

GENERAL TECHNICAL TERMS

for Niebuhr Gears A/S

1. General

1.1 The General Technical Terms (July 2014) below shall apply to all supplies delivered or to be delivered by Niebuhr Gears A/S (hereinafter called NG), insofar as these have not been derogated from in part or in whole by another written agreement.

1.2 Furthermore, refer to NG's General Terms and Conditions of Sale and Delivery.

2. Technical terms

2.1 Standard dimensions:

All dimensions not tolerance specified, will be produced according to DIN-ISO 2768 (mK).

2.2 Keyways and Grooves:

All keyway widths not tolerance specified will be tolerance set at h/H10 and Keyway depths at (+0,3 / 0).

2.3 Cylindrical Modular Gear Cutting without surface treatment:

All Gear Cuttings not tolerance-specified will be produced according to ISO 1328 Q10.

2.4 Cylindrical Modular Gear Cutting with surface treatment and without finishing:

All Gear Cuttings not tolerance-specified will be produced according to ISO 1328 Q12.

2.5 Spline Gear Cutting:

The Buyer is responsible for submitting an adequate amount of test items for functional testing. In case items are not tolerance-specified or if the Buyer has not submitted Measuring Plug/Ring Gauge, the pin dimension will be specified according to a loose tolerance, Ex. DIN 5480 H10/h10.

2.6 Bevel Gear Cutting – Palloid and Konvoid:

In case items produced by NG are to be adapted to wheels produced by another supplier, Master Items have to be submitted for testing before production start. If not submitted, NG will not be responsible for the functioning of the wheels. Tooth Flank backlash will be specified according to Table 1.

2.7 Centre Rings and Grooves:

NG reserves the right to produce Grooves and/or Centre Rings according to DIN 509 and DIN 331.

2.8 Hardening:

Hardening depth will be specified according to Table 2.

2.9 Engraving:

NG reserves the rights to engrave the items for traceability.

2.10 MPI:

If demands are made regarding MPI Testing but without specified Quality Class, the testing will be made against ISO10228-1 Q3 for surfaces with Ra below 6,3 and against ISO10228-1 Q2 for all other surfaces..

2.11 Quality Documentation:

If nothing else is specified by the Buyer, NG will use internal documents with measuring points defined by NG

Tabel 1:

General Tooth Flank backlash where nothing else is specified (Bevel Gear Cutting)											
From	Module	1	through	Module	1,25	=	0,10	-	0,15	mm	Tooth Flank backlash
		1,25			2	=	0,12	-	0,17	mm	
		2			3	=	0,15	-	0,25	mm	
		3			4	=	0,20	-	0,30	mm	
		4			5	=	0,25	-	0,35	mm	
		5			6	=	0,30	-	0,40	mm	
		6			7	=	0,35	-	0,45	mm	
		7			8	=	0,40	-	0,50	mm	
		8			9	=	0,45	-	0,55	mm	

Tabel 2:

General hardening depth according to module			
16MnCr5			
module		IHD min	IHD MAX
1	=	0,1	0,3
2	=	0,1	0,4
3	=	0,2	0,6
4	=	0,4	0,8
5	=	0,4	0,8
6	=	0,6	1
7	=	0,6	1,2
8	=		
9	=	0,8	1,4
10	=		
11	=	1	1,6
12	=		
13	=	1,4	2,2
14	=		
15	=	1,6	2,4
16	=		