

Data Sheet Accessory

Shaft couplings

Series MAK, MSK, M495, ESM

MEGATRON Shaft Couplings:

- Connect two shafts, even with different diameters
- Are suitable for rotary movements
- Absorb larger angular and radial deviations
- Have a low inertia
- Do not cause a change in the transmission speed
- Damp torsional vibrations
- Serve as mechanical protection against oversized pairs of forces
- Made of plastic (also with metal hubs) act electrically and heat insulating

Content					
Performance Level	Series	Page	Picture	Information	Price
Standard		2		Order example	
	MAK	3-4		▪ Helix coupling ▪ Material plastic ▪ Fastening: thread screws ▪ Up to 5000 rev./min	Lower
	MSK	5-6		▪ Helix coupling ▪ Material polyamide, fibre optic reinforced ▪ Hub: aluminium ▪ Fastening: thread screws ▪ Up to 12000 rev./min	
	M495	7-8		▪ Bellows coupling ▪ Material stainless steel ▪ Fastening: clamping hub ▪ Up to 15000 rev./min	
	ESM	9-10		▪ Helix coupling ▪ Material aluminium ▪ Fastening: clamping hub ▪ Up to 20000 rev./min	
Top					Higher

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Order code example

Selection: standard=black/bold, options=grey/cursive

Description		Shaft 1 Ø in [mm]	Place marker	Shaft 2 Ø in [mm]	Minimum order quantity [pcs.]
Series	XXX				
Ø Diameter shaft [mm]		X	-	X	X

Order example

Requirement:

Shaft D1 Ø 6,00 mm, Shaft D2 Ø 6,35 mm, Operational speed up to 18.000 rev./min

Example for order code:

ESM 6-6,35

It is not possible to combine each shaft diameter D1 and D2. Which combinations are possible, please refer to the following order information of each shaft coupling series.

Shaft couplings

Series MAK, MSK, M495, ESM

Series MAK



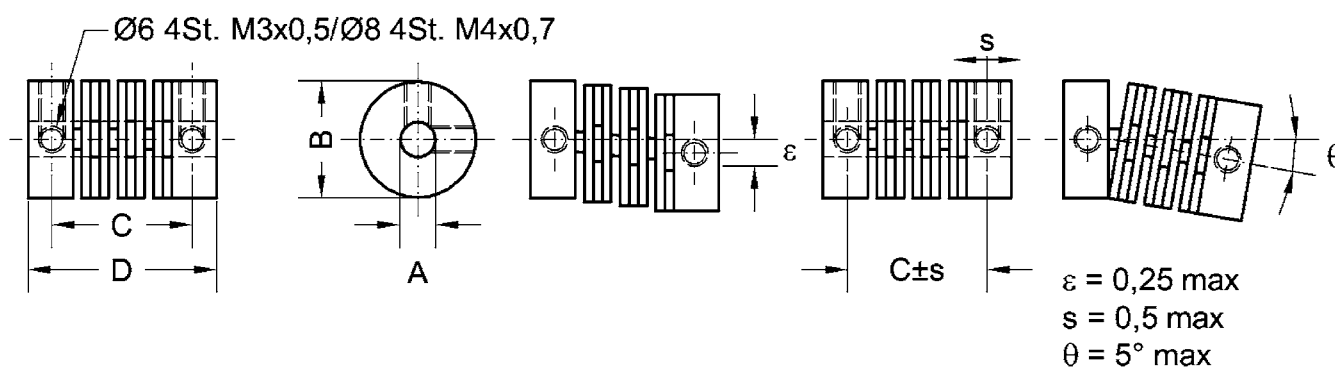
- Standard performance helix coupling
- Suitable for 6 mm shaft diameters
- Up to 5000 rev./min
- Material: Plastic

Thanks to the insulating effect from the material (plastic) of the shaft coupling it can be easily realized a galvanically insulation between the two shafts which are coupled together.

