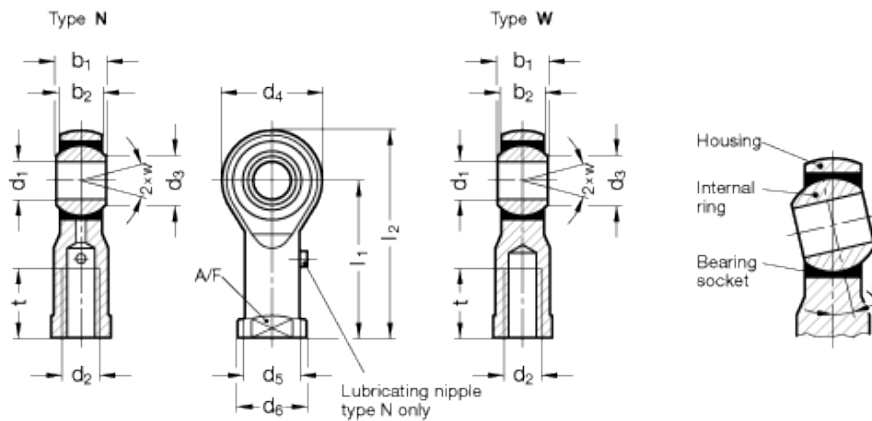


# GN 648.1

Ball joints with female thread



## technical informations

### Housing

Zinc-plated steel, blue passivated.

### Internal ring

Hardened, ground and polished steel.

### Bearing socket

- Version N (lubrication possible): brass.
- Version W (self lubricated): zinc-plated steel with PTFE-insert.

### Other standard executions available

Ball joints DIN ISO 12240-4, series E (narrow model) on request.

### Features and applications

Ball joints GN 648.1 are similar to DIN ISO 12240-4, series K (formerly DIN 648 K).

