



Visual Level Indicators (VLI) Economy Line 6

Series	Туре	Material	Pipe	Viscosity	Operating	Operating	Page
			O.D. x s (mm)		Pressure	Temperature	
Economy Line 6	34000E-A	316/316L	33.7*2.0	< 150 cSt	max. 6bar @ 20°C	-40100°C	2
	34000E-K	- "	"	"	"	"	3
	23614E-A	316/316L	53.0 x 1.5	< 600 cSt	max. 6bar @ 20°C	-40100°C	4
	23614E-K	- "	"	"	"	II .	5
	Pressure Temperature Rating for Economy Line 6						
ŭ	PED diagram for 26614E and fluid group 1						
й	Preparing indicator						8
_	Mounting specification for switches and transmitters no. 20010501						9

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)







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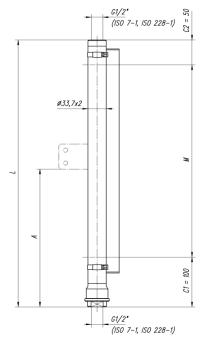
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Type: 34000E-A

Economy Line 6



Purchase Order Data:

Company: Purchase order no.: Project: Quantity:

Tag no.:

Operating Conditions

Fluid: *1) Viscosity of liquid: max. 150cSt @ operating temperature range Density: 0.6 ... 1.1g/cm3 g/cm3: Operating pressure: max. 6bar(g) @ 20°C *2) bar(g): Design pressure: bar(g): Operating temperature: -40°C up to max. 100°C *2) C Design temperature: °C:

Design and Materials: standard execution:

Float chamber: 316/316L

NBR foam 0.60 ... 0.70g/cm³ Float: 38578/0.6 0.71 ... 0.85g/cm3 38578/0.8

0.86 ... 0.95g/cm³ 38578/0.9 0.96 ... 1.10g/cm3 41622/1.0

fibre compound Aramid/NBR Gaskets: 80338 Standard pure PTFE non reinforced 85628

Closing plug with gasket G1" ISO 228-1, with connecting thread: Standard

Indication Rail:

Polycarbonate, IP 65, flaps red/silver, shrink clip fixation 34837/10 Standard Increased fixation for indication rail (top and bottom) 34837/20 Heavy fixation for indication rail (vibrations, shock etc.) 20050105/1

Indication distance "M":

M <= 3000mm (L = M + 150mm) M = mm:

Process connections:

Female G1/2" (ISO 7-1 / ISO 228-1) Standard Top cap and bottom plugged

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

dimension "A", mm: Fixation bracket no. 26936: (recommended for L > 2000mm)

Magnetic switch *3):

type 37557/3 SPST, 100V/0,5A/10VA/10W 3m cable Qty: type 37589 SPST, 100V/0,5A/10VA/10W Qty: plug type 31130-NN/3 SPST, 250V/1A/220VA/160W 3m cable Qty: type 31160-NN/3 SPDT, 250V/1A/60VA/40W 3m cable Qty:

Transmitter (without shipbuilding approval) *3):

type 29710-010-10 resistant output 10mm resolution 5m cable type 31967-010-10 4...20mA output 10mm resolution 5m cable

- aviation gas

*1) Some recommended

than 150cSt over the specified

operating temperature range:

liquids for viscosity less

- 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!

PED (2014/68/EU) assessment:

Fluid group 1 (dangerous or unknown) = article 4.3 (no marking, no material certificate) Fluid group 2 (all others) (no marking, no material certificate) = article 4.3

*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

Registered Address

ABLE Instruments & Controls Ltd Cutbush Park, Danehill, Lower Earley, Reading, Berkshire, RG6 4UT. UK.

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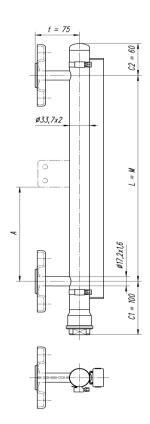






Type: 34000E-K

Economy Line 6



- 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!

Purchase Order Data:

Company: Purchase order no.: Project: Quantity: Tag no.:

Operating Conditions

Viscosity of liquid: max. 150cSt @ operating temperature range Density: 0.6 ... 1.1g/cm3 g/cm3: max. 6bar(g) @ 20°C *2) Operating pressure: bar(g) bar(g): Design pressure: Operating temperature: -40°C up to max. 100°C *2) °C. Design temperature:

Design and Materials: standard execution:

316/316L

Float chamber: 0.60 ... 0.70g/cm3 Float: NBR foam 38578/0.6 0.71 ... 0.85g/cm³ 38578/0.8

0.86 ... 0.95g/cm³ 38578/0.9 0.96 ... 1.10g/cm3 41622/1.0

fibre compound Aramid/NBR 80338 Gaskets: Standard pure PTFE non reinforced 85628

Closing plug with gasket G1" ISO 228-1

revised 25.11.2010 / Ot

34837/10 Standard

Standard

Polycarbonate, IP 65, flaps red/silver, shrink clip fixation Increased fixation for indication rail (top and bottom) 34837/20 Heavy fixation for indication rail (vibrations, shock etc.) 20050105/1

