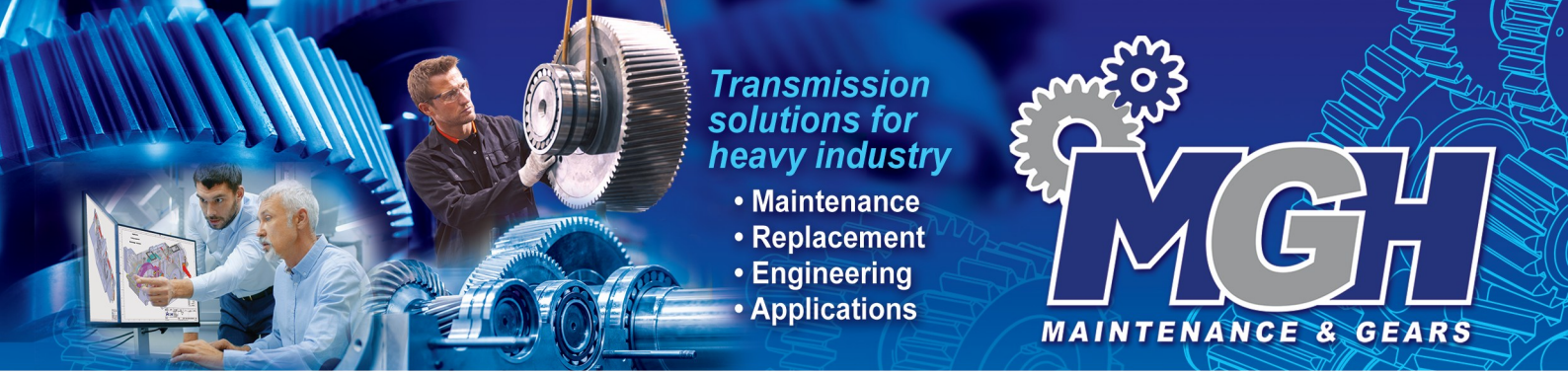
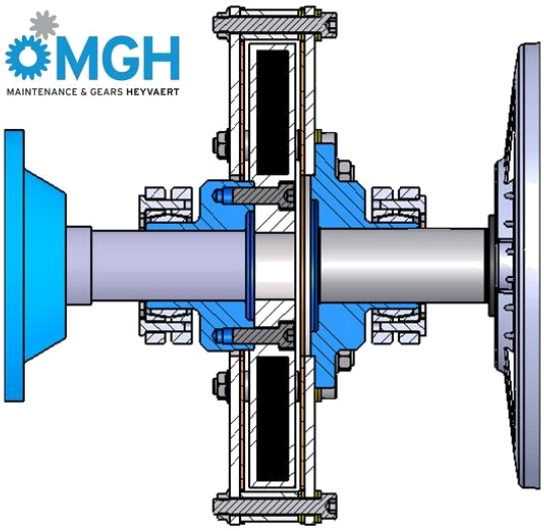


MGH Magnetic Couplings

Revolutionary technology to transfer torque through an airgap

Working principle:

- **Permanent** magnets and copper plates
- Principle of changing magnetic flux, resulting in force
  - Law of Lenz
  - Law of Newton
- The air gap is essential!



Bigger air gap = higher slip = lower torque = lower speed

Smaller air gap = lower slip = bigger torque = bigger speed

General properties

- Maintenance free
- Tolerates big misalignments
- Soft start
- Overload protection
- Dampens vibrations
- Lower TCO

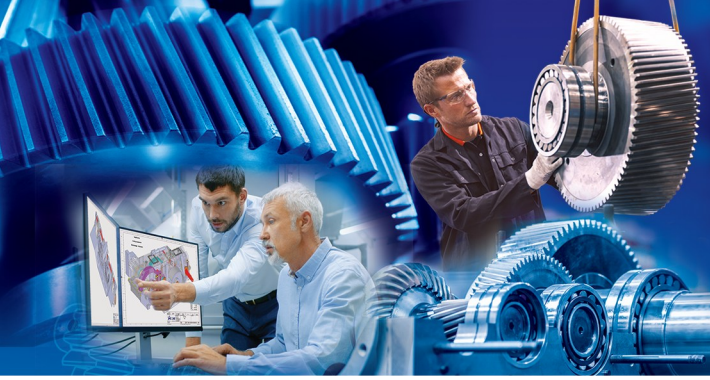
1) The hubs of our magnetic couplings are customised, allowing the installation to keep its current DBSE.
2) The selected coupling's diameter will **ALWAYS** be smaller than the height of your motor

