









| Helical Gear Components   |                        |
|---|------------------------|
|  | Helical Gear Shaft     |
|  | Nut Housing Blank      |
|  | Nylon Nut              |
|  | Tapered Roller Bearing |
|  | Roller Bearing Housing |
|  | Nut Housing End Cap    |
|  | Alignment Rod          |
|  | Shipping Strap         |



Decades of design and engineering expertise at your service

**DME** has decades of design and engineering expertise to assist you in design and development of stack molds.

Our Helical Gears are the industry standard with decades of proven applications in a wide variety of applications and plastic resins. Our Helical Gear housings and assemblies greatly simplify the design and development of stack molds, leaving you more time to concentrate on the core and cavity details. Off-the-shelf components are available when you need them.

**DME** quality ensures reliability and interchangeability of all components.

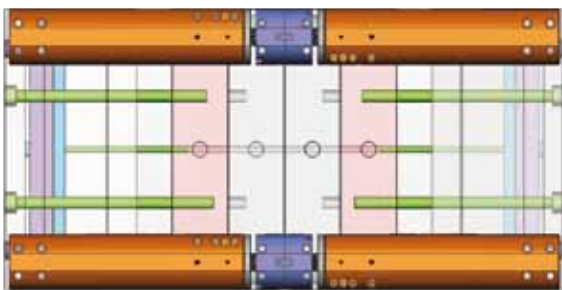
**DME** engineers and designers are available to assist you with your questions whether you are building your first stack mold or challenging multilevel stack molds with complex mold actions.

**DME** even offers complete design services (up to the cores and cavities) for those needing to off-load design and engineering during peak workloads.

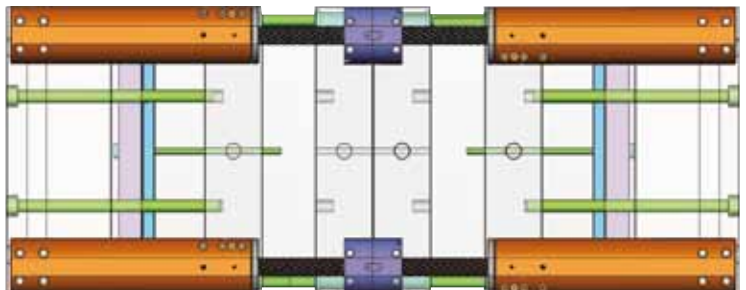
With **DME**, you can order individual components, complete assemblies ready for installation, or complete systems including design and engineering.

**DME** Helical Gear housings and assemblies greatly simplify the design and development of stack molds - leaving you more time to concentrate on core and cavity details.

