



# ***Nitrocut***



TJL



TJM



TJH



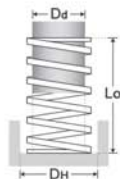
TJB



**TOHATSU SPRINGS**



# TJL TOHATSU ISO STANDARD springs



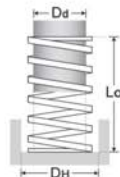
Referência	Diam. do Furo (mm)	Diam. do Pino (mm)	Compr. Total (mm)	Constante Elástica (N/mm)	25% do compr. total 3milhões ciclos estimados		30% do compr. total 1,5milhões de ciclos estimados		35% do compr. total 500mil ciclos estimados		40% do compr. total 200mil ciclos estimados		Compressão Total (mm)
					Deflexão	Carga	Deflexão	Carga	Deflexão	Carga	Deflexão	Carga	
TJL10-25	10.0 +0.58mm -0mm	5.0 +0mm -0.58mm	25	12.0	6.3	75	7.5	90	8.8	105	10.0	120	10.5
TJL10-32			32	9.4	8.0		9.6		11.2		12.8		
TJL10-38			38	7.9	9.5		11.4		13.3		15.2		
TJL10-44			44	6.8	11.0		13.2		15.4		17.6		
TJL10-51			51	5.9	12.8		15.3		17.9		20.4		
TJL10-64			64	4.7	16.0		19.2		22.4		25.6		
TJL10-76			76	3.9	19.0		22.8		26.6		30.4		
TJL10-89			89	3.4	22.3		26.7		31.2		35.6		
TJL10-102			102	2.9	25.5		30.6		35.7		40.8		
TJL10-305			305	1.0	76.3		91.5		106.8		122.0		
TJL12.5-25	12.5 +0.7mm -0mm	6.3 +0mm -0.58mm	25	24.0	6.3	150	7.5	180	8.8	210	10.0	240	10.5
TJL12.5-32			32	18.8	8.0		9.6		11.2		12.8		
TJL12.5-38			38	15.8	9.5		11.4		13.3		15.2		
TJL12.5-44			44	13.6	11.0		13.2		15.4		17.6		
TJL12.5-51			51	11.8	12.8		15.3		17.9		20.4		
TJL12.5-64			64	9.4	16.0		19.2		22.4		25.6		
TJL12.5-76			76	7.9	19.0		22.8		26.6		30.4		
TJL12.5-89			89	6.7	22.3		26.7		31.2		35.6		
TJL12.5-102			102	5.9	25.5		30.6		35.7		40.8		
TJL12.5-115			115	5.2	28.8		34.5		40.3		46.0		
TJL12.5-305	305	2.0	76.3	91.5	106.8	122.0							
TJL16-25	16.0 +0.7mm -0mm	8.0 +0mm -0.58mm	25	30.0	6.3	188	7.5	225	8.8	263	10.0	300	10.5
TJL16-32			32	23.4	8.0		9.6		11.2		12.8		
TJL16-38			38	19.7	9.5		11.4		13.3		15.2		
TJL16-44			44	17.0	11.0		13.2		15.4		17.6		
TJL16-51			51	14.7	12.8		15.3		17.9		20.4		
TJL16-64			64	11.7	16.0		19.2		22.4		25.6		
TJL16-76			76	9.9	19.0		22.8		26.6		30.4		
TJL16-89			89	8.4	22.3		26.7		31.2		35.6		
TJL16-102			102	7.4	25.5		30.6		35.7		40.8		
TJL16-115			115	6.5	28.8		34.5		40.3		46.0		
TJL16-127	127	5.9	31.8	38.1	44.5	50.8							
TJL16-305	305	2.5	76.3	91.5	106.8	122.0							
TJL20-25	20.0 +0.84mm -0mm	10.0 +0mm -0.58mm	25	60.0	6.3	375	7.5	450	8.8	525	10.0	600	10.5
TJL20-32			32	46.9	8.0		9.6		11.2		12.8		
TJL20-38			38	39.5	9.5		11.4		13.3		15.2		
TJL20-44			44	34.1	11.0		13.2		15.4		17.6		
TJL20-51			51	29.4	12.8		15.3		17.9		20.4		
TJL20-64			64	23.4	16.0		19.2		22.4		25.6		
TJL20-76			76	19.7	19.0		22.8		26.6		30.4		
TJL20-89			89	16.9	22.3		26.7		31.2		35.6		
TJL20-102			102	14.7	25.5		30.6		35.7		40.8		
TJL20-115			115	13.0	28.8		34.5		40.3		46.0		
TJL20-127	127	11.8	31.8	38.1	44.5	50.8							
TJL20-139	139	10.8	34.8	41.7	48.7	55.6							
TJL20-152	152	9.9	38.0	45.6	53.2	60.8							
TJL20-178	178	8.4	44.5	53.4	62.3	71.2							
TJL20-203	203	7.4	50.8	60.9	71.1	81.2							
TJL20-305	305	4.9	76.3	91.5	106.8	122.0							
TJL25-25	25.0 +0.84mm -0mm	12.5 +0mm -0.7mm	25	90.0	6.3	563	7.5	675	8.8	788	10.0	900	10.5
TJL25-32			32	70.3	8.0		9.6		11.2		12.8		
TJL25-38			38	59.2	9.5		11.4		13.3		15.2		
TJL25-44			44	51.1	11.0		13.2		15.4		17.6		
TJL25-51			51	44.1	12.8		15.3		17.9		20.4		
TJL25-64			64	35.2	16.0		19.2		22.4		25.6		
TJL25-76			76	29.6	19.0		22.8		26.6		30.4		

