

VPOT TYPE PU



- Bear horizontal loads in transversal direction
- Allow rotations in any direction
- Allow movements in longitudinal direction and restrain in the transversal one

Bearings according to European Standard EN 1337-5 and AASHTO LRFD 2020

GUIDED BEARING													
DATASHEET FOR A HORIZONTAL LOAD 10% OF THE VERTICAL LOAD AND A LONGITUDINAL DISPLACEMENT OF +- 50 MM													
BEARING DESIGNATION	V _{max, ULS} (kN)	V _{max, SLS} (kN)	H _{max, ULS} (kN)	H _{max, SLS} (kN)	UX (mm)	EN				AASHTO			
						L5 (mm)	B5 (mm)	D2 (mm)	TH (mm)	L5 (mm)	B5 (mm)	D2 (mm)	TH (mm)
PU-500-H10% ±50	500	358	50	36	±50	330	220	220	88	340	230	230	98
PU-1000-H10% ±50	1000	715	100	72	±50	373	263	263	88	380	270	270	99
PU-1500-H10% ±50	1500	1072	150	107	±50	397	287	287	92	420	310	310	103
PU-2000-H10% ±50	2000	1429	200	143	±50	425	319	319	92	455	345	345	108
PU-3000-H10% ±50	3000	2143	300	214	±50	470	380	380	97	507	401	401	113
PU-4000-H10% ±50	4000	2858	400	286	±50	504	426	426	97	556	457	457	128
PU-5000-H10% ±50	5000	3572	500	357	±50	540	474	474	106	600	507	507	134
PU-6000-H10% ±50	6000	4286	600	429	±50	573	516	516	108	634	548	548	143
PU-7000-H10% ±50	7000	5000	700	500	±50	610	562	562	116	668	587	587	159
PU-8000-H10% ±50	8000	5715	800	572	±50	628	589	589	116	705	628	628	159
PU-9000-H10% ±50	9000	6429	900	643	±50	655	626	626	122	735	665	665	169
PU-10000-H10% ±50	10000	7143	1000	714	±50	680	660	660	122	768	703	703	180
PU-11000-H10% ±50	11000	7858	1100	786	±50	733	717	717	131	800	739	739	180
PU-12000-H10% ±50	12000	8572	1200	857	±50	733	726	726	131	825	768	768	190
PU-13000-H10% ±50	13000	9286	1300	929	±50	750	752	752	132	858	804	804	196
PU-14000-H10% ±50	14000	10000	1400	1000	±50	778	783	783	141	887	837	837	206
PU-15000-H10% ±50	15000	10715	1500	1072	±50	795	808	808	141	904	858	858	206
PU-16000-H10% ±50	16000	11429	1600	1143	±50	824	843	843	147	933	890	890	216
PU-17000-H10% ±50	17000	12143	1700	1214	±50	848	869	869	151	953	913	913	217
PU-18000-H10% ±50	18000	12858	1800	1286	±50	858	893	893	161	980	943	943	217
PU-19000-H10% ±50	19000	13572	1900	1357	±50	893	932	932	161	1000	968	968	227
PU-20000-H10% ±50	20000	14286	2000	1429	±50	893	939	939	161	1022	994	994	227
PU-22000-H10% ±50	22000	15715	2200	1572	±50	933	990	990	167	1065	1042	1042	241
PU-24000-H10% ±50	24000	17143	2400	1714	±50	964	1030	1030	178	1104	1087	1087	251
PU-26000-H10% ±50	26000	18572	2600	1857	±50	1000	1077	1077	184	1150	1139	1139	262
PU-28000-H10% ±50	28000	20000	2800	2000	±50	1043	1130	1130	191	1190	1184	1184	262
PU-30000-H10% ±50	30000	21429	3000	2143	±50	1065	1162	1162	196	1221	1220	1220	272

