 CH-1630 BULLE Tel. +41 26 91 91 500 - Fax +41 26 91 91 505	



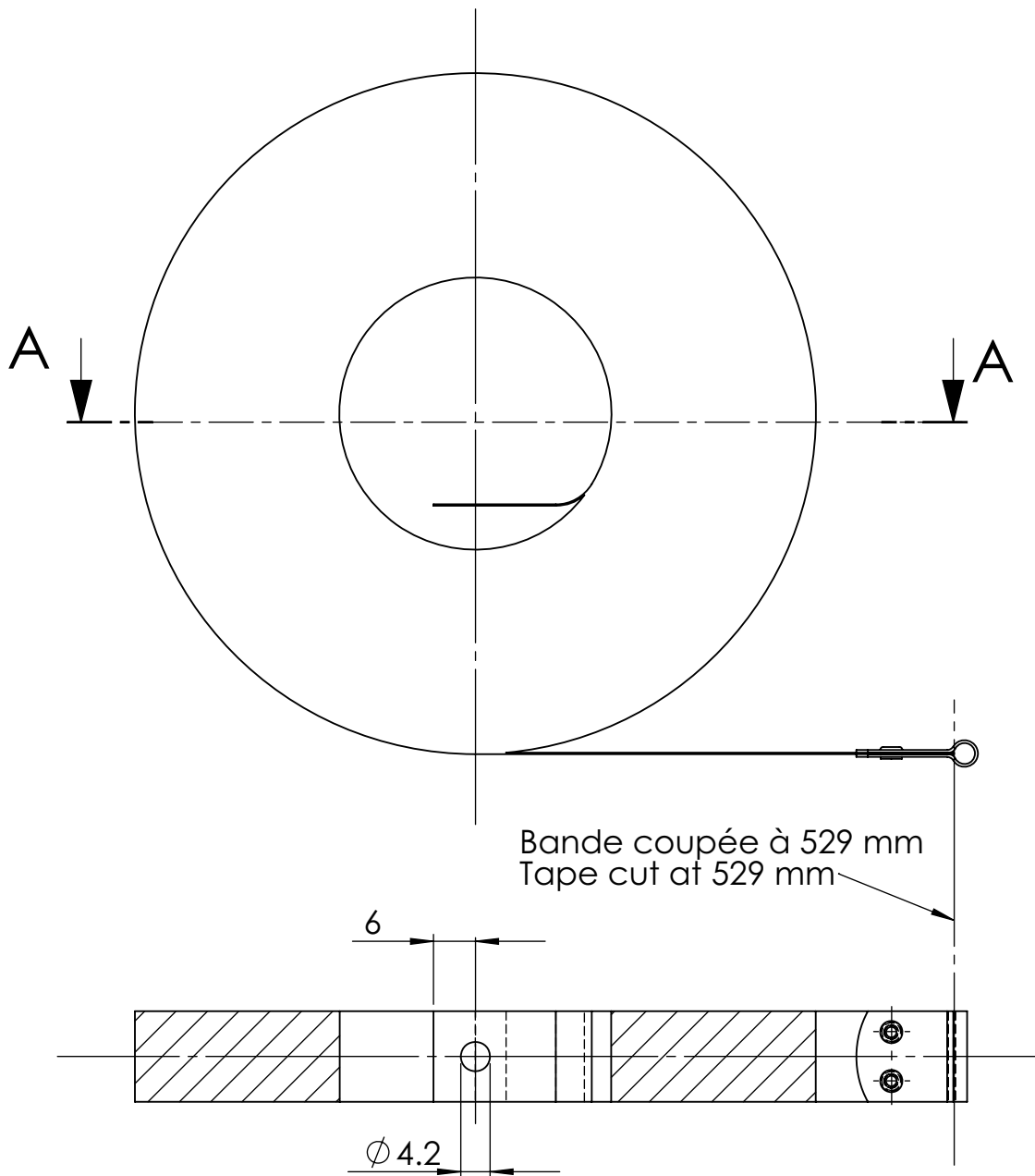
Item	Qty	Weight	Description	Material	TS	ND
1	1	147.8	Frame assy empty		19018	30864
2	1	40.0	Crank assy	-	19015	
3	1	86.8	Tape holder	CF8	19014	30865
4	1	4.4	Axle	PA6	19016	
5	2	0.9	Washer grounding	1.4301	19017	
6	1	644.9	Tape assy 30 m		10370	40798
7	1	2.0	Slotted cheese head M4 x 6	A2	40802	
8	2	2.6	Flat small head socket screw M 6x10	A2	40629	VSM13328

