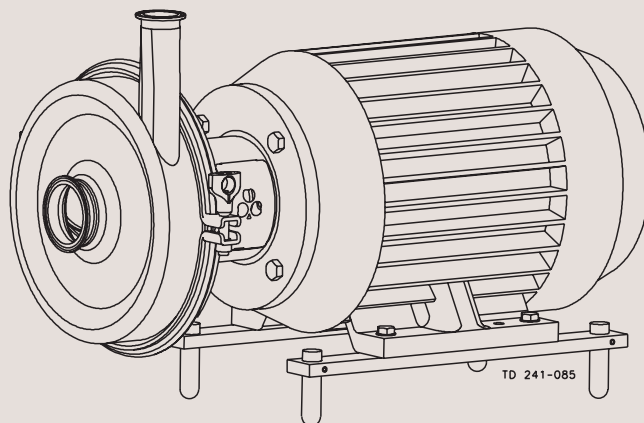
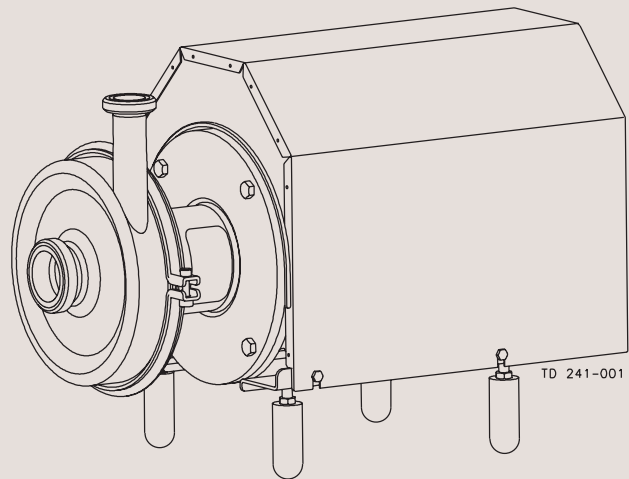




Instruction Manual

SolidC Pump



Declaration of Conformity

The designating company

Alfa Laval

Company Name

Albuen 31, DK-6000 Kolding, Denmark

Address

+45 79 32 22 00

Phone No.

hereby declare that

Centrifugal Pump

Denomination

SolidC

Type

Year

is in conformity with the following directives with amendments:

- Low Voltage Directive 73/23/EEC
- EMC Directive 89/336/EEC
- Machinery Directive 89/392/EEC

Vice President, R & D

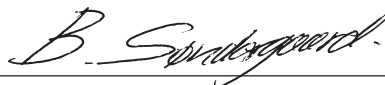
Title

Bjarne Søndergaard

Name

Alfa Laval

Company



Signature

Designation



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1.1 Important Information

1.2 Warning Signs

1. Safety

*Unsafe practices and other important information are emphasized in this manual.
Warnings are emphasized by means of special signs.*

Always read the manual before using the pump!

WARNING!

Indicates that special procedures must be followed to avoid severe personal injury.

CAUTION!

Indicates that special procedures must be followed to avoid damage to the pump.

NOTE!

Indicates important information to simplify or clarify practices.

General warning.



Dangerous electrical voltage.



Caustic agents.



All warnings in the manual are summarized on this page.

Pay special attention to the instructions below so that severe personal injury and/or damage to the pump are avoided.

Installation:

Always read the technical data thoroughly. (See chapter 5).

Always use a lifting crane when handling the pump.

Never start in the wrong direction of rotation with liquid in the pump.



Always have the pump electrically connected by authorized personnel. (See the motor instructions).

**Operation:**

Always read the technical data thoroughly. (See chapter 5).

Never touch the pump or the pipelines when pumping hot liquids or when sterilizing.

Never run the pump with both the suction side and the pressure side blocked.



Always handle lye and acid with great care.

**Maintenance:**

Always read the technical data thoroughly. (See chapter 5).

- **Never** service the pump when it is hot.

- **Never** service the pump with pump and pipelines under pressure.

**Motors with grease nipples:**

Remember lubrication according to information plate/label on the motor.

Always disconnect the power supply when servicing the pump.



*The instruction manual is part of the delivery. Study the instructions carefully.
The standard delivery does not include the test certificate. This can be supplied on request.
The large pump sizes are very heavy.
Alfa Laval therefore recommends the use of a lifting crane when handling the pump.*

Step 1

Always use a lifting crane when handling the pump (see technical data).

**CAUTION!**

Alfa Laval cannot be held responsible for incorrect unpacking.

Check the delivery for:

1. Complete pump.
2. Delivery note.
3. Motor instructions.
4. Test certificate, IF ORDERED!!

Step 2

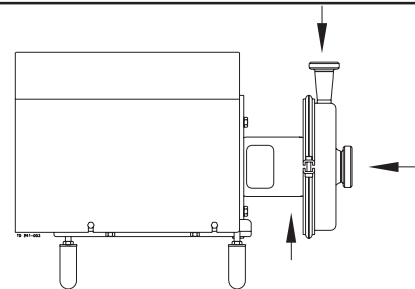
Remove possible packing materials from the inlet and the outlet, and remove the plastic film wrapped around the pump.

Avoid damaging the inlet and the outlet.

Avoid damaging the connections for flushing liquid, if supplied.

NOTE!

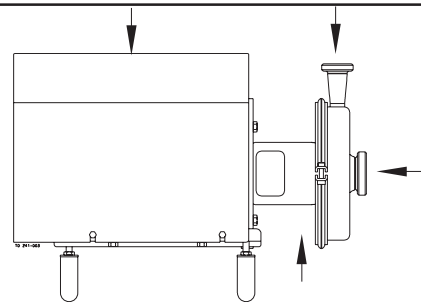
US pumps have no shroud

**Step 3**

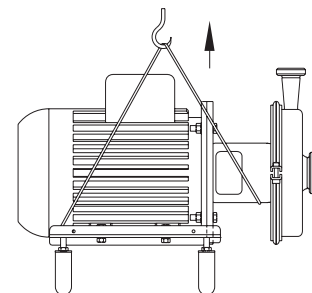
Inspect the pump for visible transport damages.

NOTE!

US pumps have no shroud

**Step 4**

Always remove the shroud, if fitted, before lifting the pump.



Study the instructions carefully and pay special attention to the warnings! Always check the pump before operation.

- See pre-use check in section 2.3

The large pump sizes are very heavy.

Alfa Laval therefore recommends the use of a lifting crane when handling the pump.

Step 1



Always read the technical data thoroughly (see chapter 5).

Always use a lifting crane when handling the pump (see technical data).



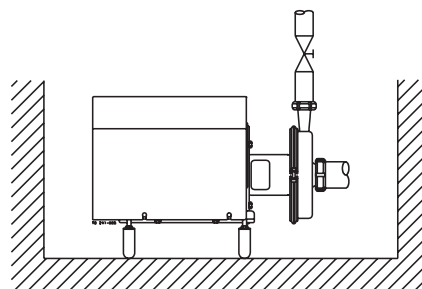
Always have the pump electrically connected by authorized personnel (see the motor instructions).

CAUTION!

Alfa Laval cannot be held responsible for incorrect installation.

Step 2

Ensure that there is sufficient clearance around the pump
(min. 0.5 m) (1.64 ft).

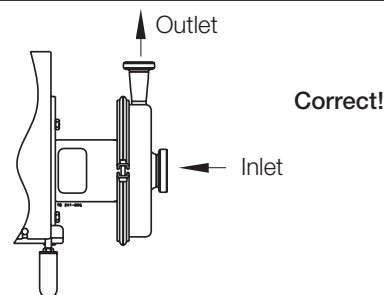


NOTE!

US pumps have no shroud

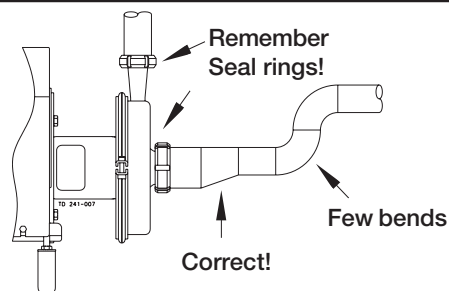
Step 3

Check that the flow direction is correct.



Step 4

1. Ensure that the pipelines are routed correctly.
2. Ensure that the connections are tight.

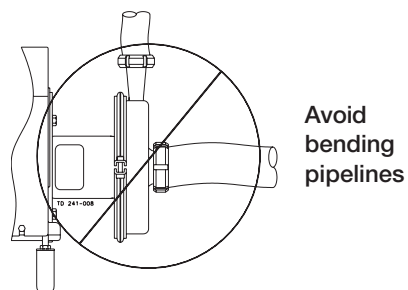


Step 5

Avoid stressing the pump.

