

## VNC-A4VG Coupling Swivel for Loading Arm

90° swivel with manoeuvring handle for use on coupler end of bottom-loading arm.

### OPERATION

A single-plane swivel allowing 360° movement in the horizontal plane.

### Key Features

- The swivel typically bolts onto the bottom of the loading arm drop hose with the coupler (and spool piece if required) on the outlet flange.
- The swivel provides necessary movement and the handle gives the operator necessary leverage to manoeuvre into position.



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### Dismantle

Remove retainer plug and rotate the swivel with the hole pointing downwards until all ball-bearings have dropped out. The male of the swivel can then be removed complete with the needle bearings and seals

### Adjustment

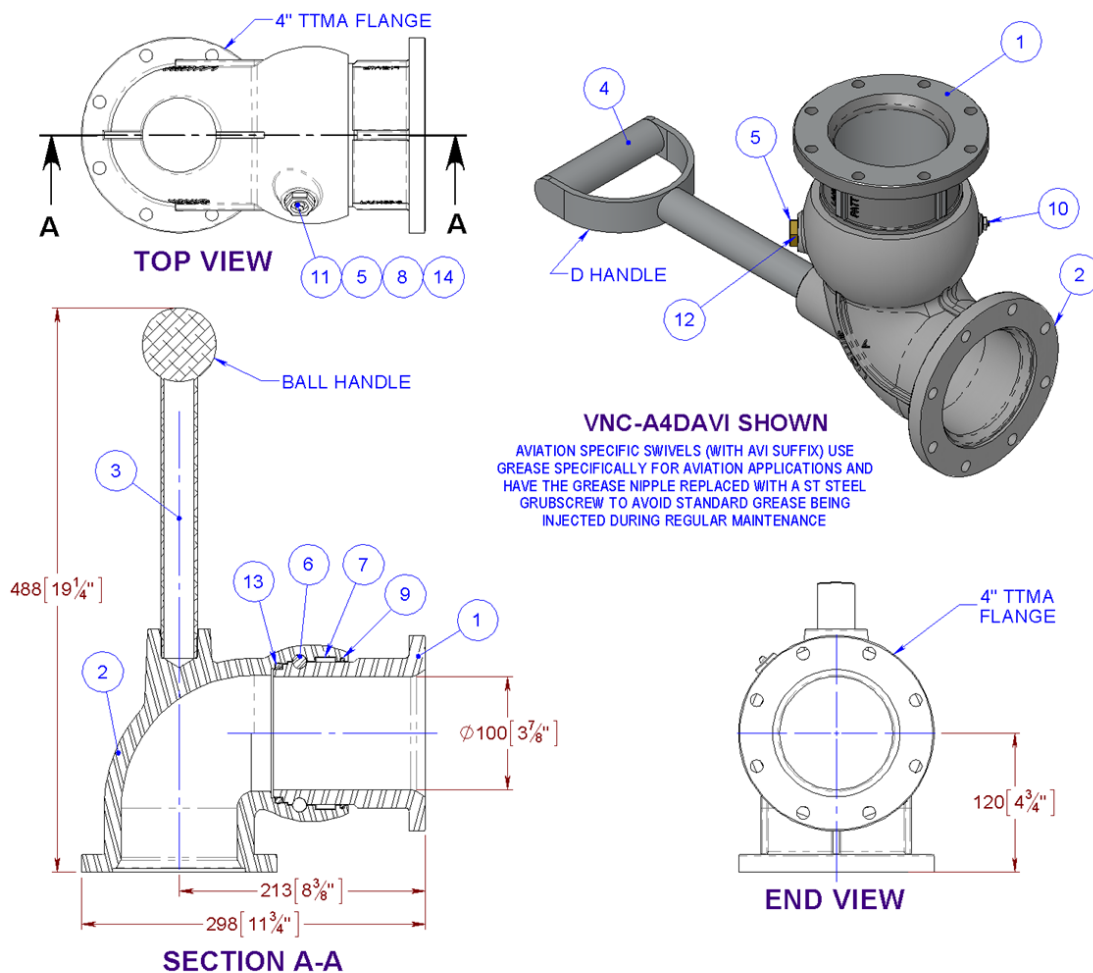
- None.
- Grease at three-monthly intervals with recommended grease.
- See Loading Arm Installation and Maintenance Manual for full details.