Referência	Diam. do Furo (mm)	Diam. do Pino (mm)	Compr. Total (mm)	Constante Elástica (N/mm)	25% do compr. total 3milhões ciclos estimados		30% do compr. total 1,5milhões de ciclos estimados		35% do compr. total 500mil ciclos estimados		40% do compr. total 200mil ciclos estimados		Compressão Total (mm)						
					Deflexão	Carga	Deflexão	Carga	Deflexão	Carga	Deflexão	Carga							
TJL25-89	25.0 +0.84mm -0mm	12.5 +0mm -0.7mm	89	25.3	22.3	563	26.7	675	31.2	788	35.6	900	37.4						
TJL25-102			102	22.1	25.5		30.6		35.7		40.8		42.8						
TJL25-115			115	19.6	28.8		34.5		40.3		46.0		48.3						
TJL25-127			127	17.7	31.8		38.1		44.5		50.8		53.3						
TJL25-139			139	16.2	34.8		41.7		48.7		55.6		58.4						
TJL25-152			152	14.8	38.0		45.6		53.2		60.8		63.8						
TJL25-178			178	12.6	44.5		53.4		62.3		71.2		74.8						
TJL25-203			203	11.1	50.8		60.9		71.1		81.2		85.3						
TJL25-229			229	9.8	57.3		68.7		80.2		91.6		96.2						
TJL25-305			305	7.4	76.3		91.5		106.8		122.0		128.1						
TJL32-38	32.0 +1mm -0mm	16.0 +0mm -0.7mm	38	92.1	9.5	875	11.4	1,050	13.3	1,225	15.2	1,400	16.0						
TJL32-44			44	79.5	11.0		13.2		15.4		17.6		18.5						
TJL32-51			51	68.6	12.8		15.3		17.9		20.4		21.4						
TJL32-64			64	54.7	16.0		19.2		22.4		25.6		26.9						
TJL32-76			76	46.1	19.0		22.8		26.6		30.4		31.9						
TJL32-89			89	39.3	22.3		26.7		31.2		35.6		37.4						
TJL32-102			102	34.3	25.5		30.6		35.7		40.8		42.8						
TJL32-115			115	30.4	28.8		34.5		40.3		46.0		48.3						
TJL32-127			127	27.6	31.8		38.1		44.5		50.8		53.3						
TJL32-139			139	25.2	34.8		41.7		48.7		55.6		58.4						
TJL32-152			152	23.0	38.0		45.6		53.2		60.8		63.8						
TJL32-178			178	19.7	44.5		53.4		62.3		71.2		74.8						
TJL32-203			203	17.2	50.8		60.9		71.1		81.2		85.3						
TJL32-229			229	15.3	57.3		68.7		80.2		91.6		96.2						
TJL32-254			254	13.8	63.5		76.2		88.9		101.6		106.7						
TJL32-305			305	11.5	76.3		91.5		106.8		122.0		128.1						
TJL40-51			40.0 +1mm -0mm	20.0 +0mm -0.84mm	51		98.0		12.8		1,250		15.3	1,500	17.9	1,750	20.4	2,000	21.4
TJL40-64					64		78.1		16.0				19.2		22.4		25.6		26.9
TJL40-76	76	65.8			19.0	22.8	26.6	30.4	31.9										
TJL40-89	89	56.2			22.3	26.7	31.2	35.6	37.4										
TJL40-102	102	49.0			25.5	30.6	35.7	40.8	42.8										
TJL40-115	115	43.5			28.8	34.5	40.3	46.0	48.3										
TJL40-127	127	39.4			31.8	38.1	44.5	50.8	53.3										
TJL40-139	139	36.0			34.8	41.7	48.7	55.6	58.4										
TJL40-152	152	32.9			38.0	45.6	53.2	60.8	63.8										
TJL40-178	178	28.1			44.5	53.4	62.3	71.2	74.8										
TJL40-203	203	24.6			50.8	60.9	71.1	81.2	85.3										
TJL40-229	229	21.8			57.3	68.7	80.2	91.6	96.2										
TJL40-254	254	19.7			63.5	76.2	88.9	101.6	106.7										
TJL40-305	305	16.4			76.3	91.5	106.8	122.0	128.1										
TJL50-64	50.0 +1mm -0mm	25.0 +0mm -0.84mm			64	156.3	16.0	2,500	19.2	3,000		22.4	3,500		25.6		4,000		26.9
TJL50-76					76	131.6	19.0		22.8			26.6			30.4				31.9
TJL50-89			89	112.4	22.3	26.7	31.2		35.6		37.4								
TJL50-102			102	98.0	25.5	30.6	35.7		40.8		42.8								
TJL50-115			115	87.0	28.8	34.5	40.3		46.0		48.3								
TJL50-127			127	78.7	31.8	38.1	44.5		50.8		53.3								
TJL50-139			139	71.9	34.8	41.7	48.7		55.6		58.4								
TJL50-152			152	65.8	38.0	45.6	53.2		60.8		63.8								
TJL50-178			178	56.2	44.5	53.4	62.3		71.2		74.8								
TJL50-203			203	49.3	50.8	60.9	71.1		81.2		85.3								
TJL50-229			229	43.7	57.3	68.7	80.2		91.6		96.2								
TJL50-254			254	39.4	63.5	76.2	88.9		101.6		106.7								
TJL50-305	305	32.8	76.3	91.5	106.8	122.0	128.1												
TJL63-76	63.0 +1.2mm -0mm	38.0 +0mm -0.1mm	76	197.4	19.0	3,750	22.8	4,500	26.6	5,250	30.4	6,000	31.9						
TJL63-89			89	168.5	22.3		26.7		31.2		35.6		37.4						
TJL63-102			102	147.1	25.5		30.6		35.7		40.8		42.8						
TJL63-115			115	130.4	28.8		34.5		40.3		46.0		48.3						
TJL63-127			127	118.1	31.8		38.1		44.5		50.8		53.3						
TJL63-152			152	98.7	38.0		45.6		53.2		60.8		63.8						
TJL63-178			178	84.3	44.5		53.4		62.3		71.2		74.8						
TJL63-203			203	73.9	50.8		60.9		71.1		81.2		85.3						
TJL63-229			229	65.5	57.3		68.7		80.2		91.6		96.2						
TJL63-254			254	59.1	63.5		76.2		88.9		101.6		106.7						
TJL63-305	305	49.2	76.3	91.5	106.8	122.0	128.1												





