TRANSFLUID industrial & marine

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drive with us

News, events and informations from Headquarters

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Transfluid and Bellmarine together

A new company has evolved from two European companies who share the same vision of sustainable electric and hybrid propulsion systems for the marine industry. Earlier this year, Transfluid S.p.A. acquired 100% of IDTechnology B.V. shares in order to develop a new line of electric and hybrid propulsion products. ID Technology may be better known under their brand name of "Bellmarine".

Bellmarine, is a Dutch brand that for several years has been a leader in electric propulsion products both in the Netherlands and the European market. Bellmarine will continue to maintain its distinctive brand under the leadership of its founder, Marien Schoonen, and will continue to develop new Bellmarine products seeking to expand its market share. As the demand for these alternative propulsion systems grows, Transfluid

plans to concentrate their efforts, in conjunction with Bellmarine, to supply propulsion systems that are simple, reliable and oriented to customer's needs. We look to provide solutions today and moving forward that were only imagined just a few years ago. We intend to develop propulsion solutions, that are ahead of the growing demand and structure our production to be ready for the changes in the future marine industry. The union of our companies allows us to develop new products that will meet not only the needs of those who have the smaller power requirements that Bellmarine's pure electrical propulsion systems provide but will meet the needs of higher power applications where Transfluid's hybrid dual drive systems will be the solution. Transfluid's dual drive hybrid systems have been in the market for some time and are a well-tested line of products, and we intend to offer both the pure electric & hybrid propulsion systems not only for marine boat/ship applications but also for vehicle applications as well.

A significant point to remember is that Bellmarine's pure electrical propulsion systems are well-suited to inland marine applications that have lower power & range demands. Some of the advantages are: low environmental impact, very low noise production, low vibration & economical operation. In low environmental impact & urban settings where these advantages are important, we believe our pure electrical propulsion systems will be the drive to us.

Bellmarine®
powered by Transfluid

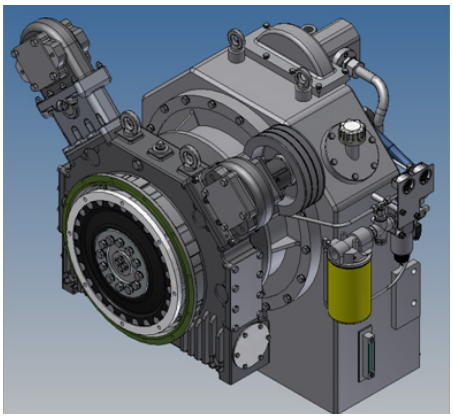
12 x 17KPTB-HS

We are proud to announce that Transfluid has been selected to provide one of the world's largest pump EOM's twelve (12) of our 17KPTB-HS variable high-speed fluid couplings for this OEM's Boiler Feed Pump (BFP) portion of the overall project, the Combined Cycle Thermal Power Plant in Iernut. The overall turnkey construction of this Power Plant has been awarded to the association of Duro Felquera-Romelectro. Duro Felguera is Spain's largest international engineering company, and Romelectro is Romania's state run electric company. this project will be constructed in Ludus-Iernut (Mures county) Romania.

Each of our 17 KPTB-HS couplings will be part of each BFP's drive line, and these pumps are rated at 397 kW at 3000 rpm. Specific to this project we are introducing several improvements to our 17 KPTB-HS couplings such as additional instrumentation and impellers manufactured from special materials. Eventually, we plan to incorporate some of these improvements into our standard production models.

