



Available materials

- CC	Chrome steel AISI 52100 Balls. Machined AISI 1016 steel housing, toughened & zinc plated
Solve specific application requirements by upgrading materials. Select option by adding suffix i.e. - CS	
- CS	Stainless Steel Balls (AISI 420) but other materials as Standard. Reduce load by 30%.
- SS	All parts in Stainless Steel - out housing AISI 416, Balls AISI 420. Reduce load by 30%.
- CD	Acetal (POM) main ball option - reduce load. See chart overleaf

Fixing clip selection

Part No.	Ball Size	Minimum Bore ϕ	Maximum Bore ϕ
P2730.015	15	24,8	25,0
P2730.022	22	37,0	37,2
P2730.030	30	46,3	46,7

Clip requires a minimum plate thickness of 3mm to grip securely

How to select the correct unit

Ball Type	Max Load (Kg)	Friction (% of load)	Speed m/sec	Shock Loads		Arduous Conditions	Orientation	Instant Change
				✓✓✓	✓✓			
Medium Duty	20-3500	2%	1,5	✓✓✓	✓✓	✓✓		✓✓✓
Light Duty	7-250	3%	1,0	✓		✓✓		✓✓✓

Variables to consider:



Shock Loads:

Standard material ball units have Rockwell 'C' hardness of 60 minimum



Track Hardness/Conveyed Item Material:

Standard material ball units have Rockwell 'C' hardness of 60 minimum



Delicate Surfaces:

Ball Units - Acetal (POM) & Phenolic Resin

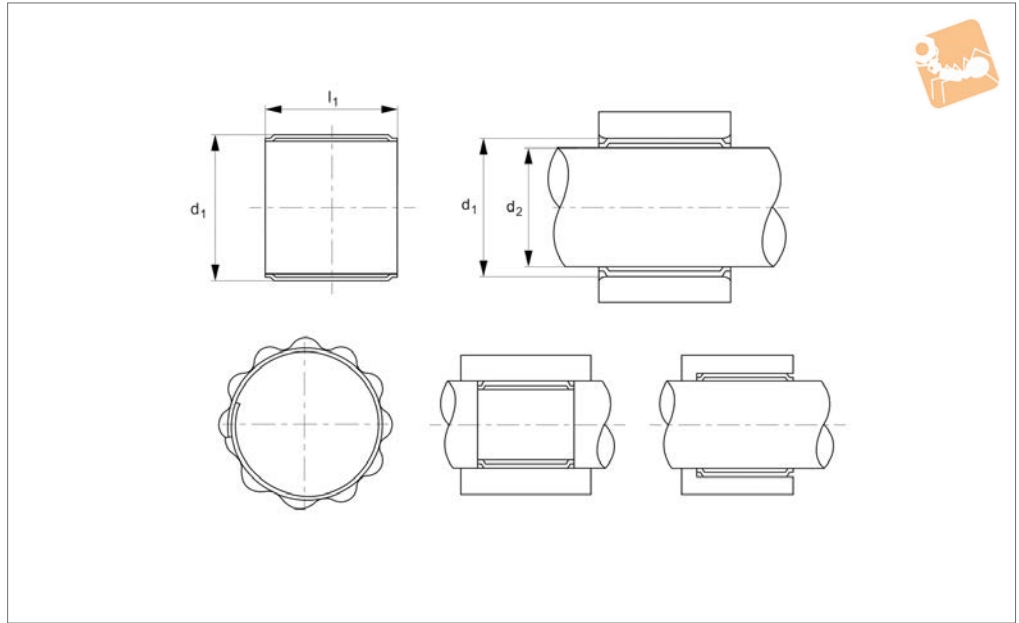


Operating Environment:

Wet, dirty, outdoor, radioactive



P0395



Material

Stainless steel (type 304, DIN 1.4301).

Technical Notes

Tolerance rings allow the mating of parts

with wider tolerances.

The waves are on the outside, the ring sits on the shaft with the waves being compressed by the housing bore.

Tips

For use where there is an accurate bore but the shaft may have a wide tolerance.

