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**Plain bearings — Hydrodynamic plain  
journal bearings under steady-state  
conditions —**

Part 2:  
**Functions for calculation of multi-  
lobed journal bearings**

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## Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

The procedures used to develop this document and those intended for its further maintenance are described in the ISO/IEC Directives, Part 1. In particular, the different approval criteria needed for the different types of ISO documents should be noted. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2 (see [www.iso.org/directives](http://www.iso.org/directives)).

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights. Details of any patent rights identified during the development of the document will be in the Introduction and/or on the ISO list of patent declarations received (see [www.iso.org/patents](http://www.iso.org/patents)).

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For an explanation of the voluntary nature of standards, the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the World Trade Organization (WTO) principles in the Technical Barriers to Trade (TBT), see [www.iso.org/iso/foreword.html](http://www.iso.org/iso/foreword.html).

This document was prepared by Technical Committee ISO/TC 123, *Plain bearings*, Subcommittee SC 8, *Calculation methods for plain bearings and their applications*.

A list of all parts in the ISO/TS 31657 series can be found on the ISO website.

Any feedback or questions on this document should be directed to the user's national standards body. A complete listing of these bodies can be found at [www.iso.org/members.html](http://www.iso.org/members.html).

# Plain bearings — Hydrodynamic plain journal bearings under steady-state conditions —

## Part 2:

## Functions for calculation of multi-lobed journal bearings

### 1 Scope

This document specifies the characteristic values for selected two-, three- and four-lobe bearings.

The functions plotted and listed in table form below are required for the operationally safe design of hydrodynamic multi-lobed journal bearings according to ISO/TS 31657-1. They are based on the presumptions and boundary conditions indicated there and only apply to stationary operating states. The symbols used are explained in ISO/TS 31657-1; calculation examples are also included there.

### 2 Normative references

There are no normative references in this document.

### 3 Terms and definitions

No terms and definitions are listed in this document.

ISO and IEC maintain terminological databases for use in standardization at the following addresses:

- ISO Online browsing platform: available at <https://www.iso.org/obp>
- IEC Electropedia: available at <http://www.electropedia.org/>

### 4 Functions for calculation of multi-lobed journal bearings

#### 4.1 General

The characteristic values for two-, three- and four-lobe bearings with relative lubrication pocket widths of  $b_p^* = 0,8$  are shown in table form below. The characteristic values were calculated for the geometrical parameters summarised in [Figure 1](#) (angular spans of segment sliding surface,  $\Omega$ , angular coordinates of lubricant pocket centrelines,  $\varphi_{p,1}$ , gap ratios,  $h_{0,max}^*$ , bearing width ratios  $B^*$ ) in the operating range  $0,02 \leq h_{min}^* \leq 1$ . The profile factors,  $K_p$ , associated with the indicated gap ratios,  $h_{0,max}^*$ , can be calculated for these bearing types as follows:

$$K_p = h_{0,max}^* \quad \text{for } Z = 2$$

$$K_p = 2 \cdot h_{0,max}^* - 1 \quad \text{for } Z = 3$$

$$K_p = \frac{h_{0,\max}^* - \frac{1}{\sqrt{2}}}{1 - \frac{1}{\sqrt{2}}} \quad \text{for } Z = 4$$

The following (dimensionless) characteristic values are indicated in [Tables 1](#) to [43](#):

a) Static characteristic values

Sommerfeld number:

$$So = \frac{F \cdot \psi_{\text{eff}}^2}{B \cdot D \cdot \eta_{\text{eff}} \cdot \omega}$$

Relative eccentricity:

$$\varepsilon = \frac{e}{C_{R,\text{eff}}}$$

Attitude angle,  $\beta$ , in °

Product of maximum lubricant film pressure parameter and Sommerfeld number:

$$p_{\max}^* \cdot So = \frac{p_{\max} \cdot \psi_{\text{eff}}^2}{\eta_{\text{eff}} \cdot \omega}$$

Minimum relative lubricant film thickness:

$$h_{\min}^* = \frac{h_{\min}}{C_{R,\text{eff}}}$$

Friction force parameter:

$$F_f^* = \frac{f}{\psi_{\text{eff}}} \cdot So$$

Lubricant flow rate parameter due to hydrodynamic pressure build-up:

$$Q_3^* = \frac{Q_3}{Q_0}$$

Lubricant flow rate parameter due to supply pressure:

$$Q_p^* = \frac{Q_p}{P_{\text{en}}^* \cdot Q_0}$$

Lubricant flow rate parameter at the exit of the lubrication gap:

$$Q_2^* = \frac{Q_2}{Q_0}$$

Non-dimensional difference between maximum lubricant temperature and lubricant temperature in the lubricant pockets:

$$\Delta T_{\max}^* = \frac{\rho \cdot c_p \cdot \psi_{\text{eff}}}{\bar{p} \cdot f} \cdot \Delta T_{\max}$$

b) Dynamic characteristic values

Non-dimensional lubricant film stiffness coefficients:

$$c_{i,k}^* = \frac{\psi_{\text{eff}}^3}{2 \cdot B \cdot \eta_{\text{eff}} \cdot \omega} \cdot c_{i,k} \quad (i, k = 1, 2)$$

Non-dimensional lubricant film damping coefficients:

$$d_{i,k}^* = \frac{\psi_{\text{eff}}^3}{2 \cdot B \cdot \eta_{\text{eff}} \cdot \omega} \cdot \omega \cdot d_{i,k} \quad (i, k = 1, 2)$$

For some selected four-lobe bearings ( $\Omega = 70^\circ$ ,  $\varphi_{p,1} = 315^\circ$ ), these characteristic values are shown graphically as a function of the Sommerfeld number  $S_o$ , the gap ratio  $h_{0,\text{max}}^*$  and the bearing width ratio  $B^*$  in [Annex A, Figures A.1 to A.16](#).

Z	$\Omega$ [°]	$\varphi_{p,1}$ [°]	$h_{0,\text{max}}^*$	$B^*$	Load case
2	150	180	3, 5	0,75	
		240	3, 5	0,75	
		270	1, 3, 5	0,5, 0,75, 1	
		300	3, 5	0,75	
3	100	240	3, 5	0,75	
		300	1, 3, 5	0,5, 0,75, 1	
4	70	270	3, 5	0,75	
		315	1, 2, 3, 4, 5	0,5, 0,75, 1	

Figure 1 — Geometrical parameters of selected multi-lobed journal bearings

## 4.2 Two-lobe bearings

Characteristic values for two-lobe bearings are listed in [Tables 1](#) to [15](#).

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Table 1 — Characteristic values of a two-lobe bearing with  $\Omega = 150^\circ$ ,  $\varphi_{p,1} = 180^\circ$ ,  $h_{0,max}^* = 3$ ,  $B^* = 0,75$

$S_o$	$\varepsilon$	$\beta [^\circ]$	$p_{max}^* \cdot S_o$	$h_{min}^*$	$F_f^*$	$Q_3^*$	$Q_p^*$	$Q_2^*$	$\Delta T_{max}^*$	$c_{11}^*$	$c_{12}^*$	$c_{21}^*$	$c_{22}^*$	$d_{11}^*$	$d_{12}^*$	$d_{21}^*$	$d_{22}^*$
0,000	0,000	90,00	0,327	1,000	1,780	0,959	36,868	1,619	1,25	0,364	-0,107	0,174	0,019	0,541	0,168	0,168	0,093
0,014	0,203	15,82	0,364	0,935	1,790	0,971	37,474	1,604	1,35	0,373	-0,106	0,181	0,023	0,548	0,171	0,171	0,099
0,029	0,406	15,38	0,422	0,856	1,822	1,007	39,301	1,560	1,50	0,401	-0,105	0,201	0,035	0,576	0,182	0,182	0,116
0,048	0,607	14,65	0,510	0,768	1,878	1,065	42,339	1,488	1,71	0,455	-0,100	0,241	0,058	0,623	0,202	0,202	0,150
0,073	0,805	13,63	0,639	0,675	1,962	1,146	46,566	1,388	1,99	0,542	-0,089	0,306	0,099	0,699	0,235	0,235	0,206
0,108	1,001	12,36	0,834	0,579	2,083	1,243	52,000	1,265	2,35	0,684	-0,067	0,415	0,174	0,815	0,289	0,289	0,297
0,159	1,195	10,84	1,139	0,485	2,255	1,357	58,643	1,118	2,88	0,916	-0,020	0,599	0,314	0,994	0,376	0,376	0,450
0,241	1,387	9,11	1,645	0,392	2,504	1,482	66,479	0,953	3,64	1,323	0,084	0,932	0,597	1,285	0,525	0,525	0,721
0,384	1,577	7,17	2,569	0,303	2,884	1,616	75,476	0,769	4,80	2,120	0,326	1,599	1,240	1,810	0,801	0,801	1,249
0,677	1,768	5,05	4,546	0,217	3,522	1,755	85,736	0,567	6,73	4,010	1,012	3,194	3,029	2,907	1,371	1,371	2,459
1,478	1,959	2,79	10,341	0,133	4,839	1,898	97,153	0,350	10,97	10,662	3,665	8,585	10,316	6,159	2,978	2,978	6,332
3,840	2,100	1,14	29,250	0,071	7,487	2,003	106,265	0,177	20,77	40,455	15,265	29,531	46,571	17,323	7,373	7,374	20,278
18,558	2,200	0,18	183,912	0,022	16,491	2,079	113,058	0,049	65,04	514,115	142,002	242,523	642,042	124,068	32,520	32,518	154,507
45,130	2,220	0,06	569,417	0,010	26,225	2,095	114,450	0,023	142,08	2 504,109	425,818	779,476	3 114,672	443,694	115,503	115,503	554,368

Table 2 — Characteristic values of a two-lobe bearing with  $\Omega = 150^\circ$ ,  $\varphi_{p,1} = 180^\circ$ ,  $h_{0,max}^* = 5$ ,  $B^* = 0,75$

So	$\epsilon$	$\beta [^\circ]$	$p_{max}^* \cdot So$	$h_{min}^*$	$F_f^*$	$Q_3^*$	$Q_p^*$	$Q_2^*$	$\Delta T_{max}^*$	$c_{11}^*$	$c_{12}^*$	$c_{21}^*$	$c_{22}^*$	$d_{11}^*$	$d_{12}^*$	$d_{21}^*$	$d_{22}^*$
0,000	0,000	90,00	0,342	1,000	1,507	1,787	152,625	1,670	1,25	0,284	-0,038	0,110	0,022	0,315	0,081	0,081	0,039
0,011	0,301	7,29	0,370	0,951	1,518	1,801	154,870	1,650	1,33	0,292	-0,038	0,114	0,024	0,321	0,083	0,083	0,041
0,023	0,602	7,02	0,418	0,883	1,551	1,841	161,614	1,598	1,46	0,315	-0,036	0,125	0,031	0,339	0,089	0,089	0,048
0,038	0,902	6,57	0,493	0,800	1,610	1,905	172,838	1,510	1,64	0,359	-0,033	0,147	0,044	0,373	0,099	0,099	0,062
0,058	1,202	5,93	0,609	0,706	1,703	1,994	188,597	1,388	1,88	0,434	-0,026	0,185	0,069	0,427	0,116	0,116	0,085
0,088	1,500	5,14	0,793	0,604	1,841	2,104	208,778	1,235	2,25	0,564	-0,012	0,252	0,116	0,519	0,145	0,145	0,125
0,134	1,798	4,21	1,106	0,496	2,051	2,234	233,495	1,050	2,78	0,805	0,021	0,373	0,212	0,674	0,194	0,194	0,199
0,218	2,095	3,15	1,701	0,384	2,386	2,380	262,650	0,836	3,69	1,311	0,097	0,623	0,435	0,977	0,287	0,287	0,350
0,321	2,293	2,40	2,463	0,307	2,742	2,486	284,578	0,676	4,64	2,042	0,218	0,968	0,784	1,367	0,401	0,402	0,554
0,517	2,491	1,62	3,996	0,228	3,319	2,597	308,482	0,504	6,29	3,737	0,505	1,725	1,650	2,183	0,611	0,611	0,992
1,004	2,690	0,86	8,151	0,146	4,446	2,713	334,471	0,319	9,97	9,508	1,410	3,958	4,721	4,513	1,177	1,177	2,276
3,915	2,900	0,18	40,203	0,052	8,632	2,842	364,011	0,109	28,23	85,684	10,417	24,374	47,054	24,886	4,356	4,355	13,687
8,457	2,950	0,07	107,659	0,027	12,809	2,873	371,364	0,056	54,49	334,928	30,443	71,696	186,580	74,182	9,627	9,627	41,342
14,689	2,970	0,03	224,879	0,017	17,027	2,886	374,341	0,035	89,35	926,933	61,807	152,876	517,668	164,982	19,973	19,972	92,317

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Table 3 — Characteristic values of a two-lobe bearing with  $\Omega = 150^\circ$ ,  $\varphi_{p,1} = 240^\circ$ ,  $h_{0,max}^* = 3$ ,  $B^* = 0,75$ 

$S_o$	$\varepsilon$	$\beta [^\circ]$	$p_{max}^* \cdot S_o$	$h_{min}^*$	$F_f^*$	$Q_3^*$	$Q_p^*$	$Q_2^*$	$\Delta T_{max}^*$	$c_{11}^*$	$c_{12}^*$	$c_{21}^*$	$c_{22}^*$	$d_{11}^*$	$d_{12}^*$	$d_{21}^*$	$d_{22}^*$
0,000	0,000	90,00	0,327	1,000	1,780	0,959	36,868	1,619	1,25	0,135	-0,307	-0,025	0,249	0,351	-0,278	-0,278	0,283
0,024	0,300	65,76	0,343	0,948	1,800	0,986	38,272	1,585	1,30	0,144	-0,316	-0,024	0,259	0,360	-0,279	-0,279	0,296
0,053	0,600	64,93	0,388	0,863	1,862	1,065	42,498	1,483	1,39	0,176	-0,345	-0,021	0,296	0,394	-0,286	-0,285	0,339
0,096	0,900	63,58	0,501	0,756	1,983	1,191	49,575	1,320	1,55	0,239	-0,401	-0,010	0,380	0,458	-0,297	-0,297	0,435
0,195	1,255	61,44	0,833	0,612	2,255	1,387	61,648	1,055	2,00	0,395	-0,528	0,031	0,646	0,603	-0,316	-0,316	0,697
0,337	1,488	59,74	1,406	0,502	2,590	1,535	71,722	0,844	2,77	0,602	-0,683	0,128	1,168	0,780	-0,327	-0,326	1,148
0,647	1,698	58,00	2,889	0,331	3,159	1,675	82,206	0,632	4,44	0,968	-0,912	0,463	2,796	1,054	-0,296	-0,296	2,322
1,449	1,860	56,29	7,683	0,182	4,165	1,784	91,126	0,455	9,19	1,578	-1,003	1,986	9,830	1,400	0,010	0,010	6,279
4,655	1,931	53,56	34,941	0,068	6,408	1,816	94,911	0,372	29,85	3,188	2,998	14,895	75,236	1,592	2,566	2,567	30,672
11,520	1,879	50,12	119,413	0,030	9,298	1,747	90,997	0,431	76,95	7,878	21,587	63,226	403,924	1,955	9,260	9,259	113,638
26,368	1,811	46,94	379,970	0,014	13,580	1,670	86,161	0,509	179,60	19,622	83,789	224,646	1 939,293	3,095	25,234	25,233	393,073

Table 4 — Characteristic values of a two-lobe bearing with  $\Omega = 150^\circ$ ,  $\varphi_{p1} = 240^\circ$ ,  $h_{0,max}^* = 5$ ,  $B^* = 0,75$

$S_o$	$\varepsilon$	$\beta [^\circ]$	$p_{max}^* \cdot S_o$	$h_{min}^*$	$F_f^*$	$Q_3^*$	$Q_p^*$	$Q_2^*$	$\Delta T_{max}^*$	$c_{11}^*$	$c_{12}^*$	$c_{21}^*$	$c_{22}^*$	$d_{11}^*$	$d_{12}^*$	$d_{21}^*$	$d_{22}^*$
0,000	0,000	90,00	0,342	1,000	1,507	1,787	152,625	1,669	1,25	0,119	-0,206	-0,057	0,188	0,178	-0,160	-0,160	0,175
0,013	0,300	59,79	0,356	0,988	1,517	1,801	154,887	1,650	1,27	0,121	-0,209	-0,058	0,193	0,181	-0,162	-0,162	0,180
0,028	0,600	59,61	0,387	0,954	1,548	1,839	161,674	1,597	1,34	0,130	-0,220	-0,060	0,209	0,189	-0,167	-0,167	0,193
0,046	0,900	59,33	0,442	0,890	1,604	1,902	172,982	1,508	1,44	0,148	-0,240	-0,065	0,240	0,203	-0,176	-0,176	0,218
0,074	1,231	58,89	0,549	0,792	1,703	1,998	190,702	1,371	1,64	0,179	-0,279	-0,073	0,305	0,230	-0,194	-0,194	0,269
0,111	1,518	58,43	0,717	0,683	1,837	2,102	210,507	1,220	1,95	0,225	-0,335	-0,083	0,413	0,268	-0,218	-0,218	0,350
0,171	1,797	57,95	1,021	0,556	2,037	2,219	233,701	1,046	2,47	0,300	-0,428	-0,097	0,630	0,324	-0,255	-0,255	0,499
0,281	2,070	57,47	1,659	0,416	2,354	2,348	260,142	0,851	3,45	0,433	-0,601	-0,115	1,150	0,415	-0,318	-0,318	0,815
0,546	2,341	57,09	3,440	0,264	2,940	2,489	290,060	0,633	5,87	0,710	-1,003	-0,110	2,946	0,588	-0,441	-0,441	1,731
1,816	2,625	56,97	15,037	0,101	4,646	2,652	325,394	0,380	17,84	1,631	-2,658	0,683	21,407	1,044	-0,742	-0,742	8,014
3,419	2,702	57,02	34,428	0,058	6,004	2,699	335,693	0,306	34,13	2,381	-4,050	3,505	65,596	1,325	-0,735	-0,735	19,502
13,503	2,757	56,80	224,496	0,017	10,618	2,731	343,151	0,252	136,17	5,394	6,815	53,808	863,057	1,707	2,358	2,358	132,080

