

BW 型通用型不锈钢金属软管

BW-based general-purpose stainless steel metal hose

BW 型通用型不锈钢金属软管主要由波纹管、网套和接头（法兰或活接头）等部件组成。适用于管道工程系统中为补偿位移和安装偏差、吸收振动及降低噪声等所采用，根据工程需要可适当延长和缩短制造长度。由于软管的弹性体波纹管的材料是奥氏体不锈钢，因此具有最佳的柔软性和耐曲挠性，很容易吸收各种交变运动和载荷，抗疲劳性强、耐压高、耐腐蚀、耐高低温（-200℃-600℃），广泛用于航天、航空、船舶、化工、石油、电力、冶金、造纸、纺织、军工、建筑、医药、食品、交通运输等行业。当温度、介质变化大时，需考虑温度与压力的递减系数，除表中所列材料外，其他特殊铁系、镍系、合金钢的压力递减系数请接洽本公司。

温度、材料、压力递减系数表

Table of descending coefficient of pressure, temperature, material

材料 material	SUS321	SUS316L	SUS304
温度 temperature			
-200-50	1.00	1.00	1.00
100	0.96	0.94	0.93
150	0.92	0.90	0.89
200	0.88	0.86	0.84
250	0.84	0.82	0.79
300	0.80	0.78	0.74
350	0.76	0.74	
400	0.72	0.70	
450	0.66		
500	0.60		
550	0.54		
600	0.44		

几种介质选材表

各种酸碱选材表

selecting table of all kinds of acid and alkali

温度 temperature	30° C	接近沸点 near boiling point	中间温度 mid temperature
介质 medium			
硝酸 nitric acid	SUS304	SUS304	SUS304L
硫酸 sulfuric acid	SUS316	Incoloy825	Incoloy825
亚硫酸 sulfurous acid	SUS316	SUS316. 317	SUS316. 317
醋酸 acetic acid	SUS304. 316	SUS316. 317	SUS317. 114ML
磷酸 phosphoric acid	SUS304	SUS316. 317	SUS317L. Incoloy825
盐酸 hydrochloric acid	SUS316	Incoloy825	Incoloy825
碱 alkali	SUS304	SUS304. 304L	SUS304. 347
氨 ammonia	SUS304	SUS316	SUS316. 316L
盐水 salt water	SUS036L	SUS317. M-5	Incoloy825

常用波纹管材质

common material of bellows

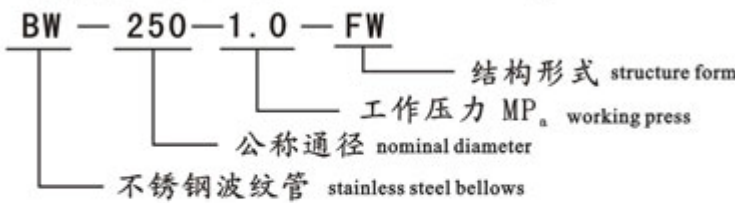
名称 name	牌号 Shopsign	使用温度° C working temperature ° C	标准号 standard No.
奥氏体不锈 钢 austenitic stainless steel	ocr18Ni10Ti (sus321)	-200~550	GB/T4237? GB/T3280
	ocr17Ni12Mo2 (sus316)		
	ocr18Nig (sus304)		
	oocr19Ni10 (sus304L)	-200~425	
	oocr17Ni14M02	-200~450	

selecting table of all kinds of medium

材料 material	可使用的材料 material available	优良材料 excellent material
介质 medium		
普通水 water	SUS304	SUS316
海水 seawater	NTKM-5	Incoloy825
蒸汽 steam	SUS316L	SUS316L
原油 crude oil	SUS316L	NTKM-5
轻质油 light oil	SUS316	SUS316L
重油 heavy oil	SUS304	SUS316
锅炉排气高温 high temperature for boiler exhaust	SUS304	SUS316L
低温 low temperature	SUS316L	Incoloy825
柴油机排气 diesel exhaust	SUS304	SUS316
粗制进炉气 crude gas into the furnace	SUS316L	Incoloy825
精制焦炉气 refining gas into the coke oven	SUS316	SUS316L
高炉气 blast furnace gas	SUS304	SUS316
烧切炉排气 tangential firing furnace exhaust	SUS316	SUS316L
船舶甲板蒸汽管 ship deck steam pipe	SUS316L	Incoloy825
船舶低温液化气管 ship low-temperature liquefied gas pipe	SUS316L	SUS316L
空气 air	SUS304	SUS304