Order No.	d ₁ tol. h9	d ₁ nom.	l	d ₂ for bearings	d ₂ for torque transfer	Torque Nm max.	Radial load N max.	Material
P0395.SV005-005	5	5	5	4,01 to 4,06	4,14 to 4,18	0.17	180	Steel
P0395.SV005-008	5	5	8	4,01 to 4,06	4,18 to 4,18	0.35	260	Steel
P0395.SV005-010	5	5	10	4,01 to 4,06	4,14 to 4,18	0.50	310	Steel
P0395.SV006-006	6	6	6	5,01 to 5,06	5,14 to 5,18	0.33	380	Steel
P0395.SV006-008	6	6	8	5,01 to 5,06	5,14 to 5,18	0.45	575	Stainless
P0395.SV006-010	6	6	10	5,01 to 5,06	5,14 to 5,18	0.90	690	Stainless
P0395.SV006-012	6	6	12	5,01 to 5,06	5,14 to 5,18	1.25	940	Steel
P0395.SV008-005	8	8	5	6,51 to 6,57	6,65 to 6,71	0.45	550	Steel
P0395.SV008-007	8	8	7	6,51 to 6,57	6,65 to 6,71	0.68	780	Stainless
P0395.SV008-008	8	8	8	6,51 to 6,57	6,65 to 6,71	0.80	910	Steel
P0395.SV008-010	8	8	10	6,51 to 6,57	6,65 to 6,71	1.00	1125	Steel
P0395.SV008-014	8	8	14	6,51 to 6,57	6,65 to 6,71	1.30	1400	Stainless
P0395.SV009-008	9	9	8	7,51 to 7,57	7,65 to 7,71	0.85	1070	Steel
P0395.SV010-006	10	10	6	8,51 to 8,57	8,65 to 8,71	1.80	950	Stainless
P0395.SV010-010	10	10	10	8,51 to 8,57	8,65 to 8,71	3.00	1275	Steel
P0395.SV010-012	10	10	12	8,51 to 8,57	8,65 to 8,71	3.60	1650	Steel
P0395.SV010-014	10	10	14	8,51 to 8,57	8,65 to 8,71	3.90	2000	Stainless
P0395.SV010-016	10	10	16	8,51 to 8,57	8,65 to 8,71	4.50	2100	Steel
P0395.SV011-010	11	11	10	9,51 to 9,57	9,65 to 9,71	4.00	1400	Steel
P0395.SV011-014	11	11	14	9,51 to 9,57	9,65 to 9,71	5.50	1680	Steel
P0395.SV012-006	12	12	6	10,52 to 10,59	10,70 to 10,77	2.20	1075	Stainless
P0395.SV012-008	12	12	8	10,52 to 10,59	10,70 to 10,77	3.20	1300	Stainless
P0395.SV012-010	12	12	10	10,52 to 10,59	10,70 to 10,77	4.50	1560	Stainless
P0395.SV012-012	12	12	12	10,52 to 10,59	10,70 to 10,77	5.30	2100	Stainless
P0395.SV012-014	12	12	14	10,52 to 10,59	10,70 to 10,77	6.10	2400	Steel
P0395.SV012-018	12	12	18	10,52 to 10,59	10,70 to 10,77	7.90	3075	Stainless
P0395.SV013-008	13	13	8	11,52 to 11,59	11,70 to 11,77	4.00	1650	Stainless
P0395.SV013-010	13	13	10	11,52 to 11,59	11,70 to 11,77	4.75	1800	Stainless
P0395.SV013-012	13	13	12	11,52 to 11,59	11,70 to 11,77	5.60	2300	Stainless
P0395.SV013-015	13	13	15	11,52 to 11,59	11,70 to 11,77	7.20	3000	Stainless
P0395.SV014-008	14	14	8	12,52 to 12,59	12,70 to 12,77	4.20	1825	Stainless
P0395.SV014-010	14	14	10	12,52 to 12,59	12,70 to 12,77	4.90	2000	Stainless
P0395.SV014-014	14	14	14	12,52 to 12,59	12,70 to 12,77	5.60	3300	Stainless