# TJM TOHATSU ISO STANDARD springs



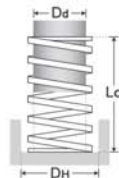
Referência	Diam. do Furo (mm)	Diam. do Pino (mm)	Compr. Total (mm)	Constante Elástica (N/mm)	25% do compr. total 3milhões ciclos estimados		30% do compr. total 1,5milhões de ciclos estimados		33,75% do compr. total 500mil ciclos estimados		37,5% do compr. total 200mil ciclos estimados		Compressão Total (mm)
					Deflexão	Carga	Deflexão	Carga	Deflexão	Carga	Deflexão	Carga	
TJM10-25	10.0 +0.58mm -0mm	5.0 +0mm -0.58mm	25	18.1	6.3	7.5	8.4	9.4	9.9				
TJM10-32			32	14.2	8.0	9.6	10.8	12.0	12.6				
TJM10-38			38	11.9	9.5	11.4	12.8	14.3	15.0				
TJM10-44			44	10.3	11.0	13.2	14.9	16.5	17.4				
TJM10-51			51	8.9	12.8	15.3	17.2	19.1	20.1				
TJM10-64			64	7.1	16.0	19.2	21.6	24.0	25.3				
TJM10-76			76	6.0	19.0	22.8	25.7	28.5	30.0				
TJM10-89			89	5.1	22.3	26.7	30.0	33.4	35.2				
TJM10-102			102	4.4	25.5	30.6	34.4	38.3	40.3				
TJM10-305			305	1.5	76.3	91.5	102.9	114.4	120.5				
TJM12.5-25	12.5 +0.7mm -0mm	6.3 +0mm -0.58mm	25	32.0	6.3	7.5	8.4	9.4	9.9				
TJM12.5-32			32	25.0	8.0	9.6	10.8	12.0	12.6				
TJM12.5-38			38	21.1	9.5	11.4	12.8	14.3	15.0				
TJM12.5-44			44	18.2	11.0	13.2	14.9	16.5	17.4				
TJM12.5-51			51	15.7	12.8	15.3	17.2	19.1	20.1				
TJM12.5-64			64	12.5	16.0	19.2	21.6	24.0	25.3				
TJM12.5-76			76	10.5	19.0	22.8	25.7	28.5	30.0				
TJM12.5-89			89	9.0	22.3	26.7	30.0	33.4	35.2				
TJM12.5-102			102	7.8	25.5	30.6	34.4	38.3	40.3				
TJM12.5-115			115	7.0	28.8	34.5	38.8	43.1	45.4				
TJM12.5-305	305	2.6	76.3	91.5	102.9	114.4	120.5						
TJM16-25	16.0 +0.7mm -0mm	8.0 +0mm -0.58mm	25	53.3	6.3	7.5	8.4	9.4	9.9				
TJM16-32			32	41.7	8.0	9.6	10.8	12.0	12.6				
TJM16-38			38	35.1	9.5	11.4	12.8	14.3	15.0				
TJM16-44			44	30.3	11.0	13.2	14.9	16.5	17.4				
TJM16-51			51	26.1	12.8	15.3	17.2	19.1	20.1				
TJM16-64			64	20.8	16.0	19.2	21.6	24.0	25.3				
TJM16-76			76	17.5	19.0	22.8	25.7	28.5	30.0				
TJM16-89			89	15.0	22.3	26.7	30.0	33.4	35.2				
TJM16-102			102	13.1	25.5	30.6	34.4	38.3	40.3				
TJM16-115			115	11.6	28.8	34.5	38.8	43.1	45.4				
TJM16-127	127	10.5	31.8	38.1	42.9	47.6	50.2						
TJM16-305	305	4.4	76.3	91.5	102.9	114.4	120.5						
TJM20-25	20.0 +0.84mm -0mm	10.0 +0mm -0.58mm	25	85.3	6.3	7.5	8.4	9.4	9.9				
TJM20-32			32	66.7	8.0	9.6	10.8	12.0	12.6				
TJM20-38			38	56.1	9.5	11.4	12.8	14.3	15.0				
TJM20-44			44	48.5	11.0	13.2	14.9	16.5	17.4				
TJM20-51			51	41.8	12.8	15.3	17.2	19.1	20.1				
TJM20-64			64	33.3	16.0	19.2	21.6	24.0	25.3				
TJM20-76			76	28.1	19.0	22.8	25.7	28.5	30.0				
TJM20-89			89	24.0	22.3	26.7	30.0	33.4	35.2				
TJM20-102			102	20.9	25.5	30.6	34.4	38.3	40.3				
TJM20-115			115	18.6	28.8	34.5	38.8	43.1	45.4				
TJM20-127	127	16.8	31.8	38.1	42.9	47.6	50.2						
TJM20-139	139	15.3	34.8	41.7	46.9	52.1	54.9						
TJM20-152	152	14.0	38.0	45.6	51.3	57.0	60.0						
TJM20-178	178	12.0	44.5	53.4	60.1	66.8	70.3						
TJM20-203	203	10.5	50.8	60.9	68.5	76.1	80.2						
TJM20-305	305	7.0	76.3	91.5	102.9	114.4	120.5						
TJM25-25	25.0 +0.84mm -0mm	12.5 +0mm -0.7mm	25	128.0	6.3	7.5	8.4	9.4	9.9				
TJM25-32			32	100.0	8.0	9.6	10.8	12.0	12.6				
TJM25-38			38	84.2	9.5	11.4	12.8	14.3	15.0				
TJM25-44			44	72.7	11.0	13.2	14.9	16.5	17.4				
TJM25-51			51	62.7	12.8	15.3	17.2	19.1	20.1				
TJM25-64			64	50.0	16.0	19.2	21.6	24.0	25.3				
TJM25-76			76	42.1	19.0	22.8	25.7	28.5	30.0				
TJM25-305			305	7.0	76.3	91.5	102.9	114.4	120.5				

