BSEU - BACKSTOP INSTALLATION & OPERATION GUIDE

Explanation 1
The STM Aust Backstop Cam Clutch, a one-way clutch with the safest reverse rotation prevention qualities available, was manufactured mainly for installation on the low speed shaft of inclined conveyors or bucket elevators. The backstop cam clutch as well as all other STM Aust Cam clutches is a one-way, sprag type clutch. Compared to other one-way clutches (ratchet or roller ramp clutch) similar in size, overheating during times when the motor is idling is significantly lower. This helps maintain superb lubrication qualities thereby improving the wear life of the clutch. Extended fatigue life is also obtainable due to the clutch’s large torque capacity. Both the European style BSEU series, as well as the BS series cam clutch which boasts of thirty years of reputable performance since its introduction, can be used as reverse rotation prevention cam clutches for an array of conveyor sizes. Applicable shaft sizes range from φ20 ~ φ450 mm.

Installation and usage for BSEU series
1. We recommend using a shaft tolerance of h7 or h8 for Cam Clutch installation.
2. DIN6895.1 keyway is standard.
3. Before installation, verify that the direction of rotation of the inner race of the Cam Clutch (shown by the arrow on the inner race) is the same as the direction of rotation of the conveyor.
4. When inserting the Cam Clutch on the shaft, apply pressure only on the surface of the inner race with a soft hammer. Never strike the Cam Clutch with a steel hammer or apply unnecessary impact loads.
5. Always use a parallel key for installation onto the shaft and then fix the Cam Clutch to the shaft with the end plate. Never use a tapered key. Allow for a clearance between the top of the clutch keyway and the top of the key for pressure ventilation. A pressure ventilation hole is provided on the keyway of the clutch’s inner race.
6. Use the frame or a pin to eliminate outer race rotation.
7. Set a 0.5 mm degree clearance between the torque arm and the frame (torque arm stopper) or the long slit in the torque arm and the pin. If the torque arm is rigidly mounted, it will apply a load to the Cam Clutch which may eventually damage it.
8. The Cam Clutch is pre-packed with low temperature grease before shipment and is ready for installation and operation. No lubrication maintenance is required. The ambient operational temperature range is -40°C to 50°C. However, the maximum temperature should be determined depending on the number of shaft revolutions. Further, if the number of shaft revolutions is low, a higher ambient operational temperature range is allowable. Consult with STM Aust for more details.

Explanation 2
Other Possible Applications:
BSEU Series Cam Clutches may also be used for low frequency indexing applications. A maximum indexing frequency of no more than 50 cycles/min. and a safety ratio of 2.5 times higher than the working torque are required. Be sure that the stress applied to the torque arm functions at a right angle in relation to the shaft direction. If the stress that is applied to the torque arm is set diagonally, the inner parts of the clutch will entangle causing damage and drastically reduce the operational life of the Cam Clutch.