

Annexure-A
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Torque Type Level Transmitters

Make: KEISO Tokyo Japan, Masoneilan USA, Magnetrol or equivalent.

Sr.#	Tag	Item description	Quantity
1	LT-TR300	Measuring Range: 24" (610mm), Chamber top gauge connection: Flanged (RF) 3" # 150 with displacer, without chamber.	01
2	LT-TR202	Measuring Range: 48" (1219mm), Chamber top gauge connection: Flanged (RF) 3" #300, with displacer, without chamber	01
3	LT-TR204	Measuring Range: 32" (813mm), Chamber top gauge connection: Flanged (RF) 3" #300, with displacer, without chamber	01
4	LT-TR206A	Measuring Range: 32" (813mm), Chamber top gauge connection: Flanged (RF) 3" #300, with displacer, without chamber	01
5	202-LT-011	Measuring Range: 14" (355.6mm), Side-Side mounting, Flange size: 2" # 300 (RF) with displacer and chamber	02

Make: Keiso Tokyo Japan, Masoneilan USA, Magnetrol or equivalent.

Equivalent Make / Model can be quoted too.

For item no. 1 - 5 – displacer is required.

For item no. 5 – displacer chamber is also required.

Technical literature for calibration and maintenance in English language must be provided.

Recommended maintenance schedule (Preventive (PM, Predictive (PDM))) by vendor in English language must also be provided.

Torque Tube Level Transmitter

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Tag: LT-TR 300

Qty: 01

Fluid: Sour Water

Specific Gravity: 0.995 (Selectable)

Measuring Range: 610 mm (24")

Transmitter: With LCD Display

Enclosure: EExdIICT6 Intrinsically Safe; FM;

Ingress Protection: IP 67

Mounting: Left Hand (Chamber top gauge)

Signal: 4-20 mA (2-Wire)

Power Supply: 24 VDC

Action: Direct

Torque Tube Material: Stainless Steel SS 316L

Temperature Protection: Standard, HT/LT Extension

Without Displacer Chamber, Chamber Top Gauge Connection Flange (RF) 3" #150

Connection Layout: Side & Side

Level & Auxiliary Equipment: With Displacer

Displacer Material: Stainless Steel SS 316L

Calibration / Trouble Shooting: Hand Held Communication & Local Key Pad

Temperature

Pressure

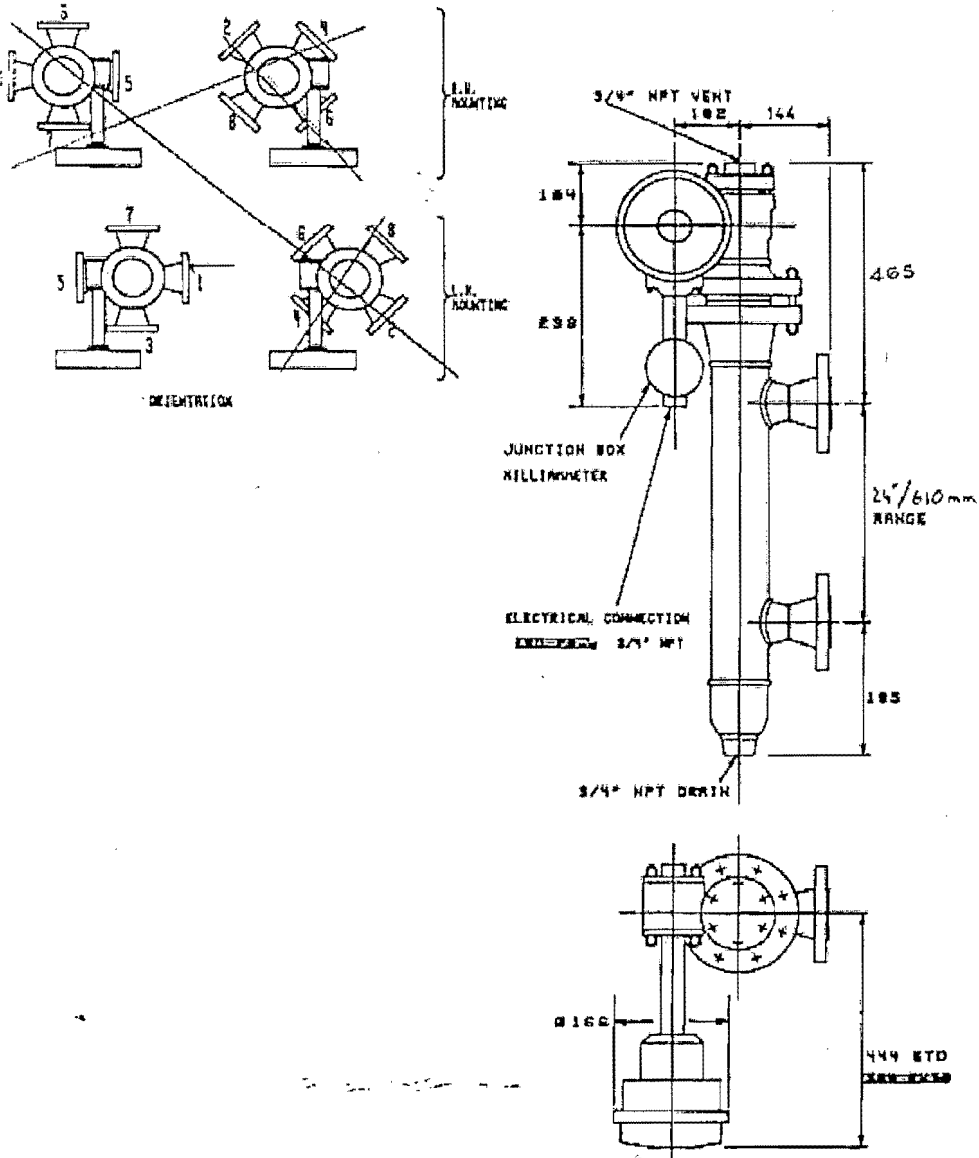
Max	Normal	Max	Normal
100 °C	82 °C	760 mm Hg	386 mm Hg

