



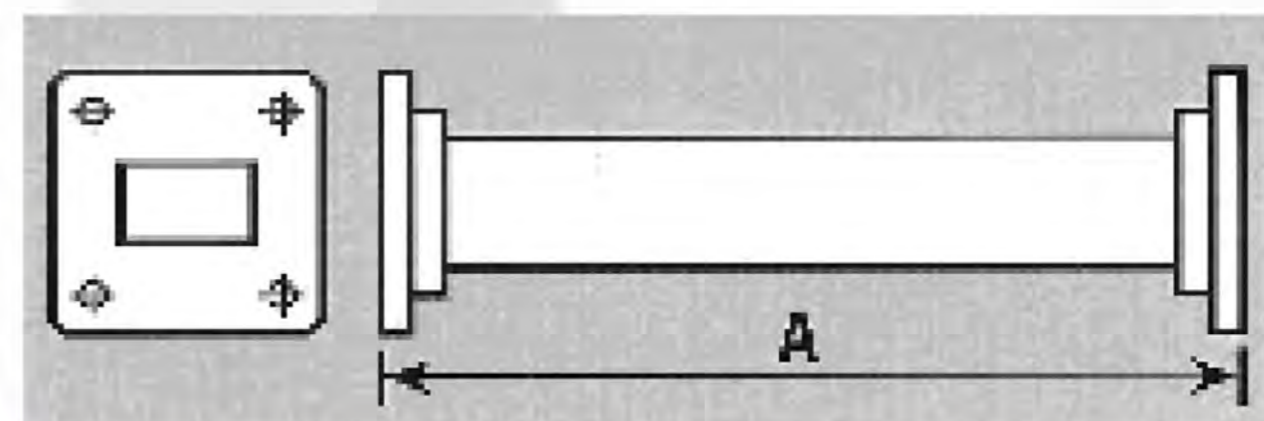
WAVEGUIDE RIGID COMPONENTS

PRECISION STRAIGHT

Standard Rectangular

Specification:

VSWR:	Values for through flanges only
Power:	Values at $f = 1.5f_c$
Material:	Aluminium, Brass & Copper
Finish:	Blue Paint, Unplated, Iridited or Chromated Flanges



Operating Frequency Band (GHz)	Waveguide Designation			PART NUMBER	Max V.S.W.R.	Insertion Loss dB's per metre	Max Power K Watts
	UK WG	IEC R	E.I.A. WR				
1.70 – 2.60.	8	22	430	PS 08 –SQZ- (**-**-**-)-B-M(**)	1.03	0.010	5900
2.20– 3.30	9A	26	340	PS 9A –SQZ- (**-**-**-)-B-M(**)	1.03	0.015	3800
2.60 – 3.95	10	32	284	PS 10 –SQZ- (**-**-**-)-B-M(**)	1.03	0.019	2430
3.30 – 4.90	11A	40	229	PS 11A –SQZ- (**-**-**-)-B-M(**)	1.03	0.025	1600
3.95 – 5.85	12	48	187	PS 12 –SQZ- (**-**-**-)-B-M(**)	1.03	0.036	1040
4.90 - 7.05	13	58	159	PS 13 –SQZ- (**-**-**-)-B-M(**)	1.03	0.043	806
5.85 – 8.20	14	70	137	PS 14 –SQZ- (**-**-**-)-B-M(**)	1.03	0.058	544
7.05 – 10.0	15	84	112	PS 15 –SQZ- (**-**-**-)-B-M(**)	1.03	0.079	355
8.20 – 12.40	16	100	90	PS 16 –SQZ- (**-**-**-)-B-M(**)	1.03	0.11	229
10.0 – 15.0	17	120	75	PS 17 –SQZ- (**-**-**-)-B-M(**)	1.05	0.13	178
12.4 – 18.0	18	140	62	PS 18 –SQZ- (**-**-**-)-C-M(**)	1.05	0.18	123
15.0 – 22.0	19	180	51	PS 19 –SQZ- (**-**-**-)-C-M(**)	1.08	0.24	83
18.0 – 26.5	20	220	42	PS 20 –SQZ- (**-**-**-)-C-M(**)	1.08	0.37	48
22.0 – 33.0	21	260	34	PS 21 –SQZ- (**-**-**-)-C-M(**)	1.08	0.37	48
26.5 – 40.0	22	320	28	PS 22 –SQZ- (**-**-**-)-C-M(**)	1.08	0.58	25