Referência	Diam. do Furo (mm)	Diam. do Pino (mm)	Compr. Total (mm)	Constante Elástica (N/mm)	25% do compr. total 3milhões ciclos estimados		30% do compr. total 1,5milhões de ciclos estimados		33,75% do compr. total 500mil ciclos estimados		37,5% do compr. total 200mil ciclos estimados		Compressão Total (mm)						
					Deflexão	Carga	Deflexão	Carga	Deflexão	Carga	Deflexão	Carga							
TJM25-89	+0.84mm -0mm	12.5 +0mm -0.7mm	89	36.0	22.3	800	960	1,080	1,200	26.7	30.0	33.4	35.2						
TJM25-102			102	31.4	25.5					30.6	34.4	38.3	40.3						
TJM25-115			115	27.8	28.8					34.5	38.8	43.1	45.4						
TJM25-127			127	25.2	31.8					38.1	42.9	47.6	50.2						
TJM25-139			139	23.0	34.8					41.7	46.9	52.1	54.9						
TJM25-152			152	21.1	38.0					45.6	51.3	57.0	60.0						
TJM25-178			178	18.0	44.5					53.4	60.1	66.8	70.3						
TJM25-203			203	15.8	50.8					60.9	68.5	76.1	80.2						
TJM25-229			229	14.0	57.3					68.7	77.3	85.9	90.5						
TJM25-305			305	10.5	76.3					91.5	102.9	114.4	120.5						
TJM32-38	32.0 +1mm -0mm	16.0 +0mm -0.7mm	38	154.4	9.5	1,467	1,760	1,980	2,200	11.4	12.8	14.3	15.0						
TJM32-44			44	133.3	11.0					13.2	14.9	16.5	17.4						
TJM32-51			51	115.0	12.8					15.3	17.2	19.1	20.1						
TJM32-64			64	91.7	16.0					19.2	21.6	24.0	25.3						
TJM32-76			76	77.2	19.0					22.8	25.7	28.5	30.0						
TJM32-89			89	65.9	22.3					26.7	30.0	33.4	35.2						
TJM32-102			102	57.5	25.5					30.6	34.4	38.3	40.3						
TJM32-115			115	51.0	28.8					34.5	38.8	43.1	45.4						
TJM32-127			127	46.2	31.8					38.1	42.9	47.6	50.2						
TJM32-139			139	42.2	34.8					41.7	46.9	52.1	54.9						
TJM32-152			152	38.6	38.0					45.6	51.3	57.0	60.0						
TJM32-178			178	33.0	44.5					53.4	60.1	66.8	70.3						
TJM32-203			203	28.9	50.8					60.9	68.5	76.1	80.2						
TJM32-229			229	25.6	57.3					68.7	77.3	85.9	90.5						
TJM32-254			254	23.1	63.5					76.2	85.7	95.3	100.3						
TJM32-305	305	19.2	76.3	91.5	102.9	114.4	120.5												
TJM40-51	40.0 +1mm -0mm	20.0 +0mm -0.84mm	51	156.9	12.8	2,000	2,400	2,700	3,000	15.3	17.2	19.1	20.1						
TJM40-64			64	125.0	16.0					19.2	21.6	24.0	25.3						
TJM40-76			76	105.3	19.0					22.8	25.7	28.5	30.0						
TJM40-89			89	89.9	22.3					26.7	30.0	33.4	35.2						
TJM40-102			102	78.4	25.5					30.6	34.4	38.3	40.3						
TJM40-115			115	69.6	28.8					34.5	38.8	43.1	45.4						
TJM40-127			127	63.0	31.8					38.1	42.9	47.6	50.2						
TJM40-139			139	57.6	34.8					41.7	46.9	52.1	54.9						
TJM40-152			152	52.6	38.0					45.6	51.3	57.0	60.0						
TJM40-178			178	44.9	44.5					53.4	60.1	66.8	70.3						
TJM40-203			203	39.4	50.8					60.9	68.5	76.1	80.2						
TJM40-229			229	34.9	57.3					68.7	77.3	85.9	90.5						
TJM40-254			254	31.5	63.5					76.2	85.7	95.3	100.3						
TJM40-305			305	26.2	76.3					91.5	102.9	114.4	120.5						
TJM50-64			50.0 +1.2mm -0mm	25.0 +0mm -0.84mm	64					208.3	16.0	3,333	4,000	4,500	5,000	19.2	21.6	24.0	25.3
TJM50-76	76	175.4			19.0	22.8	25.7	28.5	30.0										
TJM50-89	89	149.8			22.3	26.7	30.0	33.4	35.2										
TJM50-102	102	130.7			25.5	30.6	34.4	38.3	40.3										
TJM50-115	115	115.9			28.8	34.5	38.8	43.1	45.4										
TJM50-127	127	105.0			31.8	38.1	42.9	47.6	50.2										
TJM50-139	139	95.9			34.8	41.7	46.9	52.1	54.9										
TJM50-152	152	87.7			38.0	45.6	51.3	57.0	60.0										
TJM50-178	178	74.9			44.5	53.4	60.1	66.8	70.3										
TJM50-203	203	65.7			50.8	60.9	68.5	76.1	80.2										
TJM50-229	229	58.2			57.3	68.7	77.3	85.9	90.5										
TJM50-254	254	52.5			63.5	76.2	85.7	95.3	100.3										
TJM50-305	305	43.7			76.3	91.5	102.9	114.4	120.5										
TJM63-76	63.0 +1.2mm -0mm	38.0 +0mm -0.1mm			76	280.7	19.0	5,333	6,400	7,200	8,000					22.8	25.7	28.5	30.0
TJM63-89					89	239.7	22.3									26.7	30.0	33.4	35.2
TJM63-102			102	209.2	25.5	30.6	34.4					38.3	40.3						
TJM63-115			115	185.5	28.8	34.5	38.8					43.1	45.4						
TJM63-127			127	168.0	31.8	38.1	42.9					47.6	50.2						
TJM63-152			152	140.4	38.0	45.6	51.3					57.0	60.0						
TJM63-178			178	119.9	44.5	53.4	60.1					66.8	70.3						
TJM63-203			203	105.1	50.8	60.9	68.5					76.1	80.2						
TJM63-229			229	93.2	57.3	68.7	77.3					85.9	90.5						
TJM63-254			254	84.0	63.5	76.2	85.7					95.3	100.3						
TJM63-305			305	69.9	76.3	91.5	102.9					114.4	120.5						