Indication distance "M":

Indication Rail:

M = L <= 3000mm M = mm:

Process connections:

EN / DIN - pressed lap-joint flanges PN10 (304/304L) DN15: - connecting dim. acc. to EN 1092-1/02 A/PN 10 / DIN 2642/PN10 DN20: - collars, sealing surface EN 1092-1/32 B1 / DIN 2526 form C, 316L DN25: ISO / ANSI - loose flanges, PN20 / class150 (304/304L) DN15 / 1/2": - connecting dim. acc. to ISO-DIS7005-1.2 / ANSI/ASME B16.5 DN 20 / 3/4": - collars, raised sealing surface SF (smooth finish), 316L DN 25 / 1":

Accessories:

dimension "A", mm: Fixation bracket no. 26936: (recommended for L > 2000mm)

Magnetic switch *3):

type 37557/3 SPST, 100V/0,5A/10VA/10W 3m cable Qty: type 37589 SPST, 100V/0,5A/10VA/10W Qty: plug type 31130-NN/3 SPST, 250V/1A/220VA/160W 3m cable Qty: type 31160-NN/3 SPDT, 250V/1A/60VA/40W Qty: 3m cable

Transmitter (without shipbuilding approval) *3):

10mm resolution 5m cable type 29710-010-10 resistant output type 31967-010-10 4...20mA output 10mm resolution 5m cable

PED (2014/68/EU) assessment:

Fluid group 1 (dangerous or unknown) = article 4.3 (no marking, no material certificate) Fluid group 2 (all others) = article 4.3 (no marking, no material certificate)

Test pressure will be specified according to WEKA specification "Pressure- and Temperature Information"

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

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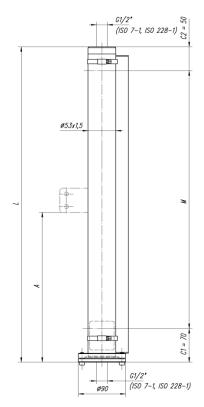
^{*2)} Notice max. pressure-temperature rating!





Type: 23614E-A

Economy Line 6



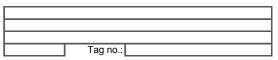


- all indicated dimensions in [mm]
- position of fixation bracket shown at time of delivery (180° opposite of indication rail)
- *1) Some recommended liquids for viscosity less than 600cSt over the specified operating temperature range:
 - aviation gas
 - diesel fuel
 - fuel oil
 - hydraulic oil
 - kerosene
 - motor oil
 - naphta
 - regular premium gasoline
 - methanol
 - ethanol
- water (no drinking water)

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

Purchase Order Data:

Company: Purchase order no.: Project: Quantity:



Operating Conditions

Fluid: *1) Viscosity of liquid: max. 600cSt @ operating temperature range Density: 0.8 ... 1.3g/cm3 g/cm3: Operating pressure: max. 6bar(g) @ 20°C *2) bar(g): Design pressure: bar(g): -40°C up to max. 100°C *2) Operating temperature: C Design temperature: °C:

Design and Materials: standard execution:

Float chamber: 316/316L Float:

NBR foam 0.80 ... 0.90g/cm³ 39525/0.8 0.91 ... 1.00g/cm3 39525/1.0 1.01 ... 1.30g/cm³ 39525/1.2

Screws and nuts: A2-70, ISO 3506

fibre compound Aramid/NBR 80361 Standard Gaskets: PTFE, racked 80426

Indication Rail:

Polycarbonate, IP 65, flaps red/silver, shrink clip fixation 34837/10 Standard Increased fixation for indication rail (top and bottom) 34837/20 Heavy fixation for indication rail (vibrations, shock etc.) 20050105/1

Indication distance "M":

M <= 3000mm (L = M + 120mm) M = mm:

Process connections:

female G1/2" (ISO 7-1 / ISO 228-1) Top cap and bottom flanged

Standard

Accessories: Fixation bracket no. 26936: dimension "A", mm: (recommended for L > 2000mm)

Magnetic switch *3):

SPST, 100V/0,5A/10VA/10W type 37557/3 3m cable Qty: type 37589 SPST, 100V/0,5A/10VA/10W Qty: plug type 31130-NN/3 SPST, 250V/1A/220VA/160W 3m cable Qty: type 31160-NN/3 SPDT, 250V/1A/60VA/40W 3m cable Qty:

Transmitter (without shipbuilding approval) *3):

type 29710-010-10 resistant output 10mm resolution 5m cable type 31967-010-10 4...20mA output 10mm resolution 5m cable

PED (2014/68/EU) assessment:

Fluid group 1 (dangerous or unknown) = article 4.3 s. dia. 2 for max. length M (no marking) Fluid group 2 (all others) = article 4.3 (no marking, no material 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

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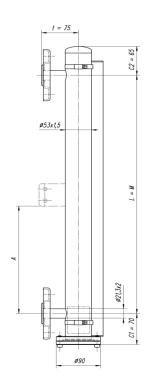




Type: 23614E-K

Standard

Economy Line 6





- 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!