TOLERANCES UNLESS OTHERWISE SPECIFIED							Weight:	ISSUE 1 : 12.03.2008	
Norm.Size	Over	6	30	100	300	1000	931.1 Eff.		
Fit	To	6	30	100	300	1000			Angles
Fine	±	0.05	0.1	0.15	0.2	0.3			0.5
REMOVE ALL BURRS AND SHARP EDGES								1:1	
Drawn: CPI 21.01.2010				Control:					
HERMeTic Dip 2 Frame assy tape 30 m							MPESA 1000 Replacement for: ND Replaced by: ND		
TS 19019 ND 30866 REF ND									
This drawing is our property and must not without our permission be copied or made available to others. The receiver is responsible for every misuse.							Enraf Tanksystem SA RUE DE L'INDUSTRIE 2 CH-1630 BULLE Tel. +41 26 91 91 500 - Fax +41 26 91 91 505		



Item	Qty	Weight	Description	Material	TS	ND
1	1	147.8	Frame assy empty	-	19018	30864
2	1	40.0	Crank assy	-	19015	-
3	1	86.8	Tape holder	CF8	19014	30865
4	1	4.4	Axle	PA6	19016	-
5	2	0.9	Washer grounding	1.4310	19017	-
6	1	840.6	Tape assy 40 m	-	10393	41161
7	1	4	Slotted cheese head M6 x 10	A2	40802	84A
8	2	2.6	Flat small head socket screw M 6x10	A2	40629	VSM13328