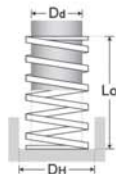


# TJH TOHATSU ISO STANDARD springs



Referência	Diam. do Furo (mm)	Diam. do Pino (mm)	Compr. Total (mm)	Constante Elástica (N/mm)	20% do compr. total 3milhões ciclos estimados		25% do compr. total 1,5milhões ciclos estimados		27,5% do compr. total 500mil ciclos estimados		30% do compr. total 200mil ciclos estimados		Compressão Total (mm)
					Deflexão	Carga	Deflexão	Carga	Deflexão	Carga	Deflexão	Carga	
TJH10-25	10.0 +0.58mm -0mm	5.0 +0mm -0.58mm	25	26.7	5.0	133	6.3	167	6.9	183	7.5	200	8.0
TJH10-32			32	20.8	6.4		8.0		8.8		9.6		
TJH10-38			38	17.5	7.6		9.5		10.5		11.4		
TJH10-44			44	15.2	8.8		11.0		12.1		13.2		
TJH10-51			51	13.1	10.2		12.8		14.0		15.3		
TJH10-64			64	10.4	12.8		16.0		17.6		19.2		
TJH10-76			76	8.8	15.2		19.0		20.9		22.8		
TJH10-89			89	7.5	17.8		22.3		24.5		26.7		
TJH10-102			102	6.5	20.4		25.5		28.1		30.6		
TJH10-305			305	2.2	61.0		76.3		83.9		91.5		97.6
TJH12.5-25	12.5 +0.7mm -0mm	6.3 +0mm -0.58mm	25	44.0	5.0	220	6.3	275	6.9	303	7.5	330	8.0
TJH12.5-32			32	34.4	6.4		8.0		8.8		9.6		
TJH12.5-38			38	28.9	7.6		9.5		10.5		11.4		
TJH12.5-44			44	25.0	8.8		11.0		12.1		13.2		
TJH12.5-51			51	21.6	10.2		12.8		14.0		15.3		
TJH12.5-64			64	17.2	12.8		16.0		17.6		19.2		
TJH12.5-76			76	14.5	15.2		19.0		20.9		22.8		
TJH12.5-89			89	12.4	17.8		22.3		24.5		26.7		
TJH12.5-102			102	10.8	20.4		25.5		28.1		30.6		
TJH12.5-115			115	9.6	23.0		28.8		31.6		34.5		
TJH12.5-305	305	3.6	61.0	76.3	83.9	91.5	97.6						
TJH16-25	16.0 +0.7mm -0mm	8.0 +0mm -0.58mm	25	80.0	5.0	400	6.3	500	6.9	550	7.5	600	8.0
TJH16-32			32	62.5	6.4		8.0		8.8		9.6		
TJH16-38			38	52.6	7.6		9.5		10.5		11.4		
TJH16-44			44	45.5	8.8		11.0		12.1		13.2		
TJH16-51			51	39.2	10.2		12.8		14.0		15.3		
TJH16-64			64	31.3	12.8		16.0		17.6		19.2		
TJH16-76			76	26.3	15.2		19.0		20.9		22.8		
TJH16-89			89	22.5	17.8		22.3		24.5		26.7		
TJH16-102			102	19.6	20.4		25.5		28.1		30.6		
TJH16-115			115	17.4	23.0		28.8		31.6		34.5		
TJH16-127	127	15.7	25.4	31.8	34.9	38.1							
TJH16-305	305	6.6	61.0	76.3	83.9	91.5	97.6						
TJH20-25	20.0 +0.84mm -0mm	10.0 +0mm -0.58mm	25	160.0	5.0	800	6.3	1,000	6.9	1,100	7.5	1,200	8.0
TJH20-32			32	125.0	6.4		8.0		8.8		9.6		
TJH20-38			38	105.3	7.6		9.5		10.5		11.4		
TJH20-44			44	90.9	8.8		11.0		12.1		13.2		
TJH20-51			51	78.4	10.2		12.8		14.0		15.3		
TJH20-64			64	62.5	12.8		16.0		17.6		19.2		
TJH20-76			76	52.6	15.2		19.0		20.9		22.8		
TJH20-89			89	44.9	17.8		22.3		24.5		26.7		
TJH20-102			102	39.2	20.4		25.5		28.1		30.6		
TJH20-115			115	34.8	23.0		28.8		31.6		34.5		
TJH20-127			127	31.5	25.4		31.8		34.9		38.1		
TJH20-139			139	28.8	27.8		34.8		38.2		41.7		
TJH20-152			152	26.3	30.4		38.0		41.8		45.6		
TJH20-178			178	22.5	35.6		44.5		49.0		53.4		
TJH20-203			203	19.7	40.6		50.8		55.8		60.9		
TJH20-305	305	13.1	61.0	76.3	83.9	91.5	97.6						
TJH25-25	25.0 +0.84mm -0mm	12.5 +0mm -0.7mm	25	266.7	5.0	1,333	6.3	1,667	6.9	1,833	7.5	2,000	8.0
TJH25-32			32	208.3	6.4		8.0		8.8		9.6		
TJH25-38			38	175.4	7.6		9.5		10.5		11.4		
TJH25-44			44	151.5	8.8		11.0		12.1		13.2		
TJH25-51			51	130.7	10.2		12.8		14.0		15.3		
TJH25-64			64	104.2	12.8		16.0		17.6		19.2		
TJH25-76			76	87.7	15.2		19.0		20.9		22.8		
TJH25-89			89	74.9	17.8		22.3		24.5		26.7		

