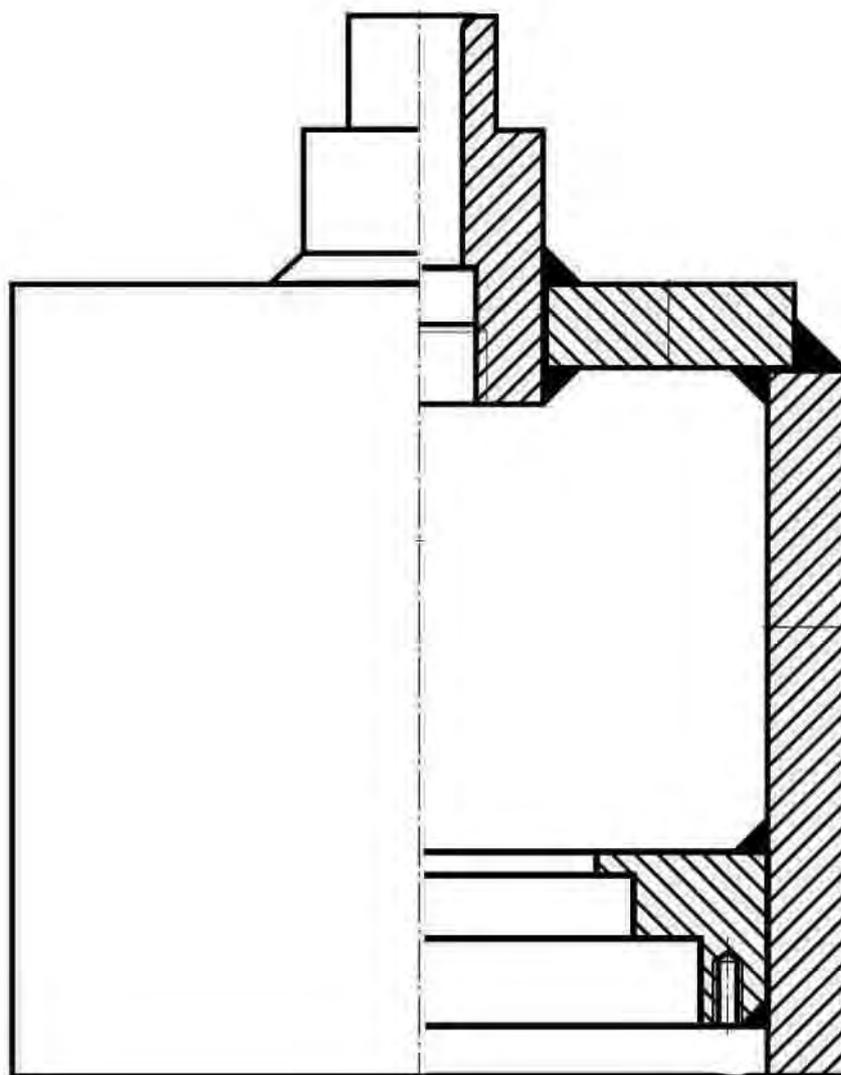


# SKIPPER STANDARD TANK

## INSTALLATION MANUAL

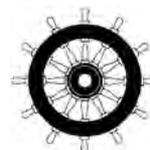
Edition : 20061211



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E-mail: [skipper@skipper.no](mailto:skipper@skipper.no)  
Co.reg.no: NO-965378847 -MVA

