

Series	Туре	Material	Pipe	Viscosity	Operating Operati		Page
			O.D. x s (mm)		Pressure	Temperature	
	<u>34000E-A</u>	316/316L	33.7*2.0	< 150 cSt	max. 6bar @ 20°C	-40…100°C	2
e Q	<u>34000E-K</u>	"	"	"	"	"	3
Line	23614E-A		53.0 x 1.5	< 600 cSt	max. 6bar @ 20°C	-40100°C	4
	23614E-K	"	"	"	н	"	5
Economy	Pressure Temperature Rating for Economy Line 6						
	PED diagram for 26614E and fluid group 1						
	Preparing indicator						
_	Mounting specification for switches and transmitters no. 20010501						

#### Information to the Economy program

If you do not find a solution for your application concerning pressure, temperature, connections or others, please have a look to our other VLI series, like Smart Line, Standard, Power, Petro or Top of tank (www.weka-ag.ch) or contact your local Weka representative.

Standard delivery time for the Economy program is 5 to 10 working days, starting from receipt of technical and commercial confirmed order.

Delivery conditions according to "General conditions of contract for the supply of plant and machinery" VSM 2016.

Shipbuilding approvals for ABS, BV, DNV, GL, LRS, RINA, RMRoS

can be downloaded under www.weka-ag.ch > support > approvals (type 34000... or 23614...)

Because of the NBR float being used for all Economy units it is not possible to fulfil the requirements of explosion proof equipment (2014/34/EU ATEX).

According the assessment of PED (2014/68/EU) the VLIs are classified to article 4.3, which means no CE marking and no material certificate 3.1 necessary. For type 23614E please consult the diagram 2 on page no. 7 to determine maximum possible length of the unit.

Important note:

The complete economy line can only be ordered with the specifications mentioned in the data sheets. There are NO alterations and NO special executions possible!

Main parameters:

- Loose flanges only
- NBR floats only
- Density 0,6 ... 1,1 (34000E); 0,8 ... 1,3 (23614E)
- Temperature -40°C ... +100°C
- PN6 (6bar@20°C)

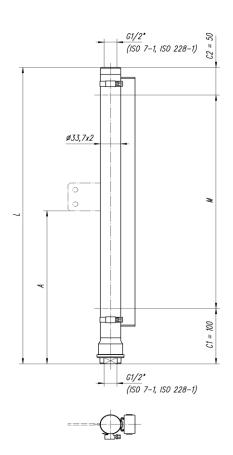


## **Economy Line 6**

**Purchase Order Data:** 



-2-



- all indicated dimensions in [mm] - position of fixation bracket shown at time of delivery (180° opposite of

indication rail)

\*1) Some recommended

liquids for viscosity less

aviation gas

hydraulic oil

kerosene

motor oil naphta

methanol

ethanol

diesel fuel

fuel oil

-

-

\_

-

--

-

-\_

than 150cSt over the specified

regular premium gasoline

water (no drinking water)

operating temperature range:

Company: Purchase order no.: Project:						
Quantity:		Tag no.:				
Operating Conditions						
Fluid: *1) Viscosity of liquid:	max 150cSt	@ operating temp	perature range			
Density:	0.6 1.1g/c		g/cm3:			
Operating pressure:	max. 6bar(g)		bar(g):			
Design pressure:	"	,	bar(g):			
Operating temperature: Design temperature:	-40°C up to r ″	nax. 100°C *2)	°C:			
Design and Materials:	standard executio	n:				
Float chamber:	316/316L					
Float:	NBR foam	0.60 0.70g/cr 0.71 0.85g/cr 0.86 0.95g/cr 0.96 1.10g/cr	m <sup>3</sup> 38578/0.8 m <sup>3</sup> 38578/0.9			
Gaskets:		nd Aramid/NBR on reinforced	80338	Standard		
Closing plug with gasket G1			<b>85628</b> ad:	Standard		
Indication Rail:						
Polycarbonate, IP 65, flaps r	ed/silver, shrink	clip fixation	34837/10	Standard		
Increased fixation for indicat			34837/20			
Heavy fixation for indication	rail (vibrations, s	shock etc.)	20050105/1			
Indication distance "M": M <= 3000mm (L = M + 150	mm)		M = mm:			
Process connections:	000 4)			Chandard		
Female G1/2" (ISO 7-1 / ISO Top cap and bottom plugged				Standard		
Accessories: Fixation bracket no. 26936: (recommended for L > 2000mm)		dimensio	n "A", mm:			
Magnetic switch *3):						
•	ST, 100V/0,5A/1	0VA/10W 3r	n cable Qty:			
	ST, 100V/0,5A/1		ug Qty:			
	ST, 250V/1A/22		n cable Qty:			
type 31160-NN/3 SPE	DT, 250V/1A/60	VA/40W 3r	m cable Qty:			
Transmitter (without shipbuil	ding approval) *:	3):				
	stant output	10mm resolution	n 5m cable			
type 31967-010-10 42	20mA output	10mm resolutior	n 5m cable			
PED (2014/68/EU) assessn	nent:					
Fluid group 1 (dangerous or		•	marking, no materia	,		
Fluid group 2 (all others)	=	article 4.3 (no	marking, no materia	i certificate)		

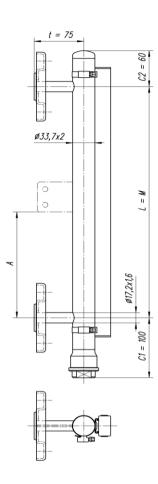
\*2) Notice max. pressure-temperature rating!

Test pressure will be specified according to WEKA specification "Pressure- and Temperature Information" \*3) Notice mounting specification for switches and transmitters no. 20010501

Because of the float there is no

Ex protection certificate available!





- all indicated dimensions in [mm]

- position of fixation bracket shown at time of delivery (180° opposite of and 180° opposite indication rail)

\*1) Some recommended liquids for viscosity less than 150cSt over the specified operating temperature range:

- aviation gas
- diesel fuel -
- fuel oil
- hydraulic oil -
- kerosene
- motor oil -
- naphta
- regular premium gasoline -
- methanol -
- \_ ethanol

water (no drinking water) \_

Because of the float there is no Ex protection certificate available!