GUIDED BEARING													
DATASHEET FOR A HORIZONTAL LOAD 10% OF THE VERTICAL LOAD AND A LONGITUDINAL DISPLACEMENT OF +- 100 MM													
BEARING DESIGNATION	V _{max, ULS} (kN)	V _{max, SLS} (kN)	H _{max, ULS} (kN)	H _{max, SLS} (kN)	UX (mm)	EN				AASHTO			
						L5 (mm)	B5 (mm)	D2 (mm)	TH (mm)	L5 (mm)	B5 (mm)	D2 (mm)	TH (mm)
PU-500-H10% ±100	500	358	50	36	±100	430	220	220	88	440	440	230	98
PU-1000-H10% ±100	1000	715	100	72	±100	473	263	263	88	480	480	270	99
PU-1500-H10% ±100	1500	1072	150	107	±100	497	287	287	92	520	520	310	103
PU-2000-H10% ±100	2000	1429	200	143	±100	525	319	319	92	555	555	345	108
PU-3000-H10% ±100	3000	2143	300	214	±100	570	380	380	97	607	607	401	113
PU-4000-H10% ±100	4000	2858	400	286	±100	604	426	426	101	656	656	457	128
PU-5000-H10% ±100	5000	3572	500	357	±100	640	474	474	106	700	700	507	134
PU-6000-H10% ±100	6000	4286	600	429	±100	673	516	516	112	734	734	548	143
PU-7000-H10% ±100	7000	5000	700	500	±100	710	562	562	116	768	768	587	159
PU-8000-H10% ±100	8000	5715	800	572	±100	728	589	589	117	805	805	628	159
PU-9000-H10% ±100	9000	6429	900	643	±100	755	626	626	126	835	835	665	169
PU-10000-H10% ±100	10000	7143	1000	714	±100	780	660	660	126	868	868	703	180
PU-11000-H10% ±100	11000	7858	1100	786	±100	833	717	717	136	900	900	739	180
PU-12000-H10% ±100	12000	8572	1200	857	±100	833	726	726	136	925	925	768	190
PU-13000-H10% ±100	13000	9286	1300	929	±100	850	752	752	136	958	958	804	196
PU-14000-H10% ±100	14000	10000	1400	1000	±100	878	783	783	142	987	987	837	206
PU-15000-H10% ±100	15000	10715	1500	1072	±100	895	808	808	146	1004	1004	858	206
PU-16000-H10% ±100	16000	11429	1600	1143	±100	924	843	843	151	1033	1033	890	216
PU-17000-H10% ±100	17000	12143	1700	1214	±100	948	869	869	151	1053	1053	913	217
PU-18000-H10% ±100	18000	12858	1800	1286	±100	958	893	893	162	1080	1080	943	217
PU-19000-H10% ±100	19000	13572	1900	1357	±100	993	932	932	166	1100	1100	968	227
PU-20000-H10% ±100	20000	14286	2000	1429	±100	993	939	939	166	1122	1122	994	227
PU-22000-H10% ±100	22000	15715	2200	1572	±100	1033	990	990	168	1165	1165	1042	241
PU-24000-H10% ±100	24000	17143	2400	1714	±100	1064	1030	1030	183	1204	1204	1087	251
PU-26000-H10% ±100	26000	18572	2600	1857	±100	1100	1077	1077	184	1250	1250	1139	262
PU-28000-H10% ±100	28000	20000	2800	2000	±100	1143	1130	1130	196	1290	1290	1184	262
PU-30000-H10% ±100	30000	21429	3000	2143	±100	1165	1162	1162	196	1321	1321	1220	272

