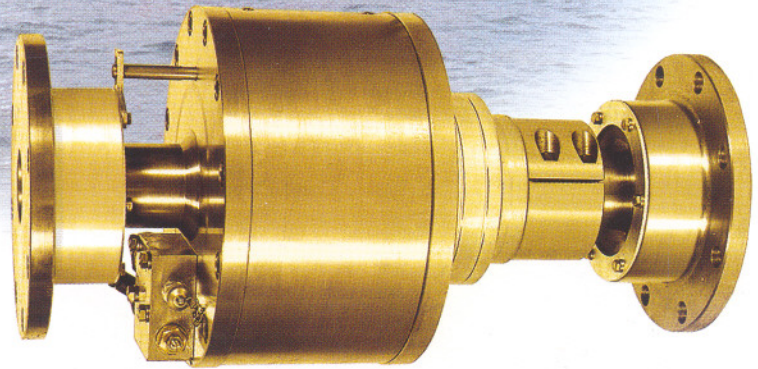


HYDRAULIC TOP BRACING

FOR VIBRATION CONTROL IN MARINE ENGINE



ISO-9001 REGISTERED FIRM
Det Norske Veritas BV, NETHERLANDS

GENERAL

개요

The Main Engine Hydraulic Top Bracings (H.T.B) are mainly used to reduce engine vibration and minimize any mechanical vibration transfer.

The H.T.B is installed on the side of engine either as a pair or a single unit.

The H.T.B is a single acting (hydro - pneumatic mechanism) with the Self-Return Mechanism(SRM).

The SRM is hydro-pneumatic piston system that acts as a set of very Smart Spring.

The SRM consists of a hydraulic and pneumatic piston, and an accumulator.

During a compression phase, if the compressive load force exceeds the set limit (23bar), a hydraulic relief valve opens. The high pressure is relieved to a lower pressure chamber. The lower pressure chamber in turn pushes the pneumatic piston by compressing the air into accumulators; until a pressure equilibrium is reached in two pressure chamber.

During an extension phase, if the load force is smaller than the pressure force generated by the compressed air in air chamber, the pneumatic piston pushes the oil in the low-pressure chamber back into the high-pressure chamber, through a check valve. This action returns the pistons to their neutral piston.

The H.T.B produces an extension force of 1,800 / 2,800kg, with an accumulator pressure of 8 bars. The accumulator can be charged by an external air supply with a pressure regulator.

유압식 탑 브레이싱 (이하 H.T.B로 약칭함) 은 엔진의 측면에 한 개 또는 한 쌍으로 설치된다.

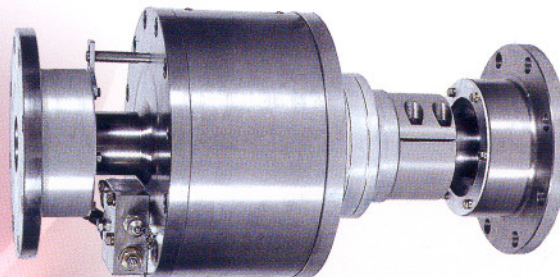
H.T.B는 단동식으로서 축압기의 공기압에 의해 복귀된다.

만약 유압 릴리프 밸브의 설정압력 (최대 23bar)에 의해 제한된 힘보다 큰 압축력이 H.T.B 에 작용하게 되면, 릴리프 밸브가 열림으로써 고압실의 오일이 저압실로 빠져나가 축압기에 저장되면서 피스톤 로드가 밀려 들어간다.

이 상태에서 다시 부하 압축력이 감소하여 고압실의 압력이 저압실의 압력보다 낮아지면 축압기의 공기압에 의해 저압실의 오일이 체크밸브를 통해 고압실로 압출되면서 피스톤 로드가 다시 밀려나와 원위치로 복귀된다.

중립위치에서 H.T.B는 8bar의 축 압력에 의해 약 2,800/1,800kg의 복원력을 발생시킨다.

축압기의 공기실을 충전하는 것은 선박자체의 공압공급관로에 압력조절기를 설치하여 압축공기를 H.T.B의 공압포트를 통해 공급함으로써 가능하다.



