



FAIR PRODUCTS INDIA

MOBILIZING MACHINES SINCE 1995

www.fairproducts.in

FOUNDER'S NOTE



Sanjay Singh
Managing Director

"From humble beginnings to global reach, our journey is driven by one belief—precision is more than engineering; it's a mindset that shapes everything we do."

When Fair Products India was established in 1995, our vision was clear—to manufacture precision-engineered components that serve as the backbone of industrial machinery across sectors. What began in a modest workshop in Faridabad has since evolved into a trusted brand, delivering over a thousand high-performance components to leading automotive, agricultural, and industrial OEMs globally.

At our core, we are driven by one unwavering belief: **Precision is not just a metric—it is a mindset.**

Over nearly three decades, we have built Fair Products India on the pillars of quality, integrity, innovation, and customer-centricity. Our journey from manufacturing industrial keys to becoming one of India's most recognized names in high-precision turned and machined components is a testament to the strength of our people, our processes, and our purpose.

In today's world, manufacturing excellence must go hand-in-hand with environmental and social responsibility. At Fair Products India, we have embedded ESG (Environmental, Social, Governance) principles into every aspect of our operations:

As we expand our global footprint—our commitment to engineering excellence, environmental stewardship, and long-term partnerships remains resolute.

The future of manufacturing lies in innovation—and we are investing boldly. With ongoing advancements in automation, digital quality controls, and intelligent machining, we are preparing not just to meet industry demands but to shape them. Every component we deliver is a reflection of our dedication to excellence, every client partnership a reflection of our values.

We remain grateful to our customers, partners, employees, and communities who continue to place their trust in us. Together, we are not just manufacturing parts—we are building the future of mobility and machinery, sustainably and responsibly.

WHO WE ARE

Fair Products India began its journey on April 13, 1995, in Faridabad, Haryana, with a modest setup and a clear vision - To manufacture High-Quality Industrial keys such as Woodruff keys, Parallel keys, Gib head keys, End round keys, and more. These precision-engineered components play a critical role in locking shafts to gears, pulleys, and various parts used in automobiles, agro-machinery, machine tools, motors, and generators.

Over the years, we have expanded significantly, and today we proudly manufacture over 1,000 turned and machined components, serving some of the top automobile manufacturers in India. With a strong commitment to quality, innovation, and customer satisfaction, Fair Products India has emerged as one of the largest key manufacturers in the country.

Our growing global footprint extends across major international markets, including the United States, United Kingdom, Brazil, and France. As we continue to evolve, our focus remains on delivering precision, reliability, and excellence in every product we create.



OUR MISSION AND VISION

Our Mission

At Fair Products India, our mission is **“To empower our customers' success by delivering high-precision, cost-effective, and Zero-Defect components that meet the highest standards of quality and performance”**.

We are committed to operational excellence, continuous innovation, and lean manufacturing practices that help us maintain competitive pricing without compromising on quality. By fostering a culture of accountability, integrity, and customer focus, we aim to be a dependable and long-term partner for every client we serve.

Our Vision

“To harness the power of superior thinking, innovation, and engineering excellence to create world-class products that consistently exceed customer expectations”.

We aspire to be the most trusted and valued business partner for our clients by delivering precision, reliability, and quality in every component we manufacture. Through continuous improvement, customer-centric practices, and ethical business values, we aim to build long-term relationships and contribute meaningfully to the global industrial landscape.



WHY CHOOSE US

- 01 Unmatched Quality:** We follow stringent quality control processes to ensure zero-defect products, delivering consistent performance and reliability.
- 02 Extensive Product Range:** From Woodruff keys to custom-machined components, we offer over 1,000 high-precision parts tailored to a wide range of industrial applications.
- 03 Customer-Centric Approach:** We believe in long-term partnerships and work closely with our clients to meet their unique specifications and timelines.
- 04 Cost Efficiency:** We combine lean manufacturing with technological excellence to provide cost-effective solutions without compromising on quality.
- 05 Continuous Innovation:** Our team is committed to ongoing process improvement and technological upgrades to stay ahead in a competitive industry.

**BUILDING TRUST
WITH EVERY
COMPONENT,
CRAFTED FOR
OVER 25 YEARS
OF EXCELLENCE**



OUR CUSTOMERS



PRODUCTS AND SERVICES

- WOODRUFF KEYS
- PARALLEL KEYS
- GIB HEAD KEYS
- SOLID DOWELS
- TAPER PINS
- BUSHES
- SPRING DOWELS
- SPRING DOWEL COMBINATION
- TURNED MACHINING PARTS
 - ADAPTORS
 - BANJO BOLTS
 - PISTON PINS
 - CLEVIS PINS
 - HIGH PRECISION SPACERS
 - CONNECTORS
 - LOCK NUTS
 - WIDE VARIETY
- SHIMS & WASHERS
- SPLIT PINS
- TUBES AND WELDED COMPONENTS



WOODRUFF KEYS

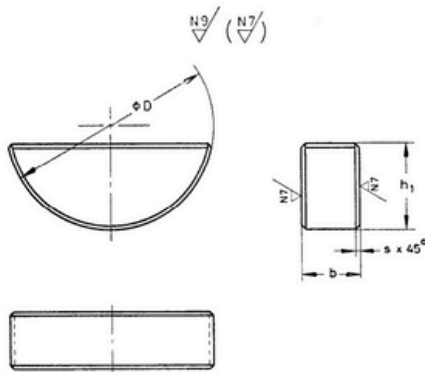


A **Woodruff key** is a semi-circular, disk-shaped key used to connect a rotating machine element (like a gear or pulley) to a shaft, ensuring proper alignment and secure torque transmission. It is widely used in automotive, aerospace, and industrial machinery for its ability to prevent slippage and maintain precise positioning during operation.

At **Fair Products India**, we manufacture premium-quality Woodruff keys tailored to customer-specific requirements. Our products are crafted with precision and durability in mind, ensuring reliable performance across various industrial applications. Trust us for customized solutions that meet the highest standards of engineering and quality.

TABLE 1 DIMENSIONS AND TOLERANCES OF KEYS
(Clause 2.1)

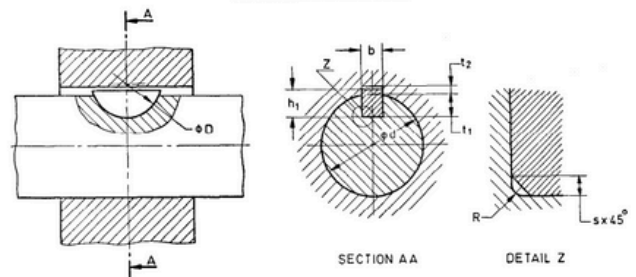
All dimensions in millimetres.



b	Tol on b h9*	h ₁	Tol on h ₁ h11	D	Tol on D h12	s	
						Min	Max
1.0	0 -0.025	1.4	0 -0.060	4.0	0 -0.120	0.16	0.25
1.5		2.6		7.0		0.16	0.25
2.0		2.6		7.0		0.16	0.25
2.0		3.7		10.0		0.16	0.25
2.5		3.7		10.0		0.16	0.25
3.0	0 -0.030	5.0	0 -0.075	13.0	0 -0.180	0.16	0.25
3.0		6.5		16.0		0.16	0.25
4.0		6.5		16.0		0.25	0.40
4.0		7.5		19.0		0.25	0.40
6.0		6.9		16.0		0.25	0.40
5.0	0 -0.030	7.5	0 -0.090	19.0	0 -0.210	0.25	0.40
5.0		9.0		22.0		0.25	0.40
6.0		9.0		22.0		0.25	0.40
6.0		10.0		25.0		0.25	0.40
8.0		11.0		28.0		0.40	0.60
10.0	0 -0.036	13.0	0 -0.110	32.0	0 -0.250	0.40	0.60

*A closer tolerance may be adopted subject to agreement between the supplier and the purchaser.

All dimensions in millimetres.



Key $b \times h_1 \times D$	b Non	Width				Depth				R	
		Tolerance on b				t_1	Tol on t_1	t_2	Tol on t_2	Max	Min
		Normal Fit		Close Fit							
		Shaft n9	Hub Js9	Shaft p9	Hub P9						
1'0×1'4×4'0	1'0	-0'004 -0'029	+0'012 -0'012	-0'006 -0'031	1'0	+0'1 0	0'6	+0'1 0	0'16	0'08	
1'5×2'6×7'0	1'5				2'0		0'8		0'16	0'08	
2'0×2'6×7'0	2'0				1'8		1'0		0'16	0'08	
2'0×3'7×10'0	2'0				2'9		1'0		0'16	0'08	
2'5×3'7×10'0	2'5				2'7		1'2		0'16	0'08	
3'0×5'0×13'0	3'0	0 -0'030	+0'015 -0'015	-0'012 -0'042	3'8	+0'2 0	1'4	+0'2 0	0'16	0'08	
3'0×6'5×16'0	3'0				5'3		1'4		0'16	0'08	
4'0×6'5×16'0	4'0				5'0		1'8		0'25	0'16	
4'0×7'5×19'0	4'0				6'0		1'8		0'25	0'16	
5'0×6'5×16'0	5'0				4'9		2'3		0'25	0'16	
5'0×7'5×19'0	5'0	0 -0'036	+0'018 -0'018	-0'015 -0'051	5'5	+0'3 0	2'3	+0'2 0	0'25	0'16	
5'0×9'0×22'0	5'0				7'0		2'3		0'25	0'16	
6'0×9'0×22'0	6'0				6'5		2'8		0'25	0'16	
6'0×10'0×25'0	6'0				7'5		2'8		0'25	0'16	
8'0×11'0×28'0	8'0				8'0		3'3		0'40	0'25	
10'0×13'0×32'0	10'0				10'0		3'3		0'40	0'25	

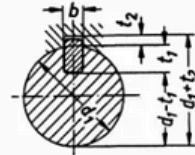
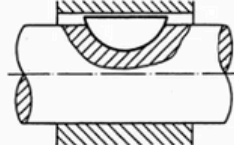
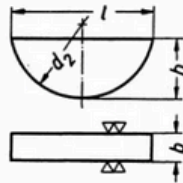
DIN STANDARD

Drive Type Fastenings without Taper Action
Woodruff Keys
Dimensions and Application

DIN
6888

Mittelnervverbindungen ohne Anzug; Scheibenfedern, Abmessungen und Anwendung

Dimensions in mm



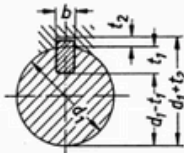
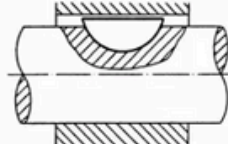
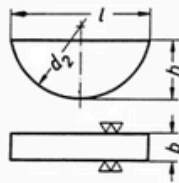
Breaking of corners
(all-round)
Chamfering RADIUSING
at manufacturer's choice

Radius at bottom of keyway
in shaft and hub

Designation of a Woodruff key of width
 $b = 4$ mm and height $h = 5$ mm:
Woodruff key 4 x 5 DIN 6888

Cross-section of Woodruff key (Half-round steel according to DIN 6882)			Width b h9	1	1,5	2	2,5 *	3	4					
			Height h h12	1,4	2,6	2,6	3,7	3,7	3,7	5	6,5	5	6,5	7,5
Allocation ¹⁾	I	for shaft diameter d ₁	above	3	4	6		8		10				
		up to	4	6			10			12				
	II	for shaft diameter d ₁	above	6	8	10		12		17			17	
		up to	8	10	12				17				22	
Diameter			d ₂	4	7	7	10	10	10	13	16	13	16	19
			Perm.var.	- 0,1	- 0,1	- 0,1	- 0,1	- 0,1		- 0,1		- 0,1		
Chamfering or radiusing			r ₁	0,2	0,2	0,2	0,2	0,2		0,2			0,2	
			Perm.var.	+ 0,1	+ 0,1	+ 0,1	+ 0,1		+ 0,1		+ 0,1		+ 0,1	
Length			l ≈	3,82	6,76	6,76	9,66	9,66	9,66	12,65	15,72	12,65	15,72	18,57
Weight (7.85 kg/dm ³) kg/1000 pieces ≈				0,031	0,153	0,204	0,414	0,518	0,622	1,10	1,80	1,47	2,40	3,22
Shaft keyway	Width b ²⁾	Tight fit P9		1	1,5	2		2,5		3			4	
		Sliding fit N9												
	Depth t ³⁾	Series A		1	2	1,8	2,9	2,9	2,5	3,8	5,3	3,5	5	6
		Series B		1	2	1,8	2,9	2,9	2,8	4,1	5,6	4,1	5,6	6,6
	Diameter d ₂ + 0,5	Perm.var. for A and B		+ 0,1	+ 0,1	+ 0,1	+ 0,1	+ 0,1	+ 0,1	+ 0,1		+ 0,1		+ 0,1
				4	7	7	10	10	10	13	16	13	16	19
Hub keyway	Width b ²⁾	Tight fit P9		1	1,5	2		2,5		3			4	
		Sliding fit J9 6)												
	Depth t ³⁾	Series A ⁴⁾		0,6	0,8	1	1		1,4				1,7	
		Series B ⁵⁾		0,6	0,8	1	1		1,1				1,1	
	Diameter d ₂ + 0,5	Perm.var. for A and B		+ 0,1	+ 0,1	+ 0,1	+ 0,1	+ 0,1	+ 0,1	+ 0,1		+ 0,1		+ 0,1
				0,2	0,2	0,2	0,2	0,2	0,2	0,2		0,2		0,2
Radius at bottom of keyway			r ₂											

Dimensions in mm



Breaking of corners
(all-round)
Chamfering RADIUSING
at manufacturer's choice

Radius at bottom of keyway
in shaft and hub

Designation of a Woodruff key of width $b = 8$ mm and height $h = 11$ mm:
Woodruff key 8 x 11 DIN 6888