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Table 5 — Characteristic values of a two-lobe bearing with  $\Omega = 150^\circ$ ,  $\varphi_{p,1} = 270^\circ$ ,  $h_{0,\max}^* = 1$ ,  $B^* = 0,5$ 

$S_o$	$\varepsilon$	$\beta [^\circ]$	$p_{\max}^* \cdot S_o$	$h_{\min}^*$	$F_f^*$	$Q_3^*$	$Q_p^*$	$Q_2^*$	$\Delta T_{\max}^*$	$c_{11}^*$	$c_{12}^*$	$c_{21}^*$	$c_{22}^*$	$d_{11}^*$	$d_{12}^*$	$d_{21}^*$	$d_{22}^*$
0,000	0,000	90,00	0,000	1,000	2,614	0,000	3,008	1,000	2,00	0,000	-0,262	0,671	0,000	0,523	0,000	0,000	1,342
0,090	0,236	64,91	0,192	0,764	2,430	0,175	3,394	0,796	2,71	0,160	-0,171	0,469	0,163	0,372	0,174	0,174	0,923
0,163	0,361	56,42	0,373	0,639	2,471	0,245	3,784	0,706	3,34	0,292	-0,210	0,674	0,345	0,510	0,339	0,338	1,309
0,260	0,467	50,13	0,643	0,533	2,607	0,291	4,131	0,639	3,93	0,438	-0,204	0,976	0,690	0,599	0,501	0,501	1,868
0,401	0,562	44,64	1,081	0,438	2,833	0,323	4,403	0,588	4,66	0,650	-0,180	1,473	1,332	0,730	0,740	0,740	2,783
0,626	0,649	39,58	1,849	0,351	3,168	0,342	4,584	0,548	5,68	0,983	-0,107	2,338	2,622	0,926	1,120	1,120	4,383
1,011	0,729	34,71	3,317	0,271	3,649	0,351	4,663	0,520	7,20	1,570	0,093	4,007	5,477	1,241	1,791	1,793	7,460
1,783	0,805	29,68	6,656	0,195	4,392	0,350	4,633	0,502	9,89	2,748	0,706	7,804	13,213	1,799	3,154	3,155	14,473
3,709	0,877	24,15	16,512	0,123	5,714	0,335	4,477	0,497	15,89	5,805	3,052	19,273	41,921	3,039	6,768	6,767	35,742
11,175	0,943	17,40	66,166	0,057	8,914	0,303	4,174	0,514	36,26	18,352	19,280	80,457	252,403	6,810	21,690	21,697	148,293
30,369	0,974	12,58	238,937	0,026	13,981	0,273	3,946	0,534	85,56	53,612	93,221	315,937	1 384,251	14,455	64,581	64,585	574,742
59,033	0,985	9,96	568,507	0,015	19,196	0,255	3,837	0,550	155,16	109,469	267,165	805,560	4 501,754	23,051	130,675	130,663	1 433,334

Table 6 — Characteristic values of a two-lobe bearing with  $\Omega = 150^\circ$ ,  $\varphi_{P,1} = 270^\circ$ ,  $h_{0,max}^* = 3$ ,  $B^* = 0,5$

$S_o$	$\varepsilon$	$\beta [^\circ]$	$p_{max}^* \cdot S_o$	$h_{min}^*$	$F_f^*$	$Q_3^*$	$Q_p^*$	$Q_2^*$	$\Delta T_{max}^*$	$c_{11}^*$	$c_{12}^*$	$c_{21}^*$	$c_{22}^*$	$d_{11}^*$	$d_{12}^*$	$d_{21}^*$	$d_{22}^*$
0,000	0,000	90,00	0,219	1,000	1,737	0,864	50,725	1,052	1,16	0,017	-0,121	0,059	0,244	0,062	-0,107	-0,107	0,330
0,029	0,300	81,39	0,264	0,934	1,758	0,884	52,595	1,030	1,30	0,020	-0,121	0,067	0,259	0,066	-0,102	-0,102	0,346
0,065	0,574	79,98	0,352	0,825	1,819	0,935	57,521	0,972	1,54	0,031	-0,121	0,093	0,310	0,075	-0,088	-0,087	0,394
0,138	0,861	76,57	0,600	0,646	1,967	1,014	65,671	0,879	2,09	0,059	-0,105	0,182	0,481	0,095	-0,040	-0,040	0,549
0,228	1,001	72,54	0,976	0,510	2,132	1,054	70,214	0,825	2,83	0,101	-0,068	0,328	0,784	0,113	0,030	0,030	0,797
0,343	1,066	67,95	1,538	0,404	2,320	1,064	71,688	0,804	3,75	0,160	-0,010	0,551	1,309	0,133	0,121	0,121	1,184
0,505	1,092	62,75	2,424	0,318	2,554	1,052	71,111	0,804	5,03	0,246	0,084	0,904	2,271	0,159	0,240	0,241	1,814
0,756	1,097	56,85	3,974	0,243	2,874	1,026	69,181	0,819	6,99	0,385	0,250	1,532	4,237	0,198	0,418	0,418	2,959
1,208	1,090	50,03	7,147	0,174	3,365	0,989	66,289	0,845	10,42	0,642	0,617	2,852	9,028	0,266	0,735	0,736	5,382
2,202	1,074	41,86	15,349	0,110	4,232	0,940	62,611	0,882	17,84	1,239	1,686	6,465	24,638	0,409	1,478	1,479	12,023
5,666	1,047	30,73	52,233	0,051	6,345	0,876	58,047	0,935	42,44	3,428	7,798	24,121	128,756	0,772	4,047	4,046	43,158
13,560	1,028	22,43	166,704	0,024	9,519	0,837	55,380	0,971	98,25	8,914	30,395	85,418	623,960	1,465	10,802	10,799	150,032
24,443	1,019	17,86	371,567	0,014	12,657	0,819	54,246	0,987	175,92	17,061	74,399	204,567	1 848,538	2,327	21,727	21,726	361,019

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Table 7 — Characteristic values of a two-lobe bearing with  $\Omega = 150^\circ$ ,  $\varphi_{p,1} = 270^\circ$ ,  $h_{0,\max}^* = 5$ ,  $B^* = 0,5$ 

$S_o$	$\varepsilon$	$\beta [^\circ]$	$p_{\max}^* \cdot S_o$	$h_{\min}^*$	$F_f^*$	$Q_3^*$	$Q_p^*$	$Q_2^*$	$\Delta T_{\max}^*$	$c_{11}^*$	$c_{12}^*$	$c_{21}^*$	$c_{22}^*$	$d_{11}^*$	$d_{12}^*$	$d_{21}^*$	$d_{22}^*$
0,000	0,000	90,00	0,247	1,000	1,450	1,650	213,796	1,082	1,13	0,017	-0,082	0,023	0,209	0,027	-0,055	-0,055	0,212
0,016	0,250	77,97	0,282	0,941	1,459	1,658	215,843	1,072	1,25	0,018	-0,082	0,025	0,215	0,027	-0,055	-0,055	0,217
0,033	0,470	77,67	0,329	0,874	1,481	1,675	221,018	1,052	1,39	0,019	-0,082	0,031	0,233	0,028	-0,053	-0,053	0,230
0,075	0,854	76,43	0,487	0,718	1,569	1,726	237,424	0,990	1,79	0,026	-0,081	0,057	0,315	0,032	-0,044	-0,044	0,289
0,133	1,118	74,44	0,768	0,567	1,701	1,775	253,621	0,928	2,43	0,039	-0,071	0,115	0,489	0,037	-0,024	-0,024	0,405
0,217	1,270	71,65	1,238	0,438	1,871	1,803	263,800	0,887	3,41	0,060	-0,047	0,222	0,826	0,045	0,011	0,011	0,609
0,338	1,335	68,02	2,019	0,333	2,085	1,806	266,737	0,873	4,79	0,096	0,005	0,409	1,485	0,054	0,063	0,064	0,953
0,524	1,341	63,43	3,385	0,246	2,370	1,790	263,798	0,879	7,04	0,157	0,102	0,755	2,844	0,069	0,147	0,148	1,591
0,846	1,306	57,59	6,119	0,172	2,790	1,758	256,513	0,901	10,80	0,270	0,320	1,476	6,156	0,094	0,293	0,293	2,916
1,534	1,240	49,80	13,089	0,107	3,517	1,714	246,007	0,936	18,85	0,524	0,962	3,420	17,016	0,139	0,603	0,603	6,416
3,824	1,144	38,09	43,390	0,049	5,237	1,659	232,808	0,981	46,29	1,454	4,265	12,856	86,361	0,272	1,777	1,777	23,268
8,906	1,081	28,45	136,265	0,023	7,783	1,627	225,087	1,009	105,72	3,721	15,807	45,042	407,129	0,523	4,864	4,864	81,056
16,009	1,051	22,64	305,473	0,014	10,294	1,613	221,714	1,022	184,85	6,936	40,897	106,192	1 241,172	0,729	8,678	8,678	184,187

Table 8 — Characteristic values of a two-lobe bearing with  $\Omega = 150^\circ$ ,  $\varphi_{p1} = 270^\circ$ ,  $h_{0,max}^* = 1$ ,  $B^* = 0,75$

$S_o$	$\varepsilon$	$\beta [^\circ]$	$p_{max}^* \cdot S_o$	$h_{min}^*$	$F_f^*$	$Q_3^*$	$Q_p^*$	$Q_2^*$	$\Delta T_{max}^*$	$c_{11}^*$	$c_{12}^*$	$c_{21}^*$	$c_{22}^*$	$d_{11}^*$	$d_{12}^*$	$d_{21}^*$	$d_{22}^*$
0,000	0,000	90,00	0,000	1,000	2,614	0,000	2,419	1,500	2,00	0,000	-0,397	1,303	0,000	0,793	0,000	0,000	2,604
0,067	0,100	76,62	0,136	0,900	2,503	0,106	2,480	1,370	2,20	0,100	-0,209	0,696	0,112	0,427	0,101	0,101	1,392
0,162	0,225	63,62	0,343	0,775	2,442	0,217	2,685	1,219	2,70	0,252	-0,253	0,871	0,293	0,551	0,273	0,273	1,744
0,290	0,348	54,89	0,648	0,652	2,488	0,299	2,963	1,088	3,38	0,472	-0,332	1,207	0,579	0,794	0,558	0,557	2,425
0,457	0,457	48,98	1,091	0,543	2,635	0,355	3,240	0,985	4,09	0,721	-0,361	1,696	1,103	0,999	0,870	0,871	3,406
0,692	0,555	43,88	1,780	0,445	2,882	0,390	3,475	0,903	4,90	1,042	-0,331	2,442	2,074	1,199	1,247	1,248	4,895
1,051	0,645	39,18	2,936	0,355	3,251	0,410	3,655	0,838	6,02	1,540	-0,234	3,707	3,955	1,496	1,835	1,835	7,407
1,653	0,729	34,54	5,096	0,271	3,797	0,415	3,765	0,788	7,80	2,399	0,043	6,097	8,041	1,966	2,855	2,854	12,140
2,787	0,807	29,76	9,707	0,193	4,637	0,406	3,793	0,755	10,96	4,080	0,888	11,320	18,552	2,781	4,861	4,862	22,404
5,384	0,879	24,49	22,147	0,121	6,098	0,382	3,723	0,742	18,01	8,162	4,039	26,083	54,894	4,462	9,790	9,792	51,020
14,772	0,945	17,77	80,430	0,055	9,630	0,335	3,530	0,761	42,36	24,424	25,423	102,609	311,066	9,486	29,552	29,548	194,465
37,137	0,975	12,88	268,936	0,025	15,046	0,295	3,368	0,797	98,40	67,256	120,183	382,518	1 634,706	18,574	81,019	81,010	695,146
70,430	0,986	10,12	636,223	0,014	20,696	0,272	3,286	0,823	176,24	135,182	347,197	971,881	5 376,094	28,396	158,436	158,420	1 696,999

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Table 9 — Characteristic values of a two-lobe bearing with  $\Omega = 150^\circ$ ,  $\varphi_{p,1} = 270^\circ$ ,  $h_{0,max}^* = 3$ ,  $B^* = 0,75$

$S_o$	$\varepsilon$	$\beta [^\circ]$	$p_{max}^* \cdot S_o$	$h_{min}^*$	$F_f^*$	$Q_3^*$	$Q_p^*$	$Q_2^*$	$\Delta T_{max}^*$	$c_{11}^*$	$c_{12}^*$	$c_{21}^*$	$c_{22}^*$	$d_{11}^*$	$d_{12}^*$	$d_{21}^*$	$d_{22}^*$
0,000	0,000	90,00	0,327	1,000	1,780	0,959	36,868	1,619	1,25	0,019	-0,174	0,107	0,364	0,093	-0,168	-0,168	0,541
0,045	0,300	83,10	0,392	0,942	1,802	0,984	38,266	1,584	1,40	0,025	-0,175	0,117	0,382	0,099	-0,161	-0,160	0,560
0,117	0,638	80,98	0,557	0,808	1,892	1,067	43,136	1,466	1,73	0,046	-0,171	0,165	0,470	0,118	-0,127	-0,126	0,650
0,227	0,900	77,18	0,909	0,632	2,059	1,158	49,062	1,323	2,37	0,091	-0,143	0,291	0,703	0,146	-0,047	-0,046	0,872
0,353	1,026	73,00	1,404	0,499	2,241	1,197	52,183	1,245	3,20	0,148	-0,089	0,483	1,096	0,170	0,055	0,055	1,206
0,510	1,086	68,38	2,114	0,396	2,450	1,198	53,198	1,212	4,30	0,228	-0,007	0,769	1,762	0,195	0,181	0,181	1,718
0,721	1,110	63,23	3,198	0,311	2,709	1,176	52,773	1,210	5,78	0,341	0,119	1,214	2,965	0,228	0,338	0,338	2,533
1,042	1,114	57,40	5,043	0,236	3,065	1,137	51,373	1,230	8,14	0,522	0,341	2,001	5,377	0,280	0,576	0,576	4,004
1,594	1,105	50,69	8,665	0,168	3,600	1,084	49,245	1,268	12,06	0,845	0,828	3,608	11,141	0,363	0,969	0,968	6,955
2,789	1,085	42,46	17,882	0,106	4,546	1,018	46,449	1,326	20,82	1,590	2,224	8,015	29,830	0,542	1,900	1,900	15,036
6,710	1,053	31,31	57,534	0,049	6,779	0,936	43,014	1,409	48,78	4,258	9,513	28,983	147,989	1,032	5,266	5,266	52,508
15,486	1,030	22,73	180,447	0,023	10,111	0,887	40,957	1,467	108,79	10,525	37,762	98,999	719,051	1,718	12,433	12,433	169,558
27,571	1,020	18,00	406,280	0,013	13,447	0,867	40,095	1,493	194,71	20,214	89,574	239,540	2 124,936	2,831	26,132	26,132	419,399

Table 10 — Characteristic values of a two-lobe bearing with  $\Omega = 150^\circ$ ,  $\varphi_{P,1} = 270^\circ$ ,  $h_{0,max}^* = 5$ ,  $B^* = 0,75$

$S_o$	$\epsilon$	$\beta [^\circ]$	$p_{max}^* \cdot S_o$	$h_{min}^*$	$F_f^*$	$Q_3^*$	$Q_P^*$	$Q_2^*$	$\Delta T_{max}^*$	$c_{11}^*$	$c_{12}^*$	$c_{21}^*$	$c_{22}^*$	$d_{11}^*$	$d_{12}^*$	$d_{21}^*$	$d_{22}^*$
0,000	0,000	90,00	0,342	1,000	1,507	1,787	152,625	1,669	1,25	0,022	-0,110	0,038	0,284	0,039	-0,081	-0,081	0,315
0,029	0,300	78,47	0,399	0,929	1,520	1,799	154,807	1,651	1,40	0,023	-0,110	0,043	0,295	0,039	-0,080	-0,080	0,325
0,049	0,488	78,16	0,453	0,872	1,543	1,817	158,387	1,622	1,54	0,025	-0,110	0,049	0,315	0,041	-0,077	-0,077	0,341
0,108	0,877	76,80	0,656	0,714	1,642	1,879	171,063	1,520	2,02	0,035	-0,107	0,084	0,419	0,046	-0,063	-0,063	0,419
0,187	1,139	74,73	0,998	0,562	1,788	1,934	183,227	1,421	2,79	0,052	-0,094	0,157	0,629	0,054	-0,035	-0,035	0,569
0,294	1,289	71,93	1,548	0,433	1,974	1,962	190,823	1,356	3,86	0,079	-0,061	0,286	1,033	0,063	0,009	0,009	0,815
0,444	1,355	68,35	2,439	0,327	2,209	1,961	193,200	1,330	5,54	0,124	0,003	0,513	1,803	0,076	0,079	0,079	1,245
0,667	1,361	63,83	3,967	0,241	2,519	1,935	191,147	1,338	8,08	0,198	0,129	0,922	3,404	0,093	0,182	0,181	2,001
1,044	1,324	58,10	6,949	0,168	2,971	1,891	185,766	1,371	12,44	0,335	0,400	1,772	7,225	0,123	0,361	0,361	3,568
1,825	1,254	50,39	14,389	0,104	3,743	1,834	177,889	1,425	21,58	0,641	1,169	4,049	19,502	0,180	0,749	0,749	7,686
4,371	1,151	38,56	46,618	0,047	5,555	1,766	167,848	1,499	51,14	1,733	5,058	14,976	97,311	0,343	2,180	2,180	27,196
9,686	1,085	28,94	141,384	0,023	8,110	1,730	162,095	1,544	112,02	4,175	18,270	49,367	439,551	0,591	5,339	5,339	86,992
17,351	1,053	22,89	321,176	0,013	10,739	1,715	159,494	1,565	196,95	7,771	47,131	117,285	1 358,273	0,819	9,579	9,579	199,359