Tolerance Rings - Shaft Variable- SV

SV type, A2 Stainless

Tolerance Rings



Order No.	d ₁ tol. h9	d ₁ nom.	l	d ₂ for bearings	d ₂ for torque transfer	Torque Nm max.	Radial load N max.	Material
P0395.SV014-020	14	14	20	12,52 to 12,59	12,70 to 12,77	8.00	4000	Stainless
P0395.SV015-006	15	15	6	13,52 to 13,59	13,70 to 13,77	3.70	1200	Stainless
P0395.SV015-008	15	15	8	13,52 to 13,59	13,70 to 13,77	3.90	1600	Stainless
P0395.SV015-010	15	15	10	13,52 to 13,59	13,70 to 13,77	4.80	2025	Stainless
P0395.SV015-012	15	15	12	13,52 to 13,59	13,70 to 13,77	6.80	2650	Stainless
P0395.SV015-014	15	15	14	13,52 to 13,59	13,70 to 13,77	8.90	2950	Stainless
P0395.SV015-016	15	15	16	13,52 to 13,59	13,70 to 13,77	11.00	3400	Stainless
P0395.SV015-019	15	15	19	13,52 to 13,59	13,70 to 13,77	12.50	3900	Steel
P0395.SV016-010	16	16	10	14,52 to 14,59	14,70 to 14,77	7.00	2600	Stainless
P0395.SV016-014	16	16	14	14,52 to 14,59	14,70 to 14,77	10.50	3100	Stainless
P0395.SV016-016	16	16	16	14,52 to 14,59	14,70 to 14,77	12.00	3500	Stainless
P0395.SV017-006	17	17	6	15,52 to 15,59	15,70 to 15,77	3.90	1500	Stainless
P0395.SV017-008	17	17	8	15,52 to 15,59	15,70 to 15,77	4.80	1800	Stainless
P0395.SV017-010	17	17	10	15,52 to 15,59	15,70 to 15,77	8.00	2650	Stainless
P0395.SV017-012	17	17	12	15,52 to 15,59	15,70 to 15,77	10.00	2800	Stainless
P0395.SV017-014	17	17	14	15,52 to 15,59	15,70 to 15,77	12.00	3200	Stainless
P0395.SV017-016	17	17	16	15,52 to 15,59	15,70 to 15,77	14.00	3650	Stainless
P0395.SV018-010	18	18	10	16,52 to 16,59	16,70 to 16,77	9.00	2650	Steel
P0395.SV018-016	18	18	16	16,52 to 16,59	16,70 to 16,77	15.00	3900	Stainless
P0395.SV018-022	18	18	22	16,52 to 16,59	16,70 to 16,77	21.00	5600	Stainless
P0395.SV019-010	19	19	10	17,52 to 17,59	17,70 to 17,77	10.00	2800	Stainless
P0395.SV019-019	19	19	19	17,52 to 17,59	17,70 to 17,77	19.00	4900	Stainless
P0395.SV019-022	19	19	22	17,52 to 17,59	17,70 to 17,77	22.00	6000	Stainless
P0395.SV020-006	20	20	6	18,02 to 18,11	18,25 to 18,33	7.00	1600	Stainless
P0395.SV020-007	20	20	7	18,02 to 18,11	18,25 to 18,33	8.00	1800	Stainless
P0395.SV020-008	20	20	8	18,02 to 18,11	18,25 to 18,33	9.00	2200	Stainless
P0395.SV020-010	20	20	10	18,02 to 18,11	18,25 to 18,33	12.00	2900	Stainless
P0395.SV020-012	20	20	12	18,02 to 18,11	18,25 to 18,33	15.00	3750	Stainless
P0395.SV020-014	20	20	14	18,02 to 18,11	18,25 to 18,33	18.00	4600	Stainless
P0395.SV020-015	20	20	15	18,02 to 18,11	18,25 to 18,33	19.00	5200	Stainless
P0395.SV020-018	20	20	18	18,02 to 18,11	18,25 to 18,33	23.00	5900	Stainless
P0395.SV020-020	20	20	20	18,02 to 18,11	18,25 to 18,33	25.00	6850	Stainless
P0395.SV020-022	20	20	22	18,02 to 18,33	18,25 to 18,33	28.00	7700	Stainless
P0395.SV022-012	22	22	12	20,02 to 20,11	20,25 to 20,33	18.00	4450	Stainless
P0395.SV022-015	22	22	15	20,02 to 20,11	20,25 to 20,33	26.00	5550	Stainless
P0395.SV022-022	22	22	22	20,02 to 20,11	20,25 to 20,33	33.00	8250	Stainless
P0395.SV024-010	24	24	10	22,02 to 22,11	22,25 to 22,33	30.00	5950	Stainless
P0395.SV024-015	24	24	15	22,02 to 22,11	22,25 to 22,33	30.00	5950	Stainless
P0395.SV024-022	24	24	22	22,02 to 22,11	22,25 to 22,33	40.00	9000	Stainless
P0395.SV024-024	24	24	24	22,02 to 22,11	22,25 to 22,33	48.00	10200	Stainless
P0395.SV025-008	25	25	8	23,02 to 23,11	23,25 to 23,33	15.00	3000	Stainless
P0395.SV025-010	25	25	10	23,02 to 23,11	23,25 to 23,33	20.00	3850	Stainless
P0395.SV025-012	25	25	12	23,02 to 23,11	23,25 to 23,33	22.00	4900	Stainless
P0395.SV025-015	25	25	15	23,02 to 23,11	23,25 to 23,33	28.00	6450	Stainless
P0395.SV025-018	25	25	18	23,02 to 23,11	23,25 to 23,33	38.00	7200	Stainless
P0395.SV025-020	25	25	20	23,02 to 23,11	23,25 to 23,33	41.00	7575	Stainless
P0395.SV025-021	25	25	21	23,02 to 23,11	23,25 to 23,33	43.00	7700	Stainless
P0395.SV025-025	25	25	25	23,02 to 23,11	23,25 to 23,33	53.00	10600	Stainless
P0395.SV028-012	28	28	12	26,02 to 26,11	26,25 to 26,33	30.00	5750	Stainless
P0395.SV028-020	28	28	20	26,02 to 26,11	26,25 to 26,33	53.00	10600	Stainless
P0395.SV028-022	28	28	22	26,02 to 26,11	26,25 to 26,33	60.00	11300	Stainless
P0395.SV028-025	28	28	25	26,02 to 26,11	26,25 to 26,33	71.00	12000	Stainless
P0395.SV030-008	30	30	8	28,02 to 28,11	28,25 to 28,33	25.00	2800	Stainless
P0395.SV030-010	30	30	10	28,02 to 28,11	28,25 to 28,33	29.00	4200	Stainless
P0395.SV030-012	30	30	12	28,02 to 28,11	28,25 to 28,33	35.00	5400	Stainless
P0395.SV030-015	30	30	15	28,02 to 28,11	28,25 to 28,33	47.00	7000	Stainless
P0395.SV030-020	30	30	20	28,02 to 28,11	28,25 to 28,33	60.00	10200	Stainless
P0395.SV030-023	30	30	23	28,02 to 28,11	28,25 to 28,33	70.00	12200	Stainless
P0395.SV030-030	30	30	30	28,02 to 28,11	28,25 to 28,33	95.00	16600	Stainless
P0395.SV032-012	32	32	12	30,02 to 30,11	30,25 to 30,33	44.00	5800	Stainless
P0395.SV032-016	32	32	16	30,02 to 30,11	30,25 to 30,33	56.00	8400	Stainless
P0395.SV032-030	32	32	30	30,02 to 30,11	30,25 to 30,33	110.00	17000	Stainless
P0395.SV035-010	35	35	10	33,03 to 33,13	33,25 to 33,40	40.00	4000	Stainless
P0395.SV035-012	35	35	12	33,03 to 33,13	33,25 to 33,40	48.00	4600	Stainless
P0395.SV035-015	35	35	15	33,03 to 33,13	33,25 to 33,40	60.00	4950	Stainless
P0395.SV035-025	35	35	25	33,03 to 33,13	33,25 to 33,40	110.00	8650	Stainless
P0395.SV035-030	35	35	30	33,03 to 33,13	33,25 to 33,40	130.00	9800	Stainless

