

### Vigtig sikkerhedsinformation

**DK**

Læs denne vejledning grundigt inden installationen af kugleventilen påbegyndes.

Anvend ikke ventilen til højere tryk eller temperaturer end angivet i databladet. Forkert anvendelse kan medføre skader på personer og/eller materiel.

### Important safety information

**UK**

Carefully read this instruction before installation of the ball valve.

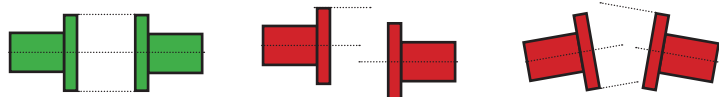
Do not use the valve for higher pressure or temperature than allowed in the datasheet. Improper use can lead to person injury or broken materiel.

### Installation

**DK**

#### Rørføring

- Rørføringen skal være præcis oplinet uden forskydninger i rørsystemet.
- Der skal være netop den afstand mellem flangerne svarende til kugleventilens indbygningsmål.
- Inden ventilen tages i brug skal rørsystemet gennemskylles grundigt.
- Der skal etableres understøtning af rørføringen.

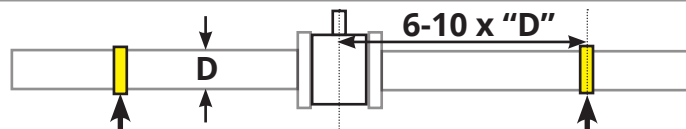


### Installation

**UK**

#### General pipe alignment

- Pipe alignment have to be accurate without displacement
- The distance between valve flanges have to be exactly like the "face to face" of the valve body.
- The pipe and valve have to be flushed before operating the valve first time.
- Support of the pipework have to be established.



#### Montering mellem flanger

Vær opmærksom på at benytte løfteværktøj, til de store og tunge ventiler.

Ventilen indføres mellem rengjorte flanger uden at beskadige huspakningen.

Flangeboltene spændes jævnt med passende moment.

#### Mounting between flanges

Remember to use lifting tools for the larger heavier valves.

The valve body is slid in between cleaned flanges, without damaging the body gaskets.

The body bolts are placed and tightened evenly with an appropriate torque.

### Vedligeholdelse

**DK**

#### Vigtig sikkerhedsinformation

Vedligeholdelse må kun udføres af uddannet personale, iført det fornødne sikkerhedsudstyr.



Før der arbejdes på ventilen skal det sikres, at anlægget er trykløst og ved omgivelsestemperatur. Desuden skal man være opmærksom på, at farligt medie fra rørsystemet undslipper ved adskillelse.

#### Efterspænding af spindelpakdåse

Spindelpakdåsen på vores Wafer kugleventil er forsynet med en "live load" anordning, hvilket vil sige, at pakdåsen holdes sammenspændt ved hjælp af tallerkenfjedre, der optager forskelle i temperaturudsving samt evt. slitage. **Hvis pakdåsen skulle blive utæt**, kan det skyldes, at pakningerne er slidt mere end fjedrene kan optage.

Man kan som udgangspunkt efterspænde sin pakdåse for at løse dette problem. Dette gøres ved at afmontere låseblivet, der fastholder spindelmøtrikken og efterspænde spindelmøtrikken. Vær opmærksom på at tallerkenfjedrene sammenspændes i henhold til momenttabellen og løsnes let. Skulle ventilens pakdåse stadig være utæt, bør denne udskiftes.

### Maintenance

**UK**

#### Important security information

Maintenance may only be carried out by trained personnel, dressed in the proper safety equipment.

Before work on the valve is begun, it is important that the systems is de-pressurized, and that the temperature is at a normal level. Be aware that the contained medium, escapes the system when dismantling the valve.

