MATERIALS (EN 1503)

- **Carbon Steel**

Forged carbon steel (EN 10222-2)

EN 10222	DIN 2528	WN°	ASTM	Min. Temp.	Max. Temp.
P 245 N	C22.8	1.0460	A 106 A 350 LF2	-20°C -46°C	+425°C +425°C

Cast steel (EN 10213-2)

EN 10213-2	DIN	WN°	ASTM	Min. Temp.	Max. Temp.
GP 240 GH	GSC-25	1.0619 1.1156	A 216 WCB A 352 LCB	-29°C -45°C	+425°C +345°C

- **Stainless Steel**

Forged stainless steel (EN 10222-5)

DIN 17-440	WN°	ASTM	Min. Temp.	Max. Temp.
X5 CrNi 18-10	1.4301	A 182 F 304	-196°C	+815°C
X2 CrNi 19-11	1.4306	A 182 F 304 L	-196°C	+425°C
X5 CrNiMo 17-12-2	1.4401	A 182 F 316	-196°C	+815°C
X2 CrNiMo 17-12-2	1.4404	A 182 F 316 L	-196°C	+455°C

Cast stainless steel (EN 10213-4)

DIN 17-445	WN°	ASTM	Min. Temp.	Max. Temp.
GX6 CrNi 18-9	1.4308	A 351 CF8	-196°C	+815°C
GX2 CrNi 19-11	1.4309	A 351 CF3	-196°C	+425°C
GX6 CrNiMo 19-11-2	1.4408	A 351 CF8M	-196°C	+815°C
GX2 CrNiMo 19-11-2	1.4409	A 351 CF3M	-196°C	+455°C

- **Cast iron & ductile iron (EN 1503-3)**

Cast iron

EN 1561	DIN 1691	WN°	ASTM	Min. Temp.	Max. Temp.
EN-GJL 250	GG 25	0.6020	A 48 class 308	-10°C	+200°C
EN-GJL 200	GG 20	0.6023	A 48 class 358	-10°C	+200°C

Ductile iron

EN 1563	DIN 1693	WN°	ASTM	Min. Temp.	Max. Temp.
EN-GJS-500-7	GGG 50	0.7050	A 536 Gr 80-55-06	-15°C	+350°C
EN-GJS-400-15	GGG 40	0.7040	A 536 Gr 65-45-12	-15°C	+350°C
EN-GJS-400-18	GGG 40.3	0.7043	A 536 Gr 60-40-18	-20°C	+350°C

- **Brass (EN 1503-4 / EN 12165)**

EN 12420	DIN	WN°	ASTM	Min. Temp.	Max. Temp.
CW 617N	Cu Zn40Pb2	2.0402	B 124 C37700	-10°C	+200°C
CW 614N	Cu Zn39Pb3	2.0372	B 124 C38500	-10°C	+200°C
CW 510L	Cu Zn42		B 124 C28500	-10°C	+200°C

- **Bronze (EN 1503-4)**

EN 1982	DIN 1691	WN°	ASTM	Min. Temp.	Max. Temp.
CC 491K	CuSn5Zn5Pb5-C	2.1096	B 62 C83600	-10°C	+260°C
CB 491K	CuSn5Zn5Pb5-B	2.1097	B 30 C83600	-10°C	+260°C

Usual working conditions for elastomeres on our butterfly valves

Elastomere	Min. / Max. Temperature	Use	Not Recommended
EPDM	-10°C / +110°C	Cold and hot water, sea water, alkaline products, sodium hydroxide.	Hydrocarbons, steam, gases, acids, oil, freon.
NBR	-10°C / +90°C	Non aromatic hydrocarbons, natural gas, greases, oil, compressed air, glycol, water.	Atmospheric environment, petrol, solvents.
FKM	-5°C / +180°C	Acids, greases, hydrocarbons, petrol, fuel, oil, gases.	Steam and hot water (max. 130°C), freon, alkaline products.
Natural Rubber	-10°C / +60°C	Spirit, acetone, food, abrasive, powders.	Acids and hydrocarbons.
Silicone	-30°C / +150°C	High temperature, air or inert gases.	Steam and hot water (max. 100°C), solvents
Food Silicone	-30°C / +150°C	Food.	Other applications.