



# **2IN1 SOLUTIONS**

THE COMPACT CLUTCH AND COUPLING COMBINATIONS











PRODUCT CATALOG





# Stop seeing individual parts. Start seeing unlimited possibilities.

Regardless of your objectives or the challenges with your application, Powertrain Solutions can help you achieve your unique goals. No matter what your application looks like, it relies on many components, all working together. But not all components are made to work together reliably and efficiently. Powertrain Solutions has the insight, experience and expertise to engineer your collection of components into a fully optimized system — giving you solutions that boost efficiency, improve reliability and performance, lower costs and simplify ordering and logistics.

#### WHERE OTHERS SEE PARTS, WE SEE A SYSTEM



Bearings



Belt & Chain



Clutches & Brakes



Conveying



Disc & Gear Couplinas



Motors



Speed Reducers & Gearboxes



Monitoring & Diagnostics

# **CLUTCHES AND BRAKES**

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# 2in1 - COUPLING/CLUTCH SOLUTIONS

## **ELECTRIC**



2in1 - Periflex®VN/MWU Combination



2in1 – SSC/MWU Combination

Regal Rexnord is the only company worldwide that manufactures elastic couplings as well as a wide range of switchable clutches.

Stromag's "2in1 solutions" enable the unique possibility to take this big advantage for nearly every drivetrain application. We simply combine the elastic coupling and the switchable clutch in a compact and smart design. The calculation and selection of both parts from Stromag's well proven product portfolio is done by our support according to the needed specification.





- No time-consuming interface clarification meetings between elastic coupling and clutch supplier
- Space and cost saving design
- Plug and play solutions lead to reduced assembly times on site
- Suitable 2in1 solutions for nearly every combination between M/E, E-motor, pumps, generators and belt drives are available

# 2in1- COUPLING/CLUTCH COMBINATION

#### **BENEFITS INCLUDE**

- Electromagnetic, hydraulic or pneumatic clutch actuations
- Optional bell housings
- Drivetrain torsional vibration analysis for OEM applications
- Additional bearing supports
- Tailormade or standardized (SAE, etc.) interfaces







#### **CLASSIFICATIONS**











For survey of the coupling by a classification society, the regulations of the society have to be adhered to. The coupling characteristics may differ from the definitions given in this catalogue. Accordingly prepared data sheets are available on request.

A number of classification societies prescribe fail-safe devices on ships main drives.

## THE TORSIONAL VIBRATION ANALYSIS



Stromag's know-how in Torsional Vibration Analysis (TVA) constitutes the core of each coupling design. It provides a comprehensive analysis of loads in the crankshaft, coupling and driven side to ensure that critical speeds can be moved per application requirements.

Unevenly rotating systems can severely degrade product quality and cause great harm to the powertrain. On a daily basis. the TVA experts at Stromag work on the challenge of detecting such deviations by measuring them and protecting the entire powertrain with ideal product selection. Stromag is capable of calculating stationary and transient operating conditions considering the stiffness and damping of the elastomers.

## **CLUTCHES AND BRAKES**

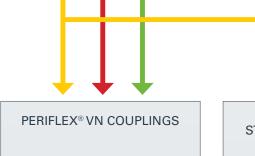
## 2in1 – Clutch and Coupling Combination



Size	20 – 1600
Torque [Nm]	400 – 20800
Outer diameter [mm]	192 – 690



Size	70 – 500	
Torque [Nm]	690 – 6100	
Outer diameter [mm]	220 – 370	





Size	183 – 726
Torque [Nm]	200 – 31500
Outer diameter [mm]	6,5" – 24"