Standard Elements	Main dimensions												Movement angle	Weight
Description	d <sub>1H7</sub>	d <sub>2</sub>	b <sub>1-0.12</sub>	b <sub>2</sub>	d <sub>3</sub>	d <sub>4</sub>	d <sub>5</sub>	d <sub>6</sub>	l <sub>1</sub>	l <sub>2</sub>	A/F	t	w	g
GN 648.1-5-M5-N	5	M5	8	6	7.7	18	9	11	27	36	9	10	13	19
GN 648.1-5-M5L-N	5	M5L	8	6	7.7	18	9	11	27	36	9	10	13	19
GN 648.1-5-M4-N*	5	M4	8	6	7.7	18	9	11	27	36	9	10	13	20
GN 648.1-6-M6-N	6	M6	9	6.75	8.9	20	10	13	30	40	11	12	13	27
GN 648.1-6-M6L-N	6	M6L	9	6.75	8.9	20	10	13	30	40	11	12	13	26
GN 648.1-8-M8-N	8	M8	12	9	10.4	24	12.5	16	36	48	13	16	14	48
GN 648.1-8-M8L-N	8	M8L	12	9	10.4	24	12.5	16	36	48	13	16	14	47
GN 648.1-10-M10-N	10	M10	14	10.5	12.9	28	15	19	43	57	17	20	13	76
GN 648.1-10-M10L-N	10	M10L	14	10.5	12.9	28	15	19	43	57	17	20	13	77
GN 648.1-10-M10x1.25-N*	10	M10x1.25	14	10.5	12.9	28	15	19	43	57	17	20	13	75
GN 648.1-12-M12-N	12	M12	16	12	15.4	32	17.5	22	50	66	19	22	13	114
GN 648.1-12-M12L-N	12	M12L	16	12	15.4	32	17.5	22	50	66	19	22	13	114
GN 648.1-12-M12x1.25-N*	12	M12x1.25	16	12	15.4	32	17.5	22	50	66	19	22	13	110
GN 648.1-14-M14-N	14	M14	19	13.5	16.8	36	20	25	57	75	22	25	16	160
GN 648.1-14-M14L-N	14	M14L	19	13.5	16.8	36	20	25	57	75	22	25	16	175
GN 648.1-16-M16-N	16	M16	21	15	19.3	42	22	27	64	85	22	28	15	232
GN 648.1-16-M16L-N	16	M16L	21	15	19.3	42	22	27	64	85	22	28	15	230
GN 648.1-16-M16x1.5-N*	16	M16x1.5	21	15	19.3	42	22	27	64	85	22	28	15	225
GN 648.1-18-M18x1.5-N	18	M18x1.5	23	16.5	21.8	46	25	31	71	94	27	32	15	318
GN 648.1-18-M18x1.5L-N	18	M18x1.5L	23	16.5	21.8	46	25	31	71	94	27	32	15	314
GN 648.1-20-M20x1.5-N	20	M20x1.5	25	18	24.3	50	27.5	34	77	102	32	33	14	419
GN 648.1-20-M20x1.5L-N	20	M20x1.5L	25	18	24.3	50	27.5	34	77	102	32	33	14	417
GN 648.1-22-M22x1.5-N	22	M22x1.5	28	20	25.8	54	30	37	84	111	32	37	15	534
GN 648.1-22-M22x1.5L-N	22	M22x1.5L	28	20	25.8	54	30	37	84	111	32	37	15	519
GN 648.1-25-M24x2-N	25	M24x2	31	22	29.6	60	33.5	42	94	124	36	42	15	735
GN 648.1-25-M24x2L-N	25	M24x2L	31	22	29.6	60	33.5	42	94	124	36	42	15	744
GN 648.1-5-M5-W	5	M5	8	6	7.7	18	9	11	27	36	9	10	13	20
GN 648.1-5-M5L-W	5	M5L	8	6	7.7	18	9	11	27	36	9	10	13	18
GN 648.1-5-M4-W*	5	M4	8	6	7.7	18	9	11	27	36	9	10	13	19
GN 648.1-6-M6-W	6	M6	9	6.75	8.9	20	10	13	30	40	11	12	13	25
GN 648.1-6-M6L-W	6	M6L	9	6.75	8.9	20	10	13	30	40	11	12	13	25
GN 648.1-8-M8-W	8	M8	12	9	10.4	24	12.5	16	36	48	13	16	14	45
GN 648.1-8-M8L-W	8	M8L	12	9	10.4	24	12.5	16	36	48	13	16	14	45
GN 648.1-10-M10-W	10	M10	14	10.5	12.9	28	15	19	43	57	17	20	13	75
GN 648.1-10-M10L-W	10	M10L	14	10.5	12.9	28	15	19	43	57	17	20	13	75
GN 648.1-10-M10x1.25-W	10	M10x1.25	14	10.5	12.9	28	15	19	43	57	17	20	13	75
GN 648.1-12-M12-W	12	M12	16	12	15.4	32	17.5	22	50	66	19	22	13	110
GN 648.1-12-M12L-W	12	M12L	16	12	15.4	32	17.5	22	50	66	19	22	13	111
GN 648.1-12-M12x1.25-W*	12	M12x1.25	16	12	15.4	32	17.5	22	50	66	19	22	13	110
GN 648.1-14-M14-W	14	M14	19	13.5	16.8	36	20	25	57	75	22	25	16	160
GN 648.1-14-M14L-W	14	M14L	19	13.5	16.8	36	20	25	57	75	22	25	16	167
GN 648.1-16-M16-W	16	M16	21	15	19.3	42	22	27	64	85	22	28	15	225

GN 648.1-16-M16L-W	16	M16L	21	15	19.3	42	22	27	64	85	22	28	15	225
GN 648.1-16-M16x1.5-W*	16	M16x1.5	21	15	19.3	42	22	27	64	85	22	28	15	221
GN 648.1-18-M18x1.5-W	18	M18x1.5	23	16.5	21.8	46	25	31	71	94	27	32	15	300
GN 648.1-18-M18x1.5L-W	18	M18x1.5L	23	16.5	21.8	46	25	31	71	94	27	32	15	320
GN 648.1-20-M20x1.5-W	20	M20x1.5	25	18	24.3	50	27.5	34	77	102	32	33	14	350
GN 648.1-20-M20x1.5L-W	20	M20x1.5L	25	18	24.3	50	27.5	34	77	102	32	33	14	350
GN 648.1-22-M22x1.5-W	22	M22x1.5	28	20	25.8	54	30	37	84	111	32	37	15	505
GN 648.1-22-M22x1.5L-W	22	M22x1.5L	28	20	25.8	54	30	37	84	111	32	337	15	512
GN 648.1-25-M24x2-W	25	M24x2	31	22	29.6	60	33.5	42	94	124	36	42	15	730
GN 648.1-25-M24x2L-W	25	M24x2L	31	22	29.6	60	33.5	42	94	124	36	42	15	725
GN 648.1-30-M30x2-W	30	M30x2	37	25	34.8	70	40	51	110	145	41	51	17	1130
GN 648.1-30-M30x2L-W	30	M30x2L	37	25	34.8	70	40	51	110	145	41	51	17	1130

\* CETOP-connector dimension



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