#### **BUREAU OF INDIAN STANDARDS**

#### **Program of Work**

#### **PGD 36 : Fluid Power System**

Scope:

a) Standardization in the field of terminology, classifications, symbols, fluid logic, and fluid properties, contamination control, components marking systems and identification codes, sealing devices and their related parameters; hydraulic components and their testing, maintenance and installations; pneumatic components and their testing, installation and maintenance. b) Standardization in the field of ports, fittings, tubes and tube, hoses & hose assemblies and their testing. c) Liaison with: (i) ISO/TC 131 Fluid power systems (P-Member) (ii) ISO/TC 131/SC 1 Terminology, Classification and symbols (P-Member) (iii) ISO/TC 131/SC 3 Cylinders (P-Member) (v) ISO/TC 131/SC 4 Connectors and similar products and components (Member) (vi) ISO/TC 131/SC 5 Control products and components (P-Member) (vii) ISO/TC 131/SC 6 Contamination control (P-Member) (viii) ISO/TC 131/SC 8 Product testing (P-Member) (ix) ISO/TC 131/SC 9 Installations and systems (P-Member)

Liaison:

ISO TC-131 (P): Fluid power systems ISO TC-131 SC-1 (P): Symbols, terminology and classifications TC-131 SC-2 (P): ISO TC-131 SC-3 (P): Cylinders ISO TC-131

SC-4 (P): Connectors and similar products and components ISO TC-131 SC-5 (P): Control products and components ISO TC-131 SC-6 (P): Contamination control ISO TC-131

SC-7 (O): Sealing devices ISO TC-131 SC-8 (P): Product testing ISO TC-131

**SC-9 (P):** *Installations and systems* 

#### **Published Standards**

S.No	IS No.	TITLE	Reaffirm M-Y	No. of Amds	Eqv.
1	IS 10069 : 2023	Hydraulic fluid power Positive-		-	Identical under dual
	ISO 4409 : 2019	Displacement Pumps Motors and			numbering
	ISO 4409 : 2019	Integral Transmissions Methods of			
		Testing and Presenting Basic			
		Steady State Performance			
2	IS 10103 : 1982	Method of test for ferrule type	January, 2020	3	Indigenous
	Reviewed In: 2020	couplings used in oil - Hydraulic			
		systems			
3	IS 10129 : 2004	Hydraulic fluid power -	February, 2020	-	Identical under dual
	ISO 3019-2	Dimensions and identification code			numbering
	Reviewed In: 2020	for mounting flanges and shaft			
	ISO 3019-2:2001	ends of displacement pumps and			
		motors (Second Revision)			
4	IS 10143 : 1995	Pneumatic fluid power - Single rod	February, 2020	-	Identical under dual
	ISO 6431	cylinders, 1000 kPa (10 Bmar)			numbering
	Reviewed In: 2020	series, with detachable mountings,			
	ISO 6431 : 1992	bores from 32 mm to 320 mm -			
		Mounting dimensions (First			
		Revision)			
5	IS 10187 : 2013	Hydraulic fluid power - Four - Port	February, 2020	-	Identical under dual

ı	ISO 4401: 2005	directional control valves -		I	numbering
	Reviewed In : 2020	Mounting surfaces (Second			numbering
	ISO 4401 : 2005	Revision)			
6	IS 10410 : 1983	Specification for lock nuts for bulk	September, 2024	1	Indigenous
"	Reviewed In : 2024	head coupling assembly for oil -	September, 2024	1	margenous
	Reviewed III . 2024	Hydraulic systems			
7	IS 10411 : 2020	Fluid Power Systems and			Identical under dual
'	ISO 4393 : 2015	Components — Cylinders — Basic	-	_	numbering
	ISO 4393 : 2015	Series of Piston Strokes (First			numbering
	150 4575 . 2015	Revision)			
8	IS 10416 : 2019	Fluid Power Systems and		_	Identical under dual
	ISO 5598 : 2008	Components ? Vocabulary (			numbering
	ISO 5598 : 2008	Second Revision )			namoering
9	IS 10417 : 1983	Specification for equal cross	September, 2024	2	Indigenous
	Reviewed In: 2024	coupling assembly for oil -	~~r···································		
	iteviewed in : 2021	Hydraulic systems			
10	IS 10433 (Part 1):	Male Stud Tee Body Stud Run for		-	Indigenous
	2023	Oil-Hydraulic Coupling			
		Specification Part 1 Made from			
		Forgings			
11	IS 10433 (Part 2):	Male stud tee body (Stud Run) for	September, 2024	-	Indigenous
	2002	oil - Hydraulic couplings -	-		
	Reviewed In: 2024	Specification: Part 2 made from			
		bar stock (First Revision)			
12	IS 10453 (Part 1):	Taper Male Stud Tee Body Stud		-	Indigenous
	2023	Run for Oil Hydraulic Couplings			
		Specification Part 1 Made from			
		Forgings			
13	IS 10453 (Part 2):	Taper Male Stud Tee Body Stud		-	Indigenous
	2023	Run for Oil Hydraulic Couplings			
		Specification Part 2 Made from			
		Bar Stock			
14	IS 10480 : 1983	Specification for stud run tee	November, 2018	-	Indigenous
	Reviewed In: 2018	coupling assemblies for oil -			
		Hydraulic systems			
15	IS 10480 : 2024	Stud run tee coupling assemblies		-	Indigenous
		for oil hydraulic systems �			
		Specification (Second Revision)			
16	IS 10481 : 2020	Hydraulic Fluid Power — General	-	-	Identical under dual
	ISO 4413 : 2010	Rules and Safety Requirements for			numbering
	ISO 4413 : 2010	Systems and their Components (			
17	IC 10505 . 2022	Second Revision ) Hydraulic fluid power Cylinders		<del> </del>	Identical under dual
17	IS 10585 : 2023 ISO 10100 : 2020	1 7		_	
	ISO 10100 : 2020	Acceptance tests			numbering
18	IS 10956 : 2023	Welding coupling body for oil		_	Indigenous
10	10 10/30 . 2023	hydraulic couplings - Specification			marganous
19	IS 10978 : 1984	Specification for welding coupling	February, 2020	1	Indigenous
	Reviewed In: 2020	assembly for oil - Hydraulic	1 0010011, 2020		margenous
	10.11.10 m 11.2020	systems			
20	10983 : 2021	Hydraulic Fluid Power - Cylinders		-	Identical under dual
	ISO 5597 : 2018	- Dimensions and Tolerances of			numbering
	ISO 5597 : 2018	Housings for Single-Acting Piston			6
		and Rod Seals in Reciprocating			
		Applications ( Second Revision )			
21	IS 11003 (Part 1):	Hydraulic fluid power - Mounting	September, 2024	-	Identical under dual
		dimensions for single rod cylinders,	· ,		numbering
	ISO 6020-1:2007	16 mpa (160 Bar) series: Part 1			
	Reviewed In: 2024	medium series (Second Revision)			
I	I	i 'I		I	I

