

D-M-E Helical Gear Stack Mold Components

GREATER PRODUCTIVITY
THROUGH SIMPLIFICATION
AND STANDARDIZATION



Helical Gear Stack Mold Components

Table of Contents



Stack Mold Helical Gear Centering Devices

Overview 79

Dimensions/Specifications 80-81

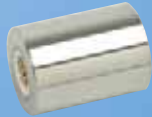


Helical Gear Components

Helical Gear Shaft 82



Nut Housing Blank..... 82



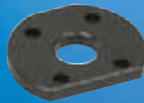
Nylon Nut..... 82



Tapered Roller Bearing..... 82



Nut Housing End Cap 82



Roller Bearing Housing 82



Shipping Strap 82



Alignment Rod..... 82

Online Price Guide

Go to www.dme.net/prices for the latest pricing guide.

D-M-E Design and Engineering Expertise



Decades of Design and Engineering Expertise at Your Service

D-M-E 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.

D-M-E quality ensures reliability and interchangeability of all components.

D-M-E engineers and designers are available to assist you with your questions whether you are building your first stack mold or challenging multi-level stack molds with complex mold actions.

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

With D-M-E, you can order individual components, complete assemblies ready for installation, or complete systems including design and engineering.

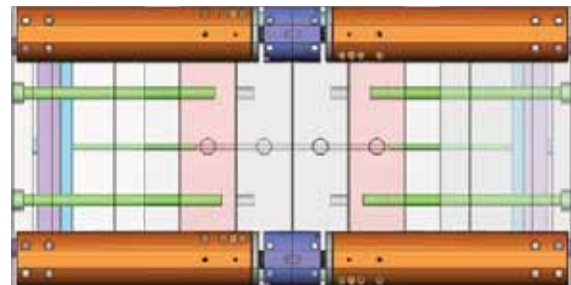
D-M-E is with you every step of the way!

Send your request or question to D-M-E Applications Engineering: appl_eng@dme.net, and we will take it from there.

D-M-E 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.

Helical Gear Stack Mold Centering Device Set-up and Maintenance Guide available upon request or at www.dme.net/hgguide