**SKIPPER**



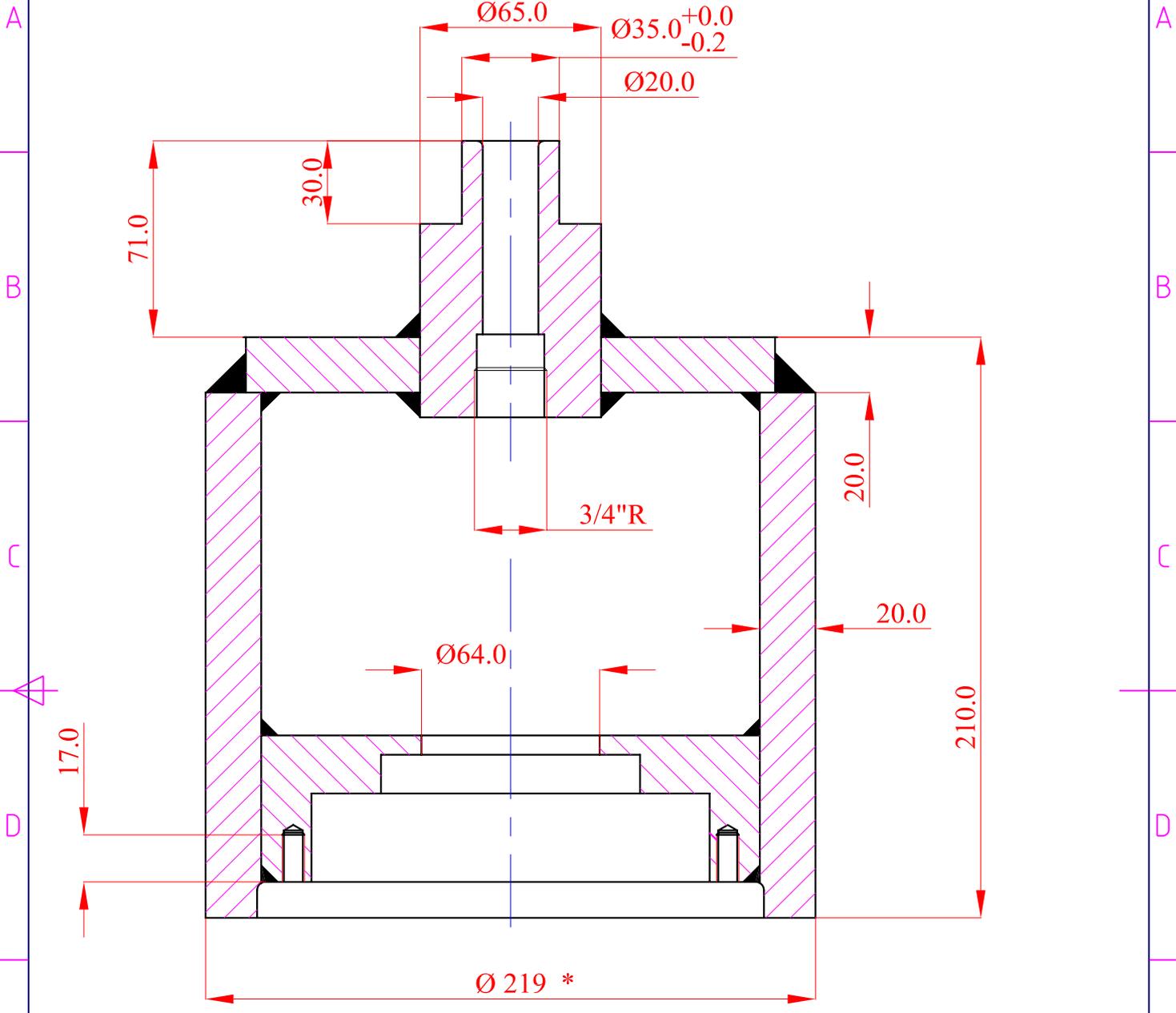
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| 1     | 2             | 3    | 4         |
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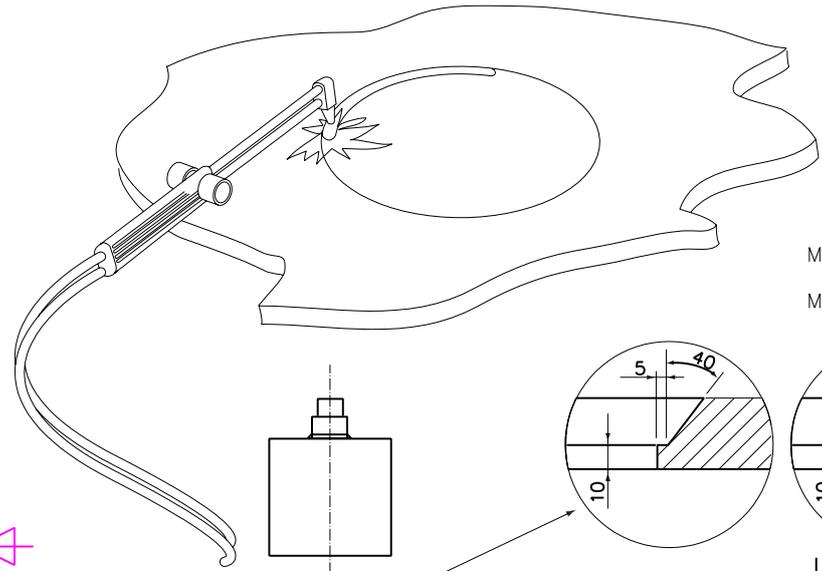
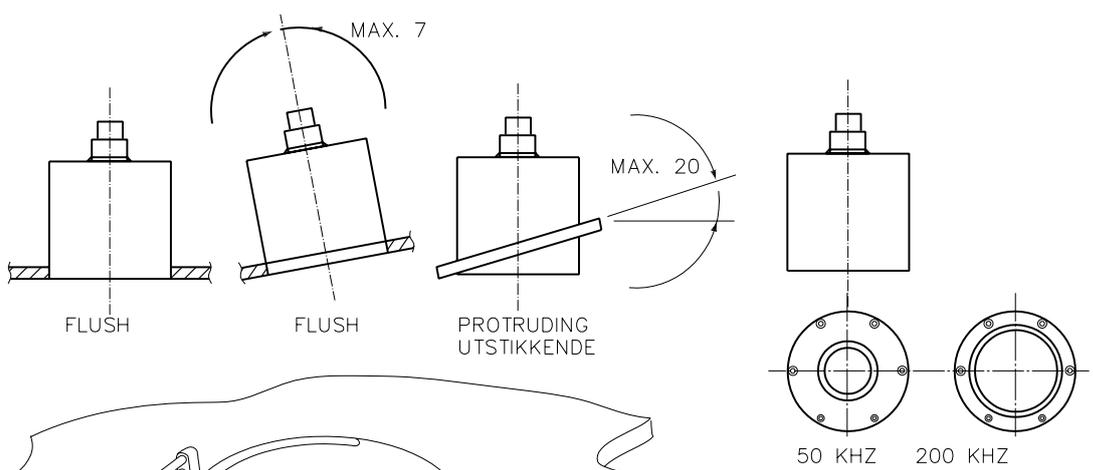
\* Note due to surface machining, the diameter may vary between 217 and 219,1

Part.no: ETNST.