Pay special attention to:

- Vibrations
- Thermal expansion of the tubes
- Excessive welding
- Overloading



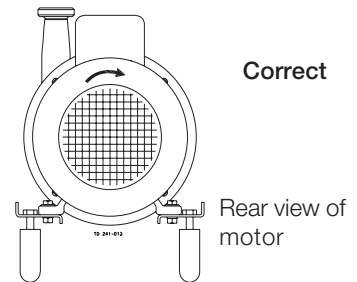
Study the instructions carefully and pay special attention to the warnings!
Solid C is with impeller screw as standard.
Check the direction of rotation of the impeller before operation.
- See the indication label on the pump.

Step 1

Never start in the wrong direction of rotation with liquid in the pump.

1. Start and stop the motor momentarily.
2. Ensure that the direction of rotation of the motor fan is **clockwise** as viewed from the rear end of the motor.

See indication label!



Study the instructions carefully and pay special attention to the warnings!
The pump is fitted with a warning label indicating correct throttling.

Step 1

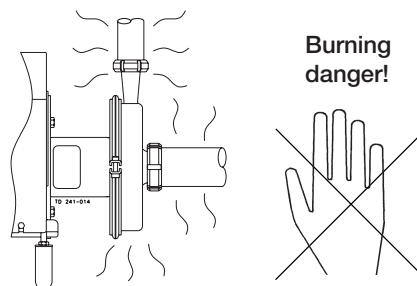
Always read the technical data thoroughly (see chapter 5).

CAUTION!

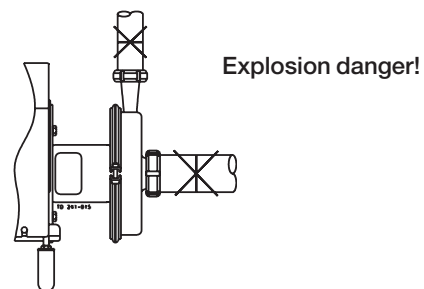
Alfa Laval cannot be held responsible for incorrect operation/control.

Step 2

Never touch the pump or the pipelines when pumping hot liquids or when sterilizing.

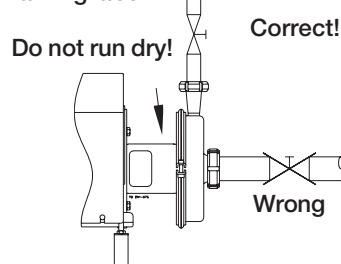
**Step 3**

Never run the pump with both the suction side and the pressure side blocked.

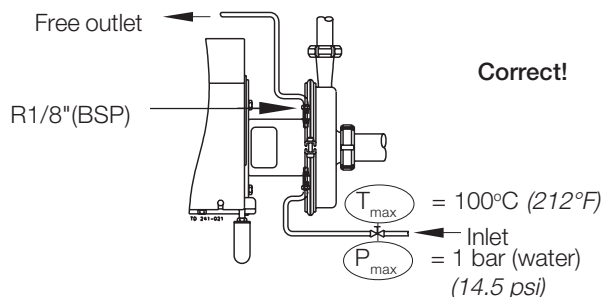
**Step 4****CAUTION!**

- The shaft seal must **not** run dry.
- **Never** throttle the inlet side.

See the warning label!

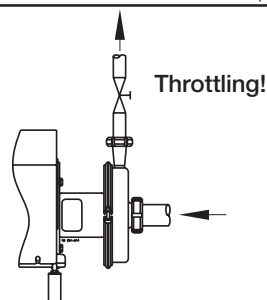
**Step 5****Flushed shaft seal:**

1. Connect the inlet of the flushing liquid correctly.
2. Regulate the water supply correctly.

**Step 6****Control:**

Reduce the capacity and the power consumption by means of:

- Throttling the pressure side of the pump.
- Reducing the impeller diameter.
- Reducing the speed of the motor.



*Pay attention to possible faults.
Study the instructions carefully.*

NOTE!

Study the maintenance instructions carefully before replacing worn parts. - See section 4.1

Problem	Cause/result	Remedy
Overloaded motor	<ul style="list-style-type: none"> - Pumping of viscous liquids - Pumping of liquids with high density - Low outlet pressure (counter pressure) - Lamination of precipitates from the liquid 	<ul style="list-style-type: none"> - Larger motor or smaller impeller - Higher counter pressure (throttling) - Frequent cleaning
Cavitation:		
- Damage	- Low inlet pressure	- Increase the inlet pressure
- Pressure reduction (sometimes to zero)	- High liquid temperature	- Reduce the liquid temperature
- Increasing of the noise level		<ul style="list-style-type: none"> - Reduce the pressure drop before the pump - Reduce speed
Leaking shaft seal	<ul style="list-style-type: none"> - Dry run (See operation/control) - Incorrect rubber grade - Abrasive particles in the liquid 	<p>Replace: All wearing parts (See general maintenance)</p> <p>If necessary: <ul style="list-style-type: none"> - Change rubber grade - Select stationary and rotating seal ring in Silicon Carbide/Silicon Carbide </p>
Leaking seals	Incorrect rubber grade	Change rubber grade

The pump is designed for cleaning in place (CIP). CIP = Cleaning In Place.
 Study the instructions carefully and pay special attention to the warnings!
 NaOH = Caustic Soda.
 HNO₃ = Nitric acid.

Step 1

Always handle lye and acid with great care.

Caustic danger!



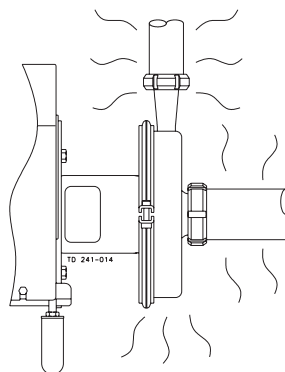
Always use
rubber gloves!



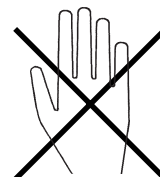
Always use
protective goggles!

Step 2

Never touch the pump or the pipelines when sterilizing.



**Burning
danger!**

**Step 3**

Examples of cleaning agents:

Use clean water, free from chlorides.

- 1% by weight NaOH at 70°C (158°F).

1 kg (2.2 lb) NaOH	+	100 l (26.4 gal) water	= Cleaning agent.
-----------------------	---	---------------------------	-------------------

2.2 l (0.6 gal) 33% NaOH	+	100 l (26.4 gal) water	= Cleaning agent.
-----------------------------	---	---------------------------	-------------------

- 0.5% by weight HNO₃ at 70°C (158°F).

0.7 l (0.2 gal) 53% HNO ₃	+	100 l (26.4 gal) water	= Cleaning agent.
---	---	---------------------------	-------------------

1. Avoid excessive concentration of the cleaning agent

⇒ **Dose gradually!**

2. Adjust the cleaning flow to the process

Sterilization of milk/viscous liquids

⇒ **Increase the cleaning flow!**

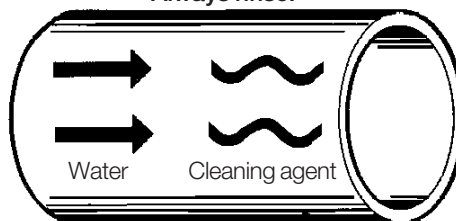
Step 4

Always rinse well with clean water after the cleaning.

NOTE!

The cleaning agents must be stored/disposed of in accordance with current rules/directives.

Always rinse!



Maintain the pump carefully. Study the instructions carefully and pay special attention to the warnings!
Always keep spare shaft seals and rubber seals in stock.
See separate motor instructions.

Step 1

Always read the technical data thoroughly (see chapter 5).



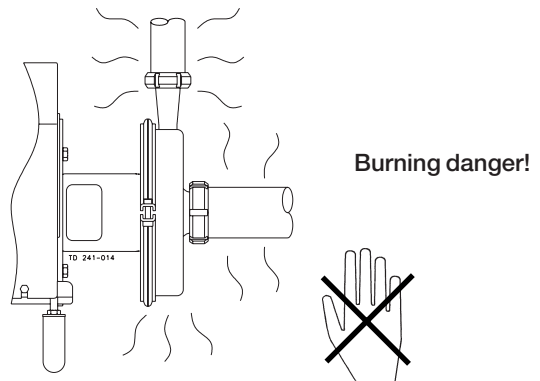
Always disconnect the power supply when servicing the pump.

NOTE!

All scrap must be stored/disposed of in accordance with current rules/directives.

Step 2

Never service the pump when it is hot.

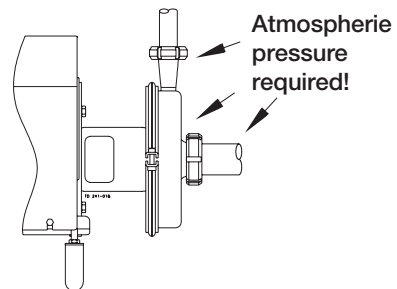
**Step 3**

Never service the pump with pump and pipelines under pressure.

CAUTION!

