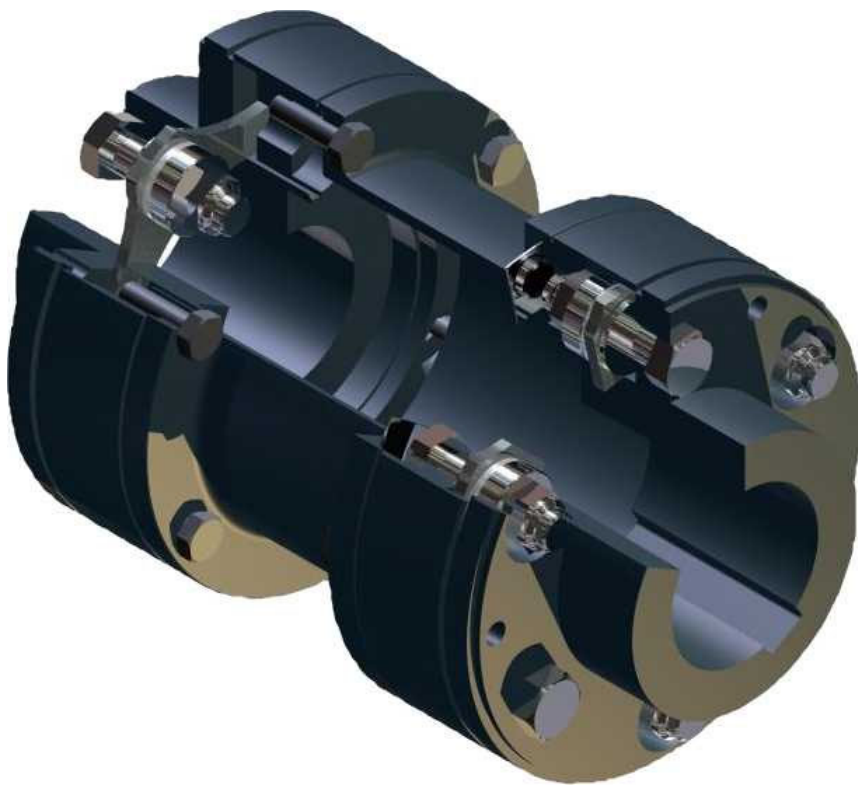


**HS - HVII TYPE**  
**METAL MEMBRANE COUPLING**  
**Installation and Assembly Instructions**



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The following instructions apply to standard HS-HVII couplings. The actual coupling supplied may vary from standard depending on the customer's requirements and specifications. These instructions should be read in conjunction with the coupling general arrangement drawing where supplied.

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## **SELECTION VERIFICATION**

The user is responsible for ensuring that the coupling ordered will meet the duty requirements and that the duty has not changed from the time the coupling was originally selected. Autogard can confirm the details based on which the coupling was supplied.

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## **INSTALLATION**

### **Preparation**

The coupling should be unpacked and examined for any signs of damage which may have occurred during transit. Verify that all the parts have been properly supplied as per the order.

Check that the coupling bores and shaft separation are per the original order. Care should be taken to ensure that all spigots and bores are free from burrs. The Autoflex HSHVII is typically fitted with a straight parallel bore and keyway for a light interference fit. Refer to the order paperwork or general arrangement drawing for details relating to the actual bore and keyway specified.

### **Shaft Alignment**

To align the shafts place the equipment into its approximate location. Measure and set the DBSE (Distance Between Shaft Ends) of the equipment as per the original specification. This should correspond to the DBSE detailed on the General Arrangement Drawing (where supplied) or on the sales order paperwork.

Align the centre lines of the driving and driven shafts using the best available method. Autogard recommends the use of laser alignment equipment. The better the alignment the lower the resultant loads that will be transmitted onto the bearings of the driving and driven equipment. Autogard recommends that misalignment is limited to no more than 10% of the catalogue maximum values. This allows for additional misalignment due to foundation settling and thermal growth.

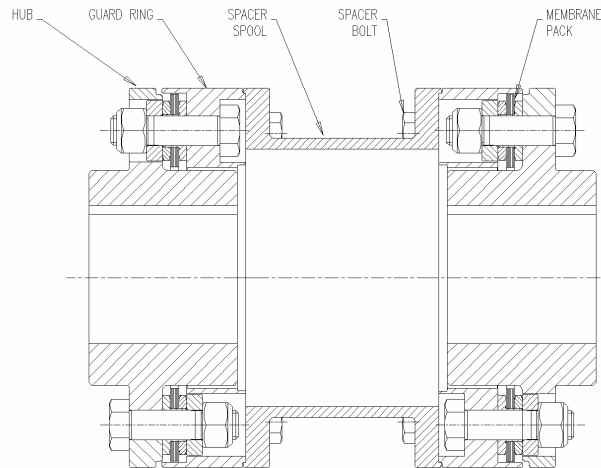
The coupling alignment should be checked periodically to ensure that any alignment deterioration is promptly corrected.

### **Hub Installation**

For standard interference fit bores, the coupling hubs should be heated to 80°C (175°F) in an oil bath or an oven. Do not use spot heat or exceed 100°C (212°F). Fit the hub assemblies onto the shafts with the hub faces flush with the shaft ends or as specified in the General Arrangement Drawing. When clearance fit hubs are supplied, slide the hubs onto the shafts and tighten the setscrews.

Where tapered bores and/or hydraulically mounted hubs are supplied, consult Autogard for the specific installation instructions.

NOTE: Care must be taken to ensure that the hub assemblies are properly supported during installation to ensure that they are not damaged.



### Assembly

Check the spigots on the guard rings and spacer spool to ensure that they are free from dirt and burrs. Using six of the spacer bolts, uniformly compress the membrane packs by threading the bolts through the clearance holes in each hub flange and into the guard rings. The membrane packs should only be compressed sufficiently to allow the spacer spool to fit between the faces of the guard rings.

Coupling Size	Bolt Size (mm)	Tightening Torque (Dry) (ft-lbs)	Tightening Torque (Dry) (Nm)
15	M6	11	14
35	M8	26	35
70	M8	26	35
130	M10	51	69
220	M12	89	120
330	M10	51	69
480	M12	89	120
700	M12	89	120
880	M16	220	299
1300	M16	220	299

**Table 1**

Using the remaining spacer bolts lightly locate the spacer spool flanges onto the guard rings and then remove the spacer bolts from the hubs. Fit the remaining bolts into the spacer spool flanges. Tighten the spacer bolts to the torques shown in Table 1. Bolts should be tightened in a diametrically opposite sequence.

### Caution:

Ensure bolts used to compress the membrane packs are removed prior to tightening any of the spacer bolts.

Balanced coupling spacer bolts have been weigh balanced and must only be supplied as a set.



Membrane packs are factory assembled. Autogard recommends NOT loosening the membrane pack fasteners.

The standard method for balancing HS couplings is to component balance the hub assemblies and spacer spool. Match marks are not used. If match marks are present, the coupling has been specially assembly balanced. The coupling must therefore be assembled with the match marks in-line.

Once the coupling has been installed as noted above, slowly rotate the machinery to ensure that everything moves freely.

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## IMPORTANT INSTRUCTIONS BEFORE START-UP:

Coupling guards must be provided in accordance with local and national regulations.

Make sure all fasteners have been properly installed and tightened per the supplied tables or the general arrangement drawing.

If possible, re-check the coupling alignment after the driver and driven foundation bolts have been tightened and realign if necessary

Consult Autogard Engineering for clarification of any of the points outlined in this installation guide.

Only authorised Autogard replacement parts to be used.

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