GUIDED BEARING													
DATASHEET FOR A HORIZONTAL LOAD 20% OF THE VERTICAL LOAD AND A LONGITUDINAL DISPLACEMENT OF +- 50 MM													
BEARING DESIGNATION	V _{max, ULS} (kN)	V _{max, SLS} (kN)	H _{max, ULS} (kN)	H _{max, SLS} (kN)	UX (mm)	EN				AASHTO			
						L5 (mm)	B5 (mm)	D2 (mm)	TH (mm)	L5 (mm)	B5 (mm)	D2 (mm)	TH (mm)
PU-500-H20% ±50	500	358	100	72	±50	340	230	230	88	340	230	230	98
PU-1000-H20% ±50	1000	715	200	143	±50	380	270	270	88	390	280	280	103
PU-1500-H20% ±50	1500	1072	300	214	±50	407	307	307	92	428	321	321	108
PU-2000-H20% ±50	2000	1429	400	286	±50	435	346	346	93	464	364	364	113
PU-3000-H20% ±50	3000	2143	600	429	±50	485	415	415	102	528	440	440	128
PU-4000-H20% ±50	4000	2858	800	572	±50	528	471	471	108	573	495	495	143
PU-5000-H20% ±50	5000	3572	1000	714	±50	563	521	521	116	611	542	542	153
PU-6000-H20% ±50	6000	4286	1200	857	±50	628	598	598	121	650	591	591	169
PU-7000-H20% ±50	7000	5000	1400	1000	±50	628	615	615	127	686	634	634	179
PU-8000-H20% ±50	8000	5715	1600	1143	±50	660	657	657	134	733	688	688	179
PU-9000-H20% ±50	9000	6429	1800	1286	±50	686	693	693	144	748	710	710	193
PU-10000-H20% ±50	10000	7143	2000	1429	±50	733	748	748	146	778	746	746	199
PU-11000-H20% ±50	11000	7858	2200	1572	±50	735	767	767	155	824	797	797	209
PU-12000-H20% ±50	12000	8572	2400	1714	±50	760	799	799	160	833	812	812	219
PU-13000-H20% ±50	13000	9286	2600	1857	±50	778	832	832	176	864	848	848	221
PU-14000-H20% ±50	14000	10000	2800	2000	±50	802	866	866	178	887	878	878	235
PU-15000-H20% ±50	15000	10715	3000	2143	±50	824	899	899	184	914	910	910	235
PU-16000-H20% ±50	16000	11429	3200	2286	±50	848	928	928	186	933	934	934	245
PU-17000-H20% ±50	17000	12143	3400	2429	±50	864	952	952	196	953	959	959	250
PU-18000-H20% ±50	18000	12858	3600	2572	±50	887	983	983	201	980	990	990	260
PU-19000-H20% ±50	19000	13572	3800	2714	±50	904	1006	1006	202	1000	1015	1015	260
PU-20000-H20% ±50	20000	14286	4000	2857	±50	918	1030	1030	204	1022	1041	1041	275
PU-22000-H20% ±50	22000	15715	4400	3143	±50	953	1099	1099	220	1065	1092	1092	286
PU-24000-H20% ±50	24000	17143	4800	3429	±50	985	1146	1146	223	1131	1169	1169	306
PU-26000-H20% ±50	26000	18572	5200	3714	±50	1018	1192	1192	240	1180	1226	1226	308
PU-28000-H20% ±50	28000	20000	5600	4000	±50	1050	1237	1237	242	1245	1298	1298	319
PU-30000-H20% ±50	30000	21429	6000	4286	±50	1097	1291	1291	261	1300	1361	1361	343