Mold closed ▶

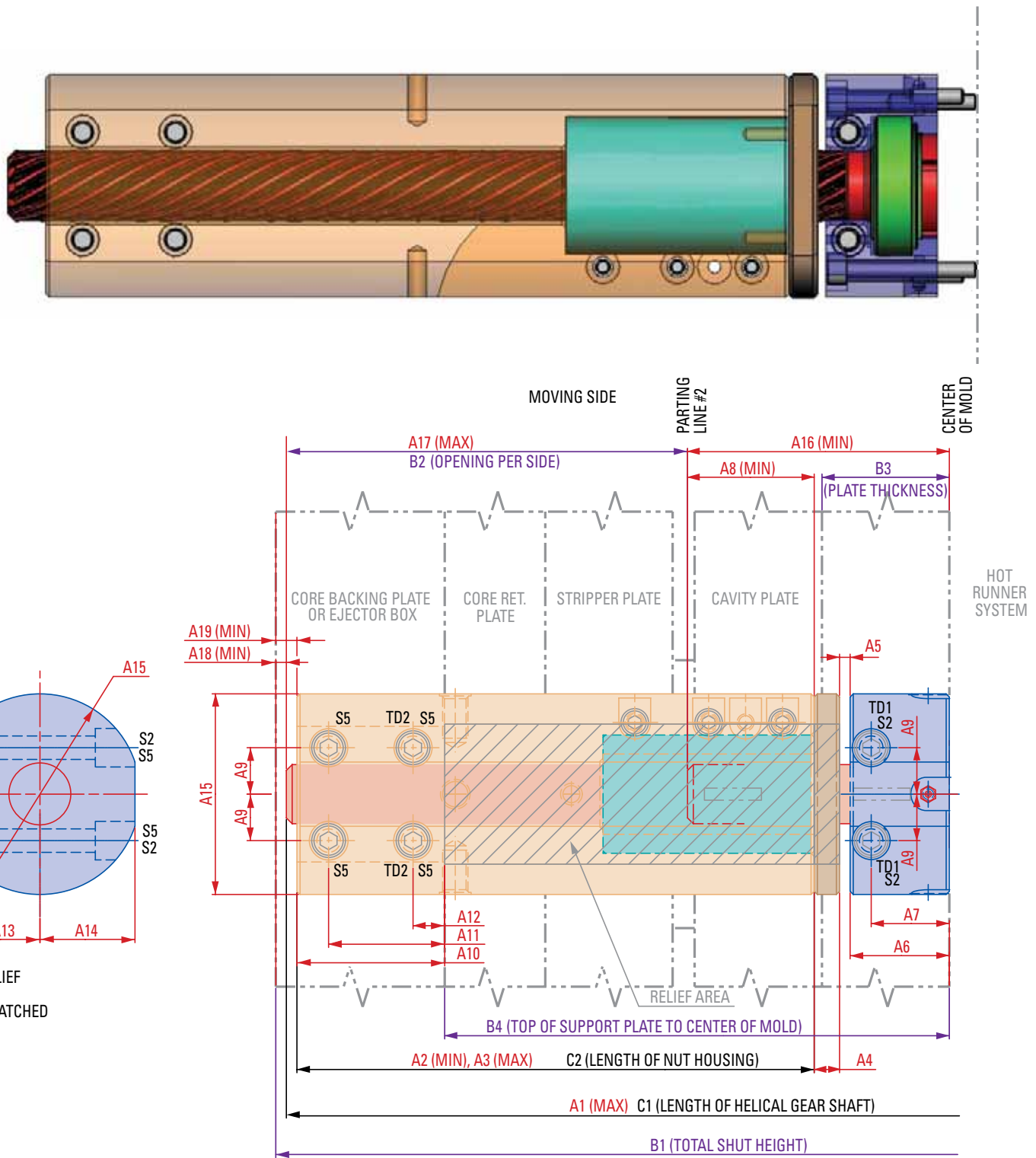


Mold open ▼



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

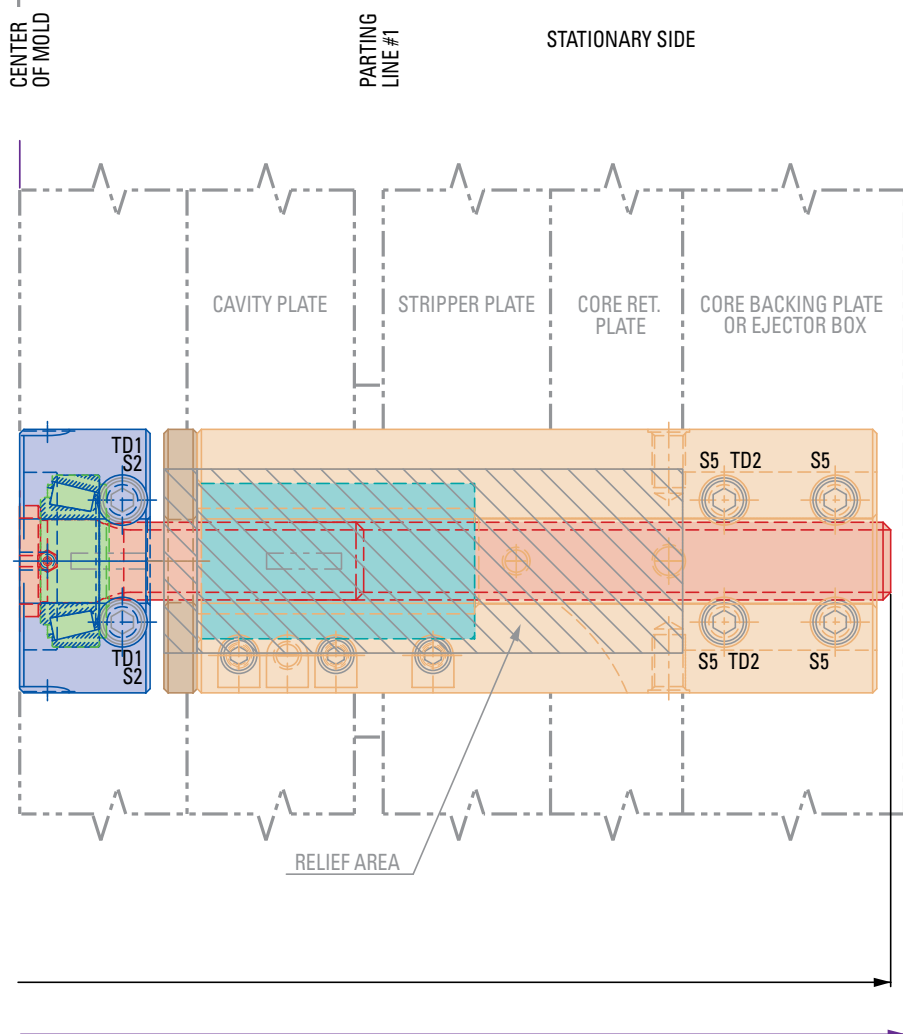
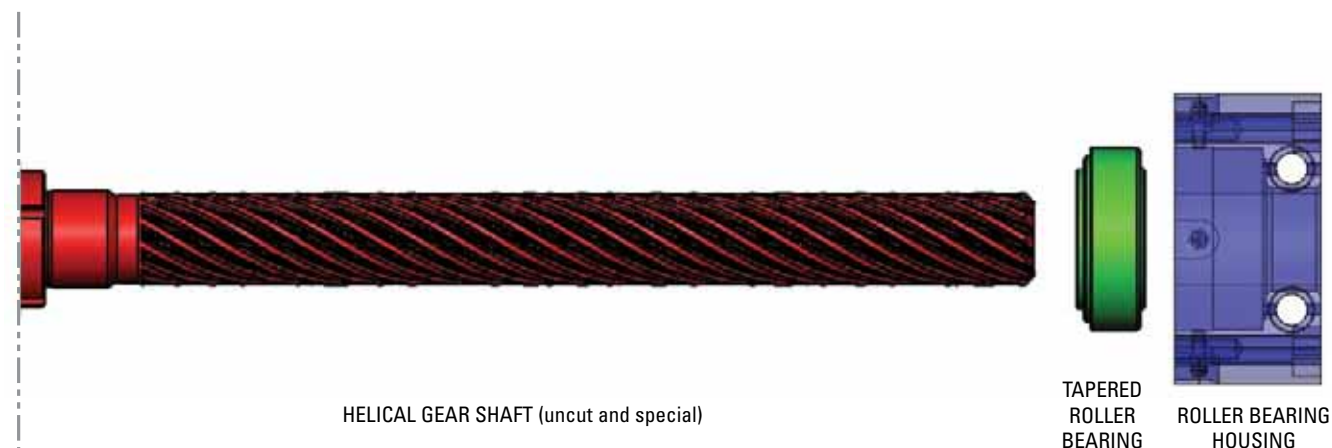
Stack Mold Helical Gear Centering Devices