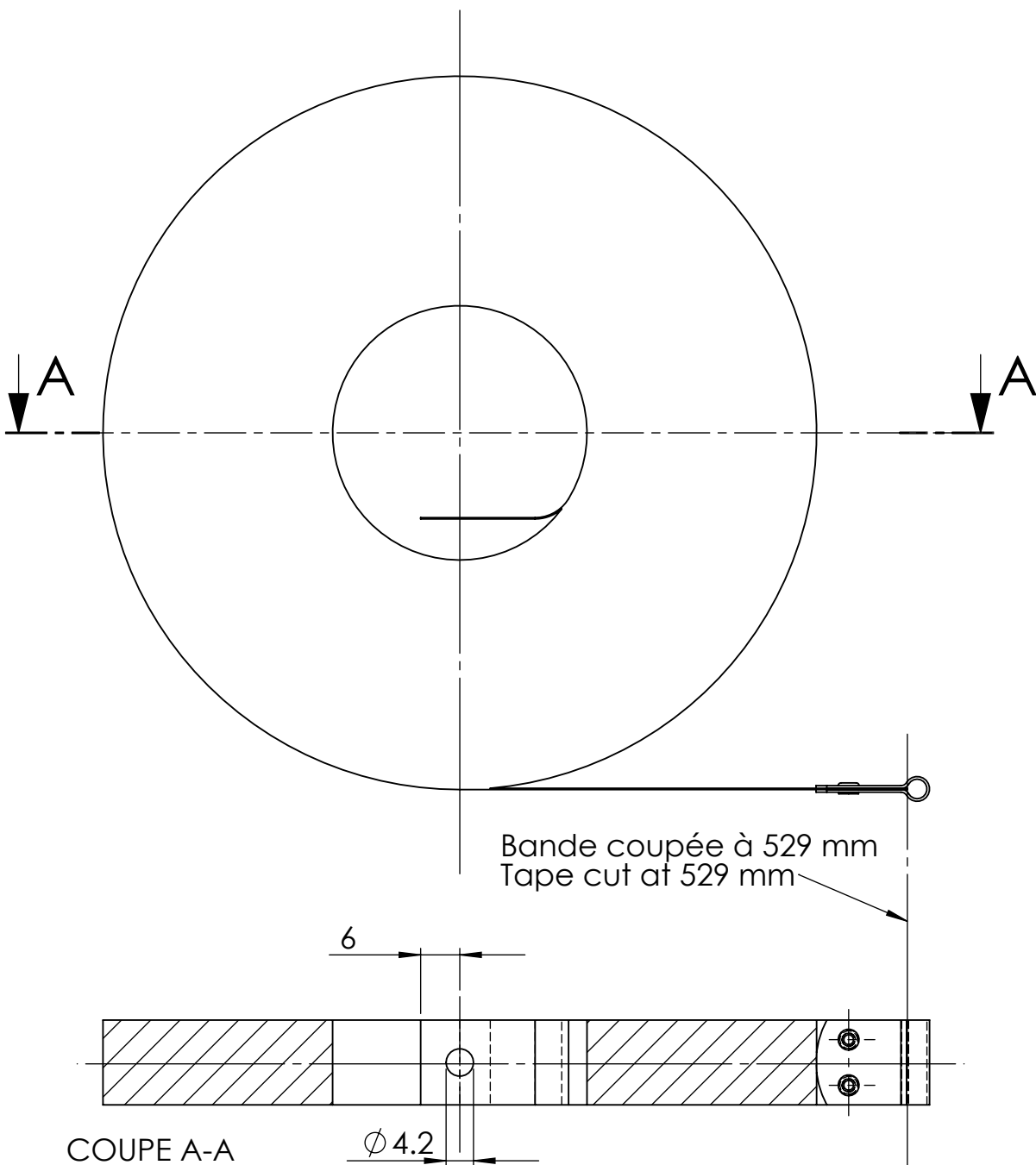
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Norm. Size	Over	6	30	100	300	1000	1126.9 Eff.		
Fit	To	6	30	100	300	1000			Angles
Fine	±	0,05	0,1	0,15	0,2	0,3		0,5	0,1°
REMOVE ALL BURRS AND SHARP EDGES								1:1	
Drawn: UPR 12.03.2008				Control:					
HERMeTic Dip 2				Frame assy tape 40 m				Replaced for: ND	Replaced by: ND
								TS 19020	
								ND 30867	
								REF ND	
This drawing is our property and must not without our permission be copied or made available to others. The receiver is responsible for every misuse.							Enraf Tanksystem SA RUE DE L'INDUSTRIE 2 CH-1630 BULLE Tel. +41 26 91 91 500 - Fax +41 26 91 91 505		



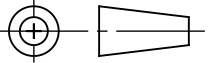
COUPE A-A

Item	Qty	Weight	Description	Material	TS	ND
1	1	643.3	Tape 30 m Metric/inch	1.4021	19503	
2	1	1.4	Clasp for swivel hook	1.4305	20555	41363
3	2	0.1	Rivet ϕ 2 x 2.1	A2	-	41367