1. Vortex (VTX) coupling

- Most **budget-friendly** magnetic coupling
- Delivered from stock
- Used for smaller size applications

MGH is the official distributor of MagnaDrive magnetic couplings in the EU

Servicecenter Brussels: Rittwegerlaan 2B - B-1830 Machelen - Servicecenter Antwerp: Luithagen Haven 2K - B 2030 Antwerpen
Tel 24/24: +32 (0)2/7530040 E-mail: info@MGH.be URL: www.MGH.be



Transmission solutions for heavy industry

- Maintenance
- Replacement
- Engineering
- Applications

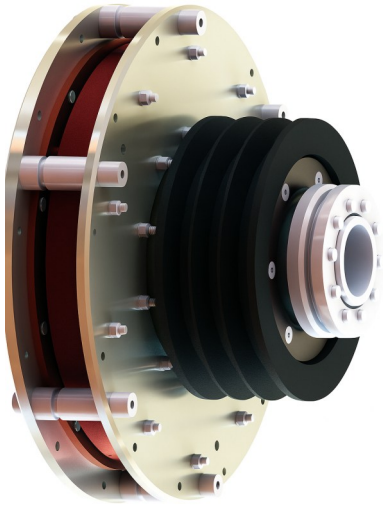
MGH
MAINTENANCE & GEARS

2. Fixed Gap Coupling (FGC)

- **High-end** solution for bigger size applications
- **ATEX** certified
- **Temperature sensor** to prevent thermal damage
- **Adjustable airgap**, done in MGH workshop **BEFORE** operation
- **Great energy savings** thanks to affinity laws
- Options available: heat exchangers

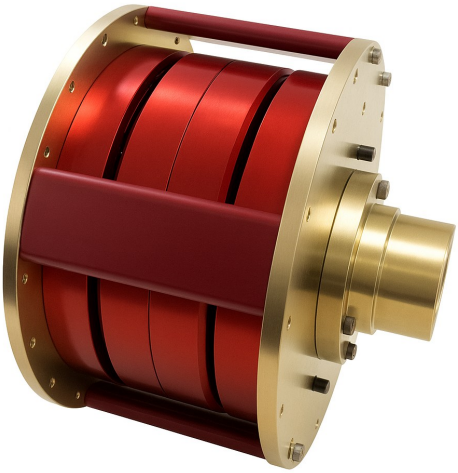
$$(Power_1/Power_2) = (Flow_1/Flow_2)^3$$

3. B-Max coupling



- Specially designed for **belt driven equipment**
- **High-end** solution
- **Temperature sensor** to prevent thermal damage
- **Adjustable airgap**, done in MGH workshop **BEFORE** operation
- **Great energy savings** thank to affinity laws

4. Synchra coupling



- Uses **2 sets of permanent magnets**
- **NO slip,** synchronous coupling
- **NO heat generated**
- Suited for **very demanding applications**
- **ATEX** certified