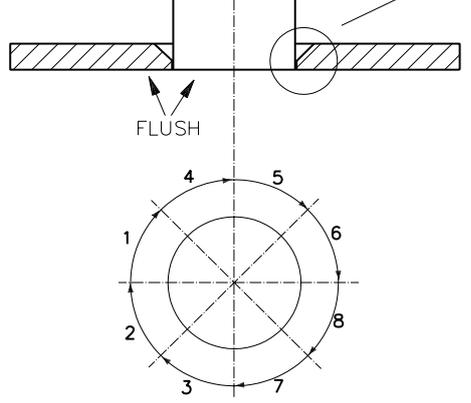
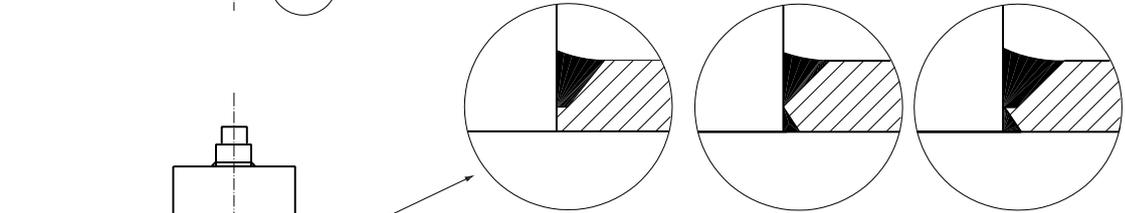
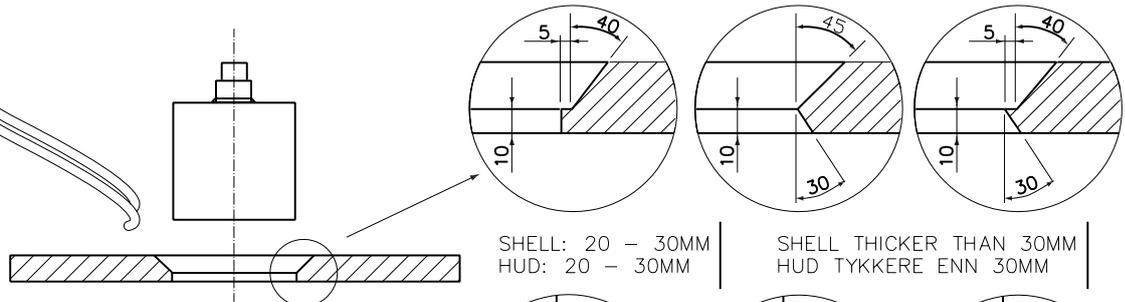
Material: ST.52.3N  
 Surface Treatment: Flugger 1240 Industriprimer. Colour: Red  
 Gen. tolerance: ±0.2

|                        |                  |  |                 |                    |                       |              |
|------------------------|------------------|--|-----------------|--------------------|-----------------------|--------------|
| Itemref                | Quantity         | Title/Name, designation, material, dimension etc |                 |                    | Article No./Reference |              |
| Designed by<br>AM      | Checked by<br>VF | Approved by - date<br>VF-2005/01/25              | File name       | Date<br>2005/01/25 | Scale<br>1:1          |              |
| Skipper Electronics AS |                  |  | Transducer Tank |                    |                       |              |
|                        |                  |  | TB-2002-Rev-00  |                    | Edition               | Sheet<br>1/1 |

|   |   |   |   |       |               |      |           |         |
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MATERIAL THICKNESS TOP AND SIDES: 20MM  
 MATERIAL TYKKELSE TOPP OG SIDER: 20MM



WELD THE TANK ACCORDING TO PROCEDURE AS SHOWN. USE LOW-HYDROGEN ELECTRODES, E.G. OK 4800 IN ORDER TO AVOID CONTRACTION STRAIN, HAMMER EACH WELDING SEAM BEFORE APPLYING NEXT. ALLOW THE TANK TO COOL DOWN DURING WELDING.  
**DO NOT HAMMER THE LAST WELDING SEAM!**  
 GRIND FLUSH ALL WELDINGS WITHIN 5 M IN FRONT OF, AND 3 M TO THE SIDE OF THE TRANSDUCER. FINALLY, PAINT THE TRANSDUCER TANK INSIDE AND OUTSIDE WITH A NON-CORROSIVE COATING.

SVEIS TANKEN I HENHOLD TIL VISTE PROSEDYRE. BRUK LAVHYDROGEN-ELEKTRODE, F.EKS. OK 4800. FOR Å UNNGÅ KRYMPESPENNINGER MEST MULIG, HAMRES HVER SVEISESTRENG FØR NESTE LEGGES, OG TANKEN HOLDES SÅ KALD SOM MULIG UNDER SVEISINGEN.  
**SISTE SVEISESTRENG MÅ IKKE HAMRES!**  
 PLANSLIP ALLE SVEISESØMMER INNENFOR ET AREALE AV 5M I FRONT OG 3 M TIL HVER SIDE FOR SVINGEREN. TIL SLUTT MALES SVINGERTANKEN UTVENDIG OG INNVENDIG MED KORROSJONSHINDRENDE MALING.

|                        |                  |  |   |         |                       |  |
|------------------------|------------------|--|---|---------|-----------------------|--|
| Itemref                | Quantity         | Title/Name, designation, material, dimension etc |   |         | Article No./Reference |  |
| Designed by<br>AM      | Checked by<br>VF | Approved by - date                               | File name   | Date    | Scale                 |  |
| Skipper Electronics AS |                  |  | INSTALLATION AND WELDING GUIDANCE FOR TRANSDUCER TANK |         |                       |  |
|                        |                  |  | TB 3001   | Edition | Sheet 1/1             |  |