TOLERANCES UNLESS OTHERWISE SPECIFIED								Weight:		ISSUE 2 : 17.7.2008			
Norm. Size	Over		6	30	100	300	1000	Angles	644.9 Eff.	MPSA 1000			
Fit	To	6	30	100	300	1000	2000						
Fine	\pm	0,05	0,1	0,15	0,2	0,3	0,5					0,1°	
REMOVE ALL BURRS AND SHARP EDGES													
Drawn: UPR 17.07.2008				Control:				1:1		Replacement for: ND		Replaced by: ND	
HERMetric Dip 2 Tape assy 30 m								TS 10370					
								ND 40798					
								REF ND 30866					
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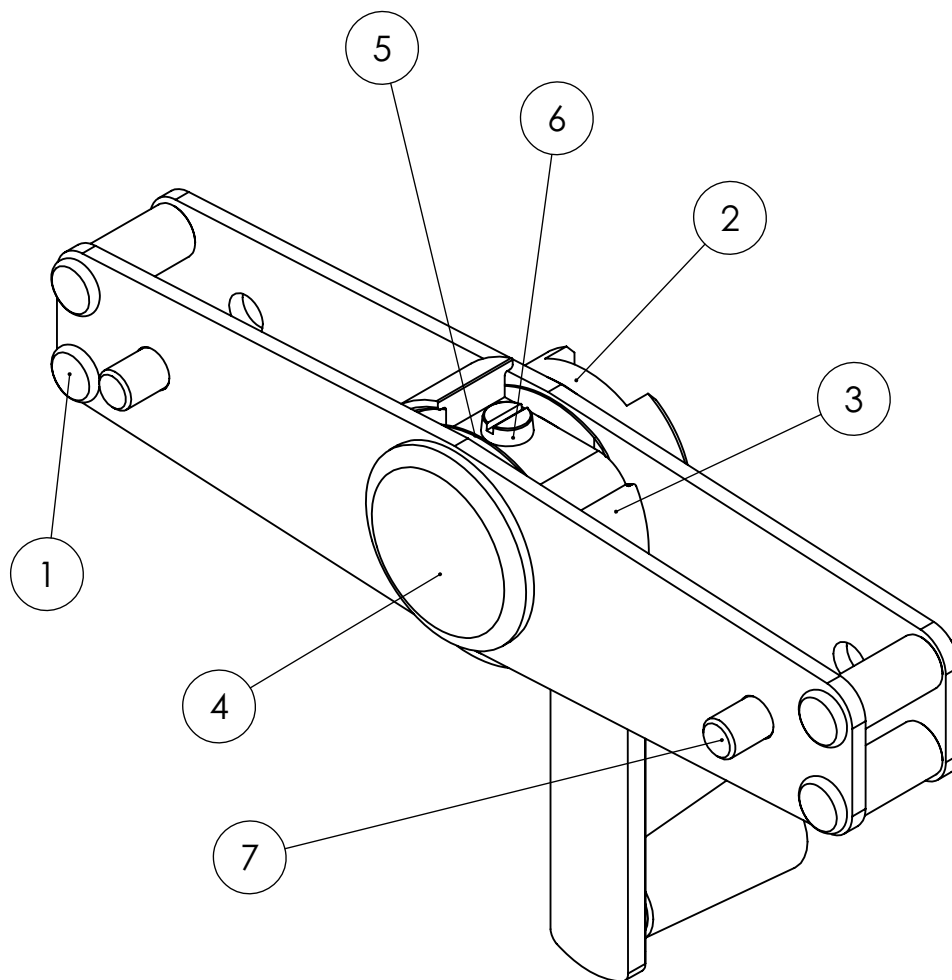


Item	Qty	Weight	Description	Material	TS	ND
1	1	839.1	Tape 40m Metric/inch	1.4021	19505	
2	1	1.4	Clasp for swivel hook	1.4305	20555	41363
3	2	0.1	Rivet \varnothing 2 x 2.1	A2	-	41367

TOLERANCES UNLESS OTHERWISE SPECIFIED								Weight:		ISSUE 1 : 04.03.2008	
Norm.Size	Over	6	30	100	300	1000	Angles	840.6 Eff.		MPSA 1000 	
Fit	To	6	30	100	300	1000	2000	1:1			
Fine	±	0,05	0,1	0,15	0,2	0,3	0,5				
REMOVE ALL BURRS AND SHARP EDGES										Replacement for: ND	
Drawn:		Control:		HERMetic Dip 2 Tape assy 40 m		TS 10393		Replaced by: ND			
CPI 04.03.2008						ND 41161					
						REF ND 30867					

