BUREAU OF INDIAN STANDARDS

Program of Work

PGD 33 : Transmission Devices

Scope: Formulation of standards for gears, transmission chains; shaft ends and axle heights; splines and serrations; clutches and couplings and keys & keyways.

Liaison: **ISO TC-100 (P):** *Chains and chain sprockets for power transmission and conveyors* **ISO TC-14 (P):** *Shafts for machinery and accessories* **ISO TC-60 (P):** *Gears* **ISO TC-60 SC-1 (O):** *Nomenclature and wormgearing* **ISO TC-60 SC-2 (O):** *Gear capacity calculation* **ISO TC-100 (P):** *Chains and chain sprockets for power transmission and conveyors* **ISO TC-14 (P):** *Shafts for machinery and accessories* **ISO TC-60 (P):** *Gears* **ISO TC-60 SC-1 (O):** *Nomenclature and wormgearing* **ISO TC-60 SC-2 (O):** *Gear capacity calculation*

Published Standards

S.No	IS No.	TITLE	Reaffirm M-Y	No. of Amds	Eqv.
1	IS 10686:1983	Specification for mechanical multi - Disc clutches (Wet Type)	May, 2024	-	Indigenous
2	IS 1072:2024 ISO 4347 ISO 4347	Leaf Chains, Clevises and Sheaves â€" Dimensions, Measuring Forces, Tensile Strengths and Dynamic Strengths (Fourth Revision)		-	Identical under dual numbering
3	IS 10911:1984 Reaffirmed but not taken up for revision	Methods of inspection for straight bevel gears	February, 2021	-	Indigenous
4	IS 11740:2026 ISO 10190	Motorcycle Chains — Characteristics and Test Methods (ISO 10190 : 2008, MOD) (Second Revision)		-	Identical under dual numbering
5	IS 11863:1986 Reaffirmed but not taken up for revision	Tolerances for worm gears	February, 2021	-	Indigenous
6	IS 12405:1988	Specification for gear type flexible couplings	March, 2023	-	Indigenous
7	IS/ISO 13203:2005 ISO 13203: 2005	Chains, sprockets and accessories - List of equivalent terms	January, 2025	-	Identical under single numbering
8	IS 13926:2005 ISO 6971 ISO 6971	Cranked - Link drag chains of welded construction, attachments and sprockets (First Revision)	September, 2025	-	Identical under dual numbering
9	IS 13927:2005 ISO 6972	Cranked - Link mill chains of welded construction, attachments	September, 2025	-	Identical under dual numbering

	ISO 6972	and sprockets (First Revision)			
10	IS 14285:1995 Decision taken to Reaffirm and Archive	Transmission devices - Flexible couplings - Tyre type - Specification	February, 2021	-	Indigenous
11	IS 14696:2000	Transmission steel roller chains and chain wheels for oil field applications - Specification	September, 2025	-	Indigenous
12	IS 15509:2017 ISO 1275 : 2006 ISO 1275 : 2006	Double - Pitch precision roller chains - Attachments and associated chain sprockets for transmission and conveyors (First Revision)	March, 2022	-	Identical under dual numbering
13	IS 15510:2004 ISO 3512 ISO 3512	Heavy - Duty cranked - Link transmission chains	September, 2025	-	Identical under dual numbering
14	IS 15511:2026 ISO 9633	Cycle Chains — Specification (First Revision)		-	Identical under dual numbering
15	IS 15790:2026 ISO 15654	Fatigue Test Method for Transmission Precision Roller Chains and Leaf Chains (First Revision)		-	Identical under dual numbering
16	IS 19153 (Part 1):2025 ISO 6336-1 ISO 6336-1	Calculation of Load Capacity of Spur and Helical Gears ï¿½ Part 1: Basic Principles Introduction and General Influence Factors		-	Identical under dual numbering
17	IS 19153 (Part 2):2025 ISO 6336-2 ISO 6336-2	Calculation of load capacity of spur and helical gears Part 2: Calculation of surface durability pitting		-	Identical under dual numbering
18	IS 19153 (Part 3):2025 ISO 6336-3 ISO 6336-3	Calculation of Load Capacity of Spur and Helical Gears ï¿½ Part 3: Calculation of Tooth Bending Strength		-	Identical under dual numbering
19	IS 19153 (Part 5):2025 ISO 6336-5 ISO 6336-5	Calculation of Load Capacity of Spur and Helical Gears ï¿½ Part 5: Strength and Quality of Materials		-	Identical under dual numbering
20	IS 19153 (Part 6):2025 ISO 6336-6 ISO 6336-6	Calculation of Load Capacity of Spur and Helical Gears ï¿½ Part 6 : Calculation of Service Life Under Variable Load		-	Identical under dual numbering
21	IS 2031:1987 ISO 496 Decision taken to Reaffirm and Archive ISO 496	Driving and driven machines - Shaft heights (First Revision J	March, 2023	-	Identical under dual numbering
22	IS 2048:1983 Decision taken to Reaffirm and Archive	Specification for parallel keys and keyways (Second Revision)	August, 2023	2	Indigenous
23	IS 2291:1990 ISO 3117-1977 Decision taken to Reaffirm and	Tangential keys and keyways (Third Revision)	March, 2023	-	Identical under dual numbering