## **Economy Line 6**

wahaaa Ordar Data P

Purchase Order Data:							
Company: Purchase order no.:							
Project:		Tan and					
Quantity:		Tag no.:					
<b>Operating Conditions</b>							
Fluid: *1)							
Viscosity of liquid:	max. 150cS <sup>4</sup>	t @ operating	temperature	range			
Density:	cm3		m3:				
Operating pressure:		) @ 20°C *2)	bar				
Design pressure:	"	, e _ ,	bar				
Operating temperature:	-40°C up to	max. 100°C *		°C:			
Design temperature:	"		,	°C:			
Design and Materials:	standard execut	ion:					
Float chamber:	316/316L						
Float:	NBR foam	0.60 0.7	0q/cm <sup>3</sup>	38578/0.6			
		0.71 0.8		38578/0.8			
		0.86 0.9		38578/0.9			
		0.96 1.1	•	41622/1.0			
			0		·		
Gaskets:	fibre compo	und Aramid/N	BR	80338	Standard		
		non reinforced		85628			
Closing plug with gaske	•				Standard		
		25.11.2010 / Ot					
Indication Rail:							
Polycarbonate, IP 65, fl	aps red/silver, shrink	clip fixation		34837/10	Standard		
Increased fixation for in				34837/20			
Heavy fixation for indica	ation rail (vibrations,	shock etc.)	2	0050105/1			
		,					
Indication distance "M	Λ":						
M = L <= 3000mm			M = n	nm:			
				-			
Process connections:	1						
EN / DIN - pressed lap-	ioint flanges PN10 (3	304/304L)		DN	115:		
- connecting dim. acc. t			42/PN10	DN	120:		
- collars, sealing surfac				DN	125:		
ISO / ANSI - loose flang	ges, PN20 / class150	(304/304L)		DN15 / 1	/2":		
- connecting dim. acc. t	o ISO-DIS7005-1.2 /	ANSI/ASME	B16.5	DN 20/3	3/4":		
- collars, raised sealing	surface SF (smooth	finish), 316L		DN 25 / 1	1":		
Accessories:							
Fixation bracket no. 269		dim	ension "A", n	nm:			
(recommended for L > 200	(Umm)						
Magnetic envited *21							
Magnetic switch *3):	SPST, 100V/0,5A/	10\/0/40\4/	2m cohl-		1		
	JEJI. 1007/0.3A/		3m cable	Qty:			
	, ,	10\///10\//	nlua	Oth //			
type 37557/3 type 37589 type 31130 NN/2	SPST, 100V/0,5A/		plug 2m opblo	Qty:			
type 37589 type 31130-NN/3	SPST, 100V/0,5A/ SPST, 250V/1A/22	0VA/160W	3m cable	Qty:			
type 37589	SPST, 100V/0,5A/	0VA/160W		· · ·			
type 37589 type 31130-NN/3 type 31160-NN/3	SPST, 100V/0,5A/ SPST, 250V/1A/22 SPDT, 250V/1A/60	0VA/160W VA/40W	3m cable	Qty:			
type 37589 type 31130-NN/3 type 31160-NN/3 Transmitter (without shi	SPST, 100V/0,5A/ SPST, 250V/1A/22 SPDT, 250V/1A/60 ipbuilding approval) *	20VA/160W 0VA/40W 73):	3m cable 3m cable	Qty: Qty:			
type 37589 type 31130-NN/3 type 31160-NN/3 Transmitter (without shi type 29710-010-10	SPST, 100V/0,5A/ SPST, 250V/1A/22 SPDT, 250V/1A/60 ipbuilding approval) * resistant output	0VA/160W VA/40W 3): 10mm reso	3m cable 3m cable lution 5n	Qty: Qty:			
type 37589 type 31130-NN/3 type 31160-NN/3 Transmitter (without shi type 29710-010-10	SPST, 100V/0,5A/ SPST, 250V/1A/22 SPDT, 250V/1A/60 ipbuilding approval) *	20VA/160W 0VA/40W 73):	3m cable 3m cable lution 5n	Qty: Qty:			