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**Table 11 — Characteristic values of a two-lobe bearing with  $\Omega = 150^\circ$ ,  $\varphi_{p,1} = 270^\circ$ ,  $h_{0,max}^* = 1$ ,  $B^* = 1$**

$S_o$	$\varepsilon$	$\beta [^\circ]$	$p_{max}^* \cdot S_o$	$h_{min}^*$	$F_f^*$	$Q_3^*$	$Q_p^*$	$Q_2^*$	$\Delta T_{max}^*$	$c_{11}^*$	$c_{12}^*$	$c_{21}^*$	$c_{22}^*$	$d_{11}^*$	$d_{12}^*$	$d_{21}^*$	$d_{22}^*$
0,000	0,000	90,00	0,000	1,000	2,614	0,000	2,108	2,000	2,00	0,000	-0,489	1,949	0,000	0,978	0,000	0,000	3,900
0,099	0,100	75,43	0,202	0,900	2,594	0,122	2,158	1,834	2,21	0,135	-0,259	1,039	0,163	0,528	0,138	0,138	2,084
0,229	0,217	62,56	0,479	0,783	2,451	0,237	2,311	1,651	2,70	0,323	-0,309	1,262	0,399	0,671	0,349	0,348	2,558
0,402	0,338	53,64	0,882	0,662	2,502	0,324	2,531	1,483	3,38	0,597	-0,405	1,685	0,766	0,957	0,704	0,704	3,465
0,624	0,448	47,91	1,451	0,552	2,656	0,382	2,764	1,344	4,23	0,941	-0,501	2,314	1,367	1,318	1,190	1,191	4,826
0,933	0,549	43,19	2,317	0,451	2,919	0,419	2,983	1,228	5,11	1,335	-0,472	3,215	2,548	1,563	1,664	1,665	6,733
1,391	0,642	38,78	3,732	0,358	3,315	0,438	3,166	1,134	6,40	1,936	-0,360	4,718	4,788	1,913	2,386	2,385	9,890
2,118	0,727	34,46	6,227	0,273	3,890	0,440	3,295	1,061	8,35	2,935	-0,048	7,439	9,440	2,463	3,590	3,592	15,533
3,466	0,807	29,85	11,452	0,193	4,788	0,427	3,361	1,010	11,89	4,896	0,934	13,394	21,341	3,419	5,955	5,959	27,630
6,450	0,880	24,68	25,040	0,120	6,339	0,397	3,345	0,988	19,73	9,558	4,626	29,934	61,882	5,316	11,559	11,552	60,213
16,854	0,946	17,96	86,518	0,054	10,043	0,343	3,220	1,011	46,31	27,847	29,359	114,765	343,527	10,933	33,673	33,682	219,295
40,350	0,975	13,08	277,380	0,025	15,534	0,300	3,102	1,058	104,69	74,270	131,880	413,357	1 726,357	21,118	90,642	90,640	754,679

Table 12 — Characteristic values of a two-lobe bearing with  $\Omega = 150^\circ$ ,  $\varphi_{p,1} = 270^\circ$ ,  $h_{0,max}^* = 3$ ,  $B^* = 1$

$S_o$	$\varepsilon$	$\beta [^\circ]$	$p_{max}^* \cdot S_o$	$h_{min}^*$	$F_f^*$	$Q_3^*$	$Q_p^*$	$Q_2^*$	$\Delta T_{max}^*$	$c_{11}^*$	$c_{12}^*$	$c_{21}^*$	$c_{22}^*$	$d_{11}^*$	$d_{12}^*$	$d_{21}^*$	$d_{22}^*$
0,000	0,000	90,00	0,393	1,000	1,808	0,986	29,398	2,196	1,31	0,019	-0,207	0,147	0,440	0,114	-0,211	-0,211	0,698
0,079	0,400	83,67	0,512	0,918	1,850	1,035	31,411	2,112	1,55	0,031	-0,207	0,166	0,476	0,126	-0,193	-0,193	0,735
0,159	0,675	81,48	0,697	0,796	1,942	1,118	35,083	1,961	1,90	0,057	-0,201	0,221	0,572	0,149	-0,148	-0,148	0,839
0,292	0,921	77,45	1,104	0,623	2,120	1,209	39,751	1,771	2,63	0,112	-0,165	0,367	0,837	0,181	-0,048	-0,048	1,097
0,439	1,039	73,23	1,651	0,494	2,311	1,243	42,157	1,667	3,55	0,180	-0,101	0,584	1,272	0,208	0,075	0,075	1,483
0,618	1,096	68,61	2,420	0,392	2,531	1,240	42,954	1,621	4,75	0,270	-0,006	0,900	2,010	0,235	0,220	0,220	2,057
0,857	1,120	63,47	3,584	0,307	2,806	1,212	42,658	1,617	6,43	0,399	0,140	1,399	3,339	0,273	0,404	0,404	2,985
1,214	1,123	57,68	5,540	0,232	3,179	1,166	41,559	1,642	9,06	0,602	0,398	2,268	6,003	0,329	0,667	0,667	4,610
1,821	1,112	51,00	9,343	0,165	3,739	1,108	39,856	1,692	13,43	0,970	0,942	4,065	12,275	0,430	1,134	1,135	7,956
3,101	1,090	42,82	18,828	0,104	4,711	1,035	37,631	1,770	22,61	1,784	2,518	8,837	32,377	0,619	2,137	2,137	16,629
7,286	1,056	31,54	59,890	0,048	7,014	0,947	34,862	1,885	52,36	4,684	10,704	31,510	159,850	1,140	5,743	5,743	56,670
16,347	1,032	22,96	184,394	0,023	10,374	0,896	33,221	1,965	114,02	11,300	41,323	105,004	757,441	1,843	13,157	13,156	177,370
29,280	1,020	18,04	424,328	0,013	13,865	0,875	32,501	2,003	206,19	21,870	98,747	258,299	2 287,242	3,066	28,191	28,188	448,341

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**Table 13 — Characteristic values of a two-lobe bearing with  $\Omega = 150^\circ$ ,  $\varphi_{p,1} = 270^\circ$ ,  $h_{0,max}^* = 5$ ,  $B^* = 1$**

$S_o$	$\varepsilon$	$\beta [^\circ]$	$p_{max}^* \cdot S_o$	$h_{min}^*$	$F_f^*$	$Q_3^*$	$Q_p^*$	$Q_2^*$	$\Delta T_{max}^*$	$c_{11}^*$	$c_{12}^*$	$c_{21}^*$	$c_{22}^*$	$d_{11}^*$	$d_{12}^*$	$d_{21}^*$	$d_{22}^*$
0,000	0,000	90,00	0,393	1,000	1,542	1,820	119,959	2,263	1,32	0,024	-0,126	0,050	0,327	0,046	-0,098	-0,098	0,383
0,028	0,250	78,87	0,443	0,944	1,551	1,826	121,181	2,248	1,47	0,025	-0,126	0,053	0,335	0,047	-0,097	-0,097	0,390
0,060	0,500	78,46	0,519	0,871	1,581	1,851	124,833	2,198	1,67	0,028	-0,126	0,063	0,362	0,049	-0,093	-0,093	0,413
0,130	0,891	77,02	0,744	0,711	1,687	1,917	135,296	2,053	2,22	0,040	-0,122	0,102	0,476	0,055	-0,075	-0,075	0,503
0,220	1,151	74,89	1,110	0,559	1,841	1,972	145,155	1,916	3,06	0,059	-0,106	0,182	0,705	0,064	-0,042	-0,042	0,668
0,339	1,300	72,08	1,689	0,430	2,036	1,999	151,327	1,826	4,26	0,090	-0,069	0,323	1,142	0,074	0,009	0,009	0,942
0,504	1,365	68,51	2,615	0,324	2,280	1,995	153,279	1,790	6,05	0,139	0,004	0,569	1,976	0,088	0,085	0,085	1,403
0,746	1,370	64,05	4,187	0,238	2,602	1,965	151,680	1,800	8,79	0,220	0,142	1,012	3,680	0,108	0,200	0,200	2,229
1,153	1,333	58,31	7,273	0,165	3,072	1,917	147,414	1,845	13,48	0,371	0,444	1,939	7,793	0,141	0,400	0,400	3,935
1,985	1,261	50,62	14,933	0,102	3,867	1,856	141,074	1,920	23,18	0,704	1,291	4,395	20,907	0,203	0,826	0,826	8,372
4,632	1,155	38,81	47,788	0,047	5,703	1,785	132,986	2,023	53,77	1,855	5,535	15,862	102,663	0,368	2,295	2,295	28,511
10,243	1,086	29,00	146,773	0,022	8,344	1,748	128,281	2,086	118,11	4,483	19,982	52,802	469,566	0,635	5,700	5,699	92,269
18,128	1,054	22,97	331,415	0,013	11,001	1,735	126,220	2,115	203,49	8,279	50,526	124,315	1 429,759	0,882	10,240	10,240	210,308

Table 14 — Characteristic values of a two-lobe bearing with  $\Omega = 150^\circ$ ,  $\varphi_{p,1} = 300^\circ$ ,  $h_{0,max}^* = 3$ ,  $B^* = 0,75$

$S_o$	$\varepsilon$	$\beta [^\circ]$	$p_{max}^* \cdot S_o$	$h_{min}^*$	$F_f^*$	$Q_3^*$	$Q_p^*$	$Q_2^*$	$\Delta T_{max}^*$	$c_{11}^*$	$c_{12}^*$	$c_{21}^*$	$c_{22}^*$	$d_{11}^*$	$d_{12}^*$	$d_{21}^*$	$d_{22}^*$
0,000	0,000	90,00	0,327	1,000	1,780	0,959	36,868	1,619	1,25	0,077	-0,008	0,274	0,307	0,060	0,110	0,110	0,574
0,034	0,100	5,49	0,402	0,909	1,789	0,959	36,910	1,618	1,44	0,078	-0,008	0,280	0,320	0,060	0,111	0,111	0,587
0,070	0,200	4,88	0,502	0,817	1,814	0,959	37,039	1,614	1,70	0,084	-0,006	0,300	0,362	0,063	0,119	0,119	0,629
0,111	0,300	3,87	0,637	0,727	1,859	0,959	37,271	1,608	2,00	0,094	-0,002	0,337	0,441	0,069	0,133	0,133	0,706
0,160	0,400	2,54	0,824	0,638	1,926	0,961	37,627	1,598	2,42	0,110	0,005	0,395	0,571	0,077	0,154	0,154	0,828
0,224	0,500	0,91	1,091	0,551	2,018	0,966	38,136	1,585	2,94	0,134	0,017	0,486	0,785	0,089	0,186	0,186	1,016
0,308	0,600	-1,02	1,484	0,467	2,145	0,974	38,841	1,565	3,66	0,170	0,037	0,626	1,139	0,105	0,232	0,232	1,307
0,428	0,700	-3,21	2,090	0,386	2,317	0,988	39,790	1,539	4,65	0,224	0,074	0,852	1,749	0,129	0,303	0,303	1,769
0,607	0,800	-5,73	3,069	0,310	2,554	1,010	41,051	1,503	6,12	0,308	0,145	1,228	2,877	0,162	0,410	0,410	2,535
0,888	0,900	-8,56	4,762	0,239	2,888	1,043	42,700	1,457	8,43	0,451	0,288	1,911	5,124	0,214	0,595	0,595	3,918
1,350	0,998	-11,72	7,856	0,176	3,361	1,087	44,795	1,399	12,07	0,694	0,607	3,210	10,009	0,289	0,896	0,896	6,472
2,631	1,130	-16,56	17,936	0,104	4,406	1,168	48,536	1,299	21,96	1,419	1,906	7,765	30,624	0,469	1,783	1,783	15,171
7,308	1,285	-23,06	67,104	0,044	6,991	1,292	54,532	1,153	56,62	4,372	10,394	32,820	186,614	0,983	5,371	5,371	60,692
12,599	1,348	-25,95	139,209	0,027	9,068	1,351	57,517	1,084	94,34	7,940	25,512	72,379	509,488	1,407	9,489	9,489	128,999
24,421	1,412	-28,88	345,973	0,015	12,528	1,413	60,817	1,014	176,27	16,364	75,092	192,153	1 771,931	2,149	18,968	18,968	328,203

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Table 15 — Characteristic values of a two-lobe bearing with  $\Omega = 150^\circ$ ,  $\varphi_{p,1} = 300^\circ$ ,  $h_{0,max}^* = 5$ ,  $B^* = 0,75$ 

$S_o$	$\varepsilon$	$\beta [^\circ]$	$p_{max}^* \cdot S_o$	$h_{min}^*$	$F_f^*$	$Q_3^*$	$Q_p^*$	$Q_2^*$	$\Delta T_{max}^*$	$c_{11}^*$	$c_{12}^*$	$c_{21}^*$	$c_{22}^*$	$d_{11}^*$	$d_{12}^*$	$d_{21}^*$	$d_{22}^*$
0,000	0,000	90,00	0,342	1,000	1,507	1,787	152,625	1,670	1,25	0,057	0,022	0,170	0,250	0,037	0,079	0,079	0,316
0,035	0,200	-21,77	0,439	0,873	1,522	1,791	153,289	1,663	1,53	0,059	0,023	0,178	0,268	0,038	0,081	0,081	0,331
0,075	0,400	-22,49	0,586	0,745	1,569	1,801	155,324	1,645	1,94	0,065	0,028	0,202	0,331	0,041	0,090	0,090	0,378
0,125	0,600	-23,67	0,815	0,618	1,654	1,819	158,856	1,615	2,53	0,077	0,039	0,251	0,460	0,046	0,106	0,106	0,472
0,196	0,800	-25,32	1,188	0,496	1,786	1,847	164,090	1,571	3,37	0,097	0,061	0,338	0,715	0,054	0,131	0,131	0,637
0,251	0,915	-26,45	1,511	0,430	1,889	1,868	167,965	1,539	4,05	0,115	0,081	0,418	0,964	0,061	0,153	0,153	0,788
0,399	1,122	-28,87	2,460	0,320	2,146	1,918	176,763	1,465	5,88	0,166	0,149	0,665	1,810	0,078	0,216	0,216	1,250
0,696	1,353	-32,07	4,663	0,214	2,590	1,993	189,679	1,360	9,52	0,275	0,335	1,275	4,255	0,109	0,351	0,352	2,370
1,515	1,631	-36,51	12,134	0,116	3,527	2,112	210,062	1,200	19,27	0,599	1,122	3,517	15,724	0,179	0,733	0,733	6,315
2,509	1,782	-39,15	23,260	0,075	4,396	2,188	223,469	1,098	31,15	1,025	2,438	7,137	38,099	0,257	1,262	1,262	12,644
4,858	1,950	-42,16	55,921	0,042	5,948	2,281	240,241	0,974	58,12	2,065	6,958	18,375	127,242	0,393	2,477	2,477	31,393
12,768	2,139	-45,60	212,468	0,017	9,439	2,391	261,315	0,822	150,04	5,946	29,964	77,574	765,144	0,811	7,717	7,717	133,800

### 4.3 Three-lobe bearings

Characteristic values for three-lobe bearings are listed in [Tables 16](#) to [26](#).

