



Read all of the maintenance instructions and safety procedures before proceeding.

1	1000 SERIES HOUSING	1
2	1000 SERIES SHAFT	1
3	1000 SERIES HOUSING FLANGE	1
4	BALL BEARING PLUG	1 SET
5*	BALL BEARING	X
6*	O-RING	2
7*	SEAL RING	1
8*	INTERNAL SCRAPER	1
9*	DRAIN O-RING	1
10	BOLTS	X
11	GREASE RING	1
12	GREASE RELIEF VALVE	1

\* Spare parts set

1000 Series swivel joint design allows seals to be changed without removing the ball bearings. No need to disassemble the joint from the system. If only seal ring change is needed, apply steps 1-13.

1. Close inlet and outlet valves and wait for all the medium in the system to be drained completely. If hot medium is used, wait system to be cooled down to normal temperature. If ball bearings need to be changed, skip to step 14.

2-Remove hex bolts(9) with an appropriate wrench and separate housing flange(3) from the housing(1).

3-With an appropriate tool, take out the drainage seal(8) from the housing(1). Be careful not to damage drainage seal chamber.

4-Take out the seal ring(7) and internal scraper(8) from the seal chamber.

5-Clean all sealing surfaces of the housing and housing flange. Pay attention not to leave any dirt, burr, etc. inside the sealing chamber.

6-Control drainage o-ring(7), if necessary replace it with new one. Apply grease on drainage o-ring and place it inside the drain seal chamber.

7-Apply grease to a new seal ring(7) and place it inside sealing chamber. Assemble internal scraper to the slot of the shaft.

8-Apply grease to the seal ring(7) and drainage seal(8).

9-When assembling the housing flange(3) to the housing(1), be careful not to damage or dislocate seal ring and drainage seal.

10-Tighten bolts(9) of the housing flange correspondingly

11-Control rotation of the swivel joint, if necessary apply grease to the ball bearings.

12-If there is a problem with the rotation of the swivel joint, skip to step 14 and apply all steps.

13-Open inlet and outlet valves, check if any leaking occurs from the drain port. If there is no leakage, the swivel joint is ready to be placed back in service.



# 1000 SERIES DISASSEMBLY & MAINTENANCE INSTRUCTIONS



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14. Disassemble the swivel joint from the system with an appropriate tool according to the connection style (threaded/ welded / flanged) of the joint.

15. Now the joint is ready for maintenance.

16. Put the swivel joint on a clean table on to the shaft side of the joint.

17. First of all, take out the grease ring(10) and grease relief valve(11).

18. Remove hex bolts(9) with an appropriate wrench and separate housing flange(3) from the housing(1).

19. With an appropriate tool, take out the drainage seal(8) from the housing(1). Be careful not to damage drainage seal chamber.

20. Take out the seal ring(7) and internal scraper(8) from the seal chamber.



21. Remove ball plug set(4) with an appropriate tool. Be careful not to damage edges of the ball plugs when taking out from the housing.

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22. Remove all grease inside ball bearing chamber with a degreaser.

23. Rotate the shaft(2) and take out all ball bearings(5).



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24. After all ball bearings are removed, take out the shaft from the housing.



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25. Remove ball bearing o-rings(6) from the shaft.

26. Clean all parts carefully. Pay attention not to leave any dirt, burr, etc. inside the sealing chamber.

27. Control ball bearings o-rings(6), if necessary replace them with new ones.

28. Be careful not to damage when assembling ball bearing o-rings onto the shaft.

29. After applying grease onto the ball bearing o-rings, while rotating the shaft, push the shaft into the housing until ball bearing races are aligned.



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30. Replace all deformed ball bearings(5) with new ones and place them all inside the bearing chamber.

31. Align ball plug(4.1) to the ball bearings and place it inside the housing and fix it with the plug stopper(4.2).



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32. Control rotation of the swivel joint, if there is any problem, take out all ball bearings and control bearing chambers.

33. Place swivel joint on the table onto the shaft side.

34. Control drainage o-ring(7), if necessary replace it with new one. Apply grease on drainage o-ring and place it inside the drain seal chamber.

35. Apply grease to a new seal ring(7) and place it inside sealing chamber.

36. Assemble internal scraper(8) to the slot of the shaft.

37. When assembling the housing flange(3) to the housing(1), be careful not to damage or dislocate seal ring and drainage seal.

38. Tighten bolts of the housing flange correspondingly

39. Assemble grease relief valve(11) and grease ring(10). Apply enough grease to the ball bearings.

40. Swivel joint is ready to be assembled back in system.

41. Assemble swivel joint to the system.

42. Open inlet and outlet valves, check if any leaking occurs from the drain port. If there is no leakage, the swivel joint is ready to be placed back in service.