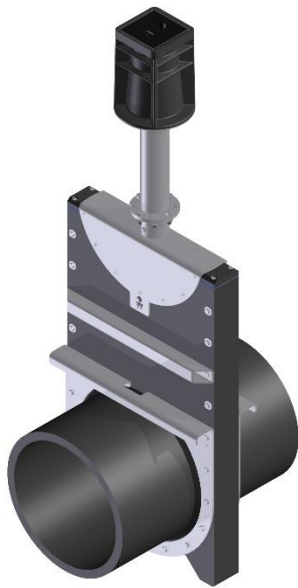


Penstocks

KLSA – inline penstocks



*30 years
of experience in
watercontrol
engineering*

Summary penstocks

Penstocks can be known by many names: sluice gates, sluice valves, gate valves. Its function is the same: manage water flows in pipes, mainly used in sewage treatment and effluent pumping. KWT's wall mounted penstocks are self-greasing, maintenance free and fabricated from prime (marine) quality stain- less steel sheets, grade 316L, often supported by high density polyethylene (HDPE). This is much less prone to corrosion than low carbon steel. Where needed we use either grade 304 steel or duplex. KWT have over 25 years of experience in using HDPE, which is now recognised as the leading "low cost" alternative in the mid to low water pressure range. KWT's spindle driven penstocks have an exclusive pitch of 6 mm per turn. EPDM seal is used as standard.

KHA - is a hand slide for simple applications;

KHSA - uses a spindle.

KSA-MD - is a mid-range 5 mwc penstock; up to Ø1.000 is supplied from stock. Rising spindles with PC tubes, and off-seating sealing, are avail- able on request.


KSA-RQ - is a 316L mid range (< 7 mwc) penstock with a square opening and flush invert. Also available in rising spindle.

KSA-HD - is a unique and patented 3° angular design in 316L with outstanding sealing and accurate adjustment features. It is applied in the extreme pressure range (8-25 mwc) like pump stations and hydropower dams. KSA-HD is engineered for bespoke use.

KLSA – This range of penstock is for inline use, and holds up to 10 mwc of pressure. With the easy accessible spindle you can protect your assets without a well.

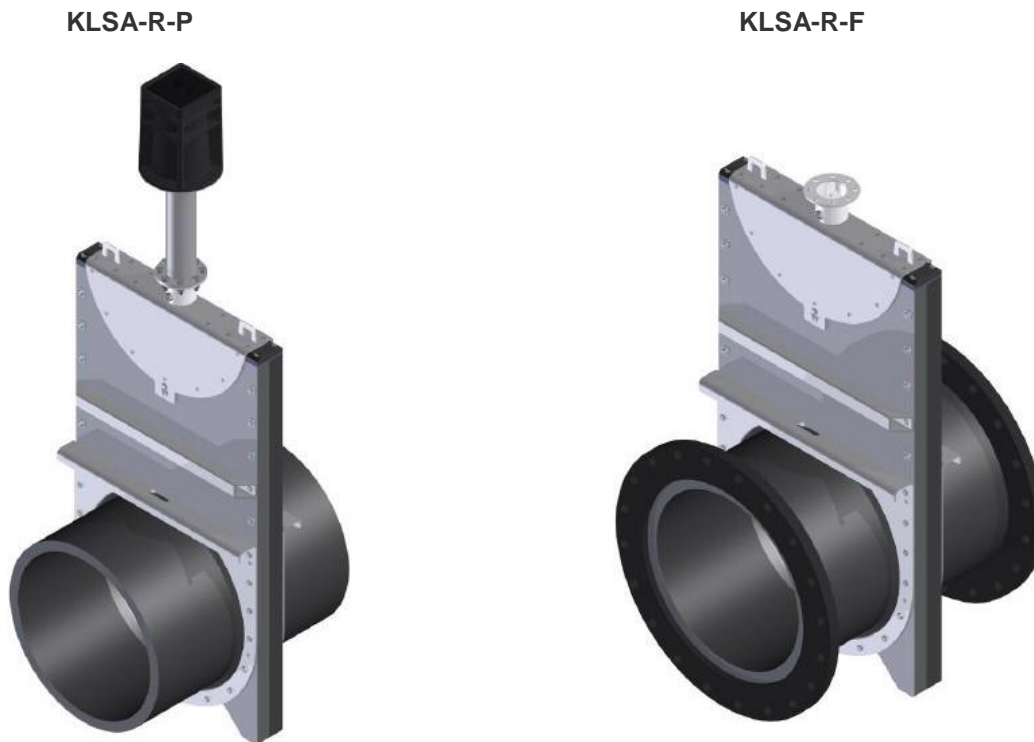
All wall mounted manually operated penstocks (exc. KSA-RQ) have a unique, embedded, half moon operating point to reduce risk of vandalism.