# TJH TOHATSU ISO STANDARD springs

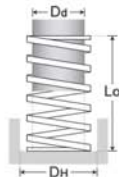


Referência	Diam. do Furo (mm)	Diam. do Pino (mm)	Compr. Total (mm)	Constante Elástica (N/mm)	20% do compr. total 3milhões ciclos estimados		25% do compr. total 1,5milhões de ciclos estimados		27.5% do compr. total 500mil ciclos estimados		30% do compr. total 200mil ciclos estimados		Compressão Total (mm)
					Deflexão	Carga	Deflexão	Carga	Deflexão	Carga	Deflexão	Carga	
TJH25-102	25.0 +0.84mm -0mm	12.5 +0mm -0.7mm	102	65.4	20.4	1,333	25.5	1,667	28.1	1,833	30.6	2,000	32.6
TJH25-115			115	58.0	23.0		28.8		31.6		34.5		36.8
TJH25-127			127	52.5	25.4		31.8		34.9		38.1		40.6
TJH25-139			139	48.0	27.8		34.8		38.2		41.7		44.5
TJH25-152			152	43.9	30.4		38.0		41.8		45.6		48.6
TJH25-178			178	37.5	35.6		44.5		49.0		53.4		57.0
TJH25-203			203	32.8	40.6		50.8		55.8		60.9		65.0
TJH25-229			229	29.1	45.8		57.3		63.0		68.7		73.3
TJH25-305	305	21.9	61.0	76.3	83.9	91.5	97.6						
TJH32-38	32.0 +1mm -0mm	16.0 +0mm -0.7mm	38	298.2	7.6	2,267	9.5	2,833	10.5	3,117	11.4	3,400	12.2
TJH32-44			44	257.6	8.8		11.0		12.1		13.2		14.1
TJH32-51			51	222.2	10.2		12.8		14.0		15.3		16.3
TJH32-64			64	177.1	12.8		16.0		17.6		19.2		20.5
TJH32-76			76	149.1	15.2		19.0		20.9		22.8		24.3
TJH32-89			89	127.3	17.8		22.3		24.5		26.7		28.5
TJH32-102			102	111.1	20.4		25.5		28.1		30.6		32.6
TJH32-115			115	98.6	23.0		28.8		31.6		34.5		36.8
TJH32-127			127	89.2	25.4		31.8		34.9		38.1		40.6
TJH32-139			139	81.5	27.8		34.8		38.2		41.7		44.5
TJH32-152			152	74.6	30.4		38.0		41.8		45.6		48.6
TJH32-178			178	63.7	35.6		44.5		49.0		53.4		57.0
TJH32-203			203	55.8	40.6		50.8		55.8		60.9		65.0
TJH32-229			229	49.5	45.8		57.3		63.0		68.7		73.3
TJH32-254	254	44.6	50.8	63.5	69.9	76.2	81.3						
TJH32-305	305	37.2	61.0	76.3	83.9	91.5	97.6						
TJH40-51	40.0 +1mm -0mm	20.0 +0mm -0.84mm	51	326.8	10.2	3,333	12.8	4,167	14.0	4,583	15.3	5,000	16.3
TJH40-64			64	260.4	12.8		16.0		17.6		19.2		20.5
TJH40-76			76	219.3	15.2		19.0		20.9		22.8		24.3
TJH40-89			89	187.3	17.8		22.3		24.5		26.7		28.5
TJH40-102			102	163.4	20.4		25.5		28.1		30.6		32.6
TJH40-115			115	144.9	23.0		28.8		31.6		34.5		36.8
TJH40-127			127	131.2	25.4		31.8		34.9		38.1		40.6
TJH40-139			139	119.9	27.8		34.8		38.2		41.7		44.5
TJH40-152			152	109.6	30.4		38.0		41.8		45.6		48.6
TJH40-178			178	93.6	35.6		44.5		49.0		53.4		57.0
TJH40-203			203	82.1	40.6		50.8		55.8		60.9		65.0
TJH40-229			229	72.8	45.8		57.3		63.0		68.7		73.3
TJH40-254			254	65.6	50.8		63.5		69.9		76.2		81.3
TJH40-305			305	54.6	61.0		76.3		83.9		91.5		97.6
TJH50-64	50.0 +1mm -0mm	25.0 +0mm -0.84mm	64	390.6	12.8	5,000	16.0	6,250	17.6	6,875	19.2	7,500	20.5
TJH50-76			76	328.9	15.2		19.0		20.9		22.8		24.3
TJH50-89			89	280.9	17.8		22.3		24.5		26.7		28.5
TJH50-102			102	245.1	20.4		25.5		28.1		30.6		32.6
TJH50-115			115	217.4	23.0		28.8		31.6		34.5		36.8
TJH50-127			127	196.9	25.4		31.8		34.9		38.1		40.6
TJH50-139			139	179.9	27.8		34.8		38.2		41.7		44.5
TJH50-152			152	164.5	30.4		38.0		41.8		45.6		48.6
TJH50-178			178	140.4	35.6		44.5		49.0		53.4		57.0
TJH50-203			203	123.2	40.6		50.8		55.8		60.9		65.0
TJH50-229			229	109.2	45.8		57.3		63.0		68.7		73.3
TJH50-254			254	98.4	50.8		63.5		69.9		76.2		81.3
TJH50-305			305	82.0	61.0		76.3		83.9		91.5		97.6