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Table 16 — Characteristic values of a three-lobe bearing with  $\Omega = 100^\circ$ ,  $\varphi_{p,1} = 240^\circ$ ,  $h_{0,\max}^* = 3$ ,  $B^* = 0,75$ 

$S_o$	$\varepsilon$	$\beta [^\circ]$	$p_{\max}^* \cdot S_o$	$h_{\min}^*$	$F_f^*$	$Q_3^*$	$Q_p^*$	$Q_2^*$	$\Delta T_{\max}^*$	$c_{11}^*$	$c_{12}^*$	$c_{21}^*$	$c_{22}^*$	$d_{11}^*$	$d_{12}^*$	$d_{21}^*$	$d_{22}^*$
0,001	0,000	90,00	0,273	1,000	1,842	0,924	38,144	2,472	0,90	0,174	-0,094	0,094	0,173	0,216	0,000	0,000	0,216
0,039	0,200	23,80	0,386	0,837	1,868	0,927	38,548	2,464	1,19	0,219	-0,073	0,125	0,162	0,251	0,025	0,025	0,208
0,080	0,400	18,73	0,554	0,691	1,949	0,932	39,747	2,441	1,57	0,301	-0,053	0,179	0,195	0,309	0,056	0,056	0,234
0,133	0,600	14,43	0,816	0,559	2,092	0,939	41,713	2,404	2,07	0,443	-0,023	0,274	0,291	0,404	0,098	0,098	0,305
0,211	0,800	10,68	1,260	0,438	2,325	0,948	44,413	2,355	2,84	0,709	0,034	0,453	0,506	0,570	0,166	0,166	0,452
0,348	1,000	7,35	2,108	0,325	2,708	0,956	47,817	2,293	4,03	1,282	0,170	0,833	1,025	0,891	0,294	0,294	0,767
0,356	1,008	7,22	2,157	0,321	2,728	0,957	47,967	2,290	4,10	1,318	0,182	0,856	1,062	0,904	0,296	0,296	0,781
0,471	1,106	5,73	2,919	0,269	3,017	0,961	49,898	2,255	4,98	1,894	0,330	1,225	1,619	1,193	0,407	0,407	1,079
0,651	1,203	4,32	4,159	0,217	3,422	0,965	51,968	2,217	6,26	2,934	0,614	1,869	2,673	1,659	0,567	0,567	1,572
0,962	1,302	2,99	6,435	0,166	4,036	0,968	54,242	2,176	8,47	5,115	1,175	3,135	4,925	2,581	0,893	0,893	2,553
1,608	1,401	1,77	11,586	0,115	5,093	0,971	56,678	2,131	12,49	11,078	2,659	6,268	11,255	4,748	1,559	1,559	4,894
2,267	1,450	1,22	17,341	0,089	5,998	0,973	57,943	2,107	16,20	19,121	4,553	10,024	19,899	7,213	2,224	2,223	7,576
3,590	1,500	0,71	30,066	0,063	7,519	0,974	59,274	2,082	23,28	40,819	9,168	19,024	43,378	13,057	3,542	3,542	13,928
7,425	1,550	0,29	74,583	0,034	10,870	0,975	60,645	2,055	42,84	144,496	26,295	52,530	155,346	35,128	8,145	8,145	37,879

Table 17 — Characteristic values of a three-lobe bearing with  $\Omega = 100^\circ$ ,  $\varphi_{p,1} = 240^\circ$ ,  $h_{0,max}^* = 5$ ,  $B^* = 0,75$

So	$\varepsilon$	$\beta [^\circ]$	$p_{max}^* \cdot So$	$h_{min}^*$	$F_f^*$	$Q_3^*$	$Q_p^*$	$Q_2^*$	$\Delta T_{max}^*$	$c_{11}^*$	$c_{12}^*$	$c_{21}^*$	$c_{22}^*$	$d_{11}^*$	$d_{12}^*$	$d_{21}^*$	$d_{22}^*$
0,000	0,000	90,00	0,273	1,000	1,583	1,691	153,086	2,550	0,91	0,133	-0,047	0,047	0,133	0,115	0,000	0,000	0,115
0,027	0,200	15,76	0,360	0,856	1,603	1,692	153,715	2,544	1,16	0,165	-0,035	0,063	0,122	0,134	0,011	0,011	0,107
0,055	0,400	12,10	0,478	0,727	1,662	1,693	155,590	2,530	1,48	0,215	-0,023	0,088	0,134	0,162	0,022	0,022	0,113
0,086	0,600	9,23	0,648	0,608	1,764	1,693	158,685	2,507	1,90	0,297	-0,010	0,126	0,172	0,207	0,037	0,037	0,133
0,128	0,800	6,82	0,909	0,496	1,922	1,694	162,973	2,475	2,46	0,439	0,012	0,188	0,252	0,277	0,057	0,057	0,173
0,193	1,003	4,76	1,357	0,388	2,170	1,693	168,518	2,433	3,30	0,714	0,051	0,303	0,422	0,403	0,089	0,089	0,252
0,304	1,202	3,06	2,213	0,286	2,564	1,693	175,098	2,384	4,69	1,328	0,137	0,543	0,820	0,655	0,150	0,150	0,419
0,399	1,301	2,29	3,006	0,236	2,866	1,692	178,787	2,357	5,77	1,985	0,234	0,783	1,260	0,888	0,193	0,193	0,577
0,552	1,401	1,61	4,386	0,185	3,305	1,692	182,789	2,327	7,47	3,299	0,417	1,218	2,143	1,303	0,275	0,275	0,860
0,837	1,500	0,99	7,204	0,134	4,007	1,691	187,022	2,294	10,49	6,483	0,842	2,194	4,318	2,214	0,406	0,406	1,485
1,539	1,600	0,48	15,408	0,081	5,384	1,690	191,569	2,259	17,63	18,498	2,102	5,113	12,486	4,970	0,864	0,864	3,376
2,461	1,650	0,26	28,258	0,054	6,819	1,689	193,944	2,241	26,78	42,402	4,239	10,215	28,881	9,921	1,385	1,385	6,770
5,553	1,700	0,08	82,986	0,027	10,294	1,689	196,386	2,222	54,23	192,433	16,020	34,620	132,053	31,316	2,481	2,481	21,476
18,084	1,730	0,02	427,909	0,009	18,727	1,689	197,883	2,210	167,38	1 835,324	40,205	143,393	1 253,681	179,575	26,759	26,760	123,268

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Table 18 — Characteristic values of a three-lobe bearing with  $\Omega = 100^\circ$ ,  $\varphi_{p,1} = 300^\circ$ ,  $h_{0,max}^* = 1$ ,  $B^* = 0,5$

$S_o$	$\varepsilon$	$\beta [^\circ]$	$p_{max}^* \cdot S_o$	$h_{min}^*$	$F_f^*$	$Q_3^*$	$Q_p^*$	$Q_2^*$	$\Delta T_{max}^*$	$c_{11}^*$	$c_{12}^*$	$c_{21}^*$	$c_{22}^*$	$d_{11}^*$	$d_{12}^*$	$d_{21}^*$	$d_{22}^*$
0,000	0,000	90,00	0,000	1,000	2,595	0,000	3,629	1,500	1,33	-0,002	-0,400	0,398	0,002	0,801	-0,003	-0,003	0,797
0,055	0,205	60,88	0,148	0,795	2,521	0,097	3,849	1,375	1,71	0,045	-0,037	0,320	0,140	0,081	0,045	0,045	0,639
0,111	0,333	53,05	0,305	0,667	2,547	0,153	4,201	1,299	2,19	0,143	-0,053	0,462	0,314	0,153	0,102	0,103	0,908
0,190	0,444	47,53	0,544	0,556	2,629	0,211	4,640	1,222	2,86	0,245	-0,052	0,717	0,612	0,252	0,218	0,217	1,355
0,303	0,539	42,08	0,915	0,461	2,774	0,266	5,127	1,151	3,80	0,420	-0,048	1,154	1,132	0,398	0,428	0,428	2,147
0,483	0,627	37,06	1,557	0,373	3,013	0,320	5,682	1,083	5,06	0,718	-0,046	1,949	2,128	0,642	0,843	0,843	3,666
0,804	0,712	32,55	2,832	0,288	3,414	0,373	6,323	1,016	6,81	1,200	0,038	3,433	4,467	0,960	1,500	1,499	6,544
1,454	0,792	27,96	5,712	0,208	4,092	0,424	7,043	0,949	9,49	2,075	0,422	6,597	10,934	1,371	2,579	2,577	12,676
3,139	0,869	22,87	14,425	0,131	5,388	0,470	7,864	0,882	15,20	4,458	1,973	16,335	35,501	2,336	5,533	5,534	31,683
10,009	0,940	16,66	59,974	0,060	8,576	0,512	8,764	0,815	35,07	14,961	13,916	70,084	223,140	5,559	18,549	18,552	136,123
27,453	0,972	12,30	214,679	0,028	13,387	0,534	9,236	0,781	80,76	44,473	71,336	271,435	1 206,697	11,931	54,575	54,575	515,176
54,633	0,984	9,80	521,922	0,016	18,496	0,544	9,430	0,767	154,19	94,901	212,980	713,524	3 998,910	20,415	117,661	117,661	1 330,641

Table 19 — Characteristic values of a three-lobe bearing with  $\Omega = 100^\circ$ ,  $\varphi_{P,1} = 300^\circ$ ,  $h_{0,max}^* = 3$ ,  $B^* = 0,5$

$S_o$	$\varepsilon$	$\beta [^\circ]$	$p_{max}^* \cdot S_o$	$h_{min}^*$	$F_f^*$	$Q_3^*$	$Q_P^*$	$Q_2^*$	$\Delta T_{max}^*$	$c_{11}^*$	$c_{12}^*$	$c_{21}^*$	$c_{22}^*$	$d_{11}^*$	$d_{12}^*$	$d_{21}^*$	$d_{22}^*$
0,000	0,000	90,00	0,215	1,000	1,806	0,894	52,680	1,612	0,84	0,134	-0,069	0,068	0,134	0,154	0,000	0,000	0,154
0,019	0,116	29,85	0,274	0,899	1,815	0,895	52,855	1,610	1,01	0,123	-0,080	0,060	0,156	0,145	-0,010	-0,010	0,169
0,040	0,239	32,87	0,358	0,797	1,843	0,897	53,420	1,605	1,22	0,117	-0,094	0,056	0,197	0,141	-0,019	-0,019	0,198
0,068	0,370	35,77	0,481	0,694	1,897	0,900	54,446	1,595	1,50	0,118	-0,112	0,058	0,267	0,142	-0,029	-0,029	0,246
0,106	0,510	38,36	0,675	0,589	1,986	0,904	56,016	1,581	1,91	0,127	-0,136	0,069	0,392	0,148	-0,037	-0,037	0,327
0,165	0,657	40,50	1,005	0,480	2,129	0,909	58,178	1,562	2,53	0,149	-0,170	0,100	0,632	0,162	-0,044	-0,044	0,475
0,267	0,809	42,08	1,651	0,368	2,359	0,916	60,954	1,537	3,63	0,189	-0,216	0,179	1,168	0,187	-0,044	-0,044	0,772
0,473	0,956	42,91	3,150	0,255	2,744	0,923	64,156	1,508	5,81	0,262	-0,265	0,419	2,648	0,224	-0,017	-0,017	1,489
1,027	1,081	42,25	8,049	0,145	3,493	0,929	67,313	1,478	11,64	0,422	-0,159	1,448	9,002	0,273	0,144	0,144	3,911
3,271	1,116	36,26	35,559	0,056	5,323	0,932	68,528	1,462	37,27	1,153	2,265	9,268	66,509	0,346	1,185	1,185	18,731
8,357	1,075	27,90	125,553	0,025	7,913	0,931	67,772	1,463	94,83	3,284	12,987	39,361	366,873	0,543	4,082	4,082	72,981
15,524	1,049	22,32	293,662	0,014	10,463	0,931	67,277	1,465	172,43	6,371	38,065	97,976	1 192,747	0,708	7,454	7,454	169,363

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Table 20 — Characteristic values of a three-lobe bearing with  $\Omega = 100^\circ$ ,  $\varphi_{p,1} = 300^\circ$ ,  $h_{0,max}^* = 5$ ,  $B^* = 0,5$

$S_o$	$\varepsilon$	$\beta [^\circ]$	$p_{max}^* \cdot S_o$	$h_{min}^*$	$F_f^*$	$Q_3^*$	$Q_p^*$	$Q_2^*$	$\Delta T_{max}^*$	$c_{11}^*$	$c_{12}^*$	$c_{21}^*$	$c_{22}^*$	$d_{11}^*$	$d_{12}^*$	$d_{21}^*$	$d_{22}^*$
0,000	0,000	90,00	0,228	1,000	1,538	1,663	215,961	1,659	0,84	0,110	-0,037	0,037	0,110	0,088	0,000	0,000	0,088
0,013	0,107	20,81	0,281	0,900	1,544	1,662	216,196	1,659	1,00	0,100	-0,044	0,032	0,125	0,083	-0,005	-0,004	0,097
0,028	0,218	23,43	0,352	0,800	1,563	1,662	216,941	1,656	1,21	0,093	-0,052	0,028	0,151	0,078	-0,009	-0,009	0,111
0,047	0,334	26,26	0,453	0,699	1,598	1,662	218,261	1,651	1,49	0,090	-0,062	0,025	0,193	0,076	-0,014	-0,014	0,134
0,072	0,459	29,28	0,606	0,597	1,657	1,662	220,298	1,644	1,89	0,090	-0,076	0,025	0,267	0,075	-0,020	-0,020	0,171
0,107	0,592	32,35	0,847	0,494	1,749	1,662	223,154	1,634	2,47	0,095	-0,096	0,029	0,399	0,077	-0,026	-0,026	0,232
0,162	0,736	35,38	1,277	0,389	1,895	1,662	227,028	1,620	3,42	0,106	-0,126	0,045	0,664	0,083	-0,033	-0,033	0,348
0,264	0,891	38,23	2,177	0,283	2,141	1,663	232,087	1,601	5,13	0,129	-0,173	0,093	1,325	0,093	-0,039	-0,039	0,591
0,511	1,055	40,68	4,778	0,173	2,622	1,663	238,423	1,578	9,62	0,179	-0,243	0,310	3,730	0,113	-0,031	-0,031	1,354
1,617	1,187	40,66	20,886	0,066	3,972	1,662	244,325	1,556	30,63	0,361	0,101	2,515	27,305	0,142	0,181	0,182	6,505
4,558	1,156	34,73	84,802	0,026	6,053	1,662	243,185	1,538	88,67	0,999	4,051	14,614	182,737	0,181	1,163	1,163	29,556
8,636	1,107	28,87	207,689	0,014	8,004	1,662	241,225	1,563	168,42	2,030	13,806	39,711	615,922	0,231	2,553	2,553	74,131

Table 21 — Characteristic values of a three-lobe bearing with  $\Omega = 100^\circ$ ,  $\varphi_{p,1} = 300^\circ$ ,  $h_{0,max}^* = 1$ ,  $B^* = 0,75$

So	$\varepsilon$	$\beta [^\circ]$	$p_{max}^* \cdot S_o$	$h_{min}^*$	$F_f^*$	$Q_3^*$	$Q_p^*$	$Q_2^*$	$\Delta T_{max}^*$	$c_{11}^*$	$c_{12}^*$	$c_{21}^*$	$c_{22}^*$	$d_{11}^*$	$d_{12}^*$	$d_{21}^*$	$d_{22}^*$
0,000	0,000	90,00	0,000	1,000	2,595	0,000	2,993	2,250	1,33	-0,003	-0,668	0,665	0,003	1,336	-0,006	-0,005	1,330
0,042	0,100	73,10	0,111	0,900	2,544	0,063	3,037	2,159	1,45	0,027	-0,041	0,439	0,099	0,085	0,026	0,026	0,878
0,088	0,196	59,41	0,239	0,804	2,525	0,110	3,158	2,082	1,71	0,065	-0,049	0,536	0,221	0,106	0,062	0,062	1,080
0,179	0,326	52,15	0,496	0,674	2,554	0,178	3,445	1,971	2,20	0,223	-0,070	0,760	0,499	0,227	0,147	0,147	1,507
0,307	0,439	46,86	0,877	0,561	2,646	0,247	3,809	1,862	2,89	0,381	-0,062	1,154	0,966	0,381	0,323	0,322	2,211
0,482	0,534	41,53	1,436	0,466	2,802	0,315	4,206	1,761	3,83	0,615	-0,046	1,793	1,739	0,575	0,627	0,625	3,416
0,746	0,621	36,46	2,342	0,379	3,052	0,384	4,653	1,664	5,10	1,016	-0,037	2,905	3,135	0,884	1,190	1,188	5,644
1,205	0,707	31,91	4,067	0,293	3,473	0,447	5,179	1,565	7,22	1,731	-0,026	5,025	6,114	1,423	2,284	2,284	10,115
2,106	0,790	27,62	7,853	0,210	4,203	0,502	5,775	1,466	10,35	2,904	0,442	9,207	14,469	1,988	3,799	3,798	18,763
4,275	0,868	22,91	18,349	0,132	5,578	0,555	6,435	1,366	16,81	5,844	2,341	21,026	44,112	3,170	7,498	7,496	43,010
12,478	0,940	16,93	68,740	0,060	8,963	0,609	7,154	1,264	39,38	18,261	16,660	82,914	257,428	6,977	22,895	22,897	166,287
33,052	0,973	12,44	239,145	0,027	14,210	0,639	7,537	1,210	93,92	53,929	87,510	321,386	1 405,130	14,795	66,869	66,863	618,000
64,438	0,985	9,87	576,829	0,015	19,730	0,653	7,690	1,188	173,46	114,685	261,035	848,353	4 681,172	25,224	144,438	144,431	1 590,927

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**Table 22 — Characteristic values of a three-lobe bearing with  $\Omega = 100^\circ$ ,  $\varphi_{P,1} = 300^\circ$ ,  $h_{0,max}^* = 3$ ,  $B^* = 0,75$**

$S_o$	$\varepsilon$	$\beta [^\circ]$	$p_{max}^* \cdot S_o$	$h_{min}^*$	$F_f^*$	$Q_3^*$	$Q_P^*$	$Q_2^*$	$\Delta T_{max}^*$	$c_{11}^*$	$c_{12}^*$	$c_{21}^*$	$c_{22}^*$	$d_{11}^*$	$d_{12}^*$	$d_{21}^*$	$d_{22}^*$
0,001	0,000	90,00	0,273	1,000	1,842	0,924	38,144	2,472	0,90	0,173	-0,094	0,093	0,173	0,216	0,000	0,000	0,215
0,025	0,117	31,05	0,347	0,899	1,851	0,925	38,283	2,469	1,08	0,158	-0,107	0,084	0,200	0,204	-0,013	-0,013	0,237
0,053	0,241	33,91	0,449	0,798	1,882	0,927	38,731	2,460	1,32	0,150	-0,124	0,079	0,249	0,198	-0,025	-0,025	0,274
0,088	0,374	36,62	0,598	0,694	1,940	0,930	39,552	2,445	1,66	0,151	-0,146	0,082	0,335	0,198	-0,037	-0,037	0,336
0,137	0,515	39,00	0,827	0,588	2,036	0,935	40,800	2,421	2,11	0,163	-0,174	0,096	0,484	0,204	-0,047	-0,047	0,438
0,210	0,662	40,94	1,207	0,479	2,188	0,940	42,505	2,389	2,84	0,188	-0,213	0,133	0,765	0,222	-0,055	-0,055	0,621
0,332	0,812	42,34	1,920	0,367	2,429	0,946	44,663	2,349	4,06	0,235	-0,265	0,227	1,371	0,250	-0,053	-0,053	0,977
0,572	0,958	43,04	3,526	0,255	2,833	0,953	47,165	2,302	6,49	0,317	-0,317	0,489	3,029	0,293	-0,023	-0,023	1,780
1,193	1,083	42,35	8,596	0,145	3,615	0,960	49,644	2,255	13,03	0,495	-0,190	1,596	9,970	0,346	0,149	0,149	4,422
3,684	1,119	36,46	37,518	0,055	5,555	0,965	50,591	2,230	41,47	1,330	2,547	10,413	73,234	0,433	1,386	1,386	21,315
9,188	1,077	28,07	132,179	0,024	8,244	0,967	49,944	2,234	103,72	3,688	15,014	43,594	405,073	0,632	4,509	4,509	79,833
16,346	1,051	22,71	296,004	0,014	10,728	0,968	49,533	2,238	180,37	6,817	42,000	102,685	1 244,818	0,776	7,681	7,681	173,018

