

## Data Sheet – Hand built rubber bellows - Type RBH

Hand built rubber bellows are designed to neutralise movement, compensate for misalignment and reduce noise and vibration in pipelines. They can be tailored to fit ANY application as they are designed and manufactured specifically to suit.

Our Type RBH is generally supplied with self-sealing, full-face solid rubber flanges and split zinc plated backing flanges to your specific drilling requirement.

### Negative Pressures and Vacuum

Where negative pressures and vacuum conditions exist, it is recommended that vacuum support rings be used. These are usually built in to the body of the bellows, but can be retrofitted if required. The size of vacuum support rings is determined by the negative pressure rating required.

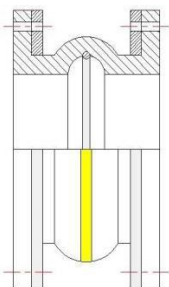
### Pressure Ratings

Our type RBH will be made bespoke as per your design pressure. We can make them from 0.01 Barg pressure up to 20 Barg and beyond. We use different amounts of layers to suit your working conditions, giving you better spring rates to suit your needs.

### Bespoke Designs

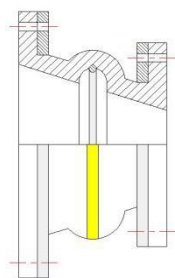
We can offer alternative lengths and variations in construction i.e. filled arch, multi arch, spool type or cuff ended can be offered enabling the design of the bellows to be tailored specifically to your requirement.

*The figures below show the options available in terms of construction.*



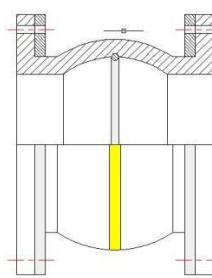
#### Single Arch

Standard Single Arch suited to most movement and vibration applications.



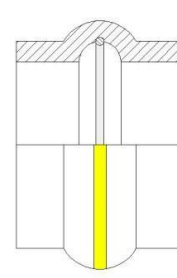
#### Single Arch Tapered

Used to reduce the bore size of pipe and also absorb movement & vibration



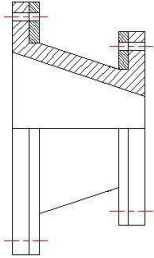
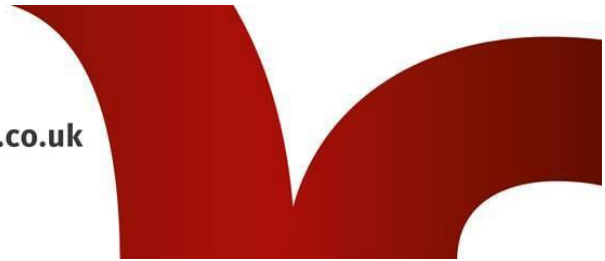
#### Wide Arch

Similar to the standard single arch but offers increased movement in restricted gaps.



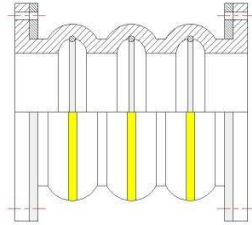
#### Cuff Ended

Like the standard flanged type but can be made to any ID to clamp onto pipe and machinery.



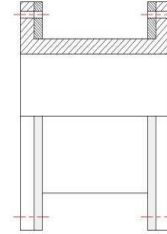
### Spool Type Tapered

Similar to the single arch tapered but smooth bore to prevent build up of media and reduce turbulence.



### Multiple Arch

Used to gain greater movement by the addition of extra arches where increased length is available.

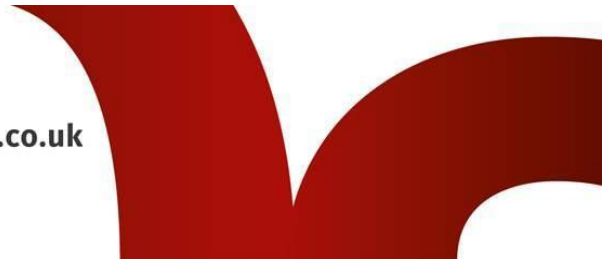


### Spool Type

Used where a smooth bore is required.

<b>Material Colour Chart</b>			
<b>Colour</b>	<b>Material</b>	<b>Main Applications</b>	<b>Max Temp °C</b>
Red	EPDM	Hot water, heating & ventilation systems, weak acids & alkalis	130
Yellow	Nitrile	Oil & gas transportation, refineries	110
Green	Hypalon	Water, Good chemical resistant qualities for acids	130
Purple	Viton	High temp applications, transportation of products derived from petroleum / chemicals / oils / solvents	180
White	Food Grade Nitrile	Transportation of food stuffs, potable water distribution	90
Silicone	Red	High temperature	200
Silicone	White	High temperature	180





**Movement data:**

Nominal Bore		Length		Typical Working Pressure (Barg)		Movements			
mm	ins	Minimum Length (mm)	Maximum Length (mm)	From	To	Compression (mm)	Elongation (mm)	Lateral +/- (mm)	Angular °
50	2	130	500	0.01	20	15	8	15	5
65	2½	130	500	0.01	20	15	8	15	5
80	3	130	500	0.01	20	15	8	15	5
100	4	130	500	0.01	20	15	8	15	5
125	5	130	500	0.01	20	20	10	15	5
150	6	130	750	0.01	20	20	10	20	10
200	8	130	750	0.01	20	20	10	20	10
250	10	130	750	0.01	16	20	10	25	10
300	12	150	1000	0.01	16	20	10	25	15
350	14	150	1000	0.01	16	25	12	25	15
400	16	200	1000	0.01	16	25	12	30	15
450	18	200	1000	0.01	10	25	12	30	15
500	20	200	1000	0.01	10	25	12	30	15
600	24	250	1000	0.01	10	25	12	30	15
700	28	250	1000	0.01	10	25	12	30	15
800	32	300	1000	0.01	10	25	12	30	15
900	36	300	1000	0.01	10	25	12	30	15
1000	40	300	1000	0.01	10	30	15	30	15
1100	44	300	1000	0.01	8	30	15	30	15
1200	48	300	1000	0.01	8	30	15	30	15
1300	52	300	1000	0.01	8	30	15	30	15
1400	56	300	1000	0.01	8	30	15	30	15
1500	60	300	1000	0.01	8	30	15	30	15
1600	64	300	1000	0.01	6	30	15	30	15
1800	72	300	1000	0.01	6	30	15	30	15
2000	80	300	1000	0.01	6	30	15	30	15

Hand built Rubber Bellows must be securely anchored & adequately guided to ensure their correct performance.  
Omitting anchors & guides may result in failure of the system. All Quick-Steel Ltd products should be installed in accordance with our fitting instructions.