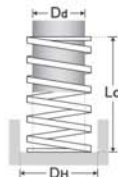
# TJB TOHATSU ISO STANDARD springs



Referência	Diam. do Furo (mm)	Diam. do Pino (mm)	Compr. Total (mm)	Constante Elástica (N/mm)	17% do compr. total 3milhões ciclos estimados		20% do compr. total 1,5milhões de ciclos estimados		22.5% do compr. total 500mil ciclos estimados		25% do compr. total 200mil ciclos estimados		Compressão Total (mm)
					Deflexão	Carga	Deflexão	Carga	Deflexão	Carga	Deflexão	Carga	
TJB10-25	10.0 +0.58mm -0mm	5.0 +0mm -0.58mm	25	36.8	4.3	156	184	207	230	5.0	6.3	6.8	
TJB10-32			32	28.8	5.4					6.4	7.2	8.0	8.6
TJB10-38			38	24.2	6.5					7.6	8.6	9.5	10.3
TJB10-44			44	20.9	7.5					8.8	9.9	11.0	11.9
TJB10-51			51	18.0	8.7					10.2	11.5	12.8	13.8
TJB10-64			64	14.4	10.9					12.8	14.4	16.0	17.3
TJB10-76			76	12.1	12.9					15.2	17.1	19.0	20.5
TJB10-89			89	10.3	15.1					17.8	20.0	22.3	24.0
TJB10-102			102	9.0	17.3					20.4	23.0	25.5	27.5
TJB10-305			305	3.0	51.9					61.0	68.6	76.3	82.4
TJB12.5-25	12.5 +0.7mm -0mm	6.3 +0mm -0.58mm	25	57.6	4.3	245	288	324	360	5.0	6.3	6.8	
TJB12.5-32			32	45.0	5.4					6.4	7.2	8.0	8.6
TJB12.5-38			38	37.9	6.5					7.6	8.6	9.5	10.3
TJB12.5-44			44	32.7	7.5					8.8	9.9	11.0	11.9
TJB12.5-51			51	28.2	8.7					10.2	11.5	12.8	13.8
TJB12.5-64			64	22.5	10.9					12.8	14.4	16.0	17.3
TJB12.5-76			76	18.9	12.9					15.2	17.1	19.0	20.5
TJB12.5-89			89	16.2	15.1					17.8	20.0	22.3	24.0
TJB12.5-102			102	14.1	17.3					20.4	23.0	25.5	27.5
TJB12.5-115			115	12.5	19.6					23.0	25.9	28.8	31.1
TJB12.5-305	305	4.7	51.9	61.0	68.6	76.3	82.4						
TJB16-25	16.0 +0.7mm -0mm	8.0 +0mm -0.58mm	25	112.0	4.3	476	560	630	700	5.0	6.3	6.8	
TJB16-32			32	87.5	5.4					6.4	7.2	8.0	8.6
TJB16-38			38	73.7	6.5					7.6	8.6	9.5	10.3
TJB16-44			44	63.6	7.5					8.8	9.9	11.0	11.9
TJB16-51			51	54.9	8.7					10.2	11.5	12.8	13.8
TJB16-64			64	43.8	10.9					12.8	14.4	16.0	17.3
TJB16-76			76	36.8	12.9					15.2	17.1	19.0	20.5
TJB16-89			89	31.5	15.1					17.8	20.0	22.3	24.0
TJB16-102			102	27.5	17.3					20.4	23.0	25.5	27.5
TJB16-115			115	24.3	19.6					23.0	25.9	28.8	31.1
TJB16-127	127	22.0	21.6	25.4	28.6	31.8	34.3						
TJB16-305	305	9.2	51.9	61.0	68.6	76.3	82.4						
TJB20-25	20.0 +0.84mm -0mm	10.0 +0mm -0.58mm	25	240.0	4.3	1,020	1,200	1,350	1,500	5.0	6.3	6.8	
TJB20-32			32	187.5	5.4					6.4	7.2	8.0	8.6
TJB20-38			38	157.9	6.5					7.6	8.6	9.5	10.3
TJB20-44			44	136.4	7.5					8.8	9.9	11.0	11.9
TJB20-51			51	117.6	8.7					10.2	11.5	12.8	13.8
TJB20-64			64	93.8	10.9					12.8	14.4	16.0	17.3
TJB20-76			76	78.9	12.9					15.2	17.1	19.0	20.5
TJB20-89			89	67.4	15.1					17.8	20.0	22.3	24.0
TJB20-102			102	58.8	17.3					20.4	23.0	25.5	27.5
TJB20-115			115	52.2	19.6					23.0	25.9	28.8	31.1
TJB20-127	127	47.2	21.6	25.4	28.6	31.8	34.3						
TJB20-139	139	43.2	23.6	27.8	31.3	34.8	37.5						
TJB20-152	152	39.5	25.8	30.4	34.2	38.0	41.0						
TJB20-178	178	33.7	30.3	35.6	40.1	44.5	48.1						
TJB20-203	203	29.6	34.5	40.6	45.7	50.8	54.8						
TJB20-305	305	19.7	51.9	61.0	68.6	76.3	82.4						
TJB25-32	25.0 +0.84mm -0mm	12.5 +0mm -0.7mm	32	312.5	5.4	1,700	2,000	2,250	2,500	6.4	8.0	8.6	
TJB25-38			38	263.2	6.5					7.6	8.6	9.5	10.3
TJB25-44			44	227.3	7.5					8.8	9.9	11.0	11.9
TJB25-51			51	196.1	8.7					10.2	11.5	12.8	13.8
TJB25-64			64	156.3	10.9					12.8	14.4	16.0	17.3
TJB25-76			76	131.6	12.9					15.2	17.1	19.0	20.5
TJB25-89			89	112.4	15.1					17.8	20.0	22.3	24.0
TJB25-102			102	98.0	17.3					20.4	23.0	25.5	27.5



