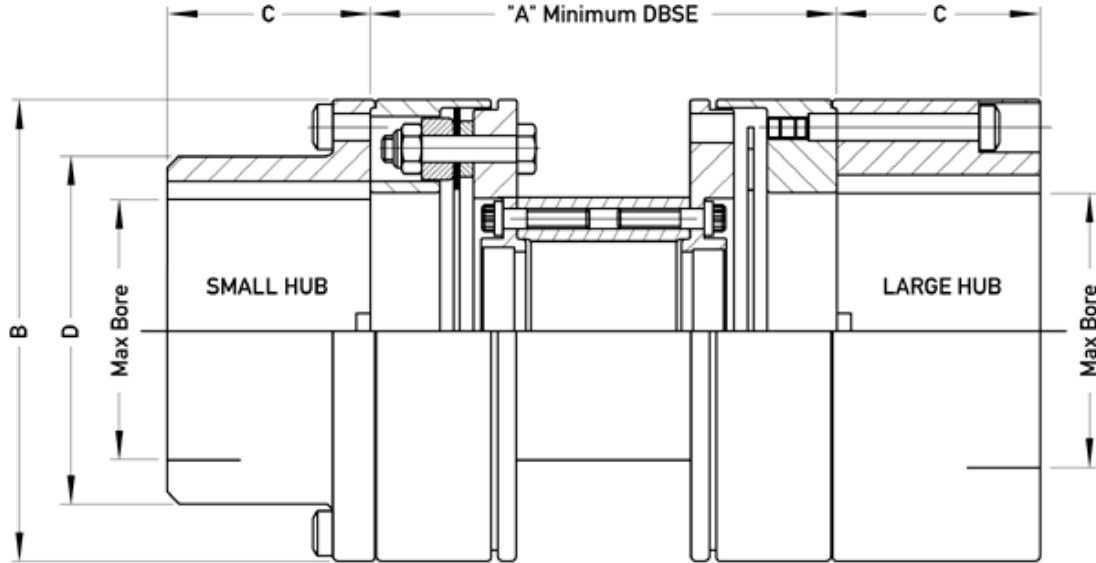


ECS - HVII TYPE METAL MEMBRANE COUPLING

Installation and Assembly Instructions





ECSHVII COUPLING

The following instructions apply to a standard ECSHVII coupling. The actual coupling supplied may vary depending on the customer's requirements and specifications. Where supplied, these instructions should be read in conjunction with the coupling general arrangement drawing.

SELECTION VERIFICATION

The user is responsible to ensure that the coupling ordered will in fact meet the duty requirements and the duty has not changed from the time that the coupling was originally selected. Autogard can supply the duty under which the coupling was originally selected.



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 ECSHVII is typically fitted with a straight parallel bore and keyway for a light interference fit. Refer to the order for specifics related to the actual bore and keyway specified.

Standard Interference, the coupling hubs should be heated to 150 degrees C (300 degrees F) in an oil bath or an oven. Do not use spot heat or exceed 300 degrees C (600 degrees F) as this may cause flange distortion. Fit the hubs onto the shafts with the hub face flush with the shaft end or as specified in the General Arrangement Drawing. When clearance fit hubs are supplied, slide the hub onto the shaft and tighten the setscrews.

Where Taper Bores and/or Hydraulic Mounting is supplied, consult Autogard for the appropriate installation instructions.

NOTE: Care must be taken to ensure that the coupling hubs are properly supported during installation to ensure that they do not slip.

Align Shafts

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 supplied on the General Arrangement Drawing where supplied.

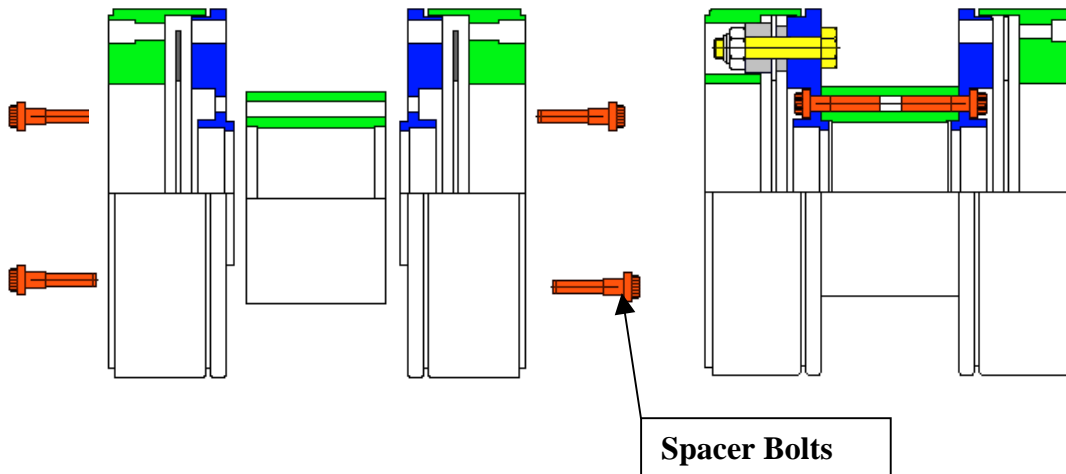
Note: The DBSE is usually measured from the inner face of the hub, which usually relates to the overall length of the transmission unit.

Align the centre line of the driving and driven shafts using the best available methods. Autogard recommends the use of Laser Alignment where available. The better the alignment the lower the resultant loads will be transmitted onto the bearings of the driving and driven equipment. Autogard recommends that the misalignment be set at no more than 10% of the catalogue ratings. This will allow for misalignment, which occurs due to foundation settling, thermal growth etc.