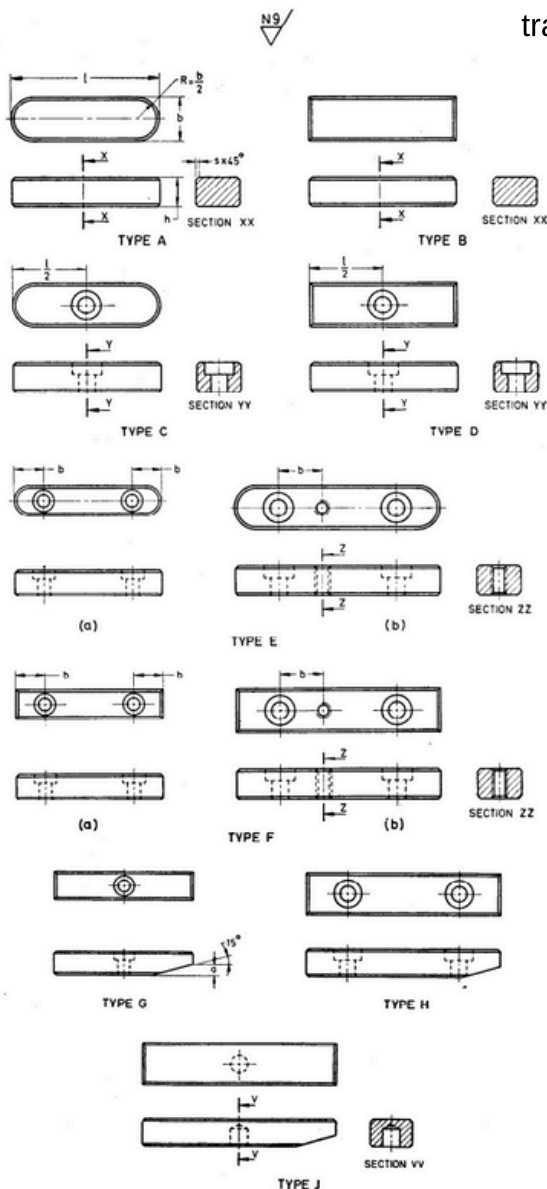
Cross-section of Woodruff key (Half-round steel according to DIN 6882)			Width b h9			5			6			8			10				
			Height h h12			6,5	7,5	9	7,5	9	(10)	11	9	11	13	11	13	16	
Allocation ¹⁾	I	for shaft diameter d_1	above	12	—				17			—	22			—	30		—
		up to	17	—				22			—	30			—	38		—	
	II	for shaft diameter d_1	above	22				30						38					
		up to	30				38						—						
Diameter			d_2	16	19	22	19	22	25	28				22	28	32	28	32	45
			Perm.var.	— 0,1				— 0,1			— 0,2			— 0,1			— 0,2		
Chamfering or radiusing			r_1	0,2				0,4						0,4			0,4		
			Perm.var.	+ 0,1				+ 0,2						+ 0,2			+ 0,2		
Length			$l \approx$	15,72	18,57	21,63	18,57	21,63	24,49	27,35	21,63			27,35	31,43	27,35	31,43	43,08	
Weight (7,85 kg/dm ³) kg/1000 p.			$\approx$	3,01	4,09	5,73	4,91	6,88	8,64	10,6	9,17			14,1	19,3	17,6	24,1	39,9	
Shaft keyway	Width b^2	Tight fit P9	5			6						8			10				
		Sliding fit N9	5			6						8			10				
	Depth t_1	Series A	4,5	5,5	7	5,1	6,6	7,6	8,6	6,2			8,2	10,2	7,8	9,8	12,8		
		Series B	5,4	6,4	7,9	6	7,5	8,5	9,5	7,5			9,5	11,5	9,1	11,1	14,1		
	Diameter $d_2 + 0,5$	Perm.var. for A and B	+ 0,1			+ 0,2			+ 0,1			+ 0,2			+ 0,2				
			16	19	22	19	22	25	28	22			28	32	28	32	45		
Hub keyway	Width b^2	Tight fit P9	5			6						8			10				
		Sliding fit J9 6)	5			6						8			10				
	Depth t_2	Series A ⁴⁾	2,2				2,6						3			3,4			
		Perm.var. for A	+ 0,1				+ 0,1						+ 0,1			+ 0,2			
	Diameter $d_2 + 0,5$	Series B ⁵⁾	1,3				1,7						1,7			2,1			
		Perm.var. for B	+ 0,1				+ 0,1						+ 0,1			+ 0,1			
Radius at bottom of keyway			r_2	0,2				0,4						0,4			0,4		
			Perm.var.	— 0,1				— 0,2						— 0,2			— 0,2		

PARALLEL KEYS



A **Parallel key** is a type of machine element used to connect a rotating machine element (like a gear or pulley) to a shaft. It ensures that torque is transmitted without slipping and helps maintain precise alignment between components. The key fits into matching keyways (slots) on both the shaft and the rotating part.

At **Fair Products India**, we manufacture premium-quality parallel keys designed for secure and efficient power transmission. Our products are crafted with precision and can be customized to meet specific customer requirements. Trusted for durability and accuracy, our keys ensure perfect alignment and torque transmission in various mechanical applications.



Note — Types A, C and E are meant for machine tools application also.

TABLE 1 DIMENSIONS FOR KEYS

(Clause 3.1 and Fig. 1)

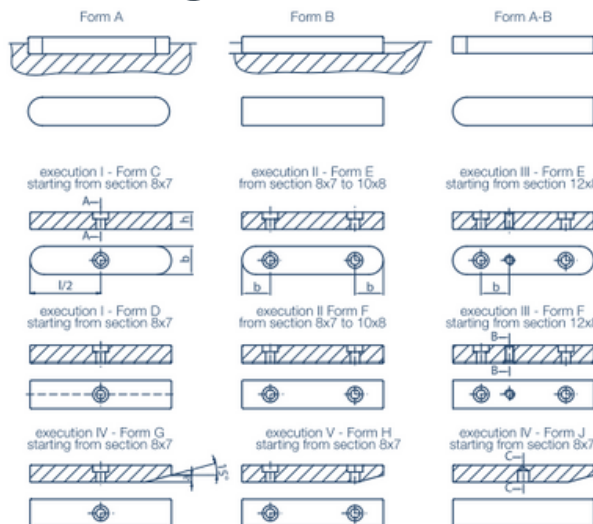
All dimensions in millimetres.

b	Tol on b h9	h	Tol on h*	a	s		Range of Key Length l		Range of Key Length (for Machine Tools Only)	
					Min	Max	Min	Max	Min	Max
2	0	2	0	—	0.16	0.25	6	20	—	—
3	-0.025	3	0	—	0.16	0.25	6	36	—	—
4	0	4	0	—	0.16	0.25	8	45	10	45
5	-0.030	5	0	—	0.25	0.40	10	56	12	56
6	0	6	0	—	0.25	0.40	14	70	16	70
8	0	7	0	3	0.25	0.40	18	90	20	90
10	-0.036	8		3	0.40	0.60	22	110	25	110
12	0	8		3	0.40	0.60	28	140	32	140
14	0	9		3.5	0.40	0.60	36	160	40	160
16	-0.043	10	0	4	0.40	0.60	45	180	45	180
18	0	11		4.5	0.40	0.60	50	200	50	200
20	0	12		5	0.60	0.80	56	220	56	220
22	-0.052	14		5.5	0.60	0.80	63	250	63	250
25	0	14	0	5.5	0.60	0.80	70	280	70	250
28	0	16		6.5	0.60	0.80	80	320	80	250
32	0	18		7	0.60	0.80	90	360	90	250
36	-0.062	20		8	1.00	1.20	100	400	100	250
40	0	22	0	9	1.00	1.20	110	400	110	250
45	0	25		10	1.00	1.20	125	400	—	—
50	0	28		11	1.00	1.20	140	400	—	—
56	0	32		13	1.60	2.00	160	400	—	—
63	-0.074	32	0	13	1.60	2.00	180	400	—	—
70	0	36		14	1.60	2.00	200	400	—	—
80	0	40		16	2.50	3.00	220	400	—	—
90	-0.087	45		18	2.50	3.00	250	400	—	—
100	0	50	0	20	2.50	3.00	280	400	—	—

Note — Keys with b = 4 to 40 are meant for machine tools application also.

*Tol on h : Square Section h9;
Rectangular Section h11.

DIN STANDARD



bxh (mm)	length L (mm)																
	feather keys length tolerance: up to 28 mm from 0 to -0,20 mm, over 28 up to 80 mm from 0 to -0,30 mm, over 80 mm from 0 to -0,50 mm																
	keyway tolerance: up to 28 mm from +0,20 to 0 mm, over 28 up to 80 mm from +0,30 to 0, over 80 mm from +0,50 to 0 mm																
3x3	8	10	12	14	15	16	18	20	22	25	28	30	32	35	36	40	
Kg/100 pcs	0,05	0,07	0,08	0,09	0,11	0,11	0,12	0,14	0,15	0,17	0,19	0,21	0,22	0,24	0,25	0,28	
4x4	8	10	12	14	15	16	18	20	22	25	28	30	32	35	36	40	
Kg/100 pcs	0,09	0,12	0,14	0,17	0,18	0,19	0,22	0,24	0,27	0,30	0,34	0,37	0,39	0,43	0,44	0,49	
5x5	8	10	12	14	15	16	18	20	22	25	28	30	32	35	36	40	
Kg/100 pcs	0,14	0,17	0,21	0,25	0,27	0,29	0,33	0,37	0,41	0,47	0,53	0,57	0,61	0,66	0,69	0,76	
6x4	10	12	14	15	16	18	20	22	25	28	30	32	35	36	40	45	
Kg/100 pcs	0,17	0,20	0,24	0,26	0,28	0,31	0,35	0,38	0,43	0,49	0,52	0,56	0,61	0,62	0,69	0,78	
6x5	10	12	14	15	16	18	20	22	25	28	30	32	35	36	40	45	
Kg/100 pcs	0,21	0,26	0,30	0,33	0,35	0,39	0,43	0,48	0,54	0,61	0,65	0,69	0,76	0,78	0,87	0,98	
6x6	10	12	14	15	16	18	20	22	25	28	30	32	35	36	40	45	
Kg/100 pcs	0,26	0,31	0,36	0,39	0,42	0,47	0,52	0,59	0,67	0,76	0,80	0,86	0,96	0,98	1,09	1,23	
8x5	12	14	15	16	18	20	22	25	28	30	32	35	36	40	45	50	
Kg/100 pcs	0,34	0,40	0,43	0,46	0,51	0,57	0,63	0,71	0,80	0,85	0,91	1,00	1,03	1,14	1,28	1,42	
8x6	12	14	15	16	18	20	22	25	28	30	32	35	36	40	45	50	
Kg/100 pcs	0,41	0,48	0,51	0,55	0,62	0,68	0,75	0,85	0,96	1,03	1,09	1,20	1,23	1,37	1,54	1,71	
8x7	12	14	15	16	18	20	22	25	28	30	32	35	36	40	45	50	
Kg/100 pcs	0,48	0,56	0,60	0,64	0,72	0,81	0,89	1,03	1,16	1,24	1,34	1,45	1,51	1,69	1,91	2,13	
8x8	15	16	18	20	22	25	28	30	32	35	36	40	45	50	55	56	
Kg/100 pcs	0,68	0,72	0,81	0,91	1,00	1,13	1,27	1,36	1,45	1,58	1,63	1,81	2,04	2,26	2,49	2,53	
10x8	15	16	18	20	22	25	28	30	32	35	36	40	45	50	55	56	
Kg/100 pcs	0,85	0,91	1,02	1,13	1,25	1,44	1,63	1,76	1,88	2,07	2,13	2,38	2,70	3,01	3,32	3,39	
10x10	15	20	22	25	28	30	32	35	36	40	45	50	55	56	60	63	
Kg/100 pcs	1,06	1,41	1,56	1,77	1,98	2,12	2,26	2,47	2,55	2,83	3,18	3,53	3,89	3,96	4,24	4,45	
12x8	15	20	22	25	28	30	32	35	36	40	45	50	55	56	60	63	
Kg/100 pcs	1,03	1,37	1,51	1,71	1,92	2,08	2,22	2,45	2,52	2,82	3,20	3,58	3,95	4,03	4,34	4,56	
12x12	20	22	25	28	30	32	35	36	40	45	50	55	56	60	63	65	
Kg/100 pcs	2,05	2,26	2,57	2,87	3,08	3,28	3,59	3,69	4,10	4,62	5,13	5,64	5,75	6,16	6,46	6,67	
14x9	20	22	25	28	30	32	35	36	40	45	50	55	56	60	63	65	
Kg/100 pcs	1,81	1,99	2,27	2,54	2,72	2,90	3,17	3,26	3,66	4,15	4,65	5,06	5,24	5,62	5,93	6,15	
14x14	30	35	40	45	50	55	56	60	63	65	70	80	85	90	100	110	
Kg/100 pcs	4,23	4,93	5,64	6,34	7,05	7,75	7,90	8,46	8,88	9,16	9,87	11,28	11,98	12,69	14,10	15,51	
16x10	30	35*	40	45	50	55	56	60	63	65	70	80	85	90	100	110	
Kg/100 pcs	3,43	4,00	4,57	5,22	5,85	6,43	6,60	7,07	7,77	8,37	9,57	10,27	10,87	12,17	13,37	13,80	
18x11	30	40	45	50	55	56	60	63	65	70	75	80	90	100	110	120	
Kg/100 pcs	4,30	5,74	6,45	7,17	7,88	8,10	8,65	9,19	9,56	10,30	11,06	11,80	13,40	14,90	16,50	17,80	
20x12	40	45	50	55	56	60	63	70	80	90	100	110	120	125	130	140	
Kg/100 pcs	6,80	7,65	8,50	9,62	9,79	10,30	11,09	12,39	14,29	16,19	17,99	19,89	21,50	22,69	23,20	25,59	
22x14	50	55	60	63	70	80	90	100	110	120	125	130	140	150*	160	180	
Kg/100 pcs	10,83	11,92	13,00	14,06	15,76	18,16	20,66	23,06	25,46	27,60	29,06	30,00	32,66	34,50	37,56	42,36	
24x14	60	63	70	80	90	100	110	120	125	130	140	150	160	180	200	220	
Kg/100 pcs	14,40	15,10	17,00	19,50	22,50	24,80	27,40	30,00	31,50	32,80	35,20	38,00	40,50	48,00	51,00	55,00	
25x14	60	63	70	80	90	100	110	120	125	130	140	150	160	180	200	220	
Kg/100 pcs	13,90	15,60	17,70	20,50	23,20	26,00	28,70	31,00	32,80	34,00	37,00	39,30	42,50	48,00	53,50	58,90	
28x16	55	60	70	80	90	100	110	120	125	130	140	145	150	160	180	200	
Kg/100 pcs	17,40	19,00	22,20	26,00	29,60	33,10	36,60	39,50	41,90	43,50	47,10	50,30	54,20	61,20	68,20	75,30	
32x18	65	70	80	90	100	110	120	125	130	140	150	160	170	180	200	220	
Kg/100 pcs	27,20	29,20	33,40	37,60	42,10	47,60	49,50	53,40	55,50	60,20	64,00	69,20	73,90	78,30	87,30	96,40	
36x20	80	90	100	110	120	125	130	140	150	160	170	180	200	220	250	280	
Kg/100 pcs	41,30	46,50	52,10	57,80	63,00	68,50	74,70	79,80	86,00	92,20	97,60	108,60	119,60	136,60	153,60	164,50	
40x22	70	90	100	110	120	125	130	140	150	160	180	200	220	240	250	280	
Kg/100 pcs	43,79	56,30	62,80	70,10	76,30	80,40	83,00	90,80	96,60	105,10	118,10	132,10	146,10	160,40	167,10	187,10	
45x25	100	110	120	125	130	140	150	160	180	200	220	240	245	250	260	280	
Kg/100 pcs	80,00	88,00	96,50	101,50	105,00	115,50	122,00	132,50	150,50	168,50	185,50	202,30	206,60	212,50	219,20	238,50	
50x28																	
56x 32																	
63x 32																	
70x 36																	
80x 40																	
90x 45																	
100x 50																	

available upon request

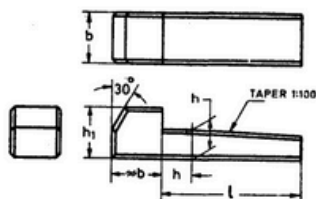
available upon request

GIBHEAD KEYS

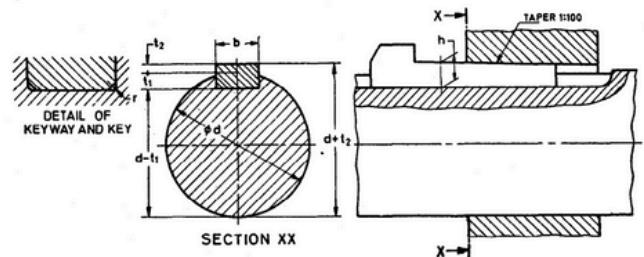


A **Gib Head Key** is a type of tapered key used in mechanical engineering to securely connect gears, pulleys, or other rotating components to a shaft. The distinctive feature of a Gib Head Key is the head or projection, which allows for easy removal and maintenance. It provides a strong, reliable connection while enabling quick disassembly when required.