Ì	ISO 6020-1:2007	1		1	I
22	IS 11003 (Part 2):	Hydraulic Fluid Power —	-	_	Identical under dual
	2020	Mounting Dimensions for Single			numbering
	ISO 6020-2 : 2015	Rod Cylinders, 16 MPa ( 160 bar )			
	ISO 6020-2 : 2015	Series Part 2 Compact Series (			
		Second Revision )			
23	IS 11146 : 1999	Hydraulic fluid power - Cylinders -	September, 2024	-	Identical under dual
	ISO 7181	Bore and rod area ratios (First			numbering
	Reviewed In: 2024	Revision)			
	ISO 7181 : 1991				
24	IS 11147 : 1984	Recommendations for parameter	February, 2020	-	Identical under dual
	ISO 4391	definitions and letter symbols for			numbering
	Reviewed In: 2020	hydraulic fluid power pumps,			
	ISO 4391 : 1983	motors and integral transmissions			
25	IS 11245 : 1999	Pneumatic cylinders purchase -	February, 2020	-	Indigenous
	Reviewed In: 2020	Specification (First Revision)			
26	IS 11277 : 2004	Hydraulic fluid power - Gas -	February, 2020	-	Identical under dual
	ISO 5596	Loaded accumulators with			numbering
		separator - Ranges of pressures and			
	ISO 5596 : 1999	volumes and characteristic			
	IC 11227 2002	quantities (First Revision)	C 1 2024	1	T 1'
27	IS 11337 : 2002	Purchase Specification for	September, 2024	-	Indigenous
28	IS 11559 : 1995	hydraulic cylinders (First Revision) Hydraulic fluid power - Cylinders -	Eahmann 2020	-	Identical under dual
28	IS 11559 : 1995 ISO 6982	Rod end spherical eyes - Mounting	February, 2020	-	
	Reviewed In : 2020	dimensions (First Revision)			numbering
	ISO 6982 : 1992	difficusions (First Revision)			
29	IS 11560 : 1995	Hydraulic fluid power - Cylinders -	February, 2020		Identical under dual
29	ISO 6981	Rod end plain eyes - Mounting	1 Coluary, 2020	_	numbering
	Reviewed In: 2020	dimensions (First Revision)			numbering
	ISO 6661: 1962	difficusions (1 fist Revision)			
30	IS 11845 (Part 1):	Fluid logic circuits for fluid power	February, 2020	_	Identical under dual
	1994	systems: Part 1 symbols for binary	1 001 001 1		numbering
	ISO 5784-1	logic and related functions (First			
	Reviewed In: 2020	_			
	ISO 5784-1 : 1988	,			
31	IS 11845 (Part 2):	Fluid Logic circuits for fluid -	February, 2020	-	Identical under dual
	1995	Power systems: Part 2 symbols for	•		numbering
	ISO 5784-2	supply and exhausts as related to			
	Reviewed In: 2020	logic symbols (First Revision)			
	ISO 5784-2 : 1989				
32	IS 11845 (Part 3):	Fluid logic circuits for fluid power	February, 2020	-	Identical under dual
	1994	systems: Part 3 symbols for logic			numbering
	ISO 5784-3	sequencers and related functions			
	Reviewed In: 2020				
	ISO 5784-3 : 1989			1	
33	12092 : 2021	Hydraulic Fluid Power - Test		-	Identical under dual
	ISO 6605 : 2017	Methods for Hoses and Hose			numbering
2.4	ISO 6605 : 2017	Assemblies (First Revision)	Camta 1 2004	1	T., 3!
34	IS 12096 : 1987	Specification for hexagon socket	September, 2024	1	Indigenous
	Reviewed In: 2024	screw plugs with parallel screw threads for fluid power system			
35	IS 12116 (Part 1):	Specification for hexagon head	September, 2024	+	Indiganous
33	18 12116 (Part 1): 1987	taper plugs for oil hydraulic	September, 2024	_	Indigenous
		systems: Part 1 made from forgings			
36	IS 12484 : 1999	Cup seal for fluid power	February, 2020	_	Indigenous
50	Reviewed In : 2020	applications - Specification (First	1 Coruary, 2020		muigenous
	100 10 Wed III . 2020	Revision)			
37	IS 12485 : 1988	Specification for metal bonded	February, 2020	-	Indigenous
'		1 .	J,	1	

	Reviewed In: 2020	seals		1	1
38	IS 12498 : 1988	Method of test for evaluation of	September, 2024	-	Indigenous
	Reviewed In: 2024	performance of air pressure	•		
		regulators			
39	IS 12593 : 2000	Hydraulic fluid power - Single rod	February, 2020	-	Identical under dual
	ISO 8131	cylinders, 16 mpa (160 Bar)			numbering
	Reviewed In: 2020	compact series - Tolerances (First			
	ISO 8131 : 1992	Revision)			
40	IS 12597 : 1988	Recommendation on units for fluid	September, 2024	-	Indigenous
	Reviewed In: 2024	power system			
41	IS 12723 : 2020	Pneumatic Fluid Power - Single	=	-	Identical under dual
	ISO 6432 : 2015	Rod Cylinders, 1 000 kPa (10 bar)			numbering
	ISO 6432: 1985	series, bores from 8 mm to 25 mm			
		- Basic and Mounting Dimensions (			
		First Revision )			
42	12725 : 2021	Pneumatic Fluid Power - General		-	Identical under dual
	ISO 4414 : 2010	Rules and Safety Requirements for			numbering
	ISO 4414: 2010	Systems and their Components (			
		Second Revision )			
43	IS 12738 : 1995	Pneumatic fluid power 7 single rod	February, 2020	-	Identical under dual
	ISO 6430	cylinders, 1 000 kPa (Ib 10 bar)			numbering
	Reviewed In: 2020	Series, With Integral Mountings,			
	ISO 6430: 1992	Bores From 32 Mm To 250 Mm -			
		Mounting Dimensions (First			
		Revision)			
44	IS 13053 : 1991	Hydraulic fluid power system	September, 2024	-	Indigenous
	Reviewed In: 2024	commissiontng and maintenance of			
		complete hydraulic systems			
		recommendations			
45	IS 13085 : 1991	Hydraulic fluid power - Single rod	September, 2024	-	Identical under dual
	ISO 8136	cylinders, 160 bar (16 Mpa)			numbering
	Reviewed In: 2024	medium series - Port dimensions			
	ISO 8136 : 1986				
46	13086 : 2021	Pneumatic Fluid Power -		-	Identical under dual
	ISO 8139 : 2018	Cylinders, 1 000 kPa ( 10 bar )			numbering
	ISO 8139 : 2018	Series - Mounting Dimensions of			
		Rod-end Spherical Eyes ( Second			
		Revision )			
47	13087 : 2021	Pneumatic Fluid Power -		-	Identical under dual
	ISO 8140 : 2018	Cylinders, 1 000 kpa ( 10 bar )			numbering
	ISO 8140 : 2018	Series - Mounting Dimensions of			
		Rod-end Clevises ( Second			
	YO 40400	Revision )		1	
48	IS 13102 : 1991	Hydraulic - Fluid power - Single	September, 2024	-	Identical under dual
	ISO 8137	rod cylinders, 250 bar (25 Mpa)			numbering
	Reviewed In: 2024	series - Port dimensions			
40	ISO 8137 : 1986	Hadronia fluid a come C' 1	Feb. 2000		Tdant!1 3 1 1 1
49	IS 13103 : 2005	Hydraulic fluid power - Single rod	February, 2020	_	Identical under dual
	ISO 8138	cylinders, 16 mpa (160 Bar)			numbering
	Reviewed In : 2020	compact series - Port dimensions			
50	ISO 8138:1998	(First Revision)			Identical under deal
50	13170 : 2021	Connections for hydraulic fluid		_	Identical under dual
	ISO 6149-1 : 2019	power and general use - Ports and			numbering
	ISO 6149-1 : 2019	stud ends with ISO 261 metric			
		threads and O-ring sealing Part 1:			
		Ports with truncated housing for O-			
51	13170 : 2021	ring seal			Identical under dual
31		Connections for Hydraulic Fluid Power and General Use - Ports and		_	numbering
l l	ISO 6140 2 · 2004	IDOMAT and Capacal Lies - Dome code			

