

Reducer Model	Model Name	Reducer Body length incl. Threads (mm)	Backfocus to CCD from thread end (mm)
M63 - APM/TS 80/480 w. 2.5" focuser	PCJ03	71,7 mm	76,00 mm
M63 - APM 80/500 w. 2.5" focuser	PCJ03	71,7 mm	79,85 mm
M63 - APM/LZOS 100/800 w. 2.5" or bigger focuser	PCJ03	71,7 mm	73,75 mm
M63 - APM/LZOS 105/650 w. 2.5" or bigger focuser	PCJ03	71,7 mm	75,85 mm
M63 - APM 107/700 w. 2.5" or bigger focuser	PCJ03	71,7 mm	74,75 mm
M63 - APM/LZOS 115/805 w. 2.5" or bigger focuser	PCJ03	71,7 mm	73,65 mm
M63 - APM/LZOS 123/738 w. 2.5" or bigger focuser	PCJ03	71,7 mm	74,35 mm
M63 - APM/LZOS 130/780 w. 2.5" or bigger focuser	PCJ03	71,7 mm	73,75 mm
M63 - APM/LZOS 130/1200 w. 2.5" or bigger focuser	PCJ03	71,7 mm	70,65 mm
M63 - APM/LZOS 152/1200 w. 2.5" or bigger focuser	PCJ03	71,7 mm	70,55 mm
M63 - APM/LZOS 180/1260	PCJ03	71,7 mm	70,05 mm
M63- GSO 10"F/8 RC	PCJ03	71,7 mm	70,55 mm
M82 - APM/LZOS 100/800 w. 3" or bigger focuser	PCJ04-1	83,7 mm	78,2 mm
M82 - APM/LZOS 105/650 w. 3" or bigger focuser	PCJ04-1	83,7 mm	80,7 mm
M82 - APM 107/700 w. 3" or bigger focuser	PCJ04-1	83,7 mm	80,0 mm
M82 - APM/LZOS 115/805 w. 3" or bigger focuser	PCJ04-1	83,7 mm	78,0 mm
M82- APM/LZOS 123/738 w. 3" or bigger focuser	PCJ04-1	83,7 mm	78,30 mm
M82 - APM/LZOS 130/780 w. 3" or bigger focuser	PCJ04-1	83,7 mm	78,1 mm
M82 - APM/LZOS 130/1200 w. 3" or bigger focuser	PCJ04-3	98,00 mm	71,1 mm
M82 - APM/LZOS 130/1200 w. 3" or bigger focuser	PCJ04-1	83,7 mm	74,6 mm
M82 - APM/LZOS 152/1200 w. 3" or bigger focuser	PCJ04-3	98,00 mm	70,6 mm
M82 - APM/LZOS 152/1200 w. 3" or bigger focuser	PCJ04-1	83,7 mm	74,1 mm
M82 - APM/LZOS 175/1400 w. 3" or bigger focuser	PCJ04-1	83,7 mm	71,8 mm
M82 - APM/LZOS 180/1260 w. 3" or bigger focuser	PCJ04-1	83,7 mm	72,38 mm
M82 - APM/LZOS 203/1420 w. 3" or bigger focuser	PCJ04-2	88,2 mm	72,3 mm
M82 - APM/LZOS 203/1800 w. 3" or bigger focuser	PCJ04-1	83,7 mm	71,4 mm
M82 - APM/LZOS 228/2050 w. 3" or bigger focuser	PCJ04-1	83,7 mm	71,1 mm
M82 - APM/LZOS 254/2250 w. 3" or bigger focuser	PCJ04-1	83,7 mm	69,9 mm
M82 - APM/LZOS 304/2280 w. 3" or bigger focuser	PCJ04-1	83,7 mm	69,5 mm
M63-APM/LZOS 152/1200 doublet w.2.5" focuser	PCJ03	71,7 mm	69,8 mm
M82-APM/LZOS 152/1200 doublet with 3" focuser	PCJ04-3	98,0 mm	73,85 mm
M63-Skywatcher Esprit 100 mm F/5.5	PCJ03	71,7 mm	80,00 mm
M82-Skywatcher Esprit 120 mm F/7	PCJ04-1	83,7 mm	77,10 mm
M63-Skywatcher Esprit 150 mm F/7	PCJ03	71,7 mm	74,00 mm
M82-Skywatcher Esprit 150 mm F/7	PCJ04-1	83,7 mm	77,10 mm