Fit the electrical connections correctly if they have been removed from the motor during service (see pre-use check).

Pay special attention to warnings!

**Step 4****Recommended spare parts:**

Service kits (see chapter 6).

Order Service Kits from Service kits list (see chapter 6).

Ordering spare parts

Contact the Sales Department.

Maintain the pump carefully. Study the instructions carefully.
 Always keep spare shaft seals and rubber seals in stock.
 See separate motor instructions.
 Check the pump for smooth operation after service.

	Shaft seal	Rubber seals	Motor bearings
Preventive maintenance	Replace after 12 months: (one-shift) Complete shaft seal	Replace when replacing the shaft seal	
Maintenance after leakage (leakage normally starts slowly)	Replace at the end of the day: Complete shaft seal	Replace when replacing the shaft seal	
Planned maintenance	<ul style="list-style-type: none"> - Regular inspection for leakage and smooth operation - Keep a record of the pump - Use the statistics for planning of inspections Replace after leakage: Complete shaft seal	Replace when replacing the shaft seal	Yearly inspection is recommended - Replace complete bearing if worn - Ensure that the bearing is axially locked (See motor instructions)
Lubrication	Before fitting Lubricate the O-rings with silicone grease or silicone oil	Before fitting Silicone grease or silicone oil	The bearings are permanently lubricated

Pre-use check

CAUTION!

Fit the electrical connections correctly if they have been removed from the motor during service.
 (See pre-use check).

Pay special attention to warnings!

1. Start and stop the motor momentarily.
2. Ensure that the pump operates smoothly.

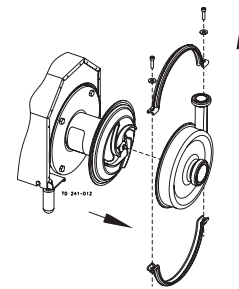
Study the instructions carefully. The items refer to the parts list and service kits section.

Handle scrap correctly.

★ : Relates to the shaft seal.

Step 1

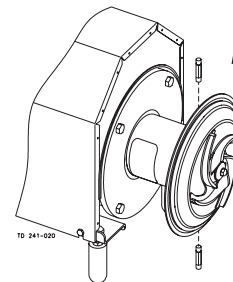
1. Remove screws, spring washers, clamps (55) and pump casing (29).



Step 2

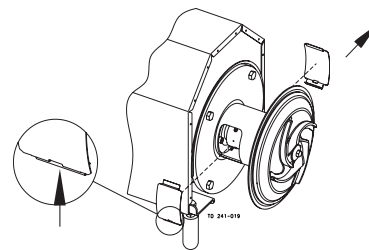
Flushed shaft seal:

Unscrew tubes (42) using a spanner.



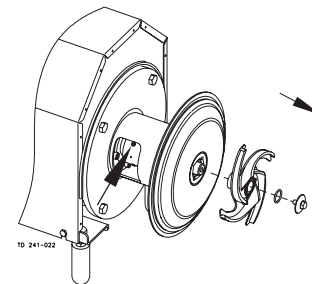
Step 3

Remove safety guards (22). This is easily done by Lifting out the safety guards, for example with a screwdriver.



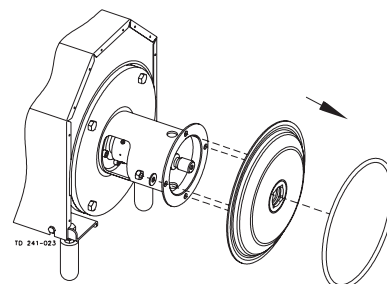
Step 4

1. Remove impeller screw (36).
2. Remove impeller (37). If necessary, loosen the impeller by tapping gently on the impeller vanes.
The shaft can be fixed with a screwdriver in the compression ring
3. Remove the O-ring (38) from the impeller.



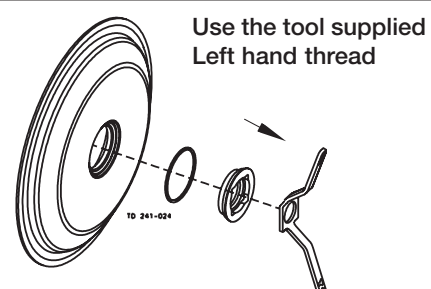
Step 5

1. Pull off the O-ring (26) from back plate (25).
2. Unscrew nuts (20) and remove washers (21) and the back plate.



Step 6

1. Remove the stationary seal ring (11).
2. Remove the O-ring (12) from stationary seal ring (11).



Study the instructions carefully. The items refer to the parts list and service kits section.

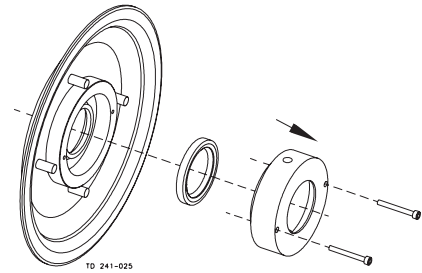
Handle scrap correctly.

★ : Relates to the shaft seal.

Step 7

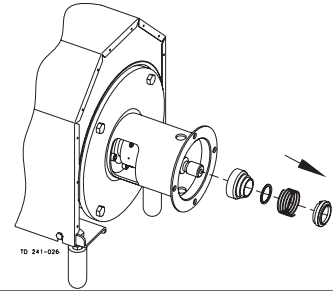
Flushed shaft seal:

1. Remove screws (41) and seal housing (40).
2. Pull out lip seal (43) from the seal housing.



Step 8

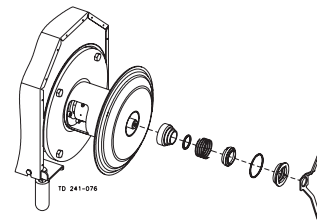
1. Remove the complete shaft seal from stub shaft (7).
2. Remove spring (13) and rotating seal ring (14) from the drive ring (10).



Alternative dismantling of single shaft seal - Front loading

1. Complete steps 1 through 4.
2. Remove stationary seal ring.
3. Remove o-ring (12) from stationary seal ring (11).
4. Remove complete shaft seal from stub shaft.
5. Remove spring (13) and rotating seal ring (14) from the drive ring (10).

Use the tool supplied
Left hand thread



Study the instructions carefully. The items refer to the parts list and service kits section.

Handle scrap correctly.

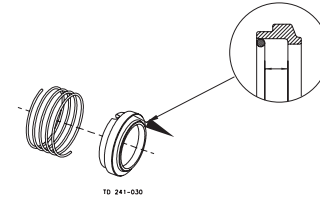
★ : Relates to the shaft seal.

Step 1

1. Remove spring (13).
2. Lubricate O-ring (15) and fit it in rotating seal ring (14)

NOTE!

Make sure that O-ring (15) has max. clearance from the sealing surface.

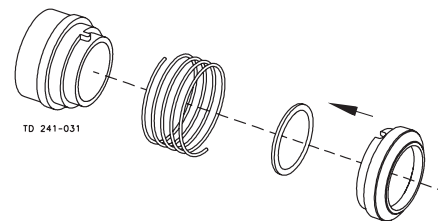


Step 2

1. Refit spring (13) on rotating seal ring (14).
2. Fit the spring and the rotating seal ring on drive ring (10).

CAUTION!

Ensure that the driver on the drive ring enters the notch in the rotating seal ring.

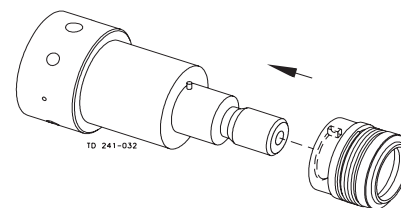


Step 3

Fit the complete shaft seal on stub shaft (7).

NOTE!

Make sure that connex pin on the stub shaft enters the notch in drive ring (10).

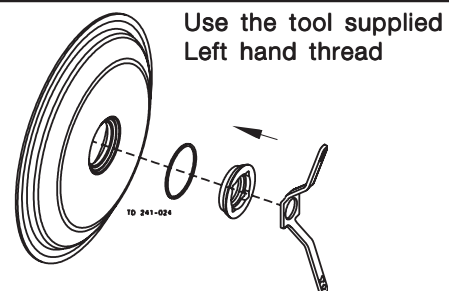


Step 4

1. Fit O-ring (12) on stationary seal ring (11) and lubricate.
2. Screw the stationary seal ring into back plate (25).

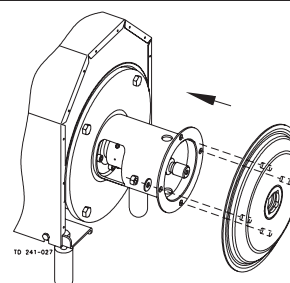
CAUTION!

Only tighten by hand to avoid deforming the stationary seal ring.