TECHNICAL SPECIFICATIONS

기술사양

Hydraulic cylinder

유압 실린더

Description	Specification	
Type	HY 250	HY 300
Self - returning force per cylinder at 8 bar air 중립 위치에서의 복원력, 공기압 8bar 기준	1800 kg	2800 kg
Max. load at max. hydraulic pressure 23bar 최대 부하력, 최대압력 23bar 기준	9200 kg	13400 kg
Installation	28 Stud bolts, Nut M1665L 1Relief valve	
Valve block	1 Relief valve (17bar setting / to be adjustable) 1 Bypass valve	

Accessories

부속물

Manifold block	1 per 2 Hydraulic top bracing	
Manifold block instruments	Air regulator Check valve Gauge for air pressure Gauge for pressure chamber Shut off valve & Quick coupling	
Oil type	Standard hydraulic oil (ISO VG 32)	
Oil volume / 1 Cylinder	2.3 liters	3.3 liters
Weight	Approx. 80 kg	Approx. 100 kg
Temperature	Do not use in ambients above 75C MAX.	
Installation tolerance	Misalignment (offset) to symmetrical axis is 30mm	

Other details on request 기타 자세한 부분은 별도 문의바람

Scope of supply

공급범위

Hydraulic cylinder with built - in valve block assembly

Manifold block with fittings for pipe connection

Spare parts

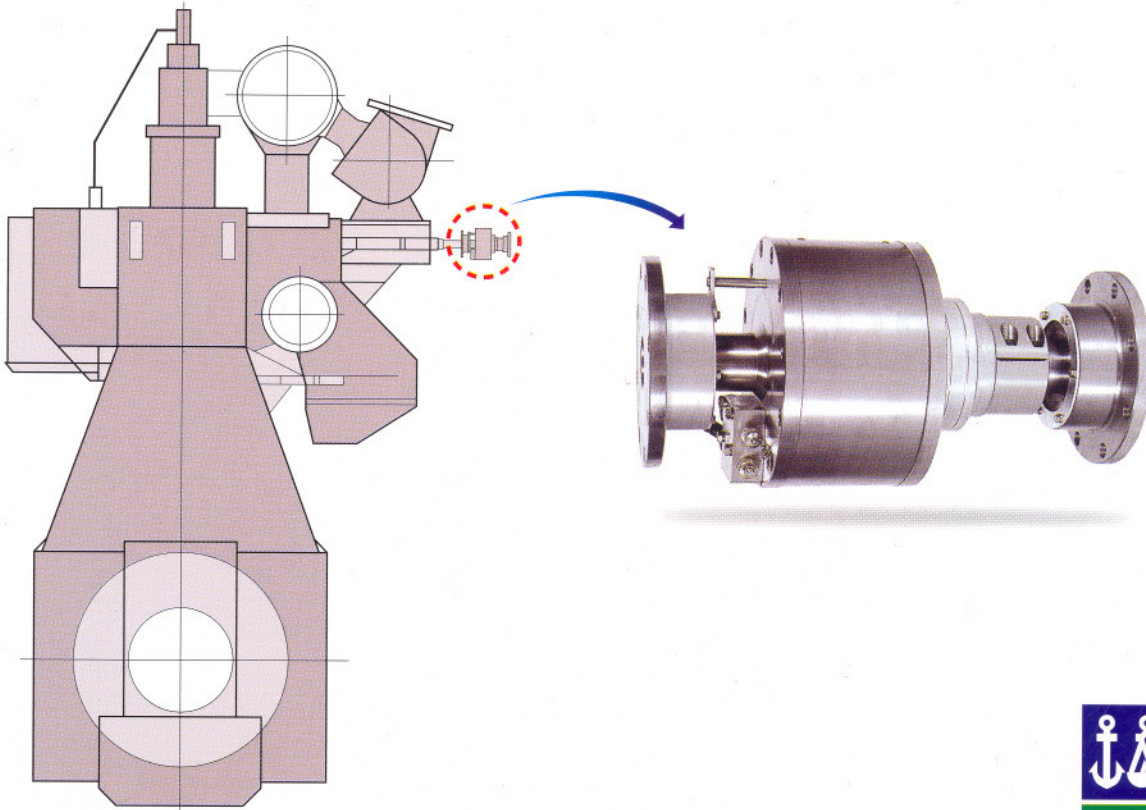
Special tools

All piping material are yard supplied. Flexible hoses are maker supplied.

호스를 제외한 배관 자재는 야드 공급범위임.

Hydraulic Cylinder, manifold blocks and associated valve and fittings are maker supplied.

유압실린더, 매니폴더 블록에 부착되는 fitting 및 밸브는 공급범위에 포함됨.



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