

# ESZ Type 200

with supervisory approval

**t = 20 mm**

Approval no. Z-16.32-408

## Design table

perm. F = KN (shown by the orange table)

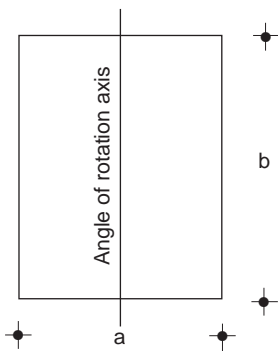
perm.  $\sigma_m$  = N/mm<sup>2</sup> (shown by the blue table)

perm.  $\alpha$  = 0\* (no perm. scheduled torsion)

Intermediate dimensions may be interpolated

a = mm b = mm	100	110	120	130	140	150	160	170	180	190	200	230	250	300	350	400	500
100	80	90.2	100.8	109.2	119.0	130.5	140.8	151.3	162.0	172.9	184.0	218.5	240.0	300.0	360.5	420.0	550.0
110	8.2	104.0	116.1	128.7	141.7	155.1	167.2	179.5	192.0	204.8	217.8	258.0	286.0	356.4	427.4	501.6	502.0
120	8.4	8.8	133.9	149.7	163.0	178.2	192.0	194.2	224.6	239.4	256.8	300.8	336.0	414.0	499.8	585.6	762.0
130	8.4	9.0	9.6	170.7	187.5	204.8	220.5	240.9	257.4	279.1	293.8	346.8	386.8	479.7	577.9	676.0	884.0
140	8.5	9.2	9.7	10.3	213.6	235.2	255.4	271.3	294.8	316.5	333.2	396.0	441.0	546.0	661.5	778.4	1008.0
150	8.7	9.4	9.9	10.5	11.2	263.3	285.6	306.0	321.9	356.3	376.2	448.5	498.8	621.0	740.3	882.0	1147.5
160	8.8	9.5	10.0	10.6	11.4	11.9	320	348.2	368.6	395.2	422.4	500.5	560.0	700.8	840.0	979.2	1288.0
170	8.9	9.6	10.2	10.9	11.4	12.0	12.8	381.5	416.2	439.3	472.6	567.0	624.8	780.3	934.1	1101.6	1436.5
180	9.0	9.7	10.4	11.0	11.7	12.2	12.8	13.6	453.6	492.5	518.4	621.0	688.5	864.0	1033.2	1216.8	1593.0
190	9.1	9.8	10.5	11.3	11.9	12.5	13.0	13.6	14.4	534.3	577.6	677.4	750.5	951.9	1137.2	1337.6	1748.0
200	9.2	9.9	10.7	11.3	11.9	12.6	13.2	13.9	14.4	15.2	624.0	736.0	820.0	1038.0	1260.0	1480.0	1920.0
230	9.5	10.2	10.9	11.6	12.3	13.0	13.6	14.5	15.0	15.5	16.0	947	1058.0	1324.8	1603.0	1840.0	2300.0
250	9.6	10.4	11.2	11.9	12.6	13.3	14.0	14.7	15.3	15.8	16.4	18.4	1218.8	1500.0	1750.0	2000.0	2500.0
300	10.0	10.8	11.5	12.3	13.0	13.8	14.6	15.3	16.0	16.7	17.3	19.2	20.0	1800.0	2100.0	2400.0	3000.0
350	10.3	11.1	11.9	12.7	13.5	14.1	15.0	15.7	16.4	17.1	18.0	19.9	20.0	20.0	2450.0	2800.0	3500.0
400	10.5	11.4	12.2	13.0	13.9	14.7	15.3	16.2	16.9	17.6	18.5	20.0	20.0	20.0	20.0	3200.0	4000.0
500	11.0	11.8	12.7	13.6	14.4	15.3	16.1	16.9	17.7	18.4	19.2	20.0	20.0	20.0	20.0	20.0	5000.0

\* = only for bearings subjected to pressure (criteria according to leaflet 339 Daf Stb)



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## Design table

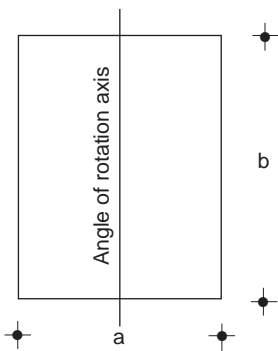
perm.  $F$  = KN (shown by the orange table)

perm.  $\sigma_m$  = N/mm<sup>2</sup> (shown by the blue table)

perm.  $\alpha$  = 10% (angle of rotation axis at right angles to the smaller bearing side )