	ISO 6149-2 : 2006	Threads and O-Ring Sealing Part 2			
		Dimensions, Design, Test Methods			
		and Requirements for Heavy-Duty (S Series) Stud Ends (First			
		Revision )			
52	13170 : 2021	Connections for Hydraulic Fluid		-	Identical under dual
32	ISO 6149-3 : 2006	Power and General Use — Ports			numbering
	ISO 6149-3 : 2006	and Stud Ends with ISO 261			
		Metric Threads and O-Ring Sealing			
		Part 3 Dimensions, Design, Test			
		Methods and Requirements for			
		Light-Duty ( L Series ) Stud Ends (			
		First Revision )			
53	IS 13251 : 2019	Hydraulic fluid power ? mounting	-	-	Identical under dual
	ISO 8132 : 2014	dimensions for accessories for			numbering
	ISO 8132:2014	single rod cylinders, 16 mpa (160			
		Bar) medium and 25 mpa (250 Bar) series (First Revision)			
54	IS 13336 : 1992	Reducer coupling assemblies for	September, 2024	1	Indigenous
] ]-		oil hydraulic system - Specification	5cptcmoc1, 2024	'	margenous
55	IS 13337 : 1992	Straight reducer coupling body for	September, 2024	1	Indigenous
		oil hydraulic system - Specification	September, 2021	1	margenous
56	IS 13338 : 1992	Hexagonal head screw plugs with	September, 2024	-	Indigenous
	Reviewed In: 2024	shoulder and parallel screw threads	1		
		- Specification			
57	IS 13434 : 2005	Hydraulic fluid power - Single rod	February, 2020	-	Identical under dual
	ISO 8135	cylinders, 16 mpa (160 Bar)			numbering
	Reviewed In: 2020	medium and 25 mpa (250 Bar)			
	ISO 8135:1999	series - Tolerances (First Revision)	4 2022		**
58	IS 13533 : 2019	Fluid power systems and	August, 2023	-	Identical under dual
	ISO 4395 : 2009 Reviewed In : 2023	components? cylinder piston rod			numbering
	ISO 4395:2009	end types and dimensions (First Revision)			
59	IS 13534 : 2023	Hydraulic Fluid Power Valves		_	Identical under dual
	ISO 4411 : 2019	Determination of Pressure			numbering
	ISO 4411 : 2019	Differential Flow Characteristics			
60	IS 13534 : 2023	Hydraulic Fluid Power Valves		-	Identical under dual
	ISO 4411 : 2019	Determination of Pressure			numbering
	ISO 4411 : 2019	Differential Flow Characteristics			
61	IS 13535 : 2017	Hydraulic fluid power - Filters -	September, 2024	-	Identical under dual
	ISO 16889 : 2008	Filter multi - Pass method for			numbering
	Reviewed In: 2024	evaluating filtration performance			
	ISO 16889 : 2008	of filter element (Second Revision)			Td-mt!11 1 1
62	IS 13542 : 2023	Hydraulic fluid power Fluids  Method for coding the level of		-	Identical under dual
	ISO 4406 : 2021 ISO 4406 : 2021	Method for coding the level of contamination by solid particles			numbering
63	IS 13569 : 1993	Hydraulic fluid power - Fluid	August, 2023	_	Identical under dual
	ISO 3722	sample containers - Qualifying and	1108000, 2023		numbering
	Reviewed In: 2023	controlling cleaning methods			
	ISO 3722 : 1976				
64	IS 13570 : 2000	HYDRAULIC FLUID POWER -	August, 2023	-	Identical under dual
	ISO 4021	PARTICULATE			numbering
	Reviewed In: 2023	CONTAMINATION ANALYSIS			
	ISO 4021 : 1992	- EXTRACTION OF FLUID			
		SAMPLES FROM LINES OF AN			
		OPERATING SYSTEM (First			
65	IC 12571 : 2020	Revision)			Identical d 11
65	IS 13571 : 2020	Hydraulic Fluid Power —	-	-	Identical under dual

1	100 11171 2016	Callbridge of Assessed Barriel		1	
	ISO 11171 : 2016 ISO 11171-2016	Calibration of Automatic Particle Counters for Liquids ( First			numbering
	130 111/1-2010	Revision )			
66	13614 : 2021	Hydraulic Fluid Power -		_	Identical under dual
	ISO 7241 : 2014	Dimensions and Requirements of			numbering
	ISO 7241 : 2014	Quick-Action Couplings Part 1			C
		Dimensions and Requirements (			
		First Revision )			
67	IS 13614 (Part 2):	Hydraulic fluid power - Quick -	September, 2024	-	Identical under dual
	1993	Action couplings: Part 2 test			numbering
	ISO 7241-2	methods			
	Reviewed In: 2024				
60	ISO 7241-2 : 1986		0 1 2024		T 1'
68	IS 13617 : 1992	Evaluation of pressure drop versus	September, 2024	-	Indigenous
	Reviewed In: 2024	flow characteristics of pneumatic			
69	IS 13876 (Part 1):	filters - Method of test Guide for marking system for fluid	September, 2024	_	Indigenous
09	1993	power components: Part 1	September, 2024	_	margenous
	Reviewed In: 2024	cylinders			
70		Guide for marking system for fluid	September, 2024	-	Indigenous
'`	1993	power components: Part 2 valves	55p.5		margonous
	Reviewed In: 2024	Francisco Constitution and Constitution			
71		Guide for marking system for fluid	September, 2024	-	Indigenous
	1993	power components: Part 3 pumps			
	Reviewed In: 2024	and motors			
72	14148 : 2021	Hydraulic Fluid Power - Pressure-		-	Identical under dual
	ISO 5781 : 2016	reducing Valves, Sequence Valves,			numbering
	ISO 5781 : 2016	Unloading Valves, Throttle Valves			
		and Check Valves - Mounting			
72	IS 14150 : 2005	Surfaces (Second Revision)	F-1 2020	+	T.d.,
73	IS 14150 : 2005 ISO 6264	Hydraulic fluid power - Pressure relief valves - Mounting surfaces	February, 2020	-	Identical under dual
	Reviewed In : 2020	(First Revision)			numbering
	ISO 6264:1998	(Prist Revision)			
74	IS 14167 : 2019	Pneumatic fluid power ? cylinders	August, 2023	_	Identical under dual
	ISO 10099 : 2001	? final examination and acceptance			numbering
	Reviewed In: 2023	criteria (First Revision)			6
	ISO 10099:2001	, , ,			
75	IS 14235 : 1995	Wiper seals used for fluid power	February, 2020	-	Indigenous
	Reviewed In: 2020	application - Specification			
76	IS 14236 : 1995	Sealsfor reciprocating applications	February, 2020	-	Indigenous
	Reviewed In: 2020	used in fluid power systems			
		methods of test			
77	IS 14237 : 1995	U - Type seals with asymmetrical	February, 2020	-	Indigenous
	Reviewed In: 2020	and symmetrical lips used for fluid			
78	14423 : 2021	power application - Specification Fluid Power Systems and		+	Identical under dual
'	ISO 4399 : 2019	Components - Connectors and		1 -	numbering
	ISO 6432 : 2015	Associated Components - Nominal			numbering
	150 0 152 . 2015	Pressures (First Revision)			
79	IS 14528 : 1998	Tube end straight reducers for oil -	September, 2024	-	Indigenous
	Reviewed In: 2024	Hydraulic couplings	1 /		- 6
80	IS 14601 : 1998	Method for presenting	February, 2020	-	Indigenous
	Reviewed In: 2020	performance data for hydraulic	•		
		pumps			
81	IS 14602 : 1999	Installation methods of positive	September, 2024	1	Indigenous
	Reviewed In: 2024	displacement hydraulic pumps and			
		motors - Guidelines		1	<b>.</b>
82	IS 14604 : 1998	Proforma for purchase	September, 2024	-	Indigenous
				•	i

