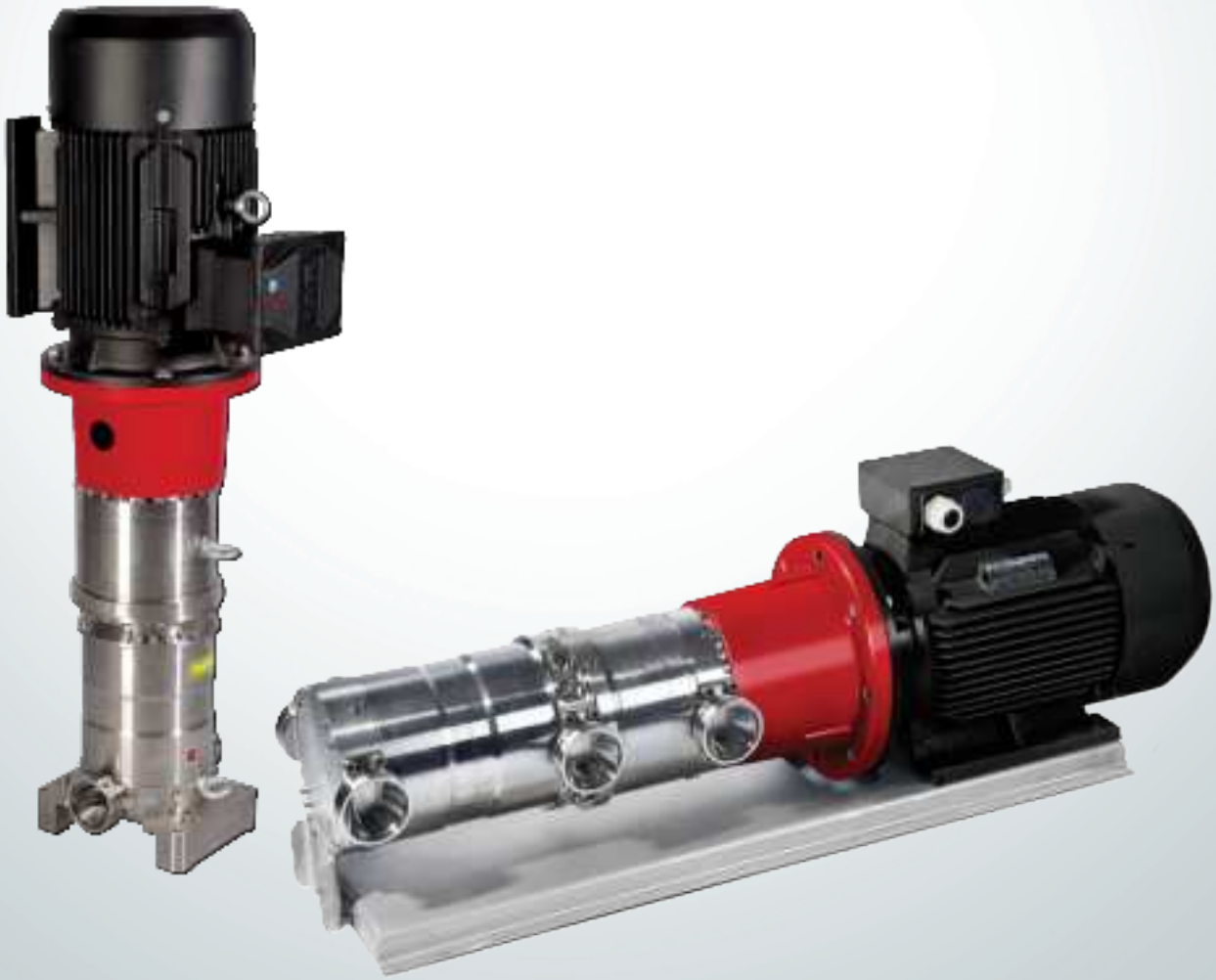
ENGINEERING
TOMORROW

Instruction

iSave Energy Recovery Device

iSave 40

Recommended service intervals



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1. General information

This guideline provides information on the recommended service intervals. The recommendation is based upon good engineering practice and on experience gained from operation even under extreme conditions.

The recommendation is for guidance only.

2. Design/features

Danfoss iSave ERD is designed for long operation and low maintenance and life cycle costs.

Provided that the ERD has been running according to the Danfoss specifications, Danfoss guarantees one year service-free operation, however, max. 18 months from date of production. After one year of operation it is recommended to inspect the iSave and replace worn parts, if any.

If the Danfoss recommendations concerning system-design (see our data sheet) are not followed, the service life of the iSave ERD might be affected.

