

Fax-form (please complete in block capitals!)

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Sender:

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Company

**Orttech**  
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Telephone (extension)

Fax

for the attention of (if known)

**Technical data of application:**

Required holding torque:

$M_H =$  \_\_\_\_\_ lb. in.

Maximum r.p.m.

$N_{max} =$  \_\_\_\_\_ RPM

**Information regarding emergency stop mode:**

Max. inertia to be stopped:

$J =$  \_\_\_\_\_ lb. ft.<sup>2</sup>

at r.p.m.

$n_T =$  \_\_\_\_\_ min<sup>-1</sup>

Required total amount of emergency engagements:

$S_B =$  \_\_\_\_\_

Shortest time between two emergency engagements:

$t_N =$  \_\_\_\_\_ min

**Installation and surroundings:**

Available space for installation (diameter x length)  
or drawing

$D \times L =$  \_\_\_\_\_ in.

Ambient temperature:

$T =$  \_\_\_\_\_ °F

**Type of Actuation method**

Electromagnetic  Pneumatic  Hydraulic

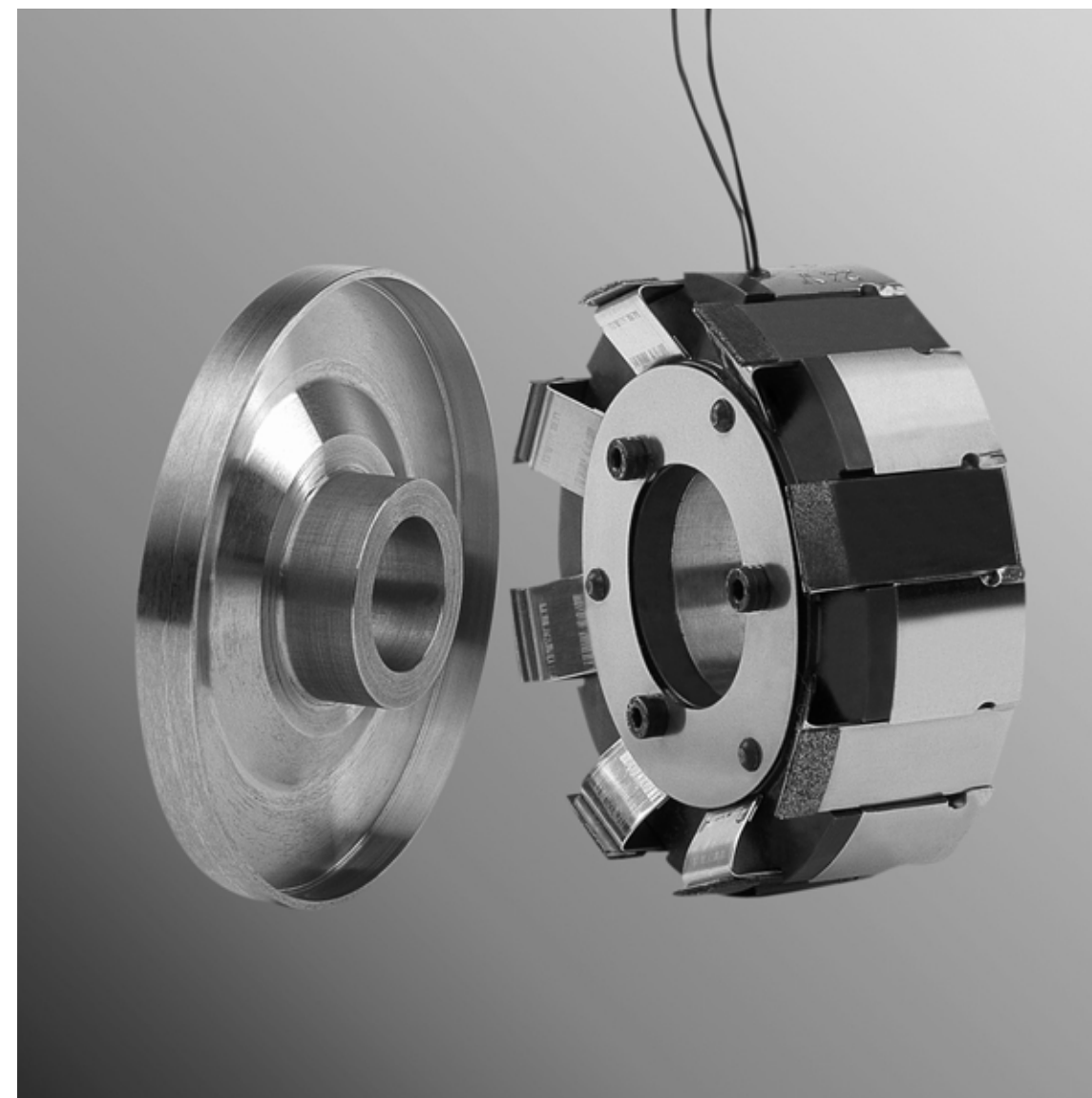
**Type of release method (for spring applied units)**

Electromagnetic  Pneumatic  Hydraulic

NOTE: For clutch applications please call Orttech.