# TJB TOHATSU ISO STANDARD springs



Referência	Diam. do Furo (mm)	Diam. do Pino (mm)	Compr. Total (mm)	Constante Elástica (N/mm)	17% do compr. total 3milhões ciclos estimados		20% do compr. total 1,5milhões de ciclos estimados		22,5% do compr. total 500mil ciclos estimados		25% do compr. total 200mil ciclos estimados		Compressão Total (mm)						
					Deflexão	Carga	Deflexão	Carga	Deflexão	Carga	Deflexão	Carga							
TJB25-115	25.0 +0.84mm -0mm	12.5 +0mm -0.7mm	115	87.0	19.6	1,700	23.0	2,000	25.9	2,250	28.8	2,500	31.1						
TJB25-127			127	78.7	21.6		25.4		28.6		31.8		34.3						
TJB25-139			139	71.9	23.6		27.8		31.3		34.8		37.5						
TJB25-152			152	65.8	25.8		30.4		34.2		38.0		41.0						
TJB25-178			178	56.2	30.3		35.6		40.1		44.5		48.1						
TJB25-203			203	49.3	34.5		40.6		45.7		50.8		54.8						
TJB25-229			229	43.7	38.9		45.8		51.5		57.3		61.8						
TJB25-305			305	32.8	51.9		61.0		68.6		76.3		82.4						
TJB32-38	32.0 +1mm -0mm	16.0 +0mm -0.7mm	38	421.1	6.5	2,720	7.6	3,200	8.6	3,600	9.5	4,000	10.3						
TJB32-44			44	363.6	7.5		8.8		9.9		11.0		11.9						
TJB32-51			51	313.7	8.7		10.2		11.5		12.8		13.8						
TJB32-64			64	250.0	10.9		12.8		14.4		16.0		17.3						
TJB32-76			76	210.5	12.9		15.2		17.1		19.0		20.5						
TJB32-89			89	179.8	15.1		17.8		20.0		22.3		24.0						
TJB32-102			102	156.9	17.3		20.4		23.0		25.5		27.5						
TJB32-115			115	139.1	19.6		23.0		25.9		28.8		31.1						
TJB32-127			127	126.0	21.6		25.4		28.6		31.8		34.3						
TJB32-139			139	115.1	23.6		27.8		31.3		34.8		37.5						
TJB32-152			152	105.3	25.8		30.4		34.2		38.0		41.0						
TJB32-178			178	89.9	30.3		35.6		40.1		44.5		48.1						
TJB32-203			203	78.8	34.5		40.6		45.7		50.8		54.8						
TJB32-229			229	69.9	38.9		45.8		51.5		57.3		61.8						
TJB32-254			254	63.0	43.2		50.8		57.2		63.5		68.6						
TJB32-305			305	52.5	51.9		61.0		68.6		76.3		82.4						
TJB40-51	40.0 +1mm -0mm	20.0 +0mm -0.84mm	51	509.8	8.7	4,420	10.2	5,200	11.5	5,850	12.8	6,500	13.8						
TJB40-64			64	406.3	10.9		12.8		14.4		16.0		17.3						
TJB40-76			76	342.1	12.9		15.2		17.1		19.0		20.5						
TJB40-89			89	292.1	15.1		17.8		20.0		22.3		24.0						
TJB40-102			102	254.9	17.3		20.4		23.0		25.5		27.5						
TJB40-115			115	226.1	19.6		23.0		25.9		28.8		31.1						
TJB40-127			127	204.7	21.6		25.4		28.6		31.8		34.3						
TJB40-139			139	187.1	23.6		27.8		31.3		34.8		37.5						
TJB40-152			152	171.1	25.8		30.4		34.2		38.0		41.0						
TJB40-178			178	146.1	30.3		35.6		40.1		44.5		48.1						
TJB40-203			203	128.1	34.5		40.6		45.7		50.8		54.8						
TJB40-229			229	113.5	38.9		45.8		51.5		57.3		61.8						
TJB40-254			254	102.4	43.2		50.8		57.2		63.5		68.6						
TJB40-305			305	85.2	51.9		61.0		68.6		76.3		82.4						
TJB50-64			50.0 +1mm -0mm	25.0 +0mm -0.84mm	64		625.0		10.9		6,800		12.8	8,000	14.4	9,000	16.0	10,000	17.3
TJB50-76					76		526.3		12.9				15.2		17.1		19.0		20.5
TJB50-89	89	449.4			15.1	17.8	20.0	22.3	24.0										
TJB50-102	102	392.2			17.3	20.4	23.0	25.5	27.5										
TJB50-115	115	347.8			19.6	23.0	25.9	28.8	31.1										
TJB50-127	127	315.0			21.6	25.4	28.6	31.8	34.3										
TJB50-139	139	287.8			23.6	27.8	31.3	34.8	37.5										
TJB50-152	152	263.2			25.8	30.4	34.2	38.0	41.0										
TJB50-178	178	224.7			30.3	35.6	40.1	44.5	48.1										
TJB50-203	203	197.0			34.5	40.6	45.7	50.8	54.8										
TJB50-229	229	174.7			38.9	45.8	51.5	57.3	61.8										
TJB50-254	254	157.5			43.2	50.8	57.2	63.5	68.6										
TJB50-305	305	131.1			51.9	61.0	68.6	76.3	82.4										

# TOHATSU

## Especificações Originais



Referência	Diam. do Furo (mm)	Diam. do Pino (mm)	Compr. Total (mm)	Constante Elástica (N/mm)	20% do compr. total 3milhões ciclos estimados		25% do compr. total 1,5milhões de ciclos estimados		27.5% do compr. total 500mil ciclos estimados		30% do compr. total 200mil ciclos estimados		Compressão Total (mm)
					Deflexão	Carga	Deflexão	Carga	Deflexão	Carga	Deflexão	Carga	
TJH63-76			76	526.3	15.2		19.0		20.9		22.8		24.3
TJH63-89			89	449.4	17.8		22.3		24.5		26.7		28.5
TJH63-102			102	392.2	20.4		25.5		28.1		30.6		32.6
TJH63-115			115	347.8	23.0		28.8		31.6		34.5		36.8
TJH63-127	63.0	38.0	127	315.0	25.4		31.8		34.9		38.1		40.6
TJH63-152	+1.2mm	+0mm	152	263.2	30.4	8,000	38.0	10,000	41.8	11,000	45.6	12,000	48.6
TJH63-178	-0mm	-0.1mm	178	224.7	35.6		44.5		49.0		53.4		57.0
TJH63-203			203	197.0	40.6		50.8		55.8		60.9		65.0
TJH63-229			229	174.7	45.8		57.3		63.0		68.7		73.3
TJH63-254			254	157.5	50.8		63.5		69.9		76.2		81.3
TJH63-305			305	131.1	61.0		76.3		83.9		91.5		97.6

Referência	Diam. do Furo (mm)	Diam. do Pino (mm)	Compr. Total (mm)	Constante Elástica (N/mm)	17% do compr. total 3milhões ciclos estimados		20% do compr. total 1,5milhões de ciclos estimados		22.5% do compr. total 500mil ciclos estimados		25% do compr. total 200mil ciclos estimados		Compressão Total (mm)
					Deflexão	Carga	Deflexão	Carga	Deflexão	Carga	Deflexão	Carga	
TJB63-76			76	842.1	12.9		15.2		17.1		*	*	18.6
TJB63-89			89	719.1	15.1		17.8		20.0		*	*	21.8
TJB63-102			102	627.5	17.3		20.4		23.0		25.5	*	27.5
TJB63-115			115	556.5	19.6		23.0		25.9		28.8		31.1
TJB63-127	63.0	38.0	127	503.9	21.6		25.4		28.6		31.8		34.3
TJB63-152	+1.2mm	+0mm	152	421.1	25.8	10,880	30.4	12,800	34.2	14,400	38.0	16,000	41.0
TJB63-178	-0mm	-0.1mm	178	359.6	30.3		35.6		40.1		44.5		48.1
TJB63-203			203	315.3	34.5		40.6		45.7		50.8		54.8
TJB63-229			229	279.5	38.9		45.8		51.5		57.3		61.8
TJB63-254			254	252.0	43.2		50.8		57.2		63.5		68.6
TJB63-305			305	209.8	51.9		61.0		68.6		76.3		82.4

**Esta linha de produtos foi desenvolvida com o objetivo de dar opções mais amplas aos projetistas.**



# Produtos que complementam nossa linha



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