Mounting Screws and Dowels

	HG28	HG38
S2 SOCKET HEAD CAP SCREW	M10 x 75mm (PART # M1075SH)	M12 x 110mm (PART # M12110SH)
S5 SOCKET HEAD CAP SCREW	M10 x 75mm (PART # M1075SH)	M12 x 110mm (PART # M12110SH)
TD1 TUBULAR DOWEL	Ø14mm x 10mm (PART # PH1410)	Ø18mm x 12mm (PART # PH1812)
TD2 TUBULAR DOWEL	Ø14mm x 10mm (PART # PH1410)	Ø18mm x 12mm (PART # PH1812)

Stack Mold Helical Gear Centering Devices



Constant Dimensions

	HG28-1000	HG38-1200	HG38-1500
A1	1000	1200	1500
A2	245	296	296
A3	436	520	670
A4	12	15	15
A5	5	5	5
A6	47	60	60
A7	37	48	48
A8	60	75	75
A9	22	29	29
A10	70	90	90
A11	55	70	70
A12	15	20	20
A13	35	45	45
A14	45	57	57
A15	95	120	120
A16	124	155	155
A17	376	445	595
A18	5	5	5
A19	5	5	5

Calculated Dimensions

	HG28	HG38
C1		
C2		

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
B1		
B2		
B3		
B4		

RESTRICTIONS

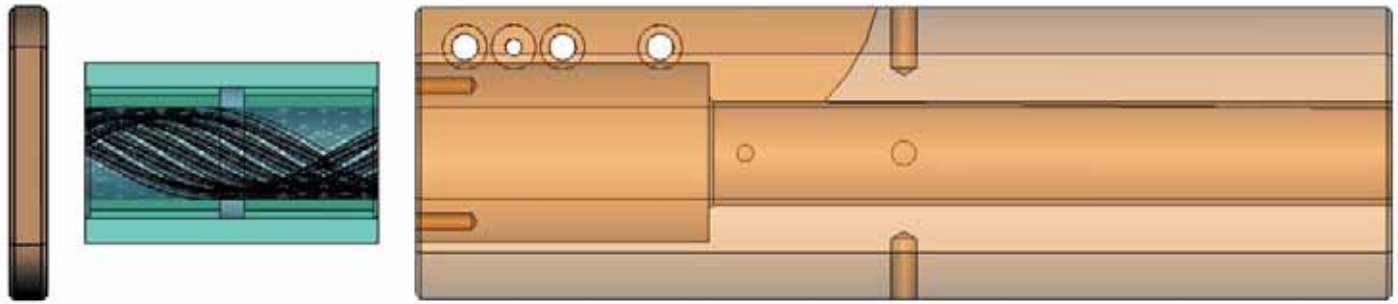
IF: B4 ≥ 1/2 x B1
 THEN: Impossible configuration.
 Decrease B4 or increase B1.