The coupling alignment should be checked periodically to ensure that alignment deterioration is properly compensated.

Assembly

Check the spigot on the disc Pack Assembly and the spacer tube to ensure that they are free from dirt and burrs. Using transmission unit bolts provided assemble the spacer flanges to the spacer tube. Tighten the transmission bolts to the torque shown in table 1. Dynamic Balanced Transmission Units are factory pre-assembled.
DO NOT DISASSEMBLE.



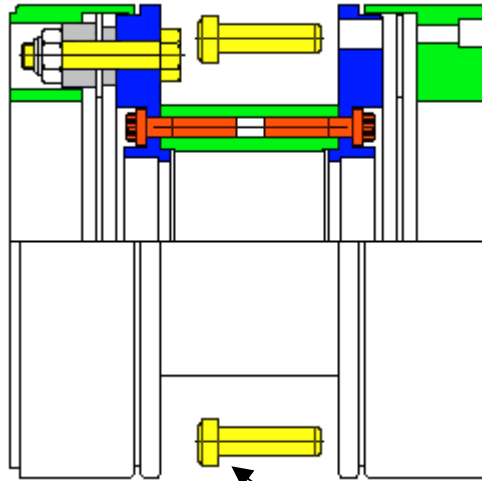
Spacer Bolt Tightening Torque

Coupling Size	Bolt Size (mm)	Bolt Tightening Torque (Dry) (ft-lbs)	Bolt Tightening Torque (Dry) (Nm)
ECS 11 HVEII	NA	NA	NA
ECS 19 HVEII	NA	NA	NA
ECS 15 HVII	M6	11	14
ECS 35 HVII	M6	11	14
ECS 70 HVII	M6	11	14
ECS 130 HVII	M8	26	35
ECS 220 HVII	M10	51	69
ECS 330 HVII	M10	51	69
ECS 480 HVII	M12	89	120
ECS 700 HVII	M12	89	120
ECS 880 HVII	M16	220	299
ECS 1300 HVII	M16	220	299

Table 1

Check the spigot on both the hubs and the transmission unit to ensure that they are free from dirt and burrs. Using three of the standard hub bolts, uniformly collapse the retaining ring and the spacer flange and place the transmission unit between the mounted hubs as shown.

Assembly – Cont.



Evenly space Three hub bolts.
Collapse the Transmission unit and assembly

Remove the compression bolts ensuring the transmission unit properly engages the hub spigot. Install the bolts through the hub and tighten to the torque shown in Table 2 or as shown in the General Arrangement Drawing. Bolts should be tightened in a diametrically opposite sequence.

Hub Bolt Tightening Torque

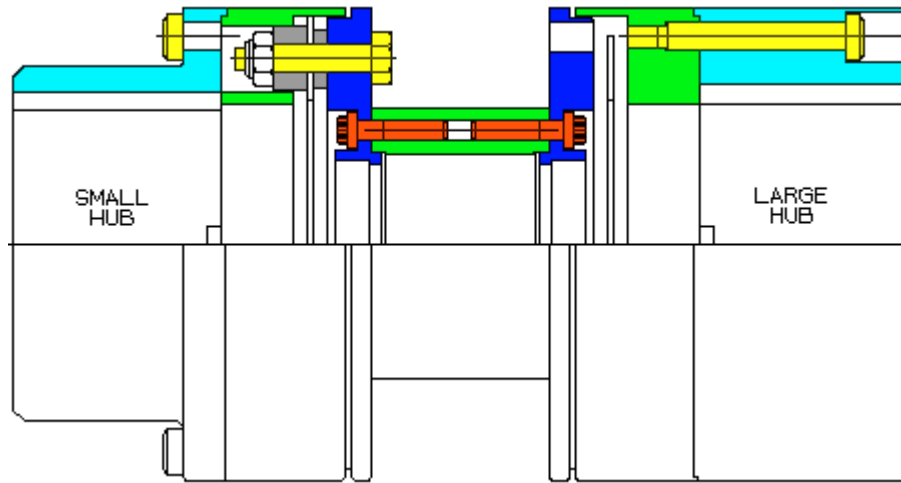
Coupling Size	Hub Bolt Size (mm)	Bolt Tightening Torque (Dry) (ft-lbs)	Bolt Tightening Torque (Dry) (Nm)
ECS 11 HVEII	M6	11	14
ECS 19 HVEII	M6	11	14
ECS 15 HVII	M6	11	14
ECS 35 HVII	M8	26	35
ECS 70 HVII	M8	26	35
ECS 130 HVII	M10	51	69
ECS 220 HVII	M12	89	120
ECS 330 HVII	M10	51	69
ECS 480 HVII	M12	89	120
ECS 700 HVII	M12	89	120
ECS 880 HVII	M16	220	299
ECS 1300 HVII	M16	220	299

Table 2

Caution:

Ensure compression bolts are removed prior to tightening any of the hub bolts. Balance coupling hub bolts have been weigh balanced and must only be supplied as a set. Disc packs are factory assembled. DO NOT loosen the disc pack fasteners.

The standard for balancing the ECSHVII is to component balance and as such match marks are not used. If match marks are present, the coupling has been specially balanced. The coupling must be assembled with the match marks in-line.



COMPLETE ECSHVII COUPLING ASSEMBLY.

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

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 Draws.
- If possible, re-check the coupling alignment after the driver and driven foundation bolts have been tightened.
- Consult Autogard Engineering for clarification of any of the points outlined in this installation guide.
- Only authorised Autogard replacement parts are to be used.