I	Reviewed In: 2024	Specification for positive		1	1
	Reviewed III . 2024	displacement pumps and motors			
		used in oil hydraulic systems			
83	IS 14740 (Part 1):	Pneumatic Fluid Power -			Identical under dual
0.5	` ′			-	
	2021	Determination of Flow-Rate			numbering
	ISO 6358-1 : 2013	Characteristics of Components			
	ISO 6358-1 : 2013	Using Compressible Fluids Part 1			
		General Rules and Test Methods			
		for Steady-State Flow (First			
		Revision )			
84	IS 14740 (Part 2):	Pneumatic Fluid Power -		-	Identical under dual
	2021	Determination of Flow-Rate			numbering
	ISO 6358-2 : 2019	Characteristics of Components			
	ISO 6358-2 : 2019	Using Compressible Fluids Part 2			
		Alternative Test Methods (First			
		Revision)			
85	IS 14740 (Part 3):	Pneumatic Fluid Power -		1	Identical under dual
	2021	Determination of Flow-Rate			numbering
	ISO 6358-3 : 2014	Characteristics of Components			indinoeting
	ISO 6358-3 : 2014	Using Compressible Fluids Part 3			
	130 0336-3 . 2014				
		Method for Calculating Steady-			
		State Flow-Rate Characteristics of			
0.5	YG 1 10 10 2000	Systems (First Revision)	7.1 2020		
86	IS 14848 : 2000	Hydraulic fluid power - Pumps and	February, 2020	-	Identical under dual
	ISO 3662	motors - Geometric displacements			numbering
	Reviewed In: 2020				
	ISO 3662 : 1976				
87	IS 14849 (Part 1):	Hydraulic fluid power -	September, 2024	-	Identical under dual
	2017	Determination of characteristics of			numbering
	ISO 4392-1 : 2002	motors: Part 1 at constant low			
	Reviewed In: 2024	speed and at constant pressure			
	ISO 4392-1 : 2002	(First Revision)			
88	IS 14849 (Part 2):	Hydraulic fluid power -	September, 2024	-	Identical under dual
	2018	Determination of characteristics of	•		numbering
	ISO 4392-2 : 2002	motors: Part 2 startability (First			
	Reviewed In: 2024	Revision)			
	ISO 4392-2	110 (101011)			
89	IS 14849 (Part 3):	Hydraulic fluid power -	February, 2020	_	Identical under dual
	2005	Determination of characteristics of	1 cordary, 2020		numbering
	ISO 4392-3	motors: Part 3 at constant flow and			numbering
	Reviewed In : 2020				
		at constant torque			
00	ISO 4392-3:1993	Communicated sin filters. Evaluation	Camtaurlan 2024		Not Emission
90	IS 14875 : 2000	Compressed air filters - Evaluation	September, 2024	=	Not Equivalent
	Reviewed In : 2024	parameters			
	ISO 5782-1 : 1997	D			
91	IS 14876 : 2020	Pneumatic Fluid Power ?	-	-	Identical under dual
		Compressed-air lubricators Part 1			numbering
	ISO 6301-1:2017	Main Characteristics to be Included			
		in Supplier's Literature and			
		Product-marking Requirements (			
		First Revision )			
92	15045 : 2021	Pneumatic Fluid Power - Five-Port		-	Identical under dual
	ISO 5599-1 : 2001	Directional Control Valves Part 1			numbering
	ISO 5599-1 : 2001	Mounting Interface Surfaces			
		without Electrical Connector ( First			
		Revision )			
93	15045 : 2021	Pneumatic Fluid Power - Five-Port		_	Identical under dual
´	ISO 5599-2 : 2001	Directional Control Valves Part 2			numbering
	ISO 5599-2:2001	Mounting Interface Surfaces with			numbering
	100 3377-2.2001	Wilder ace Surfaces with			

		Optional Electrical Connector ( First Revision )			
94	IS 15045 (Part 3):	Pneumatic fluid power - Five port	September, 2024	_	Identical under dual
	2001	directional control valves: Part 3	,		numbering
	ISO 5599-3	code system for communication of			
	Reviewed In: 2024	valve functions			
	ISO 5599-3:1990				
95	IS 15097 : 2002	Pneumatic fluid power -	September, 2024	-	Identical under dual
	ISO 6150	Cylindrical quick - Action			numbering
	Reviewed In: 2024	couplings for maximum working			
	ISO 6150:1988	pressures of 10 bar, 16 bar and 25			
		bar (1 Mpa, 1.6 Mpa And 2.5 Mpa)			
		- Plug connecting dimensions,			
		Specifications, application			
0.6	YG 171 (0. 2022	guidelines and testing			*1
96	IS 15168 : 2022	Fluid Power Systems And		-	Identical under dual
	ISO 6099 : 2018	Components Cylinders			numbering
	ISO 6099 : 2018	Identification Code For Mounting Dimensions And Mounting Types			
		First revision of IS 15168			
		Adoption of ISO 6099 : 2018 ICS			
		2310020			
97	IS 15170 : 2017	Hydraulic fluid power -	September, 2024	_	Identical under dual
	ISO/TR 10949 :	Component cleanliness -	,		numbering
	2002	Guidelines for achieving and			
	Reviewed In: 2024	controlling cleanliness of			
	ISO/TR 10949:	components from manufacturer to			
	2002	installation (First Revision)			
98	IS 15179 : 2002	Hydraulic fluid power -	August, 2023	-	Identical under dual
	ISO 6072	Compatibility between elastomeric			numbering
	Reviewed In: 2023	materials and fluids			
	ISO 6072:2011	X 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1			X1 1 1 1 1
99	IS 15181 (Part 1):	Hydraulic Fluid Power �		-	Identical under dual
	2024 ISO 9110-1 : 2020	Measurement Techniques Part 1 General Measurement Principles			numbering
	ISO 9110-1 : 2020	(First Revision)			
100	IS 15181 (Part 2):	Hydraulic Fluid Power $\ddot{i}_{i}^{1/2}$			Identical under dual
100	2024	Measurement Techniques $\ddot{i}_6^{1/2}$ Part		_	numbering
		2 Measurement of Average Steady-			namoving
	ISO 9110-2 : 2020	State Pressure in a Closed Conduit			
		(First Revision)			
101	IS 15276 : 2002	Metallic tube connections for fluid	September, 2024	-	Identical under dual
	ISO 8434-4	power and general use 24° cone			numbering
	Reviewed In: 2024	connectors with o - Ring weld - On			
	ISO 8434-4:1995	nipples			
102	IS 15277 : 2002	Metallic tube connections for fluid	September, 2024	-	Identical under dual
	ISO 8434-5	power and general use test methods			numbering
	Reviewed In : 2024	for threaded hydraulic fluid power			
102	ISO 8434-5:1995	connections	A		Tdomatical and 1 1
103	IS 15331 : 2003 ISO 11727	Pneumatic fluid power - Identification of ports and control	August, 2023	-	Identical under dual
	Reviewed In: 2023	mechanisms of control valves and			numbering
	ISO 11727:1999	other components			
104	IS 15332 : 2003	Pneumatic cylinders for	August, 2023	_	Identical under dual
	ISO 7285	mechanized multiple spot welding			numbering
	Reviewed In: 2023				
	ISO 7285:1995				
105	IS 15432 : 2003	Hydraulic fluid power - Sealing	August, 2023	-	Identical under dual
	ISO 7986	devices - Standard test methods to			numbering
I	I	ı		I	I