Table of content

	Group code	Description	Product code
	272	KLSA- inline penstocks HDPE/AISI	KLSA-R-P KLSA-R-F

The **KLSA** inline penstock is on/off seated to be used in a pipeline system. The operating pressure ranges between 5 mwc and 10 mwc. The KLSA is designed for both manual or electrical operation. This penstock is suitable for installation in aggressive media thanks to the material used, both above ground or in-ground. Its spindle block is made of bronze thus providing additional operational security and long life.

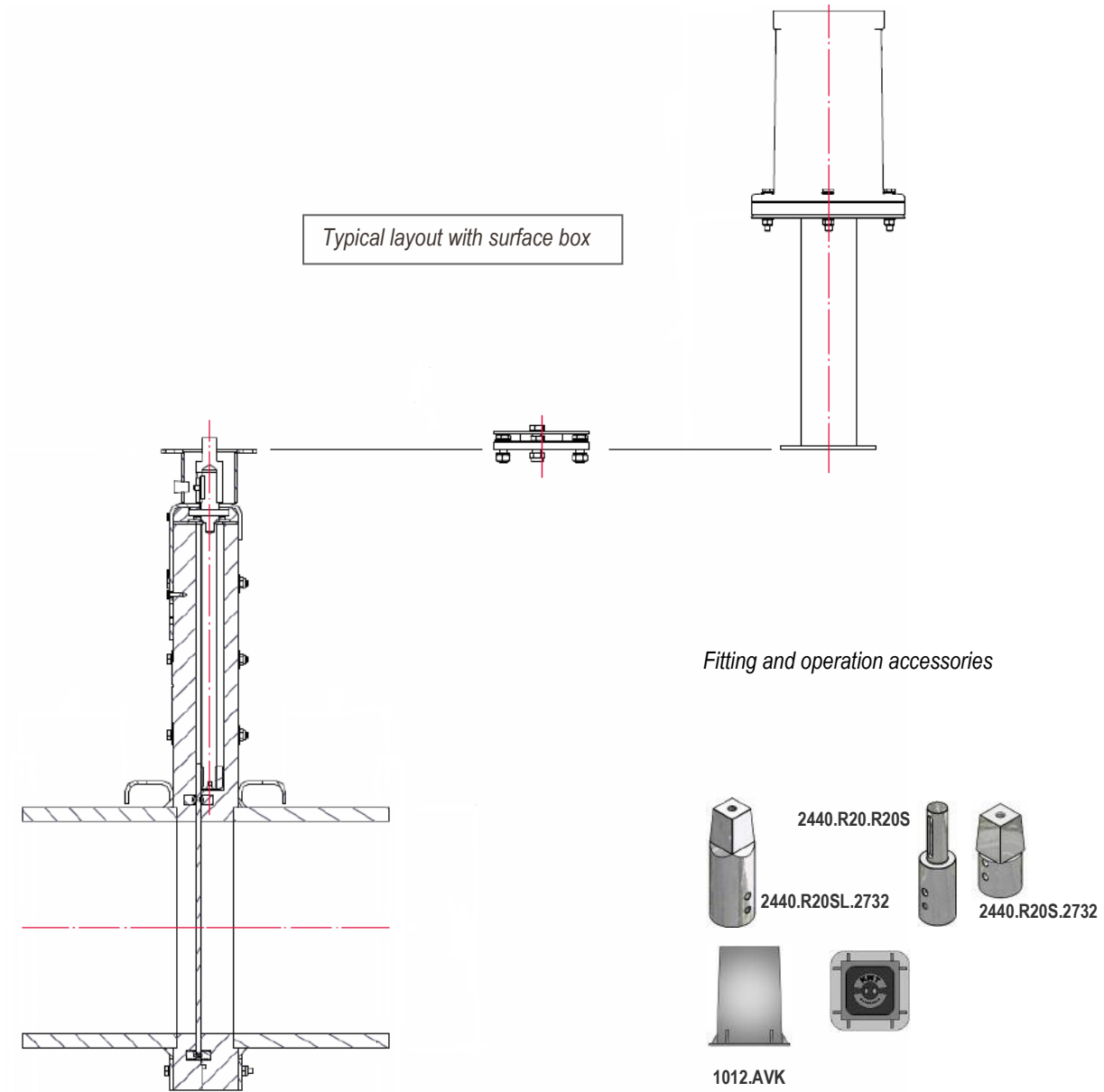
The penstock is available as a “P” version which connects to a PVC (using EPDM sleeves and stainless steel clamps) or a Spirosol pipe system, or an “F” version with a PN10 flange connection as standard. A culvert, adapter and extension tubes are available as accessories.



