

Penstocks

KWT® High Pressure Penstock Type: KSA-HD

► Application

KWT penstocks are available in various forms and are used in surface, sewer and process water systems. The penstock is a very traditional structure for regulating flows or isolating a pipe, using a simple yet effective drive system.

► Operation

As a new addition to the already popular KSA range, the KSA-HD has been developed as a high specification product for large heavy-duty applications and is suitable for on and off seating pressures of 10MwCas standard. The KSA-HD is particularly suitable for process, tidal and emergency applications where operational safety plays a decisive role. The penstock is manufactured in Stainless Steel 316L as standard however higher grades are also available.

The sealing system on the KSA-HD is unique, in that the entire moving plate rests against a sealing face positioned at an angle of 3°. As the penstock closes this automatically wedges the seal, compressing it evenly and producing a virtually drop-tight seal between the frame and plate. To ensure a tight seal between the frame and wall, there is a cavity in the back of the frame which is filled with grout to fill any pockets in the mounting face.

The KSA-HD is also unique in that the penstock does not require a cross-beam to pull the penstock door upwards, as it incorporates a patented spindle block arrangement located at a central point just above the opening. This reduces the risk of damage to the spindle and also makes the KSA-HD very compact.



► Specifications

- Culvert: Ø 500 mm to Ø 2000 mm: 500 mm x 500 mm to 2000 x 2000 mm
- Operating pressure: On/Off seating, 10 MwC as standard
- Operation method: manual or actuated
- Operation point: conical square 27/32x40
- Movement mechanism: non-rising spindle
- Higher pressures and sizes delivered on request.

► Materials

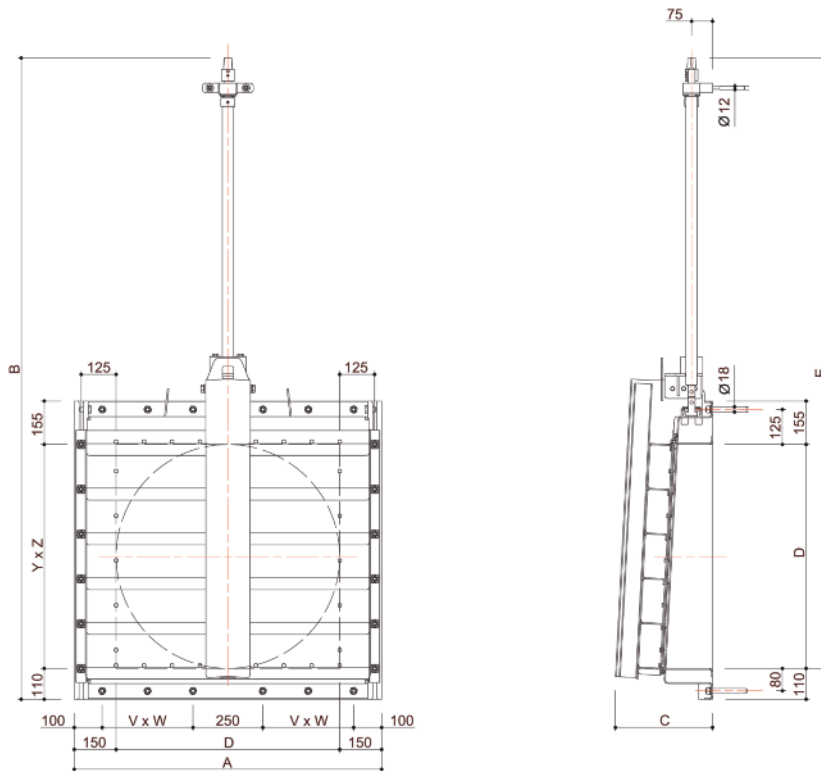
- Moving plate: Stainless steel 316L
- Spindle: Stainless steel 316
- Spindle Block: POM or Gbr12
- Bearing ring: OLG
- Backplate: RVS 316 L
- Sealing: EPDM
- Mounting material: Stainless steel 316

► Benefits

- Virtually no maintenance
- Excellent Sealing
- Fast installation
- Very compact construction



Althon reserves the right to modify the design without prior notification



ØD D x D mm.	A mm.	B mm.	C mm.	E mm.	V	W mm.	Y	Z mm.		Nm.	KG
500/2000	D+300	2xD+690	2xD+580					(D+95)/6			
500	800	1690	312	1580	1	175,00	3	166,67	99	40	114
600	900	1890	321	1780	1	225,00	4	150,00	115	55	131
700	1000	2090	339	1980	2	137,50	4	175,00	132	70	154
800	1100	2290	348	2180	2	162,50	5	160,00	149	90	185
900	1200	2490	365	2380	2	187,50	5	180,00	165	110	206
1000	1300	2690	379	2580	2	212,50	6	166,67	182	140	239
1100	1400	2890	392	2780	2	237,50	6	183,33	199	165	287
1200	1500	3090	407	2980	3	175,00	7	171,43	215	195	308
1250	1550	3190	412	3080	3	183,33	7	175,57	224	210	324
1500	1800	3690	442	3580	3	225,00	9	166,67	265	300	433
2000	2300	4690	517	4580	4	231,25	11	181,25	349	520	705

► Description for tenders

- Penstock, type Althon KSA-HD
- Manufactured by: KWT Waterbeheersing
- Materials: SS316L, HDPE and EPDM
- Passage: Ø 500 mm to Ø 2000 mm 500 x 500 to 2000 x 2000 mm
- Operating pressure: 10MwC On/ Off seating.

The penstock is equipped with a vertical spindle, with a centrally mounted bearing block. This reduces force on the spindle, reducing the risk of damage. The guides are made up using box profiles to ensure the anchors experience the correct loading. The SS316L moving plate has been equipped with an EPDM profiled seal and can be fully adjusted in relation to the mounting face that slants by 3 degrees. The KSA-HD is also designed so that spindle and seal replacements can be carried out without removing the penstock from the wall in case of damage.