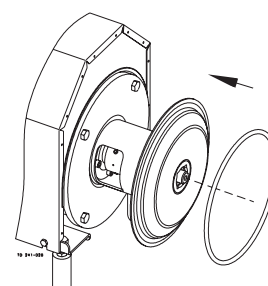
Step 5

1. Clean the sealing surfaces with contact cleaner before fitting back plate (25).
2. Carefully guide the back plate onto adaptor (16).
3. Fit washers (21) and nuts (22).



Step 6

Lubricate O-ring (26) and slide it onto back plate (25).



Study the instructions carefully.

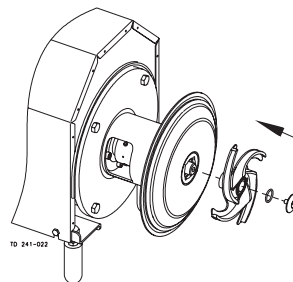
The items refer to the parts list and service kits section.

Handle scrap correctly.

***** : Relates to the shaft seal.

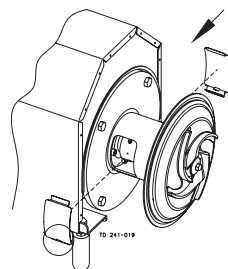
Step 7

1. Lubricate O-ring (38) and fit it in impeller (37).
2. Lubricate impeller hub with silicone grease or oil.
3. Screw the impeller onto stub shaft (7).
4. Fit impeller screw (39) and tighten.



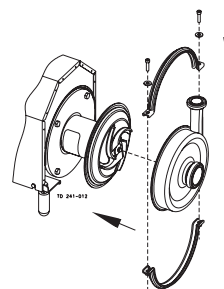
Step 8

Fit safety guards (22).



Step 9

1. Fit pump casing (29), clamps, spring washers and tighten screws (55).



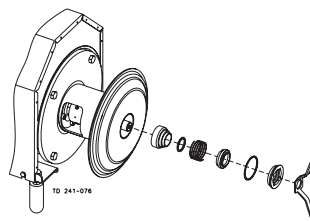
Alternative assembly of single shaft - front loading

1. Fit rotating seal ring (14) and spring (13) on drive ring (10).
2. Fit complete shaft seal on stub shaft.
3. Fit O-ring (12) onto stationary seal ring (11).
4. Fit stationary seal ring.
5. Complete steps 4 through 1.

CAUTION!

Ensure that the driver on the drive ring enters the notch in the rotating seal ring.

Use the tool supplied
Left hand thread



Study the instructions carefully.

The items refer to the parts list and service kits section.

Lubricate the rubber seals before fitting them.

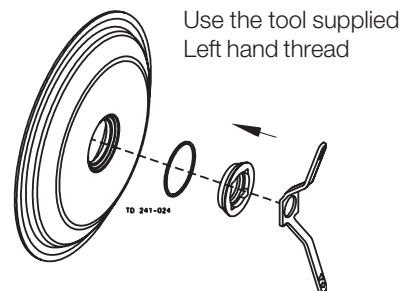
***** : Relates to the shaft seal.

Step 1

1. Fit O-ring (12) on stationary seal ring (11) and lubricate.
2. Screw the stationary seal ring into back plate (25).

CAUTION!

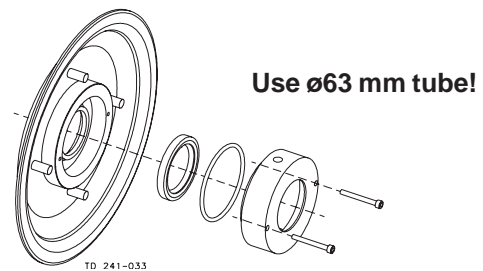
Only tighten by hand to avoid deforming the stationary seal ring.



Step 2

Flushed shaft seal:

1. Fit lip seal (43) in seal housing (40).
2. Lubricate O-ring (44) and slide onto the seal housing (40).
3. Fit the seal housing on back plate (25) and tighten screws (41).

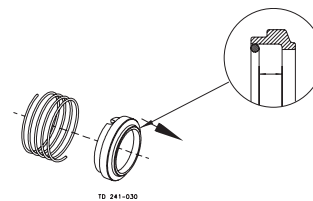


Step 3

1. Remove spring (13).
2. Lubricate O-ring (15) and fit it in rotating seal ring (14)

NOTE!

Make sure that O-ring (15) has max. clearance from the sealing surface.

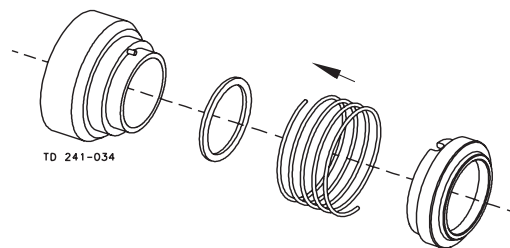


Step 4

1. Lubricate O-ring (45) and fit it in drive ring (10).
2. Fit spring (13) and rotating seal ring (14) on the drive ring.

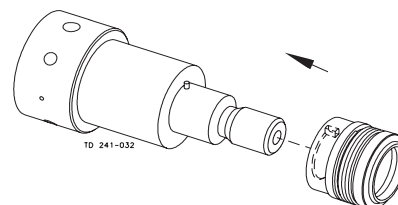
CAUTION!

Make sure that the driver on the drive ring enters the notch in the rotating seal ring.



Step 5

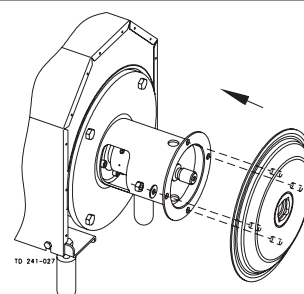
Fit complete shaft seal on stub shaft (7) so that connex pin on the stub shaft enters the notch in drive ring (10).



Step 6

1. Carefully guide back plate (25) onto adaptor (16).
2. Fit washers (21) and tighten nuts (20).

Note: Make sure that holes in the seal housing are in a vertical position



Study the instructions carefully.

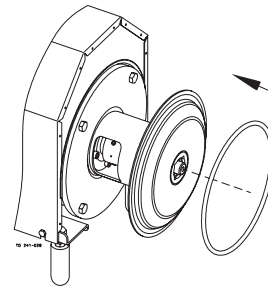
The items refer to the parts list and service kits section.

Lubricate the rubber seals before fitting them.

***** : Relates to the shaft seal.

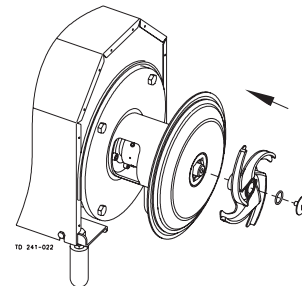
Step 7

Lubricate O-ring (26) and slide it onto back plate (25).



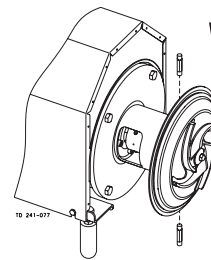
Step 8

1. Lubricate O-ring (38) and fit it in impeller (37).
2. Lubricate the impeller hub with silicone grease or oil.
3. Screw impeller (37) onto stub shaft (7).
4. Fit impeller screw (39) and tighten.



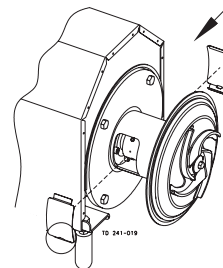
Step 9

1. Screw tubes (42) into seal housing (40).
2. Tighten with a spanner.



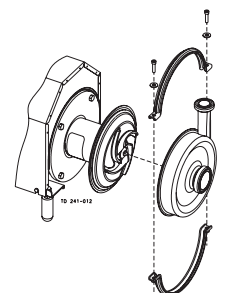
Step 10

Fit safety guards.



Step 11

1. Fit pump casing (29), clamps, spring washers and tighten screws (55).



Study the instructions carefully.

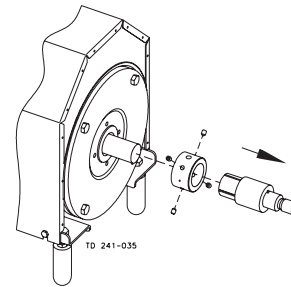
The items refer to the parts list and service kits section

Lubricate the rubber seals before fitting them.

***** : *Relates to the shaft seal.*

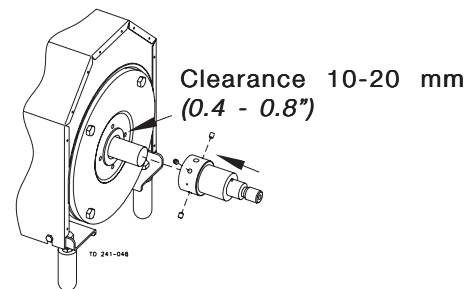
Step 1

1. Loosen screws (61).
2. Pull off stub shaft (7).



Step 2

1. Push stub shaft (7) onto the motor shaft.
2. Check that the clearance between the end of the stub shaft and the motor flange is 10-20 mm (0.4 - 0.8").