Functional Ductility of KPTO with MPD18/22

Heavy mobile equipment place many requirements on the main PTO mounted off the engine flywheel and housing mount. Needed are reliable power transmission units that have long operation life, infrequent scheduled maintenance shutdowns, if possible dampening of engine torsional vibration, and can be engaged at various speeds & loads. Also, SAE spline drive hydraulic pump mounts are always needed on heavy

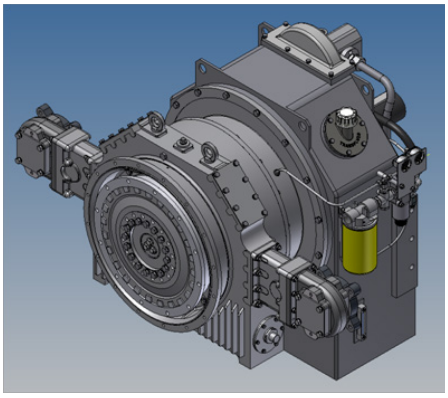


mobile equipment.
Pumps are needed to supply hydraulic pressure as well as to supply hydraulic motors which drive such things as feeder conveyors, movable tubs or hoppers, booms, outriggers and driving sprockets. Some engines do have auxiliary PTO mounts, but they provide limited performance because of their low power capacity or simply by the small number of PTO mounts available.

However, out KPTO - MPD18/22 Assemblies provide solutions:

1. They allow smooth & frequent engagements of the main load (crusher head, grinder head, etc.) at any speed while protecting the engine, working head, & drive train from damage caused by a load jam or lock up.
2. Maintenance shutdown chedules are less frequent than the scheduled maintenance requirements of over-center clutch PTO's.
3. The transmission of engine Torsional Vibration is greatly reduced.
4. Many more SAE spline drive pump head mounts are provided supplying the ever growing need for more hydraulic pumps.

These benefits give not only better day to day operation with decreased shutdown time, but they also provide greater productivity over the life of the mobile equipment. the most common applications where our KPT-MPD18/22 Assemblies are installed are in stone crushers, metal/wood/ wast shredders, agricultural hammer mills, wood chippers, mulchers and stump grinders.
We have recently received an order from a stone crusher manufacturer through our Germany branch. Previously this customer had used hydrostatic transmission models but found them to be inefficient. After some research they decided to try our 21KPTO-MPD18 Assembly. They are using our assembly in a new type of Tracked Mobile Stone crusher powered by a 282 kW 1600 rpm diesel engine with SAE 1 housing and 14" flywheel output. For them this is a new generation of crusher that targets the mobile recycling market. Because of our increased emphasis on renewable/recycling equipment systems, this project slots well into our goals for the future.
The MPD18 portion of this assembly is built with two SAE splined pump heads mounted in the "Mickey Mouse Ear" position with one pump head mounted on a head extension as can be seen in the attached rendering. This extension is required because of the large size of the pump mounted at this location which, without this extension, the pump would interfere with the 21KPTO housing. The mobile crusher's driving tracks are powered by a hydraulic motor supplied by this larger pump. The head on the other side of the MPD18 receives our optional shaft output PTO. the pulley mounted on this PTO's shaft drives a generator which produces auxiliary power that is used throughout the mobile crusher.
We are now working with an Australian distributor for an application where our KPTO-MPD assembly will be used in a Tracked Mulcher.



TPH640 clutch

Transfluid received an important order from an international manufacturer headquartered in Italy. The company is a worldwide leader in the design and manufacturing of snow groomers and tracked vehicles. In the last 10 years this company acquired a Canadian tracked vehicle manufacturer and a German company specialized in forestry mulchers diversifying their global product portfolio. The order is for TPH640 clutches approved for dynamic torque of 188Nm. The TPH will be used on snow groomers equipped with an automatic winch used to maneuver the machine in extreme alpine conditions. The clutch is a component of a system that is used as essential accessory. The most frequent duty is on very steep terrains where maneuverability is critical; the clutch allows the automatic release a steel cable anchored around a tree or a rock. This system then provides the machine capability to navigate tough operating areas. Through a dedicated design and a very competitive price Transfluid was able to beat specialized competitors including a popular clutch builders. The business will immediately involve 150 ÷ 200 machines a year.