TOLERANCE RINGS



Order No.	d ₁ tol. h9	d ₁ nom.	l	d ₂ for bearings	d ₂ for torque transfer	Torque Nm max.	Radial load N max.	Material
P0395.SV036-012	36	36	12	34,03 to 34,13	34,30 to 34,40	55.00	4800	Stainless
P0395.SV036-015	36	36	15	34,03 to 34,13	34,30 to 34,40	63.00	5100	Stainless
P0395.SV036-030	36	36	30	34,03 to 34,13	34,30 to 34,40	135.00	10300	Stainless
P0395.SV040-010	40	40	10	38,03 to 38,13	38,30 to 38,40	55.00	3800	Stainless
P0395.SV040-012	40	40	12	38,03 to 38,13	38,30 to 38,40	63.00	4500	Stainless
P0395.SV040-015	40	40	15	38,03 to 38,13	38,30 to 38,40	83.00	5400	Stainless
P0395.SV040-023	40	40	23	38,03 to 38,13	38,30 to 38,40	104.00	8500	Steel
P0395.SV040-030	40	40	30	38,03 to 38,13	38,30 to 38,40	180.00	12000	Stainless
P0395.SV045-010	45	45	10	43,03 to 43,13	43,30 to 43,40	68.00	4250	Stainless
P0395.SV045-015	45	45	15	43,03 to 43,13	43,30 to 43,40	102.00	6230	Stainless
P0395.SV045-020	45	45	20	43,03 to 43,13	43,30 to 43,40	145.00	9400	Stainless
P0395.SV045-023	45	45	23	43,03 to 43,13	43,30 to 43,40	160.00	10100	Steel
P0395.SV045-025	45	45	25	43,03 to 43,13	43,30 to 43,40	200.00	11000	Stainless
P0395.SV045-030	45	45	30	43,03 to 43,13	43,30 to 43,40	230.00	13950	Stainless
P0395.SV050-012	50	50	12	48,03 to 48,13	48,30 to 48,40	107.00	5750	Stainless
P0395.SV050-016	50	50	16	48,03 to 48,13	48,30 to 48,40	141.00	7565	Steel
P0395.SV050-020	50	50	20	48,03 to 48,13	48,30 to 48,40	186.00	9575	Stainless
P0395.SV050-030	50	50	30	48,03 to 48,13	48,30 to 48,40	310.00	13400	Stainless
P0395.SV050-040	50	50	40	48,03 to 48,13	48,30 to 48,40	350.00	18000	Steel
P0395.SV055-010	55	55	10	52,53 to 52,65	52,85 to 52,97	125.00	4900	Stainless
P0395.SV055-014	55	55	14	52,53 to 52,65	52,85 to 52,97	175.00	6750	Stainless
P0395.SV055-015	55	55	15	52,53 to 52,65	52,85 to 52,97	185.00	6800	Stainless
P0395.SV055-029	55	55	29	52,53 to 52,65	52,85 to 52,97	330.00	12500	Stainless
P0395.SV060-020	60	60	20	57,53 to 57,65	57,85 to 57,97	310.00	12000	Stainless
P0395.SV060-022	60	60	22	57,53 to 57,65	57,85 to 57,97	350.00	13200	Stainless
P0395.SV060-028	60	60	28	57,53 to 57,65	57,85 to 57,97	420.00	18400	Stainless
P0395.SV065-020	65	65	20	62,53 to 62,65	62,85 to 62,97	480.00	14800	Stainless
P0395.SV065-033	65	65	33	62,53 to 62,65	62,85 to 62,97	650.00	21000	Stainless
P0395.SV080-012	80	80	12	77,53 to 77,65	77,85 to 77,97	550.00	15000	Stainless
P0395.SV080-017	80	80	17	77,53 to 77,65	77,85 to 77,97	700.00	16500	Stainless
P0395.SV085-022	85	85	22	82,04 to 82,18	82,44 to 82,58	800.00	19000	Stainless
P0395.SV090-024	90	90	24	87,04 to 87,18	87,44 to 87,58	850.00	22000	Stainless
P0395.SV090-030	90	90	30	87,04 to 87,18	87,44 to 87,58	1100.00	27000	Steel
P0395.SV100-024	100	100	24	97,04 to 97,18	97,44 to 97,58	1350.00	28000	Steel
P0395.SV100-036	100	100	36	97,04 to 97,18	97,44 to 97,58	1900.00	36000	Steel
P0395.SV140-015	140	140	15	136,04 to 136,20	136,52 to 136,68	1200.00	25500	Stainless
P0395.SV140-022	140	140	22	136,04 to 136,20	136,52 to 136,68	1250.00	32000	Steel

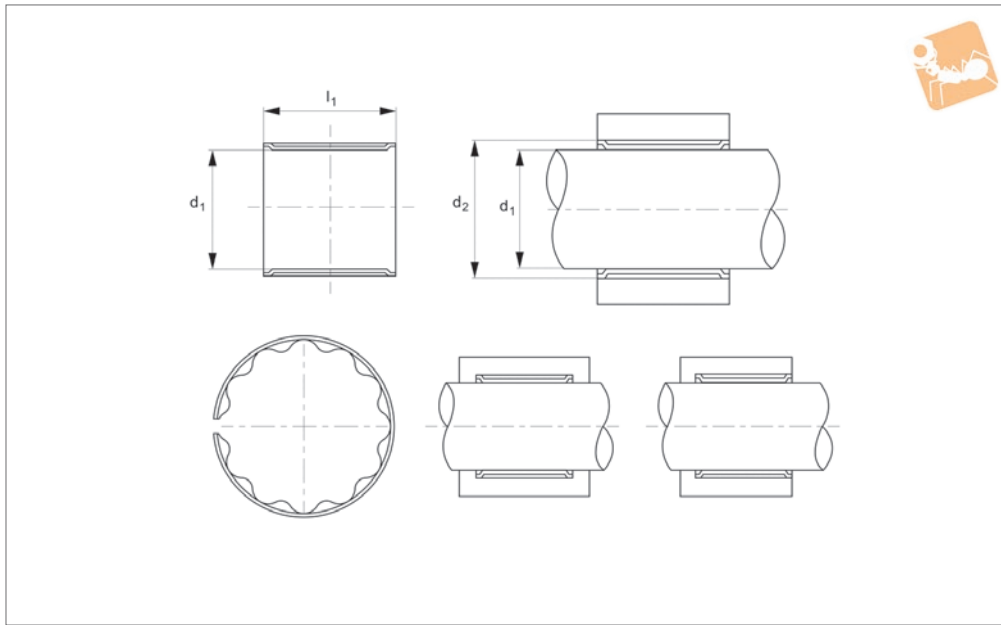


Tolerance Rings - Hole Variable- HV

HV type, A2 Stainless



Tolerance Rings



P0396

TOLERANCE RINGS

Material

Stainless steel (type 304, DIN 1.4301).

Technical Notes

Tolerance rings allow the mating of parts

with wider tolerances.

The waves are on the inside, the ring sits on the housing bore with the waves being compressed by the shaft diameter.

Tips

For use where there is an accurate shaft but the bore may have a wide tolerance.