	Archive ISO 3117				
24	IS 2292:1974	Specification for taper keys and keyways (First Revision)	May, 2024	-	Indigenous
25	IS 2293:1974	Specification for gib - Head - Keys and keyways (First Revision)	May, 2024	-	Indigenous
26	IS 2294:1986	Specifi - Cation for woodruff keys and keyways (Second Revision)	March, 2023	2	Indigenous
27	IS 2327:1993 ISO 14 :1982	Straight - Sided splines for cylindrical shafts with internal centering - Dimensions, tolerances and verification (First Revision)	January, 2025	-	Identical under dual numbering
28	IS 2403:2024 ISO 606 ISO 606	Short-Pitch Transmission Precision Roller and Bush Chains, Attachments and Associated Chain Sprockets (Fourth Revision)		-	Identical under dual numbering
29	IS 2458:2001 ISO 1122-1 ISO 1122-1	Vocabulary of gear terms - Definitions related to geometry (First Revision)	March, 2023	-	Identical under dual numbering
30	IS 2467:2002 ISO 701 ISO 701	International gear notation - Symbols for geometrical data (First Revision)	March, 2023	-	Identical under dual numbering
31	IS 2535 (Part 1):2004 ISO 53 ISO 53	Cylindrical gears for general and heavy engineering: Part 1 standard basic rack tooth profile (Third Revision)	March, 2023	-	Identical under dual numbering
32	IS 2535 (Part 2):2004 ISO 54 ISO 54	Cylindrical gears for general and heavy engineering: Part 2 module (Third Revision)	March, 2023	-	Identical under dual numbering
33	IS 2610:1989 Decision taken to Reaffirm and Archive	Power transmission - Straight sided splines for machine tools dimensions (First Revision)	December, 2023	-	Indigenous
34	IS 2637:2025 ISO 487	Steel Roller Chains, Types S and C, Attachments and Sprockets (ISO 487 : 1998, MOD) (Third Revision)		-	Identical under dual numbering
35	IS 2693:1989 Decision taken to Reaffirm and Archive	Power transmissionbush type flexible coupling (Second Revision)	May, 2024	1	Indigenous
36	IS 3542:1980 ISO 1275	Specification for extended pitch transmission precision roller chains and chain wheel (First Revision)	March, 2023	-	Not Equivalent
37	IS 3560:1980 ISO 606	Specification for short pitch transmission precision bush chains and chain wheels (First Revision)	May, 2024	-	Not Equivalent
38	IS 3654:2024	Straight Sided Serrations ï¿½ Dimensions (first revision)		-	Indigenous
39	IS 3665:2024	Involute Sided Splines ï¿½ Dimensions (First Revision)		-	Indigenous
40	IS 3681:1995	Gears - Cylindrical, gears - Accuracies (First Revision)	September, 2025	-	Indigenous
41	IS 3688:1990 ISO/TR 775 Decision taken to	Power transmission - Shafts - Dimensions for cylindrical and 1/10 conical shaft ends (Second Revision)	March, 2023	-	Identical under dual numbering