Note:

- i). Displacer is also required.
- ii). Displacer Chamber is not required.
- iii). Gauge Connection/mounting flange 3" # 150.
- iv). Technical Literature for calibration and maintenance is also required.
- v). Recommended maintenance schedule (Preventive (PM), Predictive (PDM) by vendor in English is required.

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LT-TR30D



FLANGED 1 1/2 CL150RF SCH40/80

TAG Nos. LT-TR-30D	
DRAWN BY	CHECKED BY

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Torque Tube Level Transmitter

Tag: LT-TR 202

Qty: 01

Fluid: Sour Water

Specific Gravity: 0.995 (Selectable)

Measuring Range: 1219 mm (48")

Transmitter: With LCD Display

Enclosure: EExdIICT6 Intrinsically Safe; FM;

Ingress Protection: IP 67

Mounting: Left Hand (Chamber top gauge)

Signal: 4-20 mA (2-Wire)

Power Supply: 24 VDC

Action: Direct

Torque Tube Material: Stainless Steel SS 316L

Temperature Protection: Standard, HT/LT Extension

Without Displacer Chamber, Chamber Top Gauge Connection Flange (RF) 3" #300

Connection Layout: Side & Side

Level & Auxiliary Equipment: With Displacer

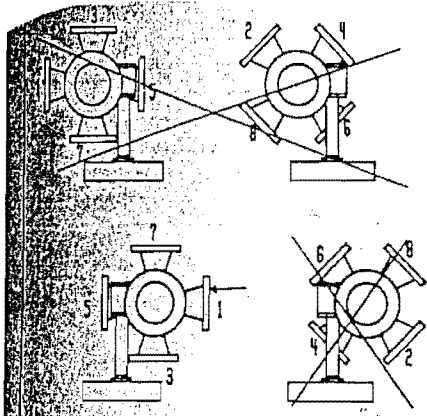
Displacer Material: Stainless Steel SS 316L