GUIDED BEARING													
DATASHEET FOR A HORIZONTAL LOAD 20% OF THE VERTICAL LOAD AND A LONGITUDINAL DISPLACEMENT OF +- 100 MM													
BEARING DESIGNATION	V _{max, ULS} (kN)	V _{max, SLS} (kN)	H _{max, ULS} (kN)	H _{max, SLS} (kN)	UX (mm)	EN				AASHTO			
						L5 (mm)	B5 (mm)	D2 (mm)	TH (mm)	L5 (mm)	B5 (mm)	D2 (mm)	TH (mm)
PU-500-H20% ±100	500	358	100	72	±100	440	230	230	88	440	440	230	98
PU-1000-H20% ±100	1000	715	200	143	±100	480	270	270	88	490	490	280	103
PU-1500-H20% ±100	1500	1072	300	214	±100	507	307	307	92	528	528	321	108
PU-2000-H20% ±100	2000	1429	400	286	±100	535	346	346	93	564	564	364	113
PU-3000-H20% ±100	3000	2143	600	429	±100	585	415	415	102	628	628	440	128
PU-4000-H20% ±100	4000	2858	800	572	±100	628	471	471	108	673	673	495	143
PU-5000-H20% ±100	5000	3572	1000	714	±100	663	521	521	116	711	711	542	153
PU-6000-H20% ±100	6000	4286	1200	857	±100	728	598	598	122	750	750	591	169
PU-7000-H20% ±100	7000	5000	1400	1000	±100	728	615	615	127	786	786	634	179
PU-8000-H20% ±100	8000	5715	1600	1143	±100	760	657	657	134	833	833	688	179
PU-9000-H20% ±100	9000	6429	1800	1286	±100	786	693	693	144	848	848	710	193
PU-10000-H20% ±100	10000	7143	2000	1429	±100	833	748	748	146	878	878	746	199
PU-11000-H20% ±100	11000	7858	2200	1572	±100	835	767	767	155	924	924	797	209
PU-12000-H20% ±100	12000	8572	2400	1714	±100	860	799	799	160	933	933	812	219
PU-13000-H20% ±100	13000	9286	2600	1857	±100	878	832	832	176	964	964	848	221
PU-14000-H20% ±100	14000	10000	2800	2000	±100	902	866	866	178	987	987	878	235
PU-15000-H20% ±100	15000	10715	3000	2143	±100	924	899	899	184	1014	1014	910	235
PU-16000-H20% ±100	16000	11429	3200	2286	±100	948	928	928	186	1033	1033	934	245
PU-17000-H20% ±100	17000	12143	3400	2429	±100	964	952	952	196	1053	1053	959	250
PU-18000-H20% ±100	18000	12858	3600	2572	±100	987	983	983	201	1080	1080	990	260
PU-19000-H20% ±100	19000	13572	3800	2714	±100	1004	1006	1006	202	1100	1100	1015	260
PU-20000-H20% ±100	20000	14286	4000	2857	±100	1018	1030	1030	204	1122	1122	1041	275
PU-22000-H20% ±100	22000	15715	4400	3143	±100	1053	1099	1099	220	1165	1165	1092	286
PU-24000-H20% ±100	24000	17143	4800	3429	±100	1085	1146	1146	223	1231	1231	1169	306
PU-26000-H20% ±100	26000	18572	5200	3714	±100	1118	1192	1192	240	1280	1280	1226	308
PU-28000-H20% ±100	28000	20000	5600	4000	±100	1150	1237	1237	242	1345	1345	1298	319
PU-30000-H20% ±100	30000	21429	6000	4286	±100	1197	1291	1291	261	1400	1400	1361	343