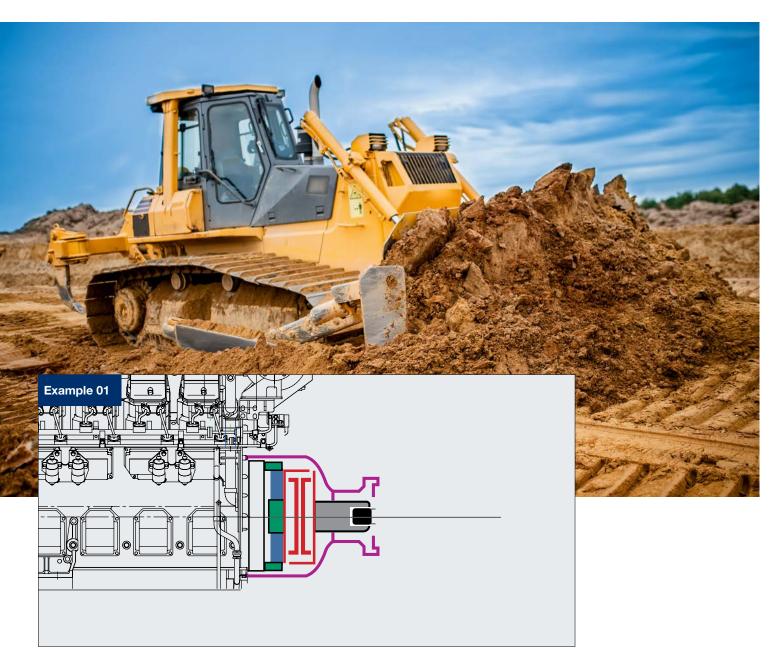
Size	11,5 – 14
Torque [Nm]	2550 – 4170
Outer diameter [mm]	11,5" – 14"

## **CLUTCHES AND BRAKES**

## 2in1 – Clutch and Coupling Combination

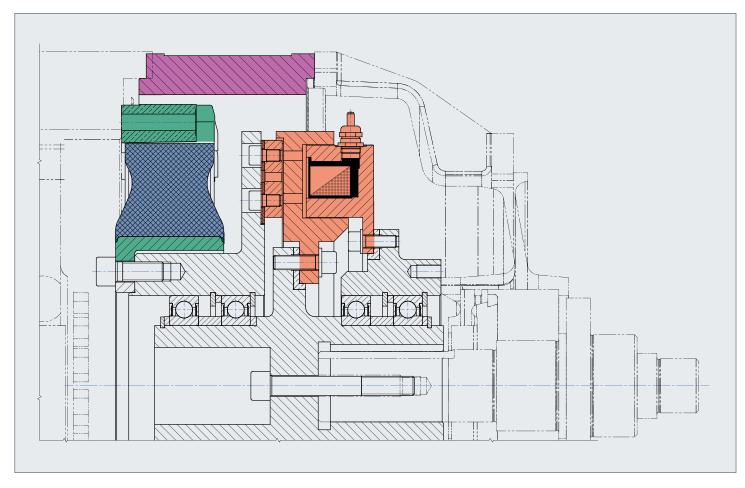


# **Enclosed 2in1 Solution** for pump drives



- Enclosed unit for direct mounting on internal combustion engines according to the SAE standard
- Output-side preparation for connecting work machines
- "Plug and Play" Solution

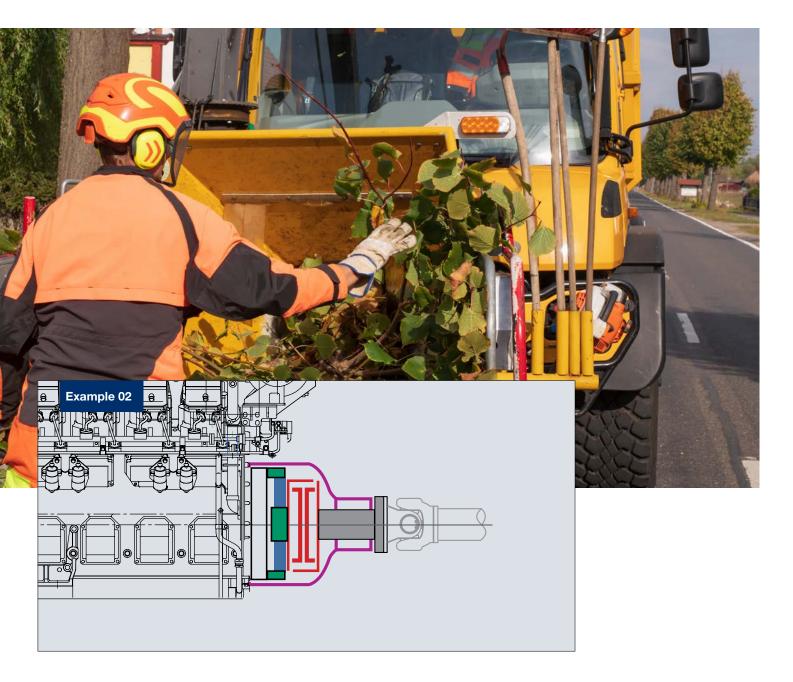
Example application: Compact 2in1 solution, consisting of our flexible coupling, Periflex® VN and electromagnetic pole-face friction clutch, MWU for connecting and disconnecting various pumps and compressors, for example in construction machinery.