Calibration / Trouble Shooting: Hand Held Communication & Local Key Pad

Temperature		Pressure	
Max	Normal	Max	Normal
200 °C	135 °C	25 Bar	20 Bar

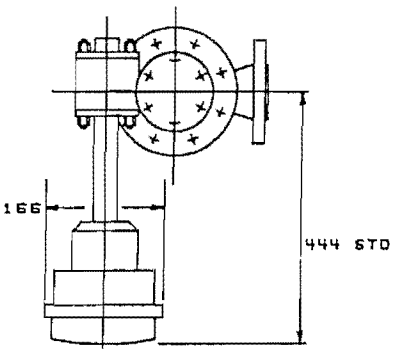
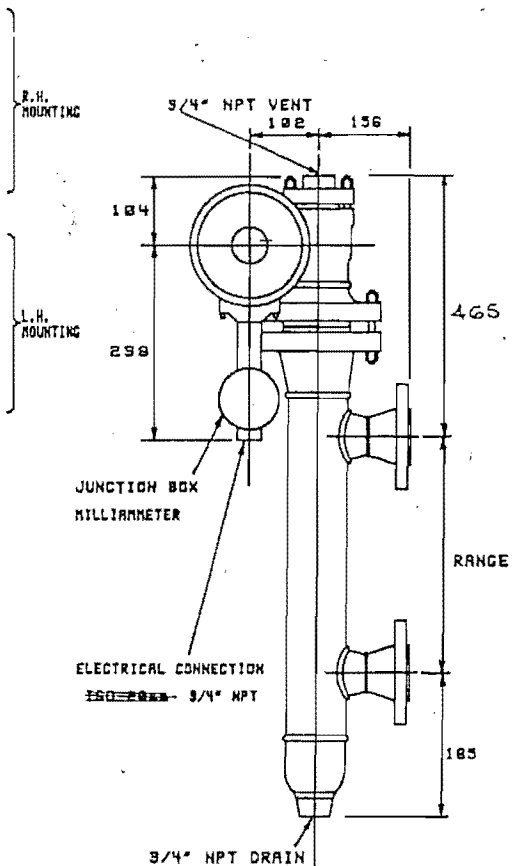
Note:

- i). Displacer is also required.
- ii). Displacer Chamber is not required.
- iii). Gauge Connection/mounting flange 3" # 150.
- iv). Technical Literature for calibration and maintenance is also required.
- v). Recommended maintenance schedule (Preventive (PM), Predictive (PDM) by vendor in English is required.



ORIENTATION

RANGE
141n/956mm
221n/849mm
321n/819mm
481n/1219mm
601n/1524mm
721n/1829mm
841n/2134mm
961n/2438mm
1081n/2743mm
1201n/3048mm



ALL DIMENSIONS IN mm

FLANGED 2" CL300RF SCH 40/80

LT-TR 202	
DRAWN BY	CHECKED BY

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Torque Tube Level Transmitter

Tag: LT-TR 204

Qty: 01

Fluid: Sour Water

Specific Gravity: 0.995 (Selectable)

Measuring Range: 813 mm (32")

Transmitter: With LCD Display

Enclosure: EExdIICT6 Intrinsically Safe; FM;

Ingress Protection: IP 67

Mounting: Left Hand (Chamber top gauge)

Signal: 4-20 mA (2-Wire)