type 37589 type 31130-NN/3 type 31160-NN/3 Transmitter (without shi type 29710-010-10	SPST, 100V/0,5A/ SPST, 250V/1A/22 SPDT, 250V/1A/60 ipbuilding approval) * resistant output	0VA/160W VA/40W 3): 10mm reso	3m cable 3m cable lution 5n	Qty: Qty:			
type 37589 type 31130-NN/3 type 31160-NN/3 Transmitter (without shi type 29710-010-10	SPST, 100V/0,5A/ SPST, 250V/1A/22 SPDT, 250V/1A/60 ipbuilding approval) * resistant output	0VA/160W VA/40W 3): 10mm reso	3m cable 3m cable lution 5n	Qty: Qty:			
type 37589 type 31130-NN/3 type 31160-NN/3 Transmitter (without shi type 29710-010-10	SPST, 100V/0,5A/ SPST, 250V/1A/22 SPDT, 250V/1A/60 ipbuilding approval) * resistant output	0VA/160W VA/40W 3): 10mm reso	3m cable 3m cable lution 5n	Qty: Qty:			
type 37589 type 31130-NN/3 type 31160-NN/3 Transmitter (without shi type 29710-010-10	SPST, 100V/0,5A/ SPST, 250V/1A/22 SPDT, 250V/1A/60 ipbuilding approval) * resistant output	0VA/160W VA/40W 3): 10mm reso	3m cable 3m cable lution 5n	Qty: Qty:			
type 37589 type 31130-NN/3 type 31160-NN/3 Transmitter (without shi type 29710-010-10 type 31967-010-10	SPST, 100V/0,5A/ SPST, 250V/1A/22 SPDT, 250V/1A/60 ipbuilding approval) * resistant output 420mA output	0VA/160W VA/40W 3): 10mm reso	3m cable 3m cable lution 5n	Qty: Qty:			
type 37589 type 31130-NN/3 type 31160-NN/3 Transmitter (without shi type 29710-010-10 type 31967-010-10 PED (2014/68/EU) ass	SPST, 100V/0,5A/ SPST, 250V/1A/22 SPDT, 250V/1A/60 ipbuilding approval) * resistant output 420mA output	0VA/160W 0VA/40W 3): 10mm reso 10mm reso	3m cable 3m cable lution 5n lution 5n	Qty: Qty:			
type 37589 type 31130-NN/3 type 31160-NN/3 Transmitter (without shi type 29710-010-10 type 31967-010-10 PED (2014/68/EU) ass Fluid group 1 (dangeror	SPST, 100V/0,5A/ SPST, 250V/1A/22 SPDT, 250V/1A/60 ipbuilding approval) * resistant output 420mA output	0VA/160W 0VA/40W 3): 10mm reso 10mm reso	3m cable 3m cable lution 5n lution 5n (no marking	Qty: Qty: n cable n cable g, no material			
type 37589 type 31130-NN/3 type 31160-NN/3 Transmitter (without shi type 29710-010-10 type 31967-010-10 PED (2014/68/EU) ass Fluid group 1 (dangeror	SPST, 100V/0,5A/ SPST, 250V/1A/22 SPDT, 250V/1A/60 ipbuilding approval) * resistant output 420mA output	0VA/160W 0VA/40W 3): 10mm reso 10mm reso	3m cable 3m cable lution 5n lution 5n (no marking	Qty: Qty:			
type 37589 type 31130-NN/3 type 31160-NN/3 Transmitter (without shi type 29710-010-10 type 31967-010-10 PED (2014/68/EU) ass	SPST, 100V/0,5A/ SPST, 250V/1A/22 SPDT, 250V/1A/60 ipbuilding approval) * resistant output 420mA output essment: us or unknown) = s) =	0VA/160W 0VA/40W 3): 10mm reso 10mm reso	3m cable 3m cable lution 5n lution 5n (no marking	Qty: Qty: n cable n cable g, no material			