M63-APM/LUNT 152/1200 doublet w. 2.5" focuser	PCJ03	71,7 mm	70,25 mm
M82-APM/LUNT 152/1200 doublet w. 3" focuser	PCJ04-1	83,7 mm	73,7 mm
M63-APM 140/980 doublet with 2.5" focuser	PCJ03	71,7 mm	71,75 mm
M82-APM 140/980 doublet with 3.7" focuser	PCJ04-1	83,7,0 mm	75,30 mm
M63-APM 152/900 doublet with 3.7" Focuser	PCJ03	71,70 mm	72,45 mm
M82-APM 152/900 doublet with 3.7" Focuser	PCJ04-1	83,70 mm	75,85 mm
M82-TMB/Astreya 180/1620 w. 4" APM Focuser	PCJ04-1	83,7 mm	73,55 mm
TEC 140			76,96 mm
M82 - APM 107/700 w. 3" or bigger focuser	PCJ04-2	88,2 mm	79,60 mm
Z600 mm F/3-f/8 RC	PCJ04-1	83,7 mm	71,08 mm
14" GSO RC	PCJ04-1	83,7 mm	72,97 mm
Zeiss APQ 130/1000	PCJ04-1	83,7 mm	75,30 mm

Optical length from center last glass surface to end of reducer thread (mm)	Reducer thread at focuser side (metric)	Reducer thread length at focuser side	Reducer thread at CCD side (metric)	Corrected image circle (mm)	vigneting at edge of field
13,45 mm	M 63 x 1 - OD	4,7 mm	M 63 x 1 - ID	42 mm or 52 mm	5% or 35 %
13,45 mm	M 63 x 1 - OD	4,7 mm	M 63 x 1 - ID	42 mm or 52 mm	3% or 30%
13,45 mm	M 63 x 1 - OD	4,7 mm	M 63 x 1 - ID	40 mm	15%
13,45 mm	M 63 x 1 - OD	4,7 mm	M 63 x 1 - ID	40 mm	19%
13,45 mm	M 63 x 1 - OD	4,7 mm	M 63 x 1 - ID	40 mm	15%
13,45 mm	M 63 x 1 - OD	4,7 mm	M 63 x 1 - ID	40 mm	20%
13,45 mm	M 63 x 1 - OD	4,7 mm	M 63 x 1 - ID	40 mm	23%
13,45 mm	M 63 x 1 - OD	4,7 mm	M 63 x 1 - ID	40 mm	23%
13,45 mm	M 63 x 1 - OD	4,7 mm	M 63 x 1 - ID	40 mm	16%
13,45 mm	M 63 x 1 - OD	4,7 mm	M 63 x 1 - ID	40 mm	23%
13,45 mm	M 63 x 1 - OD	4,7 mm	M 63 x 1 - ID	43 mm	15%
13,45 mm	M 63 x 1 - OD	4,7 mm	M 63 x 1 - ID	42 mm	20%
17,4 mm	M 82 x 1 - OD	6,7 mm	M 82 x 1 - ID	52 mm	18%
17,4 mm	M 82 x 1 - OD	6,7 mm	M 82 x 1 - ID	52 mm	20%
17,4 mm	M 82 x 1 - OD	6,7 mm	M 82 x 1 - ID	52 mm	19%
17,4 mm	M 82 x 1 - OD	6,7 mm	M 82 x 1 - ID	52 mm	20%
17,4 mm	M 82 x 1 - OD	6,7 mm	M 82 x 1 - ID	52 mm	
17,4 mm	M 82 x 1 - OD	6,7 mm	M 82 x 1 - ID	52 mm	25%
17,4 mm	M 82 x 1 - OD	6,7 mm	M 82 x 1 - ID	52 mm	24%
17,4 mm	M 82 x 1 - OD	6,7 mm	M 82 x 1 - ID	52 mm	
17,4 mm	M 82 x 1 - OD	6,7 mm	M 82 x 1 - ID	52 mm	29%
17,4 mm	M 82 x 1 - OD	6,7 mm	M 82 x 1 - ID	52 mm	
17,4 mm	M 82 x 1 - OD	6,7 mm	M 82 x 1 - ID	52 mm	33%
17,4 mm	M 82 x 1 - OD	6,7 mm	M 82 x 1 - ID	52 mm	32%
17,4 mm	M 82 x 1 - OD	6,7 mm	M 82 x 1 - ID	52 mm	33%
17,4 mm	M 82 x 1 - OD	6,7 mm	M 82 x 1 - ID	52 mm	35%
17,4 mm	M 82 x 1 - OD	6,7 mm	M 82 x 1 - ID	52 mm	35%
17,4 mm	M 82 x 1 - OD	6,7 mm	M 82 x 1 - ID	52 mm	36%
17,4 mm	M 82 x 1 - OD	6,7 mm	M 82 x 1 - ID	52 mm	36%
13,4 mm	M 63 x 1 - OD	4,7 mm	M 63 x 1 - OD	42 mm	15%
17,4 mm	M 82 x 1 - OD	6,7 mm	M 82 x 1 - ID	52 mm	30%
17,4 mm	M 63 x 1 - OD	4,7 mm	M 63 x 1 - OD	42 mm	
17,4 mm	M 82 x 1 - OD	6,7 mm	M 82 x 1 - OD	52 mm	
17,4 mm	M 63 x 1 - OD	4,7 mm	M 63 x 1 - OD	42 mm	
17,4 mm	M 82 x 1 - OD	6,7 mm	M 82 x 1 - OD	52 mm	