** Length in millimetres. Lengths up to 3 metres available as standard.

*** For 3 Digit Rectangular Flange part number, refer to the Flange Catalogue, or consult the factory.

Double Ridge

Specification:

VSWR:	Values for through flanges only
Power:	Values at $f = 1.5f_c$
Material:	Aluminium
Finish:	Blue Paint, Iridited or Chromated Aluminium Flanges

Operating Frequency Band (GHz)	Waveguide Designation	PART NUMBER	Max V.S.W.R.	Insertion Loss dB's per metre	Max Power K Watts
4.75 – 11.0	WRD475 D24	PS 475 - SQH- (**-**-**-)-A –M(**)	1.06	0.161	83
5.8 – 16.0	WRD580 D28	PS 580 - SQH- (**-**-**-)-A –M(**)	1.08	0.305	32
6.5 – 18.0	WRD650 D28	PS 650 - SQH- (**-**-**-)-A –M(**)	1.08	0.348	23
7.5 – 18.0	WRD 750 D24	PS 750 - SQH- (**-**-**-)-A –M(**)	1.08	0.315	33
18.0 – 40.0	WRD180 C24	PS 180- SQH- (**-**-**-)-A –M(**)	1.11	1.18	5.3

** Length in millimetres. Lengths up to 3 metres available as standard.

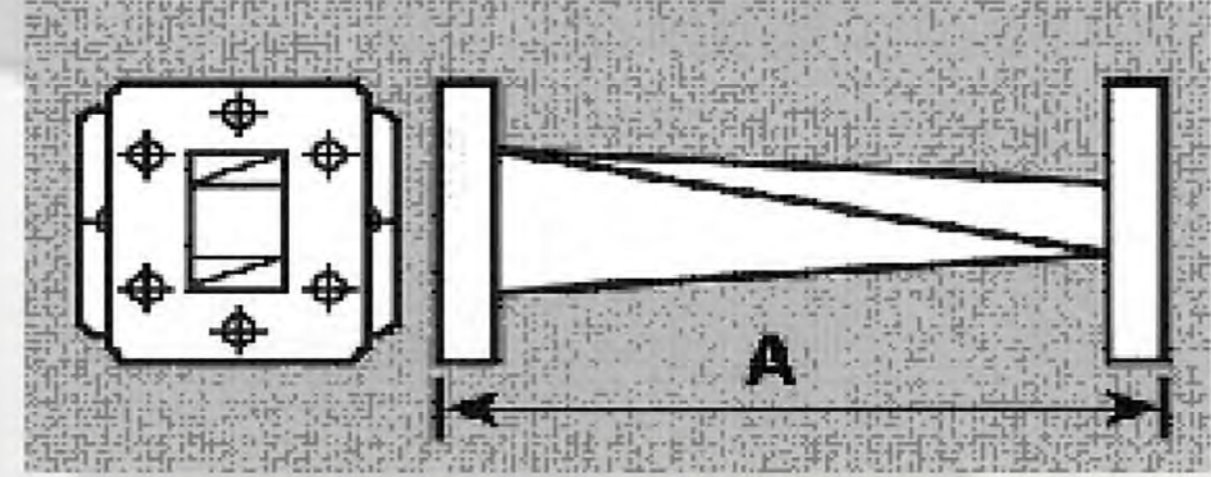
*** For 3 Digit Rectangular Flange part number, refer to the Flange Catalogue, or consult the factory.

PRECISION TWISTS

Standard Rectangular

Specification:

VSWR:	Values for through flanges and up to 90° Twists
Power:	Values at $f = 1.5f_c$ for 90° Twist only
Material:	Aluminium
Finish:	Blue Paint, Iridited or Chromated Aluminium Flanges