Order No.	d ₁ tol. H9	d ₁ nom.	l	d ₂ for bearings	d ₂ for torque transfer	Torque Nm max.	Radial load N max.	Material
P0396.HV004-006	4	4	6	4,93 to 4,95	4,82 to 4,86	0.15	80	Steel
P0396.HV004-008	4	4	8	4,93 to 4,95	4,82 to 4,86	0.25	90	Steel
P0396.HV004-010	4	4	10	4,93 to 4,95	4,82 to 4,86	0.35	95	Steel
P0396.HV005-005	5	5	5	5,93 to 5,95	5,82 to 5,86	0.45	100	Steel
P0396.HV005-008	5	5	8	5,93 to 5,95	5,82 to 5,86	0.66	160	Steel
P0396.HV005-012	5	5	12	5,93 to 5,95	5,82 to 5,86	1.25	250	Steel
P0396.HV006-006	6	6	6	6,93 to 6,985	6,82 to 6,86	0.45	133	Steel
P0396.HV006-008	6	6	8	6,93 to 6,985	6,82 to 6,86	0.75	240	Steel
P0396.HV006-010	6	6	10	6,93 to 6,985	6,82 to 6,86	1.00	290	Steel
P0396.HV006-015	6	6	15	6,93 to 6,985	6,82 to 6,86	1.20	300	Steel
P0396.HV008-006	8	8	6	9,41 to 9,48	9,23 to 9,30	1.00	240	Steel
P0396.HV008-008	8	8	8	9,41 to 9,48	9,23 to 9,30	1.45	360	Steel
P0396.HV008-012	8	8	12	9,41 to 9,48	9,23 to 9,30	2.00	580	Steel
P0396.HV008-014	8	8	14	9,41 to 9,48	9,23 to 9,30	2.10	600	Steel
P0396.HV010-004	10	10	4	11,41 to 11,48	11,23 to 11,30	0.95	480	Stainless
P0396.HV010-006	10	10	6	11,41 to 11,48	11,23 to 11,30	2.30	850	Stainless
P0396.HV010-008	10	10	8	11,41 to 11,48	11,23 to 11,30	2.50	1020	Stainless
P0396.HV010-010	10	10	10	11,41 to 11,48	11,23 to 11,30	3.00	1220	Stainless
P0396.HV010-012	10	10	12	11,41 to 11,48	11,23 to 11,30	3.50	1650	Stainless
P0396.HV010-014	10	10	14	11,41 to 11,48	11,23 to 11,30	4.00	2050	Stainless
P0396.HV010-018	10	10	18	11,41 to 11,48	11,23 to 11,30	4.50	2500	Stainless
P0396.HV012-004	12	12	4	13,41 to 13,48	13,23 to 13,30	1.60	720	Stainless
P0396.HV012-006	12	12	6	13,41 to 13,48	13,23 to 13,30	3.00	1200	Stainless
P0396.HV012-010	12	12	10	13,41 to 13,48	13,23 to 13,30	4.00	1825	Stainless
P0396.HV012-012	12	12	12	13,41 to 13,48	13,23 to 13,30	6.00	2400	Stainless
P0396.HV012-016	12	12	16	13,41 to 13,48	13,23 to 13,30	8.00	3025	Stainless
P0396.HV012-018	12	12	18	13,41 to 13,48	13,23 to 13,30	9.00	3350	Stainless
P0396.HV014-008	14	14	8	15,41 to 15,48	15,23 to 15,30	5.00	1800	Stainless
P0396.HV014-012	14	14	12	15,41 to 15,48	15,23 to 15,30	7.00	2410	Stainless
P0396.HV014-014	14	14	14	15,41 to 15,48	15,23 to 15,30	9.00	2750	Stainless
P0396.HV015-008	15	15	8	16,41 to 16,48	16,23 to 16,30	5.50	1825	Stainless
P0396.HV015-012	15	15	12	16,41 to 16,48	16,23 to 16,30	7.50	2500	Stainless
P0396.HV015-014	15	15	14	16,41 to 16,48	16,23 to 16,30	11.00	2925	Stainless