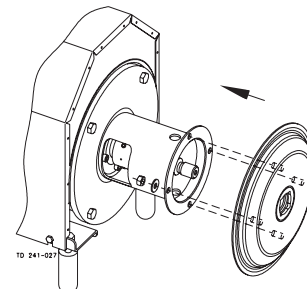


Step 3

1. Tighten screws (61) lightly and evenly.
2. Ensure that stub shaft (7) can be moved on the motor shaft.

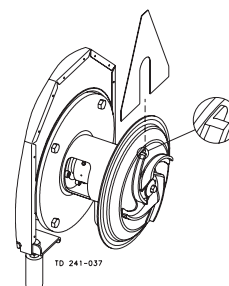
Step 4

1. Fit back plate (25), washers (20) and nuts (21) and tighten.



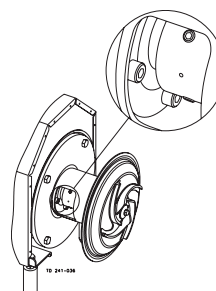
Step 5

1. Fit impeller (37) on stub shaft (7).
2. Ensure that the clearance between the impeller and back plate (25) is correct by using the tool supplied (1 mm (0.039")).



Step 6

1. Tighten screws (61) evenly to 18 Nm (13.3 lbf-ft).



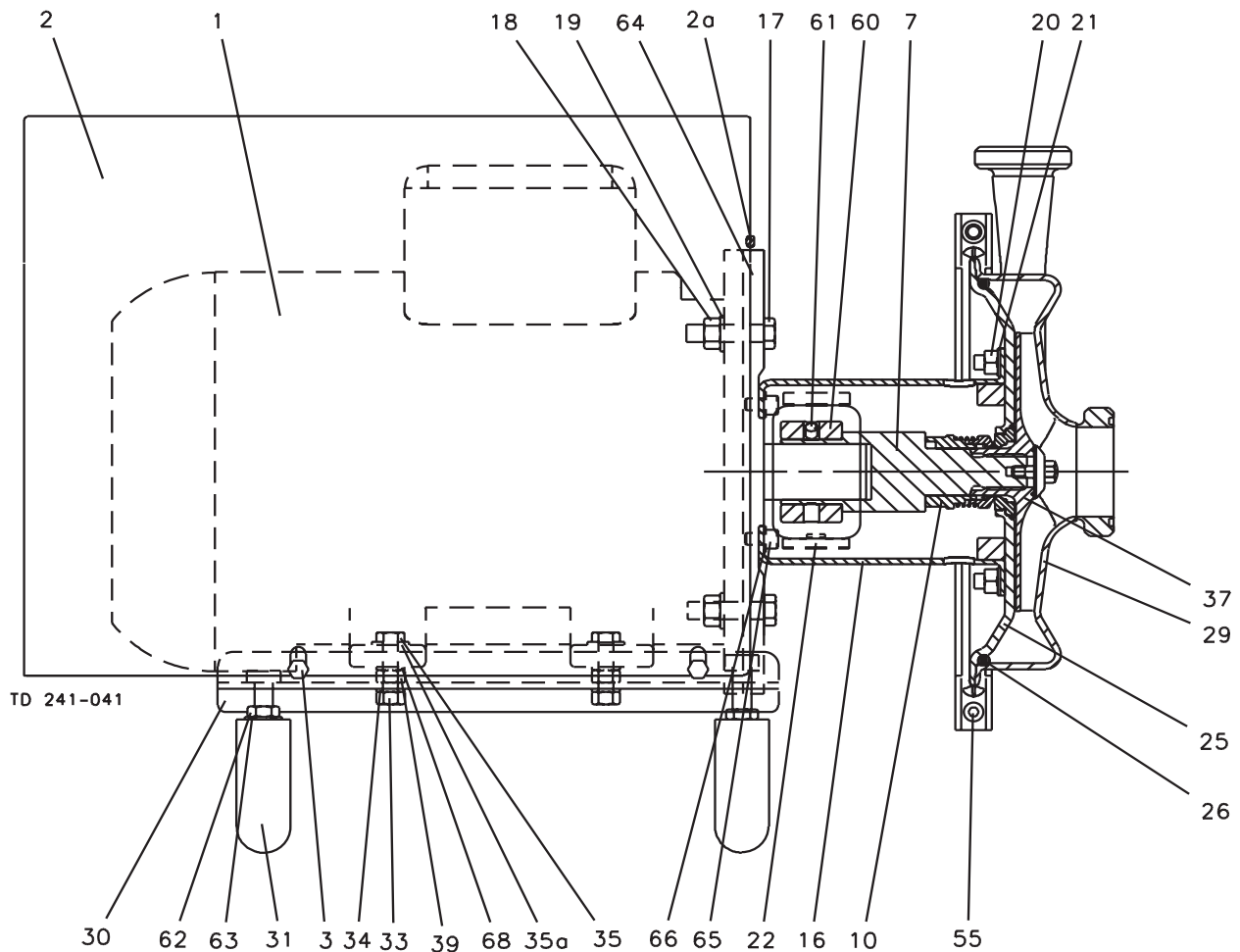
*It is important to observe the technical data during installation, operation and maintenance.
Inform the personnel about the technical data.*

Data			
Max. inlet pressure	400 kPa (4 bar) (58 psi)		
Temperature range	-10° C to +120° C (14°F to 248°F) (EPDM)		
Materials			
Product wetted steel parts	AISI 316L		
Other steel parts	AISI 304		
Finish	Semi-bright		
Product wetted seals	EPDM (standard)		
Other O-rings	EPDM		
Alternative seals	Nitrile (NBR), Fluorinated rubber (FPM) and FEP		
Shaft seal			
Seal types	External single or flushed		
Max. water pressure (flushed seal)	Normally atmospheric (max. 1 bar) (14.5 psi)		
Water consumption (flushed seal)	0.25 - 0.5 l/min. (0.07 - 0.13 gpm)		
Material, stationary seal ring (ROW)	Acid resistant steel with sealing surface of Silicon Carbide		
Material, rotating seal ring	Carbon (standard) or Silicon Carbide		
Material, O-rings	EPDM (standard)		
Alternative material, O-rings	Nitrile (NBR), Fluorinated rubber (FPM) and FEP		
Motor			
Foot-flanged motor acc. to IEC metric standard			
2 poles = 3000/3600 rpm. at 50/60 Hz			
IP55 (drain hole with labyrinth plug), insulation class F			
US: NEMA C-face Foot Mounted			
2 Poles = 3600 rpm at 60 Hz			
4 Poles = 1800 rpm at 60 Hz			
Voltage and frequency (US)	3 phase, 60 Hz 230/460		
Voltage and frequency (standard) (ROW)	3~, 50 Hz, 220-240VΔ/380-420VY	≤ 4 kW	
	3~, 60 Hz, 250-280VΔ/440-480VY	≤ 4.6 kW	
	3~, 50 Hz, 380-420VΔ/660-690VY	≥ 5.5 kW	
	3~, 60 Hz, 440-480VΔ	≥ 6.3 kW	
Motor sizes (Hp), 60 Hz	1.0, 1.5, 2, 3, 5 ,7.5, 10, 15, 20, 25, 30		
Motor sizes (kW), 50 Hz	1.1, 1.5, 2.2, 3.0, 4.0, 5.5, 7.5, 11.0, 15.0, 18.5, 22.0		
Motor sizes (kW), 60 Hz	1.3, 1.75, 2.5, 3.5, 4.6, 6.3, 8.6, 12.5, 17.0, 21.0, 25.0		
Max. weight for SolidC pumps	SolidC-1	63 kg (140 lbs)	
	SolidC-2	140 kg (310 lbs)	
	SolidC-3	171 kg (375 lbs)	
	SolidC-4	170 kg (375 lbs)	

For further information - see PD-sheet.

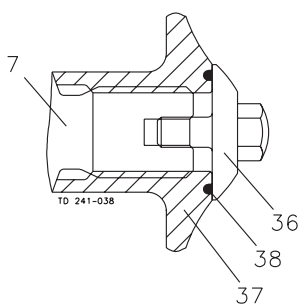
The drawing shows SolidC pump, sanitary version.