At **Fair Products India**, we manufacture premium-quality Gib Head Keys tailored to meet specific customer requirements. With precision engineering and durable materials, our products ensure optimal performance and long-lasting reliability in a wide range of industrial applications.



All dimensions in millimetres.



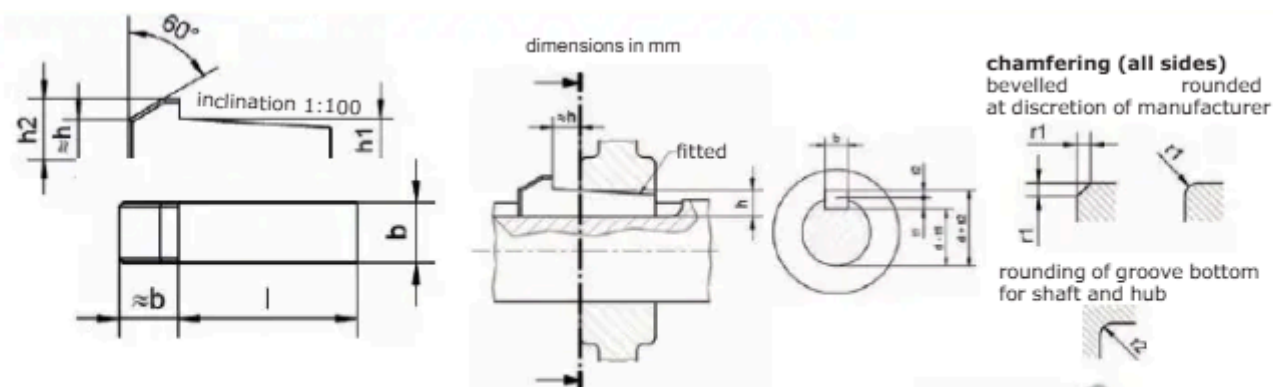
All dimensions in millimetres.

b	Tol on b h9	h	Tol on h*	s		Range of Key Length, l		h ₁
				Min	Max	Min	Max	
4		4		0.16	0.25	14	45	7
5	0 -0.030	5	0 -0.030	0.25	0.40	14	56	8
6		6		0.25	0.40	16	70	10
8	0 -0.036	7		0.25	0.40	20	90	11
10		8		0.40	0.60	25	110	12
12		8	0 -0.090	0.40	0.60	32	140	12
14	0 -0.043	9		0.40	0.60	40	160	14
16		10		0.40	0.60	45	180	16
18		11		0.40	0.60	50	200	18
20		12		0.60	0.80	56	220	20
22	0 -0.052	14	0 -0.110	0.60	0.80	63	250	22
25		14		0.60	0.80	70	280	22
28		16		0.60	0.80	80	320	25
32		18		0.60	0.80	90	360	28
36	0 -0.062	20		1.00	1.20	100	400	32
40		22	0 -0.130	1.00	1.20	110	400	36
45		25		1.00	1.20	125	400	40
50		28		1.00	1.20	140	400	45
56		32		1.60	2.00	—	—	50
63	0 -0.074	32		1.60	2.00	—	—	50
70		36	0 -0.160	1.60	2.00	—	—	56
80		40		2.50	3.00	—	—	63
90	0 -0.087	45		2.50	3.00	—	—	70
100		50		2.50	3.00	—	—	80

*Tol on h: Square Section h9; Rectangular Section h11.

Range of Shaft Dia d		Key b x h	b	Keyway						r	
				Tol on b D10	t ₁	Tol on t ₁	t ₂	Tol on t ₂	t ₃		
Above	Up to									Min	Max
10	12	4 x 4	4		2.5		1.2			0.08	0.16
12	17	5 x 5	5	+0.078 +0.030	3.0	+0.1 0	1.7	+0.1 0		0.08	0.25
17	22	6 x 6	6		3.5		2.2			0.16	0.25
22	30	8 x 7	8	+0.098 +0.040	4.0		2.4			0.16	0.25
30	38	10 x 8	10		5.0		2.4			0.25	0.40
38	44	12 x 8	12		5.0		2.4			0.25	0.40
44	50	14 x 9	14	+0.120 +0.050	5.5		2.9			0.25	0.40
50	58	16 x 10	16		6.0		3.4			0.25	0.40
58	65	18 x 11	18		7.0	+0.2 0	3.4	+0.2 0		0.25	0.40
65	75	20 x 12	20		7.5		3.9			0.40	0.60
75	85	22 x 14	22	+0.149 +0.065	9.0		4.4			0.40	0.60
85	95	25 x 14	25		9.0		4.4			0.40	0.60
95	110	28 x 16	28		10.0		5.4			0.40	0.60
110	130	32 x 18	32		11.0		6.4			0.40	0.60
130	150	36 x 20	36		12.0		7.1			0.70	1.00
150	170	40 x 22	40	+0.180 +0.080	13.0		8.1			0.70	1.00
170	200	45 x 25	45		15.0		9.1			0.70	1.00
200	230	50 x 28	50		17.0		10.1			0.70	1.00
230	260	56 x 32	56		20.0	+0.3 0	11.1	+0.3 0		1.20	1.60
260	290	63 x 32	63		20.0		11.1			1.20	1.60
290	330	70 x 36	70	+0.220 +0.100	22.0		13.1			1.20	1.60
330	380	80 x 40	80		25.0		14.1			2.00	2.50
380	440	90 x 45	90	+0.260 +0.120	28.0		16.1			2.00	2.50
440	500	100 x 50	100		31.0		18.1			2.00	2.50

DIN STANDARD



Example for ordering: Taper key with gip head according to DIN 6887:

b = 10 mm, h = 8 mm, l = 50 mm;

Order number: 10 30 1008 0500

mbo standard 30

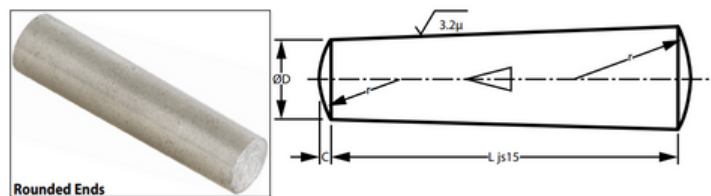
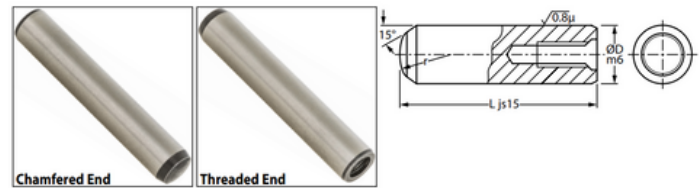
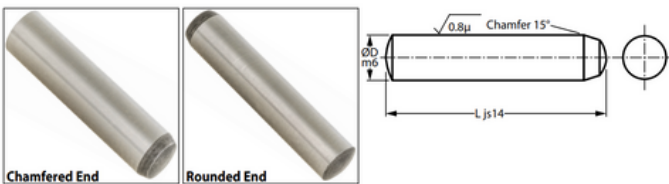
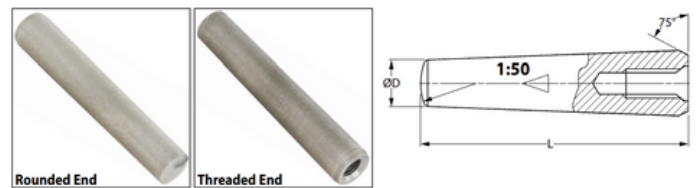
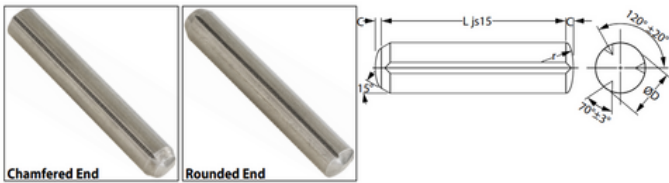
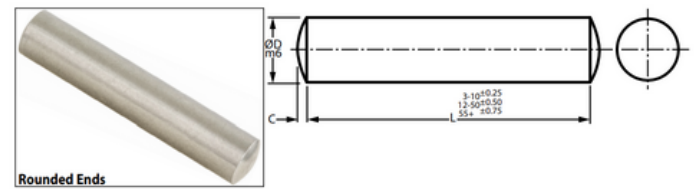
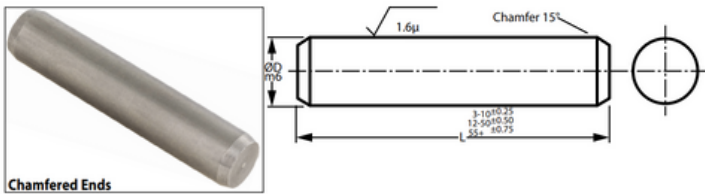
Order number ⁴⁾	Key width b h _g	Key height h	For shaft diameter ^{d¹⁾}		Key height		Gip height h _z	Groove width b D ₁₀	Shaft groove depth		Hub groove depth		Bevelled/rounded		Rounding of groove bottom		Länge mm		
			Above	Up to	h ₁	Admiss. diff.			t ₁ ²⁾	Admiss. diff.	t ₂ ²⁾	Admiss. diff.	Min.	Max.	Max.	Min.	From	Up to	Admiss. diff.
10 30 0404	4	4	10	12	4.1	-0.1	7	4	2.5	+0.1	1.2	+0.1	0.16	0.25	0.16	0.08	14	45	-0.2 / -0.3
10 30 0505	5	5	12	17	5.1	-0.1	8	5	3	+0.1	1.7	+0.1	0.25	0.4	0.25	0.16	14	56	-0.2 / -0.3
10 30 0606	6	6	17	22	6.1	-0.1	10	6	3.5	+0.1	2.2	+0.1	0.25	0.4	0.25	0.16	16	70	-0.2 / -0.3
10 30 0807	8	7	22	30	7.2	-0.2	11	8	4	+0.2	2.4	+0.2	0.25	0.4	0.25	0.16	20	90	-0.2 / -0.5
10 30 1008	10	8	30	38	8.2	-0.2	12	10	5	+0.2	2.4	+0.2	0.4	0.6	0.4	0.25	25	110	-0.2 / -0.5
10 30 1208	12	8	38	44	8.2	-0.2	12	12	5	+0.2	2.4	+0.2	0.4	0.6	0.4	0.25	32	140	-0.3 / -0.5
10 30 1409	14	9	44	50	9.2	-0.2	14	14	5.5	+0.2	2.9	+0.2	0.4	0.6	0.4	0.25	40	160	-0.3 / -0.5
10 30 1610	16	10	50	58	10.2	-0.2	16	16	6	+0.2	3.4	+0.2	0.4	0.6	0.4	0.25	45	180	-0.3 / -0.5
10 30 1811	18	11	58	65	11.2	-0.2	18	18	7	+0.2	3.4	+0.2	0.4	0.6	0.4	0.25	50	200	-0.3 / -0.5
10 30 2012	20	12	65	75	12.2	-0.2	20	20	7.5	+0.2	3.9	+0.2	0.6	0.8	0.6	0.4	56	220	-0.3 / -0.5
10 30 2214	22	14	75	85	14.2	-0.2	22	22	9	+0.2	4.4	+0.2	0.6	0.8	0.6	0.4	63	250	-0.3 / -0.5
10 30 2514	25	14	85	95	14.2	-0.2	22	25	9	+0.2	4.4	+0.2	0.6	0.8	0.6	0.4	70	280	-0.3 / -0.5
10 30 2816	28	16	95	110	16.2	-0.2	25	28	10	+0.2	5.4	+0.2	0.6	0.8	0.6	0.4	80	320	-0.3 / -0.5
10 30 3218	32	18	110	130	18.3	-0.2	28	32	11	+0.2	6.4	+0.2	0.6	0.8	0.6	0.4	90	360	-0.5
10 30 3620	36	20	130	150	20.4	-0.3	32	36	12	+0.3	7.1	+0.3	1	1.2	1	0.7	100	400	-0.5
10 30 4022	40	22	150	170	22.4	-0.3	36	40	13	+0.3	8.1	+0.3	1	1.2	1	0.7	110	400	-0.5
10 30 4525	45	25	170	200	25.4	-0.3	40	45	15	+0.3	9.1	+0.3	1	1.2	1	0.7	125	400	-0.5
10 30 5028	50	28	200	230	28.4	-0.3	45	50	17	+0.3	10.1	+0.3	1	1.2	1	0.7	140	400	-0.5
10 30 5632	56	32	230	260	32.5	-0.3	50	56	20	+0.3	11.1	+0.3	1.6	2	1.6	1.2			
10 30 6332	63	32	260	290	32.5	-0.3	50	63	20	+0.3	11.1	+0.3	1.6	2	1.6	1.2			
10 30 7036	70	36	290	330	36.5	-0.3	56	70	22	+0.3	13.1	+0.3	1.6	2	1.6	1.2			
10 30 8040	80	40	330	380	40.5	-0.3	63	80	25	+0.3	14.1	+0.3	2.5	3	2.5	2			
10 30 9045	90	45	380	440	45.6	-0.3	70	90	28	+0.3	16.1	+0.3	2.5	3	2.5	2			
10 30 0050	100	50	440	500	50.6	-0.3	80	100	31	+0.3	18.1	+0.3	2.5	3	2.5	2			

SOLID DOWEL

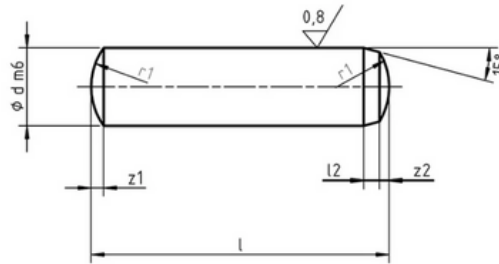


Solid dowels are cylindrical rods used in woodworking, furniture manufacturing, and construction to reinforce joints, ensure precise alignment, and enhance structural strength. Commonly made from hardwood or metal, they provide a reliable connection between components without the need for screws or nails.

At **Fair Products India**, we manufacture premium quality solid dowels tailored to meet your exact specifications. Whether you require specific sizes, materials, or finishes, we deliver products that match your needs with precision and durability.



DIN STANDARD



DIN 6325 Type 1 DIN 6325 Type 2

Thread: -

Notes: -

Table according to ISO 8734:
dimensions in mm

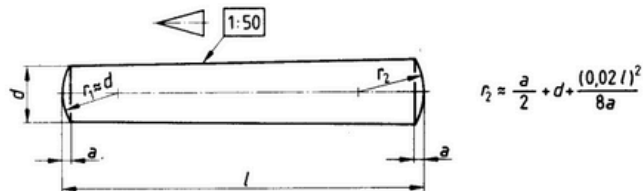
D	M6	1	1,5	2	2,5	3	4	5	6	8	10	12	16	20
c	=	0,2	0,3	0,35	0,4	0,5	0,63	0,8	1,2	1,6	2	2,5	3	3,5
l			trade lengths											
jmen.	min.	max.												
3	2,75	3,25	+											
4	3,75	4,25	+	+										
5	4,75	5,25	+	+	+									
6	5,75	6,25	+	+	+	+								
8	7,75	8,25	+	+	+	+	+							
10	9,75	10,25	+	+	+	+	+	+						
12	11,5	12,5		+	+	+	+	+	+					
14	13,5	14,5		+	+	+	+	+	+	+				
16	15,5	16,5		+	+	+	+	+	+	+				
18	17,5	18,5			+	+	+	+	+	+	+			
20	19,5	20,5			+	+	+	+	+	+	+			
22	21,5	22,5				+	+	+	+	+	+	+		
24	23,5	24,5				+	+	+	+	+	+	+		
26	25,5	26,5					+	+	+	+	+	+	+	
28	27,5	28,5					+	+	+	+	+	+	+	
30	29,5	30,5					+	+	+	+	+	+	+	
32	31,5	32,5						+	+	+	+	+	+	
35	34,5	35,5						+	+	+	+	+	+	
40	39,5	40,5						+	+	+	+	+	+	+
45	44,5	45,5							+	+	+	+	+	+
50	49,5	50,5							+	+	+	+	+	+
55	54,25	55,75								+	+	+	+	+
60	59,25	60,75								+	+	+	+	+
65	64,25	66,75									+	+	+	+
70	69,25	70,75									+	+	+	+
75	74,25	75,75									+	+	+	+
80	79,25	80,75									+	+	+	+
85	84,25	85,75										+	+	+
90	89,25	90,75										+	+	+
95	94,25	95,75										+	+	+
100	99,25	100,75										+	+	+

TAPER PINS



Taper pins are precision-engineered fasteners used to align or secure mechanical components in machinery and assemblies. Their gradually decreasing diameter ensures a tight, secure fit that resists loosening under vibration or load, making them ideal for positioning parts accurately in tools, jigs, and fixtures.

