

Supplier	Customer
Supplier Name	Customer Name Bosch
Part Number Supplier	Part Number Bosch
Inspection Report number Supplier	Inspection Report number Bosch

1. OVERVIEW ICL-SEQUENCE

All cmk values in a table according to ICL sequence

2. OVERVIEW CMK ASCENDING

All cmk values in a table sorted by cmk ascending

3. DETAILED EVALUATION SHEET PER CHARACTERISTIC

4. OVERVIEW MIN-TOLERANCE

All cmk values in a table (ICL sequence) – Info of the minimum tolerance for a capable characteristic

The summary report contains all calculated capabilities in one PDF file. With a linked table of content a comfortable navigation between the different content is possible:

1. Overview table of all cmk values in ICL sequence
2. Overview table of all cmk values in ascending sequence (worst results first)
3. Detailed evaluation sheet per characteristic
4. Overview table of all cmk values in ICL sequence – info of min tolerances for a capable characteristic

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cover page	overview cmk ascending	reports per characteristic	overview min tolerance
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Char.N	Char.Descr.	\bar{x}	s	Index	Index	Rating	Value Chart	Page
10	10#1 Radius	0.83000	0.000			---		20
20	20#1 Winkel	30.39000	0.000			---		21
30	30#1 Durchmesser	25.21600	0.00894	$C_m = 3.73$	$C_{mk} = 3.13$	✘		22
40	40#1 Profiltiefe	6.42800	0.339	$C_m = 9.84$	$C_{mk} = 13.35$?		23
50	50#1 ...					---		24
50.1						---		25
60				0.38	$C_{mk} = 7.46$	✘		26
70				$C_m = 4.60$	$C_{mk} = 2.52$	✘		27

1. Overview table of all cmk values in ICL sequence

Navigation bar quick links to entire content

Link to detailed evaluation sheet of characteristic

C_m/cmk -value including rating (assessment) for each characteristic

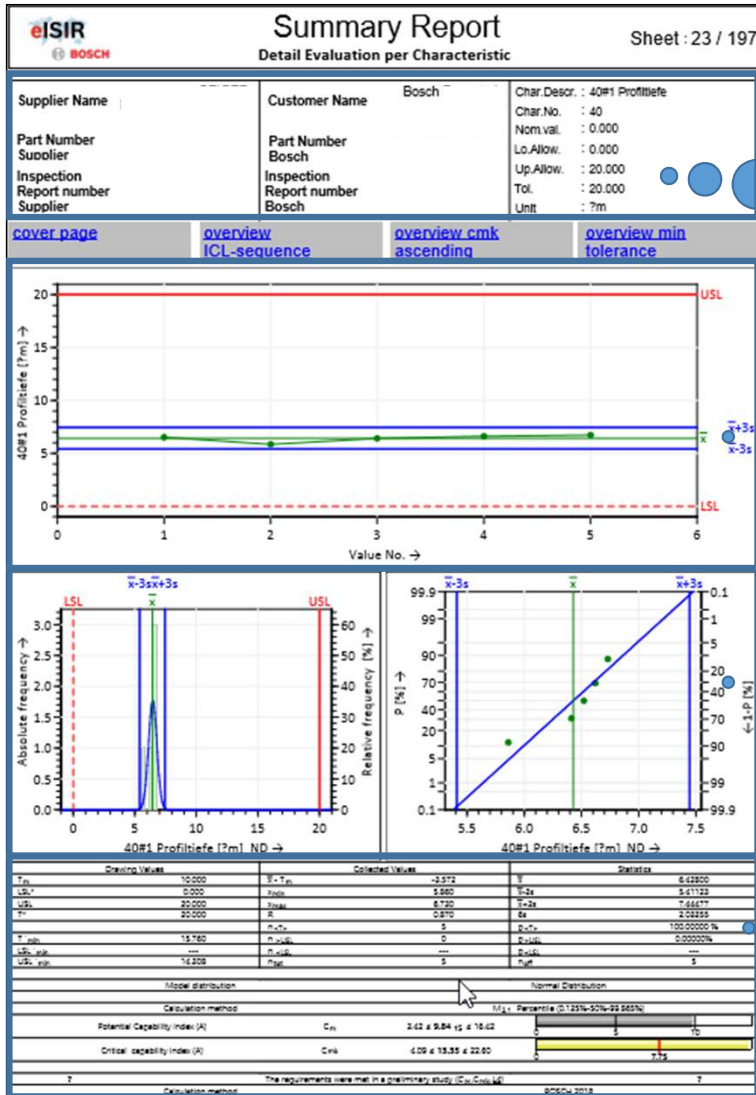
Number of characteristic and description → cavity number behind #-key