Material

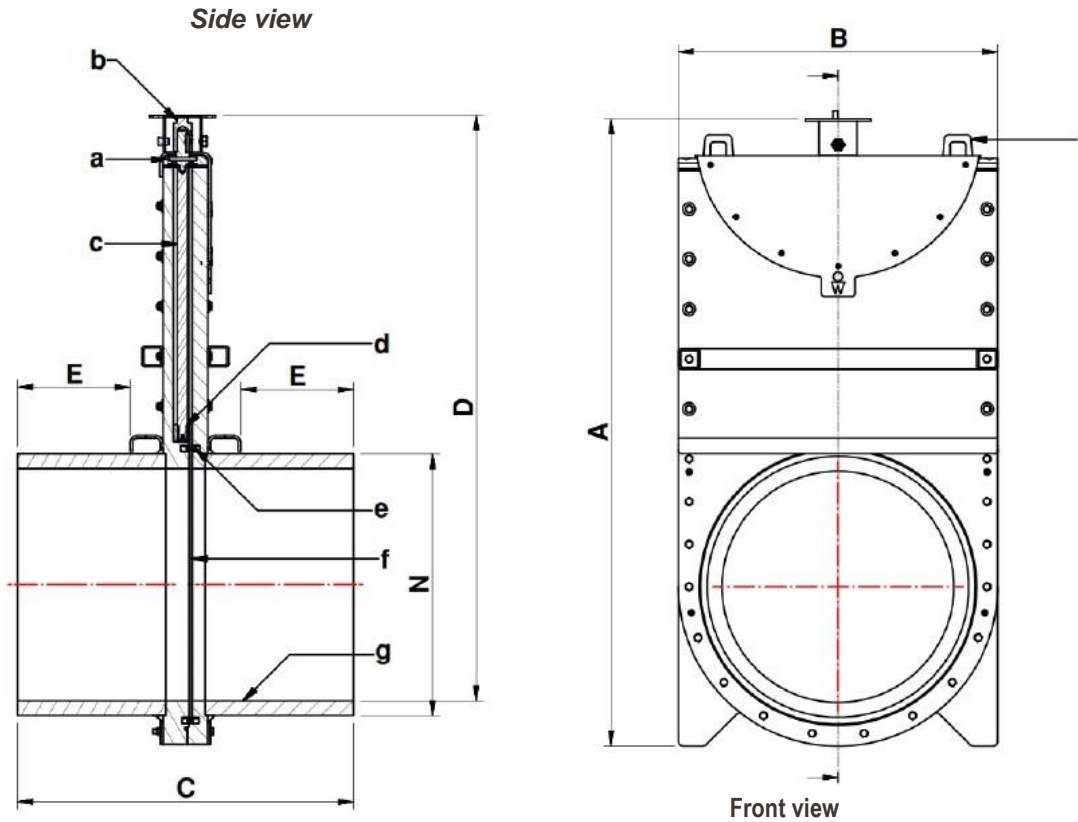
Construction	HDPE
Slide plate	RVS 316
Spindle	RVS 316
Nut	Bronze
Seal	EPDM
Fixing kit (P)	Not included
Fixing kit (F)	Not included
Comment	5—10 MwC operational pressure and round opening standard

KLSA-R-P



- a - OLG bearing fixture
- b - half moon connector
- c - Protection tube
- d - Spindle
- e - Seal
- f - Sliding plate
- g - Tube
- i - Lifting hooks

KLSA-R-P



Specifications:

KWT item number	DN	Ø	A	B	C	D	E	N			
272Y0100	DN100	97	442	220	380	380	84	110	20	20	14
272Y0125	DN125	110	471	235	400	409	94	125	22	25	15
272Y0150	DN150	141	539	270	440	475	114	150	28	30	19
272Y0200	DN200	176	617	310	440	550	114	200	34	30	24
272Y0250	DN250	220	714	360	470	645	130	250	42	35	32
272Y0300	DN300	278	840	425	480	767	132	315	52	35	43
272Y0400	DN400	353	1005	510	610	927	199	400	65	40	64
272Y0500	DN500	441	1200	610	640	1117	214	500	83	40	90
272Y0600	DN600	555	1502	740	1015	NA	369	630	100	50	205