Operating Frequency Band (GHz)	Waveguide Designation			PART NUMBER	Max V.S.W.R.	Max Power Watts C.W.	Length "A" (mm)
	UK WG	IEC R	E.I.A. WR				
2.60 – 3.95	10	32	284	PT 10 -(*)QZ- (**-**-**)-B-(**)	1.05	2230	458
3.30 – 4.90	11A	40	229	PT 11A -(*)QZ- (**-**-**)-B-(**)	1.05	1500	356
3.95 – 5.85	12	48	187	PT 12 -(*)QZ- (**-**-**)-B-(**)	1.05	990	305
4.90 – 7.05	13	58	159	PT 13 -(*)QZ- (**-**-**)-B-(**)	1.05	775	248
5.85 – 8.20	14	70	137	PT 14 -(*)QZ- (**-**-**)-B-(**)	1.05	520	217
7.05 – 10.0	15	84	112	PT 15 -(*)QZ- (**-**-**)-B-(**)	1.05	345	179
8.20 – 12.40	16	100	90	PT 16 -(*)QZ- (**-**-**)-B-(**)	1.05	225	140
10.0 – 15.0	17	120	75	PT 17 -(*)QZ- (**-**-**)-B-(**)	1.07	175	115
12.4 – 18.0	18	140	62	PT 18 -(*)QZ- (**-**-**)-C-(**)	1.07	120	100
15.0 – 22.0	19	180	51	PT 19 -(*)QZ- (**-**-**)-C-(**)	1.11	80	51
18.0 – 26.5	20	220	42	PT 20 -(*)QZ- (**-**-**)-C-(**)	1.11	46	71
22.0 – 33.0	21	260	34	PT 21 -(*)QZ- (**-**-**)-C-(**)	1.11	46	71
26.5 – 40.0	22	320	28	PT 22 -(*)QZ- (**-**-**)-C-(**)	1.11	24	39

* S = clockwise, A = anticlockwise (as viewed through the waveguide)
 ** Twist in degrees. Standard Twist 30, 45 and 90 degrees.
 *** For 3 Digit Rectangular Flange part number, refer to the Flange Catalogue, or consult the factory.

Double Ridge

Specification:

VSWR:	Values for through flanges and up to 90° Twists
Power:	Values at $f = 1.5f_c$ for 90° Twist only
Material:	Aluminium
Finish:	Blue Paint, Iridited or Chromated Aluminium Flanges

Operating Frequency Band (GHz)	Waveguide Designation	PART NUMBER	Max V.S.W.R.	Max Power Watts C.W.	Length "A" (mm)
4.75 – 11.0	WRD475 D24	PT 475 -(*)QH- (**-**-**)-A-(**)	1.10	80	229
5.8 – 16.0	WRD580 D28	PT 580 -(*)QH- (**-**-**)-A-(**)	1.12	30	114
6.5 – 18.0	WRD650 D28	PT 650 -(*)QH- (**-**-**)-A-(**)	1.12	20	114
7.5 – 18.0	WRD750 D24	PT 750 -(*)QH- (**-**-**)-A-(**)	1.12	30	114
18.0 – 40.0	WRD180 C24	PT 180 -(*)QH- (**-**-**)-A-(**)	1.15	5	51

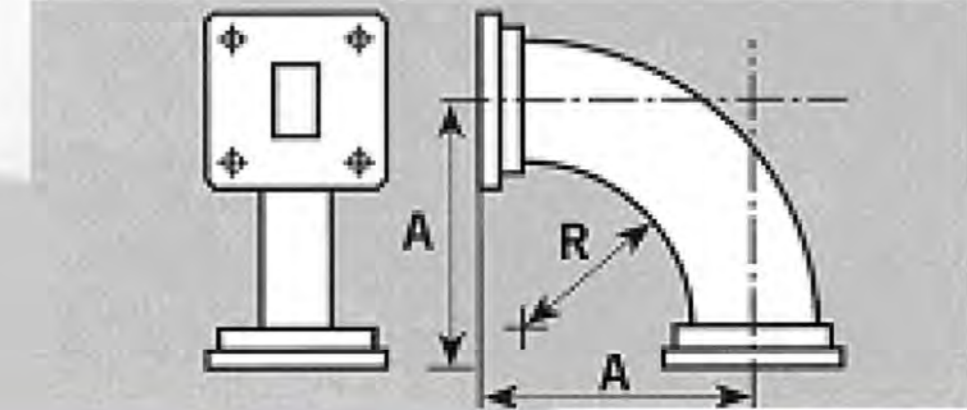
* S = clockwise, A = anticlockwise (as viewed through the waveguide)
 ** Twist in degrees. Standard Twist 30, 45 and 90 degrees.
 *** For 3 Digit Rectangular Flange part number, refer to the Flange Catalogue, or consult the factory.