Intermediate dimensions may be interpolated

a = mm b = mm	80	90	100	110	120	130	140	150	160	170	180	190	200	230	250	300	350	400	500
80	39.3	45.3	52.4	58.7	65.5	71.8	79.3	86.1	93.0	99.6	106.3	114.0	120.9	143.9	158.2	197.1	235.7	268.8	336.0
90	6.1	55.7	63.4	72.0	79.3	87.4	96.2	105.8	114.3	122.9	131.8	140.2	148.8	175.2	195.7	242.8	292.0	339.7	423.0
100	6.6	6.9	76.1	85.7	96.5	105.5	115.7	126.7	136.9	147.3	158.0	168.8	190.1	210.2	234.0	292.9	351.3	412.4	515.0
110	6.7	7.3	7.6	100.7	112.5	125.8	136.8	149.2	162.6	174.3	185.3	198.1	211.2	251.0	275.0	343.2	415.8	486.8	610.5
120	6.8	7.3	8.60	8.5	129.9	144.1	160.3	172.6	184.9	200.0	216.4	231.4	246.7	290.9	322.7	399.8	482.8	566.4	737.6
130	6.9	7.5	8.1	8.8	9.0	164.1	181.0	200.3	214.6	229.1	246.9	266.4	282.8	335.0	368.7	455.2	552.3	650.7	847.5
140	7.1	7.6	8.3	8.9	9.5	9.9	203.5	223.3	246.0	262.6	279.3	300.1	317.3	376.2	419.4	520.0	626.3	735.3	963.0
150	7.2	7.8	8.4	9.0	9.6	10.3	10.6	248.4	271.4	289.7	315.3	335.9	355.1	423.1	471.8	587.7	696.8	828.1	1.083.0
160	7.3	7.9	8.6	9.2	9.6	10.3	11.0	11.3	299.0	325.4	346.1	377.3	398.1	467.1	525.7	655.1	786.2	920.1	1.204.1
170	7.3	8.0	8.7	9.3	9.8	10.4	11.0	11.4	12.0	355.5	380.1	406.9	442.4	522.6	580.6	723.9	872.7	1.021.5	1.332.2
180	7.4	8.1	8.8	9.4	10.0	10.6	11.1	11.7	12.0	12.4	418.0	445.5	475.7	570.1	630.9	793.9	949.7	1.116.6	1.468.3
190	7.5	8.2	8.9	9.5	10.2	10.8	11.3	11.8	12.4	12.6	13.0	486.7	524.7	623.2	683.5	864.6	1.034.5	1.221.7	1.588.7
200	7.6	8.3	9.5	9.6	10.3	10.9	11.3	11.8	12.4	13.0	13.2	13.8	561.6	683.1	742.5	935.6	1.124.5	1.328.4	1.728.0
230	7.8	8.5	9.1	9.9	10.5	11.2	11.7	12.3	12.7	13.4	13.8	14.3	14.9	823.5	916.6	1.146.5	1.391.8	1.631.9	2.151.7
250	7.9	8.7	9.4	10.0	10.8	11.3	12.0	12.6	13.1	13.7	14.0	14.4	14.9	15.9	1.028.3	1.305.2	1.564.2	1.851.0	2.432.4
300	8.2	9.0	9.8	10.4	11.1	11.7	12.4	13.1	13.6	14.2	14.7	15.2	15.6	16.6	17.4	1.632.2	2.014.0	2.322.7	3.000.0
350	8.4	9.3	10.0	10.8	11.5	12.1	12.8	13.3	14.0	14.7	15.1	15.6	16.1	17.3	17.9	18.1	2.320.1	2.740.7	3.500.0
400	8.4	9.4	10.3	11.1	11.8	12.5	13.1	13.8	14.4	15.0	15.5	16.1	16.6	17.7	18.5	19.4	2.995.2	3.942.0	
500	8.4	9.4	10.3	11.1	12.3	13.0	13.8	14.4	15.1	15.7	16.3	16.7	17.3	18.7	19.5	20.0	20.0	19.7	14.6