The items refer to the parts lists in the following sections

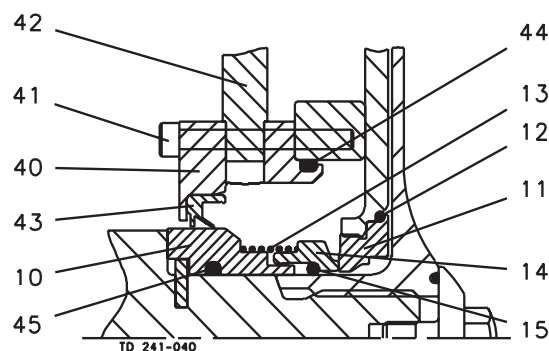


NOTE! US pumps have no shroud. US legs are shown on the exploded drawings, sections 6.2, 6.3, 6.4 and 6.5

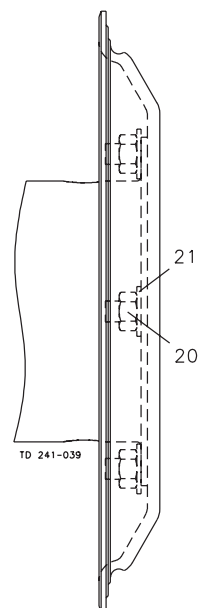
For further information see parts list sections 6.2, 6.3, 6.4 and 6.5



Impeller screw



Flushed shaft seal



Fitting of back plate

For further information see parts list sections 6.2, 6.3, 6.4 and 6.5

The drawing and the parts list include all items.

Parts List

Pos.	Qty.	Denomination
1	1	Motor
2	1	Shroud (not US)
2a	1	Edge list for shroud (included in pos. 2) (not US)
3	4	Screw for shroud (not US)
7	1	Shaft
10	1	Drive ring
16	1	Adaptor
17	4	Screw for motorflange
18	4	Nut for motorflange
19	4	Washer for motorflange
20	4	Nut for backplate
21	4	Washer for backplate
22	2	Safety guard
25	1	Backplate
26□○	1	O-ring for casing
29	1	Pump casing
36	1	Impeller screw
37	1	Impeller
38□○	1	O-ring for impeller screw
55	1	Clamp set
60	1	Compression ring
61	4	Screw for compression ring
64	1	Motor flange
65	4	Screw for adaptor
66	4	Spring washer for adaptor
67	1	Retaining ring

Legs

30	2	Bracket
31	4	Legs
33	4	Nut for legs
34	4	Spring washer for legs
35	4	Screw for legs
35a	4	Washer for legs
39	4	Nut (3 kw)
62	4	Nut for legs
63	4	Washer for legs
68	4	Washer for legs (3 kw)

Legs (US)

70	2	Bracket
72	4	Legs
71	4	Allen screws

Accessories

1	Tool for seal
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Parts for Flushed Shaft Seal

40	1	Seal housing
42	2	Tube
41	2	Screw for seal housing

Pos. Qty. Denomination

□ Single shaft seal

11	1	Stationary seal ring, SiC
12	1	O-ring, EPDM
13	1	Spring
14	1	Rotating seal ring, Carbon
15	1	O-ring, EPDM

○ Flushed shaft seal

11	1	Stationary seal ring, SiC
12	1	O-ring, EPDM
13	1	Spring
14	1	Rotating seal ring, Carbon
15	1	O-ring, EPDM
44	1	O-ring for seal housing EPDM
45	1	O-ring for drive ring
43	1	Lip seal

Service kit for single shaft seal

□	Service kit, EPDM	9611-92-2454
□	Service kit, NBR	9611-92-2455
□	Service kit, FPM	9611-92-2456
□	Service kit, FEP	9611-92-2457

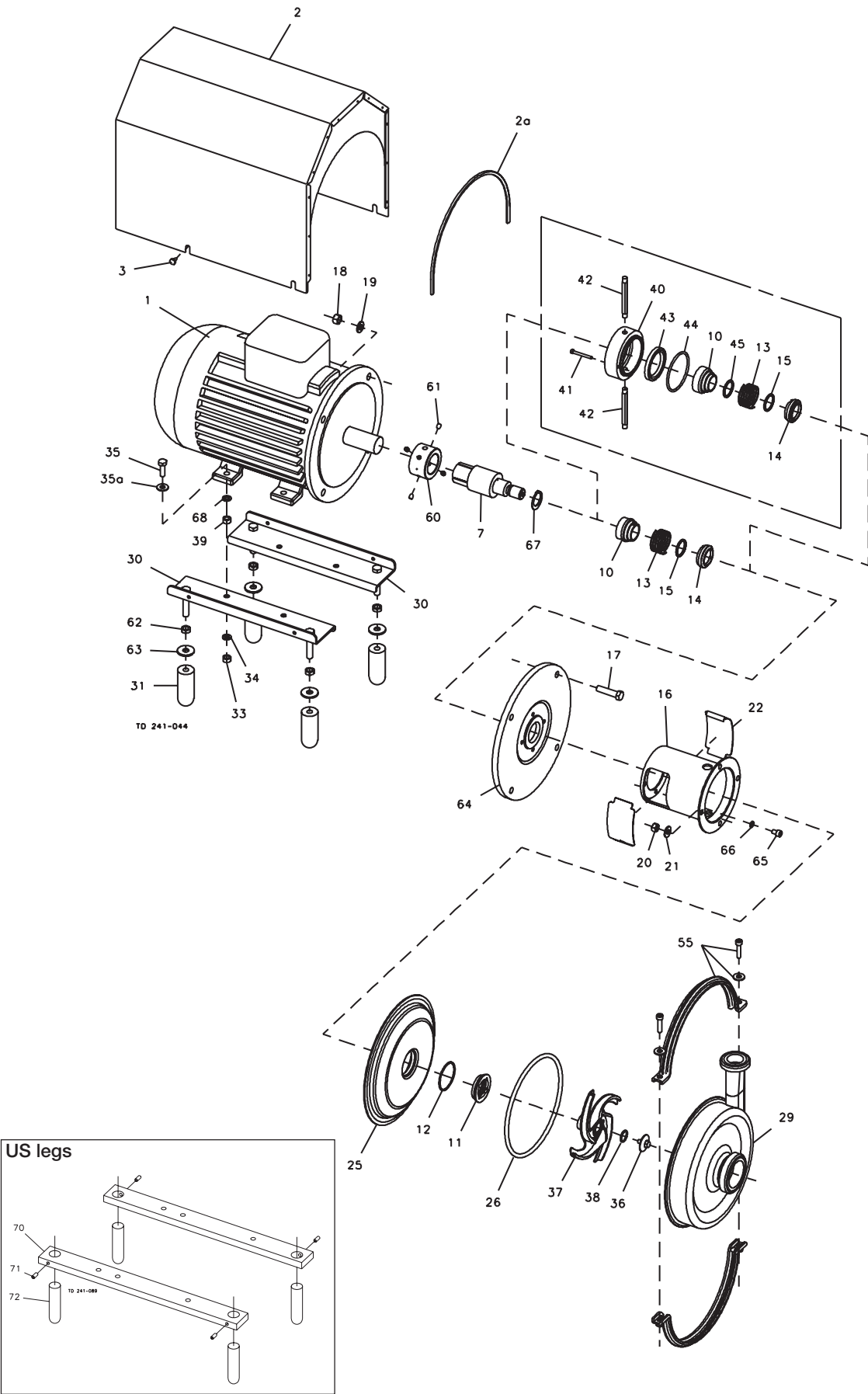
Service kit for flushed shaft seal

○	Service kit, EPDM	9611-92-2462
○	Service kit, NBR	9611-92-2463
○	Service kit, FPM	9611-92-2464
○	Service kit, FEP	9611-92-2465

Recommended Spare parts: Service kits

Conversion kit, single to flushed shaft seal 9611-92-2470

*This page shows an exploded drawing of SolidC-1.
The drawing includes all items of the pump.*



The drawing and the parts list include all items.

Parts List

Pos.	Qty.	Denomination
1	1	Motor
2	1	Shroud (not US)
2a	1	Edge list for shroud (included in pos. 2) (not US)
3	4	Screw for shroud (not US)
7	1	Shaft
10	1	Drive ring
16	1	Adaptor
17	4	Screw for motorflange
18	4	Nut for motorflange
19	4	Washer for motorflange
20	4	Nut for backplate
21	4	Washer for backplate
22	2	Safety guard
25	1	Backplate
26 <input type="checkbox"/> <input type="radio"/>	1	O-ring for casing
29	1	Pump casing
36	1	Impeller screw
37	1	Impeller
38 <input type="checkbox"/> <input type="radio"/>	1	O-ring for impeller screw
55	1	Clamp upper
60	1	Compression ring
61	4	Screw for compression ring
64	1	Motor flange
65	4	Screw for adaptor
66	4	Spring washer for adaptor

Legs

30	2	Bracket
31	4	Legs
33	4	Nut for legs
34	4	Spring washer for legs
35	4	Screw for legs
35a	4	Washer for legs
39	4	Nut (3 kw)
62	4	Nut for legs
63	4	Washer for legs
68	4	Washer for legs (3 kw)

Legs (US)

70	2	Bracket
72	4	Legs
71	4	Allen screws

Accessories

1	Tool for seal
---	---------------

Parts for Flushed Shaft Seal

40	1	Seal housing
42	2	Tube
41	2	Screw for seal housing

Pos. Qty. Denomination

☐ Single shaft seal

11	1	Stationary seal ring, SiC
12	1	O-ring, EPDM
13	1	Spring
14	1	Rotating seal ring, Carbon
15	1	O-ring, EPDM