Mold closed

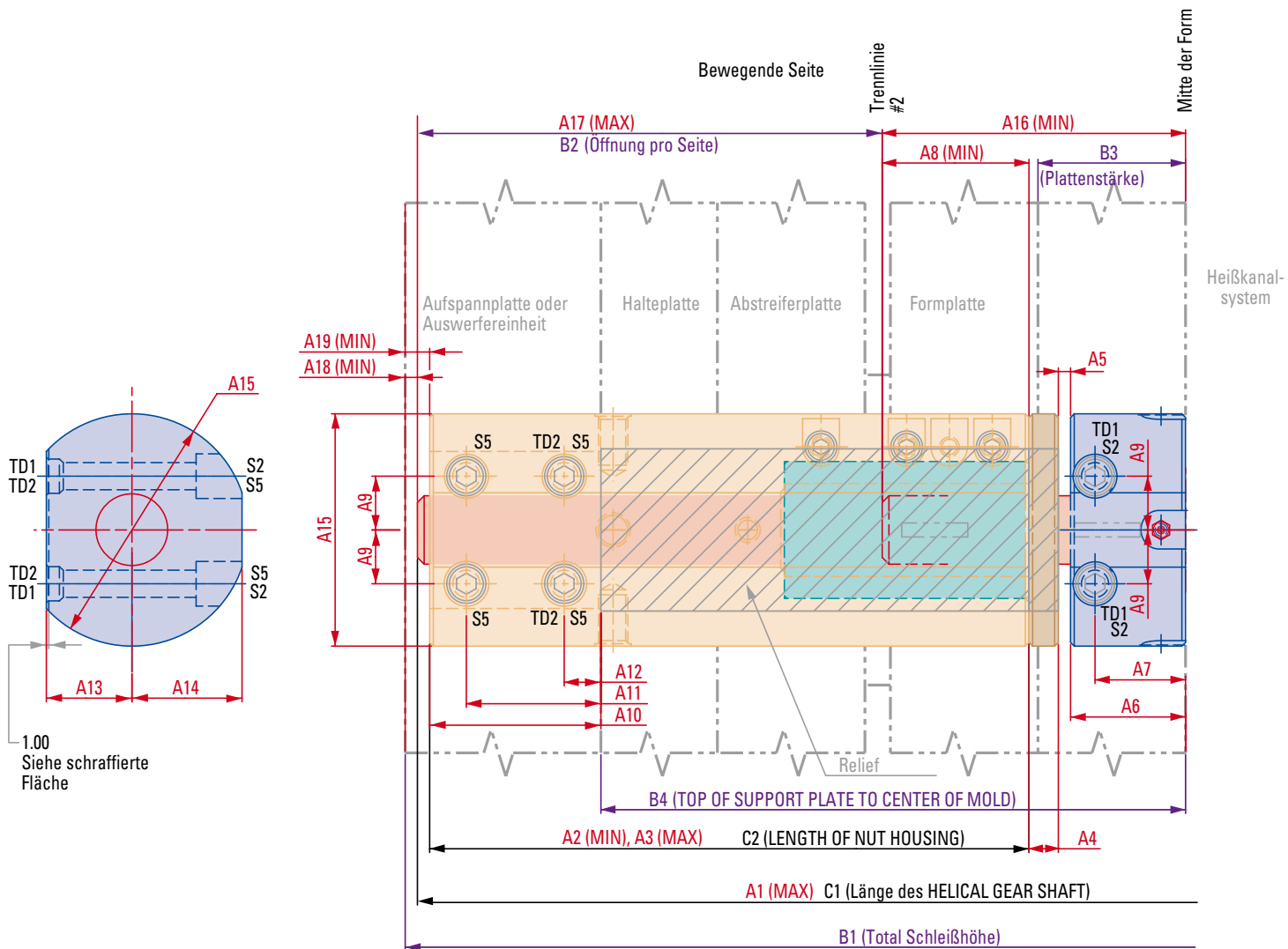
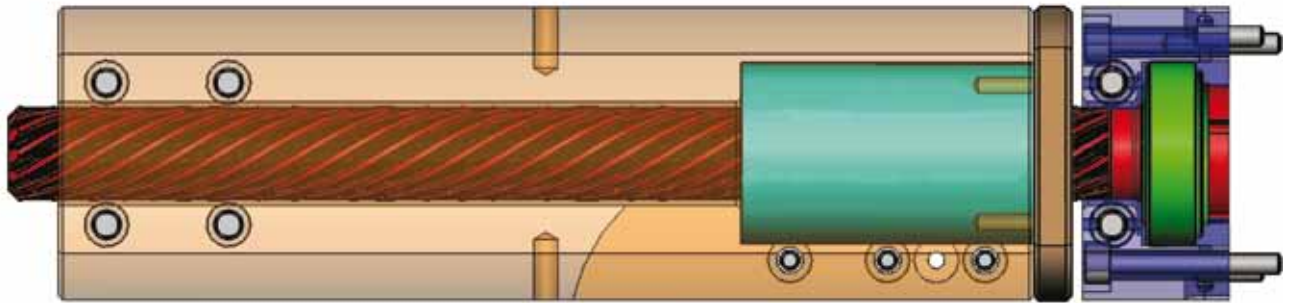


Mold open



Helical Gear Stack Mold Centering Devices ensure that both parting lines open the same distance simultaneously.





**Mounting Screws and Dowels**

|                                 | HG28         | HG38         |
|---------------------------------|--------------|--------------|
| <b>S2 Socket head cap screw</b> | M10 x 75mm   | M12 x 110mm  |
| <b>S5 Socket Head Cap Screw</b> | M10 x 75mm   | M12 x 110mm  |
| <b>TD1 Tubular Dowel</b>        | Ø14mm x 10mm | Ø18mm x 12mm |
| <b>TD2 Tubular Dowel</b>        | Ø14mm x 10mm | Ø18mm x 12mm |