Leakage rate

KLSA-R-P measured values	MwC	L/min ¹	
100mm - 500 mm	5 - 10	0,3	0,4

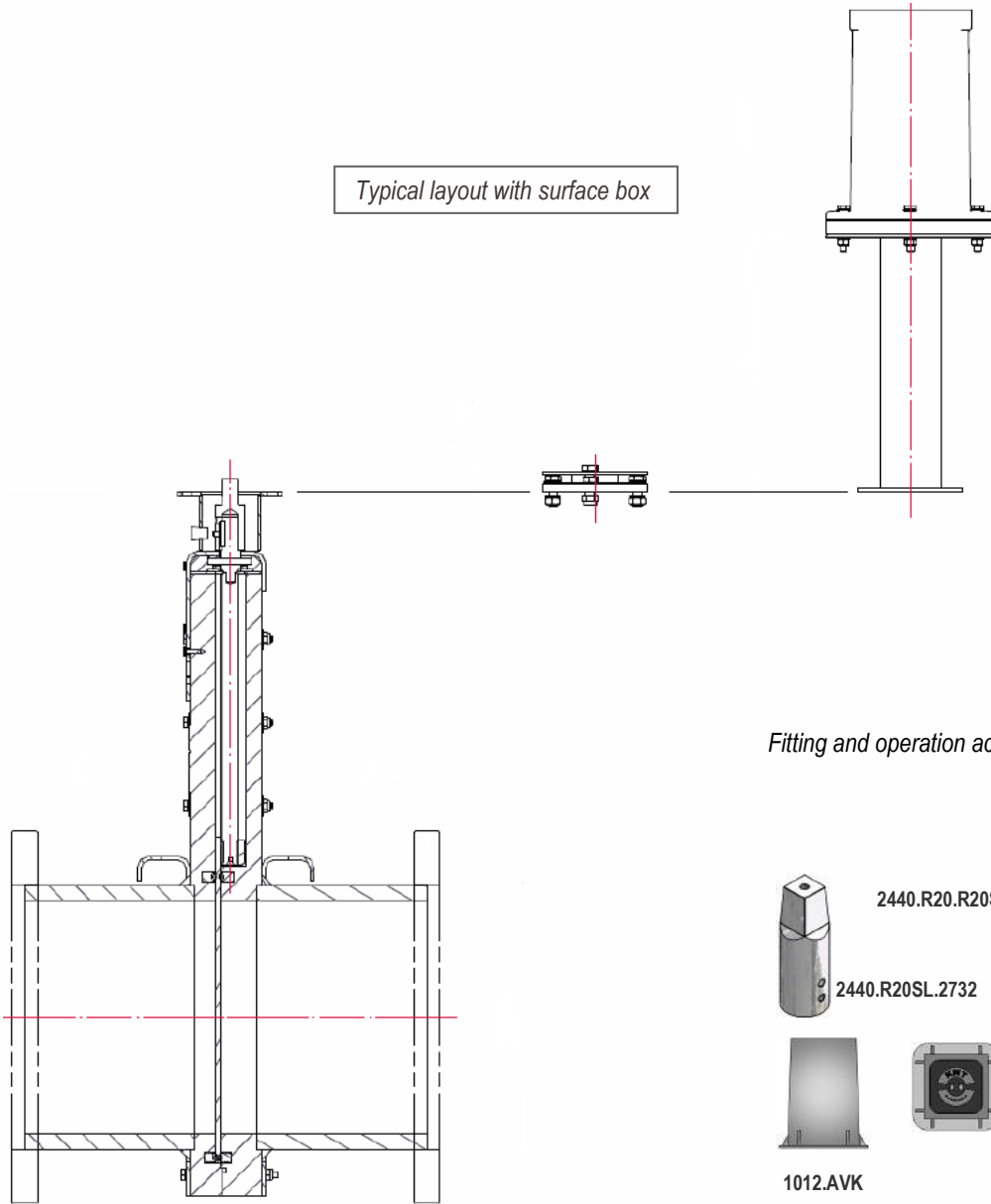
Measured values
(L/min¹/m¹)

MwC	AWWA 560 / BS7775		DIN 19569-4	
	L/min ¹	L/min ¹	L/min ¹	L/min ¹
5 - 10				
	0,45	0,45	1,2 - 3,0	1,2 - 3,0