ĺ	Reviewed In: 2023	assess the performance of seals		1	
	ISO 7986:1997	used in oil hydraulic reciprocating			
	130 /900.199/	applications			
106	IS 15577 (Part 1):	Connections for general use and	February, 2020		Identical under dual
100	2005	fluid power - Ports and stud ends	1 Cordary, 2020	_	numbering
	ISO 9974-1	with ISO 261 threads with			numbering
	Reviewed In: 2020	elastomeric or Metal - to - Metal			
	ISO 9974-1:1996				
107	IS 15577 (Part 2):	sealing: Part 1 threaded ports  Connections for general use and	February, 2020		Identical under dual
107	2005	fluid power - Ports and stud ends	reditionly, 2020	-	
	ISO 9974-2	with ISO 261 threads with			numbering
	Reviewed In : 2020	elastomeric or Metal - to - Metal			
	ISO 9974-2:1996				
	130 9974-2:1990	sealing: Part 2 stud ends with			
100	IC 15577 (Dant 2)	elastomeric sealing (Type E)	Manah 2022		Identical ander dual
108	IS 15577 (Part 3):	Connections for general use and	March, 2022	-	Identical under dual
	2005	fluid power - Ports and stud ends with ISO 261 threads with			numbering
	ISO 9974-3				
	Reviewed In : 2022	elastomeric or Metal - to - Metal			
	ISO 9974-3:1996	sealing: Part 3 stud ends with metal			
100	IC 17001 2022	- To - Metal sealing (Type B)		+	Tdans:1 1 1 1
109	IS 17091 : 2023 ISO 14743 : 2020	Pneumatic Fluid Power Push-in		-	Identical under dual
		Connectors for Thermoplastic			numbering
110	ISO 14743 : 2020	Tubes		-	In diament
110	IS 17215 : 2019	Fluid Power System ― Hexagon		-	Indigenous
		Socket Screw Plugs with Parallel Screw Threads with Elastomeric			
111	IS 18159 : 2023	Sealing ― Specification			Indiana.
111	13 18139 : 2023	Online Leakage Sealing Systems  Code of Practise		-	Indigenous
112	IS/ISO 3939 : 1977	Fluid power systems and	August, 2023		Identical under single
112	Reviewed In : 2023	components - Multiple lip packing	August, 2023	_	numbering
	ISO 3939 : 1977	sets - Methods for measuring stack			numbering
	130 3939 . 1977	heights			
113	IS/ISO 4412-1 :	Hydraulic fluid power - Test code	January, 2020	_	Identical under single
113	1991	for determination ok airborne noise	Junuary, 2020		numbering
	Reviewed In: 2020	levels: Part 1 pumps			namoernig
	ISO 4412 - 1 : 1991	levels. Fair Fpainps			
114	IS/ISO 4412-2 :	Hydraulic fluid power - Test code	January, 2020	_	Identical under single
	1991	for determination of airborne noise	bundary, 2020		numbering
	Reviewed In: 2020	levels: Part 2 motors			nums vi mg
	ISO 4412-2:1991	ievels. Ture 2 motors			
115	IS/ISO 4412-3:	Hydraulic fluid power - Test code	January, 2020	_	Identical under single
		for determination of airborne noise			numbering
	Reviewed In: 2020	levels: Part 3 pumps - Method			
	ISO 4412-3 : 1991	using a parallelepiped microphone			
	2502 5 . 1771	array			
116	IS 5107 : 2004	Fluid power systems and	January, 2020	-	Identical under dual
	ISO 2944	components - Nominal pressures			numbering
	Reviewed In: 2020	(First Revision)			
	ISO 2944:2000	( 100 200 1000)			
117	IS 5108 : 1969	Recommendation on nominal rates	September, 2024	-	Indigenous
	Reviewed In: 2024	of flow for oil - Hydraulic system			
		elements			
118	IS 5109 : 1969	Recommendation on nominal bores	September, 2024	-	Indigenous
		for oil - Hydraulic system elements			
119		Hydraulic fluid power - Cylinders -	January, 2020	-	Identical under single
		Piston seal housings incorporating			numbering
	ISO 6547 : 1981	bearing rings - Dimensions and			
		tolerances			
				1	1

120	IS/ISO 7425-1 :	Hydraulic Fluid Power Cylinders		-	Identical under single
	2021	� Dimensions and Tolerances of			numbering
		Housings for Elastomer-Energized,			
	ISO 7425-1 : 2021	Plastic-Faced Seals Part 1 Piston			
		Seal Housings			
121	IS/ISO 7425-2:	Hydraulic fluid power - Housings	January, 2020	-	Identical under single
	1989	for elastomer - Energized, plastic -			numbering
	Reviewed In: 2020	Faced seals - Dimensions and			
	ISO 7425-2:1989	tolerances: Part 2 rod seal housings			
122	IS 7513 (Part 1):	Fluid Power Systems and	August, 2023	-	Identical under dual
	2019	Components ― Graphical			numbering
		Symbols and Circuit Diagrams Part			
	Reviewed In: 2023	1 Graphical Symbols for			
	ISO 1219-1:2012	Conventional Use and Data-			
		Processing Applications ( First			
		Revision)			
123	IS 7513 (Part 2):	Fluid power systems and	August, 2023	-	Identical under dual
	2019	components ? graphical symbols	<i>U</i> ,		numbering
	ISO 1219-2 : 2012	and circuit diagrams: Part 2 circuit			
	Reviewed In : 2023	diagrams (First Revision)			
	ISO 1219-2:2012	(1 Hot 100 1101)			
124	IS 7513 (Part 3):	Fluid Power Systems and		_	Identical under dual
127	2021	Components Graphical Symbols			numbering
	ISO 1219-3 : 2016	and Circuit Diagrams Part 3			numbering
	ISO 1219-3 : 2016	Symbol modules and connected			
	130 1219-3 . 2010	symbols in circuit diagrams ICS			
		0108030 2310001 Adoption of			
125	IS 8208 : 2020	ISO 1219-3 : 2016			Identical under dual
125		Fluid Power Systems and	-	-	Identical under dual
	ISO 3320 : 2013	Components — Cylinder Bores and			numbering
	ISO 3320 : 2013	Piston Rod Diameters and Area			
		Ratios — Metric Series ( Second			
106	TG 0202 2022	Revision )			X1 1 1 1 1
126	IS 8383 : 2023	Hydraulic Fluid Power Filter		-	Identical under dual
	ISO 2942 : 2018	Elements Verification of			numbering
	ISO 2942 : 2018	Fabrication Integrity and			
		Determination of the First Bubble			
		Point			
127	IS 8384 : 2013	Hydraulic fluid power - Filter	January, 2020	-	Identical under dual
	ISO 2941: 2009	elements - Verification of			numbering
		collapse/burst pressure rating (First			
	ISO 2941 : 2009	Revision)			
128	IS 8385 : 2005	Hydraulic fluid power - Filter	January, 2020	-	Identical under dual
	ISO 2943	elements - Verification of material			numbering
	Reviewed In: 2020	compatibility with fluids (First			
	ISO 2943:1998	Revision)			
129	IS 8386 : 1977	Method of test for end - Load	January, 2020	1	Not Equivalent
	ISO 3723	rating of oil hydraulic filter			
	Reviewed In: 2020	elements			
	ISO/DIS 3723				
130		Sizes for bores and port threads for	January, 2020	-	Indigenous
	ISO 7180	pneumatic fluid power cylinders -			
	Reviewed In: 2020	Recommendations (First Revision)			
131	IS 8532 : 2013	Hydraulic fluid power - Filter	January, 2020	-	Not Equivalent
	ISO 3724 :2007	elements - Determination of			
	Reviewed In: 2020	resistance to flow fatigue using			
	ISO 7180 : 1986	particulate contaminant (Second			
		Revision)			
132	IS 8801 : 1978	Specification for male stud	September, 2024	3	Indigenous
I I		<sup>-</sup>	=	1	I