PRECISION BEND

Standard Rectangular

Specification:

VSWR:	Values for through flanges and up to 90° Bends
Power:	Values at $f = 1.5f_c$ and for the 90° bends
Material:	Aluminium, Brass, Copper
Finish:	Blue Paint, Unplated Flanges



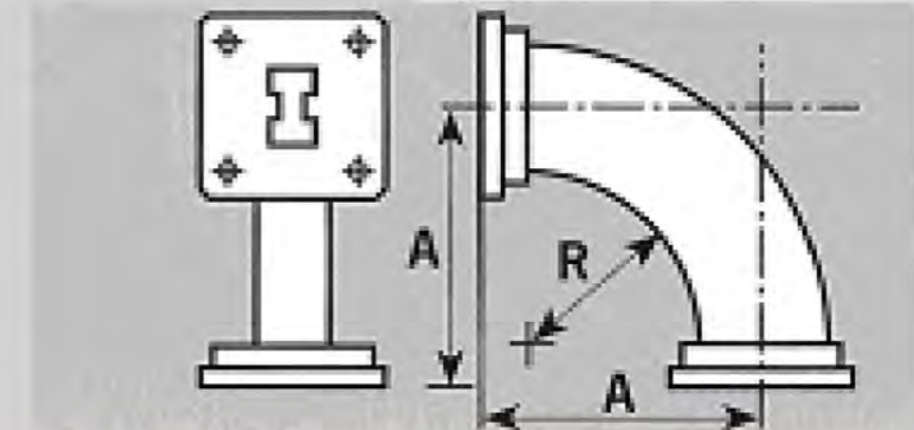
Operating Frequency Band (GHz)	Waveguide Designation			PART NUMBER	V.S.W. R. Max	Max Power K Watts	Dim A (mm)	Bend Radius (mm) approx
	UK WG	IEC R	E.I.A. WR					
2.60 – 3.95	10	32	284	PB 10 –SQZ- (***)-(**)-(*)	1.05	2230	153	90
3.30 – 4.90	11A	40	229	PB 11A –SQZ- (***)-(**)-(*)	1.05	1500	153	85
3.95 – 5.85	12	48	187	PB 12 –SQZ- (***)-(**)-(*)	1.05	1005	150	75
4.90 – 7.05	13	58	159	PB 13 –SQZ- (***)-(**)-(*)	1.05	775	140	80
5.85 – 8.20	14	70	137	PB 14 –SQZ- (***)-(**)-(*)	1.05	520	125	60
7.05 – 10.0	15	84	112	PB 15 –SQZ- (***)-(**)-(*)	1.05	345	100	45
8.20 – 12.40	16	100	90	PB 16 –SQZ- (***)-(**)-(*)	1.05	225	75	40
10.0 – 15.0	17	120	75	PB 17 –SQZ- (***)-(**)-(*)	1.07	175	65	22
12.40 – 18.0	18	140	62	PB 18 –SQZ- (***)-(**)-(*)	1.07	120	50	22
15.0 – 22.0	19	180	51	PB 19 –SQZ- (***)-(**)-(*)	1.11	80	50	20
18.0 – 26.5	20	220	42	PB 20 –SQZ- (***)-(**)-(*)	1.11	46	50	20
22.0 – 33.0	21	260	34	PB 21 –SQZ- (***)-(**)-(*)	1.11	46	50	20
26.5 – 40.0	22	320	28	PB 22 –SQZ- (***)-(**)-(*)	1.11	24	40	15

* E or H Plane bend (add "E" or "H"), when included in the above table, the dimensions refer specifically to either E or H Plane bends.
 ** Angle of bend in degrees. Standard Bends 30, 45, 60 and 90 degrees, alternative angles available on request.
 *** For 3 Digit Rectangular Flange part number, refer to the Flange Catalogue, or consult the factory.
 Cast Bends may be offered as an alternative.

Double Ridge

Specification:

VSWR:	Values for through flanges and up to 90° Twists
Power:	Values at $f = 1.5f_c$ for 90° bends
Material:	Aluminium
Finish:	Blue Paint, Iridited or Chromated Aluminium Flanges



Operating Frequency Band (GHz)	Waveguide Designation	PART NUMBER	Max V.S.W.R.	Max Power Watts C.W.	Dim A (mm)	Bend Radius (mm) approx
4.75 – 11.0	WRD475 D24	PB 475 –SQH- (***)-(**)-(*)	1.10	80	110	50
5.8 – 16.0	WRD580 D28	PB 580 –SQH- (***)-(**)-(*)	1.12	30	110	35
6.5 – 18.0	WRD650 D28	PB 650 –SQH- (***)-(**)-(*)	1.12	20	70	28
7.5 – 18.0	WRD750 D24	PB 750 –SQH- (***)-(**)-(*)	1.12	30	70	28
18.0 – 40.0	WRD180 C24	PB 180 –SQH- (***)-(**)-(*)	1.15	5	60	20