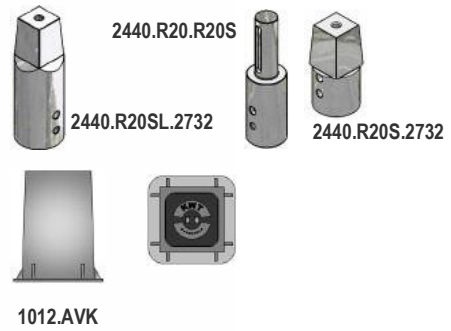
Norm values (L/min¹/m¹)

KLSA-R-F

Typical layout with surface box



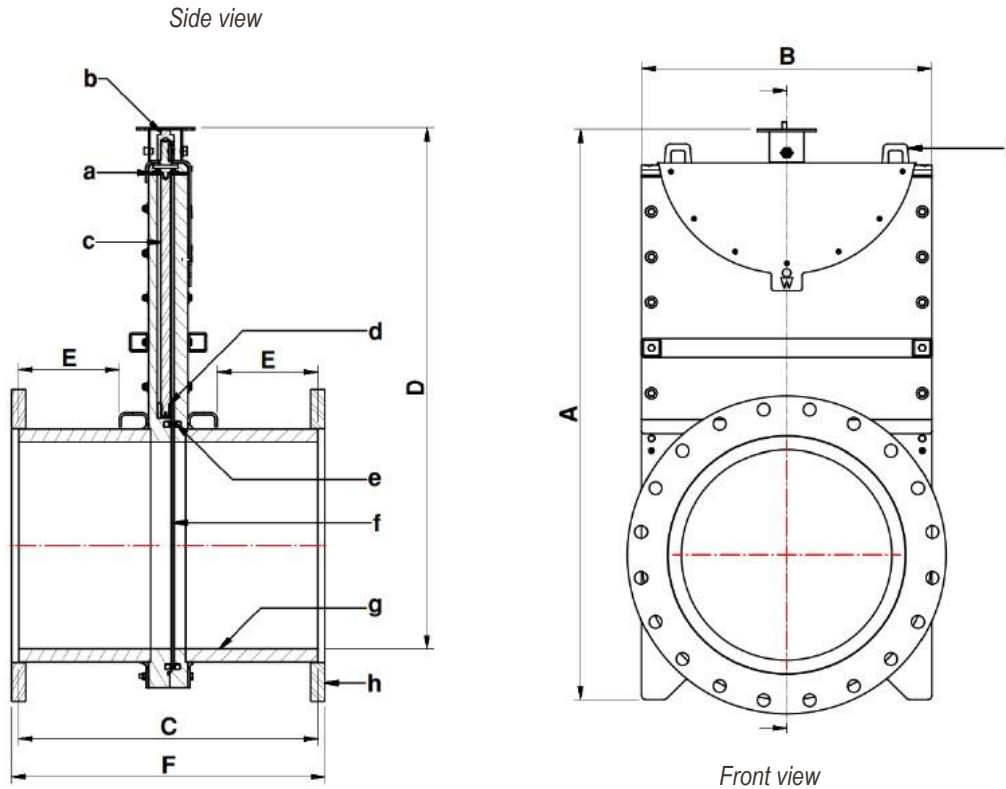
Fitting and operation accessories



- a - OLG bearing fixture
- b - half moon connector
- c - Protection tube
- d - Spindle
- e - Seal
- f - Sliding plate
- g - Tube
- h - Flange
- i - Lifting hooks







KLSA-R-F





Data (mm)





flens: PN10—PN16

KWT item number	DN	Ø	A	B	C	D	E	F				
274Z0100	DN 110	97	442	220	380	380	84	400	20	20	14	10
274Z0125	DN 125	110	471	235	400	409	94	420	22	25	15	10
274Z0150	DN 150	141	539	270	440	475	114	460	28	30	19	10
274Z0200	DN 200	176	617	310	440	550	114	470	34	30	24	10
274Z0250	DN 250	220	714	360	470	645	130	500	42	35	32	10
274Z0300	DN 300	278	840	425	480	767	132	510	52	35	43	10
274Z0400	DN 400	353	1005	510	610	927	199	640	65	40	64	10
274Z0500	DN 500	441	1200	610	640	1117	214	670	83	40	90	10

Leakage rate

KLSA-R-P measured values	MwC	L/min ¹	
			
100mm - 500 mm	5—10	0,3	0,4

Measured values
(L/min¹/m¹)

MwC	AWWA 560 / BS7775		DIN 19569-4	
				
5—10	0,45	0,45	1,2 - 3,0	1,2 - 3,0

Norm values (L/min¹/m¹)