3

Company: Purchase order no.: Project: Quantity:

Tag no.:	

Operating Conditions

Fluid: *1) Viscosity of liquid: Density: Operating pressure:

Design pressure:

Operating temperature:

Design temperature:

max. 600cSt @ operating temperature range 0.8 ... 1.3g/cm3 g/cm3: max. 6bar(g) @ 20°C *2) bar(g): bar(g): -40°C up to max. 100°C *2) °C:

Design and Materials: standard execution:

Float chamber: 316/316L

0.80 ... 0.90g/cm3 Float: NBR foam 39525/0.8 0.91 ... 1.00g/cm3 39525/1.0

1.01 ... 1.30g/cm³ 39525/1.2

A2-70, ISO 3506 Screws and nuts:

fibre compound Aramid/NBR 80361 Standard Gaskets: PTFE, racked 80426

Indication Rail:

Polycarbonate, IP 65, flaps red/silver, shrink clip fixation 34837/10 Increased fixation for indication rail (top and bottom) 34837/20

Heavy fixation for indication rail (vibrations, shock etc.) 20050105/1

Indication distance "M":

M = L <= 3000mm M = mm:

Process connections:

EN / DIN - pressed lap-joint flanges PN10 (304/304L) DN15: - connecting dim. acc. to EN 1092-1/02 A/PN 10 / DIN 2642/PN10 DN20: - collars, sealing surface EN 1092-1/32 B1 / DIN 2526 form C, 316L DN25:

ISO / ANSI - loose flanges, PN20 / class150 (304/304L) DN15 / 1/2": - connecting dim. acc. to ISO-DIS7005-1.2 / ANSI/ASME B16.5 DN 20 / 3/4": - collars, raised sealing surface SF (smooth finish), 316L DN 25 / 1":

Accessories:

dimension "A", mm: Fixation bracket no. 26936: (recommended for L > 2000mm)

Magnetic switch *3):

type 37557/3 SPST, 100V/0,5A/10VA/10W 3m cable Qty: type 37589 SPST, 100V/0,5A/10VA/10W Qty: plug type 31130-NN/3 SPST, 250V/1A/220VA/160W 3m cable Qty: type 31160-NN/3 SPDT, 250V/1A/60VA/40W 3m cable Qty:

Transmitter (without shipbuilding approval) *3):

10mm resolution 5m cable type 29710-010-10 resistant output type 31967-010-10 4...20mA output 10mm resolution 5m cable

PED (2014/68/EU) assessment:

Fluid group 1 (dangerous or unknown) = article 4.3 s. dia. 2 for max. length M (no marking) Fluid group 2 (all others) = article 4.3 (no marking, no material certificate)

Test pressure will be specified according to WEKA specification "Pressure- and Temperature Information"

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

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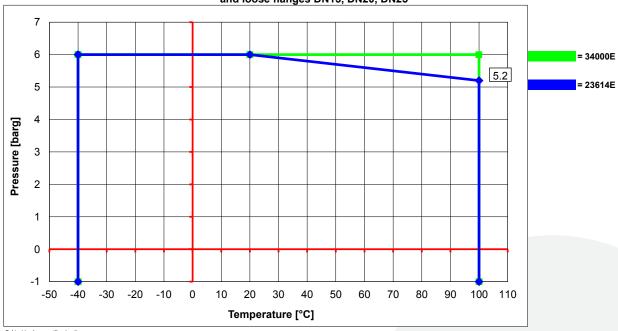
^{*2)} Notice max. pressure-temperature rating!





Max allowed pressure-temperature rating

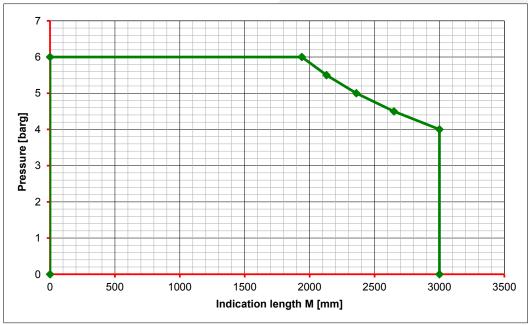
VLI EconomyLine 6, all types 34000E and 23614E max. 6bar(g) @ 20°C, up to max. 100°C for VLI bypass float chambers in ss 316/316L and loose flanges DN15, DN20, DN25



Subject to change without notice

Max allowed pressure-volume rating

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
 - 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.
- 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:

Tighten torque of 23614E lower cover

- 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.







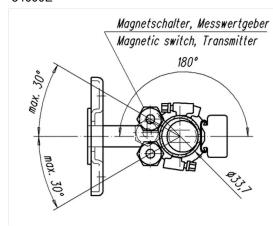


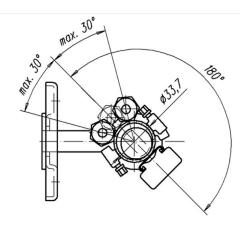




Mounting specification for switches and transmitters all types

34000E





23614E