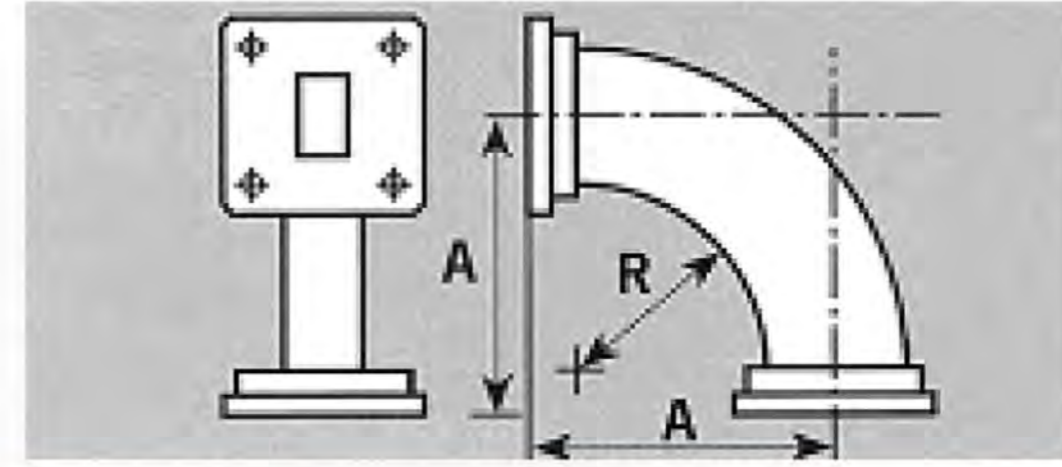
* E or H Plane bend (add "E" or "H"), when included in the above table, the dimensions refer specifically to either E or H Plane bends.
 ** Angle of bend in degrees. Standard Bends 30, 45, 60 and 90 degrees, alternative angles available on request.
 *** For 3 Digit Rectangular Flange part number, refer to the Flange Catalogue, or consult the factory.

COMPACT BEND

Standard Rectangular

Specification:

VSWR:	Values for through flanges and up to 90° Bends
Power:	Values at $f = 1.5f_c$ and for the 90° bends
Material:	Aluminium, Brass, Copper
Finish:	Blue Paint, Unplated Flanges