	Reaffirm and Archive ISO 775				
42	IS 3734:1983 Reaffirmed but not taken up for revision	Dimensions for worm gearing (First Revision)	February, 2021	1	Indigenous
43	IS 3756:2002	Method for gear correction - Addendum modification for external cylindrical gears with parallel axes (First Revision)	March, 2023	-	Indigenous
44	IS 4071:1986 Decision taken to Reaffirm and Archive	Specification for Master Gears (first revision)	May, 2025	-	Indigenous
45	IS 4278:1988	Specification for flexible shafts for speedometers and tachographs (Second Revision)	January, 2020	-	Indigenous
46	IS 4460 (Part 13):1995 Reaffirmed but not taken up for revision ISO 6336	Gears - spur and helical gears - Calculation of load capacity (First Revision)	March, 2023	2	Not Equivalent
47	IS 4600:2024	Flexible Shafts ï¿½ Specification		-	Indigenous
48	IS 5037 (Part 1):2004 ISO 677 ISO 677	Straight bevel gears for general engineering and heavy engineering: Part 1 basic rack (First Revision)	March, 2023	-	Identical under dual numbering
49	IS 5037 (Part 2):2004 ISO 678 ISO 678	Straight bevel gears for general engineering and heavy engineering: Part 2 module and diametral pitches (First Revision)	March, 2023	-	Identical under dual numbering
50	IS 5267:2002 ISO 1122-2 ISO 1122-2	Vocabulary of gear terms - Definitions related to worm gear geometry (First Revision)	March, 2023	-	Identical under dual numbering
51	IS 6166:1971	Specification for thin taper keys and keyways	July, 2024	1	Indigenous
52	IS 6167:1971	Specification for thin parallel keys and keyways	May, 2024	1	Indigenous
53	IS 6196:1971 Decision taken to Reaffirm and Archive	Dimensions for fitted half - Couplings	December, 2023	-	Indigenous
54	IS 6276:1971 Decision taken to Reaffirm and Archive	Specification for flexible shafts used in concrete vibrators	May, 2024	-	Indigenous
55	IS 7403:1974 Reaffirmed but not taken up for revision	Code of practice for selection of standard worm and helical gear boxes	March, 2023	-	Indigenous
56	IS 7443:2002	Method for load rating of worm gears (First Revision)	March, 2023	-	Indigenous

57	IS 7504:1995 Reaffirmed but not taken up for revision	Gears - Cylindrical gears - Accuracies methods of inspection (First Revision)	February, 2021	-	Indigenous
58	IS 8733:1978 Reaffirmed but not taken up for revision	Tolerances for single start gear hobs	March, 2023	-	Indigenous
59	IS 8830:2007 ISO 9083 Decision taken to Reaffirm and Archive ISO 9083	Calculation of load capacity of spur and hellcal gears - Application to marine gears (First Revision)	March, 2023	-	Identical under dual numbering
60	IS 8843:1978	Accuracy requirements for turbine gears	October, 2024	-	Indigenous

Standards under Development

Projects Approved

SI. No.	Doc No.	Title
No Records Found		

Preliminary Draft Standards

SI. No.	Doc No.	Title
No Records Found		

Drafts Standards in WC Stage

SI. No.	Doc No.	Title
No Records Found		

Draft Standards Completed WC Stage

SI. No.	Doc No.	Title
No Records Found		

Finalized Draft Indian Standard

SI. No.	Doc No.	Title
1	PGD 33 (33795)	Straight Cylindrical Involute Splines Metric Module Side Fit Part 1 Generalities
2	PGD 33 (33799)	Straight cylindrical involute splines metric module side fit Part 2 Dimensions
3	PGD 33 (34184)	Straight Cylindrical Involute Splines Metric Module Side Fit Part 3 Inspection