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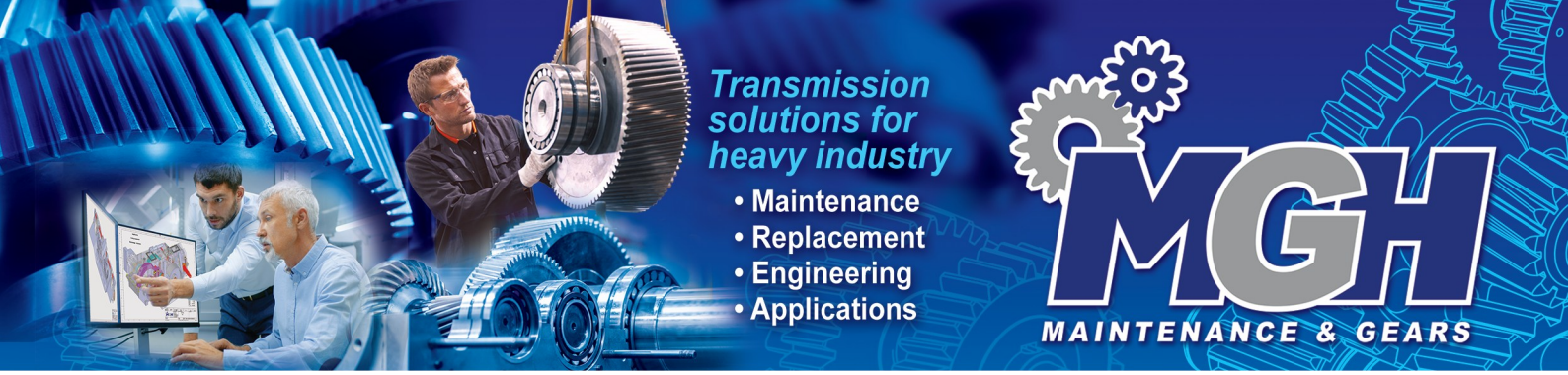
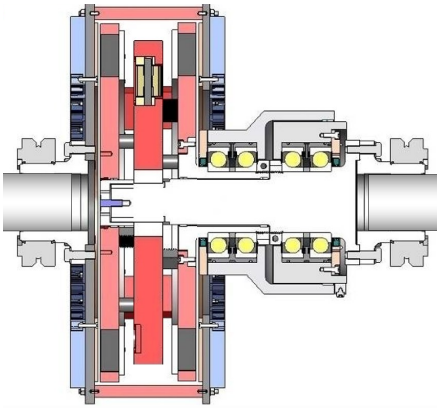


5. Adjustable Speed Drive (ASD)

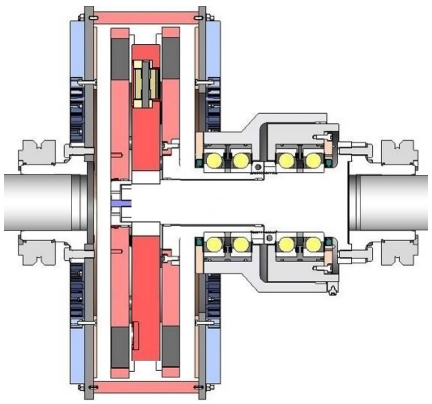
- (Mostly) maintenance free
- Adjustable airgap

  By using actuator **DURING** operation
- Highly suited for compressors / fans / pumps / ...
- **High end** solution
- **FANTASTIC ENERGY SAVINGS!!!**

SMALL AIRGAP



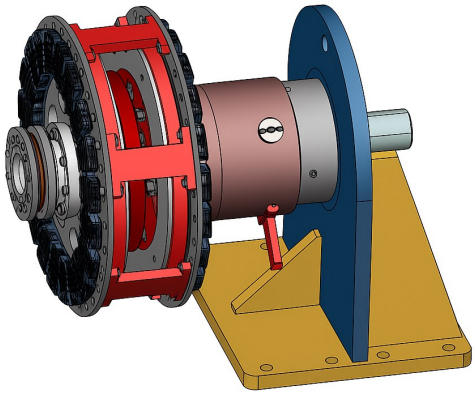
BIG AIRGAP



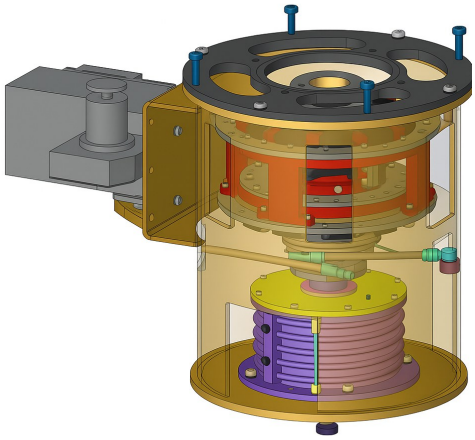
$$(Power_1/Power_2) = (Flow_1/Flow_2)^3$$

There are 3 variants of the ASD:

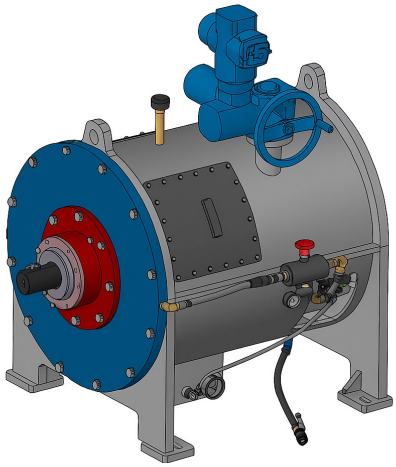
Rigid Pedestal Mount



Vertical



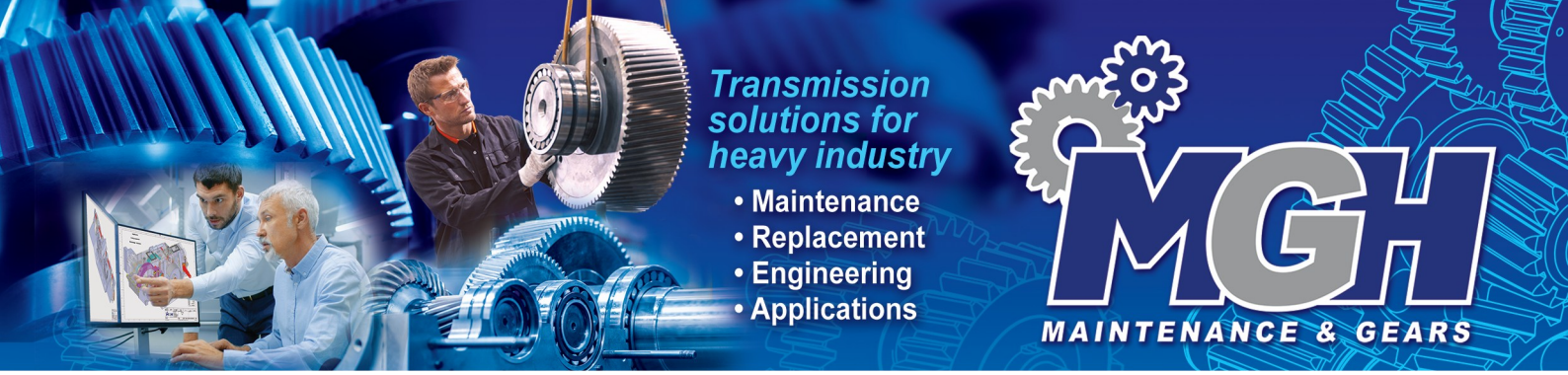
Water-cooled



Advantages compared to "classical solutions"

Compared to fluid couplings:	Compared to frequency drives (VFD)	Compared to inlet guide vanes (IGV)
• **NO** maintenance needed	• **NO** expensive and complex electrical equipment needed	• **NO** complex mechanical set-up
• **NO** leaks / burning hot oil spilling	• Longer lifespan	• **NO** mechanical spare parts
• **NO** expensive stock spare parts	• VFD and coupling in 1	• Longer lifespan
• **NO** complex installation procedure	• Motor can operate on nominal settings (= more efficient)	• Motor can operate on nominal settings (= more efficient)
• Food industry approved		

1) The hubs are customised, allowing the installation to keep its current DBSE.



Motor	VTX				FGC				ASD						
									Air-Cooled, ped + vert				Water-Cooled		
RPM kW	3000	1500	1000	750	3000	1500	1000	750	3000	1500	1000	750	1500	1000	750
0,75	1	1	1	1											
1,5	1	1	2	2											
2,5	1	1	2	2											
4,0	1	2	2	2											
5,5	2	2	2	3											
7,5	2	2	3	3											
11,0	2	3	3	3			4	4				9			
15,0	2	3	3	3			4	5			9	9			
18,5	2	3	3			4	4	5			9	9			
22	3	3				4	5	5		9	9				
30	3	3				5	5	6		9					
37	3				4	5	6			9		10			
45	3				4	5	6		9		10	10			
55	3				4	6		7	9		10				
75					5		7		9	10					
90					6					10					
110					6	7						11			12
132															12
160								8	10		11			12	12
200					7			8						12	12
250					7		8	8		11			12	12	12
315						8	8						12	12	13
355						8							12	12	13
400						8							12	12	13
500													12	13	13
560													12	13	13
630					8								12	13	13
710					8								13	13	13
800					8								13	13	
900					8								13	13	
1000													13	13	
1500													13		
2000															
2500															

Not possible Possible

1 = €2k
2 = €4k
3 = €5k
4 = €7k
5 = €11k
6 = €13k
7 = €16k
8 = €55k
9 = €48k
10 = €55k
11 = €95k
12 = €240k
13 = €330k

DISCLAIMER: Every case is unique, MGH will be happy to check and validate your selection. These prices are indicative for 2025 and may change