TOLERANCE RINGS

Order No.	d ₁ tol. H9	d ₁ nom.	l	d ₂ for bearings	d ₂ for torque transfer	Torque Nm max.	Radial load N max.	Material
P0396.HV015-022	15	15	22	16,41 to 16,48	16,23 to 16,30	14.00	3500	Stainless
P0396.HV016-005	16	16	5	17,41 to 17,48	17,23 to 17,30	4.0	1100	Stainless
P0396.HV016-008	16	16	8	17,41 to 17,48	17,23 to 17,30	7.0	1900	Stainless
P0396.HV016-010	16	16	10	17,41 to 17,48	17,23 to 17,30	8.0	2275	Stainless
P0396.HV016-012	16	16	12	17,41 to 17,48	17,23 to 17,30	9.0	2800	Stainless
P0396.HV016-016	16	16	16	17,41 to 17,48	17,23 to 17,30	14.0	3650	Stainless
P0396.HV016-022	16	16	22	17,41 to 17,48	17,23 to 17,30	17.0	4500	Stainless
P0396.HV018-006	18	18	6	19,89 to 19,98	19,67 to 19,75	6.5	1300	Stainless
P0396.HV018-010	18	18	10	19,89 to 19,98	19,67 to 19,75	11.0	2450	Stainless
P0396.HV018-016	18	18	16	19,89 to 19,98	19,67 to 19,75	17.0	4100	Stainless
P0396.HV019-006	19	19	6	20,89 to 20,98	20,67 to 20,75	7.0	1875	Stainless
P0396.HV009-016	19	19	16	20,89 to 20,98	20,67 to 20,75	21.0	4450	Steel
P0396.HV020-012	20	20	12	21,89 to 21,98	21,67 to 21,75	18.0	3650	Stainless
P0396.HV020-014	20	20	14	21,89 to 21,98	21,67 to 21,75	22.0	4300	Steel
P0396.HV020-016	20	20	16	21,89 to 21,98	21,67 to 21,75	24.0	4900	Steel
P0396.HV020-020	20	20	20	21,89 to 21,98	21,67 to 21,75	30.0	6100	Steel
P0396.HV020-026	20	20	26	21,89 to 21,98	21,67 to 21,75	34.0	7250	Stainless
P0396.HV022-005	22	22	5	23,89 to 23,98	23,67 to 23,75	12.0	1650	Stainless
P0396.HV022-007	22	22	7	23,89 to 23,98	23,67 to 23,75	16.0	2450	Stainless
P0396.HV022-010	22	22	10	23,89 to 23,98	23,67 to 23,75	18.0	3525	Stainless
P0396.HV022-016	22	22	16	23,89 to 23,98	23,67 to 23,75	30.0	5450	Steel
P0396.HV022-020	22	22	20	23,89 to 23,98	23,67 to 23,75	35.0	7000	Steel
P0396.HV022-022	22	22	22	23,89 to 23,98	23,67 to 23,75	38.0	8200	Steel
P0396.HV024-006	24	24	6	25,89 to 25,98	25,67 to 25,75	17.0	2320	Stainless
P0396.HV024-007	24	24	7	25,89 to 25,98	25,67 to 25,75	18.0	2715	Stainless
P0396.HV024-012	24	24	12	25,89 to 25,98	25,67 to 25,75	29.0	5550	Stainless
P0396.HV024-016	24	24	16	25,89 to 25,98	25,67 to 25,75	32.0	7800	Steel
P0396.HV024-020	24	24	20	25,89 to 25,98	25,67 to 25,75	45.0	9000	Steel
P0396.HV025-010	25	25	10	26,89 to 26,98	26,67 to 26,75	24.0	4300	Steel
P0396.HV025-016	25	25	16	26,89 to 26,98	26,67 to 26,75	35.0	7800	Stainless
P0396.HV025-020	25	25	20	26,89 to 26,98	26,67 to 26,75	47.0	9000	Stainless
P0396.HV026-008	26	26	8	27,89 to 27,98	27,67 to 27,75	21.0	3425	Stainless
P0396.HV026-010	26	26	10	27,89 to 27,98	27,67 to 27,75	26.0	4500	Stainless
P0396.HV026-016	26	26	16	27,89 to 27,98	27,67 to 27,75	43.0	8250	Stainless
P0396.HV026-020	26	26	20	27,89 to 27,98	27,67 to 27,75	52.0	9600	Stainless
P0396.HV028-008	28	28	8	29,89 to 29,98	29,67 to 29,75	27.0	4000	Stainless
P0396.HV028-010	28	28	10	29,89 to 29,98	29,67 to 29,75	30.0	4700	Stainless
P0396.HV028-012	28	28	12	29,89 to 29,98	29,67 to 29,75	39.0	6250	Stainless
P0396.HV028-014	28	28	14	29,89 to 29,98	29,67 to 29,75	45.0	7250	Stainless
P0396.HV028-020	28	28	20	29,89 to 29,98	29,67 to 29,75	55.0	9050	Stainless
P0396.HV028-030	28	28	30	29,89 to 29,98	29,67 to 29,75	92.0	15250	Steel
P0396.HV030-008	30	30	8	31,89 to 31,98	31,67 to 31,75	28.0	4100	Stainless
P0396.HV030-012	30	30	12	31,89 to 31,98	31,67 to 31,75	40.0	5700	Stainless
P0396.HV030-016	30	30	16	31,89 to 31,98	31,67 to 31,75	50.0	8065	Stainless
P0396.HV030-030	30	30	30	31,89 to 31,98	31,67 to 31,75	95.0	15500	Steel
P0396.HV032-008	32	32	8	33,89 to 33,98	33,67 to 33,75	30.0	3000	Stainless
P0396.HV032-010	32	32	10	33,89 to 33,98	33,67 to 33,75	35.0	3200	Stainless
P0396.HV032-014	32	32	14	33,89 to 33,98	33,67 to 33,75	50.0	4200	Stainless
P0396.HV032-030	32	32	30	33,89 to 33,98	33,67 to 33,75	115.0	18000	Stainless
P0396.HV035-006	35	35	6	36,89 to 36,98	36,67 to 36,75	32.0	2900	Steel
P0396.HV035-010	35	35	10	36,89 to 36,98	36,67 to 36,75	43.0	3350	Stainless
P0396.HV035-014	35	35	14	36,89 to 36,98	36,67 to 36,75	58.0	5000	Stainless
P0396.HV035-016	35	35	16	36,89 to 36,98	36,67 to 36,75	70.0	8200	Stainless
P0396.HV040-008	40	40	8	41,89 to 41,98	41,67 to 41,75	54.0	2800	Steel
P0396.HV040-100	40	40	10	41,89 to 41,98	41,67 to 41,75	62.0	3300	Steel
P0396.HV040-012	40	40	12	41,89 to 41,98	41,67 to 41,75	72.0	4450	Stainless
P0396.HV040-016	40	40	16	41,89 to 41,98	41,67 to 41,75	91.0	6230	Stainless
P0396.HV040-020	40	40	20	41,89 to 41,98	41,67 to 41,75	125.0	8450	Stainless
P0396.HV040-030	40	40	30	41,89 to 41,98	41,67 to 41,75	180.0	12000	Stainless
P0396.HV042-012	42	42	12	43,89 to 43,98	43,67 to 43,75	75.0	4900	Stainless
P0396.HV042-030	42	42	30	43,89 to 43,98	43,67 to 43,75	225.0	13250	Stainless
P0396.HV045-012	45	45	12	46,89 to 46,98	46,67 to 46,75	90.0	6000	Stainless
P0396.HV045-020	45	45	20	46,89 to 46,98	46,67 to 46,75	165.0	8700	Stainless
P0396.HV047-006	47	47	6	48,89 to 48,98	48,67 to 48,75	65.0	2450	Steel
P0396.HV047-008	47	47	8	48,89 to 48,98	48,67 to 48,75	76.0	2850	Steel
P0396.HV047-014	47	47	14	48,89 to 48,98	48,67 to 48,75	117.0	6230	Steel
P0396.HV047-018	47	47	18	48,89 to 48,98	48,67 to 48,75	175.0	8300	Stainless