Table 23 — Characteristic values of a three-lobe bearing with  $\Omega = 100^\circ$ ,  $\varphi_{p,1} = 300^\circ$ ,  $h_{0,max}^* = 5$ ,  $B^* = 0,75$

So	$\varepsilon$	$\beta [^\circ]$	$p_{max}^* \cdot So$	$h_{min}^*$	$F_f^*$	$Q_3^*$	$Q_p^*$	$Q_2^*$	$\Delta T_{max}^*$	$c_{11}^*$	$c_{12}^*$	$c_{21}^*$	$c_{22}^*$	$d_{11}^*$	$d_{12}^*$	$d_{21}^*$	$d_{22}^*$
0,000	0,000	90,00	0,273	1,000	1,583	1,691	153,086	2,550	0,91	0,133	-0,047	0,047	0,133	0,115	0,000	0,000	0,115
0,016	0,107	21,38	0,332	0,900	1,589	1,692	153,267	2,547	1,08	0,122	-0,054	0,040	0,150	0,107	-0,005	-0,005	0,125
0,035	0,219	23,91	0,413	0,799	1,609	1,692	153,845	2,543	1,32	0,114	-0,064	0,036	0,180	0,102	-0,011	-0,011	0,142
0,057	0,335	26,59	0,524	0,699	1,646	1,692	154,863	2,535	1,64	0,110	-0,076	0,033	0,228	0,100	-0,017	-0,017	0,170
0,086	0,459	29,40	0,688	0,597	1,708	1,692	156,417	2,523	2,09	0,109	-0,091	0,033	0,310	0,098	-0,024	-0,024	0,212
0,126	0,591	32,28	0,944	0,495	1,803	1,693	158,594	2,507	2,71	0,114	-0,113	0,037	0,456	0,101	-0,031	-0,031	0,280
0,190	0,734	35,15	1,395	0,390	1,955	1,693	161,550	2,485	3,78	0,126	-0,146	0,054	0,747	0,106	-0,039	-0,039	0,410
0,303	0,887	37,88	2,314	0,283	2,208	1,693	165,384	2,456	5,78	0,151	-0,197	0,109	1,446	0,118	-0,046	-0,046	0,690
0,570	1,049	40,28	4,923	0,174	2,700	1,693	170,189	2,420	10,57	0,204	-0,275	0,333	3,967	0,138	-0,038	-0,038	1,505
1,708	1,183	40,50	20,543	0,067	4,057	1,694	174,781	2,385	32,20	0,391	0,037	2,542	27,442	0,170	0,179	0,179	6,803
4,793	1,157	34,81	85,183	0,026	6,203	1,694	174,045	2,388	92,87	1,056	4,261	15,072	189,304	0,208	1,182	1,182	30,462
9,262	1,107	28,81	218,483	0,014	8,301	1,694	172,479	2,398	181,08	2,219	15,192	43,234	669,801	0,266	2,799	2,798	80,660

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Table 24 — Characteristic values of a three-lobe bearing with  $\Omega = 100^\circ$ ,  $\varphi_{p,1} = 300^\circ$ ,  $h_{0,\max}^* = 1$ ,  $B^* = 1$ 

$S_0$	$\varepsilon$	$\beta [^\circ]$	$p_{\max}^* \cdot S_0$	$h_{\min}^*$	$F_f^*$	$Q_3^*$	$Q_p^*$	$Q_2^*$	$\Delta T_{\max}^*$	$c_{11}^*$	$c_{12}^*$	$c_{21}^*$	$c_{22}^*$	$d_{11}^*$	$d_{12}^*$	$d_{21}^*$	$d_{22}^*$
0,000	0,000	90,00	0,000	1,000	2,595	0,000	2,612	3,000	1,33	-0,004	-0,883	0,879	0,003	1,766	-0,008	-0,007	1,757
0,056	0,100	71,85	0,148	0,900	2,545	0,067	2,650	2,886	1,45	0,034	-0,047	0,588	0,130	0,097	0,032	0,032	1,180
0,113	0,191	58,41	0,303	0,809	2,528	0,114	2,749	2,793	1,71	0,089	-0,059	0,707	0,281	0,122	0,073	0,073	1,436
0,232	0,322	51,64	0,633	0,678	2,561	0,187	2,998	2,649	2,20	0,295	-0,081	0,993	0,631	0,290	0,181	0,180	1,975
0,397	0,437	46,57	1,117	0,563	2,661	0,262	3,320	2,510	2,89	0,477	-0,067	1,484	1,217	0,481	0,407	0,405	2,869
0,618	0,533	41,41	1,805	0,467	2,827	0,340	3,669	2,381	3,83	0,763	-0,045	2,269	2,164	0,720	0,791	0,789	4,379
0,936	0,619	36,18	2,864	0,381	3,084	0,415	4,054	2,255	5,21	1,211	-0,054	3,559	3,767	1,041	1,423	1,423	7,060
1,472	0,704	31,58	4,789	0,296	3,509	0,477	4,503	2,126	7,44	2,043	-0,038	5,998	7,100	1,664	2,707	2,707	12,382
2,523	0,789	27,46	9,004	0,211	4,273	0,536	5,026	1,994	10,93	3,424	0,432	10,799	16,389	2,388	4,593	4,593	22,706
4,970	0,868	22,93	20,252	0,132	5,705	0,595	5,595	1,864	18,03	6,695	2,558	23,815	48,899	3,691	8,727	8,725	50,007
14,098	0,941	16,97	73,609	0,059	9,266	0,656	6,212	1,723	42,65	20,493	19,025	92,075	284,875	7,838	25,632	25,624	186,601
35,583	0,973	12,57	244,340	0,027	14,558	0,690	6,525	1,653	99,12	58,505	93,643	343,042	1 471,953	16,497	73,774	73,793	666,446
68,272	0,985	9,97	585,772	0,015	20,170	0,705	6,653	1,623	181,86	122,546	279,242	894,327	4 872,992	27,328	155,002	154,995	1 679,815

Table 25 — Characteristic values of a three-lobe bearing with  $\Omega = 100^\circ$ ,  $\varphi_{p,1} = 300^\circ$ ,  $h_{0,max}^* = 3$ ,  $B^* = 1$

$S_o$	$\varepsilon$	$\beta [^\circ]$	$p_{max}^* \cdot S_o$	$h_{min}^*$	$F_f^*$	$Q_3^*$	$Q_p^*$	$Q_2^*$	$\Delta T_{max}^*$	$c_{11}^*$	$c_{12}^*$	$c_{21}^*$	$c_{22}^*$	$d_{11}^*$	$d_{12}^*$	$d_{21}^*$	$d_{22}^*$
0,001	0,000	90,00	0,298	1,000	1,862	0,927	30,215	3,335	0,92	0,194	-0,109	0,108	0,194	0,252	0,000	0,000	0,253
0,028	0,118	31,74	0,377	0,899	1,872	0,927	30,333	3,332	1,11	0,177	-0,124	0,097	0,224	0,239	-0,014	-0,014	0,276
0,060	0,243	34,52	0,487	0,798	1,903	0,928	30,714	3,320	1,37	0,169	-0,142	0,093	0,278	0,232	-0,028	-0,028	0,318
0,100	0,376	37,10	0,644	0,694	1,963	0,932	31,405	3,298	1,70	0,170	-0,165	0,095	0,370	0,231	-0,041	-0,041	0,386
0,154	0,517	39,37	0,884	0,588	2,062	0,936	32,455	3,265	2,20	0,182	-0,195	0,111	0,530	0,238	-0,052	-0,052	0,501
0,235	0,665	41,20	1,282	0,478	2,220	0,942	33,901	3,220	2,96	0,209	-0,236	0,151	0,835	0,257	-0,060	-0,060	0,699
0,368	0,814	42,50	2,012	0,367	2,467	0,948	35,706	3,165	4,25	0,259	-0,290	0,248	1,479	0,286	-0,058	-0,058	1,076
0,623	0,959	43,13	3,631	0,255	2,879	0,955	37,798	3,101	6,89	0,348	-0,346	0,531	3,196	0,332	-0,023	-0,023	1,951
1,275	1,084	42,44	8,711	0,145	3,677	0,963	39,882	3,036	13,88	0,538	-0,223	1,702	10,311	0,390	0,172	0,172	4,803
3,878	1,122	36,61	38,144	0,054	5,665	0,969	40,694	3,003	43,56	1,428	2,619	11,011	75,728	0,487	1,532	1,531	22,845
9,534	1,079	28,24	133,711	0,024	8,380	0,972	40,106	3,011	107,89	3,867	15,869	45,237	418,268	0,679	4,689	4,689	82,375
17,074	1,051	22,73	304,717	0,014	10,956	0,973	39,714	3,016	189,72	7,222	44,976	108,410	1 311,976	0,835	8,120	8,120	181,584

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Table 26 — Characteristic values of a three-lobe bearing with  $\Omega = 100^\circ$ ,  $\varphi_{p,1} = 300^\circ$ ,  $h_{0,\max}^* = 5$ ,  $B^* = 1$ 

$S_o$	$\varepsilon$	$\beta [^\circ]$	$p_{\max}^* \cdot S_o$	$h_{\min}^*$	$F_f^*$	$Q_3^*$	$Q_p^*$	$Q_2^*$	$\Delta T_{\max}^*$	$c_{11}^*$	$c_{12}^*$	$c_{21}^*$	$c_{22}^*$	$d_{11}^*$	$d_{12}^*$	$d_{21}^*$	$d_{22}^*$
0,000	0,000	90,00	0,290	1,000	1,607	1,686	119,420	3,442	0,93	0,145	-0,052	0,052	0,145	0,130	0,000	0,000	0,129
0,018	0,108	21,71	0,351	0,900	1,613	1,687	119,572	3,439	1,12	0,133	-0,060	0,045	0,163	0,122	-0,006	-0,006	0,141
0,038	0,219	24,18	0,433	0,800	1,634	1,687	120,047	3,433	1,37	0,125	-0,070	0,040	0,195	0,116	-0,012	-0,012	0,159
0,062	0,336	26,80	0,547	0,699	1,672	1,687	120,894	3,422	1,69	0,120	-0,082	0,037	0,247	0,112	-0,018	-0,019	0,187
0,093	0,460	29,54	0,714	0,597	1,735	1,688	122,180	3,406	2,15	0,119	-0,099	0,037	0,332	0,111	-0,026	-0,026	0,234
0,137	0,592	32,33	0,974	0,494	1,833	1,688	123,980	3,383	2,85	0,124	-0,122	0,043	0,484	0,113	-0,033	-0,033	0,310
0,203	0,733	35,09	1,424	0,390	1,986	1,689	126,388	3,353	3,91	0,137	-0,156	0,058	0,787	0,118	-0,042	-0,042	0,441
0,322	0,885	37,76	2,341	0,284	2,242	1,689	129,534	3,315	5,99	0,163	-0,209	0,115	1,506	0,130	-0,049	-0,049	0,733
0,597	1,046	40,12	4,920	0,174	2,737	1,690	133,479	3,267	10,92	0,217	-0,290	0,342	4,060	0,151	-0,041	-0,041	1,571
1,768	1,182	40,42	20,571	0,067	4,116	1,690	137,327	3,219	33,36	0,410	0,009	2,607	27,892	0,187	0,186	0,186	7,080
4,952	1,157	34,81	86,410	0,026	6,306	1,691	136,726	3,274	96,59	1,103	4,370	15,616	194,774	0,225	1,243	1,243	31,759
9,570	1,108	28,81	223,884	0,014	8,452	1,691	135,442	3,238	188,69	2,329	15,761	45,211	694,108	0,289	2,980	2,980	84,762

#### 4.4 Four-lobe bearings

Characteristic values for four-lobe bearings are listed in [Tables 27](#) to [43](#).

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Table 27 — Characteristic values of a four-lobe bearing with  $\Omega = 70^\circ$ ,  $\varphi_{p,1} = 270^\circ$ ,  $h_{0,max}^* = 3$ ,  $B^* = 0,75$

$S_0$	$\varepsilon$	$\beta [^\circ]$	$p_{max}^* \cdot S_0$	$h_{min}^*$	$F_f^*$	$Q_3^*$	$Q_p^*$	$Q_2^*$	$\Delta T_{max}^*$	$c_{11}^*$	$c_{12}^*$	$c_{21}^*$	$c_{22}^*$	$d_{11}^*$	$d_{12}^*$	$d_{21}^*$	$d_{22}^*$
0,000	0,000	90,00	0,207	1,000	1,798	0,767	41,065	3,317	0,69	0,139	-0,061	0,061	0,139	0,140	0,000	0,000	0,140
0,034	0,215	21,85	0,324	0,802	1,829	0,767	41,622	3,309	1,00	0,153	-0,055	0,075	0,159	0,148	0,006	0,006	0,153
0,054	0,320	20,30	0,413	0,708	1,866	0,767	42,299	3,299	1,21	0,174	-0,047	0,094	0,188	0,159	0,013	0,013	0,171
0,077	0,421	18,35	0,531	0,621	1,927	0,768	43,202	3,286	1,47	0,206	-0,036	0,122	0,234	0,175	0,024	0,024	0,199
0,106	0,520	16,12	0,688	0,540	2,007	0,770	44,325	3,270	1,82	0,255	-0,020	0,165	0,305	0,201	0,038	0,038	0,241
0,142	0,618	13,74	0,905	0,465	2,113	0,771	45,670	3,250	2,22	0,332	0,004	0,226	0,418	0,238	0,057	0,057	0,301
0,190	0,714	11,38	1,208	0,395	2,255	0,773	47,211	3,227	2,79	0,451	0,040	0,318	0,595	0,293	0,083	0,083	0,391
0,259	0,810	9,09	1,659	0,329	2,447	0,774	48,975	3,200	3,50	0,647	0,098	0,462	0,894	0,380	0,120	0,120	0,532
0,364	0,907	6,89	2,388	0,266	2,721	0,776	50,983	3,169	4,53	1,002	0,206	0,710	1,447	0,521	0,177	0,178	0,762
0,537	1,004	4,87	3,673	0,205	3,128	0,778	53,217	3,134	6,14	1,719	0,425	1,185	2,587	0,784	0,272	0,272	1,190
0,877	1,102	3,03	6,425	0,145	3,810	0,780	55,704	3,095	9,09	3,547	0,955	2,279	5,524	1,372	0,482	0,482	2,151
1,755	1,200	1,42	14,578	0,086	5,204	0,782	58,423	3,051	15,77	10,740	3,056	6,098	17,359	3,176	0,870	0,870	5,119
8,348	1,300	0,20	104,967	0,024	11,262	0,783	61,435	3,001	61,25	166,460	31,262	57,172	271,258	27,844	5,277	5,277	45,406
21,971	1,320	0,06	388,417	0,010	18,391	0,784	62,066	2,990	149,86	1038,328	102,928	203,667	1 683,263	111,505	26,538	26,538	181,680

Table 28 — Characteristic values of a four-lobe bearing with  $\Omega = 70^\circ$ ,  $\varphi_{p,1} = 270^\circ$ ,  $h_{0,max}^* = 5$ ,  $B^* = 0,75$

$S_o$	$\varepsilon$	$\beta [^\circ]$	$p_{max}^* \cdot S_o$	$h_{min}^*$	$F_f^*$	$Q_3^*$	$Q_P^*$	$Q_2^*$	$\Delta T_{max}^*$	$c_{11}^*$	$c_{12}^*$	$c_{21}^*$	$c_{22}^*$	$d_{11}^*$	$d_{12}^*$	$d_{21}^*$	$d_{22}^*$
0,000	0,000	90,00	0,209	1,000	1,565	1,392	160,058	3,424	0,70	0,108	-0,030	0,030	0,108	0,074	0,000	0,000	0,074
0,024	0,207	14,41	0,298	0,822	1,587	1,391	160,845	3,420	0,97	0,116	-0,027	0,036	0,119	0,077	0,002	0,002	0,079
0,037	0,308	13,49	0,361	0,737	1,616	1,390	161,801	3,414	1,15	0,128	-0,024	0,043	0,134	0,082	0,004	0,004	0,085
0,053	0,409	12,29	0,443	0,654	1,659	1,389	163,131	3,405	1,37	0,147	-0,019	0,055	0,157	0,089	0,008	0,008	0,095
0,071	0,509	10,88	0,551	0,576	1,718	1,388	164,817	3,394	1,65	0,175	-0,012	0,072	0,193	0,100	0,012	0,012	0,110
0,093	0,608	9,37	0,695	0,501	1,796	1,387	166,847	3,381	2,01	0,217	-0,001	0,096	0,248	0,116	0,018	0,018	0,131
0,122	0,707	7,80	0,893	0,431	1,901	1,385	169,238	3,365	2,47	0,282	0,014	0,132	0,332	0,140	0,025	0,025	0,163
0,160	0,805	6,28	1,179	0,363	2,041	1,384	171,959	3,348	3,08	0,387	0,037	0,185	0,466	0,176	0,036	0,036	0,211
0,214	0,903	4,83	1,616	0,298	2,233	1,381	175,032	3,328	3,95	0,568	0,074	0,270	0,699	0,233	0,054	0,054	0,286
0,300	1,002	3,46	2,354	0,235	2,513	1,379	178,494	3,305	5,28	0,915	0,143	0,428	1,150	0,339	0,079	0,079	0,424
0,453	1,101	2,22	3,808	0,173	2,953	1,377	182,315	3,279	7,40	1,731	0,311	0,763	2,218	0,540	0,116	0,116	0,689
0,789	1,200	1,18	7,513	0,111	3,767	1,374	186,495	3,250	12,29	4,322	0,725	1,667	5,581	1,138	0,251	0,251	1,469
2,154	1,300	0,35	27,674	0,047	6,069	1,371	191,082	3,219	30,63	26,032	3,333	7,047	33,818	4,553	0,908	0,908	5,928
5,498	1,340	0,09	96,702	0,020	9,587	1,369	193,019	3,205	68,53	154,175	18,445	31,453	201,599	16,470	1,001	1,001	21,481

