

# LensGeo.Dat

## Description

The geometric base data, reference points, centration lines and near portions are defined in the LensGeo.Dat file.

## Table structure

No.	Field name	Pos	Length	Format	Comments
1*	Man. code base lens	1	6	T6	
2*	Diameter of base lens	7	4	9999	9999 or 99 with 2 blanks  00 with 2 blanks = geometry applies to all not separately listed centric diameters  0000 = geometry applies to all not separately listed non-centric diameters
3*	Elliptic	11	1	T1	blank=round "E"=elliptic
4*	Strongest principal meridian from	12	5	+9999	+99.99 D Empty = geometry applies to all delivery ranges not specified
5*	Strongest principal meridian to	17	5	+9999	+99.99 D Empty = geometry applies to all delivery ranges not specified
6	Exact diameter in the vertical semiaxis	22	4	9999	99,99mm Empty if value "0000" is indicated under Pos. 2, "Diameter of base lens".
7	Exact diameter in the horizontal semiaxis	26	4	9999	99,99mm Empty if value "0000" is indicated under Pos. 2, "Diameter of base lens".
8	Near portion type	30	1	9	0=C 1=S 2=Panto 3=round 4=Executive
9	Vertical distance to distance reference point (Room reference point for office lenses)	31	5	+9999	+99.99mm: vertical distance from the geometric center of the base lens to the distance reference point. Superior positive
10	Max. horizontal distance to distance reference point (Room reference point for office lenses)	36	5	+9999	+99.99mm: horizontal distance from the geometric center of the base lens to the distance reference point. Nasal positive

No.	Field name	Pos	Length	Format	Comments
11	Vertical distance to dividing edge (Bifo / Trifo)	41	5	+9999	+99.99mm: Vertical distance from the geometric center of the base lens to extreme point T of the near portion Inferior positive.
12	Horizontal distance to dividing edge (Bifo / Trifo)	46	5	+9999	+99.99mm: Horizontal distance from the geometric center of the base lens to extreme point T of the near portion. Nasal positive
13	Vertical distance to the near portion center (Bifo / Trifo)	51	5	+9999	Vertical distance from the geometric center of the base lens to the center of the circle describing the lower radius of the near portion. Inferior positiv.
14	Lower radius of near portion	56	4	9999	99.99mm for bifocals /trifocals
15	Upper radius of near portion	60	4	9999	99.99mm for bifocals /trifocals
16	Width of near portion	64	4	9999	99.99mm for bifocals /trifocals
17	Height of near portion	68	4	9999	99.99mm for bifocals /trifocals
18	Height of intermediate portion	72	4	9999	99.99mm for trifocals
19	Max. vertical distance to distance centering cross (progressive lens)	76	4	9999	99.99mm vertical distance from the geometric center of the base lens to the distance centering cross. Superior positive.
20	Centering to zero gaze direction or principal visual direction (progressive lens)	80	1	9	0=zero gaze direction 1=principal visual direction
21*	Maximum vertical distance to near reference point (progressive lens)	81	4	9999	99.99mm vertical distance from the geometric center of the base lens to the near reference point. Inferior positive
22*	Minimum vertical distance to near reference point (progressive lens)	85	4	9999	99.99mm minimum vertical distance from the geometric center of the base lens to the near reference point. Inferior positive
23*	Maximum horizontal distance to near reference point (progressive lens)	89	4	9999	99.99mm maximum horizontal distance from the geometric center of the base lens to the near reference point. Nasal positive

No.	Field name	Pos	Length	Format	Comments
24*	Minimum horizontal distance to near reference point (progressive lens)	93	4	9999	99.99mm minimum horizontal distance from the geometric center of the base lens to the near reference point. Nasal positive
25	Variable decentration. Smallest decentration	97	2	99	0= No variable decentration Value= smallest optical diameter. See LensRange.Dat file description
26	Min. horizontal distance to distance reference point (Room reference point for office lenses)	99	5	+9999	+99.99mm: horizontal distance from the geometric center of the base lens to the distance reference point. Nasal positive (see also field 10)
27	Min. vertical distance to distance centering cross (progressive)	104	4	9999	99.99mm vertical distance from the geometric center of the base lens to the distance centering cross. Superior positive

## Notes

If the diameter (Field 2) is specified with "0000" or "00" and is therefore applicable to all diameters, the values for "Exact diameter" (Field 6/7) are not used or are also filled with "0000".

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