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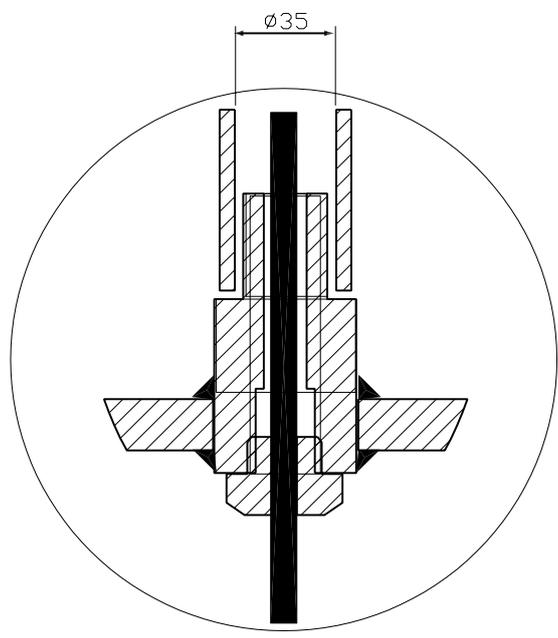
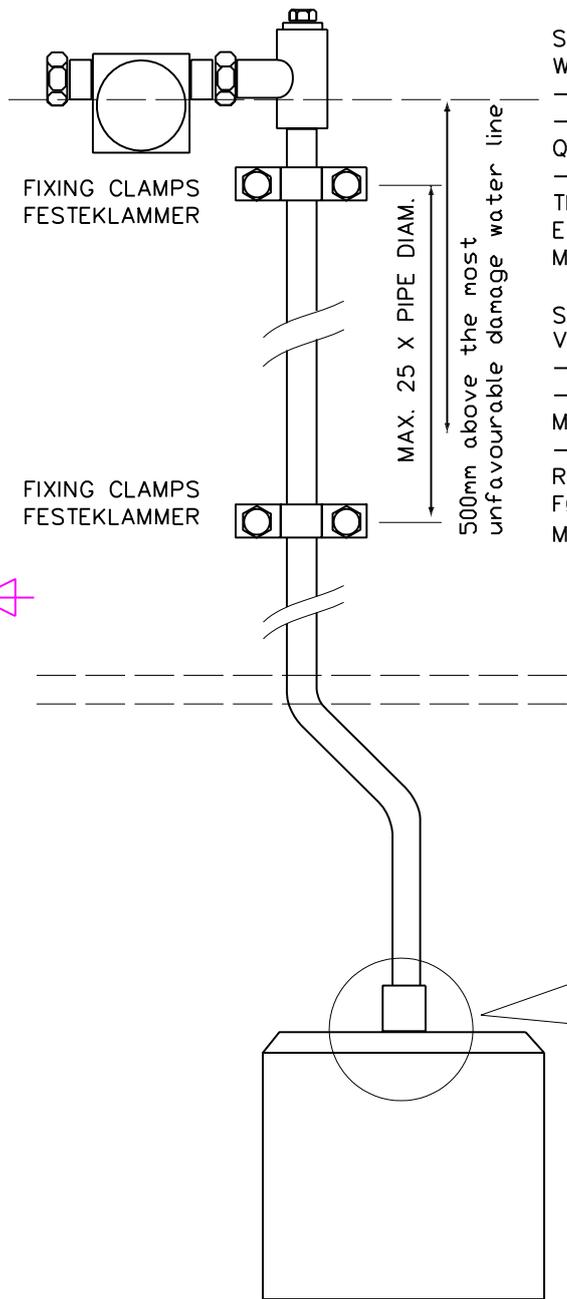
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WATERTIGHT JUNCTION BOX MUST BE SITED FOR EASY ACCESS IN AN EXPLOSION-SAFE PLACE, OVER MAX. WATER LINE.

VANNETT KOPLINGSBOKS Plasseres på ikke eksplosjonsfarlig, lett tilgjengelig sted, over max. vannlinje.

STEEL PIPE, MIN. 35MM DIAM. INSIDE.  
WALL THICKNESS:  
- GALVANIZED PIPE: MINIMUM 6 MM  
- BLACK PIPE: MINIMUM 10 MM  
QUALITY OF MATERIAL:  
- STATED IN VERITAS CHAP. X. PARA. 7A, TYPE III  
THE PIPE TO BE WELDED BEFORE PULLING THE CABLE.  
EXPANDING POSSIBILITIES MUST BE ARRANGED.  
MAXIMUM DISTANCE BETWEEN PIPE CLAMPS, 25 X PIPE DIAM.

STÅLRØR, INNV. DIAM. MIN. 35 MM  
VEGGTYKKELSE:  
- GALVANISERTE RØR: MIN. 6 MM  
- SVARTE RØR: MIN. 10 MM  
MATERIALKVALITET:  
- SE VERITAS REGLER KAP. X. PARA 7A, TYPE III  
RØRET SVEISES INN MED TILSTREKkelig EKSPANSJONSMULIGHET, FØR KABELN TREKKES.  
MAKS. KLAMMERAVSTAND PÅ RØRET, 25 X RØRDIA.



|                        |                  |  |                               |         |              |
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| Itemref                | Quantity         | Title/Name, designation, material, dimension etc | Article No./Reference         |         |              |
| Designed by<br>AM      | Checked by<br>VF | Approved by - date                               | File name                     | Date    | Scale        |
| Skipper Electronics AS |                  |  | Cable pipe for Transducertank |         |              |
|                        |                  |  | TA 3004                       | Edition | Sheet<br>1/1 |

PROVIDE APPROX. 3/4 M OF CABLE BETWEEN CABLE GLAND AND THE TRANSDUCER ELEMENT

SØRG FOR AT KABELLENGDEN MELLOM KABELGJENNOMFØRING OG SVINGERELEMENT ER CA. 3/4 M.