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Table 29 — Characteristic values of a four-lobe bearing with  $\Omega = 70^\circ$ ,  $\varphi_{p,1} = 315^\circ$ ,  $h_{0,\max}^* = 1$ ,  $B^* = 0,5$ 

$S_o$	$\varepsilon$	$\beta [^\circ]$	$p_{\max}^* \cdot S_o$	$h_{\min}^*$	$F_f^*$	$Q_3^*$	$Q_p^*$	$Q_2^*$	$\Delta T_{\max}^*$	$c_{11}^*$	$c_{12}^*$	$c_{21}^*$	$c_{22}^*$	$d_{11}^*$	$d_{12}^*$	$d_{21}^*$	$d_{22}^*$
0,000	0,000	90,00	0,000	1,000	2,430	0,000	4,780	2,000	1,00	0,000	-0,301	0,301	0,000	0,602	0,000	0,000	0,602
0,071	0,362	73,93	0,255	0,638	2,484	0,150	5,713	1,791	1,30	0,101	-0,093	0,232	0,188	0,246	0,068	0,067	0,428
0,128	0,492	66,05	0,484	0,508	2,611	0,219	6,504	1,698	1,67	0,102	-0,049	0,346	0,416	0,194	0,087	0,086	0,608
0,190	0,552	57,13	0,731	0,448	2,675	0,256	6,949	1,642	2,19	0,136	0,012	0,512	0,730	0,151	0,098	0,098	0,882
0,274	0,599	48,13	1,064	0,401	2,737	0,282	7,335	1,597	2,95	0,219	0,054	0,801	1,214	0,186	0,167	0,167	1,375
0,405	0,651	39,76	1,598	0,349	2,865	0,304	7,797	1,556	4,07	0,363	0,121	1,328	2,113	0,253	0,305	0,305	2,309
0,634	0,711	32,42	2,573	0,289	3,112	0,324	8,379	1,517	5,82	0,644	0,234	2,393	3,997	0,391	0,616	0,616	4,292
1,114	0,781	26,24	4,809	0,219	3,594	0,343	9,123	1,477	8,79	1,321	0,449	5,043	8,914	0,747	1,516	1,515	9,517
2,400	0,858	21,27	11,737	0,142	4,641	0,362	10,021	1,434	14,96	3,095	1,226	12,977	27,446	1,581	4,056	4,058	25,824
8,190	0,935	15,61	50,682	0,065	7,638	0,377	11,004	1,394	33,97	10,709	8,789	56,224	182,132	3,851	13,755	13,762	114,184
23,854	0,970	11,69	188,664	0,030	12,326	0,380	11,479	1,381	78,29	34,201	48,957	225,246	1 027,561	8,993	43,323	43,324	451,432
48,941	0,983	9,43	468,703	0,017	17,285	0,380	11,660	1,378	146,02	76,818	155,132	607,936	3 475,074	16,432	98,479	98,528	1 198,632

Table 30 — Characteristic values of a four-lobe bearing with  $\Omega = 70^\circ$ ,  $\varphi_{P,1} = 315^\circ$ ,  $h_{0,max}^* = 2$ ,  $B^* = 0,5$

$S_o$	$\varepsilon$	$\beta [^\circ]$	$p_{max}^* \cdot S_o$	$h_{min}^*$	$F_f^*$	$Q_3^*$	$Q_P^*$	$Q_2^*$	$\Delta T_{max}^*$	$c_{11}^*$	$c_{12}^*$	$c_{21}^*$	$c_{22}^*$	$d_{11}^*$	$d_{12}^*$	$d_{21}^*$	$d_{22}^*$
0,000	0,000	90,00	0,145	1,000	1,990	0,414	20,999	2,112	0,67	0,111	-0,077	0,077	0,111	0,166	0,000	0,000	0,165
0,017	0,121	34,23	0,197	0,899	2,001	0,415	21,167	2,109	0,82	0,114	-0,079	0,080	0,120	0,169	0,000	0,000	0,175
0,036	0,242	34,20	0,273	0,797	2,036	0,419	21,673	2,101	1,01	0,122	-0,085	0,088	0,151	0,176	0,001	0,001	0,199
0,060	0,363	34,16	0,388	0,694	2,098	0,424	22,516	2,089	1,27	0,138	-0,095	0,104	0,213	0,188	0,002	0,002	0,248
0,094	0,483	34,10	0,567	0,590	2,195	0,432	23,684	2,071	1,64	0,164	-0,112	0,132	0,328	0,209	0,005	0,005	0,335
0,147	0,603	34,01	0,872	0,486	2,341	0,442	25,185	2,047	2,17	0,207	-0,139	0,182	0,555	0,241	0,010	0,010	0,488
0,239	0,723	33,87	1,446	0,380	2,567	0,454	27,017	2,018	3,07	0,280	-0,183	0,279	1,050	0,291	0,021	0,021	0,785
0,420	0,841	33,66	2,704	0,274	2,933	0,467	29,142	1,984	4,81	0,411	-0,258	0,506	2,324	0,374	0,052	0,052	1,467
0,878	0,956	33,21	6,422	0,168	3,623	0,481	34,521	1,944	9,15	0,676	-0,355	1,247	7,129	0,506	0,154	0,154	3,521
2,925	1,051	31,14	28,958	0,066	5,458	0,493	38,716	1,907	28,71	1,412	0,719	7,237	52,839	0,685	0,927	0,926	16,748
8,487	1,053	25,57	118,421	0,027	8,256	0,490	33,764	1,906	84,67	3,567	11,523	38,595	356,511	0,782	3,989	3,989	74,282
16,238	1,038	20,88	285,985	0,015	10,943	0,486	33,402	1,912	166,53	7,229	36,394	104,067	1 187,208	1,015	8,794	8,794	189,727

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**Table 31 — Characteristic values of a four-lobe bearing with  $\Omega = 70^\circ$ ,  $\varphi_{p,1} = 315^\circ$ ,  $h_{0,max}^* = 3$ ,  $B^* = 0,5$**

$S_o$	$\varepsilon$	$\beta [^\circ]$	$p_{max}^* \cdot S_o$	$h_{min}^*$	$F_f^*$	$Q_3^*$	$Q_p^*$	$Q_2^*$	$\Delta T_{max}^*$	$c_{11}^*$	$c_{12}^*$	$c_{21}^*$	$c_{22}^*$	$d_{11}^*$	$d_{12}^*$	$d_{21}^*$	$d_{22}^*$
0,000	0,000	90,00	0,182	1,000	1,774	0,764	58,090	2,174	0,66	0,117	-0,049	0,049	0,117	0,110	0,000	0,000	0,110
0,014	0,108	22,35	0,231	0,900	1,781	0,764	58,275	2,174	0,81	0,118	-0,050	0,049	0,123	0,111	0,000	0,000	0,114
0,029	0,217	22,56	0,301	0,799	1,804	0,764	58,839	2,170	0,99	0,121	-0,053	0,052	0,144	0,113	-0,001	-0,001	0,126
0,048	0,326	22,97	0,399	0,699	1,846	0,765	59,780	2,163	1,23	0,127	-0,059	0,057	0,184	0,117	-0,002	-0,002	0,149
0,072	0,436	23,58	0,548	0,598	1,910	0,766	61,113	2,154	1,55	0,138	-0,069	0,064	0,257	0,123	-0,003	-0,003	0,188
0,108	0,549	24,37	0,788	0,497	2,009	0,767	62,884	2,142	2,07	0,154	-0,086	0,078	0,394	0,132	-0,005	-0,005	0,258
0,164	0,664	25,41	1,209	0,395	2,160	0,769	65,102	2,127	2,91	0,183	-0,116	0,105	0,667	0,148	-0,008	-0,008	0,386
0,267	0,783	26,68	2,061	0,292	2,405	0,770	67,841	2,107	4,39	0,233	-0,170	0,161	1,320	0,172	-0,012	-0,012	0,651
0,502	0,908	28,25	4,322	0,188	2,863	0,772	71,202	2,083	7,87	0,336	-0,286	0,330	3,482	0,217	-0,013	-0,013	1,374
1,412	1,039	29,96	15,883	0,083	4,066	0,774	75,258	2,053	22,36	0,614	-0,528	1,594	19,865	0,318	0,066	0,066	5,420
4,190	1,089	29,20	68,223	0,032	6,196	0,774	76,949	2,039	69,02	1,179	1,239	10,616	142,260	0,389	0,774	0,774	25,796
8,887	1,078	25,84	190,641	0,016	8,449	0,774	76,569	2,042	148,57	2,323	10,626	38,356	582,377	0,421	2,573	2,573	78,486

Table 32 — Characteristic values of a four-lobe bearing with  $\Omega = 70^\circ$ ,  $\varphi_{P,1} = 315^\circ$ ,  $h_{0,max}^* = 4$ ,  $B^* = 0,5$

So	$\varepsilon$	$\beta [^\circ]$	$p_{max}^* \cdot So$	$h_{min}^*$	$F_f^*$	$Q_3^*$	$Q_P^*$	$Q_2^*$	$\Delta T_{max}^*$	$c_{11}^*$	$c_{12}^*$	$c_{21}^*$	$c_{22}^*$	$d_{11}^*$	$d_{12}^*$	$d_{21}^*$	$d_{22}^*$
0,000	0,000	90,00	0,191	1,000	1,635	1,085	125,082	2,216	0,67	0,106	-0,034	0,034	0,106	0,080	0,000	0,000	0,080
0,012	0,105	17,51	0,238	0,900	1,641	1,086	125,306	2,214	0,81	0,107	-0,035	0,034	0,111	0,081	0,000	0,000	0,083
0,025	0,210	17,74	0,301	0,800	1,660	1,086	125,977	2,212	0,99	0,109	-0,037	0,035	0,127	0,082	-0,001	-0,001	0,090
0,040	0,316	18,18	0,390	0,699	1,695	1,085	127,108	2,207	1,21	0,112	-0,041	0,038	0,158	0,083	-0,001	-0,001	0,105
0,060	0,423	18,85	0,523	0,599	1,748	1,085	128,713	2,200	1,56	0,118	-0,048	0,041	0,213	0,086	-0,003	-0,003	0,130
0,088	0,531	19,76	0,730	0,499	1,828	1,084	130,803	2,191	2,04	0,127	-0,060	0,047	0,313	0,090	-0,005	-0,005	0,170
0,130	0,643	21,02	1,087	0,397	1,951	1,084	133,471	2,180	2,88	0,142	-0,080	0,059	0,509	0,097	-0,008	-0,008	0,250
0,205	0,759	22,69	1,790	0,296	2,149	1,082	136,770	2,165	4,33	0,169	-0,119	0,083	0,966	0,109	-0,012	-0,012	0,406
0,366	0,882	24,92	3,554	0,194	2,512	1,081	140,864	2,147	7,59	0,223	-0,204	0,156	2,385	0,129	-0,020	-0,020	0,816
0,937	1,019	27,99	11,702	0,090	3,433	1,079	146,146	2,123	19,93	0,372	-0,468	0,671	11,767	0,181	-0,012	-0,012	2,923
2,495	1,090	29,39	43,834	0,038	5,000	1,078	149,182	2,108	56,00	0,628	-0,469	3,874	70,211	0,233	0,172	0,172	11,949
5,441	1,099	28,05	127,356	0,019	6,825	1,078	149,582	2,106	119,52	0,992	3,414	14,560	319,938	0,238	0,583	0,583	32,270

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Table 33 — Characteristic values of a four-lobe bearing with  $\Omega = 70^\circ$ ,  $\varphi_{p,1} = 315^\circ$ ,  $h_{0,\max}^* = 5$ ,  $B^* = 0,5$ 

$S_o$	$\varepsilon$	$\beta [^\circ]$	$p_{\max}^* \cdot S_o$	$\eta_{\min}^*$	$F_f^*$	$Q_3^*$	$Q_p^*$	$Q_2^*$	$\Delta T_{\max}^*$	$c_{11}^*$	$c_{12}^*$	$c_{21}^*$	$c_{22}^*$	$d_{11}^*$	$d_{12}^*$	$d_{21}^*$	$d_{22}^*$
0,000	0,000	90,00	0,191	1,000	1,534	1,394	230,933	2,245	0,67	0,095	-0,026	0,026	0,095	0,062	0,000	0,000	0,062
0,010	0,103	14,79	0,234	0,900	1,539	1,395	231,195	2,243	0,81	0,095	-0,026	0,026	0,098	0,062	0,000	0,000	0,063
0,021	0,207	15,06	0,292	0,800	1,556	1,395	231,990	2,241	0,98	0,096	-0,028	0,026	0,111	0,062	0,000	0,000	0,069
0,034	0,311	15,50	0,374	0,700	1,586	1,394	233,319	2,237	1,22	0,098	-0,031	0,027	0,136	0,063	-0,001	-0,001	0,079
0,051	0,416	16,12	0,493	0,600	1,633	1,393	235,202	2,231	1,54	0,102	-0,036	0,029	0,180	0,065	-0,002	-0,002	0,096
0,074	0,523	17,02	0,680	0,499	1,703	1,392	237,680	2,223	2,06	0,108	-0,045	0,033	0,259	0,067	-0,004	-0,004	0,126
0,108	0,632	18,29	0,995	0,399	1,809	1,390	240,784	2,214	2,85	0,117	-0,060	0,039	0,414	0,070	-0,006	-0,006	0,178
0,167	0,745	20,04	1,603	0,298	1,979	1,388	244,621	2,202	4,35	0,134	-0,088	0,052	0,763	0,076	-0,010	-0,010	0,287
0,291	0,866	22,55	3,101	0,196	2,289	1,386	249,426	2,187	7,57	0,167	-0,153	0,094	1,822	0,089	-0,016	-0,016	0,570
0,717	1,004	26,31	9,825	0,093	3,067	1,383	255,788	2,167	18,80	0,260	-0,366	0,344	8,736	0,119	-0,025	-0,025	1,831
1,816	1,083	28,68	34,566	0,041	4,351	1,381	259,852	2,154	49,53	0,413	-0,570	1,878	48,463	0,153	0,020	0,020	6,784
3,905	1,106	28,67	100,620	0,020	5,914	1,380	261,092	2,149	107,91	0,609	0,927	7,497	212,037	0,168	0,206	0,206	19,241

Table 34 — Characteristic values of a four-lobe bearing with  $\Omega = 70^\circ$ ,  $\varphi_{p,1} = 315^\circ$ ,  $h_{0,max}^* = 1$ ,  $B^* = 0,75$

So	$\varepsilon$	$\beta [^\circ]$	$p_{max}^* \cdot So$	$h_{min}^*$	$F_f^*$	$Q_3^*$	$Q_p^*$	$Q_2^*$	$\Delta T_{max}^*$	$c_{11}^*$	$c_{12}^*$	$c_{21}^*$	$c_{22}^*$	$d_{11}^*$	$d_{12}^*$	$d_{21}^*$	$d_{22}^*$
0,000	0,000	90,00	0,000	1,000	2,430	0,000	3,832	3,000	1,00	0,000	-0,449	0,449	0,000	0,898	0,000	0,000	0,898
0,023	0,100	81,80	0,080	0,900	2,404	0,042	3,889	2,927	1,05	0,128	-0,134	0,212	0,056	0,262	0,017	0,017	0,473
0,111	0,379	74,73	0,396	0,621	2,507	0,175	4,651	2,699	1,31	0,127	-0,151	0,344	0,292	0,380	0,103	0,102	0,636
0,194	0,503	66,61	0,720	0,497	2,643	0,247	5,274	2,570	1,69	0,141	-0,065	0,501	0,625	0,272	0,117	0,117	0,893
0,286	0,561	57,63	1,076	0,439	2,715	0,287	5,626	2,491	2,23	0,190	0,021	0,738	1,079	0,212	0,135	0,135	1,290
0,406	0,605	48,54	1,545	0,395	2,779	0,314	5,918	2,427	3,00	0,302	0,084	1,139	1,764	0,256	0,226	0,226	1,988
0,586	0,653	40,15	2,256	0,347	2,908	0,337	6,262	2,370	4,11	0,488	0,180	1,836	2,971	0,338	0,400	0,400	3,255
0,898	0,711	32,48	3,537	0,289	3,162	0,357	6,713	2,313	5,90	0,851	0,342	3,246	5,475	0,505	0,793	0,793	5,946
1,520	0,779	26,06	6,281	0,221	3,652	0,376	7,290	2,254	9,10	1,679	0,630	6,567	11,628	0,918	1,875	1,875	12,710
3,152	0,857	21,01	14,527	0,143	4,746	0,397	8,018	2,187	16,26	4,021	1,395	16,737	33,700	2,118	5,513	5,511	34,846
10,020	0,935	15,65	57,453	0,065	7,887	0,414	8,814	2,122	37,44	12,900	10,107	66,581	209,948	4,768	16,997	16,999	140,026
27,504	0,970	11,82	200,354	0,030	12,762	0,418	9,194	2,099	86,52	39,536	54,379	254,365	1 126,412	10,876	51,817	51,795	523,922
54,798	0,983	9,54	484,784	0,017	17,878	0,417	9,339	2,094	157,53	85,240	177,393	662,678	3 774,674	18,077	107,122	107,089	1 307,804