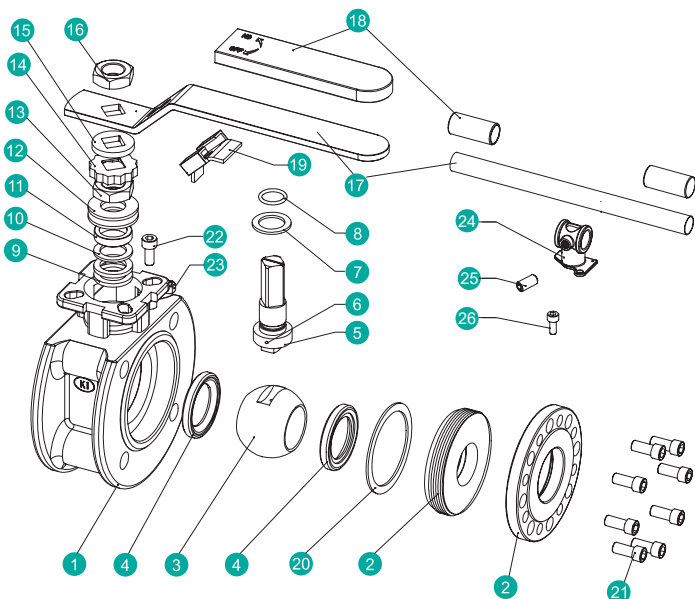
#### Retightening the stem packing

On our Wafer ball valve the stem packing is fitted with a "live load" device, which means that the packing is held tight by a pair of Belleville washers that keep the packing functional during changes in temperature and wear. **Should the packing begin to leak**, it may be too worn for the washers to compensate.

Generally the leaking is stopped by re-tightening the packing according to the table. This is done by removing the locking pad that retains the nut and then tighten it. Pay attention not to fully tighten the Belleville washers, because it will disable the "live load" functionality.

If the packing is still leaking, replacement is necessary.

### Oversigt over ventilens enkeltdele/Individual parts



POS	DESCRIPTION	MATERIAL
1	BODY	STAINLESS STEEL CF8M
2	END CAP	STAINLESS STEEL CF8M
3	BALL	STAINLESS STEEL AISI 316
4	BALL SEATS	PTFE (TFM 1600)
5	STEM*	STAINLESS STEEL AISI 316
6	ANTI-STATIC DEVICE	STAINLESS STEEL AISI 316
7	THRUST WASHER	TFM1600
8	O-RING	FPM
9	STEM PACKING	PTFE
10	BUSHING	50% STAINLESS STEEL + 50% PTFE
11	GLAND	STAINLESS STEEL AISI 316
12	BELLEVILLE WASHERS	STAINLESS STEEL AISI 301
13	STEM NUT	STAINLESS STEEL A194-8
14	STOP-LOCK CAP	STAINLESS STEEL AISI 304
15	GLAND	STAINLESS STEEL AISI 304
16	NUT	STAINLESS STEEL A194-8
17	HANDLE**	STAINLESS STEEL AISI 304
18	HANDLE SLEEVE	PVC
19	LOCKING DEVICE	STAINLESS STEEL AISI 304
20	BODY GASKET	PTFE
21	BOLT	STAINLESS STEEL A2-70
22	STOP BOLT	STAINLESS STEEL A2-70
23	STOP NUT	STAINLESS STEEL A2-70
24	HANDLE ADAPTER	STAINLESS STEEL A351-CF8
25	SET SCREWED	STAINLESS STEEL A2-70
26	BOLT	STAINLESS STEEL A2-70

### Udskiftning af spindelpakning og sæder

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### Replacing the stem packing and seats

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#### Adskillelse

- Fjern flangebolte og møtrikker, og løft ventilen ud af rørstrengen. Undgå at beskadige pakningen. Vær opmærksom på at ventilen er tung - løftegrej kan være nødvendigt.
- Løsne spindel møtrikken, fjern håndtag og alle skiver inkl. bøsning (pos. 11).
- Fjern ende dæksel.
- Adskil ventilen - afmontér det ene sæde.
- Afmontér huspakningen.
- For at afmontére kuglen, skal spindlen drejes så ventilen står helt lukket. Afmontér kuglen og undgå at ridse denne.
- Afmontér det andet sæde.
- Spindlen fjernes ved at denne slås forsigtigt ind i huset. Den nedre spindelpakning bør sidde fast på spindlen og afmonteres sammen med denne.
- Afmontér spindelpakningen.