Technical data		
2in1 combination	MWU 160-400 Periflex®VN 43611	
Static torque	[Nm]	5600
max. admissible speed	[1/min]	1800
Torsional stiffness	[Nm/rad]	25400
Connection drive eide	engine housing connection	SAE 1
Connection drive side	flywheel connection	SAE 14"
Connection driven side	Shaft-Ø 60mm / Key	
Outer diameter	[mm]	552
Length	[mm]	288,5
Weight	[kg]	171
Actuation method		engaged by electrical current

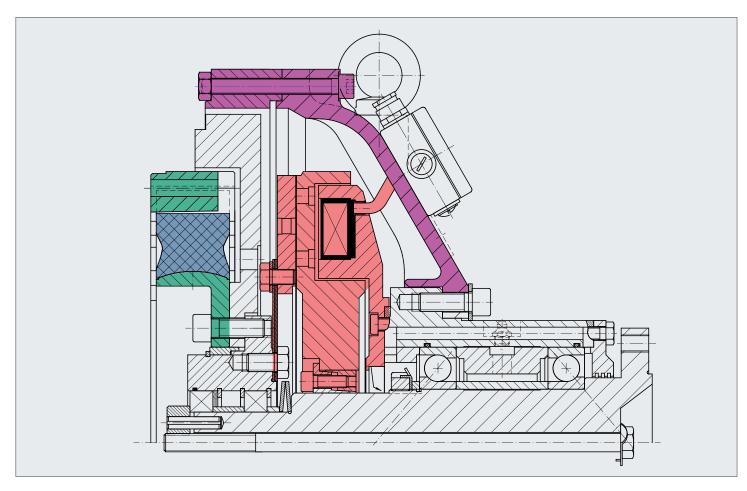
- Integration into existing drive system
- Bell housing adapted to expand the existing installation space
- Customer adjustment unnecessary due to internal bearings
- Deactivation of the output with almost no residual torque

# **Enclosed 2in1 Solution** for cardan shaft connection



- Enclosed unit for direct mounting on internal combustion engines according to the SAE standard
- Output-side preparation for connecting cardan shafts
- "Plug and Play" Solution