TUBE  
REF. TA 3004

RØR  
REF. TA 3004

WASHER, STAINLESS

RUBBER GASKET

WASHER, STAINLESS

PACKING NIPPLE

SKIVE, RUSTFRI

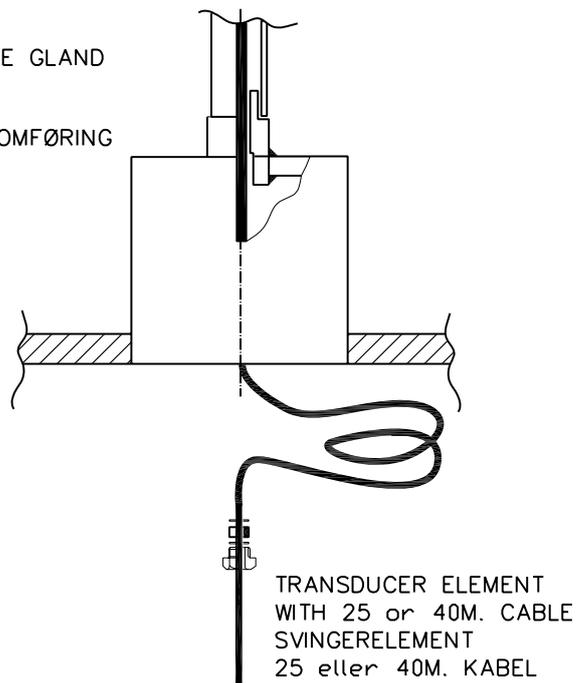
GUMMIPAKNING

SKIVE, RUSTFRI

PAKKNIPPEL

SPECIAL WRENCH/TOOL FOR TIGHTENING OF PACKING NIPPLE

SPESIALVERKTØY FOR STRAMMING AV PAKKNIPPEL



MOUNTING RING MONTASJERING

ALLEN SCREW M8X16 APPLY WHITE LEAD OR SIM. ON THREADS

SYL.HODE SKRUE M8X16 PÅFØR BLYHVITT EL.LIGN. PÅ GJENGER

ALLEN KEY, 6MM NØKKELE, 6MM

|                        |               |  |                       |
|------------------------|---------------|--|-----------------------|
| Itemref                | Quantity      | Title/Name, designation, material, dimension etc | Article No./Reference |
| Designed by AM         | Checked by VF | Approved by - date                               | File name             |
|                        |               | Date   | Scale                 |
| Skipper Electronics AS |               | Mounting of Transducer                           |                       |
|                        |               | TB 3003  | Edition               |
|                        |               |  | Sheet 1/1             |