	Reviewed In: 2024	coupling body for oil - Hydraulic couplings			
133	IS 8802 : 1987 Reviewed In : 2024	Specification for ferrules for oil hydraulic couplings (First Revision)	September, 2024	2	Indigenous
134	IS 8803 : 1987 Reviewed In : 2024	Specification for coupling nuts for oil hydraulic system (First Revision)	September, 2024	1	Indigenous
135	IS 8805 : 2002 Reviewed In : 2024	General requirements for ferrule type couplings used in oil hydraulic systems (First Revision)	September, 2024	-	Indigenous
136	IS 9269 : 2023 ISO 3968 : 2017 ISO 3968 : 2017	Hydraulic fluid power Filters Evaluation of Differential Pressure Versus Flow		-	Identical under dual numbering
137	IS 9387 (Part 1): 2018 Reviewed In: 2024	Specification for taper male stud elbow body for oil - Hydraulic c0upling: Part 1 made from forgings zyxw	September, 2024	-	Indigenous
138	IS 9387 (Part 2): 2018 Reviewed In: 2024	Specification for taper male stud elbow body for oil - Hydraulic couplings: Part 2 made from bar stock	September, 2024	-	Indigenous
139	IS 9388 (Part 1): 1979 Reviewed In: 2024	Specification for equal elbow body for oil - Hydraulic couplings: Part 1 made from forgings	September, 2024	-	Indigenous
140	IS 9388 (Part 2) : 2019	Equal elbow body for oil - Hydraulic couplings - Specification: Part 2 made from bar stock (First Revision)	-	-	Indigenous
141	IS 9389 (Part 1): 2018 Reviewed In: 2024	Specification for - Equal tee - Body for oil - Hydraulic couplins: Part 1 tee body made from forgings	September, 2024	-	Indigenous
142	IS 9389 (Part 2): 2018 Reviewed In: 2024	Specification for equal tee body for oil - Hydraulic couplings: Part 2 made from bar stock	September, 2024	-	Indigenous
143	IS 9390 : 2018 Reviewed In : 2024	Specification for straight coupling body for oil - Hydraulic couplings	September, 2024	-	Indigenous
144	IS 9391 : 1980 Reviewed In : 2024	Specification for straight coupling assemblies for oil - Hydraulic systems	September, 2024	-	Indigenous
145	IS 9392 : 1980 Reviewed In : 2024	Specification for taper male stud coupling body for oil - Hydraulic couplings	September, 2024	1	Indigenous
146	IS 9411 : 1980 Reviewed In : 2024	Specification for elbow coupling assemblies for oil - Hydraulic systems	September, 2024	-	Indigenous
147	IS 9412 (Part 1): 1980 Reviewed In: 2018	Specification for male stud elbow body for oil - Hydraulic couplings: Part 1 made from forgings	November, 2018	-	Indigenous
148	IS 9412 (Part 1): 2024	Male Stud Elbow Body for Oil - Hydraulic Couplings Specification Part 1 Made from Forgings		-	Indigenous
149	IS 9412 (Part 2): 1980 Reviewed In: 2018	Specification for male stud elbow body for oil - Hydraulic couplings: Part 2 made from bar stock	November, 2018	1	Indigenous
150	IS 9645 : 2005	Hexagon socket pipe plugs (First	January, 2020	-	Indigenous

	Reviewed In: 2020	Revision)		1	
151	IS 9724 (Part 1):	Specification for taper male stud	September, 2024	-	Indigenous
	1981	tee body (Stud Branch) for oil -	•		
	Reviewed In: 2024	Hydraulic couplings: Part 1 made			
		from forgings			
152	IS 9724 (Part 2):	Taper male stud tee body (Stud		-	Indigenous
	2024	branch) for oil hydraulic couplings			
		� Specification: Part 2 Made			
		from bar stock (first revision)			
153	IS 9724 (Part 2):	Specification for taper male stud	September, 2024	-	Indigenous
	1981	tee body (Stud Branch) for oil -	•		
	Reviewed In: 2024	Hydraulic couplings: Part 2 made			
		from bar stock			
154	IS 9725 (Part 1):	Specification for male stud tee	September, 2024	1	Indigenous
	1981	body (Stud Branch) for oil -			
	Reviewed In: 2024	Hydraulic couplings: Part 1 made			
		from forgings			
155	IS 9725 (Part 2):	Male Stud Tee Body Stud Branch		-	Indigenous
	2023	For Oil Hydraulic Couplings			
		Specification Part 2 Made From			
		Bar Stock			
156	IS 9746 (Part 1):	Equal Cross Body for Oil		=	Indigenous
	2021	Hydraulic Coupling Specification			
		Part 1 Made from Forgings			
157	IS 9746 (Part 2):	Specification for equal cross body	November, 2018	1	Indigenous
	1981	for oil - Hydraulic couplings: Part			
	Reviewed In: 2018	2 made from bar stock			
158	IS 9757 (Part 1):	Bulkhead Elbow Body for Oil		-	Indigenous
	2023	Hydraulic Couplings Specification			
		Part 1 Made from Forgings			
159	IS 9757 (Part 2):	Specification for bulkhead elbow	November, 2018	1	Indigenous
	1983	body for oil - Hydraulic couplings:			
	Reviewed In: 2018	Part 2 made from bar stock			
160	IS 9757 (Part 2):	Bulkhead Elbow Body or Oil		-	Indigenous
	2024	Hydraulic Couplings Specification			
		Part 2 Made from Bar Stock			
161	IS 9767 : 1981	Specification for tee coupling	September, 2024	-	Indigenous
	Reviewed In: 2024	assemblies for oil - Hydraulic			
		systems			
162	IS 9768 : 2024	Bulkhead straight body for oil -		-	Indigenous
		Hydraulic Couplings Specification			
		(Second Revision)			
163	IS 9769 : 1981	Specification for bulkhead straight	September, 2024	1	Indigenous
	Reviewed In: 2024	coupling assembly for oil -			
		Hydraulic systems			
164	IS 9770 : 1981	Specification for bulkhead elbow	September, 2024	1	Indigenous
	Reviewed In: 2024	coupling assembly for oil -			
		Hydraulic systems			