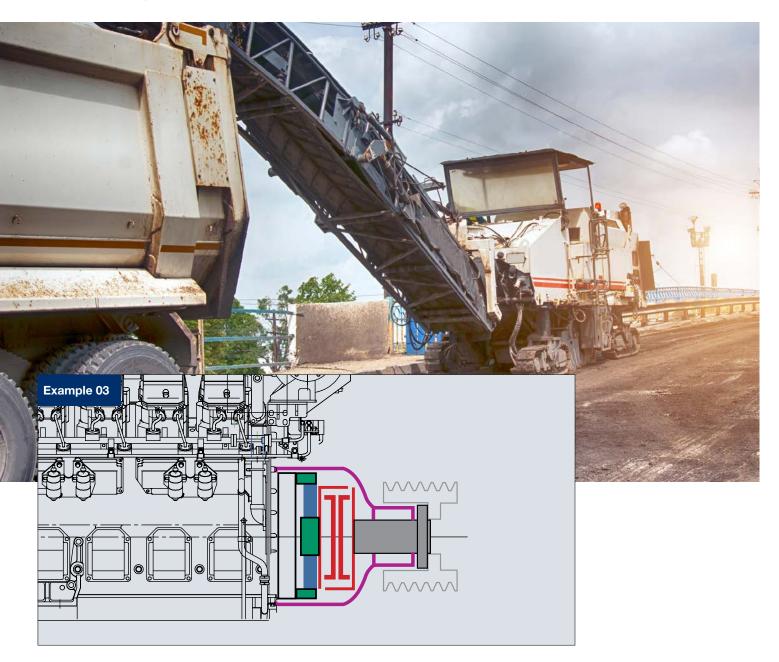
Example application: Compact 2in1 solution, consisting of our flexible coupling, Periflex® VN and electromagnetic pole-face friction clutch, MWU for connecting and disconnecting various work equipment, for example on municipal vehicles.



Technical data		
2in1 combination	MWU 60-150 Periflex®VN 358	
Static torque	[Nm]	2100
max. admissible speed	[1/min]	1800
Torsional stiffness	[Nm/rad]	16700
Connection drive side	engine housing connection	SAE 2
	flywheel connection	SAE 11,5"
Connection driven side	Flange / pitch circle diameter 130 mm	
Outer diameter	[mm]	489
Length	[mm]	326
Weight	[kg]	120
Actuation method enga		engaged by electrical current

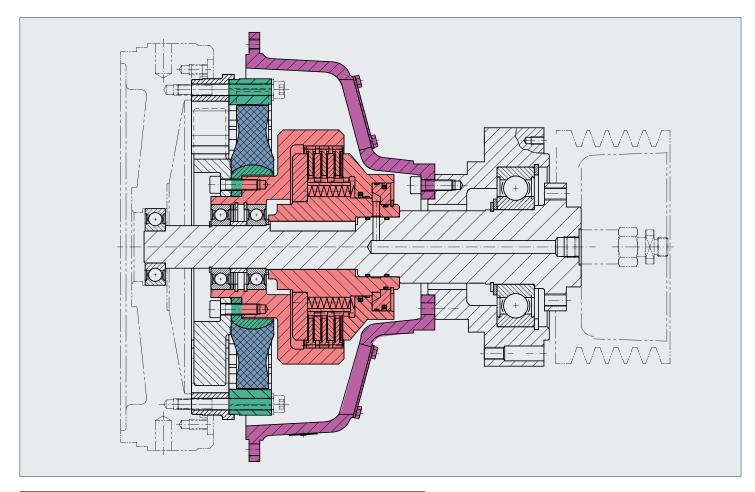
- Easy installation in drivetrain
- Central wear adjustment
- Integrated additional mass for vibration damping
- Robust cardan shaft bearing

# **Enclosed 2in1 Solution** for pulley connection



- Enclosed unit for direct mounting on internal combustion engines according to the SAE standard
- Preparation on the output side for connecting belt drives
- "Plug and Play" solution