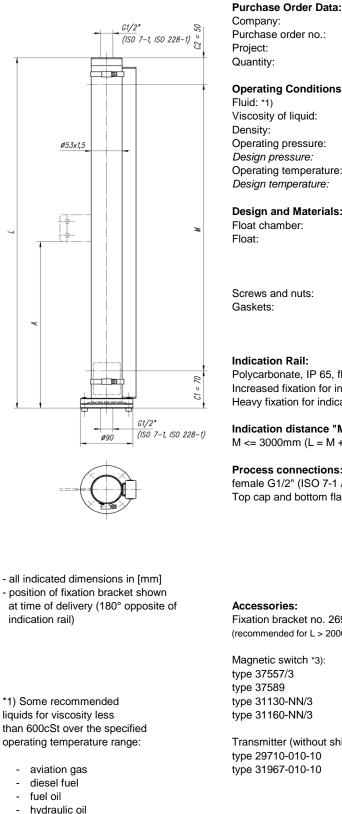
\*3) Notice mounting specification for switches and transmitters no. 20010501

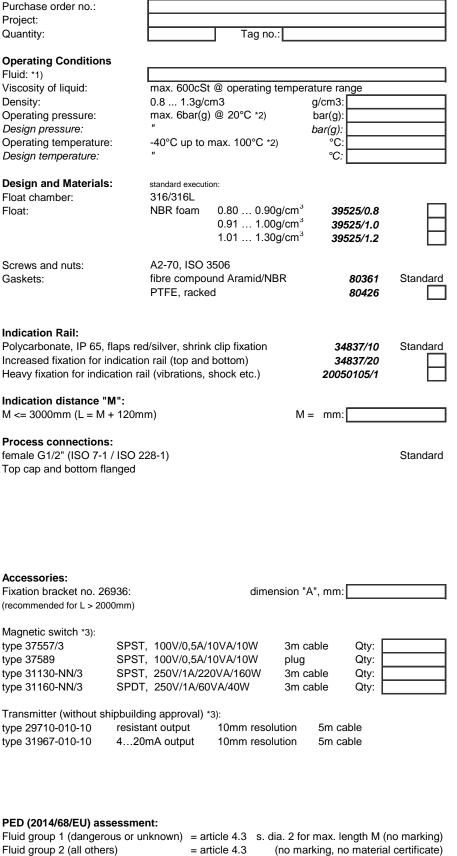
## Type: 34000E-K



## **Economy Line 6**

|--|





\*2) Notice max. pressure-temperature rating!

Test pressure will be specified according to WEKA specification "Pressure- and Temperature Information" \*3) Notice mounting specification for switches and transmitters no. 20010501

DS\_Economy\_E\_2018\_01\_22 Subject to change without notice. revised 22.08.2017/Fu

Because of the float there is no

Ex protection certificate available!

kerosene motor oil naphta

methanol

ethanol

regular premium gasoline

water (no drinking water)



# t = 75C2 = 65ø53x1,5 W = 1 ø21,3x2 2 C1 = ø90

- all indicated dimensions in [mm]

- position of fixation bracket shown at time of delivery (180° opposite of and 180° opposite indication rail)

\*1) Some recommended liquids for viscosity less than 600cSt over the specified operating temperature range:

- aviation gas
- diesel fuel \_
- fuel oil
- hydraulic oil -
- kerosene -
- motor oil
- naphta \_
- regular premium gasoline
- methanol \_
- ethanol
- water (no drinking water) \_

Because of the float there is no Ex protection certificate available!