13,45 mm	M 63 x 1 - OD	4,7 mm	M 63 x 1 - OD	42 mm	17%
17,4 mm	M 82 x 1 - OD	6,7 mm	M 82 x 1 - OD	52 mm	30%
13,45 mm	M 63 x 1 - OD	4,7 mm	M 63 x 1 - OD	42 mm	21%
17,4 mm	M 82 x 1 - OD	6,7 mm	M 82 x 1 - OD	52 mm	30%
13,45 mm	M 63 x 1 - OD	4,7 mm	M63 x 1 - OD	42 mm	
17,40 mm	M 82 x1 - OD	6,7 mm	M 82 x 1 -OD	52 mm	
13,45 mm	M 82 x 1 -OD	4,7 mm	M 82 x 1 - OD	52 mm	
17,4 mm	M 82 x 1 -OD	6,7 mm	M 82 x 1 - OD	52 mm	
17,4 mm	M82 x 1 - OD	6,7 mm	M 82 x 1 - ID	52 mm	
17,4 mm	M82 x 1 - OD	6,7 mm	M 82 x 1 - ID	52 mm	
17,4 mm	M82 x 1 -OD	6,7 mm	M 82 x 1 - ID	52 mm	

backfocus e change due reducer	Total optical path of reducer body + backfocuse + focuse change (mm)	total optical path of reducer+ backfocuse +focuse change + collimation flange (mm)	
32 mm	179,70 mm - 4,7 mm = 175,00 mm	175,00+9 = 184,00 mm	
33 mm	184,55 mm - 4,7 mm = 179,85 mm	179,85+9 = 188,85 mm	
28 mm	173,45 mm - 4,7 mm = 168,75mm	168,75+9 = 177,75 mm	
29 mm	176,55 mm - 4,7 mm = 171,85 mm	171,85+9 = 180,85 mm	
29 mm	175,45 mm - 4,7 mm = 170,75 mm	170,75+9 = 179,75 mm	
28 mm	173,35 mm - 4,7 mm = 168,65 mm	168,65+9 = 177,65 mm	
28 mm	174,05 mm - 4,7 mm = 169,35 mm	169,35+9 = 178,35 mm	
28 mm	173,45 mm - 4,7 mm = 168,75 mm	168,75+9 = 177,75 mm	
24 mm	166,35 mm - 4,7 mm = 161,65 mm	161,65+9 = 170,65 mm	
25 mm	167,25 mm - 4,7 mm = 162,55 mm	162,55+9 = 171,55 mm	
25 mm	266,75 mm - 4,7 mm = 162,05 mm	162,05+9 = 171,05 mm	
38 mm	199,9 mm	199,9+11 = 200,9 mm	
40 mm	204,4 mm	204,4+11 = 215,4 mm	
40 mm	203,70 mm	203,7 +11 = 214,70 mm	
38 mm	199,7 mm	199,7+11 = 210,7 mm	
38 mm	200,0 mm	200,0+11 = 211,00 mm	
38 mm	199,8 mm	199,8+11 = 210,8 mm	
27 mm	196,1 mm	196,1+11 = 207,1 mm	
27 mm	195,6 mm	195,6+11 = 206,6 mm	
34 mm	189,4 mm	189,4+11 = 200,4 mm	
35 mm	191,1 mm	191,1+11 = 202,1 mm	
33 mm	193,2 mm	193,2+11 = 204,2 mm	
33 mm	188,1 mm	188,1+11 = 199,1 mm	
33 mm	187,8 mm	187,8+11 = 198,8 mm	
33 mm	187,6 mm	187,6+11 = 198,6 mm	
33 mm	187,2 mm	187,2+11 = 198,2 mm	
25,21	166,71 mm - 4,7 mm = 162,01 mm	162,01 +9 = 171,01 mm	
34,3 mm	206,15 mm	206,15 +11= 227,15 mm	
40 mm	192 mm		
40 mm	200,8 mm	200,8 +11 = 211,8 mm	
28 mm	173,70 mm		
40 mm	200,8 mm	200,8 + 11 = 211,8 mm	