Power Supply: 24 VDC

Action: Direct

Torque Tube Material: Stainless Steel SS 316L

Temperature Protection: Standard, HT/LT Extension

Without Displacer Chamber, Chamber Top Gauge Connection Flange (RF) 3" #300

Connection Layout: Side & Side

Level & Auxiliary Equipment: With Displacer

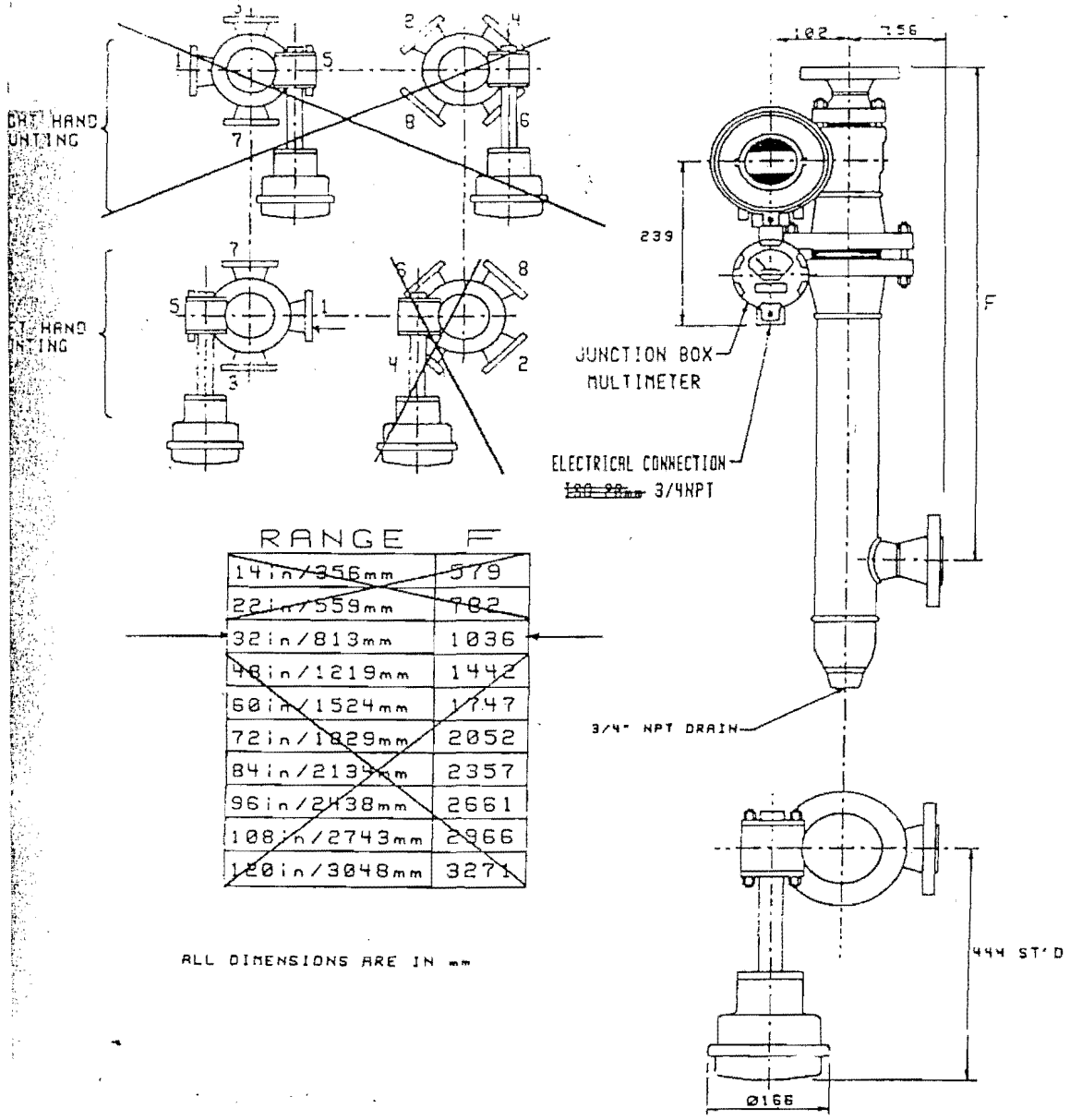
Displacer Material: Stainless Steel SS 316L

Calibration / Trouble Shooting: Hand Held Communication & Local Key Pad

Temperature		Pressure	
Max	Normal	Max	Normal
100 °C	60 °C	28 Bar	20 Bar

Note:

- i). Displacer is also required.
- ii). Displacer Chamber is not required.
- iii). Gauge Connection/mounting flange 3" # 150.
- iv). Technical Literature for calibration and maintenance is also required.
- v). Recommended maintenance schedule (Preventive (PM), Predictive (PDM) by vendor in English is required.



TAG Nos. LT-TR-204	
DRAWN BY	CHECKED BY

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Torque Tube Level Transmitter

Tag: LT-TR 206A

Qty: 01

Fluid: Sour Water

Specific Gravity: 0.995 (Selectable)

Measuring Range: 813 mm (32")

Transmitter: With LCD Display

Enclosure: EExdIICT6 Intrinsically Safe; FM;

Ingress Protection: IP 67

Mounting: Left Hand (Chamber top gauge)

Signal: 4-20 mA (2-Wire)

Power Supply: 24 VDC

Action: Direct

Torque Tube Material: Stainless Steel SS 316L

Temperature Protection: Standard, HT/LT Extension

Without Displacer Chamber, Chamber Top Gauge Connection Flange (RF) 3" #300

Connection Layout: Side & Side

Level & Auxiliary Equipment: With Displacer

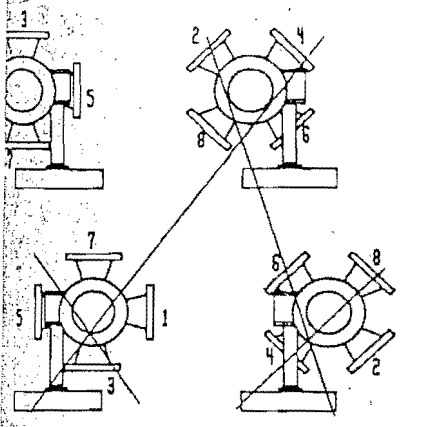
Displacer Material: Stainless Steel SS 316L