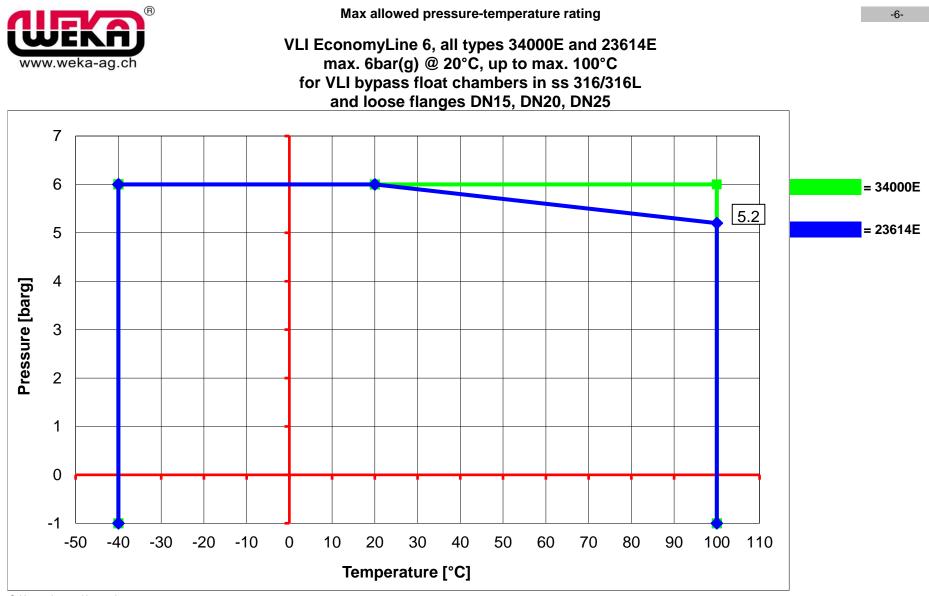
## **Economy Line 6**

P

Purchase Order Data:							
Company: Purchase order no.:							
Project:							
Quantity:		Tag no.:					
Operating Conditions							
Fluid: *1)							
Viscosity of liquid:		@ operating			1		
Density:	0.8 1.3g/c		g/cm				
Operating pressure:	max. 6bar(g) "	) @ 20°C °2)	bar(				
Design pressure: Operating temperature:	-40°C up to	max. 100°C *2	bar(g	<sup>9):</sup> C:			
Design temperature:	-40 C up to	max. 100 C 2	,	C:			
Design temperature.				0.			
Design and Materials:	standard execut	on:					
Float chamber:	316/316L						
Float:	NBR foam	NBR foam 0.80 0.90g/cm <sup>3</sup>		39525/0.8			
		0.91 1.00	)g/cm <sup>3</sup>	39525/1.0			
		1.01 1.30	)g/cm <sup>3</sup>	39525/1.2			
Screws and nuts:	A2-70, ISO 3						
Gaskets:		und Aramid/N	3R	80361	Standard		
	PTFE, racke	a		80426			
Indication Rail:							
Polycarbonate, IP 65, flaps re	ed/silver, shrink	clip fixation		34837/10	Standard		
Increased fixation for indicati				34837/20			
Heavy fixation for indication	• •	,	20	0050105/1			
·							
Indication distance "M":							
M = L <= 3000mm			M = m	m:			
Process connections: EN / DIN - pressed lap-joint f - connecting dim. acc. to EN - collars, sealing surface EN	1092-1/02 A/PI	N 10 / DIN 264		DN	115: 120: 125:		
ISO / ANSI - loose flanges, F	N20 / class150	(304/3041)		DN15/1	/2"		
- connecting dim. acc. to ISC		. ,	316.5	DN 20/3			
- collars, raised sealing surfa				DN 25 / 1	":		
-							
Accessories:		al:					
Fixation bracket no. 26936: (recommended for L > 2000mm)		aime	ension "A", m	m:			
Magnetic switch *3):							
-	T, 100V/0,5A/	I0VA/10W	3m cable	Qty:			
	T, 100V/0,5A/		plug	Qty:			
type 31130-NN/3 SPS	T, 250V/1A/22	0VA/160W	3m cable	Qty:			
type 31160-NN/3 SPE	0T, 250V/1A/60	VA/40W	3m cable	Qty:			
		- )					
<b>—</b> •,, , , , , , , , , , , , , , , , , ,	P	211					
Transmitter (without shipbuil							
type 29710-010-10 resis	stant output	10mm resol		cable			
type 29710-010-10 resis				cable cable	$\square$		
type 29710-010-10 resis type 31967-010-10 42 PED (2014/68/EU) assessm	stant output 20mA output 20mA soutput	10mm resol 10mm resol	ution 5m	cable			
type 29710-010-10 resis type 31967-010-10 42 PED (2014/68/EU) assessm Fluid group 1 (dangerous or	stant output 20mA	10mm resol 10mm resol rticle 4.3 s. c	ution 5m dia. 2 for max	cable c. length M (r	•		
type 29710-010-10 resis type 31967-010-10 42 PED (2014/68/EU) assessm	stant output 20mA	10mm resol 10mm resol	ution 5m dia. 2 for max	cable	•		
type 29710-010-10 resis type 31967-010-10 42 PED (2014/68/EU) assessm Fluid group 1 (dangerous or	stant output 20mA output ent: unknown) = a = a	10mm resol 10mm resol rticle 4.3 s. c	ution 5m dia. 2 for max	cable c. length M (r	•		

DS\_Economy\_E\_2018\_01\_22 Subject to change without notice. revised 22.08.2017/Fu