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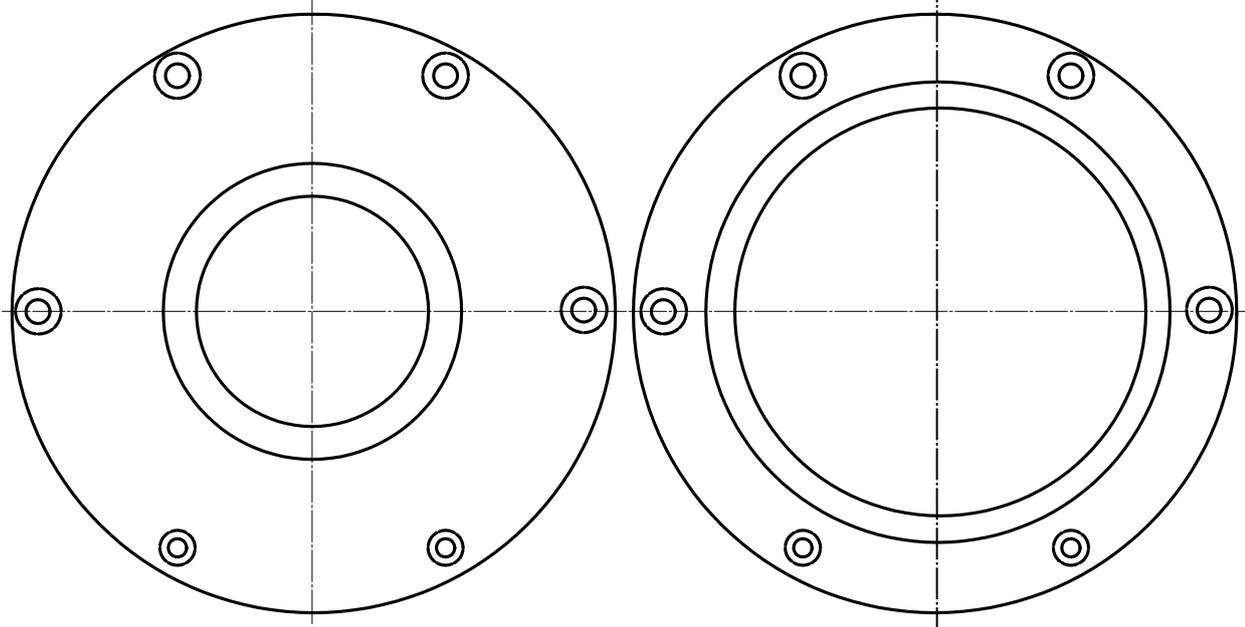
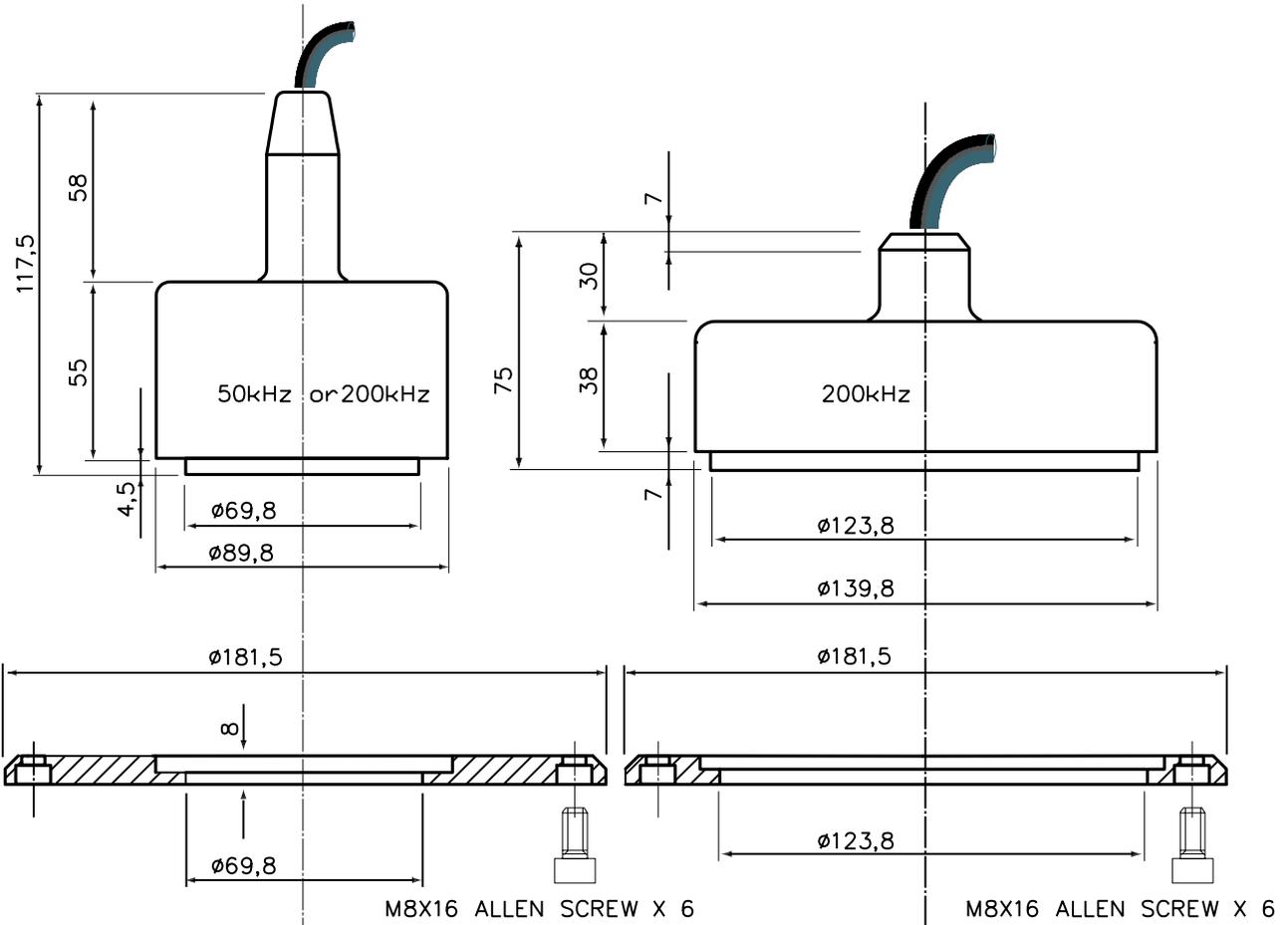
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| Itemref                | Quantity         | Title/Name, designation, material, dimension etc |                              |      | Article No./Reference |              |
| Designed by<br>AM      | Checked by<br>VF | Approved by - date                               | File name                    | Date | Scale                 |              |
| Skipper Electronics AS |                  |  | Transducer and Mounting ring |      |                       |              |
|                        |                  |  | TB 2001                      |      | Edition               | Sheet<br>1/1 |