☐ Flushed shaft seal

11	1	Stationary seal ring, SiC
12	1	O-ring, EPDM
13	1	Spring
14	1	Rotating seal ring, Carbon
15	1	O-ring, EPDM
44	1	O-ring for seal housing EPDM
45	1	O-ring for drive ring
43	1	Lip seal

Service kit for single shaft seal

<input type="checkbox"/>	Service kit, EPDM	9611-92-2471
<input type="checkbox"/>	Service kit, NBR	9611-92-2472
<input type="checkbox"/>	Service kit, FPM	9611-92-2473
<input type="checkbox"/>	Service kit, FEP	9611-92-2474

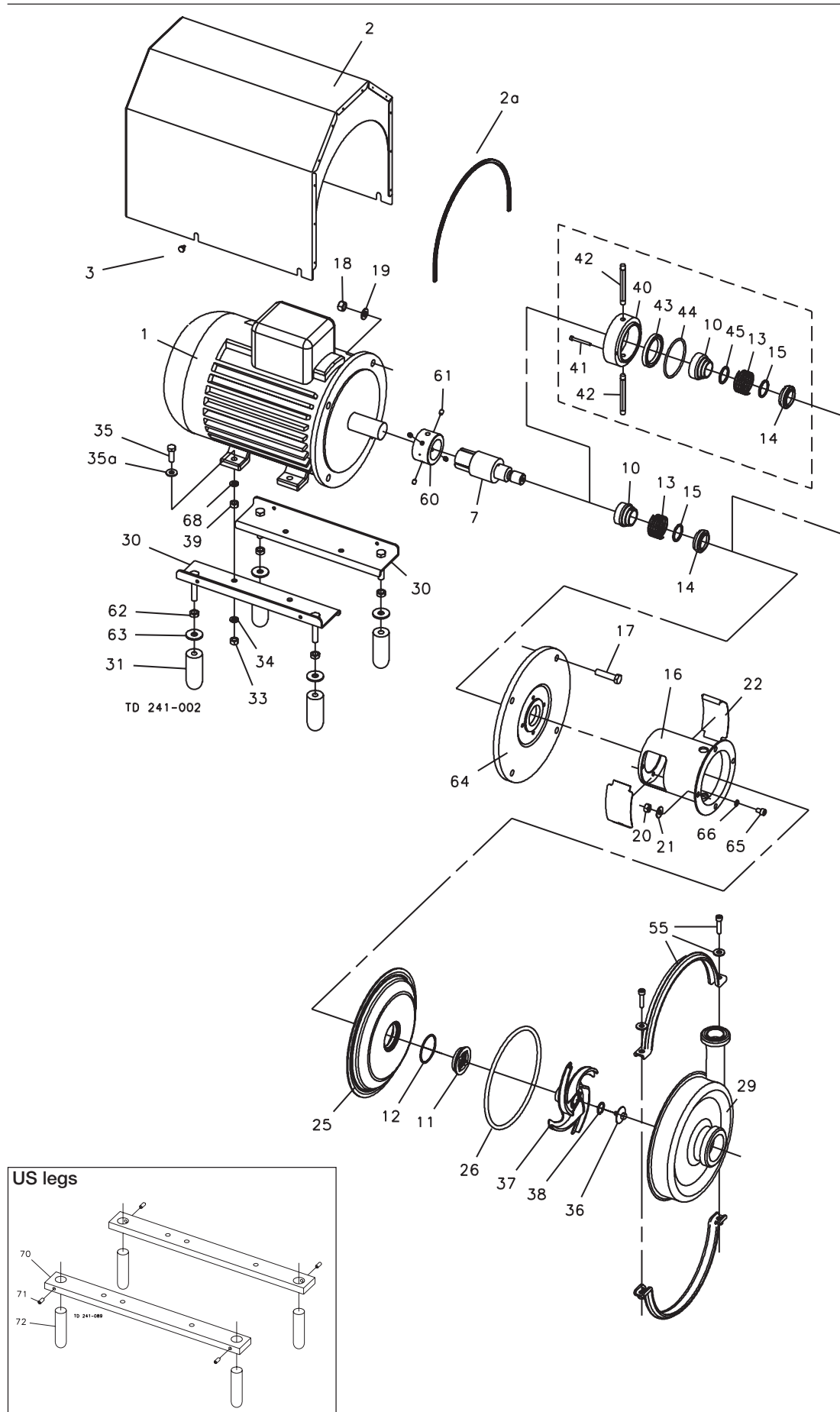
Service kit for flushed shaft seal

<input type="radio"/>	Service kit, EPDM	9611-92-2479
<input type="radio"/>	Service kit, NBR	9611-92-2480
<input type="radio"/>	Service kit, FPM	9611-92-2481
<input type="radio"/>	Service kit, FEP	9611-92-2482

Recommended Spare parts: Service kit





Conversion kit, single to flushed shaft seal 9611-92-2470

*This page shows an exploded drawing of SolidC-2.
The drawing includes all items of the pump.*



The drawing and the parts list include all items.

Parts List

Pos.	Qty.	Denomination
1	1	Motor
2	1	Shroud
2a	1	Edge list for shroud (included in pos. 2)
3	4	Screw for shroud
7	1	Shaft
10	1	Drive ring
16	1	Adaptor
17	4	Screw for motorflange
18	4	Nut for motorflange
19	4	Washer for motorflange
20	4	Nut for backplate
21	4	Washer for backplate
22	2	Safety guard
25	1	Backplate
26  	1	O-ring for casing
29	1	Pump casing
36	1	Impeller screw
37	1	Impeller
38  	1	O-ring for impeller screw
55	1	Clamp set
60	1	Compression ring
61	4	Screw for compression ring
64	1	Motor flange
65	4	Screw for adaptor
66	4	Spring washer for adaptor

Legs

30	2	Bracket
31	4	Legs
33	4	Nut for legs
34	4	Spring washer for legs
35	4	Screw for legs
35a	4	Washer for legs
62	4	Nut for legs
63	4	Washer for legs

Legs (US)

70	2	Bracket
72	4	Legs
71	4	Allen screws

Accessories

1	1	Tool for seal
---	---	---------------

Parts for Flushed Shaft Seal

40	1	Seal housing
42	2	Tube
41	2	Screw for seal housing

Pos. Qty. Denomination

Single shaft seal

11	1	Stationary seal ring, SiC
12	1	O-ring, EPDM
13	1	Spring
14	1	Rotating seal ring, Carbon
15	1	O-ring, EPDM

Flushed shaft seal

11	1	Stationary seal ring, SiC
12	1	O-ring, EPDM
13	1	Spring
14	1	Rotating seal ring, Carbon
15	1	O-ring, EPDM
44	1	O-ring for seal housing EPDM
45	1	O-ring for drive ring
43	1	Lip seal

Service kit for single shaft seal

	Service kit, EPDM	9611-92-2487
	Service kit, NBR	9611-92-2488
	Service kit, FPM	9611-92-2489
	Service kit, FEP	9611-92-2490