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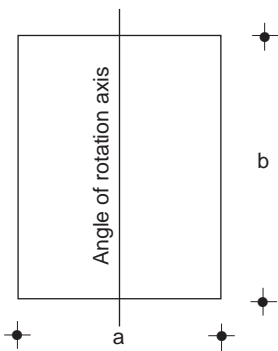
perm.  $F$  = KN (shown by the orange table)

perm.  $\sigma_m$  = N/mm<sup>2</sup> (shown by the blue table)

perm.  $\alpha$  = 25% (angle of rotation axis at right angles to the smaller bearing side )

Intermediate dimensions may be interpolated

a = mm b = mm	80	90	100	110	120	130	140	150	160	170	180	190	200	230	250	300	350	400	500
80	38.3	44.2	51.1	57.3	63.9	70.1	77.4	84.0	90.7	97.1	103.7	111.2	118.0	140.4	154.4	192.3	230.0	262.4	328.0
90	6.0	54.0	61.4	69.8	76.8	84.7	93.3	102.5	110.7	119.1	127.7	135.9	144.2	169.8	189.6	235.3	282.9	329.2	364.0
100	6.4	6.7	73.1	82.4	92.8	101.5	111.2	121.8	131.6	141.6	151.9	162.3	182.8	202.1	225.0	281.6	337.8	396.6	495.0
110	6.5	7.0	7.5	96.0	107.2	120.0	130.4	142.2	155.0	166.1	176.7	188.9	201.3	239.2	262.1	327.2	396.4	464.1	577.5
120	6.7	7.1	7.7	8.1	122.7	136.1	151.4	162.9	174.5	188.8	204.3	218.5	232.9	274.6	304.7	377.4	455.8	534.6	696.3
130	6.7	7.2	7.8	8.4	8.7	153.3	169.0	187.0	200.4	213.9	230.6	248.8	264.1	312.9	344.3	425.1	515.8	607.6	791.4
140	6.9	7.4	7.9	8.5	9.0	9.3	187.8	206.1	227.0	242.3	257.7	276.9	292.8	347.1	387.0	479.9	577.9	678.5	888.6
150	7.0	7.6	8.1	8.6	9.0	9.63	9.8	226.2	247.1	263.8	287.1	305.8	323.4	385.2	429.6	535.1	634.5	754.1	986.1
160	7.1	7.7	8.2	8.8	9.1	9.6	10.1	10.3	268.4	292.0	310.6	338.6	357.2	419.2	471.7	587.9	705.6	825.8	1080.6
170	7.1	7.8	8.3	8.9	9.3	9.7	10.2	10.3	10.7	314.0	335.7	359.4	390.7	461.6	512.8	639.4	770.8	902.2	1176.6
180	7.2	7.9	8.4	8.9	9.5	9.9	10.2	10.6	10.8	11.0	362.8	386.6	412.8	494.8	547.5	688.9	824.1	969.0	1274.2
190	7.3	7.9	8.5	9.0	9.6	10.1	10.4	10.7	11.1	11.1	11.3	414.3	446.6	530.4	581.8	735.9	880.6	1039.9	1352.3
200	7.4	8.0	9.1	9.2	9.7	10.2	10.5	10.8	11.2	11.5	11.5	11.8	468.0	569.3	618.8	779.6	937.1	1107.0	1440.0
230	7.6	8.2	8.8	9.5	10.0	10.5	10.8	11.2	11.4	11.8	12.0	12.1	12.4	635.3	707.1	884.4	1073.6	1258.8	1659.8
250	7.7	8.4	9.0	9.5	10.2	10.6	11.1	11.5	11.8	12.1	12.2	12.2	12.4	12.3	742.7	942.6	1129.7	1336.8	1756.7
300	8.0	8.7	9.4	9.9	10.5	10.9	11.4	11.9	12.2	12.5	12.8	12.9	13.0	12.8	12.6	921.4	1137.0	1311.2	1727.6
350	8.2	9.0	9.7	10.3	10.9	11.3	11.8	12.1	12.6	13.1	13.1	13.2	13.4	13.3	12.9	10.8	783.8	925.9	1216.6
400	8.2	9.1	9.9	10.5	11.1	11.7	12.1	12.6	12.9	13.3	13.5	13.7	13.8	13.7	13.4	10.9	6.6		
500	8.2	9.1	9.9	10.5	11.6	12.2	12.7	13.1	13.5	13.8	14.2	14.2	14.4	14.4	14.1	11.5	7.0		