Finalized Draft Indian Standards under Print

SI. No.	Doc No.	Title
1	PGD 33 (01415)	BELT DRIVES V-BELTS FOR THE AUTOMOTIVE INDUSTRY AND CORRESPONDING PULLEYS DIMENSIONS adoption of ISO 2790 2004
2	PGD 33 (01416)	Steel cord conveyor belts Part 1 Design dimensions and mechanical requirements for conveyor belts for general use first revision of IS 15427 Part 1 ISO 15236-1 200
3	PGD 33 (01417)	Steel cord conveyor belts Part 2 Preferred belt types
4	PGD 33 (01418)	Steel cord conveyor belts Part 3 Special safety requirements for belts for use in underground

		installations
5	PGD 33 (01419)	Steel cord conveyor belts Part 4 Vulcanized belt joints
6	PGD 33 (01420)	Belt drives Narrow V-belts Sections 9N J 15N J and 25N J lengths in the effective system
7	PGD 33 (01421)	Synchronous belt drives - Automotive belts
8	PGD 33 (01422)	Synchronous belt drives - Automotive pulleys
9	PGD 33 (01423)	Belt drives - Electrical conductivity of antistatic endless synchronous belts - Characteristics and test method
10	PGD 33 (01424)	V-belts - Uniformity of belts - Test method for determination of centre distance variation
11	PGD 33 (01425)	Light conveyor belts Determination of THE electrical resistances
12	PGD 33 (01426)	Light conveyor belts Determination of the electrostatic field generated by a running light conveyor belt
13	PGD 33 (01427)	LIGHT CONVEYOR BELTS DETERMINATION OF THE MAXIMUM TENSILE STRENGTH
14	PGD 33 (01428)	LIGHT CONVEYOR BELTS DETERMINATION OF THE RELAXED ELASTIC MODULUS
15	PGD 33 (01429)	Light conveyor belts Determination of the coefficient of friction
16	PGD 33 (01430)	LIGHT CONVEYOR BELTS PART 1 PRINCIPAL CHARACTERISTICS AND APPLICATIONS
17	PGD 33 (01433)	Belt drives V-belts and the corresponding pulleys for agricultural machineries Dimensions
18	PGD 33 (01434)	CONVEYOR BELTS DETERMINATION OF ELASTIC AND PERMANENT ELONGATION AND CALCULATION OF ELASTIC MODULUS
19	PGD 33 (01462)	SYNCHRONOUS BELT DRIVES PULLEYS
20	PGD 33 (01463)	BELT DRIVES PULLEYS QUALITY FINISH AND BALANCE
21	PGD 33 (01464)	BELT DRIVES V-RIBBED BELTS JOINED V-BELTS AND V-BELTS INCLUDING WIDE SECTION BELTS AND HEXAGONAL BELTS ELECTRICAL CONDUCTIVITY OF ANTISTATIC BELTS CHARACTERISTICS AND METHODS OF TEST
22	PGD 33 (01465)	DOUBLE-PITCH PRECISION ROLLER CHAINS ATTACHMENTS AND ASSOCIATED CHAIN SPROCKETS FOR TRANSMISSION AND CONVEYORS
23	PGD 33 (10264)	CONVEYOR BELTS WITH TEXTILE CARCASS WIDTHS AND LENGTHS
24	PGD 33 (10265)	CONVEYOR BELTS ADHESION BETWEEN CONSTITUTIVE ELEMENTS TEST METHODS
25	PGD 33 (10266)	CONVEYOR BELTS SAMPLING
26	PGD 33 (10269)	CONVEYOR BELTS WITH A TEXTILE CARCASS TOTAL BELT THICKNESS AND THICKNESS OF CONSTITUTIVE ELEMENTS TEST METHODS
27	PGD 33 (10271)	CONVEYORS BELTS - DETERMINATION OF MINIMUM PULLEY DIAMETERS
28	PGD 33 (10272)	RUBBER VULCANIZED OR THERMOPLASTIC DETERMINATION OF ABRASION RESISTANCE USING A ROTATING CYLINDRICAL DRUM DEVICE
29	PGD 33 (10273)	CONVEYOR BELTS - CHARACTERISTICS OF COVERS - CLASSIFICATION
30	PGD 33 (10274)	CONVEYOR BELTS SPECIFICATION FOR RUBBER- OR PLASTICS-COVERED CONVEYOR BELTS OF TEXTILE CONSTRUCTION FOR GENERAL USE
31	PGD 33 (10275)	TEXTILE CONVEYOR BELTS DETERMINATION OF THE NET LENGTH OF AN ENDLESS SPLICED CONVEYOR BELT
32	PGD 33 (10357)	Conveyor And Elevator Textile Belting part 5 Fire Resistant Belting For Surface Application Amendment - 1
33	PGD 33 (12969)	Conveyor belts Transverse flexibility troughability Test method Adoption of ISO 703 2017 ICS 5304020
34	PGD 33 (12970)	Conveyor Belts Markings Adoption of ISO 433 2017 ICS 5304020
35	PGD 33 (14508)	Textile conveyor belts Full thickness tensile strength elongation at break and elongation at the reference load Test method
36	PGD 33 (14509)	Conveyor belts Test atmospheres and conditioning periods
37	PGD 33 (22814) Revision of: IS 4600:1968	Flexible Shafts Specification
38	PGD 33 (23029) Revision of: IS 3654:1966	Straight Sided Serrations Dimensions
39	PGD 33 (23034) Revision of: IS 3665:1966	Involute Sided Splines Dimensions First Revision
40	PGD 33 (23185) Revision of: IS 2403:2014	Short-Pitch Transmission Precision Roller and Bush Chains Attachments and Associated Chain Sprockets
41	PGD 33 (23194) Revision of: IS 1072:2014	Leaf Chains Clevises and Sheaves Dimensions Measuring Forces Tensile Strengths and Dynamic Strengths
42	PGD 33 (26084)	Calculation of Load Capacity of Spur and Helical Gears Part 3 Calculation of Tooth Bending

