

ISO 13612-1:2014-05 (E)

Heating and cooling systems in buildings - Method for calculation of the system performance and system design for heat pump systems - Part 1: Design and dimensioning

Contents		Page
Foreword		iv
Introduction		v
1	Scope	1
2	Normative references	2
3	Terms and definitions	2
4	Symbols and abbreviations	3
5	System design requirements	4
5.1	General	4
5.2	Heating/cooling source	4
5.3	Electrical supply	5
5.4	Heat pump system design	6
5.5	Positioning	6
5.6	Noise level	6
6	Dimensioning of the heat pump system	6
6.1	General	6
6.2	Methodology for sizing	7
6.3	Dimensioning the heat pump system for the heating period	8
6.4	Determination of the power of the heat pump system for the cooling period	12
6.5	Oversizing considerations	13
7	Additional design information for heat pump system	13
7.1	Hydraulic integration	13
7.2	Control of the system	13
7.3	Safety requirements	13
7.4	Operational requirements	14
8	Installation requirements	14
Annex A (informative) Heat pump technologies and design schemes		15
Annex B (informative) Guidelines for the design parameters of the heat pump systems using water as a heat source		47
Annex C (informative) Noise levels in the vicinity		48
Annex D (informative) Example calculations of the domestic hot water (DHW) storage size		49
Annex E (informative) Average daily tapping patterns for the domestic hot water production		51
Annex F (informative) Commissioning of the system		54
Bibliography		58