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## Design table

perm.  $F = \text{KN}$  (shown by the orange table)

perm.  $\sigma_m = \text{N/mm}^2$  (shown by the blue table)

perm.  $\alpha = 50\%$  (angle of rotation axis at right angles to the smaller bearing side )

Intermediate dimensions may be interpolated

$\frac{a}{b}$ mm/mm	80	90	100	110	120	130	140	150	160	170	180	190	200	230	250	300	350	400	500
80	36.7	42.3	49.0	54.9	61.2	67.2	74.7	80.5	96.9	93.1	99.4	106.6	113.0	134.6	147.9	184.3	220.4	252.8	316.0
90	5.7	51.1	58.1	66.1	72.7	80.2	88.3	97.0	104.8	112.8	120.9	128.6	136.5	160.7	179.5	222.8	267.8	311.7	391.5
100	6.1	6.3	68.3	76.9	86.6	94.7	103.8	113.7	122.9	132.2	141.8	151.5	170.6	188.7	210.0	262.8	315.2	370.1	465.0
110	6.2	6.7	7.0	88.1	98.4	110.1	119.7	130.6	142.3	152.5	162.2	173.4	184.9	219.7	240.7	300.4	363.9	426.1	533.5
120	6.4	6.7	7.2	7.5	110.5	122.6	136.4	146.8	157.3	170.1	184.1	196.9	209.9	247.5	274.5	340.1	410.7	481.8	627.4
130	6.5	6.9	7.3	7.7	7.9	135.2	149.1	165.0	176.8	188.7	203.3	219.4	232.9	275.9	303.7	374.9	454.9	535.9	697.9
140	6.6	7.0	7.4	7.8	8.1	8.2	161.6	177.3	195.3	208.5	221.7	238.3	251.9	298.7	333.0	412.9	497.2	583.8	764.5
150	6.7	7.2	7.6	7.9	8.2	8.5	8.4	189.2	206.7	220.6	240.2	255.8	270.5	322.2	359.3	447.6	530.6	630.7	824.8
160	6.8	7.3	7.7	8.1	8.2	8.5	8.7	8.6	217.3	236.4	251.5	274.1	289.2	339.3	381.9	475.9	571.2	668.5	874.8
170	6.8	7.4	7.8	8.2	8.3	8.5	8.8	8.7	8.7	244.8	261.7	280.2	304.6	359.8	399.8	498.4	600.9	703.3	917.2
180	6.9	7.5	7.9	8.2	8.5	8.7	8.8	8.9	8.7	8.6	270.7	288.4	308.0	369.1	408.5	514.0	614.8	722.9	950.6
190	7.0	7.5	8.0	8.3	8.6	8.9	9.0	9.0	9.0	8.7	8.4	293.6	316.5	375.9	412.3	521.5	624.0	736.9	958.3
200	7.1	7.6	8.5	8.4	8.7	9.0	9.0	9.0	9.0	9.0	8.6	8.3	312.0	379.5	412.5	519.8	624.8	738.0	960.0
230	7.3	7.8	8.2	8.7	9.0	9.2	9.3	9.3	9.2	9.2	8.9	8.6	8.3	321.5	357.8	447.5	543.3	637.1	840.0
250	7.4	8.0	8.4	8.8	9.2	9.3	9.5	9.6	9.5	9.4	9.1	8.7	8.3	6.1	266.6	338.4	405.5	479.9	630.6
300	7.7	8.3	8.8	9.1	9.4	9.6	9.8	9.9	9.9	9.8	9.5	9.1	8.7	6.5	4.5				
350	7.9	8.5	9.0	9.5	9.8	10.0	10.1	10.1	10.2	10.1	9.8	9.4	8.9	6.7	4.6				
400	7.9	8.7	9.3	9.7	10.0	10.3	10.4	10.5	10.4	10.3	10.0	9.7	9.2	6.9	4.8				
500	7.9	8.7	9.3	9.7	10.5	10.7	10.9	11.0	10.9	10.8	10.6	10.1	9.6	7.3	5.0				