GUIDED BEARING													
DATASHEET FOR A HORIZONTAL LOAD 30% OF THE VERTICAL LOAD AND A LONGITUDINAL DISPLACEMENT OF +- 50 MM													
BEARING DESIGNATION	V _{max, ULS} (kN)	V _{max, SLS} (kN)	H _{max, ULS} (kN)	H _{max, SLS} (kN)	UX (mm)	EN				AASHTO			
						L5 (mm)	B5 (mm)	D2 (mm)	TH (mm)	L5 (mm)	B5 (mm)	D2 (mm)	TH (mm)
PU-500-H30% ±50	500	358	150	107	±50	356	246	246	88	345	235	235	98
PU-1000-H30% ±50	1000	715	300	215	±50	390	287	287	92	400	293	293	103
PU-1500-H30% ±50	1500	1072	450	322	±50	425	335	335	97	455	358	358	114
PU-2000-H30% ±50	2000	1429	600	429	±50	475	396	396	102	476	387	387	119
PU-3000-H30% ±50	3000	2143	900	643	±50	518	462	462	112	556	482	482	143
PU-4000-H30% ±50	4000	2858	1200	857	±50	550	511	511	123	618	556	556	157
PU-5000-H30% ±50	5000	3572	1500	1072	±50	590	572	572	134	651	603	603	173
PU-6000-H30% ±50	6000	4286	1800	1286	±50	628	630	630	148	733	694	694	193
PU-7000-H30% ±50	7000	5000	2100	1500	±50	660	680	680	158	740	710	710	198
PU-8000-H30% ±50	8000	5715	2400	1715	±50	695	730	730	166	748	726	726	215
PU-9000-H30% ±50	9000	6429	2700	1929	±50	733	780	780	176	778	764	764	221
PU-10000-H30% ±50	10000	7143	3000	2143	±50	748	816	816	194	833	826	826	231
PU-11000-H30% ±50	11000	7858	3300	2357	±50	778	857	857	200	878	881	881	240
PU-12000-H30% ±50	12000	8572	3600	2572	±50	800	889	889	202	921	931	931	254
PU-13000-H30% ±50	13000	9286	3900	2786	±50	824	925	925	214	970	986	986	265
PU-14000-H30% ±50	14000	10000	4200	3000	±50	851	964	964	222	1018	1041	1041	275
PU-15000-H30% ±50	15000	10715	4500	3215	±50	878	999	999	223	1065	1094	1094	286
PU-16000-H30% ±50	16000	11429	4800	3429	±50	904	1051	1051	242	1131	1169	1169	306
PU-17000-H30% ±50	17000	12143	5100	3643	±50	933	1091	1091	243	1160	1204	1204	308
PU-18000-H30% ±50	18000	12858	5400	3857	±50	950	1118	1118	244	1214	1263	1263	308
PU-19000-H30% ±50	19000	13572	5700	4072	±50	975	1155	1155	245	1279	1334	1334	319
PU-20000-H30% ±50	20000	14286	6000	4286	±50	1000	1186	1186	255	1300	1360	1360	343
PU-22000-H30% ±50	22000	15715	6600	4715	±50	1065	1264	1264	265	1392	1462	1462	345
PU-24000-H30% ±50	24000	17143	7200	5143	±50	1150	1350	1350	265	-	-	-	-
PU-26000-H30% ±50	26000	18572	7800	5572	±50	1214	1428	1428	275	-	-	-	-
PU-28000-H30% ±50	28000	20000	8400	6000	±50	1290	1507	1507	284	-	-	-	-
PU-30000-H30% ±50	30000	21429	9000	6429	±50	1392	1606	1606	283	-	-	-	-