耐腐蚀合金 corrosion resistant alloys	(SUS316L)			低温氧气 low-temperature oxygen	SUS304	SUS316L
	NS111	-200~700	GB/T15010 CB1330	高温氧气 high-temperature oxygen	SUS316	SUS316L
	FN-2					

完整标记示例： full mark example



FW-法兰网罩式 network cover-type flange

SW-丝口网罩式 pipe thread mesh enclosure

DHF-单边活套法兰网罩式  
unilateral unfixed network cover-type flange

## technical characteristics table

公称通径 mm nominal diameter		长度 mm length	波纹管有 纹面积 cm2 lined area of bellows	最小弯曲半 径（动态） mm min. bend radius (dynamic)	径向最大变化 量 mm max. radial displacement
法兰联接 flange join	15	200	3	120	30
	20	200	3.5	170	30
	25	200	9	200	30
	32	200	19	250	30
	40	200	21	250	30
	50	250	41	350	20
	65	250	61	410	20
	80	250	82	450	20
	100	250	125	560	20
	125	280	180	660	20
	150	280	255	815	20
	200	280	480	850	20
	250	300	730	950	20
	300	300	1020	1400	25
	350	300	1280	1500	25
	400	350	1580	1800	25
	450	350	1980	2000	30
	500	400	2450	2400	30
	600	400	3450	2800	30
	700	400	4740	3000	30
800	450	5960	3200	30	
丝口 联接 interface join	15	250	3	160	30
	20	250	3.5	200	30
	25	250	9	220	30
	32	250	19	280	30
	40	300	21	280	20
	50	300	41	400	20
	65	300	61	500	20
	80	300	82	700	20

Figure 1 illustrates three types of stainless steel bellows joints, labeled (a), (b), and (c). Each joint consists of a central stainless steel bellows (不锈钢波纹管) and a stainless steel ring (不锈钢圈). The joints are designed for use in DN15-DN32 applications.

- (a) **copper joint** (铜接头): This joint features a stainless steel bellows (不锈钢波纹管) with a mesh closure on the outside (外表带网罩). It is used for DN15-DN32 applications.
- (b) **stainless steel joint** (不锈钢接头): This joint features a stainless steel bellows (不锈钢波纹管) with a mesh closure on the outside (外表带网罩). It is used for DN15-DN32 applications.
- (c) **active joint** (活接头): This joint features a stainless steel bellows (不锈钢波纹管) with a mesh closure on the outside (外表带网罩). It is used for DN15-DN32 applications.

The diagram also shows the internal components of the joints, including the stainless steel bellows (不锈钢波纹管), stainless steel ring (不锈钢圈), and stainless steel clamping ring (不锈钢扣环). The joints are designed to be rotatable at the inner interface (可转动, 内接口).

flange 法兰 stainless steel ring 不锈钢圈 loose flange 活套法兰  
mesh enclosure 网罩 波纹管 bellows  
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BW-DHF型单边活套法兰网罩式  
unilateral unfixed network cover-type flange

由向伸缩量按照长度根据压力大小取 3~5%，但安装时应按原始长度取值，产品伸缩时会产生网罩鼓胀和凹瘪现象。 The parameter

mentioned above is under 1.0Mpa working pressure. Under 1.6Mpa working pressure, the bend radius will be magnified

about 20% and max. Radial displacement will shrink about 40% while the bend radius will be magnified about 20% when the working pressure is 2.5M. The axial displacement is 3~5% according to length and pressure but it is the original length value when installed. The displacement of the product will cause the reticulation expanding or concave.