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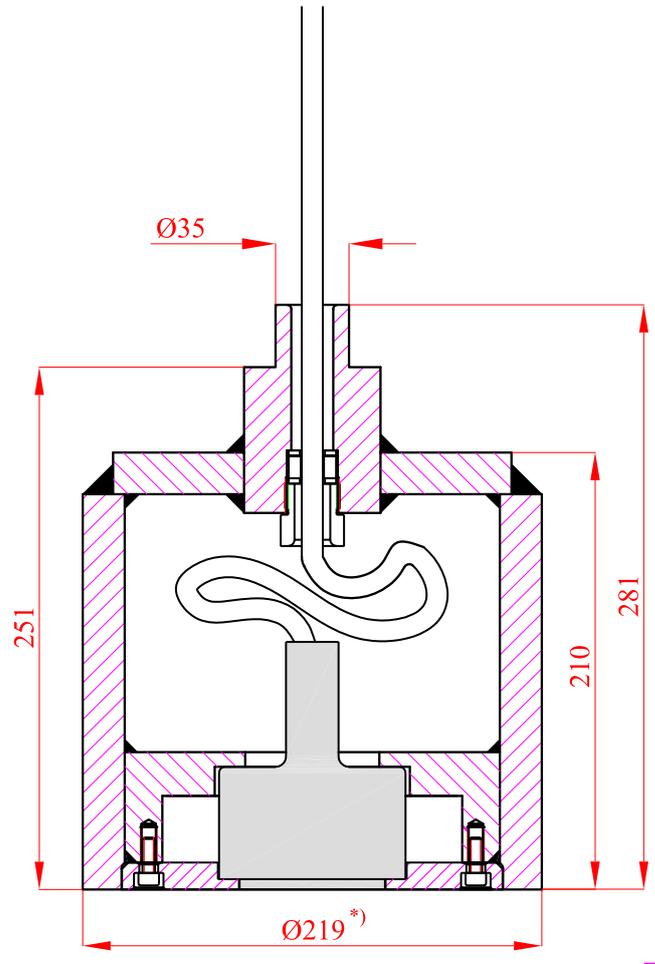
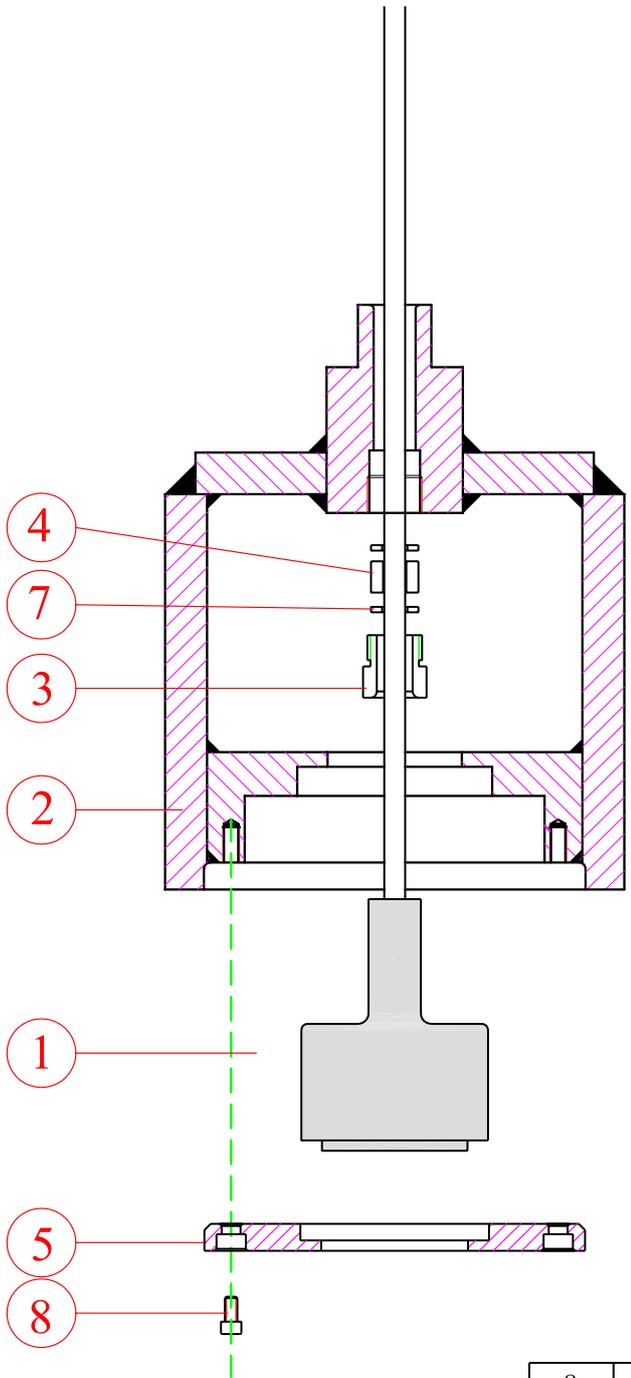
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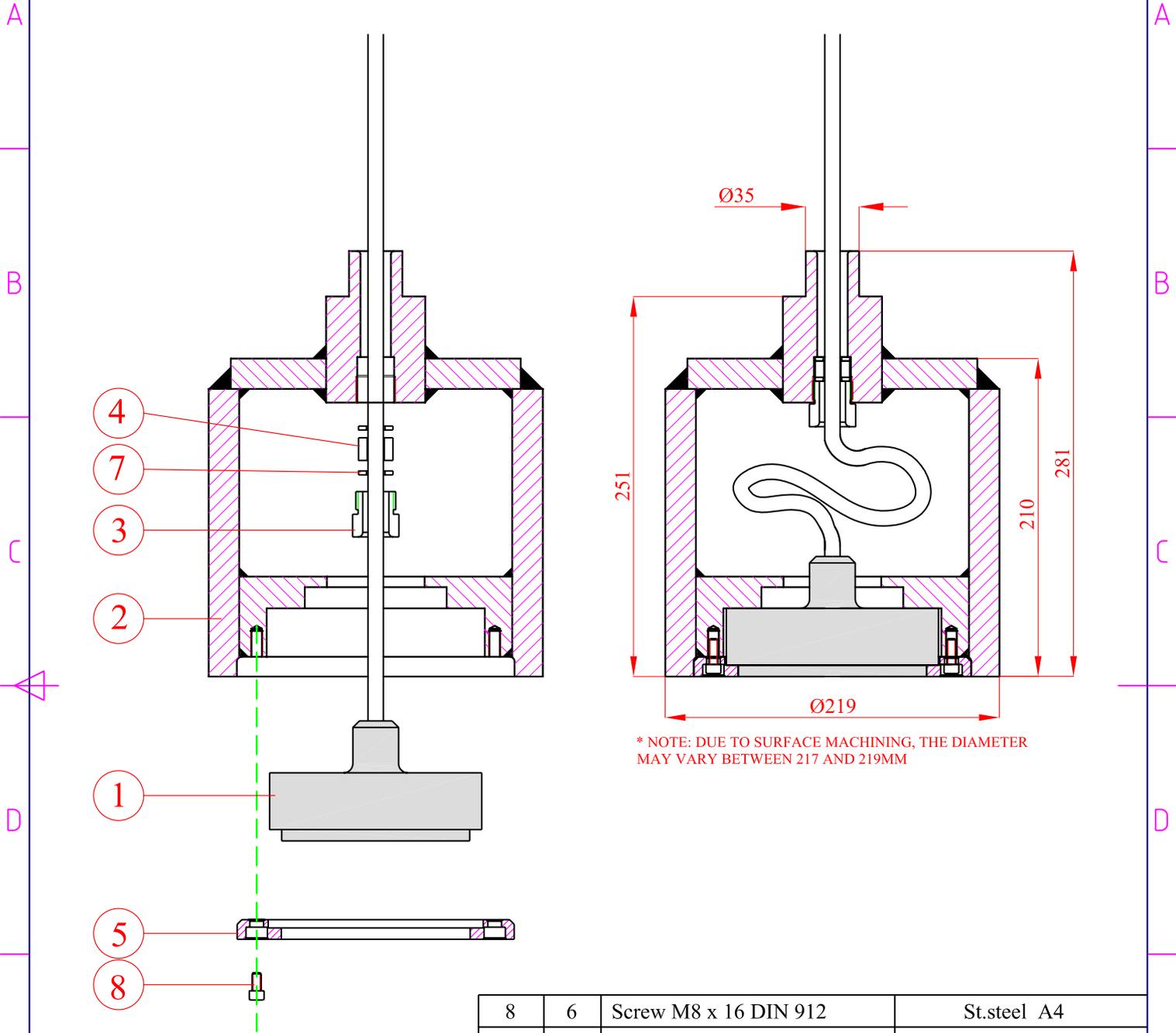
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\* NOTE: DUE TO SURFACE MACHINING, THE DIAMETER MAY VARY BETWEEN 217 AND 219MM