The recommended service intervals on the different parts in the iSave ERD appears from the table below:

3. Service intervals

3.1 iSave 40 (Serial no. 01 to 03)

Description[1)]	Service interval	Service interval (2nd, 3rd)
Tool kit		
Valve plate kit (2 pcs), Pressure exchanger	32,000 hours	26,000 hours
Port plate, Brine (1 pc), Pressure exchanger	32,000 hours	26,000 hours
Port plate, Sea water (1 pd), Pressure exchanger	32,000 hours	26,000 hours
Sealing kit, Pressure exchanger	32,000 hours	32,000 hours
Sealing kit, Vane pump	32,000 hours	26,000 hours
Vane kit (8 pcs)	56,000 hours	56,000 hours
Rotor element	32,000 hours	26,000 hours
Side plate kit	56,000 hours	56,000 hours
Coupling kit, internal	56,000 hours	56,000 hours

[1)] For detailed information on parts, see Service guide AX290231141118en-000101 Parts list

4. Service intervals

3.1 iSave 40 (Serial no. 04 and newer)

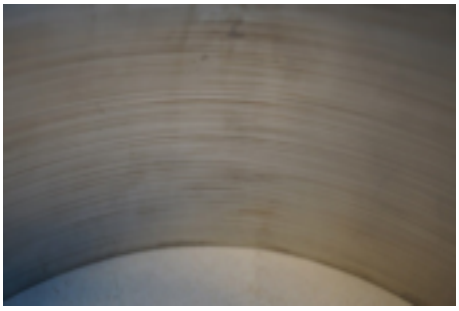
Description[1)]	Service interval	Service interval (2nd, 3rd)
Tool kit		
Valve plate kit (2 pcs), Pressure exchanger	32,000 hours	26,000 hours
Port plate, Brine (1 pc), Pressure exchanger	32,000 hours	26,000 hours
Port plate, Sea water (1 pd), Pressure exchanger	32,000 hours	26,000 hours
Sealing kit, Pressure exchanger	32,000 hours	32,000 hours
Sealing kit, Vane pump	32,000 hours	26,000 hours
Vane kit (8 pcs)	56,000 hours	56,000 hours
Rotor element	32,000 hours	26,000 hours
Side plate kit	56,000 hours	56,000 hours
Coupling kit, internal	56,000 hours	56,000 hours

[1)] For detailed information on parts, see Service guide AX290231141118en-000101 Parts list

5. Appendix 1 (serial no. 01 to 03)

Stator
The stator does not have to be replaced even If there are grooves on the surface.

Fig. 1



Burrs on the surface should be sanded down.

Rotor
Measure the height difference between the points indicated in Fig. 2 and Fig. 3.

Fig. 2

Point where there normally is no wear..

Fig. 3

Point where the rotor normally is most worn. This is the side of the rotor where the shaft is. The rotor is worn if the height difference is above 0.15 mm.

Side plates
Measure the height (thickness) difference between the points indicated in Fig. 4 and Fig. 5

Fig. 4

This is where there normally is little wear.

Fig. 5

This is where there normally is most wear. The side plate is worn if the height difference is aboe 0.15 mm.

Side plates (continued)
It is possible to restore the surface in contact with the rotor by lapping it with extra fine sandpaper with water (ISO P800, CAMI grit 320) placed on a flat surface.
Thoroughly clean the side plate after lapping.
The minimum allowed thickness of the side plates is 10,40 mm. However, the combined thickness of the two side plates in a unit should not be less than 20,85 mm.

Pressure measurement
It is possible to indirectly measure the leak and thereby the wear of the rotor and side plates by measuring the pressure in one of the LP bleed ports in the vane pump. If the pressure in the bleed port is 2 barg (29 psig) above the pressure in LPin port the vane poump needs to be examined. The side plates and possibly the rotor need to be replaced. The thread in the bleed port is G ¼" (BSP).

Port plate
Measure the height (thickness) difference between the points indicated in Fig. 6 and Fig. 7.

Fig. 6

Fig. 7

The measruing point is where the outside land is worn the most. It might not be the indicated position. The port plate is worn if the height difference is above 0.05 mm.

It is possible to restore the surface by lapping it with extra fine sand paper with water (ISO P800, CAMI grit 320) placed on a flat surface. See Fig. 8.
Thoroughly clean the port plate after lapping.

Fig. 8

Lapping is permissible until the throttling groove indicated is a minimum of 0.1 mm deep.

Valve plate
The valve plate will wear where they are in contact with the land of the port plate. The valve plates are worn when these grooves are 0.03 mm deep.

6. Appendix 2

Could be the inspections created in the disassembly and assembly that is under construction.

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