Power Transmissions for Road Sweepers

Transfluid products are increasingly finding applications on truck mounted and compact road sweepers. Benefiting from the long-term relationship with a leading worldwide manufacturer has allowed Transfluid to develop and expand its business with a number of important global players. Thanks to the unsurpassed performance provided by the SKF fluid coupling an important road sweeper manufacturer recently adopted similar solutions for machines manufactured in several different production sites in Europe and South Korea. The fluid couplings, size 13 and 15, are installed on auxiliary engines that are dedicated to the sweeper's operation. It is an essential power transmission product that replaces a traditional clutching system that operates a fan that vacuums bulky debris through a large hose. The compact dimensions and robust bearing arrangement of the KFBD and SKFE allow the installation of the fan directly on fluid coupling output shaft. Additionally, Rubber Block Drives are installed on hydrostatic models to connect the main hydraulic pump to different propulsion engines. The addition of this new customer has been a benefit to business by increasing the yearly sweeper turnover to over 800 units of 13SKF fluid coupling and 250 units of the 10SS Rubber Block Drive. In May, at the IFAT show in Munich, most sweeper manufacturer entered the green market by displaying Zero Emission (full electric) and Hybrid prototypes designs. Consequently, Transfluid will remain a "main character" with a dedicated range of plug & play electric and hybrid modules suitable for sweeper applications.

UK's first hybrid pilot boat ordered

The Port of London Authority (PLA) has ordered the UK's first hybrid pilot boat from Goodchild Marine in bold move to help meet climate targets.

The ORC 136.HY is a parallel hybrid pilot boat, thanks to the **TRANSFLUID HYBRID SYSTEM**, which will combine both diesel and electric power and has been designed to be completely emission-free when operating in electric mode. The PLA has placed the order as it starts to deliver on the commitments in its recently published Air Quality Strategy for the tidal Thames - also the first of its kind for any UK Port. Among the 18 proposals for action is a commitment to encourage the installation of green technology. Goodchild Marine Services Limited, a family-run business in Burgh Castle, near Great Yarmouth - whose ORC flagship range lends itself to incorporating hybrid power - is partnering with EP Barrus for the Yanmar engines, and transmission specialists, Marine and Industrial Transmissions Limited for the TRANSFLUID HYBRID SYSTEM, to deliver a plug-in diesel hybrid pilot boat. The hull will be based on the established 'ORC' design, developed by French naval architects Pantocarene and adapted by Goodchild Marine for the UK market. ORCs feature a 'beak' bow design, which aims to give the design unmatched all-weather capability. The new hybrid vessel is due for delivery spring 2019.

15 KNOTS ON HYBRID POWER

The new pilot cutter, which is expected to reach up to 15 knots under hybrid power, will be used by the PLA for the transfer of pilots to and from vessels in Gravesend Reach. Alan Goodchild, Managing Director of Goodchild Marine Services Limited, said the company was delighted to respond to developing technology and market interest. "There are lots of hybrid boats on the market, but in my opinion, not like this. It's down to the application, the speed it must reach, where it operates and the time it's working over the course of the day, which means it is a challenge to achieve. "Passenger boats, such as ferries are low speed on a pre-determined duty cycle and there are times they can be plugged in and re-charged. "Pilot boats however, can be erratic on duty cycle and speed requirements, so to achieve 15 knots under hybrid power is a leap and perhaps why no-one else, to the best of my knowledge, has gone for it." TRANSFLUID will provide the hybrid system.

John Logue, Managing Director of MIT, distributor for Transfluid in UK, said: "Our manufacturing and technology partners TRANSFLUID have invested heavily in the development of our plug and play electric/hybrid system and have numerous reference projects around the world. However, the PLA project is unique in that it is a first for a UK pilot vessel and will operate at speeds up to 15 knots in electric mode." Other vessels which may benefit from a hybrid solution include survey vessels, harbor workboats, passenger vessels, and patrol boats.