# SEMO-Brake

Electromagnetically spring applied brake, backlash-free



The Ortttech SEMO Brake

The SEMO-Brake is a backlash-free, spring applied brake based on a totally NEW, patented principal of operation. This brake can be released using electromagnetic, pneumatic, or hydraulic force.

Application

The *Ortttech* SEMO-Brake can be used in all types of applications in which the brake primarily serves as a statically applied holding brake. However, this brake can also be occasionally used in a dynamic mode as an emergency brake.

Advantages of the SEMO concept include:

- **No drag or idling torque.**
- Can be installed in a horizontal or vertical position or at **any** angle.
- Completely **backlash free.**
- **Very compact** design.
- **No maintenance** required for setting or maintaining air gap.
- There is **no air gap to maintain** therefore **machining** tolerances of adjoining parts are less demanding.
- **No axial loading** on adjoining parts..
- **Self adjusting** as it wears with no reduction in the brake torque.

Design Concept

The SEMO concept is based on using mechanical leverage to amplify the force of the friction linings against the respective opposing friction surface. This mechanical advantage results in a very high torque to physical size relationship

Due to its unique design, the friction radius of the brake is almost at the very outer diameter of the unit, which makes it a very compact design concept.

The torsionally stiff actuation fingers, that have the friction material attached to them, guarantee that the brake will have zero backlash.

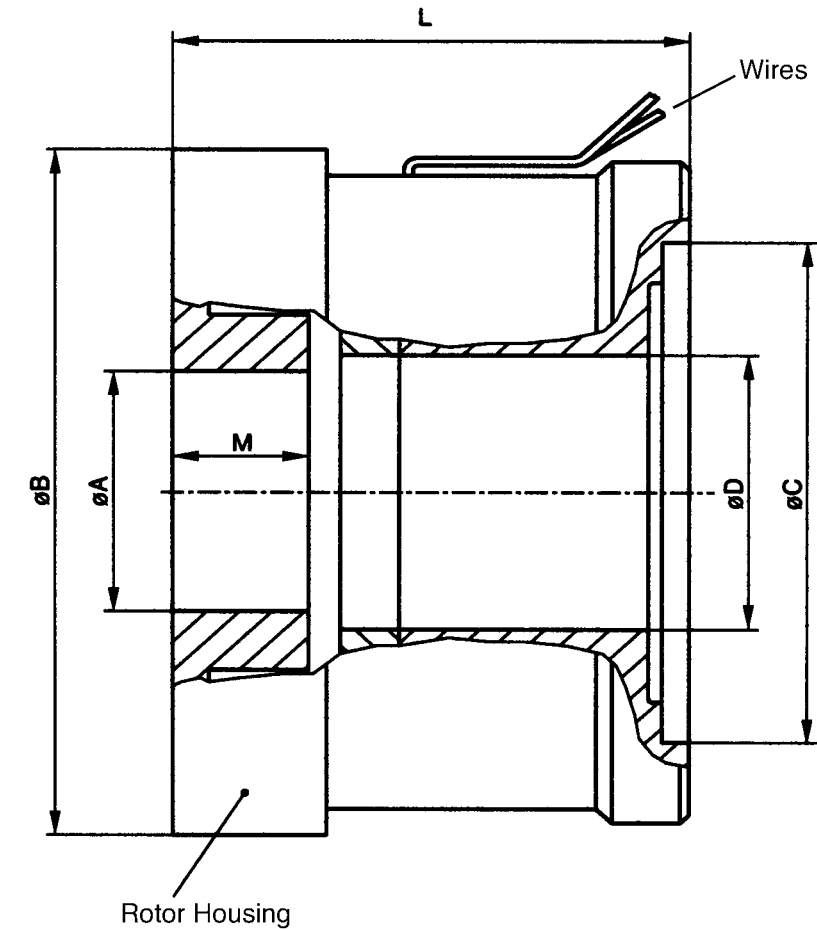


SEMO-Brake used as a holding brake incorporated into an optical microscope for surgeons.

Flexibility of Concept

This patented design can be used for clutch or brake applications using various actuation methods. See your Ortttech representative to review your specific needs.

The SEMO concept allows the unit to be designed as a clutch or a brake. They can be actuated or released by electrical, pneumatic or hydraulic means. Below is an example of electro-magnetically released, spring applied brake series that is backlash free. Additional types of units using the SEMO concept are available. The SEMO concept is particularly well suited for design and integration into OEM equipment.



Drawing No.	Mstat Nm	Mdyn Nm	P20 W <sup>1)</sup>	P80 W <sup>1)</sup>	A mm	B mm	C mm	D mm	L mm	M mm
0208-001-03-001000	2	1,8	11,5	9,3	15	57		23	27	10
0208-000-05-011000	10	9	24	19,6	24	100	66	40	42	20
0208-000-04-002000	13,5	12	21	17	30	85	62	34	57	15
0208-000-04-003000	14	12	26	21	25,5	85	62	34	40	15
0208-001-05-001000	40	35	32	26		84			74	
0208-000-07-001000	35	31	48	39	80	134		60	42	

Other design variations and sizes on request.

<sup>1)</sup> Voltage 24 DCV