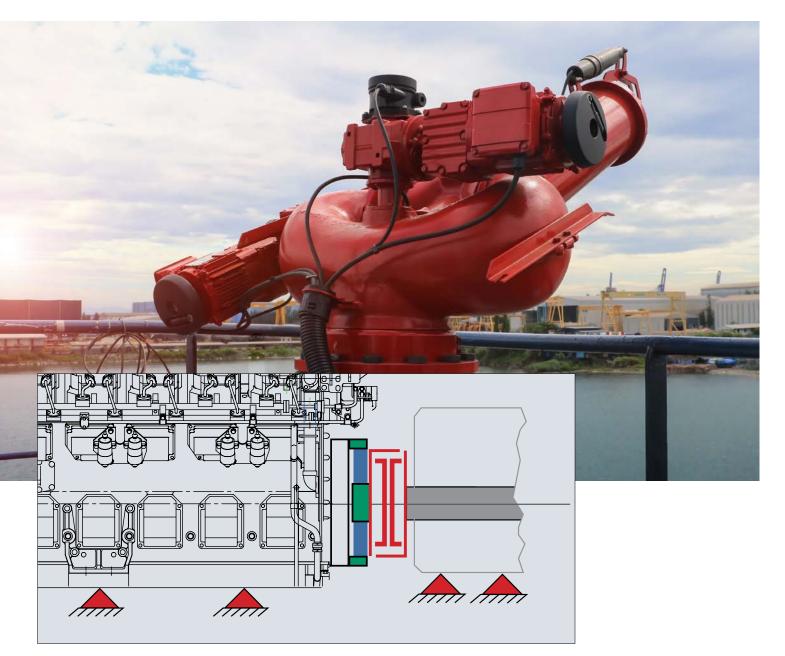
Example application: Compact 2in1 solution, consisting of our flexible coupling, Periflex® VN and hydraulic multi-disc clutch, KHA for connecting and disconnecting various tools via belt drives, e.g. in asphalt milling machines.



Technical data		
2in1 combination	KHA 130 Periflex®VN/Periflex®IC	
Static torque	[Nm]	1100
max. admissible speed	[1/min]	2250
Torsional stiffness	[Nm/rad]	3760
Connection drive side	engine housing connection	SAE 4
	flywheel connection	SAE 10"
Connection driven side	Flange / pitch circle diameter 100 mm	
Outer diameter	[mm]	403,2
Length	[mm]	410,6
Weight	[kg]	78,3
Actuation method		hydraulic

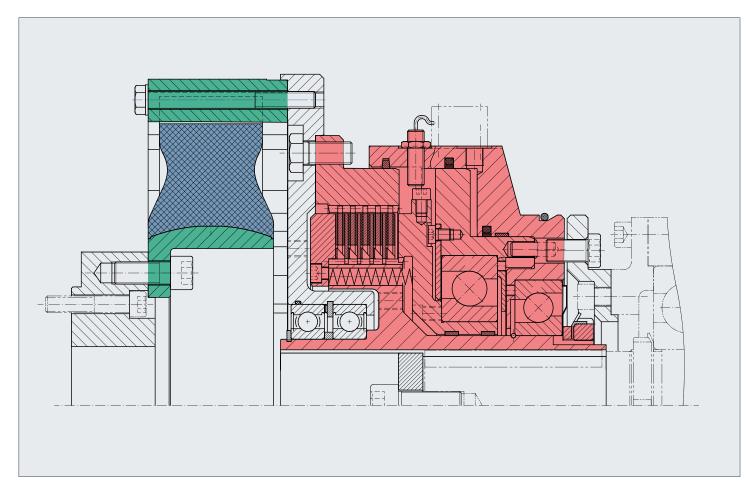
- High power density due to compact disk design
- Integrated pilot bearing
- Central and easily accessible pressurized oil supply
- Robust pulley bearing

# **Non-enclosed 2in1 Solution** for pump drives



- Engine and work machine fixed installation
- Compact design
- "Plug and Play" solution

