

ISO 16610-21:2025-01 (E)

Geometrical product specifications (GPS) - Filtration - Part 21: Linear profile filters: Gaussian filters

| Contents | | Page |
|------------------------------|---|-------------|
| Foreword | | iv |
| Introduction | | v |
| 1 | Scope | 1 |
| 2 | Normative references | 1 |
| 3 | Terms and definitions | 1 |
| 4 | Characteristics of the Gaussian filter for unbounded open profiles | 3 |
| 4.1 | General | 3 |
| 4.2 | Gaussian weighting function | 3 |
| 4.3 | Filter equations | 4 |
| 4.3.1 | Determination of the large-scale lateral component | 4 |
| 4.3.2 | Determination of the small-scale lateral component | 5 |
| 4.4 | Transmission characteristics | 5 |
| 4.4.1 | Transmission characteristic for the large-scale lateral component | 5 |
| 4.4.2 | Transmission characteristic for the small-scale lateral component | 6 |
| 5 | Characteristics of the Gaussian filter for closed profiles | 7 |
| 5.1 | General | 7 |
| 5.2 | Gaussian weighting function | 7 |
| 5.3 | Filter equations | 8 |
| 5.3.1 | Determination of the large-scale lateral component | 8 |
| 5.3.2 | Determination of the small-scale lateral component | 9 |
| 5.4 | Transmission characteristics | 9 |
| 5.4.1 | Transmission characteristic for the large-scale lateral component | 9 |
| 5.4.2 | Transmission characteristic for the small-scale lateral component | 10 |
| 6 | Series of nesting index values | 11 |
| 7 | Filter designation | 11 |
| Annex A (informative) | Implementation details of the Gaussian filter for open profiles | 12 |
| Annex B (informative) | Implementation details of the Gaussian filter for closed profiles | 23 |
| Annex C (informative) | Relationship to the filtration matrix model | 27 |
| Annex D (informative) | Relationship to the GPS matrix model | 28 |
| Bibliography | | 29 |