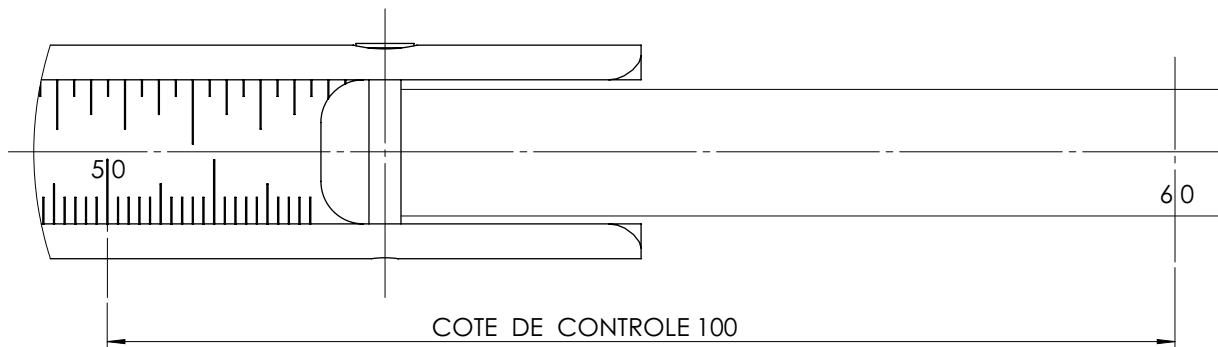
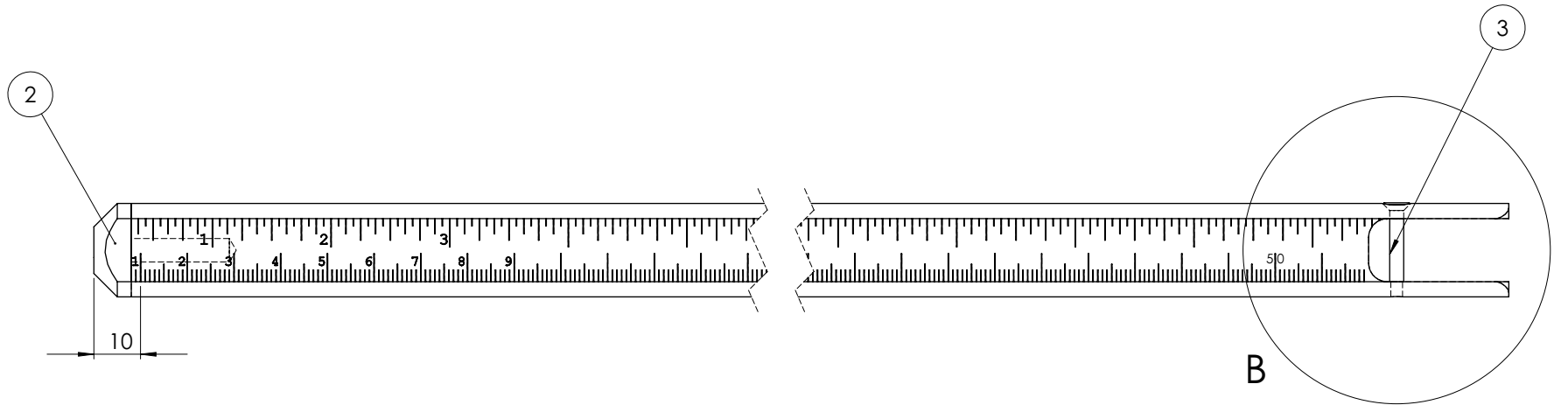
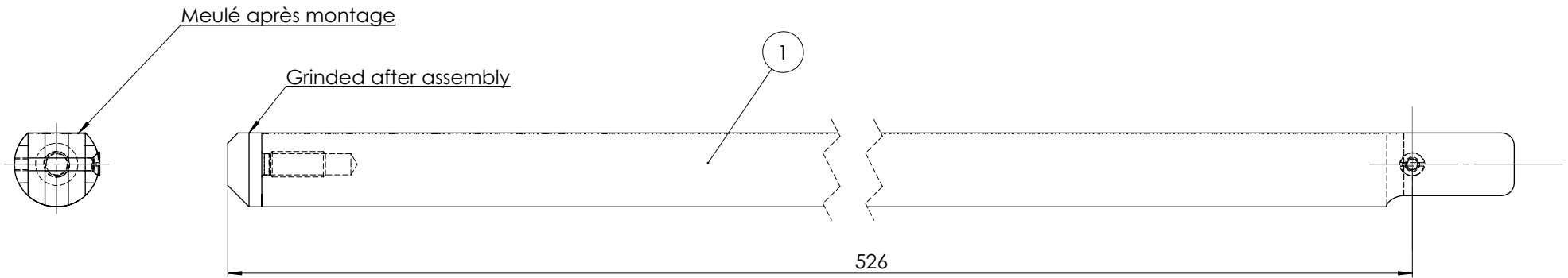
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Item	Qty	Weight	Description	Material	TS	ND
1	1	147.8	Frame assy empty		19018	30864
2	1	40.0	Crank assy	-	19015	
3	1	86.8	Tape holder	CF8	19014	30865
4	1	4.4	Axle	PA6	19016	
5	2	0.9	Washer grounding	1.4310	19017	
6	1	2.0	Slotted cheese head M4 x 6	A2	40802	DIN 84A
7	2	2.6	Flat small head socket screw M 6x10	A2	40629	VSM13328