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Char.N	Char.Descr.	\bar{x}	s	Index	Index	Rating	Value Chart	Page
100	100#1 Radius	0.52800	0.0455	C _m = 0.73	C _{mk} = 0.53	✘		31
1070	1070#1 Rundlauf	0.00220	0.000837	C _m = 10.37	C _{mk} = 0.63	✘		132
750	750#1 Radius	1.13400	0.0351	C _m = 1.90	C _{mk} = 0.63	✘		104
510	510#1 Rundlauf	0.00160	0.000548	C _m = 2.89	C _{mk} = 0.63	✘		80
1190	1190#1 Ebenheit	0.00160	0.000548	C _m = 2.89	C _{mk} = 0.63	✘		147
1450	1450#1 Rundlauf	0.01260	0.00451	C _m = 0.89	C _{mk} = 0.70	✘		183
380	380#1 Rundheit	0.00208	0.000912	C _m = 9.14	C _{mk} = 0.76	✘		64
1100	1100#1 Rundlauf	0.01720	0.00726	C _m = 1.02	C _{mk} = 0.99	✘		135
1144	1144#1 Geradheit auf Gew	0.00260	0.000548	C _m = 2.89	C _{mk} = 1.00	✘		142

2. Overview table of all cmk values in ascending sequence

Overview of the lowest cmk values of the report



3. Detailed evaluation sheet per characteristic

Headerdata: Report-, part- and characteristics identification, tolerances

Time line plot of measurements in sequence of measuring

Histogram and probability plot for data analysis

Statistical results (cm, cmk, min tolerances)

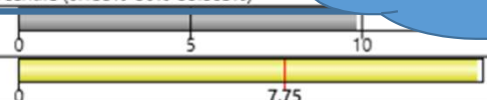
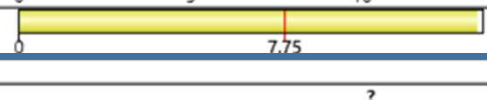
3. Detailed evaluation sheet per characteristic

Drawing data/set tolerances and minimal tolerances for capable cmk (tolerance discussion)

Infos to measured values

Statistical calculations

Drawing Values		Collected Values		Statistics	
T_m	10.000	$\bar{x} - T_m$	-3.572	\bar{x}	6.42800
LSL*	0.000	x_{min}	5.860	$\bar{x} - 3s$	5.41123
USL	20.000	x_{max}	6.730	$\bar{x} + 3s$	7.44477
T^*	20.000	R	0.870	6s	2.03355
		$n_{<T^*}$	5	$p_{<T^*}$	100.00000 %
T'_{min}	15.760	$n_{>USL}$	0	$p_{>USL}$	0.00000 %
LSL' min	---	$n_{<LSL}$	---	$p_{<LSL}$	---
USL' min	14.308	n_{tot}	5	n_{eff}	5

Model distribution		Normal Distribution	
Calculation method		M _{2,1} Percentile (0.135%-50%-99.865%)	
Potential Capability index (A)	C_m	$3.42 \leq 9.84_{15} \leq 16.42$	
Critical capability index (A)	C_{mk}	$4.09 \leq 13.35 \leq 22.60$	
The requirements were met in a preliminary study ($C_m, C_{mk} \geq 1.4$)			
Calculation method		BOSCH 2018	

Model of distribution chosen for the calculation

Calculation method

eISIR		Summary Report			Sheet 186 / 197				
BOSCH		Overview MIN-Tolerance							
Supplier					Customer				
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cover page		overview ICL-sequence		overview cmk ascending		reports per characteristic			
Char.No.	Char.Descr.	Nom.va	LSL	USL	Histogram Individual.	T 'min	LSL 'min	USL 'min	
10	10#1 Radius	0.800	0.700	0.900	--- [901]	---	---	---	---
20	20#1 Winkel	30.000	29.000	31.000	--- [901]	---	---	---	---
30	30#1 Durchmesser	25.200	25.100	25.300		0.416	25.008	25.424	✘
40	40#1 Profiltiefe	0.000	0.000	20.000		15.760	---	14.308	?
50	50#1 Radius	0.400	0.300	0.500	--- [901]	---	---	---	---
60	60#1 Winkel	1.000	1.000	4.000		---	---	0.198	✘

4. Overview table of all cmk values in ICL sequence – info of min tolerances for a capable characteristic

Set drawing tolerances

Minimal tolerances for capable cmk