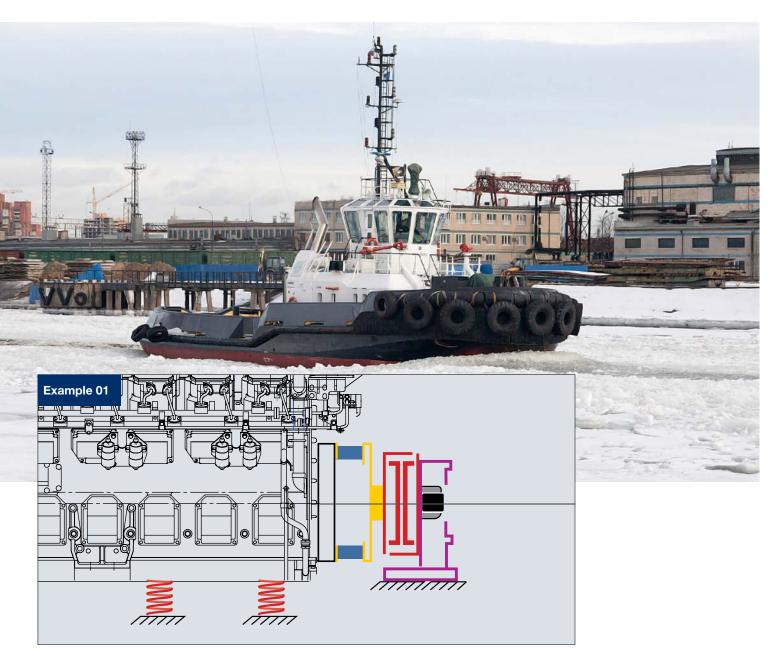
Example application: Compact 2in1 solution, consisting of our flexible coupling, Periflex® VN and pneumatic multi-disc clutch, KPR for connecting and disconnecting various pumps and compressors, e.g. fire pumps.



Technical data		
2in1 combination	KPR 800 Periflex®VN 43611	
Static torque	[Nm]	7000
max. admissible speed	[1/min]	1800
Torsional stiffness	[Nm/rad]	25400
Connection drive side	engine housing connection	D170 h6
	flywheel connection	D145 6x60°
Connection driven side	Shaft-Ø 70mm / Key	
Outer diameter	[mm]	475
Length	[mm]	380
Weight	[kg]	185
Actuation method	pneumatic	

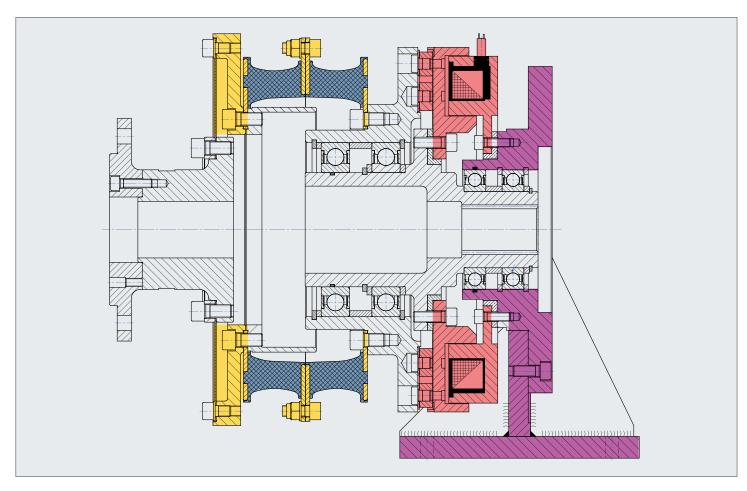
- Radial compressed air supply
- High power density due to compact disk design
- Integrated sensor for RPM detection

# **Non-Enclosed 2in1 Solution** for PTO/PTI drives



- Internal engine, flexible installation
- Stand-alone design
- Integrated stand for mounting the work machine, stand-alone version

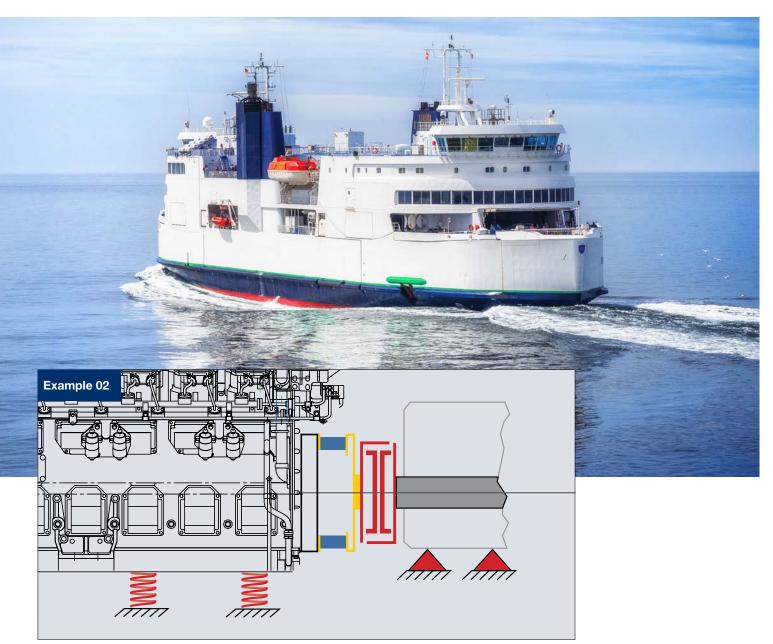
Example application: Compact 2in1 solution, consisting of our flexible coupling, TEF and electromagnetic pole-face friction clutch, MWU for connecting and disconnecting PTO/PTI units, e.g. hydraulic pump.



