

ZM1 pre-dimensioning

ratio $z_2/z_1 = 4,000$ $n_2 = 150/\text{min}$

teeth ratio u

no. of teeth z_1

no. of teeth z_2

T torque T Nm

P rated power P kW

n rotational speed n_1 /min

single type

double

triple

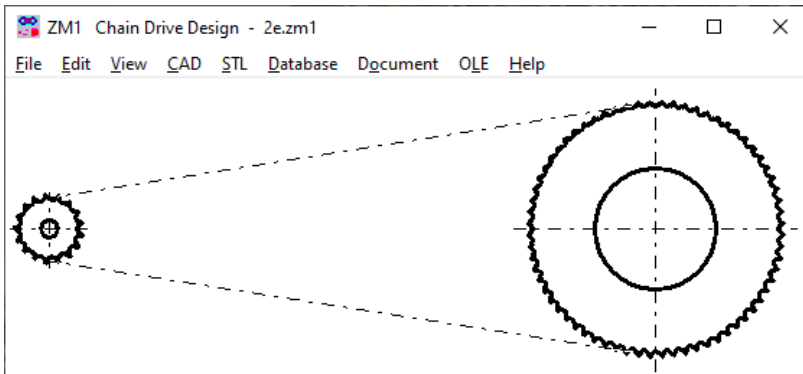
DIN 8187 / 8188

ISO 606

center distance a ca. mm

operating factor f_B

OK Cancel Help Text mm <-> inch



ZM1 Chain Drive Design - DECKER1e.zm1

File Edit View CAD STL Database Document OLE Help

HEXAGON ZM1 Chain Drive Design V3.0

sprocket 000001			
no. of teeth	z		17
pitch	p	inL	1,500"
roller diameter	df	inL	0,875"
face width	bff	mm	22,93 .. 23,45
face width total	bfs	mm	114,33
pitch diameter	d	mm	207,347
root diameter	df	mm	184,8 .. 185,1
pitch angle	tau	°	21,18
tip diameter	da	mm	226,8 .. 232,7
diameter groove	dg	mm	152,8 .. 163,8
roller root radius	rl	mm	11,23 .. 11,42
tooth flank radius	ro	mm	50,68 .. 83,4
tooth chamfer radius	rx	mm	>=38,1
chamfer	ba	mm	4,763
tooth chamfer radius	ra	mm	0,5 .. 6
roller root angle	alpha	°	114,7 .. 134,7
flank angle	gamma	°	12,06 .. 22,06

responsible dept.	technical reference	Created by	Approved by
Document type		Document status	
Title, Supplementary title		000001	
sprocket		Rev.	Date of issue
			2021-01-07
		Lang.	en
		Page	

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Lubrication

ZM1 determines the recommended type of lubrication from speed-pitch chart according to Niemann. The calculated operating point is marked in the diagram.

Text Printout

The calculation results and input data can be printed on any Windows printer. Alternatively, ZM1 can generate a HTML or TXT file, or directly load the results with MS-Excel.

Quick View

Quick views show calculation results with drawings and diagrams altogether on one screen.

True-Scale Drawings

Drawings of sprockets can be displayed on screen, printed out or exported as true-scale drawings to CAD via DXF or IGES interfaces.

Production Drawings

ZM1 generates a complete manufacturing drawing of the sprockets with drawings and tables and ISO 7200 data field. Drawing info and modifications can be entered in the program. The drawings may be printed directly, or loaded into CAD via DXF or IGES interface.

CAD Interface

Drawings and diagrams can be exported to CAD via the DXF or IGES interfaces.

STL Interface

Profile of sprockets can be generated as STL file and printed with your 3D printer.

HEXAGON Help System

As with all HEXAGON programs ZM1 can provide you with a help text and auxiliary picture for each input. Help texts and auxiliary pictures can be modified and appended by the user as required. When error messages appear you can have a description and remedy suggestion displayed.

Units

ZM1 can be switched between metric units (mm, N,MPa) and imperial units (inch, lbf, psi).

System Requirements

ZM1 is available as 32-bit app or as 64-bit app for Windows 7, 8, Windows 10.

Scope of Delivery

Software with user manual (pdf), non-expiring perpetual license with update rights.

Guarantee

HEXAGON gives a 24 month guarantee on full functionality of the software. We provide help and support by email and hotline without extra charge. HEXAGON Software is continuously improved and updated. Registered users are regularly kept informed of updates and new editions.