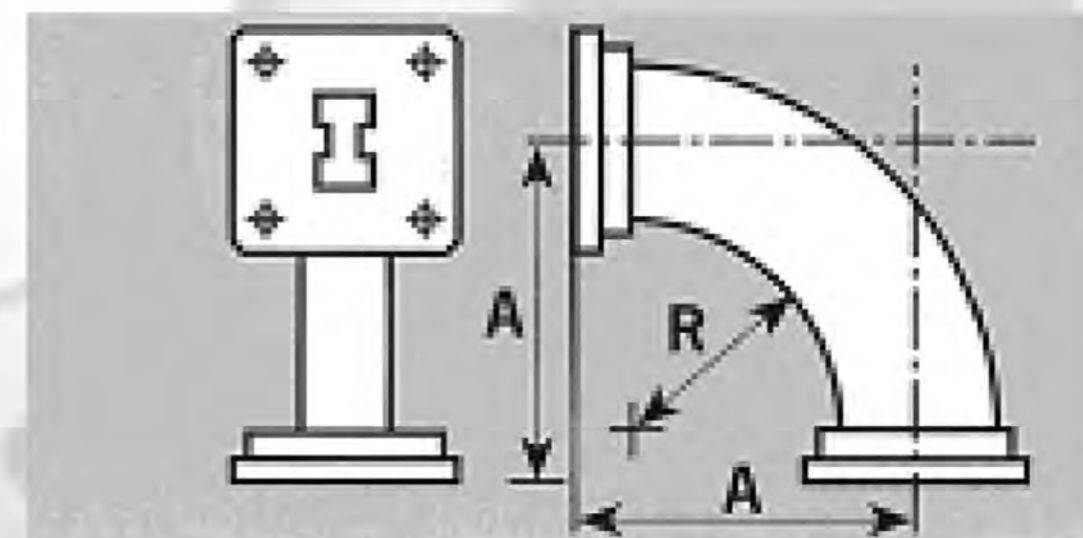
Operating Frequency Band (GHz)	Waveguide Designation			PART NUMBER	V.S.W. R. Max	Max Power K Watts	Dim A (mm)	Bend Radius (mm) approx
	UK WG	IEC R	E.I.A. WR					
2.60 – 3.95	10	32	284	PB 10 –CQZ- (**-***)-B-(**)-E	1.15	2200	74	45
2.60 – 3.95	10	32	284	PB 10 –CQZ- (**-***)-B-(**)-H	1.15	2200	93	45
3.30 – 4.90	11A	40	229	PB 11A –CQZ- (**-***)-B-(**)-E	1.15	1490	84	58
3.30 – 4.90	11A	40	229	PB 11A –CQZ- (**-***)-B-(**)-H	1.15	1490	91	50
3.95 – 5.85	12	48	187	PB 12 –CQZ- (**-***)-B-(**)-E	1.15	995	81	58
3.95 – 5.85	12	48	187	PB 12 –CQZ- (**-***)-B-(**)-H	1.15	995	90	55
4.90 – 7.05	13	58	159	PB 13 –CQZ- (**-***)-B-(**)-E	1.15	770	72	50
4.90 – 7.05	13	58	159	PB 13 –CQZ- (**-***)-B-(**)-H	1.15	770	77	45
5.85 – 8.20	14	70	137	PB 14 –CQZ- (**-***)-B-(**)-E	1.15	518	69	40
5.85 – 8.20	14	70	137	PB 14 –CQZ- (**-***)-B-(**)-H	1.15	518	73	34
7.05 – 10.00	15	84	112	PB 15 –CQZ- (**-***)-B-(**)-E	1.15	343	50	22
7.05 – 10.00	15	84	112	PB 15 –CQZ- (**-***)-B-(**)-H	1.15	343	61	25
8.20 – 12.40	16	100	90	PB 16 –CQZ- (**-***)-B-(**)-E	1.15	222	42	16
8.20 – 12.40	16	100	90	PB 16 –CQZ- (**-***)-B-(**)-H	1.15	222	55	22
10.0 – 15.00	17	120	75	PB 17 –CQZ- (**-***)-B-(**)-E	1.18	172	39	13
10.0 – 15.00	17	120	75	PB 17 –CQZ- (**-***)-B-(**)-H	1.18	172	47	16
12.40 – 18.00	18	140	62	PB 18 –CQZ- (**-***)-C-(**)-E	1.18	119	37	13
12.40 – 18.00	18	140	62	PB 18 –CQZ- (**-***)-C-(**)-H	1.18	119	44	15
15.0 – 22.00	19	180	51	PB 19 –CQZ- (**-***)-C-(**)-E	1.20	77	26	12
15.0 – 22.00	19	180	51	PB 19 –CQZ- (**-***)-C-(**)-H	1.20	77	29	12
18.0 – 26.50	20	220	42	PB 20 –CQZ- (**-***)-C-(**)-E	1.25	44	25	12
18.0 – 26.50	20	220	42	PB 20 –CQZ- (**-***)-C-(**)-H	1.25	44	28	12
22.0 – 33.00	21	260	34	PB 21 –CQZ- (**-***)-C-(**)-E	1.25	44	25	12
22.0 – 33.00	21	260	34	PB 21 –CQZ- (**-***)-C-(**)-H	1.25	44	28	12
26.5 – 40.00	22	320	28	PB 22 –CQZ- (**-***)-C-(**)-E	1.25	22	25	12
26.5 – 40.00	22	320	28	PB 22 –CQZ- (**-***)-C-(**)-H	1.25	22	27	12

** Angle of bend in degrees. Standard Bends 30, 45, 60 and 90 degrees, alternative angles available on request.
 *** For 3 Digit Rectangular Flange part number, refer to the Flange Catalogue, or consult the factory.
 Cast Bends may be offered as an alternative option.

Double Ridge

Specification:

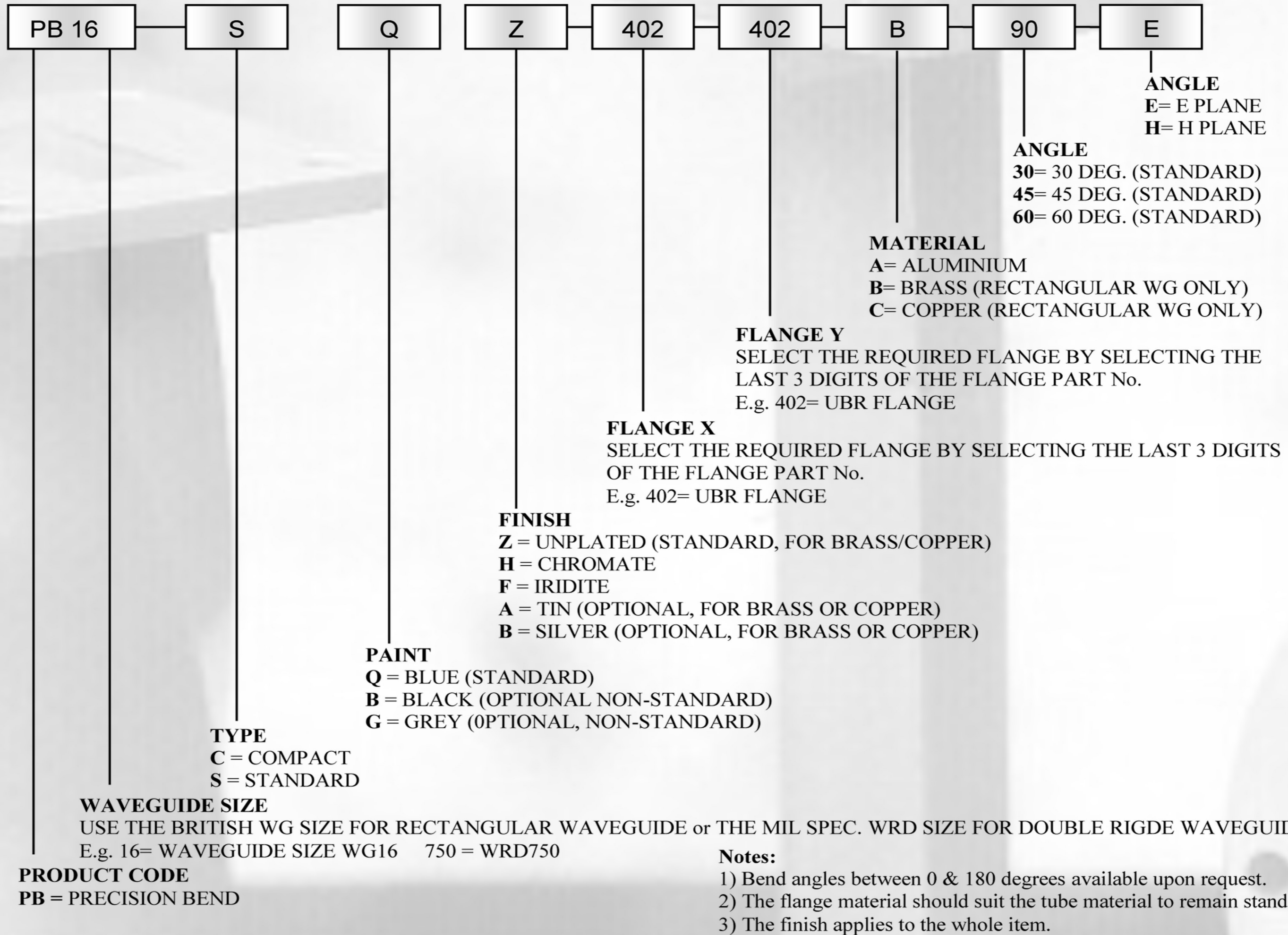
VSWR:	Values for through flanges and up to 90° Bends
Power:	Values at $f = 1.5f_c$ and for the 90° bends
Material:	Aluminium
Finish:	Blue Paint, Iridited or Chromated Aluminium Flanges