|      |      |                       |                 |
|------|------|-----------------------|-----------------|
| 8    | 6    | Screw M8 x 16 DIN 912 | St.steel A4     |
| 7    | 2    | Washer M12 DIN 125    | St.steel A4     |
| 5    | 1    | Ring 50 kHz           | TC-2010-Rev-00  |
| 4    | 1    | Gasket                | SB-6029-Rev-00  |
| 3    | 1    | PG-Nipple             | TC-2013-Rev-00  |
| 2    | 1    | Transducer Tank ETNST | TB-2002-Rev-01  |
| 1    | 1    | Sensor 50 kHz         |                 |
| ITEM | QTY. | DESCRIPTION           | DWG.NO/MATERIAL |

|                        |               |  |                       |                       |           |
|------------------------|---------------|--|-----------------------|-----------------------|-----------|
| Itemref                | Quantity      | Title/Name, designation, material, dimension etc |                       | Article No./Reference |           |
| Designed by AM         | Checked by VF | Approved by - date                               | File name             | Date 2005/05/02       | Scale     |
| Skipper Electronics AS |               |  | Transducer Tank 50kHz |                       |           |
|                        |               |  | TB-0050-Rev-00        | Edition               | Sheet 1/1 |



\* NOTE: DUE TO SURFACE MACHINING, THE DIAMETER MAY VARY BETWEEN 217 AND 219MM

| 8    | 6    | Screw M8 x 16 DIN 912 | St.steel A4     |
|------|------|-----------------------|-----------------|
| 7    | 2    | Washer M12 DIN 125    | St.steel A4     |
| 5    | 1    | Ring 200 kHz          | TC-2011-Rev-00  |
| 4    | 1    | Gasket                | SB-6029-Rev-00  |
| 3    | 1    | PG-Nipple             | TC-2013-Rev-00  |
| 2    | 1    | Transducer Tank ETNST | TB-2002-Rev-01  |
| 1    | 1    | Sensor 200 kHz        |                 |
| ITEM | QTY. | DESCRIPTION           | DWG.NO/MATERIAL |

| Itemref                | Quantity      | Title/Name, designation, material, dimension etc |           |                        | Article No./Reference |         |
|------------------------|---------------|--|-----------|------------------------|-----------------------|---------|
| Designed by AM         | Checked by VF | Approved by - date                               | File name | Date 2005/05/02        | Scale                 |         |
| Skipper Electronics AS |               |  |           | Transducer Tank 200kHz |                       |         |
|                        |               |  |           | TB-0200-Rev-00         |                       | Edition |