Data Series MAK

Maximum operating torque	n/a
Max. operational speed	5000 rev./min
Torsional stiffness	n/a
Radial spring bar	n/a
Axial spring bar	n/a
Maximum angular offset	n/a
Maximum radial offset	n/a
Maximum axial offset	n/a
Mass moment of inertia	n/a
Tightening torque of the screws	n/a
Mass	n/a
Material	Plastic
Operating temperature range	-10..70°C

Drawing Series MAK



	A	B	C	D
Welle Ø6	Ø6 ^{+0,1} ₋₀	Ø15	16,5	22

Shaft couplings

Series MAK, MSK, M495, ESM

Order information series MAK

Order code series MAK

Selection: standard=black/bold, options=grey/cursive

Description		Shaft 1 Ø in [mm]	Place marker	Shaft 2 Ø in [mm]	Minimum order quantity [pcs.]
Series	MAK				
Ø Diameter shaft [mm]		6	-	6	1

Order example series MAK

Requirement:

Shaft D1 Ø 6.00 mm, shaft D2 Ø 6.00 mm

Example for order code:

MAK 6-6

Shaft couplings

Series MAK, MSK, M495, ESM

Series MSK



- Helix coupling for average performance requirements
- Suitable for shaft diameters from 2 to 6,35 mm
- Up to 12000 rev./min
- Material: Polyamide, fibre optic reinforced
- Clamp hubs made of aluminium

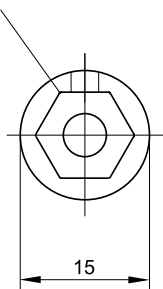
The aluminium hubs ensure a safe low-wear fixation of the coupling on the shafts. The fibre optic reinforced design of the coupling has a heat and electrically insulating property.

Data series MSK

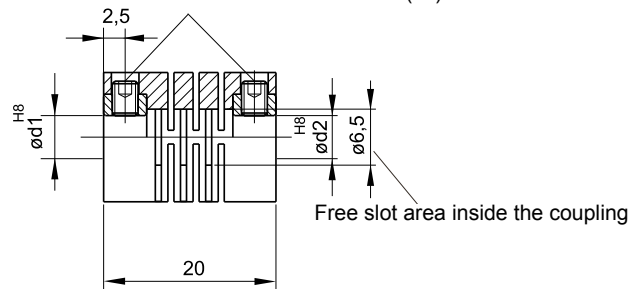
Maximum operating torque	0,3 Nm
Max. operational speed	12000 rev./min
Torsional stiffness	0.012 kNm/rad
Radial spring bar	45 N/mm
Axial spring bar	n/a
Maximum angular offset	2.5°
Maximum radial offset	±0.3 mm
Maximum axial offset	±0.2 mm
Mass moment of inertia	n/a
Tightening torque of the screws	0.7 Nm
Mass	6 g
Material	Coupling polyamide 6.6, fibre optic reinforced, hub brass
Operating temperature range	n/a

Drawing series MSK

Form fit shaft-hub connection



Grub screw M3x4 ISO 4029 (2x)



Data Sheet Accessory

Shaft couplings

Series MAK, MSK, M495, ESM

Order information series MSK

Combination possibilities shaft diameter Ø 1 with shaft diameter Ø 2 series MSK
YES = shaft combination is possible, NO = shaft combination is not possible

D1 \ D2		Diameter Ø shaft 2 [mm]					
		2	3	4	5	6	6,35
Diameter Ø shaft 1 [mm]	2	YES	YES	YES	YES	YES	NO
	3	NO	YES	YES	YES	YES	NO
	4	NO	NO	YES	YES	YES	NO
	5	NO	NO	NO	YES	YES	NO
	6	NO	NO	NO	NO	YES	NO
	6,35	NO	NO	NO	NO	NO	YES

Order code series MSK

Selection: standard=black/bold, options=grey/cursive

Description		Shaft 1 Ø in [mm]	Place marker	Shaft 2 Ø in [mm]	Minimum order quantity [pcs.]
Series	MSK				
Ø Diameter shaft [mm]		2		2	10
		3		3	10
		4		4	10
		5	-	5	10
		6		6	1
		6,35		6,35	10

Order example series MSK

Requirement:

Shaft D1 Ø 4.00 mm, Shaft D2 Ø 6.00 mm

Example for order code:

MSK 4-6

Data Sheet Accessory

Shaft couplings

Series MAK, MSK, M495, ESM



- High performance bellows coupling
- Suitable for shaft diameters from 3 to 12 mm in two versions
- Up to 15.000 rev./min
- Material: stainless steel
- Clamping hub
- 2 versions

The high-quality product design is a guarantee for a long lifespan. The clamp hubs ensure a safe low-wear fixation of the coupling on the shafts.