Technical data		
2in1 combination	MWU 80-200 TEF 311	
Static torque	[Nm]	2600
max. admissible speed	[1/min]	2000
Torsional stiffness	[Nm/rad]	6900
Connection drive side	engine housing connection	Flange / pitch circle diameter 171,45
Connection drive side	flywheel connection	mm
Connection driven side	Shaft-Ø 38,25mm / gearing ANSI B92.1 DP8/16 13 teeth	
Outer diameter	[mm]	335
Length	[mm]	406,7
Weight	[kg]	131,6
Actuation method		engaged by electrical

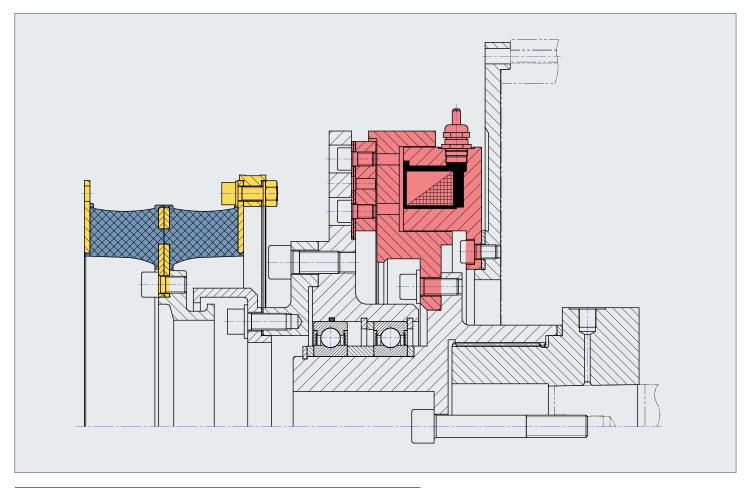
- Adapted pump connection on the stand
- In addition to torsional vibration damping, radial, axial and angular displacement permitted
- Deactivation of the output with almost no residual torque
- Easy installation in drivetrain

# **Non-enclosed 2in1 Solution** for hybrid drives



- Internal combustion engine, flexible installation
- Flexible adaptation options
- Easy accessibility