At **Fair Products India**, we manufacture premium quality taper pins, crafted with precision and reliability in mind. We offer customization as per customer specifications, ensuring every product meets exact technical requirements and industry standards.



Dimensions in millimetres																								
d	h10 ¹⁾			0,6	0,8	1	1,2	1,5	2	2,5	3	4	5	6	8	10	12	16	20	25	30	40	50	
a	≈			0,08	0,1	0,12	0,16	0,2	0,25	0,3	0,4	0,5	0,63	0,8	1	1,2	1,6	2	2,5	3	4	5	6,3	
p ²⁾																								
nom.	min.	max.																						
2	1,75	2,25																						
3	2,75	3,25																						
4	3,75	4,25																						
5	4,75	5,25																						
6	5,75	6,25																						
8	7,75	8,25																						
10	9,75	10,25																						
12	11,5	12,5																						
14	13,5	14,5																						
16	15,5	16,5																						
18	17,5	18,5																						
20	19,5	20,5																						
22	21,5	22,5																						
24	23,5	24,5																						
26	25,5	26,5																						
28	27,5	28,5																						
30	29,5	30,5																						
32	31,5	32,5																						
35	34,5	35,5																						
40	39,5	40,5																						
45	44,5	45,5																						
50	49,5	50,5																						
55	54,25	55,75																						
60	59,25	60,75																						
65	64,25	65,75																						
70	69,25	70,75																						
75	74,25	75,75																						
80	79,25	80,75																						
85	84,25	85,75																						
90	89,25	90,75																						
95	94,25	95,75																						
100	99,25	100,75																						
120	119,25	120,75																						
140	139,25	140,75																						
160	159,25	160,75																						
180	179,25	180,75																						
200	199,25	200,75																						

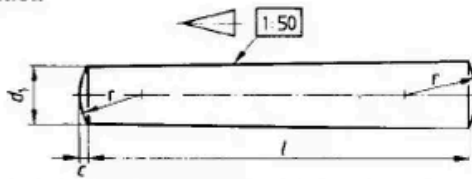
- 1) Other tolerances, for example, a11, c11, f8, as agreed between customer and supplier.
2) For nominal lengths above 200 mm, steps of 20 mm.

DIN STANDARD

2 Dimensions and designation

A Ground (standard design)¹⁾

B Turned¹⁾



Designation of a taper pin A (ground), of diameter $d_1 = 3$ mm and length $l = 30$ mm, of 9 SMnPb 28 K or St 50 K (St):

Table 1.

Taper pin DIN 1 – A 3 x 30 – St

d_1	h10	0,6	0,8	1	1,5	2	(2,5)	3	4	5	6
c	max.	0,1	0,12	0,15	0,23	0,3	0,4	0,45	0,6	0,75	0,9
r	$\approx$	0,6	0,8	1	1,5	2	2,5	3	4	5	6
l js15	Weight (7,85 kg/dm ³) kg per 1000 pieces $\approx$										
4	0,01										
6	0,017	0,028									
8	0,023	0,030	0,058								
10	0,031	0,05	0,075	0,16							
12		0,063	0,095	0,206	0,341	0,526					
14		0,077	0,114	0,24	0,404	0,62	0,88				
16			0,135	0,295	0,468	0,712	1,02	1,78			
18			0,157	0,339	0,534	0,811	1,15	2			
20				0,384	0,605	0,914	1,29	2,23	3,47		
(22)											
24					0,485	0,752	1,13	1,58	2,72	4,18	6,02
(26)											
28						0,909	1,35	1,88	3,22	4,93	7,17
(30)											
32						1,08	1,59	2,2	3,73	5,7	8,35
36						1,26	1,84	2,55	4,28	6,51	9,5
40							2,1	2,88	4,84	7,3	10,3
45								3,35	5,56	8,35	11,7
50								3,83	6,31	9,45	13,4
55									7,12	10,6	14,7
60									7,94	11,8	16,3
70										14,2	19,7
80											24,3
90											28,4

Table 1. (continued)

d_1	h10	8	10	12	14	16	20	25	30	40	50
c	max.	1,2	1,5	1,8	2	2,5	3	4	4,5	6	7,5
r	$\approx$	8	10	12	16	16	20	25	32	40	50
l js15	Weight (7,85 kg/dm ³) kg per 1000 pieces $\approx$										
28	12,3										
(30)	13,1										
32	14	21,9									
36	16	24,8	35,4	47,6							
40	17,8	27,6	31,6	52,4	69,8						
45	20,2	31,2	44,6	60	78,6						
50	22,7	34,9	49,8	66,6	87,4	137					
55	25,3	38,8	55,2	73,8	96,4	150	235				
60	27,8	42,5	60,2	81,2	105	164	257	369			
70	33,2	50,4	71,8	95,9	123	192	299	430	770		
80	38,8	58,5	83	110	143	220	342	492	876	1390	
90	44,5	67	94,5	126	162	250	386	554	984	1550	
100	50,5	75,7	106	141	181	280	430	616	1100	1710	
110	57	84,7	118	157	202	310	476	680	1210	1880	
120	63,5	94	130	173	222	340	521	742	1320	2050	
130		104	143	188	244	370	567	808	1430	2210	
140		114	157	208	265	403	615	874	1540	2400	
150			170	225	287	436	664	942	1650	2570	
165			192	252	321	484	736	1040	1820	2830	
180					357	536	812	1150	2000	3090	
200					406	606	914	1290	2240	3450	
230					657	715	1080	1500	2600	4000	
260							1240	1730	2970	4550	

BUSHES



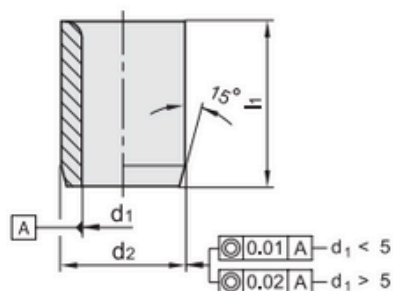
Cylindrical bushes are mechanical components used to reduce friction and wear between moving parts, ensuring smooth motion and enhanced durability in various industrial applications. Commonly used in automotive, machinery, and agricultural equipment, they help absorb shock and minimize vibration.

At **Fair Products India**, we manufacture premium quality cylindrical bushes tailored to meet specific customer requirements. With a focus on precision and performance, our products are designed to deliver reliability and long service life in the most demanding conditions.



Inner Diameter (mm)	Outer Diameter (mm)	Height (mm)
3	6	6
4	8	4 6 8 10
5	9	6 8 10
6	10	6 8 10 12 16 20
6	12	10
8	12	8 10 12 15
8	16	10
10	14	5 8 10 12 15 20
10	16	10 12 15 18 20
12	16	7 10 12 15 18 20
12	18	10 12 15 18 20
14	20	12 15 18 20 22 25 28
16	22	15 18 20 22 25 28 30
18	25	18 20 22 25 28 30 32
20	26	15 20 30
20	28	20 22 25 28 30 32 35
22	30	20 22 25 28 30 32 35
25	32	20 22 25 28 30 32 35 40
28	35	22 25 28 30 32 35 40 45 50
30	38	20 25 28 30 32 35 40 45 50
30	40	30 40 50
32	40	28 30 32 35 40 45 50
35	45	28 30 32 35 40 45 50
38	48	30 35 40 45 50
40	50	30 32 35 40 45 50 55
45	55	30 32 35 40 45 50 55 60
50	60	35 40 45 50 55 60 65
55	65	35 40 45 50 55 60 65
60	40	35 40 45 50 55 60 65

DIN STANDARD



Description	d1 F7	d2 n6	l1	$\Delta\Delta$
DIN 179-B24-20-A	24	35	20	78
DIN 179-B24-36-A	24	35	36	141
DIN 179-B24-45-A	24	35	45	177
DIN 179-B24.5-20-A	24.5	35	20	75
DIN 179-B24.5-36-A	24.5	35	36	136
DIN 179-B24.5-45-A	24.5	35	45	170
DIN 179-B25-20-A	25	35	20	72
DIN 179-B25-36-A	25	35	36	131
DIN 179-B25-45-A	25	35	45	165
DIN 179-B25.5-20-A	25.5	35	20	72
DIN 179-B25.5-36-A	25.5	35	36	125
DIN 179-B25.5-45-A	25.5	35	45	156
DIN 179-B26-20-A	26	35	20	65
DIN 179-B26-36-A	26	35	36	119
DIN 179-B26-45-A	26	35	45	151
DIN 179-B26.5-25-A	26.5	42	25	161
DIN 179-B26.5-45-A	26.5	42	45	290
DIN 179-B26.5-56-A	26.5	42	56	362
DIN 179-B27-25-A	27	42	25	156
DIN 179-B27-45-A	27	42	45	283
DIN 179-B27-56-A	27	42	56	352
DIN 179-B27.5-25-A	27.5	42	25	152
DIN 179-B27.5-45-A	27.5	42	45	250
DIN 179-B27.5-56-A	27.5	42	56	343
DIN 179-B28-25-A	28	42	25	148
DIN 179-B28-45-A	28	42	45	268
DIN 179-B28-56-A	28	42	56	330
DIN 179-B28.5-25-A	28.5	42	25	143
DIN 179-B28.5-45-A	28.5	42	45	256
DIN 179-B28.5-56-A	28.5	42	56	320
DIN 179-B29-25-A	29	42	25	139
DIN 179-B29-45-A	29	42	45	252
DIN 179-B29-56-A	29	42	56	310
DIN 179-B29.5-25-A	29.5	42	25	134
DIN 179-B29.5-45-A	29.5	42	45	241
DIN 179-B29.5-56-A	29.5	42	56	240
DIN 179-B30-25-A	30	42	25	130
DIN 179-B30-45-A	30	42	45	236
DIN 179-B30-56-A	30	42	56	295
DIN 179-B30.5-25-A	30.5	48	25	208
DIN 179-B30.5-45-A	30.5	48	45	370
DIN 179-B30.5-56-A	30.5	48	56	461
DIN 179-B31-25-A	31	48	25	203
DIN 179-B31-45-A	31	48	45	368
DIN 179-B31-56-A	31	48	56	458
DIN 179-B31.5-25-A	31.5	48	25	198
DIN 179-B31.5-45-A	31.5	48	45	353
DIN 179-B31.5-56-A	31.5	48	56	440

Description	d1 F7	d2 n6	l1	$\Delta\Delta$
DIN 179-B32-25-A	32	48	25	194
DIN 179-B32-45-A	32	48	45	350
DIN 179-B32-56-A	32	48	56	434
DIN 179-B32.5-25-A	32.5	48	25	188
DIN 179-B32.5-45-A	32.5	48	45	336
DIN 179-B32.5-56-A	32.5	48	56	419
DIN 179-B33-25-A	33	48	25	183
DIN 179-B33-45-A	33	48	45	331
DIN 179-B33-56-A	33	48	56	426
DIN 179-B33.5-25-A	33.5	48	25	178
DIN 179-B33.5-45-A	33.5	48	45	318
DIN 179-B33.5-56-A	33.5	48	56	396
DIN 179-B34-25-A	34	48	25	172
DIN 179-B34-45-A	34	48	45	314
DIN 179-B34-56-A	34	48	56	390
DIN 179-B34.5-25-A	34.5	48	25	168
DIN 179-B34.5-45-A	34.5	48	45	302
DIN 179-B34.5-56-A	34.5	48	56	373
DIN 179-B35-25-A	35	48	25	162
DIN 179-B35-45-A	35	48	45	295
DIN 179-B35-56-A	35	48	56	367
DIN 179-B36-30-A	36	55	30	312
DIN 179-B36-56-A	36	55	56	589
DIN 179-B36-67-A	36	55	67	716
DIN 179-B37-30-A	37	55	30	294
DIN 179-B37-56-A	37	55	56	555
DIN 179-B37-67-A	37	55	67	665
DIN 179-B38-30-A	38	55	30	286
DIN 179-B38-56-A	38	55	56	549
DIN 179-B38-67-A	38	55	67	655
DIN 179-B39-30-A	39	55	30	286
DIN 179-B39-56-A	39	55	56	503
DIN 179-B39-67-A	39	55	67	603
DIN 179-B40-30-A	40	55	30	258
DIN 179-B40-56-A	40	55	56	484
DIN 179-B40-67-A	40	55	67	580
DIN 179-B41-30-A	41	55	30	243
DIN 179-B41-56-A	41	55	56	449
DIN 179-B41-67-A	41	55	67	538
DIN 179-B42-30-A	42	55	30	227
DIN 179-B42-56-A	42	55	56	428
DIN 179-B42-67-A	42	55	67	512

SPRING DOWELS



Spring dowels, also known as roll pins or tension pins, are cylindrical fasteners used to secure the position of two or more parts in machinery. They are designed to compress when inserted into a hole, creating a tight fit that resists loosening from vibration or movement. Commonly used in automotive, aerospace, and industrial applications, spring dowels offer a reliable and cost-effective fastening solution.

At **Fair Products India**, we manufacture premium-quality spring dowels tailored to meet custom specifications. Our products are made with precision to ensure durability, strength, and performance across a wide range of applications.

Table 1 — Dimensions

			Dimensions in millimetres													
d	m6 ^h		1	1,5	2	2,5	3	4	5	6	8	10	12	16	20	
c	=		0,2	0,3	0,35	0,4	0,5	0,63	0,8	1,2	1,6	2	2,5	3	3,5	
l ^h																
nom.	min.	max.														
3	2,75	3,25														
4	3,75	4,25														
5	4,75	5,25														
6	5,75	6,25														
8	7,75	8,25														
10	9,75	10,25														
12	11,5	12,5														
14	13,5	14,5														
16	15,5	16,5														
18	17,5	18,5														
20	19,5	20,5														
22	21,5	22,5														
24	23,5	24,5														
26	25,5	26,5														
28	27,5	28,5														
30	29,5	30,5														
32	31,5	32,5														
35	34,5	35,5														
40	39,5	40,5														
45	44,5	45,5														
50	49,5	50,5														
55	54,25	55,75														
60	59,25	60,75														
65	64,25	65,75														
70	69,25	70,75														
75	74,25	75,75														
80	79,25	80,75														
85	84,25	85,75														
90	89,25	90,75														
95	94,25	95,75														
100	99,25	100,75														

1) Other tolerances as agreed between customer and supplier.

2) For nominal lengths above 100 mm, steps of 20 mm.

1) Other tolerances as agreed between customer and supplier.

2) For nominal lengths above 100 mm, steps of 20 mm.