Tolerance Rings - Hole Variable- HV

HV type, A2 Stainless

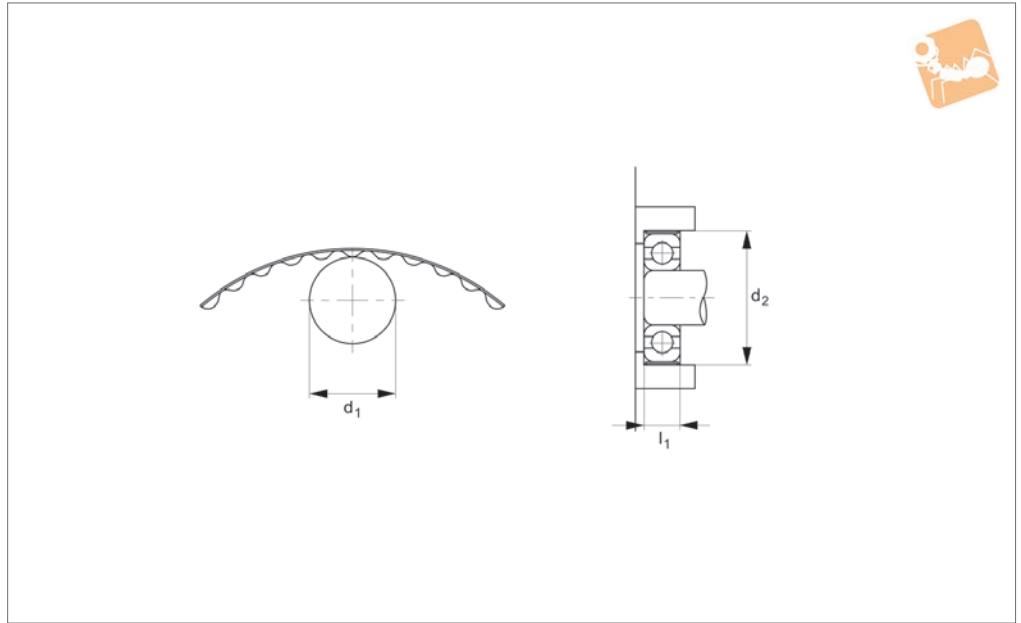
Tolerance Rings

Order No.	d ₁ tol. H9	d ₁ nom.	l	d ₂ for bearings	d ₂ for torque transfer	Torque Nm max.	Radial load N max.	Material
P0396.HV047-020	47	47	20	48,89 to 48,98	48,67 to 48,75	210.0	8450	Stainless
P0396.HV047-022	47	47	22	48,89 to 48,98	48,67 to 48,75	235.0	10750	Stainless
P0396.HV050-015	50	50	15	52,35 to 52,47	52,03 to 52,15	157.0	6600	Stainless
P0396.HV050-020	50	50	20	52,35 to 52,47	52,03 to 52,15	215.0	10100	Stainless
P0396.HV052-008	52	52	8	54,35 to 54,47	54,03 to 54,15	100.0	3200	Steel
P0396.HV052-015	52	52	15	54,35 to 54,47	54,03 to 54,15	165.0	7120	Stainless
P0396.HV055-012	55	55	12	57,35 to 57,47	57,03 to 57,15	156.0	5550	Stainless
P0396.HV055-020	55	55	20	57,35 to 57,47	57,03 to 57,15	260.0	10750	Stainless
P0396.HV060-015	60	60	15	62,35 to 62,47	62,03 to 62,15	280.0	8800	Stainless
P0396.HV060-025	60	60	25	62,35 to 62,47	62,03 to 62,15	475.0	15500	Stainless
P0396.HV062-010	62	62	10	64,35 to 64,47	64,03 to 64,15	215.0	5300	Stainless
P0396.HV062-015	62	62	15	64,35 to 64,47	64,03 to 64,15	290.0	8450	Stainless
P0396.HV065-025	65	65	25	67,35 to 67,47	67,03 to 67,15	520.0	14900	Stainless
P0396.HV065-063	65	65	63	67,35 to 67,47	67,03 to 67,15	850.0	46000	Stainless
P0396.HV070-025	70	70	25	72,35 to 72,47	72,03 to 72,15	550.0	16900	Stainless
P0396.HV072-010	72	72	10	74,35 to 74,47	74,03 to 74,15	230.0	6000	Stainless
P0396.HV072-017	72	72	17	74,35 to 74,47	74,03 to 74,15	420.0	13000	Stainless
P0396.HV072-019	72	72	19	74,35 to 74,47	74,03 to 74,15	470.0	14500	Stainless
P0396.HV072-020	72	72	20	74,35 to 74,47	74,03 to 74,15	490.0	15000	Stainless
P0396.HV075-016	75	75	16	77,35 to 77,47	77,03 to 77,15	520.0	13000	Stainless
P0396.HV075-020	75	75	20	77,35 to 77,47	77,03 to 77,15	600.0	17000	Stainless
P0396.HV080-012	80	80	12	82,35 to 82,47	82,03 to 82,15	280.0	11000	Steel
P0396.HV080-020	80	80	20	82,35 to 82,47	82,03 to 82,15	630.0	16800	Stainless
P0396.HV084-012	84	84	12	86,82 to 86,96	86,42 to 86,56	490.0	13000	Stainless
P0396.HV085-019	85	85	19	87,82 to 87,96	87,42 to 87,56	700.0	17000	Steel
P0396.HV090-015	90	90	15	92,82 to 92,96	92,42 to 92,56	560.0	14000	Stainless
P0396.HV090-020	90	90	20	92,82 to 92,96	92,42 to 92,56	770.0	18000	Steel
P0396.HV090-023	90	90	23	92,82 to 92,96	92,42 to 92,56	870.0	21000	Steel
P0396.HV090-025	90	90	25	92,82 to 92,96	92,42 to 92,56	950.0	22500	Stainless

TOLERANCE RINGS



P0397



Material

Stainless steel (type 304, DIN 1.4301).