### Specifications

|                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
|------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Mounting</b>              | Mounting Flanges are 100mm (4") TTMA pattern.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| <b>Technical Data</b>        | <ul style="list-style-type: none"> <li>• All aluminium construction (heat treated).</li> <li>• Ball and needle rolling elements for optimum axial and radial load bearing with minimum friction.</li> <li>• Grease nipple one side with relief valve mounted opposite for efficient removal of old grease and debris.</li> <li>• Dual o-rings for product seal and dust seal respectively.</li> <li>• Viton GFLT grade o-rings (* Teflon or other special seals available on request).</li> <li>• Brass ball retainer.</li> <li>• Handle can be ball-type or D-handle.</li> </ul> |
| <b>Working pressure</b>      | 1,000 kPa (145 PSI)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| <b>Test pressure</b>         | 1,500 kPa (218 PSI)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| <b>Weight</b>                | 60 kg (132lb)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| <b>Operating temperature</b> | -20° to +80°C (-4° to +176°F) for EPDM & Viton B70 grade<br>-40° to +60°C (-40° to +140°F) for Viton GFLT grade                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| <b>Associated Equipment</b>  | <ul style="list-style-type: none"> <li>• Straight spool piece 200mm (8") long VSS-4.</li> <li>• 15° angled spool piece 200mm (8") long VSA-4.</li> <li>• LBV450(L) Butterfly Valve to suit 4" TTMA flange</li> <li>• API bottom loading coupler API800 series</li> </ul>                                                                                                                                                                                                                                                                                                          |

**\* Note:** The nature of Teflon is that it is unyielding but easily scratched; therefore the slightest damage can lead to weeps particularly where clamping force is provided by a spring which is necessarily limited in force. However the use of Teflon cannot be avoided because of its outstanding chemical resistance. Liquip guarantee the sealing of all new products and test all production prior to dispatch. Following installation of the equipment by the Purchaser it is essential that the valve be kept perfectly clean, any test liquids be perfectly clean and no tools be allowed to touch the Teflon seals. It is not uncommon for valves to exhibit small weeps once in service with commercial-quality liquids.

# VNC-A4VG Coupling Swivel for Loading Arm



| ITEM | PART No. | DESCRIPTION                | VNC-A4VG | VNC-A4DVG | VNC-A4AVI | VNC-A4DAVI | VNC-A4T | VNC-A4E | MATERIAL         |
|------|----------|----------------------------|----------|-----------|-----------|------------|---------|---------|------------------|
| 1    | LAN400-8 | STRAIGHT MALE SWIVEL 100NB | 1        | 1         | 1         | 1          | 1       | 1       | ALUMINIUM        |
| 2    | LAN400-6 | ELBOW FEMALE TO 100mm TTMA | 1        | 1         | 1         | 1          | 1       | 1       | ALUMINIUM        |
| 3    | LA400-14 | BALL HANDLE ASSEMBLY       | 1        | -         | 1         | -          | 1       | 1       | ALUMINIUM        |
| 4    | LA400-13 | HANDLE D-STYLE             | -        | 1         | -         | 1          | -       | -       | ALUMINIUM        |
| 5    | LAN400-9 | PLUG                       | 1        | 1         | 1         | 1          | 1       | 1       | BRASS            |
| 6    | 2334     | BALL BEARING               | 32       | 32        | 32        | 32         | 32      | 32      | BEARING STEEL    |
| 7    | 4531     | NEEDLE ROLLER              | 100      | 100       | 100       | 100        | 100     | 100     | BEARING STEEL    |
| 8    | 0885     | WASHER FIBRE               | 1        | 1         | 1         | 1          | 1       | 1       | VULCANISED FIBRE |
| 9    | 6080     | O-RING                     | 1        | 1         | 1         | 1          | 1       | 1       | VITON B70        |
| 10   | 1525     | NIPPLE GREASE RELIEF       | 1        | 1         | 1         | 1          | 1       | 1       | Z/P STEEL        |
| 11   | 0481     | NIPPLE GREASE STRAIGHT     | 1        | 1         | -         | -          | 1       | 1       | Z/P STEEL        |
| 12   | 6696     | GRUBSCREW CUP POINT        | -        | -         | 1         | 1          | -       | -       | ST STEEL         |
| 13   | 0126VG   | O-RING                     | 1        | 1         | -         | -          | -       | -       | VITON GFLT       |
|      | 0126     | O-RING                     | -        | -         | 1         | 1          | -       | -       | VITON B70        |
|      | 0126EPDM | O-RING                     | -        | -         | -         | -          | -       | 1       | EPDM             |
| 14   | 4641     | TEFLON V SEAL              | -        | -         | -         | -          | 1       | -       | TEFLON           |
|      | 7172     | GREASE MOLYKOTE            | 1        | 1         | -         | -          | -       | -       | GREASE           |
|      | 7815     | GREASE MOLYKOTE (AVIATION) | -        | -         | 1         | 1          | -       | -       | GREASE           |
|      | 7128     | GREASE ROCOL (SILICONE)    | -        | -         | -         | -          | 1       | 1       | GREASE           |