GUIDED BEARING													
DATASHEET FOR A HORIZONTAL LOAD 30% OF THE VERTICAL LOAD AND A LONGITUDINAL DISPLACEMENT OF ± 100 MM													
BEARING DESIGNATION	$V_{max, ULS}$ (kN)	$V_{max, SLS}$ (kN)	$H_{max, ULS}$ (kN)	$H_{max, SLS}$ (kN)	UX (mm)	EN				AASHTO			
						L5 (mm)	B5 (mm)	D2 (mm)	TH (mm)	L5 (mm)	B5 (mm)	D2 (mm)	TH (mm)
PU-500-H30% ± 100	500	358	150	107	± 100	456	246	246	88	445	235	235	98
PU-1000-H30% ± 100	1000	715	300	215	± 100	490	287	287	92	500	293	293	103
PU-1500-H30% ± 100	1500	1072	450	322	± 100	525	335	335	97	555	358	358	114
PU-2000-H30% ± 100	2000	1429	600	429	± 100	575	396	396	102	576	387	387	119
PU-3000-H30% ± 100	3000	2143	900	643	± 100	618	462	462	112	656	482	482	143
PU-4000-H30% ± 100	4000	2858	1200	857	± 100	650	511	511	123	718	556	556	157
PU-5000-H30% ± 100	5000	3572	1500	1072	± 100	690	572	572	134	751	603	603	173
PU-6000-H30% ± 100	6000	4286	1800	1286	± 100	728	630	630	148	833	694	694	193
PU-7000-H30% ± 100	7000	5000	2100	1500	± 100	760	680	680	158	840	710	710	198
PU-8000-H30% ± 100	8000	5715	2400	1715	± 100	795	730	730	166	848	726	726	215
PU-9000-H30% ± 100	9000	6429	2700	1929	± 100	833	780	780	176	878	764	764	221
PU-10000-H30% ± 100	10000	7143	3000	2143	± 100	848	816	816	194	933	826	826	231
PU-11000-H30% ± 100	11000	7858	3300	2357	± 100	878	857	857	200	978	881	881	240
PU-12000-H30% ± 100	12000	8572	3600	2572	± 100	900	889	889	202	1021	931	931	254
PU-13000-H30% ± 100	13000	9286	3900	2786	± 100	924	925	925	214	1070	986	986	265
PU-14000-H30% ± 100	14000	10000	4200	3000	± 100	951	964	964	222	1118	1041	1041	275
PU-15000-H30% ± 100	15000	10715	4500	3215	± 100	978	999	999	223	1165	1094	1094	286
PU-16000-H30% ± 100	16000	11429	4800	3429	± 100	1004	1051	1051	242	1231	1169	1169	306
PU-17000-H30% ± 100	17000	12143	5100	3643	± 100	1033	1091	1091	243	1260	1204	1204	308
PU-18000-H30% ± 100	18000	12858	5400	3857	± 100	1050	1118	1118	244	1314	1263	1263	308
PU-19000-H30% ± 100	19000	13572	5700	4072	± 100	1075	1155	1155	245	1379	1334	1334	319
PU-20000-H30% ± 100	20000	14286	6000	4286	± 100	1100	1186	1186	255	1400	1360	1360	343
PU-22000-H30% ± 100	22000	15715	6600	4715	± 100	1165	1264	1264	265	1492	1462	1462	345
PU-24000-H30% ± 100	24000	17143	7200	5143	± 100	1250	1350	1350	265	-	-	-	-
PU-26000-H30% ± 100	26000	18572	7800	5572	± 100	1314	1428	1428	275	-	-	-	-
PU-28000-H30% ± 100	28000	20000	8400	6000	± 100	1390	1507	1507	284	-	-	-	-
PU-30000-H30% ± 100	30000	21429	9000	6429	± 100	1492	1606	1606	283	-	-	-	-

Bearings have been designed with the following parameters :

Concrete on deck is H40 ($f_{ck} = 40$ MPa)

Concrete on piers and abutment is H35 ($f_{ck} = 35$ MPa)

Bearing designation: bearing type – $V_{max, ULS}$ (kN) – $\%H_{max, ULS}$ (kN) – Longitudinal displacement capacity ULS (mm)

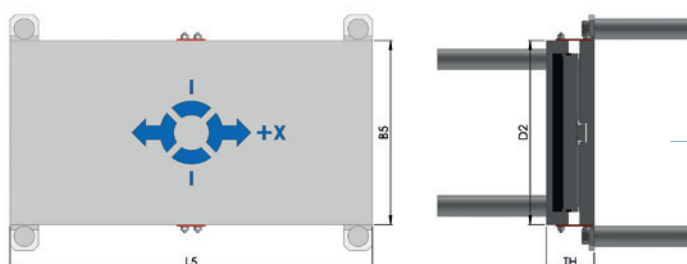
*% of horizontal load in ULS in comparison with vertical load in ULS

Minimum vertical load at SLS and ULS is 25% of maximum vertical load at SLS

Rotation 0,01 rad (EN) and 0,02 rad (AASHTO)

Other models are available on request

The dimensions given are indicative. Designs and dimensions may be modified by VSL without prior notification.



Notes

L5 = upper plate length
B5 = upper plate width
D2 = lower plate diameter
TH = total height