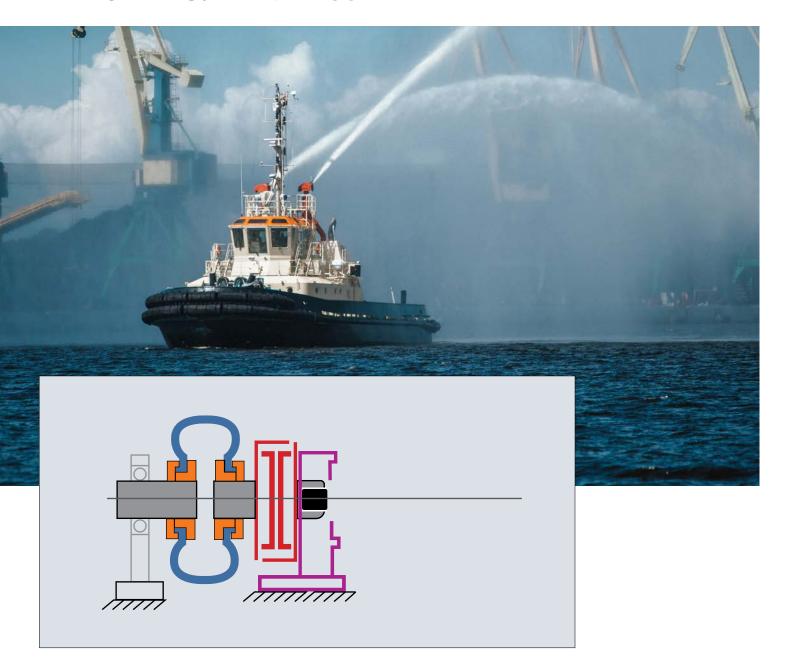
Example application: Compact 2in1 solution consisting of our flexible coupling, TRI and electromagnetic pole-face friction clutch, MWU for connecting and disconnecting hybrid drives, such as electric motors and generators.



Technical data		
2in1 combination	MWU 160-400 TEF 322	
Static torque	[Nm]	5200
max. admissible speed	[1/min]	2600
Torsional stiffness	[Nm/rad]	14500
Connection drive side	engine housing connection	SAE 1
Connection drive side	flywheel connection	SAE 11,5"
Connection driven side	Shaft-Ø 60mm / Tapered conncetion	
Outer diameter	[mm]	550
Length	[mm]	397,3
Weight	[kg]	152,6
Actuation method		engaged by electrical current

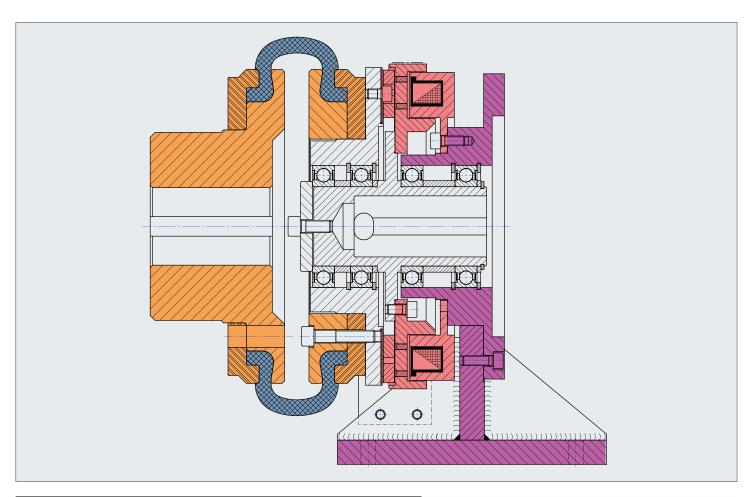
- In addition to torsional vibration damping, radial, axial and angular displacement permitted.
- Deactivation of the output with almost no residual torque

# 4 Simple 2in1 Solution for PTO/PTI drives



- Flexible coupling for compensating radial, axial and angular displacements between drive and work machine
- Shaft-shaft variant
- Integrated stand for mounting the work machine, stand-alone version

Example application: Compact 2in1 solution, consisting of our flexible coupling, Periflex® NA and electromagnetic pole-face friction clutch, MWU for connecting and disconnecting PTO/PTI units, e.g. compressor.



Technical data		
2in1 combination	MWU 40-100 Periflex®TT 310 R	
Static torque	[Nm]	1300
max. admissible speed	[1/min]	1800
Torsional stiffness	[Nm/rad]	18500 - 25500
Connection drive side	engine housing connection	Shaft Ø 63,475 H7 /
	flywheel connection	Key
Connection driven side	Shaft-Ø 50mm / Key	
Outer diameter	[mm]	310
Length	[mm]	290
Weight	[kg]	84,1
Actuation method		engaged by electrical current

- Adapted pump connection on the stand
- Radial, axial and angular displacement permitted.
- Deactivation of the output with almost no residual torque
- Easy installation in drivetrain



# **Stromag**

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