		Strength
43	PGD 33 (26086)	Calculation of load capacity of spur and helical gears Part 2 Calculation of surface durability pitting
44	PGD 33 (26087)	Calculation of Load Capacity of Spur and Helical Gears Part 1 Basic Principles Introduction and General Influence Factors
45	PGD 33 (26088)	Calculation of Load Capacity of Spur and Helical Gears Part 5 Strength and Quality of Materials
46	PGD 33 (26090)	Calculation of Load Capacity of Spur and Helical Gears Part 6 Calculation of Service Life Under Variable Load
47	PGD 33 (27175) Revision of: IS 2637:2004	Steel Roller Chains Types S and C Attachments and Sprockets ISO 487 1998 MOD Third Revision
48	PGD 33 (27258) Revision of: IS 15511:2004	Cycle Chains Specification First Revision
49	PGD 33 (28145) Revision of: IS 15790:2008	Fatigue Test Method for Transmission Precision Roller Chains and Leaf Chains First Revision
50	PGD 33 (32998)	Motorcycle Chains Characteristics and Test Methods ISO 10190 2008 MOD Second Revision
51	PGD 33 (35448)	Vocabulary of gear terms - Definitions related to geometry Second Revision

Total Published Standards:60 Total Standards Under development:54

Aspect Wise Report

Product : 30
Code of Practices : 1
Methods of Test : 12
Terminology : 3
Dimensions : 9
System Standard : 0
Safety Standard : 0
Others : 5
Service Specification : 0
Process Specification : 0
Unclassified : 0

Annexure-I :List of Indian Standards Withdrawn/Superseded

SI. No.	IS No. & Year	Title
1	IS 10185:1982	Data for procurement of worm and wormwheels
2	IS 2240:1976	Vegetable tanned leather belting for power transmission
3	IS 2458 (Part 2):1984	Glossary Of Terms For Toothed Gearing part 2 Bevel And Hypoid Gears
4	IS 2710:1975	Parallel keys and keyways for machine tools
5	IS 3143:1965	Cotton ropes for power transmission
6	IS 3653:1966	Dimensions For Forged End Type Rigid Couplings
7	IS 529:1976	Solid-woven impregnated cotton belting for power transmission
8	IS 5375:1979 Reaffirmed but not taken up for revision	Data for procurement of cylindrical gears First Revision
9	IS 6535:1979 Reaffirmed but not taken up for revision	Data for procurement of straight bevel gears First Revision
10	IS 6583:1989	Power transmission belts - Train lighting belting