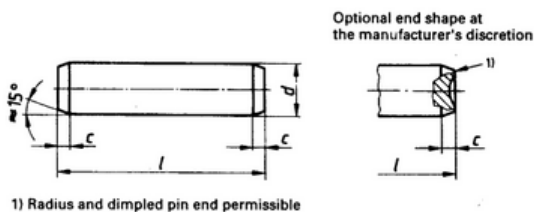
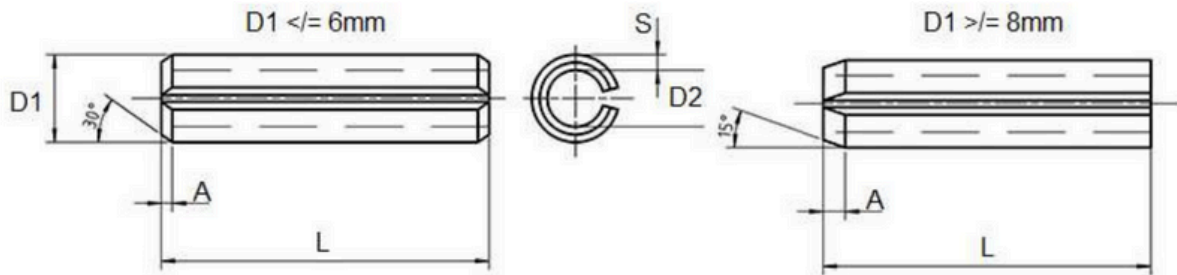


Figure 1

DIN STANDARD



Dimensions of Metric DIN 1481 Slotted Spring Pins / Roll Pins – Heavy Type

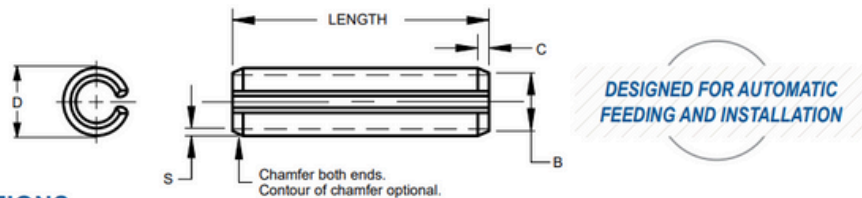
Dimension		1	1.5	2	2.5	3	3.5	4	4.5	5	6	8	10	12	13
A		0.15	0.25	0.35	0.4	0.5	0.6	0.65	0.8	0.9	1.2	2	2	2	2
D1	min.	1.2	1.7	2.3	2.8	3.3	3.8	4.4	4.9	5.4	6.4	8.5	10.5	12.5	13.5
	max.	1.3	1.8	2.4	2.9	3.5	4	4.6	5.1	5.6	6.7	8.8	10.8	12.8	13.8
D2	approx.	0.8	1.1	1.5	1.8	2.1	2.3	2.8	2.9	3.4	3.9	5.5	6.5	7.5	8.5
S		0.2	0.3	0.4	0.5	0.6	0.75	0.8	1	1	1.25	1.5	2	2.5	2.5
shear kN	shear force	0.35	0.79	1.41	2.19	3.16	4.53	5.62	7.68	8.77	13	21.4	35.1	52.1	57.6
	double shear	0.7	1.58	2.82	4.38	6.32	9.06	11.2	15.4	17.5	26	42.8	70.2	104	115
I	tolerance	weight kg/1000pcs													
4		0.02	0.03	0.06	0.1	0.14	0.2	0.24							
5	0.5	0.02	0.04	0.08	0.12	0.17	0.25	0.3	0.4	0.47					
6	0	0.02	0.05	0.09	0.14	0.2	0.3	0.36	0.48	0.57					
8		0.03	0.07	0.12	0.19	0.27	0.39	0.48	0.64	0.75					
10		0.04	0.09	0.15	0.24	0.34	0.49	0.6	0.79	0.94	1.38	2.24	3.69	5.55	6.18
12		0.05	0.1	0.18	0.28	0.41	0.59	0.72	0.92	1.13	1.66	2.66	4.43	6.66	7.42
14		0.05	0.12	0.21	0.33	0.48	0.69	0.84	1.11	1.32	1.94	3.13	5.17	7.78	8.66

Dimension		1	1.5	2	2.5	3	3.5	4	4.5	5	6	8	10	12	13
L	tol.	weight kg/1000pcs													
16		0.06	0.14	0.24	0.38	0.54	0.79	0.96	1.27	1.51	2.21	3.58	5.9	8.89	9.9
18		0.07	0.15	0.28	0.42	0.61	0.89	1.07	1.43	1.7	2.49	4.03	6.64	10	11.1
20		0.08	0.17	0.31	0.47	0.68	0.99	1.19	1.59	1.88	2.77	4.48	7.38	11.1	12.4
22				0.34	0.52	0.75	1.08	1.31	1.75	2.07	3.04	4.92	8.12	12.2	13.6
24	1			0.37	0.57	0.81	1.18	1.43	1.9	2.26	3.32	5.37	8.86	13.3	14.8
26	0			0.97	0.61	0.88	1.28	1.55	2.06	2.45	3.6	5.82	9.59	14.4	16.1
28				0.43	0.66	0.95	1.38	1.67	2.22	2.64	3.87	6.26	10.3	15.6	17.3
30				0.46	0.71	1.02	1.48	1.79	2.38	2.83	4.15	6.71	11.1	16.7	18.5
32						1.09	1.58	1.91	2.54	3.02	4.43	7.16	11.8	17.8	19.8
36						1.22	1.77	2.18	2.86	3.39	4.98	8.06	13.3	20	22.3
40						1.36	1.97	2.39	3.17	3.77	5.54	8.95	14.8	22.2	24.7
45								2.68	3.57	4.24	6.23	10.1	16.6	25	27.8
50								2.98	3.96	4.71	6.92	11.2	18.4	27.8	30.9
55										5.18	7.61	12.3	20.3	30.5	34
60										5.65	8.3	13.4	22.1	33.3	37.1
65										6.12	8.99	14.5	24	36.1	40.2
70										6.59	9.69	15.7	25.8	38.9	43.3
75										7.06	10.4	16.8	27.7	41.7	46.4
80										7.54	11.1	18	29.5	44.4	49.5
85	1.5										11.8	19	31.4	47.2	52.5
90	0										12.5	20.1	33.2	50	55.6
95											13.1	21.3	35	52.8	58.7
100											13.8	22.4	36.9	55.5	61.8
120												26.8	44.3	66.6	74.2
140													51.7	77.8	86.5
160													59	88.9	98.9
180														100	111

SPRING DOWEL COMBINATION



At Fair Products India, we manufacture premium-quality **Spring Dowel Combinations** designed for precise alignment, secure fastening, and resistance to shear and vibration. Commonly used in automotive, machinery, and industrial applications, these components ensure stable positioning of parts under dynamic conditions. Their spring-loaded design allows easy installation and strong retention without damaging components. We offer customization in size, material, and finish to meet specific customer requirements, delivering reliable performance and durability in every piece.



METRIC SPECIFICATIONS

NOMINAL DIAMETER		1.5	2	2.5	3	4	5	6	8	10	12
DIAMETER ØD	MAX.	1.66	2.19	2.72	3.25	4.30	5.33	6.36	8.45	10.51	12.55
	MIN.	1.58	2.10	2.62	3.14	4.16	5.17	6.18	8.22	10.25	12.28
CHAMFER DIAMETER B	MAX.	1.4	1.9	2.4	2.9	3.9	4.8	5.8	7.8	9.7	11.7
	MIN.	0.7	0.8	0.9	1.0	1.2	1.4	1.6	2.0	2.4	2.8
CHAMFER LENGTH C	MAX.	0.15	0.2	0.2	0.2	0.3	0.3	0.4	0.4	0.5	0.6
	MIN.	0.35	0.45	0.55	0.65	0.8	1.0	1.2	1.6	2.0	2.5
WALL THICKNESS S	NOMINAL	1.56	2.07	2.58	3.10	4.12	5.12	6.12	8.15	10.15	12.18
	MAX.	1.5	2.00	2.50	3.00	4.00	5.00	6.00	8.00	10.00	12.00
RECOMMENDED HOLE SIZE	MIN.	1.8	3.5	5.5	7.8	12.3	19.6	28.5	48.8	79.1	104.1
	CARBON & MARTENSITIC SST	1.0	2.0	3.2	4.5	7.2	11.4	16.6	28.4	46.1	—
MIN. DOUBLE SHEAR STRENGTH, kN	AUSTENITIC SST										

STANDARD SIZES

NOMINAL DIAMETER		1.5	2	2.5	3	4	5	6	8	10	12
LENGTH	4	*	*								
	5	*	*								
	6	*	*	*	*						
	8	*	*	*	*	*					
	10	*	*	*	*	*					
	12	*	*	*	*	*	*				
	14	*	*	*	*	*	*	*			
	16	*	*	*	*	*	*	*	*		
	18	*	*	*	*	*	*	*	*	*	
	20	*	*	*	*	*	*	*	*	*	*
	22	*	*	*	*	*	*	*	*	*	*
	24	*	*	*	*	*	*	*	*	*	*
	26	*	*	*	*	*	*	*	*	*	*
	28	*	*	*	*	*	*	*	*	*	*
	30	*	*	*	*	*	*	*	*	*	*
	32	*	*	*	*	*	*	*	*	*	*
	35	*	*	*	*	*	*	*	*	*	*
	40	*	*	*	*	*	*	*	*	*	*
	45	*	*	*	*	*	*	*	*	*	*
	50	*	*	*	*	*	*	*	*	*	*
	55	*	*	*	*	*	*	*	*	*	*
	60	*	*	*	*	*	*	*	*	*	*
	65	*	*	*	*	*	*	*	*	*	*
	70	*	*	*	*	*	*	*	*	*	*
	75	*	*	*	*	*	*	*	*	*	*
	80	*	*	*	*	*	*	*	*	*	*
	85	*	*	*	*	*	*	*	*	*	*
	90	*	*	*	*	*	*	*	*	*	*
	95	*	*	*	*	*	*	*	*	*	*
	100	*	*	*	*	*	*	*	*	*	*

Nominal Pin Length **Length Tolerance**

Up to 24mm incl. ± 0.40mm

Over 24mm to 50mm incl. ± 0.50mm

Over 50mm to 75mm incl. ± 0.60mm

Over 75mm ± 0.75mm

Straightness Gauge Specifications²

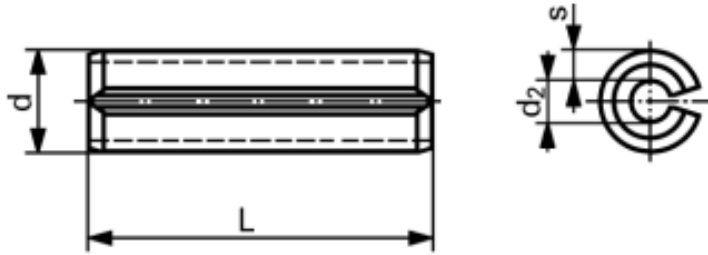
Nominal Pin Length	Gage Length	Gage Hole Diameter = Maximum Pin Diameter Plus:	
		MIN.	MAX.
Up to 24mm incl.	25mm ± 0.15mm	0.20mm	0.22mm
24mm – 50mm	50mm ± 0.15mm	0.40mm	0.43mm
Over 50mm	75mm ± 0.15mm	0.60mm	0.64mm

Available in high carbon (B) and stainless steel (C, D)

Only available in high carbon (B)

* Generally stocked size

DIN STANDARD



D	1		1,5		2		2,5	
s	0,2		0,3		0,4		0,5	
d min.	1,2		1,7		2,3		2,8	
d2 ≈	0,8		1,1		1,5		1,8	
L quantity	100	1000	100	1000	100	1000	100	1000
4	4.50	3.-	4.40	2.15	4.-	2.20	4.50	2.45
5	4.50	3.-	4.50	2.20	4.-	2.30	4.60	2.45
6	4.50	3.-	4.50	2.20	4.-	2.30	4.60	2.45
8	4.70	3.20	4.50	2.20	4.60	2.40	4.70	2.50
10	4.70	3.30	4.60	2.30	4.60	2.40	4.80	2.55
12	4.70	3.30	4.60	2.30	4.60	2.40	4.90	2.55
14	5.-	3.60	4.70	2.40	4.70	2.40	5.-	2.60
16	7.-	4.10	4.70	2.40	4.70	2.45	5.-	2.65
18	8.10	5.05	4.70	2.55	4.70	2.45	5.10	2.65
20			4.80	2.65	4.80	2.50	5.20	2.70
22					5.-	2.70	5.20	2.75
24					5.-	2.75	5.20	3.-
26					5.-	3.-	5.30	3.15
28					5.20	3.15	5.40	3.30
30					5.30	3.15	5.50	3.70

D	3		3,5		4		5	
s	0,6		0,75		0,8		1	
d min.	3,3		3,8		4,4		5,4	
d2 ≈	2,1		2,3		2,8		3,4	
L quantity	100	1000	100	1000	100	1000	100	1000
4	4.70	2.70	7.10	5.20				
5	4.70	2.70	7.10	5.20				
6	4.80	2.80	5.10	3.30	5.20	3.40	8.-	5.60
8	4.90	2.85	5.20	3.45	5.30	3.25	5.90	3.75
10	5.-	2.70	5.20	3.40	5.40	3.25	6.-	3.65
12	5.-	2.90	5.20	3.45	5.50	3.30	6.10	3.80
14	5.10	2.95	5.30	3.60	5.50	3.50	6.20	4.-
16	5.10	2.95	5.40	3.60	5.70	3.50	6.40	4.30
18	5.20	3.-	5.40	3.70	5.70	3.60	6.50	4.50
20	5.20	3.10	5.60	3.75	5.80	3.65	6.70	4.60
22	5.30	3.15	5.60	3.85	5.90	3.80	6.90	4.80
24	5.40	3.20	5.70	4.10	6.-	4.10	7.20	5.-
26	5.50	3.40	6.-	4.30	6.10	4.30	7.50	5.20
28	5.70	3.55	6.-	4.40	6.20	4.50	7.70	5.40
30	5.80	3.75	6.40	4.80	6.40	4.80	8.-	5.60
32	5.90	4.-	6.90	5.-	6.90	5.10	8.30	5.80
35					9.90	7.10	12.20	8.50
36	6.10	4.30	9.20	6.50	7.60	5.60	9.20	6.30
40	6.60	4.70	8.-	5.80	8.20	6.-	10.-	7.-
45			10.40	7.10	9.-	6.70	11.-	7.70
50	9.-	6.20	10.60	7.30	10.-	7.30	12.10	8.40
55							13.30	9.30
60							14.20	10.-
65							18.20	13.30
70							18.20	13.30
75							19.80	13.90
80							20.25	14.70