# **Standards under Development**

		Projects Approved
SI. No.	SI. No. Doc No. Title	
No Records Found		

# **Preliminary Draft Standards**

SI. No.	Doc No.	Title
1	PGD 36 (20471)	Fluid Power Systems Installation of Hydraulic Cylinders Guidelines

	Drafts Standards in WC Stage		
SI. No.	Doc No.	Title	
1	PGD 36 (24560) Revision	Metallic Tube Connections for Fluid Power and General Use Test Methods for Hydraulic Fluid	
	of: IS 15277:2002	Power Connections	

	Draft Standards Completed WC Stage		
SI. No.	Doc No.	Title	
1	PGD 36 (17550) Revision	PROFORMA FOR PURCHASE OF POSITIVE DISPLACEMENT PUMPS AND MOTORS	
	of: IS 15277:2002	USED IN OIL HYDRAULIC SYSTEMS SPECIFICATION	
2	PGD 36 (23662)	Hydraulic Fluid Power Calibration of Automatic Particle Counters for Liquids	
3	PGD 36 (23666) Revision	Fluid Power Systems and Components Vocabulary	
	of: IS 15277:2002		
4	PGD 36 (24419) Revision	Pneumatic fluid power Cylindrical Quick-action Couplings for Maximum Working Pressures of 1	
	of: IS 15277:2002	MPa 16 MPa and 25 MPa 10 bar 16 bar and 25 bar Plug Connecting Dimensions Specifications	
		Application Guidelines and Testing	
5	PGD 36 (24420) Revision	Hydraulic Fluid Power Dimensions and Requirements of Quick-Action Couplings Part 1	
	of: IS 15277:2002	Dimensions and Requirements	
6	PGD 36 (24562) Revision	Hydraulic Fluid Power Quick-Action Couplings Part 2 Test methods	
	of: IS 15277:2002		
7	PGD 36 (24563) Revision	Hydraulic Fluid Power Filters Filter Multi-pass Method for Evaluating Filtration Performance of	
	of: IS 15277:2002	Filter Element	
8	PGD 36 (24564) Revision	Connections for Hydraulic Fluid Power and General Use Ports and Stud Ends with ISO 261 Metric	
	of: IS 15277:2002	Threads and O-Ring Sealing Part 1 Ports with Truncated Housing for O-Ring Seal	

	Finalized Draft Indian Standard		
SI. No.	Doc No.	Title	
1	PGD 36 (18526) Revision	Equal Cross Body for Oil Hydraulic Couplings Specification Part 2 Made from Bar Stocks	
	of: IS 9746:1981		
2	PGD 36 (21665) Revision	Hydraulic Fluid Power Cylinders Dimensions and Tolerances of Housings for Elastomer Energized	
	of: IS/ISO 7425:1989	Plastic-Faced Seals Part 2 Rod Seal Housings	

	Finalized Draft Indian Standards under Print		
SI. No.	Doc No.	Title	
1	PGD 36 (17530) Revision	Metallic Tube Connections for Fluid Power And General Use Part 1 24 Cone Connectors	
	of: IS 15276:2002		

Total Published Standards:159 Total Standards Under development:13

### **Aspect Wise Report**

Product: 88
Code of Practices: 34
Methods of Test: 17
Terminology: 2
Dimensions: 11
System Standard: 0
Safety Standard: 1
Others: 6

Service Specification: 0 Process Specification: 0 Unclassified: 0

# Annexure-I :List of Indian Standards Withdrawn/Superseded

SI. No.	IS No. & Year	Title
1	IS 14645 : 1998	Fluid power systems and components - Cylinders - Nominal pressure
	Reviewed In: 2008	
2	IS 14740 : 1999	Pneumatic fluid power - Components using compressible fluids - Determination of flow - Rate
	ISO 6358	characteristics
	Reviewed In: 2020 ISO	
	6358 : 1989	
3	IS 7513 : 1974	Graphical symbols for fluid power systems
	ISO 1219	
	Reviewed In: 2018 ISO	
	1219- 1976	
4	IS 8805 (Part 1): 1978	General requirements for ferrule type couplings used in oil-hydraulic system Part 1 General
	Reviewed In: 1994	

### **Annexure-II :List of Indian Product Standards**

SI. No.	IS No. & Year	Title
1	IS 10103 : 1982	Method of test for ferrule type couplings used in oil - Hydraulic systems
	Reviewed In: 2020	
2	IS 10187 : 2013	Hydraulic fluid power - Four - Port directional control valves - Mounting surfaces Second
	ISO 4401: 2005	Revision
	Reviewed In: 2020 ISO	
	4401 : 2005	
3	IS 10410 : 1983	Specification for lock nuts for bulk head coupling assembly for oil - Hydraulic systems
	Reviewed In: 2024	
4	IS 10417 : 1983	Specification for equal cross coupling assembly for oil - Hydraulic systems
	Reviewed In: 2024	
5	IS 10433 (Part 1): 2023	Male Stud Tee Body Stud Run for Oil-Hydraulic Coupling Specification Part 1 Made from
		Forgings
6	IS 10433 (Part 2): 2002	Male stud tee body Stud Run for oil - Hydraulic couplings - Specification Part 2 made from bar
	Reviewed In: 2024	stock First Revision
7	IS 10453 (Part 1): 2023	Taper Male Stud Tee Body Stud Run for Oil Hydraulic Couplings Specification Part 1 Made from
		Forgings
8	IS 10453 (Part 2): 2023	Taper Male Stud Tee Body Stud Run for Oil Hydraulic Couplings Specification Part 2 Made from
		Bar Stock
9	IS 10480 : 2024	Stud run tee coupling assemblies for oil hydraulic systems Specification Second Revision
	77 1007 5 2022	
10	IS 10956 : 2023	Welding coupling body for oil hydraulic couplings - Specification
11	IS 10978 : 1984	Specification for welding coupling assembly for oil - Hydraulic systems
11	Reviewed In : 2020	Specification for weighing assembly for on - frydraunc systems
12	10983 : 2021	Hydraulic Fluid Power - Cylinders - Dimensions and Tolerances of Housings for Single-Acting
12	ISO 5597 : 2018	Piston and Rod Seals in Reciprocating Applications Second Revision
	IEC 61331-3 : 2014	1 iston and Rod seats in Reciprocating Applications second Revision
13	IS 12096 : 1987	Specification for hexagon socket screw plugs with parallel screw threads for fluid power system
	Reviewed In : 2024	Specification for normagon society series, plage with parameter anemas for fluid power system
14	IS 12116 (Part 1): 1987	Specification for hexagon head taper plugs for oil hydraulic systems Part 1 made from forgings
	Reviewed In: 2024	aportion of the control of the contr
15	IS 12484 : 1999	Cup seal for fluid power applications - Specification First Revision
	Reviewed In: 2020	
16	IS 12485 : 1988	Specification for metal bonded seals
	Reviewed In: 2020	1
17	IS 12498 : 1988	Method of test for evaluation of performance of air pressure regulators
	Reviewed In: 2024	
18	IS 12593 : 2000	Hydraulic fluid power - Single rod cylinders 16 mpa 160 Bar compact series - Tolerances First
	ISO 8131	Revision
	Reviewed In: 2020 ISO	
I	I	1