Annexure-II :List of Indian Product Standards

SI. No.	IS No. & Year	Title
1	IS 10686:1983	Specification for mechanical multi - Disc clutches Wet Type
2	IS 1072:2024 ISO 4347	Leaf Chains Clevises and Sheaves Dimensions Measuring Forces Tensile Strengths and Dynamic Strengths Fourth Revision
3	IS 11740:2026	Motorcycle Chains Characteristics and Test Methods ISO 10190 2008 MOD Second Revision
4	IS 12405:1988	Specification for gear type flexible couplings
5	IS 13926:2005 ISO 6971 ISO 6971	Cranked - Link drag chains of welded construction attachments and sprockets First Revision
6	IS 13927:2005 ISO 6972 ISO 6972	Cranked - Link mill chains of welded construction attachments and sprockets First Revision
7	IS 14285:1995 Decision taken to Reaffirm and Archive	Transmission devices - Flexible couplings - Tyre type - Specification
8	IS 14696:2000	Transmission steel roller chains and chain wheels for oil field applications - Specification
9	IS 15509:2017 ISO 1275 : 2006 ISO 1275 : 2006	Double - Pitch precision roller chains - Attachments and associated chain sprockets for transmission and conveyors First Revision
10	IS 15510:2004 ISO 3512 ISO 3512	Heavy - Duty cranked - Link transmission chains
11	IS 2291:1990 ISO 3117-1977 Decision taken to Reaffirm and Archive ISO 3117	Tangential keys and keyways Third Revision
12	IS 2292:1974	Specification for taper keys and keyways First Revision
13	IS 2293:1974	Specification for gib - Head - Keys and keyways First Revision
14	IS 2294:1986	Specifi - Cation for woodruff keys and keyways Second Revision
15	IS 2403:2024 ISO 606	Short-Pitch Transmission Precision Roller and Bush Chains Attachments and Associated Chain Sprockets Fourth Revision
16	IS 2535 (Part 1):2004 ISO 53 ISO 53	Cylindrical gears for general and heavy engineering Part 1 standard basic rack tooth profile Third Revision
17	IS 2535 (Part 2):2004 ISO 54 ISO 54	Cylindrical gears for general and heavy engineering Part 2 module Third Revision
18	IS 2637:2025	Steel Roller Chains Types S and C Attachments and Sprockets ISO 487 1998 MOD Third Revision
19	IS 2693:1989 Decision taken to Reaffirm and Archive	Power transmissionbush type flexible coupling Second Revision
20	IS 3542:1980	Specification for extended pitch transmission precision roller chains and chain wheel First

	ISO 1275	Revision
21	IS 3560:1980 ISO 606	Specification for short pitch transmission precision bush chains and chain wheels First Revision
22	IS 3681:1995	Gears - Cylindrical gears - Accuracies First Revision
23	IS 4071:1986 Decision taken to Reaffirm and Archive	Specification for Master Gears first revision
24	IS 4278:1988	Specification for flexible shafts for speedometers and tachographs Second Revision
25	IS 4600:2024	Flexible Shafts Specification
26	IS 5037 (Part 1):2004 ISO 677 ISO 677	Straight bevel gears for general engineering and heavy engineering Part 1 basic rack First Revision
27	IS 5037 (Part 2):2004 ISO 678 ISO 678	Straight bevel gears for general engineering and heavy engineering Part 2 module and diametral pitches First Revision
28	IS 6166:1971	Specification for thin taper keys and keyways
29	IS 6167:1971	Specification for thin parallel keys and keyways
30	IS 6276:1971 Decision taken to Reaffirm and Archive	Specification for flexible shafts used in concrete vibrators