D	6		8		10		12	
s	1,25		1,5		2		2,5	
d min.	6,4		8,5		10,5		12,5	
d2 ≈	4		5,5		6,5		7,5	
L quantity	100	1000	100	1000	100	1000	100	1000
10	6.50	4.30	10.50	7.40				
12	6.70	4.40	10.50	7.40	43.50	32.-		
14	6.90	4.50	10.50	7.40	19.-	14.60		
16	7.10	4.80	10.50	7.40	19.-	14.60	140.-	116.-
18	7.50	5.20	11.30	7.90	19.-	14.60	154.-	128.-
20	7.90	5.50	12.20	8.50	19.-	14.60	57.-	46.-
22	8.50	5.90	13.-	9.-	20.50	15.60	59.-	47.50
24	9.-	6.30	13.70	9.60	21.75	16.50	61.-	48.50
26	9.70	6.80	14.80	10.30	23.25	17.70	62.-	49.50
28	10.30	7.20	14.90	10.80	24.50	18.70	63.50	51.-
30	10.70	7.50	16.-	11.60	26.-	19.80	65.-	52.-
32	11.30	7.90	17.10	12.40	26.25	21.-	64.50	53.50
35			29.-	23.60			112.-	97.50
36	12.40	8.60	18.50	13.40	29.-	23.-	82.-	68.50
40	13.50	9.50	20.25	14.70	31.75	25.25	67.50	56.-
45	14.80	10.40	22.-	16.-	35.-	27.75	72.-	60.-
50	15.60	11.30	24.25	17.60	38.25	30.50	78.-	66.-
55	17.-	12.30	26.25	19.10	41.50	33.-	85.50	71.-
60	18.30	13.30	27.50	20.75	45.-	35.75	92.50	77.-
65	19.70	14.20	30.25	23.-	48.50	38.25	117.-	95.50
70	21.-	15.30	31.75	24.-	51.50	41.-	109.-	90.50
75	25.75	16.20	37.50	28.-	55.-	43.50	115.-	95.50
80	27.25	17.50	42.-	31.75	58.50	46.50	123.-	102.-
85	27.50	19.60	44.-	33.25	62.-	49.-	125.-	108.-
90	29.75	22.25	46.-	34.75	66.50	53.-	149.-	129.-
100	37.75	28.50	53.-	40.-	72.-	59.50	209.-	182.-
120					125.-	98.-		
140							425.-	370.-

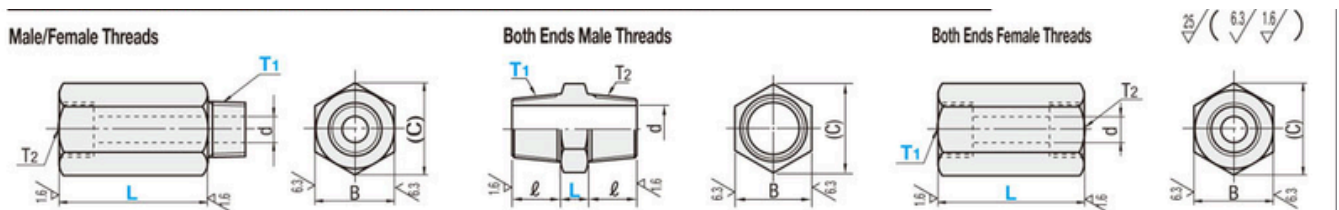
D	6		8		10		12	
s	1,25		1,5		2		2,5	
d min.	6,4		8,5		10,5		12,5	
d2 ≈	4		5,5		6,5		7,5	
L quantity	100	1000	100	1000	100	1000	100	1000
10	12.30	7.30						
12	12.60	7.60	18.20	11.60			160.-	131.-
14	13.-	7.90			23.75	16.80		
16	13.80	8.50	18.90	12.20	25.25	17.10		
20	15.40	9.70	21.25	14.-	28.50	20.75		
22							81.-	64.-
24	17.10	11.-	23.75	15.90				
26			25.50	17.10				
28	18.80	12.30	26.-	18.-				
30	19.70	12.80	27.75	19.20	31.50	22.25		
32			29.25	20.50				
36							94.50	77.50
40	23.75	15.90	33.-	23.50	47.-	36.25	98.50	80.50
45	25.75	17.40	35.75	25.50				
50	27.25	18.90	38.75	28.-	57.50	44.50		
55	28.50	20.-	43.50	31.-				
60	31.-	21.75	46.-	34.-	68.-	53.50		
65	33.-	23.25						
70			52.50	39.25				
75			60.-	44.50				
80			65.50	49.50	90.-	71.50	179.-	148.-
90					102.-	81.-	213.-	183.-
100							286.-	248.-

TURNED MACHINING COMPONENTS

01. ADAPTORS



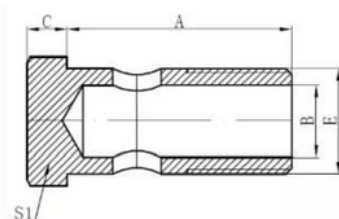
We manufacture high-precision **Adaptors** used for connecting dissimilar fittings in hydraulic, pneumatic, and fluid transfer systems. These adaptors are essential for ensuring leak-proof, secure, and efficient transitions between varying thread types or sizes, particularly in automotive, industrial, and machinery applications. Made from premium-grade materials with tight machining tolerances, our adaptors are designed for high pressure, corrosion resistance, and long service life. We offer full customization based on size, thread type, and finish, ensuring every product meets specific client requirements and industry standards.



02. BANJO BOLTS



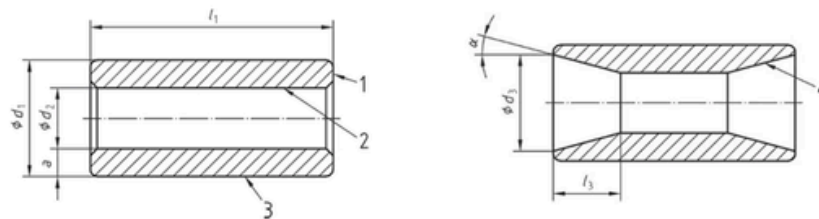
We manufacture high-quality **Banjo Bolts** used for fluid transfer in hydraulic, fuel, and brake systems. These specialized fasteners allow for secure, leak-proof connections where space is limited, and directional fluid flow is required. Commonly used in automotive, industrial machinery, and heavy equipment, our banjo bolts are engineered with precision to withstand high pressure and vibration. Made from durable, corrosion-resistant materials, we offer these components with full customization in thread sizes, lengths, and finishes to suit a wide range of customer-specific applications and performance standards.



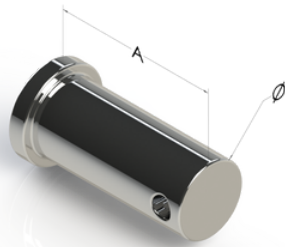
03. PISTON PINS



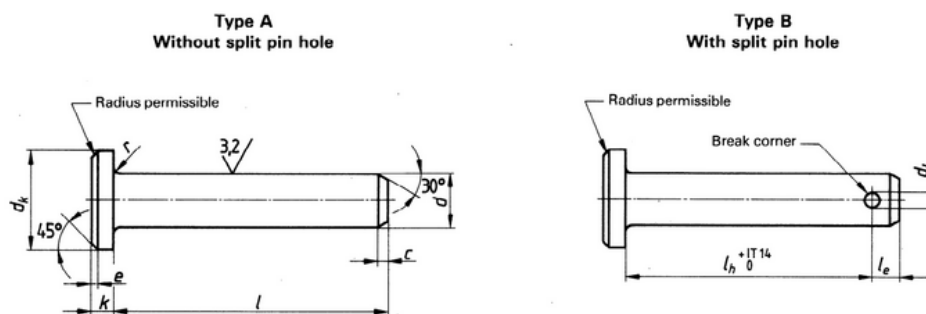
We manufacture precision-engineered **Piston Pins** (also known as gudgeon pins) used in internal combustion engines to connect the piston to the connecting rod. These critical components are designed to endure high loads, temperatures, and dynamic stresses, ensuring smooth and efficient engine performance. Our piston pins are made from hardened, wear-resistant materials with tight tolerances for perfect fit and long service life. We offer customization in size, finish, and material to meet specific engine requirements across automotive, agricultural, and industrial machinery sectors.



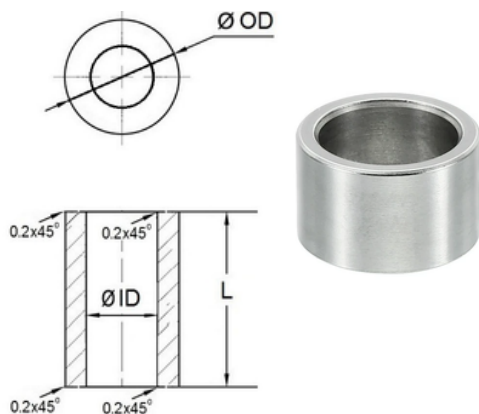
04. CLEVIS PINS



We manufacture high-strength **Clevis Pins** used for secure, removable connections in mechanical linkages and assemblies. Commonly used in agricultural equipment, automotive systems, construction machinery, and industrial linkages, clevis pins provide a reliable pivot or fastening point while allowing quick assembly and disassembly. Crafted from durable, corrosion-resistant materials, our pins are available in various diameters, lengths, and finishes, with or without cross-holes. We also offer customization as per customer requirements, ensuring performance, safety, and longevity in demanding applications.



05. HIGH PRECISION SPACERS



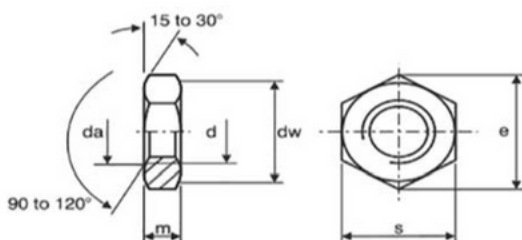
We manufacture precision-engineered Spacers designed to maintain accurate distance between components in mechanical assemblies. Widely used in automotive, electrical, aerospace, and industrial applications, spacers help ensure proper alignment, load distribution, and insulation between parts. Our spacers are made from high-quality metals and engineering plastics, available in various sizes, thicknesses, and finishes. We also offer complete customization based on material, dimensions, and tolerance, delivering reliable solutions tailored to specific customer requirements.

06. CONNECTOR



Connectors are essential components used to join mechanical, hydraulic, or electrical parts, ensuring secure, efficient, and leak-proof connections. Commonly applied in automotive systems, industrial machinery, fluid handling units, and electrical assemblies, they are built to withstand pressure, vibration, and environmental stress. Available in various shapes, sizes, thread types, and configurations, our connectors are made from corrosion-resistant, high-strength materials. We offer full customization to meet specific application requirements, ensuring long-lasting and reliable performance.

07. LOCK NUTS

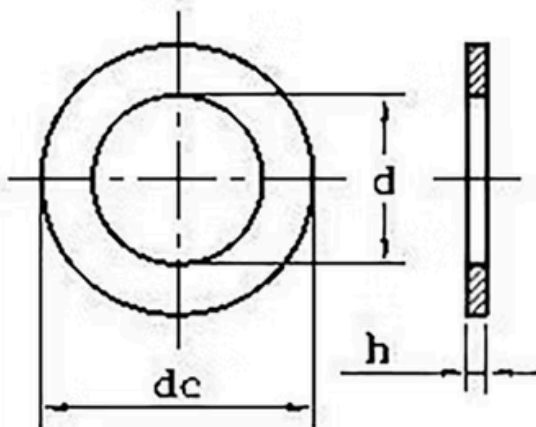


Lock Nuts are specialized fasteners designed to resist loosening under vibration or torque, ensuring secure assemblies in demanding environments. Widely used in automotive, machinery, construction, and heavy equipment, they provide enhanced locking performance compared to standard nuts. Manufactured from high-strength, corrosion-resistant materials, they are available in various thread sizes, types (such as nylon insert, all-metal), and finishes. Customization options are available to match specific mechanical and environmental requirements for reliable and long-term fastening.

SHIMS & WASHERS

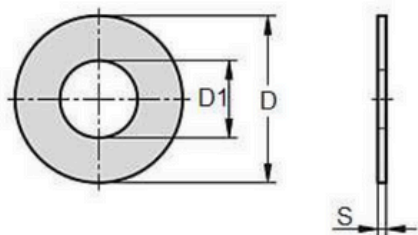


At **Fair Products India**, we manufacture **Shims and Washers** that play a critical role in ensuring proper spacing, alignment, and load distribution in mechanical assemblies. Shims are used for precision adjustments and tolerance correction, while washers help reduce friction, prevent wear, and evenly distribute loads under fasteners and rotating parts. These components are widely used across automotive, aerospace, industrial, and construction sectors. We offer a wide range of materials, thicknesses, and finishes, with full customization available to meet specific performance and dimensional requirements.



公称 直径	d		dc		
	min	max	Nom	min	max
3	3.02	3.12	6	5.85	5.97
4	4.03	4.15	8	7.81	7.96
5	5.03	5.15	10	9.81	9.96
6	6.03	6.15	12	11.77	11.95
7	7.04	7.19	13	12.77	12.95
8	8.04	8.19	14	13.77	13.95
9	9.04	9.19	15	14.77	14.95
10	10.04	10.19	16	15.77	15.95
11	11.05	11.23	17	16.77	16.95
12	12.05	12.23	18	17.77	17.95
13	13.05	13.23	19	18.725	18.935
14	14.05	14.23	20	19.725	19.935
15	15.05	15.23	21	20.725	20.935
16	16.05	16.23	22	21.725	21.935
17	17.05	17.23	24	23.725	23.935
18	18.05	18.23	25	24.725	24.935
19	19.065	19.275	26	25.725	25.935
20	20.065	20.275	28	27.725	27.935
22	22.065	22.275	30	29.725	29.935
22	22.065	22.275	32	31.67	31.92
25	25.065	25.275	35	34.67	34.92
25	25.065	25.275	36	35.67	35.92
26	26.065	26.275	37	36.67	36.92
28	28.065	28.275	40	39.67	39.92
30	30.065	30.275	42	41.67	41.92
32	32.08	32.33	45	44.67	44.92
35	35.08	35.33	45	44.67	44.92
36	36.08	36.33	45	44.67	44.92
37	37.08	37.33	47	46.67	46.92
40	40.08	40.33	50	49.67	49.92

DIN STANDARD



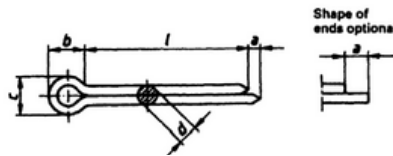
Dimensions of Metric DIN 986 Nylon Insert Hexagon Domed Cap Lock Nuts