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Table 35 — Characteristic values of a four-lobe bearing with  $\Omega = 70^\circ$ ,  $\varphi_{p,1} = 315^\circ$ ,  $h_{0,max}^* = 2$ ,  $B^* = 0,75$

$S_o$	$\varepsilon$	$\beta [^\circ]$	$p_{max}^* \cdot S_o$	$h_{min}^*$	$F_f^*$	$Q_3^*$	$Q_p^*$	$Q_2^*$	$\Delta T_{max}^*$	$c_{11}^*$	$c_{12}^*$	$c_{21}^*$	$c_{22}^*$	$d_{11}^*$	$d_{12}^*$	$d_{21}^*$	$d_{22}^*$
0,000	0,000	90,00	0,169	1,000	2,005	0,420	15,294	3,209	0,69	0,137	-0,101	0,101	0,137	0,221	0,000	0,000	0,221
0,021	0,123	35,86	0,232	0,900	2,017	0,421	15,428	3,206	0,85	0,141	-0,103	0,104	0,148	0,224	0,000	0,000	0,231
0,046	0,246	35,74	0,322	0,797	2,054	0,424	15,831	3,193	1,06	0,152	-0,110	0,115	0,186	0,233	0,001	0,002	0,263
0,076	0,369	35,57	0,457	0,694	2,121	0,431	16,503	3,172	1,33	0,172	-0,122	0,137	0,260	0,251	0,004	0,004	0,327
0,119	0,490	35,32	0,666	0,590	2,223	0,439	17,427	3,143	1,73	0,205	-0,141	0,172	0,399	0,276	0,008	0,008	0,435
0,184	0,611	35,02	1,017	0,484	2,379	0,450	18,610	3,105	2,33	0,259	-0,174	0,235	0,668	0,319	0,016	0,016	0,628
0,293	0,729	34,65	1,650	0,379	2,614	0,463	20,015	3,060	3,31	0,347	-0,222	0,352	1,232	0,379	0,032	0,032	0,987
0,505	0,846	34,21	3,011	0,273	2,997	0,477	21,652	3,006	5,19	0,502	-0,301	0,613	2,674	0,474	0,068	0,068	1,770
1,027	0,960	33,56	6,937	0,167	3,718	0,493	23,481	2,945	9,87	0,807	-0,399	1,453	7,999	0,628	0,191	0,191	4,123
3,289	1,054	31,35	30,331	0,065	5,633	0,507	25,162	2,887	31,35	1,616	0,878	8,007	58,209	0,824	1,035	1,035	18,555
9,228	1,055	25,80	121,958	0,026	8,512	0,504	25,180	2,886	91,30	3,953	13,041	41,919	384,593	0,915	4,346	4,346	79,957
17,584	1,039	21,06	301,653	0,014	11,352	0,499	24,881	2,897	181,04	8,264	38,456	117,223	1 266,817	1,284	11,059	11,059	221,280

Table 36 — Characteristic values of a four-lobe bearing with  $\Omega = 70^\circ$ ,  $\varphi_{p,1} = 315^\circ$ ,  $h_{0,max}^* = 3$ ,  $B^* = 0,75$

So	$\varepsilon$	$\beta [^\circ]$	$p_{max}^* \cdot So$	$h_{min}^*$	$F_f^*$	$Q_3^*$	$Q_p^*$	$Q_2^*$	$\Delta T_{max}^*$	$c_{11}^*$	$c_{12}^*$	$c_{21}^*$	$c_{22}^*$	$d_{11}^*$	$d_{12}^*$	$d_{21}^*$	$d_{22}^*$
0,000	0,000	90,00	0,207	1,000	1,798	0,767	41,065	3,317	0,69	0,139	-0,061	0,061	0,139	0,140	0,000	0,000	0,140
0,017	0,109	23,27	0,263	0,900	1,806	0,766	41,208	3,315	0,84	0,140	-0,062	0,062	0,146	0,141	0,000	0,000	0,144
0,035	0,218	23,47	0,338	0,800	1,830	0,767	41,638	3,309	1,03	0,144	-0,066	0,065	0,169	0,144	-0,001	-0,001	0,159
0,057	0,328	23,82	0,447	0,699	1,873	0,768	42,362	3,299	1,29	0,151	-0,072	0,070	0,215	0,148	-0,002	-0,002	0,186
0,086	0,439	24,31	0,608	0,598	1,941	0,769	43,388	3,284	1,63	0,164	-0,084	0,079	0,298	0,155	-0,003	-0,003	0,232
0,127	0,552	24,99	0,865	0,496	2,044	0,770	44,739	3,264	2,19	0,183	-0,102	0,096	0,450	0,166	-0,006	-0,006	0,313
0,192	0,667	25,86	1,309	0,394	2,201	0,772	46,429	3,239	3,05	0,216	-0,134	0,124	0,755	0,183	-0,009	-0,009	0,453
0,307	0,785	26,97	2,186	0,292	2,454	0,774	48,494	3,208	4,70	0,272	-0,193	0,188	1,457	0,212	-0,012	-0,012	0,755
0,564	0,909	28,35	4,487	0,188	2,925	0,776	51,025	3,169	8,33	0,384	-0,317	0,367	3,784	0,265	-0,013	-0,013	1,528
1,520	1,038	29,91	15,904	0,083	4,143	0,778	54,052	3,122	23,43	0,680	-0,584	1,699	20,431	0,371	0,077	0,077	5,878
4,385	1,089	29,24	67,964	0,032	6,309	0,779	55,359	3,102	72,03	1,280	1,057	11,053	143,055	0,453	0,861	0,861	27,601
9,443	1,078	25,84	196,405	0,015	8,681	0,779	55,070	3,106	158,72	2,504	11,513	40,849	620,585	0,479	2,745	2,745	83,509

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Table 37 — Characteristic values of a four-lobe bearing with  $\Omega = 70^\circ$ ,  $\varphi_{p,1} = 315^\circ$ ,  $h_{0,max}^* = 4$ ,  $B^* = 0,75$

$S_o$	$\varepsilon$	$\beta [^\circ]$	$p_{max}^* \cdot S_o$	$h_{min}^*$	$F_f^*$	$Q_3^*$	$Q_p^*$	$Q_2^*$	$\Delta T_{max}^*$	$c_{11}^*$	$c_{12}^*$	$c_{21}^*$	$c_{22}^*$	$d_{11}^*$	$d_{12}^*$	$d_{21}^*$	$d_{22}^*$
0,000	0,000	90,00	0,213	1,000	1,663	1,086	87,291	3,381	0,69	0,123	-0,041	0,041	0,123	0,099	0,000	0,000	0,099
0,014	0,105	18,11	0,263	0,900	1,670	1,085	87,458	3,381	0,84	0,124	-0,042	0,042	0,129	0,099	0,000	0,000	0,101
0,029	0,211	18,34	0,331	0,800	1,690	1,085	87,968	3,376	1,02	0,126	-0,044	0,043	0,146	0,100	-0,001	-0,001	0,110
0,047	0,317	18,74	0,425	0,699	1,725	1,085	88,820	3,368	1,28	0,130	-0,049	0,045	0,180	0,102	-0,002	-0,002	0,127
0,069	0,424	19,34	0,564	0,599	1,781	1,084	90,027	3,357	1,62	0,137	-0,057	0,049	0,241	0,105	-0,003	-0,003	0,153
0,100	0,533	20,17	0,780	0,498	1,864	1,084	91,614	3,342	2,17	0,147	-0,069	0,056	0,349	0,110	-0,005	-0,005	0,202
0,148	0,644	21,29	1,146	0,397	1,991	1,083	93,601	3,324	3,00	0,164	-0,091	0,068	0,562	0,117	-0,008	-0,008	0,284
0,229	0,759	22,81	1,854	0,296	2,194	1,082	96,056	3,301	4,52	0,193	-0,131	0,093	1,049	0,129	-0,014	-0,014	0,451
0,404	0,882	24,90	3,637	0,194	2,567	1,081	99,126	3,272	7,97	0,250	-0,222	0,169	2,557	0,154	-0,021	-0,021	0,889
1,012	1,018	27,82	11,876	0,090	3,512	1,079	103,055	3,235	21,07	0,407	-0,501	0,711	12,426	0,206	-0,013	-0,013	3,132
2,660	1,089	29,21	44,886	0,037	5,126	1,079	105,330	3,213	59,59	0,676	-0,495	4,061	74,595	0,261	0,174	0,174	12,611
5,764	1,098	27,89	131,528	0,018	7,004	1,079	105,628	3,210	127,88	1,067	3,628	15,496	340,247	0,268	0,625	0,625	34,518

Table 38 — Characteristic values of a four-lobe bearing with  $\Omega = 70^\circ$ ,  $\varphi_{p,1} = 315^\circ$ ,  $h_{0,max}^* = 5$ ,  $B^* = 0,75$

So	$\varepsilon$	$\beta [^\circ]$	$p_{max}^* \cdot So$	$h_{min}^*$	$F_f^*$	$Q_3^*$	$Q_p^*$	$Q_2^*$	$\Delta T_{max}^*$	$c_{11}^*$	$c_{12}^*$	$c_{21}^*$	$c_{22}^*$	$d_{11}^*$	$d_{12}^*$	$d_{21}^*$	$d_{22}^*$
0,000	0,000	90,00	0,209	1,000	1,565	1,392	160,058	3,424	0,70	0,108	-0,030	0,030	0,108	0,074	0,000	0,000	0,074
0,012	0,104	15,32	0,255	0,900	1,570	1,391	160,257	3,423	0,84	0,108	-0,031	0,030	0,112	0,074	0,000	0,000	0,076
0,025	0,208	15,50	0,316	0,800	1,588	1,391	160,853	3,420	1,03	0,110	-0,033	0,031	0,126	0,075	0,000	0,000	0,082
0,039	0,312	15,87	0,401	0,700	1,619	1,390	161,846	3,413	1,27	0,112	-0,036	0,032	0,153	0,076	-0,001	-0,001	0,093
0,058	0,417	16,45	0,524	0,600	1,667	1,389	163,252	3,404	1,63	0,116	-0,041	0,035	0,200	0,077	-0,002	-0,002	0,113
0,083	0,524	17,32	0,715	0,499	1,739	1,388	165,101	3,393	2,15	0,123	-0,051	0,038	0,286	0,080	-0,004	-0,004	0,144
0,121	0,633	18,49	1,035	0,398	1,849	1,386	167,416	3,377	3,03	0,133	-0,067	0,044	0,451	0,084	-0,006	-0,006	0,201
0,184	0,745	20,11	1,644	0,298	2,023	1,385	170,250	3,359	4,53	0,150	-0,097	0,060	0,816	0,091	-0,010	-0,010	0,320
0,318	0,866	22,48	3,157	0,196	2,342	1,382	173,828	3,336	7,93	0,186	-0,166	0,105	1,930	0,104	-0,017	-0,017	0,625
0,763	1,002	26,06	9,858	0,093	3,129	1,379	178,490	3,305	19,66	0,281	-0,387	0,358	9,060	0,134	-0,027	-0,027	1,932
1,876	1,080	28,41	34,088	0,041	4,411	1,378	181,471	3,285	51,18	0,437	-0,616	1,882	48,611	0,170	0,017	0,017	6,949
3,929	1,104	28,52	97,064	0,020	5,947	1,377	182,432	3,278	109,30	0,629	0,753	7,200	205,663	0,186	0,189	0,189	18,938

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Table 39 — Characteristic values of a four-lobe bearing with  $\Omega = 70^\circ$ ,  $\varphi_{p,1} = 315^\circ$ ,  $h_{0,max}^* = 1$ ,  $B^* = 1$

$S_o$	$\varepsilon$	$\beta [^\circ]$	$p_{max}^* \cdot S_o$	$h_{min}^*$	$F_f^*$	$Q_3^*$	$Q_p^*$	$Q_2^*$	$\Delta T_{max}^*$	$c_{11}^*$	$c_{12}^*$	$c_{21}^*$	$c_{22}^*$	$d_{11}^*$	$d_{12}^*$	$d_{21}^*$	$d_{22}^*$
0,000	0,000	90,00	0,000	1,000	2,430	0,000	3,251	4,000	1,00	0,000	-0,547	0,547	0,000	1,094	0,000	0,000	1,094
0,028	0,100	81,92	0,095	0,900	2,404	0,043	3,300	3,909	1,04	0,183	-0,166	0,253	0,070	0,326	0,014	0,015	0,576
0,138	0,387	75,00	0,480	0,613	2,520	0,183	3,975	3,613	1,32	0,138	-0,188	0,415	0,361	0,457	0,122	0,122	0,771
0,238	0,509	66,88	0,857	0,491	2,663	0,256	4,504	3,448	1,72	0,167	-0,076	0,601	0,760	0,323	0,138	0,138	1,078
0,348	0,566	57,92	1,273	0,434	2,739	0,296	4,800	3,346	2,29	0,224	0,026	0,880	1,301	0,252	0,158	0,158	1,550
0,489	0,608	48,91	1,804	0,392	2,805	0,324	5,039	3,264	3,09	0,351	0,103	1,340	2,094	0,299	0,261	0,261	2,361
0,703	0,655	40,34	2,618	0,345	2,938	0,346	5,326	3,189	4,26	0,567	0,219	2,151	3,507	0,391	0,461	0,461	3,853
1,066	0,712	32,52	4,047	0,288	3,198	0,366	5,703	3,115	6,12	0,981	0,413	3,771	6,385	0,576	0,904	0,904	6,984
1,770	0,779	26,00	7,012	0,221	3,696	0,385	6,186	3,036	9,40	1,901	0,748	7,491	13,252	1,025	2,100	2,101	14,671
3,592	0,857	20,90	15,737	0,143	4,815	0,406	6,803	2,945	16,96	4,540	1,515	18,858	37,230	2,405	6,304	6,302	40,027
10,982	0,935	15,69	59,477	0,065	8,020	0,424	7,478	2,856	38,96	14,089	10,775	72,000	223,598	5,304	18,850	18,856	153,872
30,198	0,971	11,79	210,308	0,029	13,165	0,428	7,810	2,822	90,68	43,501	60,456	278,949	1 234,127	12,002	57,317	57,323	578,483
60,245	0,984	9,47	516,999	0,016	18,580	0,427	7,933	2,814	167,27	95,082	198,396	740,246	4 205,523	20,439	121,985	121,972	1 472,585

Table 40 — Characteristic values of a four-lobe bearing with  $\Omega = 70^\circ$ ,  $\varphi_{p,1} = 315^\circ$ ,  $h_{0,max}^* = 2$ ,  $B^* = 1$

So	$\epsilon$	$\beta [^\circ]$	$p_{max}^* \cdot S_o$	$h_{min}^*$	$F_f^*$	$Q_3^*$	$Q_p^*$	$Q_2^*$	$\Delta T_{max}^*$	$c_{11}^*$	$c_{12}^*$	$c_{21}^*$	$c_{22}^*$	$d_{11}^*$	$d_{12}^*$	$d_{21}^*$	$d_{22}^*$	
0,000	0,000	90,00	0,178	1,000	2,013	0,418	12,163	4,309	0,70	0,151	-0,115	0,115	0,151	0,253	0,000	0,000	0,000	0,253
0,024	0,125	36,70	0,245	0,899	2,026	0,419	12,278	4,304	0,86	0,155	-0,117	0,118	0,164	0,256	0,000	0,000	0,000	0,263
0,051	0,249	36,52	0,340	0,797	2,064	0,422	12,619	4,286	1,08	0,167	-0,125	0,131	0,204	0,267	0,002	0,002	0,002	0,301
0,085	0,372	36,27	0,481	0,694	2,133	0,429	13,180	4,258	1,36	0,190	-0,138	0,155	0,285	0,286	0,005	0,005	0,005	0,371
0,133	0,494	35,93	0,701	0,589	2,239	0,438	13,957	4,217	1,75	0,227	-0,159	0,195	0,437	0,317	0,010	0,010	0,010	0,491
0,204	0,614	35,52	1,061	0,484	2,398	0,449	14,933	4,166	2,34	0,287	-0,192	0,262	0,724	0,362	0,019	0,019	0,019	0,696
0,323	0,733	35,04	1,719	0,378	2,641	0,462	16,111	4,103	3,36	0,385	-0,244	0,392	1,332	0,431	0,038	0,038	0,038	1,094
0,550	0,849	34,49	3,103	0,272	3,032	0,477	17,459	4,030	5,27	0,553	-0,324	0,672	2,857	0,530	0,078	0,078	0,078	1,936
1,103	0,962	33,74	7,063	0,166	3,766	0,493	18,963	3,948	10,02	0,875	-0,422	1,544	8,449	0,705	0,207	0,207	0,207	4,383
3,441	1,055	31,51	30,388	0,065	5,705	0,507	20,341	3,870	32,31	1,734	0,839	8,423	59,312	0,912	1,158	1,158	1,158	19,828
9,621	1,056	25,91	123,634	0,026	8,646	0,505	20,355	3,869	93,10	4,152	13,934	43,641	400,548	0,984	4,502	4,502	4,502	82,657
18,273	1,040	21,13	308,583	0,014	11,546	0,499	20,108	3,884	185,56	8,708	40,555	122,861	1 317,886	1,384	11,738	11,738	11,738	231,959

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**Table 41 — Characteristic values of a four-lobe bearing with  $\Omega = 70^\circ$ ,  $\varphi_{P,1} = 315^\circ$ ,  $h_{0,\max}^* = 3$ ,  $B^* = 1$**