Technical Notes

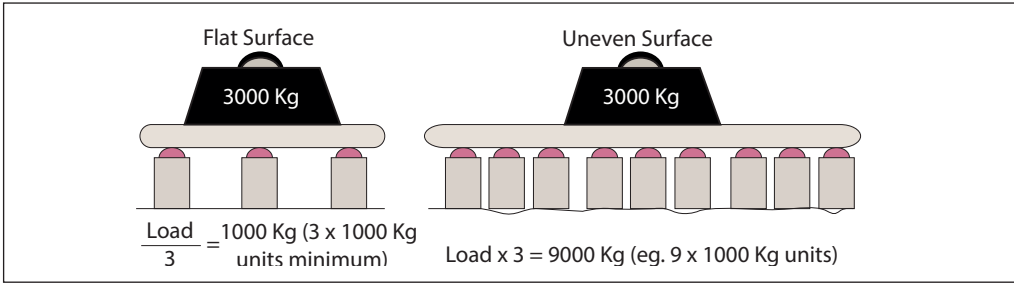
The waves are on the inside, the ring sits

on the housing bore with the waves being compressed by the shaft diameter. Used as a bearing mount where the bearings are required to float axially.

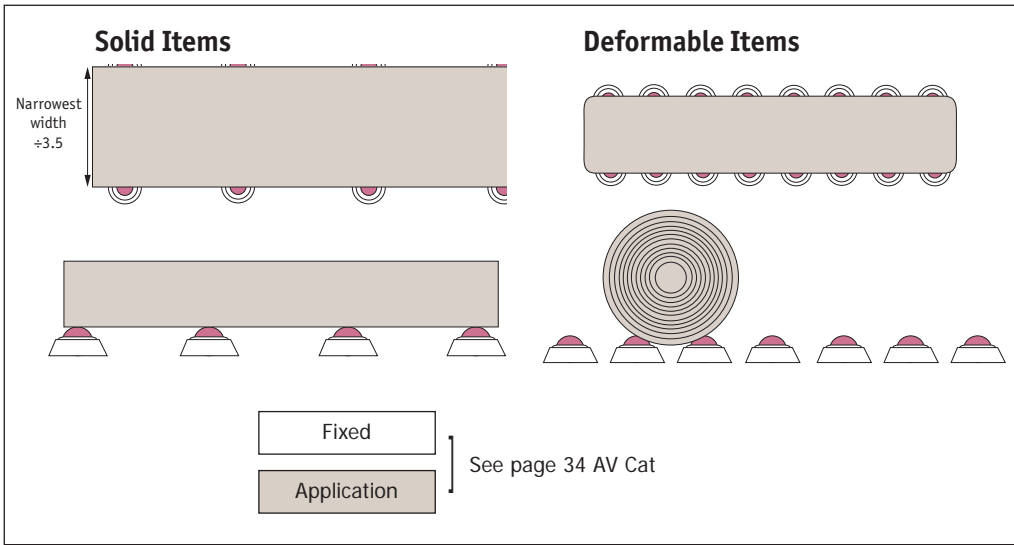
Order No.	d ₁	l ₁	Bearing dia. & no.	d ₂	Radial load N max.
P0397.HVL013-005	13	5	13 (~624)	13,60 to 13,65	125
P0397.HVL016-005	16	5	16 (~625)	16,60 to 16,65	150
P0397.HVL019-006	19	6	19 (~626)	19,60 to 19,65	220
P0397.HVL022-007	22	7	22 (~608)	22,60 to 22,65	300
P0397.HVL024-007	24	7	24 (~609)	24,60 to 24,65	330
P0397.HVL026-008	26	8	26 (~629)	26,60 to 26,65	400
P0397.HVL028-008	28	8	28 (~6001)	28,60 to 28,65	440
P0397.HVL030-009	30	9	30 (~6200)	30,60 to 30,65	520
P0397.HVL032-008	32	8	32 (~16002)	32,60 to 32,65	500
P0397.HVL032-009	32	9	32 (~6002)	32,60 to 32,65	560
P0397.HVL032-010	32	10	32 (~6201)	32,60 to 32,65	620
P0397.HVL035-010	35	10	35 (~6003)	35,60 to 35,65	750
P0397.HVL035-015	35	15	35 (~6202)	35,60 to 35,65	1050
P0397.HVL052-015	52	15	52 (~6205)	52,60 to 52,65	1600



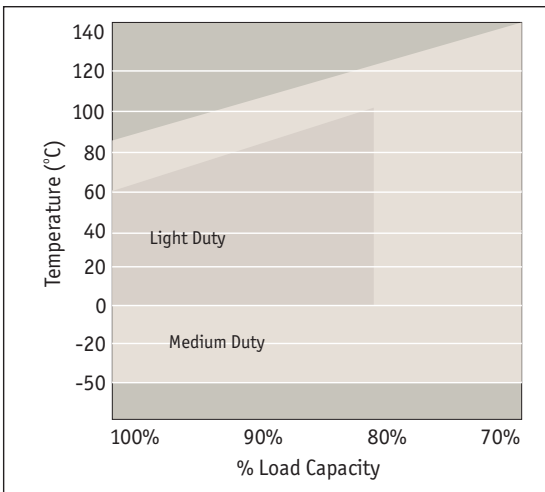
Load & Stability



Pitch & Spacing



Operating Temperature



Ball Transfer Units from Automation Components

TOLERANCE RINGS