D1	D	S	D1	D	S	D1	D	S	D1	D	S	D1	D	S
3	6	0.1	6	12	0.1	9	15	0.2	12	18	0.25	15	21	0.2
3	6	0.15	6	12	0.2	9	15	0.3	12	18	0.3	15	21	0.25
3	6	0.2	6	12	0.25	9	15	0.5	12	18	0.5	15	21	0.3
3	6	0.25	6	12	0.3	9	15	1	12	18	1	15	21	0.5
3	6	0.3	6	12	0.5	10	16	0.1	13	19	0.1	15	21	1
3	6	0.5	6	12	1	10	16	0.15	13	19	0.15	15	21	1.2
3	6	1	7	13	0.1	10	16	0.2	13	19	0.2	16	22	0.15
4	8	0.1	7	13	0.2	10	16	0.25	13	19	0.25	16	22	0.2
4	8	0.15	7	13	0.3	10	16	0.3	13	19	0.3	16	22	0.25
4	8	0.2	7	13	0.5	10	16	0.5	13	19	0.5	16	22	0.3
4	8	0.3	7	13	1	10	16	1	13	19	1	16	22	0.5
4	8	0.5	8	14	0.1	11	17	0.1	14	20	0.1	16	22	1
4	8	1	8	14	0.15	11	17	0.2	14	20	0.15	16	22	1.2
5	10	0.1	8	14	0.2	11	17	0.25	14	20	0.2	17	24	0.1
5	10	0.15	8	14	0.25	11	17	0.3	14	20	0.25	17	24	0.15
5	10	0.2	8	14	0.3	11	17	0.5	14	20	0.3	17	24	0.2
5	10	0.25	8	14	0.5	11	17	1	14	20	0.5	17	24	0.25
5	10	0.3	8	14	1	12	18	0.1	14	20	1	17	24	0.3
5	10	0.5	9	15	0.1	12	18	0.15	15	21	0.1	17	24	0.5
5	10	1	9	15	0.15	12	18	0.2	15	21	0.15	17	24	1
D1	D	S	D1	D	S	D1	D	S	D1	D	S	D1	D	S
17	24	1.2	25	35	0.1	30	42	1.5	37	47	0.25	45	55	1.5
18	25	0.1	25	35	0.15	30	42	2	37	47	0.3	45	55	2
18	25	0.15	25	35	0.2	32	45	0.1	37	47	0.5	48	60	0.1
18	25	0.2	25	35	0.25	32	45	0.15	37	47	1	48	60	0.15
18	25	0.25	25	35	0.3	32	45	0.2	37	47	1.2	48	60	0.2
18	25	0.3	25	35	0.5	32	45	0.25	37	47	1.5	48	60	0.25
18	25	0.5	25	35	1	32	45	0.3	37	47	2	48	60	0.3
18	25	1	25	35	1.2	32	45	0.5	40	50	0.1	48	60	0.5
18	25	1.2	25	35	1.5	32	45	1	40	50	0.15	48	60	1
19	26	0.1	26	37	0.1	32	45	1.2	40	50	0.2	48	60	1.2
19	26	0.15	26	37	0.15	32	45	1.5	40	50	0.25	48	60	1.5
19	26	0.2	26	37	0.2	32	45	2	40	50	0.3	48	60	2
19	26	0.25	26	37	0.25	35	45	0.1	40	50	0.5	50	62	0.1
19	26	0.3	26	37	0.3	35	45	0.15	40	50	1	50	62	0.15
19	26	0.5	26	37	0.5	35	45	0.2	40	50	1.2	50	62	0.2
19	26	1	26	37	1	35	45	0.25	40	50	1.5	50	62	0.25
19	26	1.2	26	37	1.2	35	45	0.3	40	50	2	50	62	0.3
20	28	0.1	26	37	1.5	35	45	0.5	42	52	0.1	50	62	0.5
20	28	0.15	28	40	0.1	35	45	1	42	52	0.15	50	62	1
20	28	0.2	28	40	0.15	35	45	1.2	42	52	0.2	50	62	1.2
20	28	0.25	28	40	0.2	35	45	1.5	42	52	0.25	50	62	1.5
20	28	0.3	28	40	0.25	35	45	2	42	52	0.3	50	62	2
20	28	0.5	28	40	0.3	36	45	0.1	42	52	0.5			
20	28	1	28	40	0.5	36	45	0.15	42	52	1			
20	28	1.2	28	40	1	36	45	0.2	42	52	1.2			
20	28	1.5	28	40	1.2	36	45	0.25	42	52	1.5			
22	30	0.1	28	40	1.5	36	45	0.3	42	52	2			
22	30	0.15	30	42	0.1	36	45	0.5	45	55	0.1			
22	30	0.2	30	42	0.15	36	45	1	45	55	0.15			
22	30	0.25	30	42	0.2	36	45	1.2	45	55	0.2			
22	30	0.3	30	42	0.25	36	45	1.5	45	55	0.25			
22	30	0.5	30	42	0.3	36	45	2	45	55	0.3			
22	30	1	30	42	0.5	37	47	0.1	45	55	0.5			
22	30	1.2	30	42	1	37	47	0.15	45	55	1			
22	30	1.5	30	42	1.2	37	47	0.2	45	55	1.2			

SPLIT PINS



Split pins, also known as cotter pins, are widely used mechanical fasteners designed to secure other components such as bolts, nuts, and clevis pins, especially in situations where vibration or movement could cause loosening. They are commonly used across various industries including automotive, aerospace, agriculture, marine, and general engineering due to their reliability and ease of installation. At **Fair Products India**, we manufacture high-quality split pins using premium materials to ensure strength, durability, and resistance to corrosion. Our products meet strict quality standards and are suitable for both standard and heavy-duty applications. With a focus on precision, consistency, and fair pricing, Fair Products India is committed to providing dependable fastening solutions for a wide range of industrial and commercial needs.



IS 549 : 2005
ISO 1234 : 1997

IS 549 : 2005
ISO 1234 : 1997

Table 1 — Dimensions (Lengths / : see table 2)

Nominal size*		Dimensions in millimetres							
		0,6	0,8	1	1,2	1,6	2	2,5	3,2
d	max.	0,5	0,7	0,9	1,0	1,4	1,8	2,3	2,9
	min.	0,4	0,6	0,8	0,9	1,3	1,7	2,1	2,7
a	max.	1,6	1,6	1,6	2,50	2,50	2,50	2,50	3,2
	min.	0,8	0,8	0,8	1,25	1,25	1,25	1,25	1,6
b	=	2	2,4	3	3	3,2	4	5	6,4
c	max.	1,0	1,4	1,8	2,0	2,8	3,6	4,6	5,8
	min.	0,9	1,2	1,6	1,7	2,4	3,2	4,0	5,1
Corresponding diameters*	Bolts	over	—	2,5	3,5	4,5	5,5	7	9
		to	2,5	3,5	4,5	5,5	7	9	11
	Clevis pins	over	—	2	3	4	5	6	8
		to	2	3	4	5	6	8	12

Nominal size*		4	6	8	10	13	16	20
d	max.	3,7	4,6	5,9	7,5	9,5	12,4	15,4
	min.	3,5	4,4	5,7	7,3	9,3	12,1	15,1
a	max.	4	4	4	4	6,30	6,30	6,30
	min.	2	2	2	2	3,15	3,15	3,15
b	=	8	10	12,6	16	20	26	32
c	max.	7,4	9,2	11,8	15,0	19,0	24,8	30,8
	min.	6,5	8,0	10,3	13,1	16,8	21,7	27,0
Corresponding diameters*	Bolts	over	14	20	27	36	56	80
		to	20	27	36	56	80	120
	Clevis pins	over	12	17	23	29	44	69
		to	17	23	29	44	69	110

1) Nominal size = diameter of the split pin hole; for the pin hole diameter the following tolerance classes are recommended.

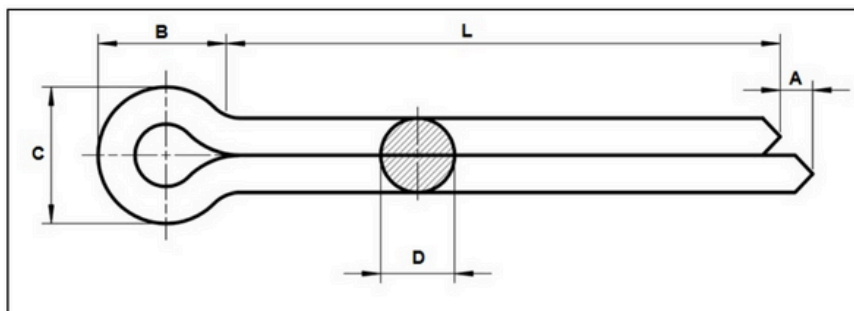
H13 for nominal size ≤ 1,2
H14 for nominal size > 1,2

2) For railway applications and in cases where split pins in clevis pins are subjected to alternating transverse forces, it is recommended to use the next larger split pin size to that specified in this table.

Table 2 — Nominal lengths / and commercial lengths

Length /			Nominal size															
			Dimensions in millimetres															
nom.	min.	max.	0,6	0,8	1	1,2	1,6	2	2,5	3,2	4	5	6,3	8	10	13	16	20
4	3,5	4,5																
5	4,5	5,5																
6	5,5	6,5																
8	7,5	8,5																
10	9,5	10,5																
12	11	13																
14	13	15																
16	15	17																
18	17	19																
20	19	21																
22	21	23																
25	24	26																
28	27	29																
32	30,5	33,5																
36	34,5	37,5																
40	38,5	41,5																
45	43,5	46,6																
50	48,5	51,5																
56	54,5	57,5																
63	61,5	64,5																
71	69,5	72,5																
80	78,5	81,5																
90	88	92																
100	98	102																
112	110	114																
125	123	127																
140	138	142																
160	158	162																
180	178	182																
200	198	202																
224	222	226																
250	248	252																
280	278	282																

DIN STANDARD

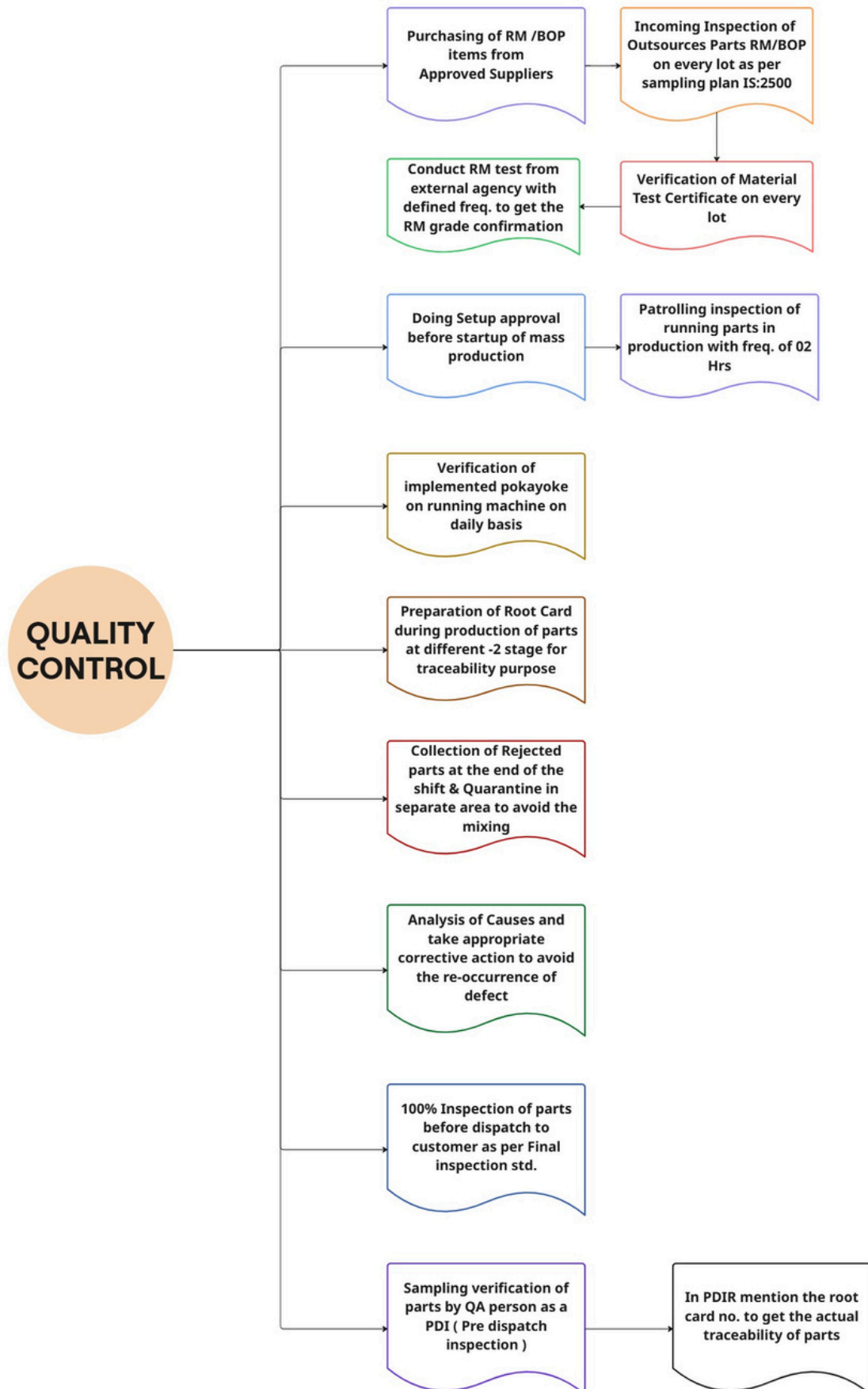


Nominal Diameter	1	1.5	2	2.5	3.2	4	5	6.3	8	10	13
D	Min	0.9	1.4	1.8	2.3	2.9	3.7	4.6	5.9	7.5	9.5
	Max	0.8	1.3	1.7	2.1	2.7	3.5	4.4	5.7	7.3	9.3
A	1.6	2.5	2.5	2.5	3.2	4	4	4	4	6.3	6.3
B	3	3.2	4	5	6.4	8	10	12.6	16	20	26
C	1.6	2.4	3.2	4	5.1	6.5	8	10.3	13.1	16.6	1.7

All measurements are in mm

Nominal Diameter	1	1.5	2	2.5	3.2	4	5	6.3	8	10	13
L (mm)	Weight kg(s) / 1000 pcs										
10	0.04	0.15	0.37								
12	0.08	0.16	0.38	0.59	1.01	1.89					
16	0.10	0.22	0.39	0.70	0.09	2.22					
18		0.22	0.40	0.73	1.20	2.36					
20	0.13	0.25	0.45	0.76	1.27	2.36					
22		0.26	0.47		1.40	2.51					
25		0.31	0.54	0.99	1.49	2.84					
28		0.37	0.58	1.01	1.71	2.94	4.84				
32		0.38	0.65	1.18	1.85	3.12	5.36	6.97			
36			0.80	1.28	2.05	3.72	5.92	10.20			
40			0.82	1.38	2.24	4.07	6.41	11.40	20.60		
45				1.57	2.37	4.33	6.82	12.60	21.20		
50				2.00	2.81	4.75	7.87	13.20	23.10		
56					3.10	5.40	8.52	14.60	25.00	40.30	
63					3.50	5.87	9.41	15.70	28.00	44.80	
71						7.09	10.00	17.60	30.40	49.20	
80						7.94	11.50	18.50	33.40	53.30	
90						8.79	12.80	20.80	36.70	58.50	106.90
100							15.70	22.90	41.20	64.10	117.80
112								25.20	47.00	72.00	128.00
125								27.30	48.50	79.00	142.90
140									65.60	97.70	170.00