#### Disassembly

- Remove flange bolts and nuts and lift the valve from the line. Care should be taken to avoid scratching or damaging serrated gasket. The valves are heavy and should be adequately supported before removing them from the line.
- Loosen the stem nut and remove the handle and the stop plate. Next, remove lock saddle, packing nuts, Belleville washers and gland.
- Remove body end cap, using proper wrench.
- Lift off body end. One seat should come out with the body end.
- Remove body seal.
- To take out the ball, rotate stem so ball is in fully closed position. Lift ball from the body, using a strap and lift device, if necessary. Extreme caution should be taken to avoid damage to the ball.
- Take out the other seat.
- The stem must be removed from inside the body. A tap to the top of the stem should loosen it. The thrust washer should come out with the stem.
- Then, remove the stem packing.



### Samling

- Montér et sæde i husets hulrum med den sfæriske krumning mod kuglen. Se splittegning på forrige side.
- Montér den nedre spindelpakning på spindlen og før denne op gennem huset. Montér pakning, tallerkenfjedre og låseblik. Skru møtrik løseligt på spindlen.
- Påsæt håndtag og drej spindlen til lukket position.
- Montér kuglen i huset og drej håndtaget til åben position.
- Montér det andet sæde i husets hulrum med den sfæriske krumning mod kuglen.
- Montér huspakningen i huset.
- Saml de to hus dele og vær opmærksom på både at line flangeenden korrekt op i forhold til huset men også til rørets flange. OBS! det kan lade sig gøre at samle ventilen forkert. Vær også opmærksom på ikke at beskadige huspakningen under samlingen.
- Montér ende dæksel. Vær sikker på at kuglen er i åben position.
- Åben gradvist ventilen indtil den fulde kvarte omgang nås. Dette gøres for at forme PTFE sædet til kuglens form og skabe optimal tætning. Et hurtigt drej kan her foresage skade på sæderne.

### Reassembly

- Install one seat in the body cavity with the spherical curvature facing the ball. A split drawing is found on the previous page.
- Install the thrust washer on the stem and slide the stem up through the body. Install packing, gland, Belleville washers and locking saddle. Screw the packing nut onto the stem. Lock the saddle in place.
- Install stop plate, handle and washer. Screw the stem nut onto the stem until the handle is secure.
- Turn the handle to the closed position. Line up the ball slot with the stem end and slide the ball into position. Turn the handle to the open position to hold the ball in place.
- Install the remaining seat into the body side.
- Put the body seal gasket into the body and line-up the end flange. Be careful not to damage the body seal when putting the cap end into body.
- Install the cap end. Make sure that the ball is in an open position.
- Cycle the valve slowly, with a gentle back and forth motion, to build gradually to the full quarter turn. By cycling slowly, the seat lips will assume a permanent seal shape against the ball. A fast turning motion, at this point, may cut the seats before they are able to form the proper seal.

DN15FB 1/2"	DN20FB 3/4"	DN25FB 1"	DN32FB 1-1/4"	DN40FB 1-1/2"	DN50FB 2"	DN65FB 2-1/2"	DN80FB 3"	DN100FB 4"
<b>Tilspændingsmomenter for spindelmøtrik - Stem nut torque</b>								
14,3 [Nm]	14,3 [Nm]	14,3 [Nm]	19,4 [Nm]	22,4 [Nm]	22,4 [Nm]	22,4 [Nm]	32,7 [Nm]	32,7 [Nm]
<b>Efter tilspænding af spindelpakningen skal møtrikken løsnes mellem 20-60° til nærmeste flade ud for låseblikket</b> After tightening the stem gasket the nut has to be loosened between 20-60° to nearest fixing point of the lock saddle								

### Tilspænding af spindelmøtrik

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I forbindelse med udskiftning af spindelpakninger eller efterspænding af pakdåsen er det vigtigt at følge de i tabellen anførte momenter. Efterfølgende skal spindelmøtrikken løsnes lidt for at sikre funktionen af fjedreskiverne (20-60° til nærmeste flade ud for låseblikket).



### Tightening the stem nut

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During replacement of stem gaskets or during maintenance, it is of great importance to tighten the stem nut according to the figures given in the table. After tightening the stem nut it must be loosened to ensure proper function of the spring washers (20-60° to nearest fixing point of the lock saddle).

### Brug for hjælp?

DK



Er der spørgsmål, eller har du brug for reservedele er du mere end velkommen til at kontakte:

DVC / Armatec **+45 75 72 33 00**

### Need help?

UK

If you have any questions or need spare parts do not hesitate to contact:

DVC / Armatec **+45 75 72 33 00**