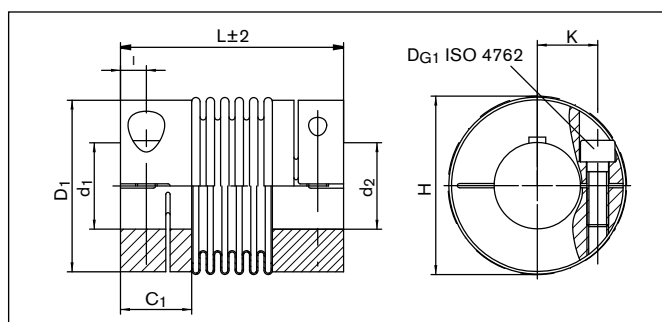
Data Series M495

Version , shaft diameter	Version 1 shaft diameter d1, d2 3..10 mm	Version 2 shaft diameter d1, d2 11..12 mm
Maximum operating torque	1.5 Nm	2 Nm
Maximum operational torque	15000 rev./min	15000 rev./min
Torsional stiffness	0.7 kNm/rad	1 kNm/rad
Radial spring bar	81 N/mm	46 N/mm
Axial spring bar	23 N/mm	14 N/mm
Maximum angular offset	2°	2°
Maximum radial offset	0.15 mm	0.25 mm
Maximum axial offset	0.4 mm	0.5 mm
Mass moment of inertia	1.2 x 10 ⁻⁶ kg m ²	2.8 x 10 ⁻⁶ kg m ²
Tightening torque of the screws	0.8 Nm	1 Nm
Mass	24 g	40 g
Material	Stainless steel	Stainless steel
Operating temperature range	n/a	n/a

Drawing series M495

Dimensions series M495

	L ±2 [mm]	D1 [mm]	d1 [mm]	d2 [mm]	H [mm]	C1 [mm]	K [mm]	I [mm]	DG1 [mm]
Version 1	30	20	3, 4, 5, 6, 6.35, 7, 8, 9, 10	3, 4, 5, 6, 6.35, 7, 8, 9, 10	21	9	7	3	M2.5
Version 2	42	25	11, 12	11, 12	27	11	9	4	M3



Data Sheet Accessory

Shaft couplings

Series MAK, MSK, M495, ESM

Order information series M495

Combination possibilities shaft diameter Ø 1 with shaft diameter Ø 2 series M495

YES = shaft combination is possible, NO = shaft combination is not possible

D1 \ D2		Diameter Ø shaft 2 [mm]										
		3	4	5	6	6.35	7	8	9	10	11	12
Diameter Ø shaft 1 [mm]	3	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES
	4	YES	YES	YES	YES	YES	YES	YES	YES	YES	NO	NO
	5	YES	YES	YES	YES	YES	YES	YES	YES	YES	NO	NO
	6	YES	YES	YES	YES	YES	YES	YES	YES	YES	NO	NO
	6.35	YES	YES	YES	YES	YES	YES	YES	YES	YES	NO	NO
	7	YES	YES	YES	YES	YES	YES	YES	YES	YES	NO	NO
	8	YES	YES	YES	YES	YES	YES	YES	YES	YES	NO	NO
	9	YES	YES	YES	YES	YES	YES	YES	YES	YES	NO	NO
	10	YES	YES	YES	YES	YES	YES	YES	YES	YES	NO	NO
	11	NO	NO	NO	NO	NO	NO	NO	NO	NO	YES	YES
	12	NO	NO	NO	NO	NO	NO	NO	NO	NO	YES	YES

Order code series M495

Selection: standard=black/bold, options=grey/cursive

Description		Shaft 1 Ø in [mm]	Place marker	Shaft 2 Ø in [mm]	Minimum order quantity [pcs.]
Series	M495				
Ø Diameter shaft [mm]		3		3	10
		4		4	10
		5		5	10
		6		6	1
		6,35		6,35	10
		7	-	7	10
		8		8	10
		9		9	10
		10		10	10
		11		11	10
		12		12	10

Order example series M495

Requirement:

Shaft D1 Ø 3.00 mm, Shaft D2 Ø 5.00 mm

Example for order code:

M495 3-5

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Series ESM



- Top performance helix coupling
- Suitable for shaft diameters from 3 mm to 12 mm
- Up to 20000 rev./min
- Material aluminium
- Clamping hub
- 4 different dimensions (=designs)

Completely made of one aluminium profile. As a result, fatigue fractures, e.g. such as can occur by welded joints, can be excluded.