$S_o$	$\varepsilon$	$\beta [^\circ]$	$p_{\max}^* \cdot S_o$	$h_{\min}^*$	$F_f^*$	$Q_3^*$	$Q_P^*$	$Q_2^*$	$\Delta T_{\max}^*$	$c_{11}^*$	$c_{12}^*$	$c_{21}^*$	$c_{22}^*$	$d_{11}^*$	$d_{12}^*$	$d_{21}^*$	$d_{22}^*$
0,000	0,000	90,00	0,215	1,000	1,810	0,760	31,983	4,462	0,69	0,150	-0,067	0,067	0,150	0,156	0,000	0,000	0,156
0,018	0,109	23,71	0,271	0,900	1,818	0,760	32,100	4,458	0,84	0,151	-0,068	0,068	0,157	0,156	0,000	0,000	0,161
0,038	0,219	23,91	0,349	0,799	1,843	0,761	32,455	4,450	1,03	0,156	-0,072	0,071	0,182	0,159	-0,001	-0,001	0,176
0,062	0,329	24,20	0,460	0,699	1,887	0,762	33,049	4,435	1,30	0,164	-0,079	0,077	0,231	0,164	-0,002	-0,002	0,205
0,093	0,440	24,68	0,623	0,598	1,957	0,763	33,890	4,414	1,67	0,177	-0,091	0,088	0,318	0,172	-0,003	-0,003	0,255
0,137	0,553	25,29	0,883	0,496	2,062	0,764	34,995	4,387	2,20	0,198	-0,111	0,105	0,478	0,185	-0,006	-0,006	0,339
0,206	0,668	26,09	1,329	0,394	2,222	0,766	36,377	4,352	3,11	0,233	-0,143	0,136	0,794	0,202	-0,009	-0,009	0,491
0,328	0,787	27,14	2,222	0,291	2,482	0,768	38,082	4,310	4,75	0,293	-0,206	0,205	1,534	0,235	-0,012	-0,012	0,814
0,596	0,910	28,43	4,522	0,188	2,959	0,770	40,157	4,257	8,55	0,410	-0,335	0,400	3,906	0,289	-0,010	-0,010	1,651
1,577	1,038	29,91	15,926	0,083	4,188	0,773	42,591	4,194	23,53	0,716	-0,614	1,770	20,834	0,400	0,085	0,085	6,158
4,489	1,089	29,26	67,744	0,032	6,365	0,774	43,659	4,166	72,28	1,327	1,023	11,206	144,247	0,482	0,880	0,880	28,198
9,516	1,079	25,97	193,328	0,016	8,715	0,773	43,444	4,171	157,88	2,541	11,473	40,626	614,313	0,506	2,736	2,736	83,138

Table 42 — Characteristic values of a four-lobe bearing with  $\Omega = 70^\circ$ ,  $\varphi_{p,1} = 315^\circ$ ,  $h_{0,max}^* = 4$ ,  $B^* = 1$

So	$\epsilon$	$\beta [^\circ]$	$p_{max}^* \cdot So$	$h_{min}^*$	$F_f^*$	$Q_3^*$	$Q_P^*$	$Q_2^*$	$\Delta T_{max}^*$	$c_{11}^*$	$c_{12}^*$	$c_{21}^*$	$c_{22}^*$	$d_{11}^*$	$d_{12}^*$	$d_{21}^*$	$d_{22}^*$
0,000	0,000	90,00	0,219	1,000	1,678	1,076	67,365	4,549	0,69	0,132	-0,045	0,045	0,132	0,108	0,000	0,000	0,108
0,015	0,105	18,42	0,269	0,900	1,685	1,076	67,501	4,547	0,84	0,133	-0,045	0,045	0,137	0,108	0,000	0,000	0,111
0,031	0,211	18,62	0,338	0,800	1,705	1,075	67,915	4,541	1,04	0,135	-0,048	0,046	0,156	0,109	-0,001	-0,001	0,119
0,050	0,317	19,00	0,433	0,700	1,741	1,075	68,605	4,530	1,28	0,139	-0,053	0,049	0,191	0,111	-0,002	-0,002	0,137
0,074	0,425	19,57	0,574	0,599	1,798	1,075	69,594	4,515	1,65	0,146	-0,061	0,054	0,254	0,115	-0,003	-0,003	0,168
0,107	0,533	20,36	0,789	0,499	1,882	1,074	70,871	4,495	2,17	0,157	-0,074	0,061	0,366	0,120	-0,005	-0,005	0,217
0,157	0,645	21,45	1,159	0,397	2,012	1,073	72,498	4,470	3,02	0,174	-0,097	0,073	0,590	0,129	-0,009	-0,009	0,304
0,243	0,760	22,89	1,871	0,296	2,218	1,072	74,491	4,438	4,55	0,205	-0,138	0,098	1,096	0,141	-0,014	-0,014	0,475
0,423	0,882	24,90	3,647	0,194	2,594	1,071	76,961	4,399	7,99	0,264	-0,232	0,176	2,640	0,167	-0,022	-0,022	0,927
1,042	1,017	27,75	11,805	0,090	3,543	1,070	80,123	4,349	21,01	0,424	-0,515	0,723	12,583	0,219	-0,014	-0,014	3,208
2,694	1,088	29,16	44,296	0,037	5,157	1,069	81,965	4,319	59,34	0,700	-0,583	4,130	73,336	0,277	0,190	0,190	13,055
5,908	1,097	27,83	132,943	0,018	7,084	1,069	82,207	4,315	130,07	1,101	3,708	15,858	348,286	0,283	0,641	0,641	35,427

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Table 43 — Characteristic values of a four-lobe bearing with  $\Omega = 70^\circ$ ,  $\varphi_{p,1} = 315^\circ$ ,  $h_{0,\max}^* = 5$ ,  $B^* = 1$ 

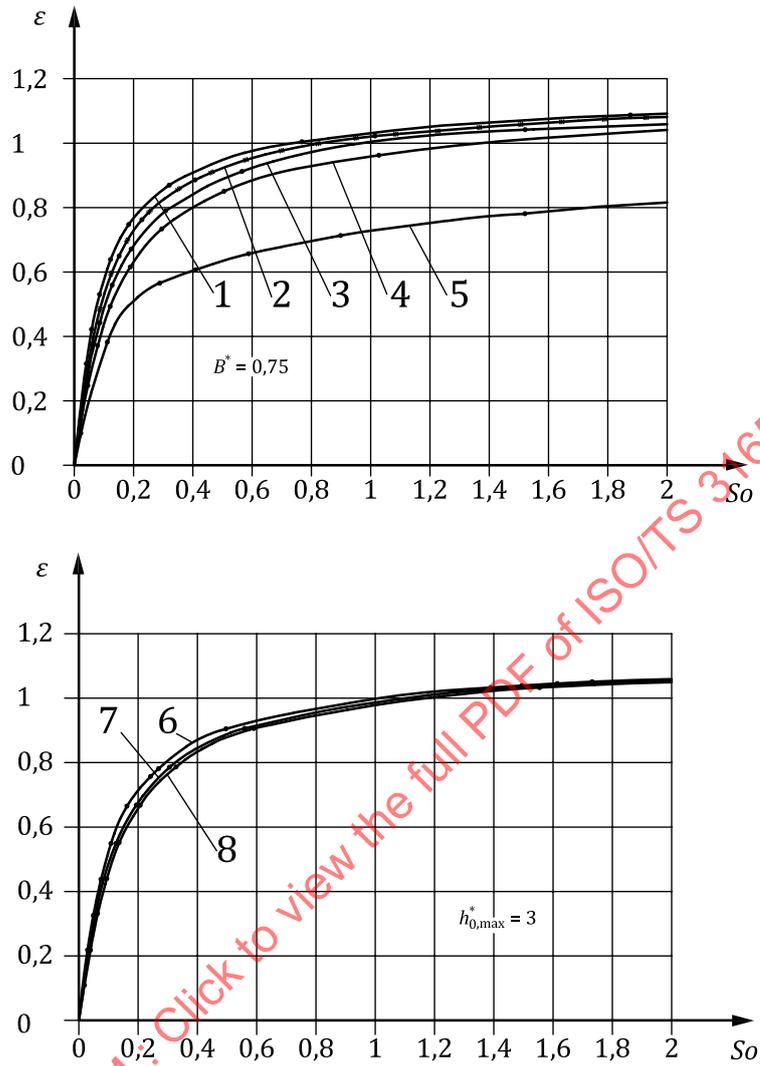
$S_o$	$\varepsilon$	$\beta [^\circ]$	$p_{\max}^* \cdot S_o$	$h_{\min}^*$	$F_f^*$	$Q_3^*$	$Q_p^*$	$Q_2^*$	$\Delta T_{\max}^*$	$c_{11}^*$	$c_{12}^*$	$c_{21}^*$	$c_{22}^*$	$d_{11}^*$	$d_{12}^*$	$d_{21}^*$	$d_{22}^*$
0,000	0,000	90,00	0,213	1,000	1,580	1,378	122,919	4,606	0,70	0,114	-0,033	0,033	0,114	0,081	0,000	0,000	0,081
0,013	0,104	15,51	0,259	0,900	1,586	1,377	123,079	4,605	0,84	0,115	-0,033	0,033	0,119	0,080	0,000	0,000	0,082
0,026	0,208	15,70	0,321	0,800	1,604	1,377	123,560	4,599	1,03	0,117	-0,035	0,033	0,133	0,081	-0,001	-0,001	0,089
0,042	0,312	16,05	0,406	0,700	1,635	1,376	124,362	4,591	1,27	0,119	-0,038	0,034	0,162	0,082	-0,001	-0,001	0,099
0,061	0,417	16,63	0,529	0,600	1,684	1,376	125,496	4,579	1,63	0,123	-0,044	0,037	0,210	0,084	-0,002	-0,002	0,121
0,088	0,524	17,45	0,720	0,499	1,758	1,374	126,988	4,562	2,15	0,130	-0,054	0,041	0,299	0,087	-0,004	-0,004	0,154
0,127	0,633	18,58	1,039	0,399	1,869	1,373	128,856	4,542	3,03	0,140	-0,070	0,048	0,467	0,091	-0,007	-0,007	0,215
0,194	0,746	20,17	1,657	0,298	2,047	1,371	131,165	4,517	4,55	0,159	-0,101	0,064	0,846	0,099	-0,011	-0,011	0,339
0,331	0,866	22,46	3,165	0,196	2,368	1,369	134,630	4,485	7,93	0,195	-0,172	0,111	1,981	0,112	-0,017	-0,017	0,655
0,785	1,001	25,95	9,832	0,094	3,159	1,366	137,763	4,444	19,64	0,292	-0,396	0,362	9,211	0,142	-0,028	-0,028	1,971
1,918	1,079	28,29	34,118	0,041	4,453	1,364	140,165	4,417	51,48	0,451	-0,635	1,903	49,291	0,178	0,015	0,015	7,079
3,951	1,103	28,45	95,628	0,021	5,970	1,364	140,940	4,408	108,98	0,639	0,681	7,088	203,383	0,196	0,182	0,182	18,852

## Annex A (informative)

### Characteristic curves for four-lobe bearings

The static and dynamic characteristic values given in [4.4](#) for the segment centre-loaded ( $\varphi_{p,1} = 315^\circ$ ) four-lobe bearings (angular span of segment sliding surface  $\Omega = 70^\circ$ ) are shown graphically as a function of the Sommerfeld number  $S_o$ , the gap ratio  $h_{0,\max}^*$  and the width ratio  $B^*$  below.

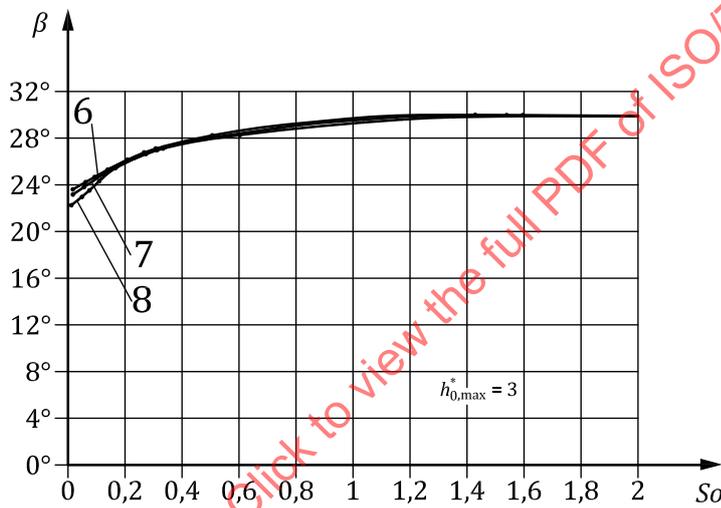
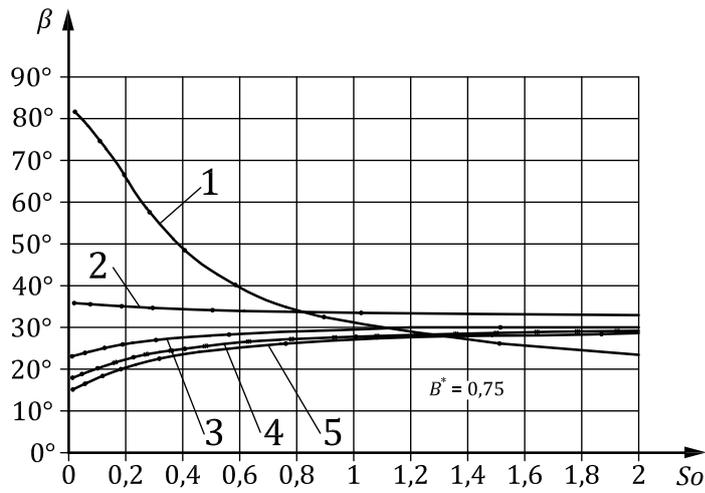
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**Key**

- 1  $h_{0,max}^* = 5$
- 2  $h_{0,max}^* = 4$
- 3  $h_{0,max}^* = 3$
- 4  $h_{0,max}^* = 2$
- 5  $h_{0,max}^* = 1$
- 6  $B^* = 0,5$
- 7  $B^* = 0,75$
- 8  $B^* = 1$

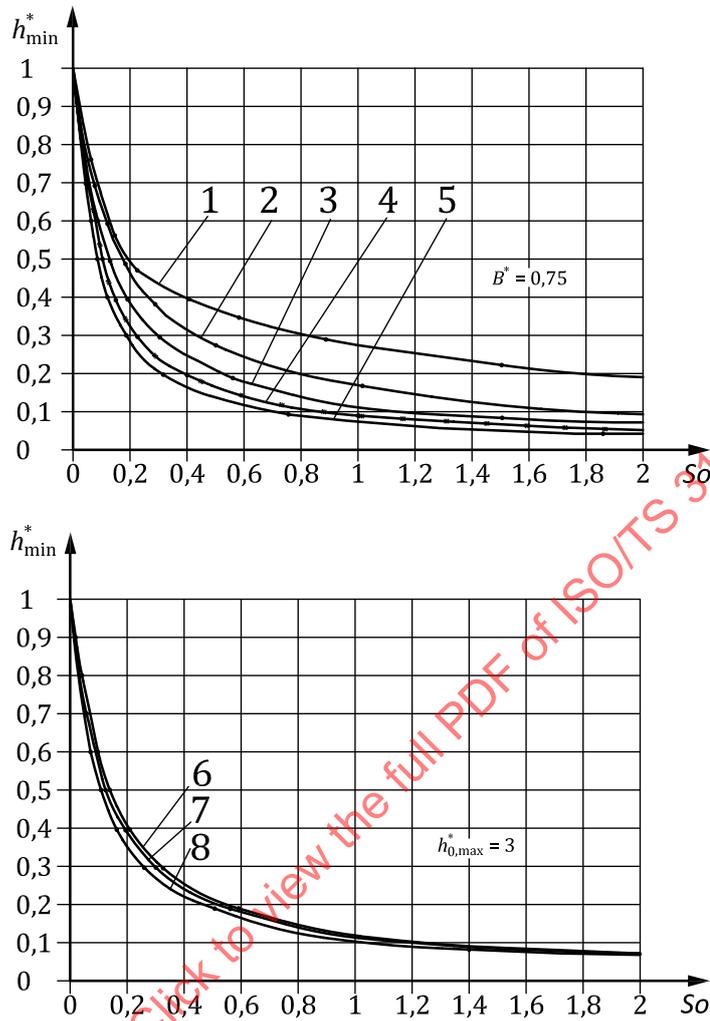
**Figure A.1 — Relative eccentricity,  $\varepsilon$ , of the four-lobe bearing loaded on the segment centre as a function of the Sommerfeld number,  $S_o$**



**Key**

- 1  $h_{0,max}^* = 1$
- 2  $h_{0,max}^* = 2$
- 3  $h_{0,max}^* = 3$
- 4  $h_{0,max}^* = 4$
- 5  $h_{0,max}^* = 5$
- 6  $B^* = 1$
- 7  $B^* = 0,75$
- 8  $B^* = 0,5$

**Figure A.2 — Attitude-angle,  $\beta$ , of the four-lobe bearing loaded on the segment centre as a function of the Sommerfeld number,  $So$**



**Key**

- 1  $h_{0,\max}^* = 1$
- 2  $h_{0,\max}^* = 2$
- 3  $h_{0,\max}^* = 3$
- 4  $h_{0,\max}^* = 4$
- 5  $h_{0,\max}^* = 5$
- 6  $B^* = 1$
- 7  $B^* = 0,75$
- 8  $B^* = 0,5$

**Figure A.3 — Minimum relative lubricant film thickness,  $h_{\min}^*$ , of the four-lobe bearing loaded on the segment centre as a function of the Sommerfeld number,  $So$**