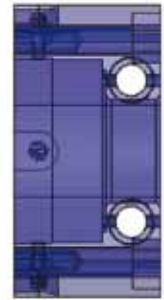
CAD reference point



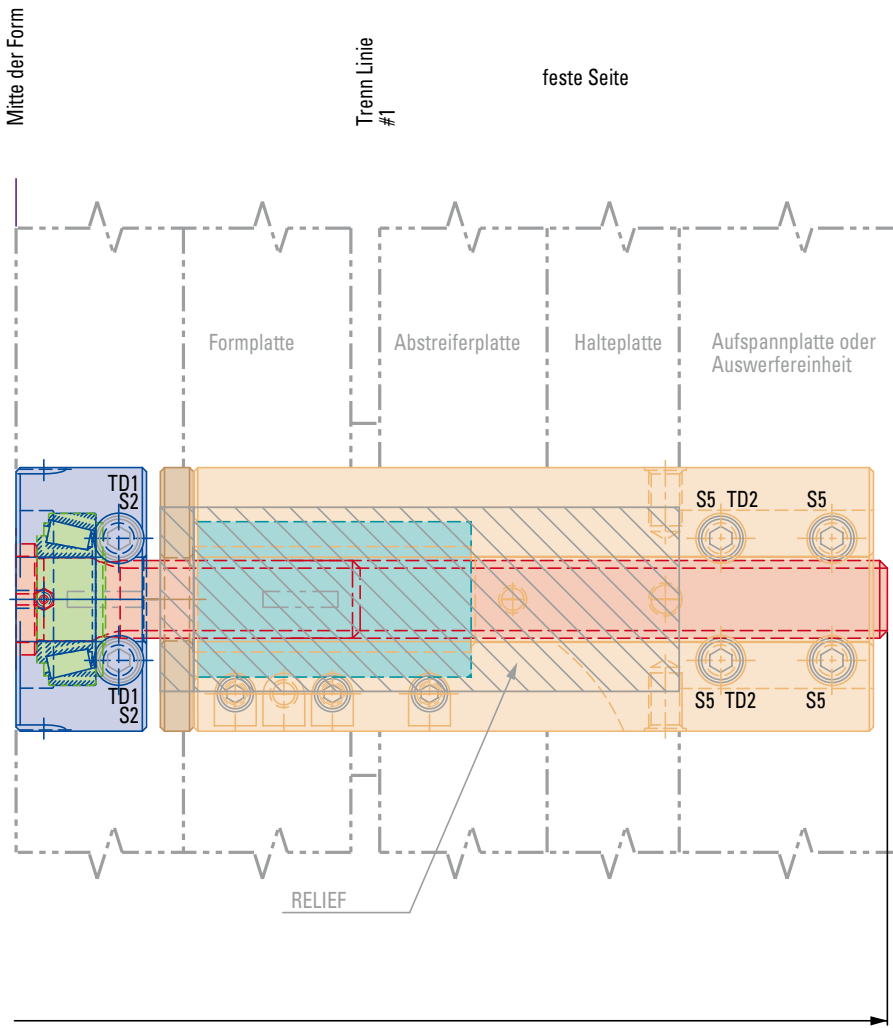
HELICAL GEAR SHAFT (uncut and special)



TAPERED  
ROLLER  
BEARING



Roller Bearing  
Housing



**Constant Dimensions**

|            | HG28-1000 | HG38-1200 | HG38-1500 |
|------------|-----------|-----------|-----------|
| <b>a1</b>  | 1000      | 1200      | 1500      |
| <b>A2</b>  | 245       | 296       | 296       |
| <b>A3</b>  | 436       | 520       | 670       |
| <b>A4</b>  | 12        | 15        | 15        |
| <b>A5</b>  | 5         | 5         | 5         |
| <b>A6</b>  | 47        | 60        | 60        |
| <b>A7</b>  | 37        | 48        | 48        |
| <b>A8</b>  | 60        | 75        | 75        |
| <b>A9</b>  | 22        | 29        | 29        |
| <b>A10</b> | 70        | 90        | 90        |
| <b>A11</b> | 55        | 70        | 70        |
| <b>A12</b> | 15        | 20        | 20        |
| <b>A13</b> | 35        | 45        | 45        |
| <b>A14</b> | 45        | 57        | 57        |
| <b>A15</b> | 95        | 120       | 120       |
| <b>A16</b> | 124       | 155       | 155       |
| <b>A17</b> | 376       | 445       | 595       |
| <b>A18</b> | 5         | 5         | 5         |
| <b>A19</b> | 5         | 5         | 5         |

**Calculated Dimensions**

|           | HG28 | HG38 |
|-----------|------|------|
| <b>C1</b> |      |      |
| <b>C2</b> |      |      |

C1 = 2 x (A16 + B2)  
 IF: C1 > (B1 - 10)  
 THEN: Gear Shaft is too long.  
 Increase B1 (total shut height).

C2 = (B4 + A10) - (A4 + A5 + A6)  
 IF: C2 < A2  
 THEN: Nut Housing is too short.  
 Increase B1 (total shut height).

IF: C2 > A3  
 THEN: Need special Nut Housing, longer than A3.

IF: C2 > 1/2 x B1 - (A4 + A5 + A6 + A19)  
 THEN: Nut Housing is too long.  
 Increase B1 (total shut height).

**Input Data**

|           | HG28 | HG38 |
|-----------|------|------|
| <b>B1</b> |      |      |
| <b>B2</b> |      |      |
| <b>B3</b> |      |      |
| <b>B4</b> |      |      |

**Restrictions**

IF: B4 ≥ 1/2 x B1  
 THEN: Impossible configuration.  
 Decrease B4 or increase B1.

IF: B3 < A6  
 THEN: Impossible configuration.  
 Increase B3.

IF: B2 ≥ 1/2 x B1  
 THEN: Impossible configuration.  
 Decrease B2.

Configuration Calculation Sheet available from **DME** Applications Engineering to help determine the lengths of the Helical Gear Shaft and Nut Housing based on mold size, and required parting line openings per side.

CAD reference point