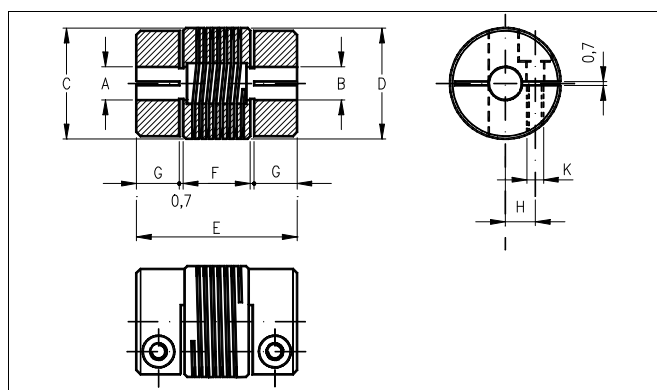
Data series ESM

Maximum operating torque	n/a
Max. operational speed	20000 rev./min
Torsional stiffness	n/a
Radial spring bar	600 N/mm (D1, D2 = 3, 4 mm), 1100 N/mm (D1, D2 = 4, 6, 6.35 mm), 2200 N/mm (D1, D2 = 7, 8, 9, 10 mm), 4000 N/mm (D1, D2 = 11, 12 mm)
Axial spring bar	n/a
Maximum angular offset	5°
Maximum radial offset	0.25 mm
Maximum angular offset	0.25 mm
Mass moment of inertia	n/a
Tightening torque of the screws	n/a
Mass	n/a
Material	Aluminium
Operating temperature range	n/a

Drawing series ESM

Dimensions series ESM

Version	Ø D1 [mm]	Ø D2 [mm]	C [mm]	D [mm]	E [mm]	F [mm]	G [mm]	H [mm]	K - Ø
Design 1	3, 4	3, 4	15	14	23	7.6	7	4.7	2 M
Design 2	5, 6, 6.35	5, 6, 6.35	20	19	29	11.6	8	6.5	3 M
Design 3	7, 8, 9, 10	7, 8, 9, 10	25	24	31	13.6	8	8	3 M
Design 4	11, 12	11, 12	30	29	38	16.6	10	10	4 M



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Order information series ESM

Combination possibilities shaft diameter Ø 1 with shaft diameter Ø 2 series ESM

YES = shaft combination is possible, NO = shaft combination is not possible

D1 \ D2		Diameter Ø shaft 2 [mm]										
		3	4	5	6	6.35	7	8	9	10	11	12
Diameter Ø shaft 1 [mm]	3	YES	YES	NO	NO	NO	NO	NO	NO	NO	NO	NO
	4	YES	YES	NO	NO	NO	NO	NO	NO	NO	NO	NO
	5	NO	NO	YES	YES	YES	NO	NO	NO	NO	NO	NO
	6	NO	NO	YES	YES	YES	NO	NO	NO	NO	NO	NO
	6.35	NO	NO	YES	YES	YES	NO	NO	NO	NO	NO	NO
	7	NO	NO	NO	NO	NO	YES	YES	YES	YES	NO	NO
	8	NO	NO	NO	NO	NO	YES	YES	YES	YES	NO	NO
	9	NO	NO	NO	NO	NO	YES	YES	YES	YES	NO	NO
	10	NO	NO	NO	NO	NO	YES	YES	YES	YES	NO	NO
	11	NO	NO	NO	NO	NO	NO	NO	NO	NO	YES	YES
	12	NO	NO	NO	NO	NO	NO	NO	NO	NO	YES	YES

Order code series ESM

Selection: standard=black/bold, options=grey/cursive

Description		Shaft 1 Ø in [mm]	Place marker	Shaft 2 Ø in [mm]	Minimum order quantity [pcs.]
Series	M495				
Ø Diameter shaft [mm]		3		3	1
		4		4	1
		5		5	1
		6		6	1
		6,35		6,35	1
		7	-	7	1
		8		8	1
		9		9	1
		10		10	1
		11		11	1
		12		12	1

Order example series ESM

Requirement:

Shaft D1 Ø 5.00 mm, Shaft D2 Ø 6.35 mm

Example for order code:

ESM 5-6.35