1	8131 : 1992	
19	IS 12597 : 1988	Recommendation on units for fluid power system
	Reviewed In: 2024	
20	IS 12723 : 2020	Pneumatic Fluid Power - Single Rod Cylinders 1 000 kPa 10 bar series bores from 8 mm to 25
	ISO 6432 : 2015	mm - Basic and Mounting Dimensions First Revision
	ISO 6432 : 1985	
21	IS 12738 : 1995	Pneumatic fluid power 7 single rod cylinders 1 000 kPa Ib 10 bar Series With Integral Mountings
	ISO 6430	Bores From 32 Mm To 250 Mm - Mounting Dimensions First Revision
	Reviewed In: 2020 ISO	
	6430 : 1992	
22	IS 13053 : 1991	Hydraulic fluid power system commissiontng and maintenance of complete hydraulic systems
	Reviewed In: 2024	recommendations
23	IS 13085 : 1991	Hydraulic fluid power - Single rod cylinders 160 bar 16 Mpa medium series - Port dimensions
	ISO 8136	
	Reviewed In: 2024 ISO	
	8136 : 1986	
24	IS 13102 : 1991	Hydraulic - Fluid power - Single rod cylinders 250 bar 25 Mpa series - Port dimensions
	ISO 8137	
	Reviewed In: 2024 ISO	
25	8137 : 1986	Hydraulia fluid nowar Single rad cylinders 16 mms 160 Dec segment series Dect discovery
25	IS 13103 : 2005 ISO 8138	Hydraulic fluid power - Single rod cylinders 16 mpa 160 Bar compact series - Port dimensions First Revision
	Reviewed In : 2020 ISO	FIIST REVISION
	8138:1998	
26	13170 : 2021	Connections for hydraulic fluid power and general use - Ports and stud ends with ISO 261 metric
20	ISO 6149-1 : 2019	threads and O-ring sealing Part 1 Ports with truncated housing for O-ring seal
	ISO/IEC 20547-3:2020	threads and O-ring scanng rare reference from the first scan
27	13170 : 2021	Connections for Hydraulic Fluid Power and General Use - Ports and Stud Ends with ISO 261
	ISO 6149-2 : 2006	Metric Threads and O-Ring Sealing Part 2 Dimensions Design Test Methods and Requirements for
	Identical	Heavy-Duty S Series Stud Ends First Revision
28	13170 : 2021	Connections for Hydraulic Fluid Power and General Use Ports and Stud Ends with ISO 261 Metric
	ISO 6149-3 : 2006	Threads and O-Ring Sealing Part 3 Dimensions Design Test Methods and Requirements for Light-
	ISO 13397-1:1995	Duty L Series Stud Ends First Revision
29	IS 13336 : 1992	Reducer coupling assemblies for oil hydraulic system - Specification
	Reviewed In: 2024	
30	IS 13337 : 1992	Straight reducer coupling body for oil hydraulic system - Specification
	Reviewed In: 2024	
31	IS 13338 : 1992	Hexagonal head screw plugs with shoulder and parallel screw threads - Specification
	Reviewed In: 2024	
32	IS 13434 : 2005	Hydraulic fluid power - Single rod cylinders 16 mpa 160 Bar medium and 25 mpa 250 Bar series -
	ISO 8135	Tolerances First Revision
	Reviewed In: 2020 ISO	
	8135:1999	W. I. W. W. D. I. I. A. D. I.
33	IS 13534 : 2023	Hydraulic Fluid Power Valves Determination of Pressure Differential Flow Characteristics
	ISO 4411 : 2019	
24	12614 - 2021	Hydroulia Eluid Douran, Dimonologo and Douringments of Octob Astley Governor Day
34	13614 : 2021 ISO 7241 : 2014	Hydraulic Fluid Power - Dimensions and Requirements of Quick-Action Couplings Part 1
	ISO 5522:1981	Dimensions and Requirements First Revision
35	IS 13614 (Part 2) : 1993	Hydraulic fluid power - Quick - Action couplings Part 2 test methods
] 33	ISO 7241-2	Tryuraune truid power - Quiek - Action couplings Fait 2 test inclinds
	Reviewed In : 2024 ISO	
	7241-2 : 1986	
36	14148 : 2021	Hydraulic Fluid Power - Pressure-reducing Valves Sequence Valves Unloading Valves Throttle
	ISO 5781 : 2016	Valves and Check Valves - Mounting Surfaces Second Revision
	ISO/TR 15599:2002	- III I I I I I I I I I I I I I I I I I
37	IS 14150 : 2005	Hydraulic fluid power - Pressure relief valves - Mounting surfaces First Revision
	ISO 6264	, 1
	Reviewed In: 2020 ISO	
1	1	

I	6264:1998	
38	IS 14235 : 1995	Wiper seals used for fluid power application - Specification
	Reviewed In: 2020	The state of the s
39	IS 14236 : 1995	Sealsfor reciprocating applications used in fluid power systems methods of test
	Reviewed In: 2020	Saft man Saft
40	IS 14237 : 1995	U - Type seals with asymmetrical and symmetrical lips used for fluid power application -
	Reviewed In: 2020	Specification
41	14423 : 2021	Fluid Power Systems and Components - Connectors and Associated Components - Nominal
	ISO 4399 : 2019	Pressures First Revision
	ISO 16954:2015	
42	IS 14528 : 1998	Tube end straight reducers for oil - Hydraulic couplings
	Reviewed In: 2024	James Lange
43	IS 14740 (Part 1): 2021	Pneumatic Fluid Power - Determination of Flow-Rate Characteristics of Components Using
	ISO 6358-1 : 2013	Compressible Fluids Part 1 General Rules and Test Methods for Steady-State Flow First Revision
		, i
44	IS 14875 : 2000	Compressed air filters - Evaluation parameters
	Reviewed In: 2024 ISO	
	5782-1 : 1997	
45	IS 14876 : 2020	Pneumatic Fluid Power Compressed-air lubricators Part 1 Main Characteristics to be Included in
		Supplier s Literature and Product-marking Requirements First Revision
	ISO 6301-1:2017	
46	15045 : 2021	Pneumatic Fluid Power - Five-Port Directional Control Valves Part 1 Mounting Interface Surfaces
	ISO 5599-1 : 2001	without Electrical Connector First Revision
	ISO 19807-1	
47	15045 : 2021	Pneumatic Fluid Power - Five-Port Directional Control Valves Part 2 Mounting Interface Surfaces
	ISO 5599-2 : 2001	with Optional Electrical Connector First Revision
	ISO 17937:2015	
48	IS 15045 (Part 3): 2001	Pneumatic fluid power - Five port directional control valves Part 3 code system for
	ISO 5599-3	communication of valve functions
	Reviewed In: 2024 ISO	
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