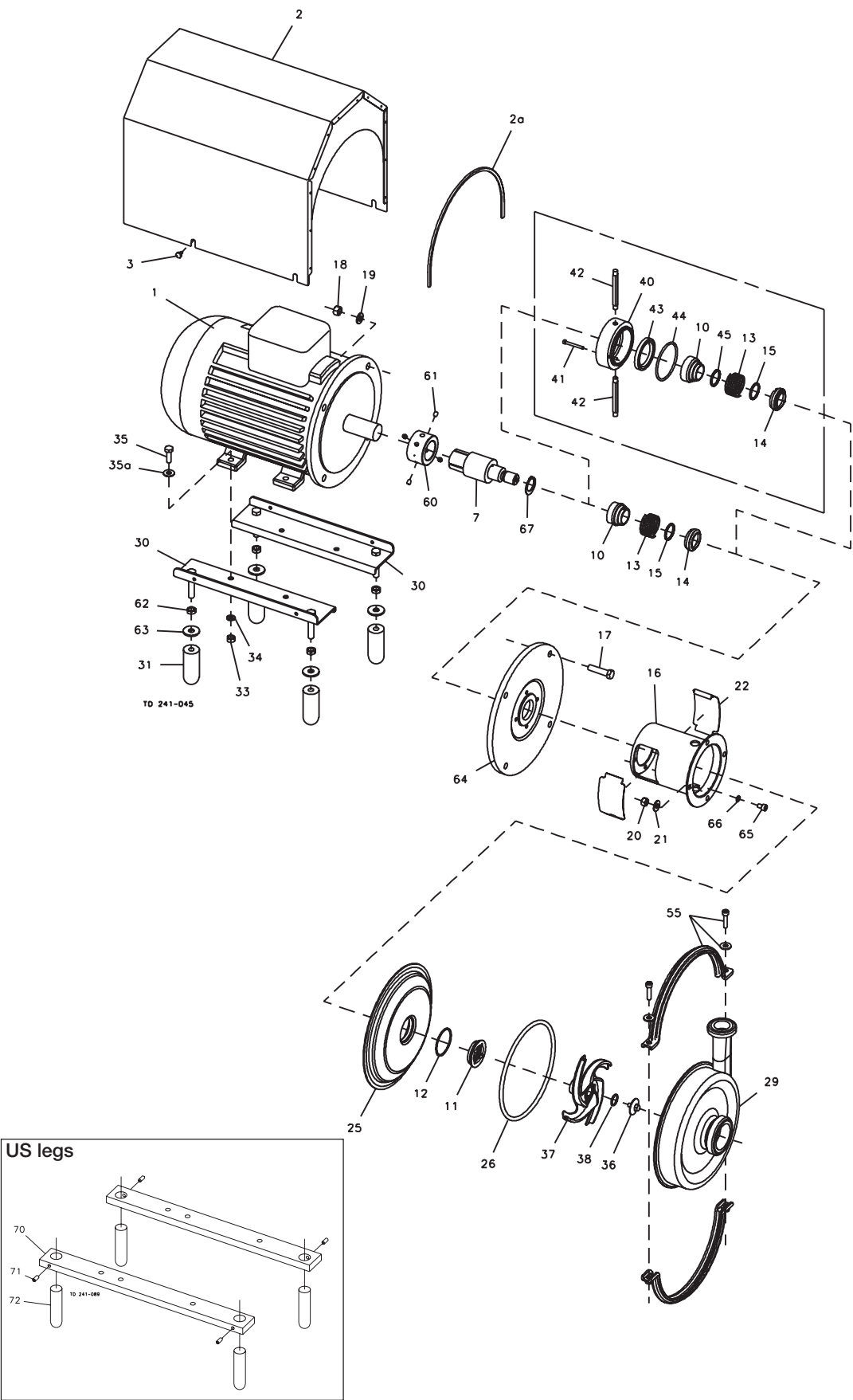
Service kit for flushed shaft seal

	Service kit, EPDM	9611-92-2495
	Service kit, NBR	9611-92-2496
	Service kit, FPM	9611-92-2497
	Service kit, FEP	9611-92-2498

Recommended Spare Parts :Service kits





Conversion kit, single to flushed shaft seal 9611-92-2470

*This page shows an exploded drawing of SolidC-3.
The drawing includes all items of the pump.*



The drawing and the parts list include all items.

Parts List

Pos.	Qty.	Denomination
1	1	Motor
2	1	Shroud
2a	1	Edge list for shroud (included in pos. 2)
3	4	Screw for shroud
7	1	Shaft
10	1	Drive ring
16	1	Adaptor
17	4	Screw for motorflange
18	4	Nut for motorflange
19	4	Washer for motorflange
20	4	Nut for backplate
21	4	Washer for backplate
22	2	Safety guard
25	1	Backplate
26  	1	O-ring for casing
29	1	Pump casing
36	1	Impeller screw
37	1	Impeller
38  	1	O-ring for impeller screw
55	1	Clamp set
60	1	Compression ring
61	4	Screw for comp. Ring
64	1	Motor flange
65	4	Screw for adaptor
66	4	Spring washer for adaptor

Legs

30	2	Bracket
31	4	Legs
33	4	Nut for legs
34	4	Spring washer for legs
35	4	Screw for legs
35a	4	Washer for legs
62	4	Nut for legs
63	4	Washer for legs

Legs (US)

70	2	Bracket
72	4	Legs
71	4	Allen screws

Accessories

1	Tool for seal
---	---------------

Parts for Flushed Shaft Seal

1	Seal housing
2	Tube
2	Screw for seal housing

Pos. Qty. Denomination

Single shaft seal

11	1	Stationary seal ring, SiC
12	1	O-ring, EPDM
13	1	Spring
14	1	Rotating seal ring, Carbon
15	1	O-ring, EPDM

Flushed shaft seal

11	1	Stationary seal ring, SiC
12	1	O-ring, EPDM
13	1	Spring
14	1	Rotating seal ring, Carbon
15	1	O-ring, EPDM
44	1	O-ring for seal housing EPDM
45	1	O-ring for drive ring
43	1	Lip seal

Service kit for single shaft seal

	Service kit, EPDM	9611-92-2503
	Service kit, NBR	9611-92-2504
	Service kit, FPM	9611-92-2505
	Service kit, FEP	9611-92-2506

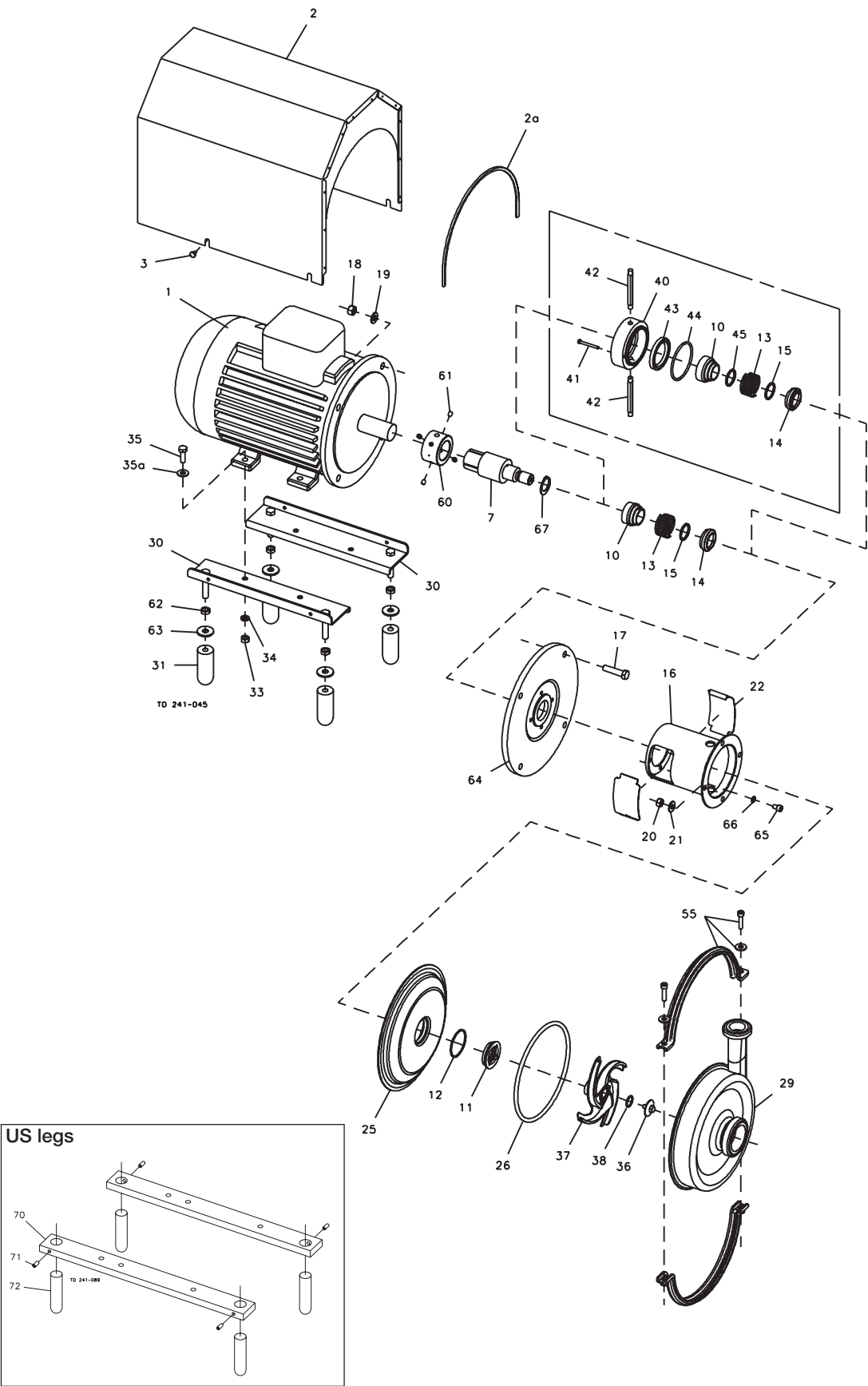
Service kit for flushed shaft seal

	Service kit, EPDM	9611-92-2511
	Service kit, NBR	9611-92-2512
	Service kit, FPM	9611-92-2513
	Service kit, FEP	9611-92-2514

Recommended Spare Parts: Service kits

Conversion kit, single to flushed shaft seal 9611-92-2470

*This page shows an exploded drawing of SolidC-4.
The drawing includes all items of the pump.*



How to contact Alfa Laval

Contact details for all countries are continually updated on our website. Please visit www.alfalaval.com to access the information direct.