QUALITY INSPECTION PROCESS



EQUIPMENT & MACHINERY

CNC MACHINE



VMC MACHINE



SURFACE GRINDERS



BENCH DRILLING MACHINE



BANDSAW MACHINE



CIRCULAR SAW MACHINE



CENTRELESS GRINDER



CENTRIFUGAL DEBURRING MACHINE



VIBRO DEBURRING MACHINE



DUPLEX GRINDER



LASER MARKING MACHINE



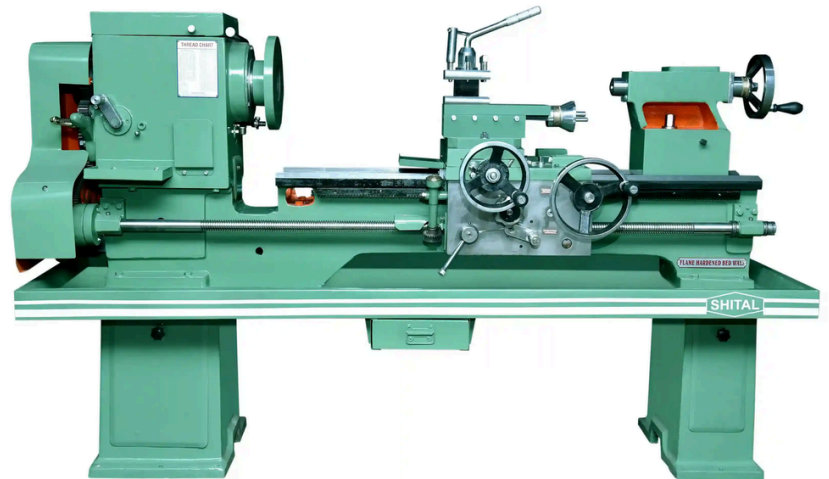
TRAUB MACHINE



MILLING MACHINE



LATHE MACHINE



SPM MACHINE



POWER PRESS



TRAUB ADDA



TESTING EQUIPMENTS



MICROMETER



VERNIER CALLIPER



METRIC THREAD GAUGE



RING GAUGE



LOBBYING MICROMETER



PLAIN PLUG GAUGE



METALLURGICAL MICROSCOPE



ROCKWELL HARDNESS TESTER



PROFILE PROJECTOR



MICRO VICKERS HARDNESS TESTER



SURFACE PLATE

CERTIFICATIONS

			
CERTIFICATE			
Quality Austria - Trainings, Zertifizierungs und Begutachtungs GmbH awards this qualityaustria certificate to the following organisation:		This qualityaustria certificate confirms the application and further development of an effective	
Fair Products (India) Plot No.63, Sector - 25, Faridabad - 121004, Haryana, India		QUALITY MANAGEMENT SYSTEM complying with the requirements of standard ISO 9001:2015	
Quality Austria - Trainings, Zertifizierungs und Begutachtungs GmbH is accredited according to DIN EN ISO 9001:2015 (Federal Ministry of Economic Affairs and Climate Protection) Quality Austria is accredited as an organisation for environmental verification to the DIN EN ISO 14001:2015 (Federal Ministry of Agriculture, Forestry, Environment and Water Management) Quality Austria is authorized by the VDA (Association of German Automobile Manufacturers) for accreditation registration details please refer to the respective decisions or recognition documents Quality Austria is the Austrian member of IQNET (International Certification Network) Dok. Nr. IQA_008 6147635-6020-4740- 9110-000010750337		Registration No.: Q-24602/0 Date of initial issue: 29 September 2020 Valid until: 25 September 2026 Vienna, 26 September 2023 Quality Austria - Trainings, Zertifizierungs und Begutachtungs GmbH, AT-1010 Vienna, Zelinkagasse 10/3	
Manufacture of Machined Components The validity of the qualityaustria certificate will be maintained by annual surveillance audits and one renewal audit after three years.		   	
The current validity of the certificate is documented exclusively on the Internet under http://www.qualityaustria.com/en/cert		   Mag. Christoph Mondl CEO Mag. Dr. Werner Paar CEO Mag. Dr. Anni Koubek Specialist representative	

			
CERTIFICATE			
Quality Austria - Trainings, Zertifizierungs und Begutachtungs GmbH awards this qualityaustria certificate to the following organisation:		This qualityaustria certificate confirms the application and further development of an effective	
Fair Products (India) Plot No.63, Sector - 25, Faridabad - 121004, Haryana, India		QUALITY MANAGEMENT SYSTEM complying with the requirements of standard IATF 16949:2016 without product design	
Manufacture of Machined Components		Registration No.: T-10862/0 IATF-USE: TRNH3H IATF-Registration No.: 0483890 Issue Date: 26 September 2023 Expiration Date: 25 September 2026 Vienna, 26 September 2023 Quality Austria - Trainings, Zertifizierungs und Begutachtungs GmbH, AT-1010 Vienna, Zelinkagasse 10/3	
Dok. Nr. IQA_008 14333947-020-4330- 8210-100000000000		Page 1 / 1    Mag. Christoph Mondl CEO Mag. Dr. Werner Paar CEO Ing. Michael Dragosits, MSc Specialist representative	



Certificate of Registration

This is to certify that

M/S FAIR PRODUCTS (INDIA)

UNIT I:- PLOT NO 63, SECTOR-25, FARIDABAD, HARYANA-121005 INDIA
UNIT II:- E-22, SECTOR- 23, SANJAY COLONY FARIDABAD, HARYANA, INDIA

has been independently assessed and is
compliant with the requirement of :

ISO 45001:2018
(Occupational Health & Safety Management System)

For the following scope of activities :

MANUFACTURE OF MACHINED COMPONENTS

Date of Certification : 28.10.2024
1st Surveillance Audit Due : 27.10.2025

2nd Surveillance Audit Due : 27.10.2026
Certificate Expiry : 27.10.2027

Certificate Number : ISAFH384



Authorized Signatory
ISA Inspection & Certification



Validity of this certificate can be verified at www.isacert.uk

This certificate is property of ISA Inspection & Certification and shall be returned immediately on request
this compliance certificate is approved subject to the organization maintaining its system to the required standards,
which will be monitored by ISA, this certificate remains valid only above mention address and scope, this certificate
is related to the management system, not to the products or services of the certified organizations, organization must
check the acceptability of the certificate in requirement with concerned institutions from time to time,
this certificate is not for legal purpose

www.isacert.uk, email: support@isacert.uk



Certificate of Registration

This is to certify that

M/S FAIR PRODUCTS (INDIA)

UNIT I:- PLOT NO 63, SECTOR-25, FARIDABAD, HARYANA-121005 INDIA
UNIT II:- E-22, SECTOR- 23, SANJAY COLONY FARIDABAD, HARYANA, INDIA

has been independently assessed and is
compliant with the requirement of :

ISO 14001:2015
(Environmental Management System)

For the following scope of activities :

MANUFACTURE OF MACHINED COMPONENTS

Date of Certification : 28.10.2024
1st Surveillance Audit Due : 27.10.2025

2nd Surveillance Audit Due : 27.10.2026
Certificate Expiry : 27.10.2027

Certificate Number : ISAFE268


Authorised Signatory
ISA Inspection & Certification

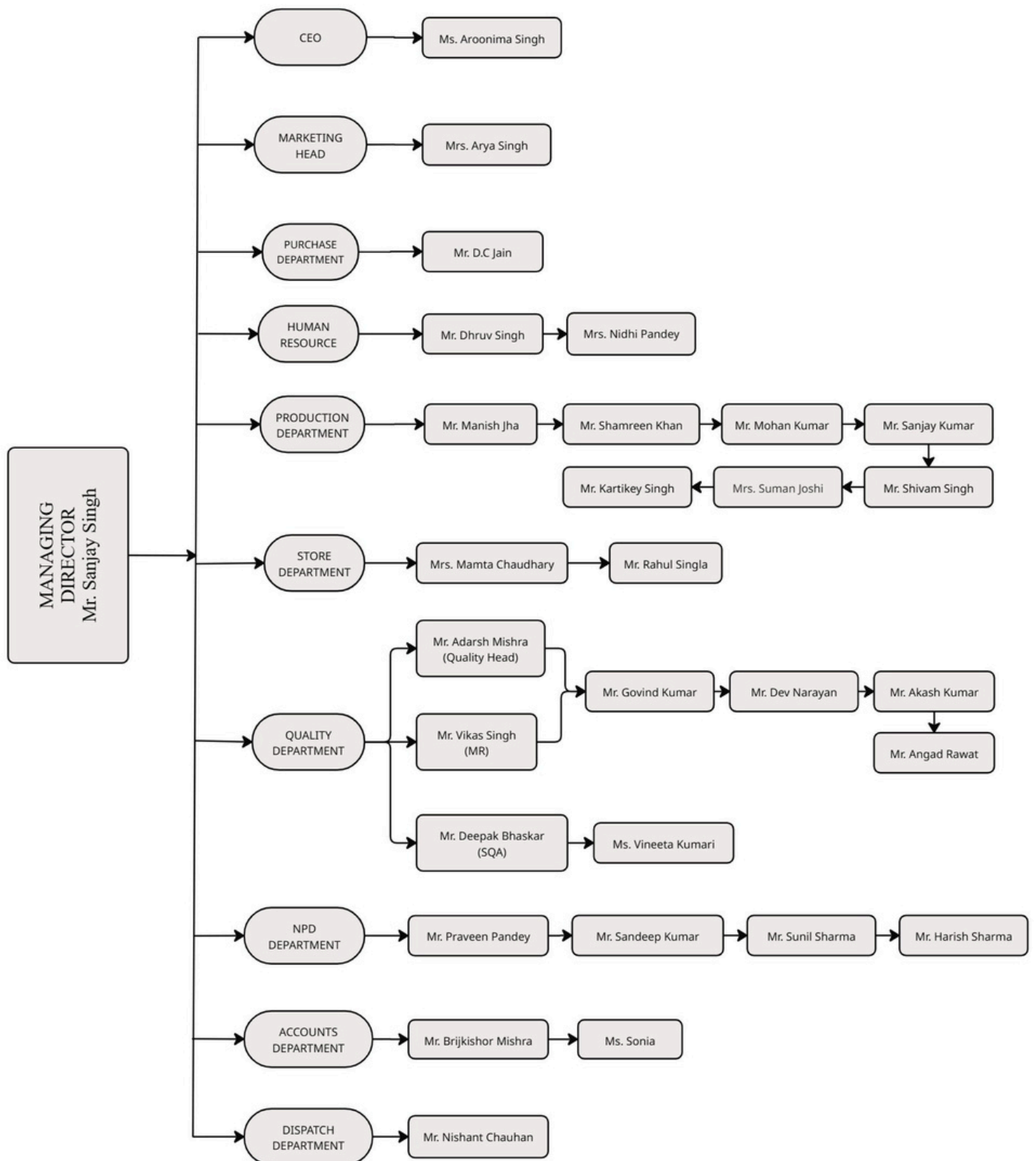


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this certificate is not for legal purpose

www.isacert.uk email: support@isacert.uk

OUR TEAM



VENDOR RATINGS

 MARUTI SUZUKI	Vendor Rating for the FY 2024-25
Vendor Name : FAIR PRODUCTS (INDIA)	
Vendor Code : F035	

Monthly Performance (Delivery)		
	Q	
Qty Defaults in the month		0.00%
Time Defaults in the month		0.00%
Spares Default in the month		0.00%
LRWC		N
Line Stoppage		N
Other Parameters		
Unapproved Changes		N
Recalls		N
Dispatch Suspension		N

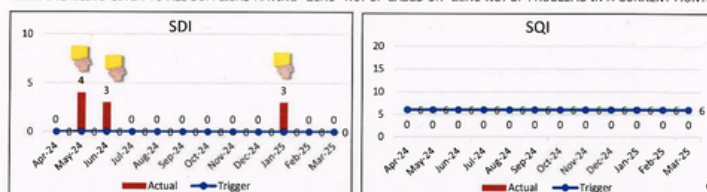
Deduction Due to Quality Problem		
Month - Year	Q	Amount (Rs.)
03-2025		0

Monthly Performance Parameters for Quality		
	Q	
Incoming Quality :		Repeat No
Total No of Defects	0	0
Maru A	0	0
Functional	0	0
General	0	0
No of QPCRs: (GCA;Rec;Spares;Mkt;Rev;KDO)	0	0
QPCR Maru A	0	0
QPCR Functional	0	0
QPCR General	0	0
Rejection PPM	0	
Line Rejection PPM	0	
Stock Rejection PPM	0	
4M Marks	50	
SMIR Marks	0	
Warranty Parameters:		
No of Claims	0	
Warranty Cost (in Rs.)	0	



DELIVERY 2W			QUALITY 2W			Customer Complaint		Overall Score	
No. Of Problem	SDI	Rank	No. Of Cases	SQI	Rank	Customer Complaint due to Your Part Issue		Supplier score based on Q,C,D, Capacity, Financial, CO ₂	
Based on Delivery abnormality	Based on weightage	Rank / Out of	Based on Problem Reported	(Based on Weightage of Defects)	Rank / Out of	No. of Claim's	No. Of Part's	Your Company Score	Best Company Score
0	0	1/65	0	0	1/65	-	-	8.8	10

*RANK 1 IS BEING GIVEN TO ALL SUPPLIERS HAVING "ZERO" NO. OF CASES OR "ZERO" NO. OF PROBLEMS IN A CURRENT MONTH.



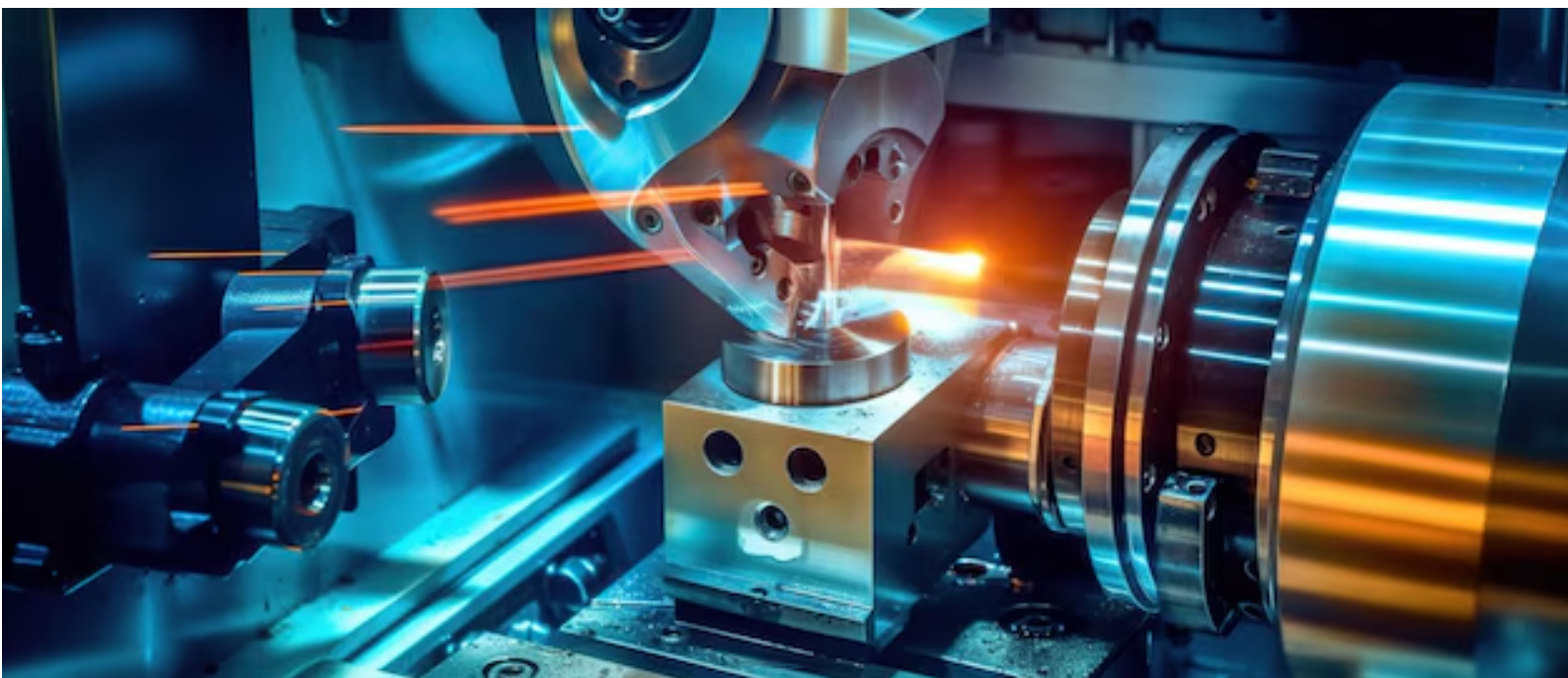
Overall Performance Score :

You have been scored as GREEN supplier for MAP-ID based on your performance rating for the month of Mar'25. Keep up your good performance & thanks for your contribution in achieving overall company's objective !

PHOTO GALLERY



FAIR PRODUCTS INDIA



 www.fairproducts.in

 sanjay.singh@fairproducts.in

 FPI Plot 63, Sector 25, Ballabgarh, Faridabad
Near - Ballabgarh Railway Station