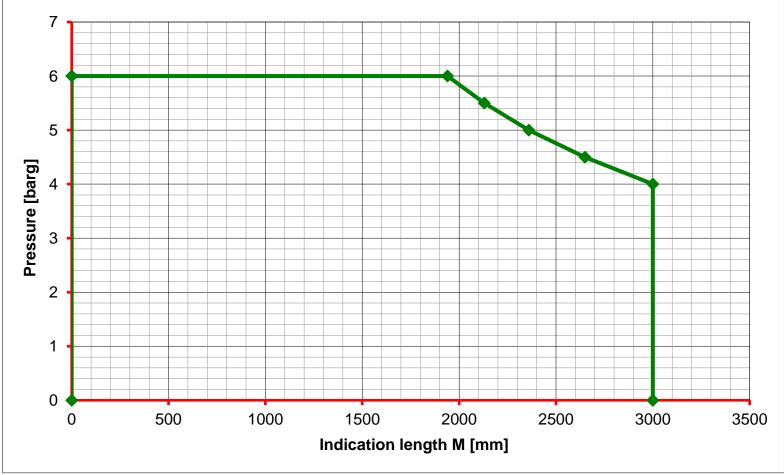
## Type: 23614E-K



Subject to change without notice.



## PED (2014/68/EU) conformity to article 4.3 for VLI type 23614E depends on fluid group 1, indication length M and pressure PS



Subject to change without notice.



## Economy Line 6

## Preparing for installation



2. Open the cardboard box both ends and unpack the float.

Because there is no possibility to fix the float inside the float chamber the float is delivered in a cardboard box attached to the side of the Visual Level Indicator (VLI). Before setting to work you should insert the float into the float chamber and make sure the unit is working satisfactorly.

For the float installation you need two tools:

- a) a side cutter or something similar
- b) for type 34000E: a open-end wrench size 27mm for type 23614E: a hexagon allen-type wrench 5mm
  - 1. Cut the cable tie and unfix the cardboard box with the float.



- - Open the float chamber of the VLI at the lower end (the type label and the label beside the indication rail shows the upright position),
    - for type 34000E by unscrewing the plug.
    - for type 23614E by unscrewing the 4 hexagon screws and removing the service flange.
- - 4. Insert the float into the float chamber with the "TOP"- marking first.
  - 5. Close the float chamber again. Take care of the gaskets and the sealing surfaces. Tighten torque of 34000E G1" plug
    for Aramid/NBR- gaskets :
    for PTFE- gaskets :
    for Aramid/NBR- gaskets :
    0.73 ... 3.06Nm
    for PTFE- gaskets :
    2.62 ... 3.06Nm

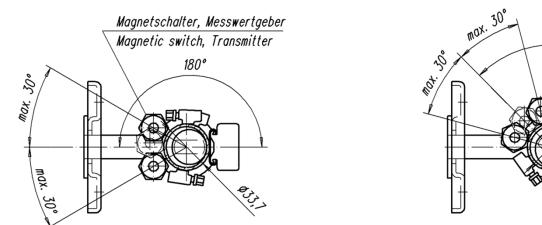
After the first filling the float will turn into the right direction to activate the indication rail.



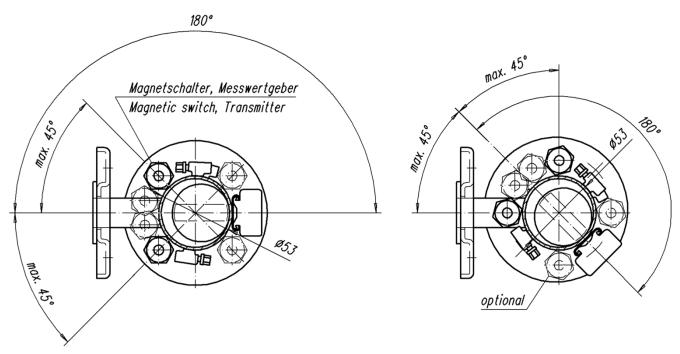


## Mounting specification for switches and transmitters all types

#### 34000E



23614E



1800

\$33,1