Calibration / Trouble Shooting: Hand Held Communication & Local Key Pad

Temperature		Pressure	
Max	Normal	Max	Normal
200 °C	135 °C	28 Bar	20 Bar

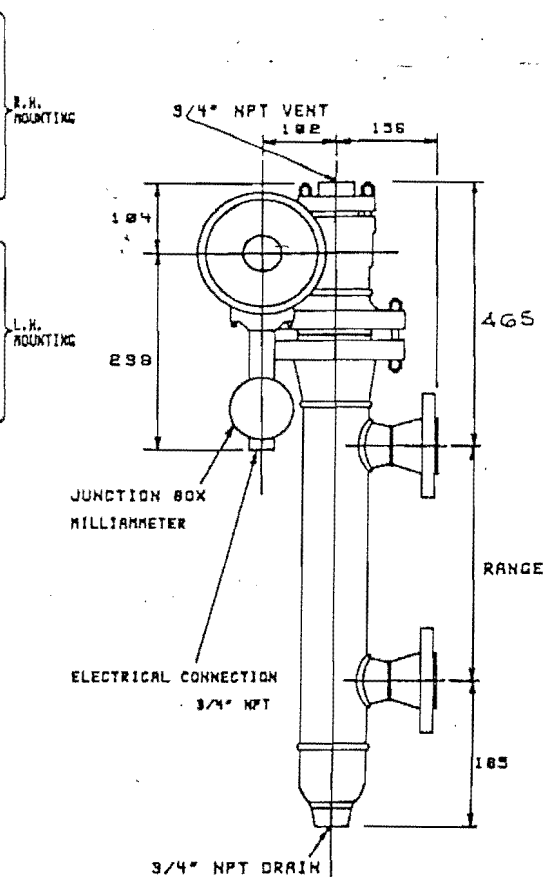
Note:

- i). Displacer is also required.
- ii). Displacer Chamber is not required.
- iii). Gauge Connection/mounting flange 3" # 150.
- iv). Technical Literature for calibration and maintenance is also required.
- v). Recommended maintenance schedule (Preventive (PM), Predictive (PDM) by vendor in English is required.



ORIENTATION

RANGE
14 in / 356 mm
22 in / 559 mm
32 in / 813 mm
48 in / 1219 mm
60 in / 1524 mm
72 in / 1829 mm
84 in / 2134 mm
96 in / 2438 mm
108 in / 2743 mm
120 in / 3048 mm



JUNCTION BOX
MILLIAMMETER

ELECTRICAL CONNECTION
3/4" NPT

3/4" NPT DRAIN

ALL DIMENSIONS IN mm

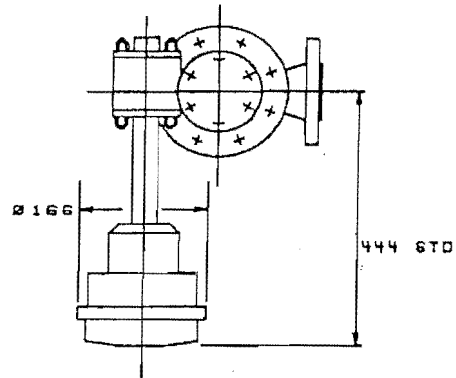


FIG No. LT-TR-206A	
DRAWN BY	CHECKED BY

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Torque Tube Level Transmitter

Tag: 202-LT-011, 203-LT-011

Qty: 01 Each

Fluid: Water

Specific Gravity: 1.00 (Selectable)

Measuring Range: 355.55 mm (14")

Transmitter: With LCD Display

Enclosure: EExdIICT6 Intrinsically Safe; FM;

Ingress Protection: IP 67

Mounting: Left Hand (Chamber top gauge)

Signal: 4-20 mA (2-Wire)

Power Supply: 24 VDC

Electronic Connection: 1/2" NPT

Action: Direct

Chamber and Torque Tube Material: Stainless Steel SS 316L

Temperature Protection: Standard, HT/LT Extension

With Displacer Chamber, Chamber Top Gauge Connection Flange (RF) 2" #300

Connection Layout: Side & Side

Connection Type: Flanged (RF)

Connection Size: DN 50 (2"), Connection Class/PN: ANSI # 300, Facing/Finish: Raised Face

Chamber Material: Stainless Steel SS316L

Level & Auxiliary Equipment: With Displacer

Displacer Material: Stainless Steel SS 316L

Calibration / Trouble Shooting: Hand Held Communication & Local Key Pad

Temperature

Pressure

Max	Normal	Max	Normal
75 °C	50 °C	25 Bar	20 Bar

Note:

- i). Displacer and Displacer Chamber is also required.
- ii). Gauge Connection/mounting flange 3" # 150.
- iii). Technical Literature for calibration and maintenance is also required.
- iv). Recommended maintenance schedule (Preventive (PM), Predictive (PDM) by vendor in English is required.