TOLERANCES UNLESS OTHERWISE SPECIFIED								Weight:	ISSUE 1 : 17.7.2008
Norm.Size	Over	6	30	100	300	1000	Angles	286.2 Eff.	
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								1:1	MPSA YNNN
Drawn: CPI 18.07.2008		Control:				Replacement for: ND			Replaced by: ND
HERMetic Dip 2 Frame with crank assy								TS 19021	
								ND 41376	
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DÉTAIL B
ECHELLE 2 : 1

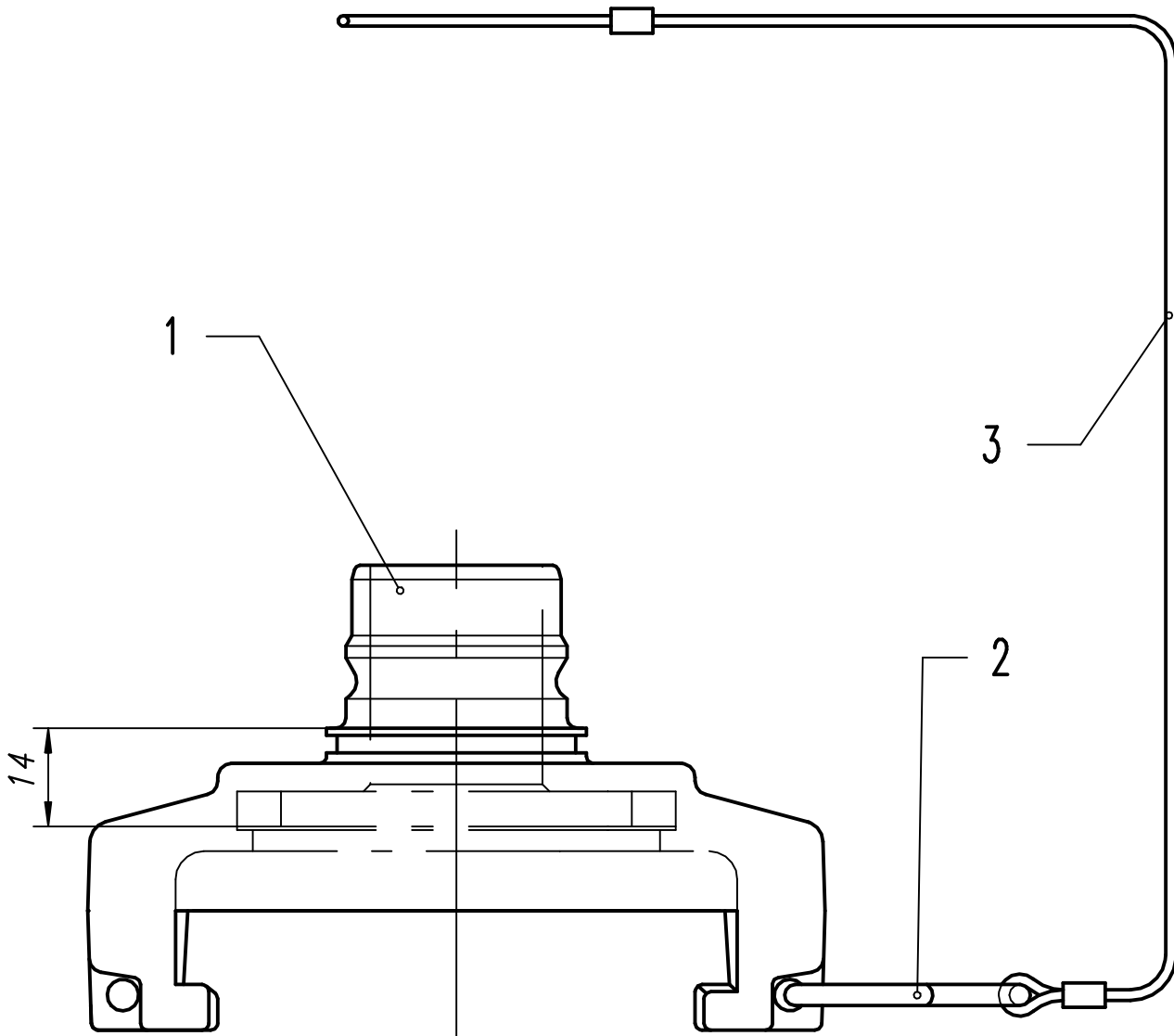
Item	Qty	Weight	Description	Material	TS	ND
1	1	1177.5	Dipping rod	1.4305	19002	30483
2	1		4.0 Dipping head	PVDF	19004	40512
3	1		2 Slotted flat head screw M3 x 20	A2	40619	DIN963A

TOLERANCES UNLESS OTHERWISE SPECIFIED							Weight:		ISSUE 2 : 14.02.2008	
Norm. Size	Over	6	30	100	300	1000	1181.6 Eff.			
Fit	To	6	30	100	300	1000	Angles			
Fine	±	0.05	0.1	0.15	0.2	0.3	0.5	0.1°		

REMOVE ALL BURRS AND SHARP EDGES		1:1	MPSA 1000	
Drawn: UPR 01.09.2008	Control:		Replaced for: ND	Replaced by: ND
HERMeTic Dip 2 Dipping rod assy			TS 19506	
			ND 30419	
			REF ND 20194720195/20198	

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Item	Qt	Weight	Description	Material	TS #	ND #
1	1	400	Connector 1" - 2" FKM	-	22563	41032
2	1	5	S Holder	AISI 304	11902	40537
3	1	4	Cable assy	-	55112	40525

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°

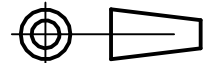
Weight:
409 Th.
0 Eff.

ISSUE 1 : 14.3.1997

REMOVE ALL BURRS AND SHARP EDGES

1:1

MPSA
4110



Drawn:
UPR 14.03.1997

Control:

Replacement for:
ND

Replaced by:
ND

Valves

Adaptor 1"-2"

TS 22564

ND 41039

REF ND

Is Date
Visa Modification

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