

ISO 22109:2026-02 (E)

Industrial valves - Gearboxes for valves

Contents		Page
	Foreword	iv
1	Scope	1
2	Normative references	1
3	Terms and definitions	1
4	Classification	2
4.1	General.....	2
4.2	Kind of operation.....	2
4.3	Kind of rotation.....	2
5	Design requirements	2
5.1	Endurance.....	2
5.2	Structural integrity.....	4
5.3	Self-locking/braking.....	4
5.4	Mechanical advantage.....	4
5.4.1	General.....	4
5.4.2	Manual gearboxes and manual override gearboxes.....	4
5.4.3	Automated gearboxes.....	5
5.5	Environmental conditions.....	5
5.5.1	General.....	5
5.5.2	Altitude.....	5
5.5.3	Enclosure protection.....	5
5.5.4	Corrosion protection.....	5
5.5.5	Vibration, shock and seismic conditions.....	6
5.6	Gearbox attachment.....	6
5.6.1	Part-turn gearboxes.....	6
5.6.2	Multi-turn gearboxes.....	6
5.7	Primary closing direction.....	7
5.8	Other requirements.....	7
5.8.1	Manual operation.....	7
5.8.2	Position indicator for part-turn gearboxes.....	7
5.8.3	End stop for part-turn gearboxes.....	7
5.8.4	Gearing lubricant.....	7
5.8.5	Noise.....	7
6	Optional equipment	7
7	Type and production test	8
7.1	General.....	8
7.2	Type tests.....	8
7.3	Control of production process.....	8
8	Marking	9
8.1	Mandatory markings.....	9
8.2	Optional markings.....	9
9	Documentation	10
9.1	General.....	10
9.2	Mandatory documentation.....	10
9.3	Optional documentation.....	10
10	Packaging	10
	Annex A (normative) Endurance test procedure	11
	Annex B (informative) Load profiles	12
	Bibliography	14