

ISO 5459:2024-10 (E)

Geometrical product specifications (GPS) - Geometrical tolerancing - Datums and datum systems

Contents

Page

Foreword.....	v
Introduction.....	vii
1 Scope.....	1
2 Normative references.....	1
3 Terms and definitions.....	1
4 Symbols.....	5
5 Role of datums.....	7
6 General concepts.....	9
6.1 General.....	9
6.2 Intrinsic characteristics of surfaces associated with datum features.....	10
6.2.1 General.....	10
6.2.2 Single datum established from a single feature.....	11
6.2.3 Common datum established from two or more single features simultaneously.....	11
6.2.4 Datum systems established in a defined sequence from two or more single features.....	13
6.3 Single datums, common datums and datum systems.....	13
6.3.1 General.....	13
6.3.2 Single datums.....	13
6.3.3 Common datums.....	14
6.3.4 Datum systems.....	15
7 Graphical language.....	18
7.1 General.....	18
7.2 Indication of datum features.....	18
7.2.1 Datum feature indicator.....	18
7.2.2 Datum feature identifier.....	19
7.2.3 Datum targets.....	19
7.3 Specification of datums and datum systems.....	23
7.4 Indication and meaning of rules.....	24
7.4.1 General.....	24
7.4.2 Rules.....	24
8 Specification operators for datum.....	47
8.1 ISO default specification operator for datum.....	47
8.2 Special specification operator for datum.....	47
8.2.1 General.....	47
8.2.2 Filtration specification elements for datum.....	48
8.2.3 Association specification elements for datum.....	49
8.3 Drawing-default specification operator for datums.....	50
Annex A (normative) Association for datums.....	51
Annex B (informative) Invariance classes.....	61
Annex C (informative) Examples.....	63
Annex D (informative) Former practices.....	86
Annex E (informative) Examples of a datum system or a common datum established with contacting features.....	90

Annex F (normative) Relations and dimensions of graphical symbols 96
Annex G (normative) Establishment of a datum coordinate system from a datum system..... 99
Annex H (informative) Filter symbols and attached nesting index 103
Annex I (informative) Issue of orientation and location constraints in datum systems 104
Annex J (normative) Filtration of a datum feature which is nominally a plane..... 111
Annex K (informative) Relation to the GPS matrix model..... 114
Bibliography..... 115