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

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

Configuration Calculation Sheet available from D-M-E 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.

Helical Gear Components

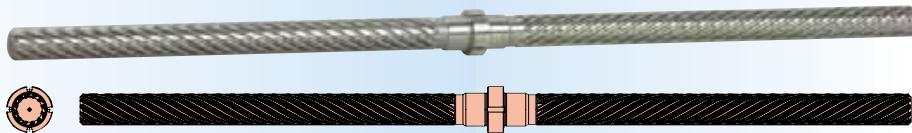


NUT HOUSING
END CAP

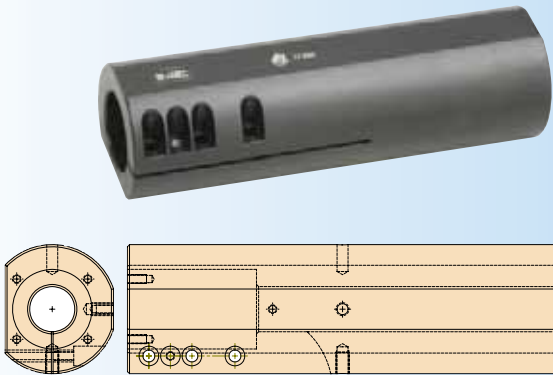
NYLON NUT
(left and right)

NUT HOUSING BLANK

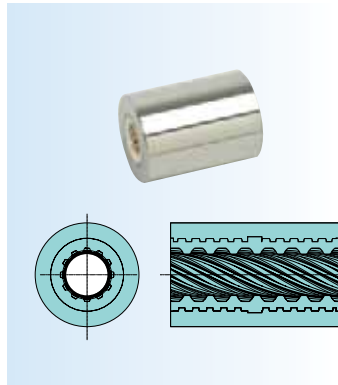
Helical Gear Components



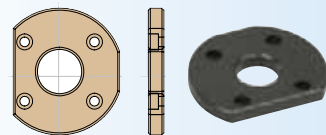
HELICAL GEAR SHAFT
Material: Pre-Hardened Steel
Variable length; cut to match your application.



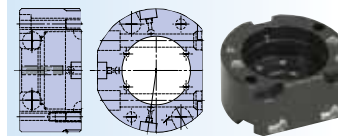
NUT HOUSING BLANK
Material: Aircraft Aluminum
Variable length; cut to match your application.



NYLON NUT (left)
NYLON NUT (right)
Material: Outer Sleeve – Steel
Nylon Insert – High-strength nylon
Nylon insert provides lubricity and an engineered fail-safe. The nylon insert will strip from the steel outer sleeve should the stack mold seize. This minimizes the potential of costly damage to the mold.
NOTE: It is recommended that a set of spare nylon nuts be kept on hand.



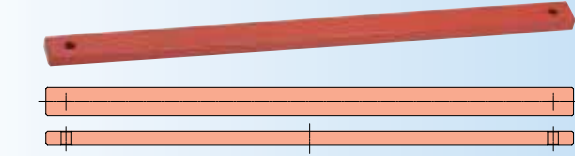
NUT HOUSING END CAP
Material: Aircraft Aluminum



ROLLER BEARING HOUSING
Material: Aircraft Aluminum



Material: Industry Standard



SHIPPING STRAP
Material: Steel



ALIGNMENT ROD
Material: Steel

ITEM NUMBERS	
HELICAL GEAR SHAFT	
HG28SH1000	HG38SH1200
—	HG38SH1500
NUT HOUSING BLANK	
HG28NH1000BL	HG38NH1200BL
—	HG38NH1500BL
NUT HOUSING END CAP	
HG28NHC	HG38NHC
NYLON NUT	
HG28NNL (left)	HG38NNL (left)
HG28NNR (right)	HG38NNR (right)
ROLLER BEARING HOUSING	
HG28RBH	HG38RBH
TAPERED ROLLER BEARING	
HG28RB	HG38RB
ALIGNMENT ROD	
HG28AR	HG38AR
SHIPPING STRAP	
HG28ST	HG38ST