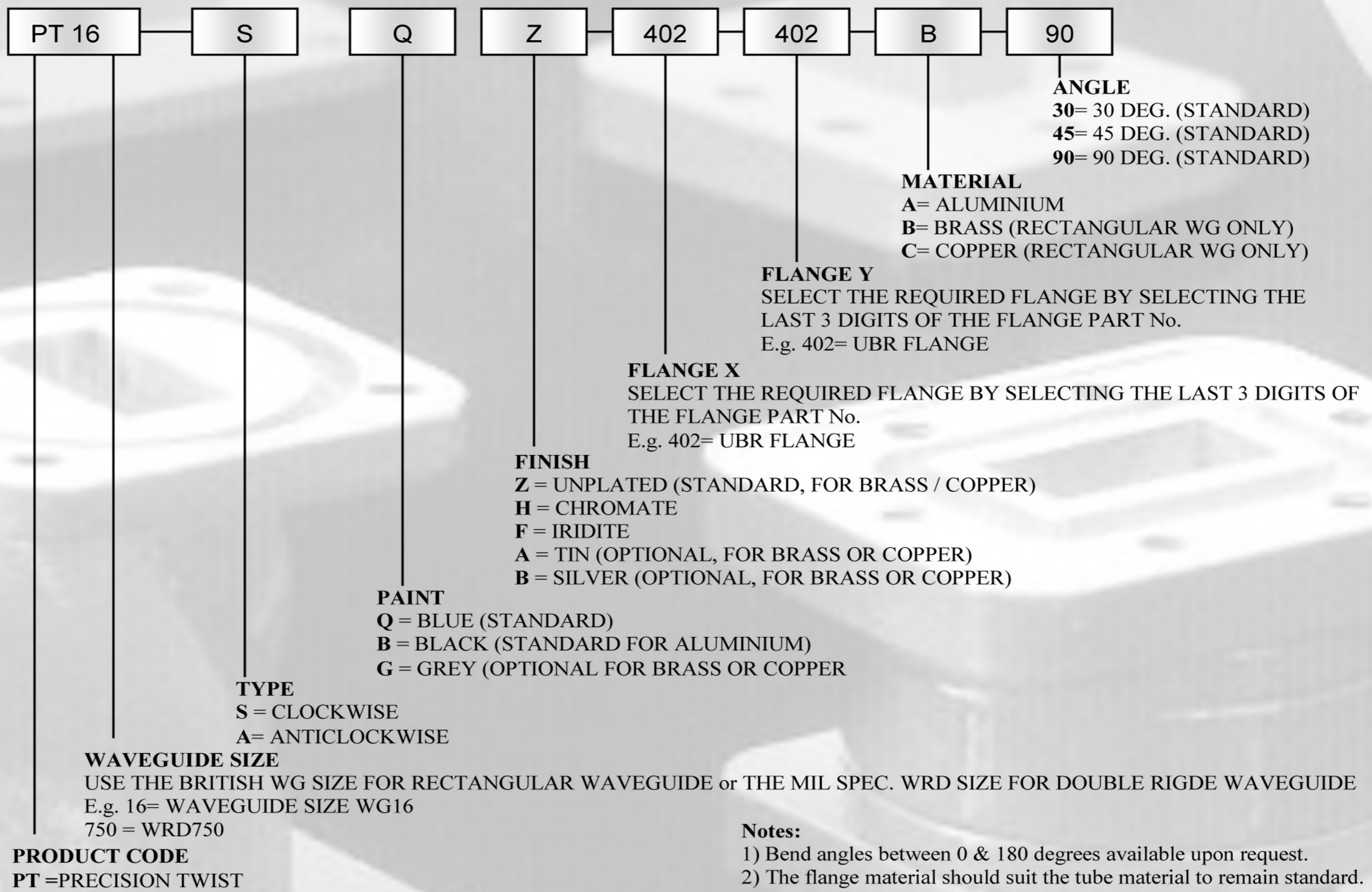
Operating Frequency Band (GHz)	Waveguide Designation	PART NUMBER	Max V.S.W.R.	Max Power Watts C.W.	Dim A (mm)	*Bend Radius (mm) approx
4.75 – 11.0	WRD475 D24	PB 475 –CQH- (**-***)-A-(**)-E	1.15	78	48	30
4.75 – 11.0	WRD475 D24	PB 475 –CQH- (**-***)-A-(**)-H	1.15	78	55	30
5.80 – 16.0	WRD580 D28	PB 580 –CQH- (**-***)-A-(**)-E	1.15	28	41	25
5.80 – 16.0	WRD580 D28	PB 580 –CQH- (**-***)-A-(**)-H	1.15	28	46	25
6.5 – 18.0	WRD650 D28	PB 650 –CQH- (**-***)-A-(**)-E	1.20	18	35	20
6.5 – 18.0	WRD650 D28	PB 650 –CQH- (**-***)-A-(**)-H	1.20	18	40	20
7.5 – 18.0	WRD750 D24	PB 750 –CQH- (**-***)-A-(**)-E	1.20	28	35	20
7.5 – 18.0	WRD750 D24	PB 750 –CQH- (**-***)-A-(**)-H	1.20	28	40	20
18.0 – 40.0	WRD180 C24	PB 180 –CQH- (**-***)-A-(**)-E	1.25	4.5	25	12
18.0 – 40.0	WRD180 C24	PB 180 –CQH- (**-***)-A-(**)-H	1.25	4.5	27	12

* The bend radius indicated are approximate please consult the factory for actual values for your application.
 ** Angle of bend in degrees. Standard Bends 30, 45, 60 and 90 degrees, alternative angles available on request.
 *** For 3 Digit Rectangular Flange part number, refer to the Flange Catalogue, or consult the factory.

PRECISION BENDS



PRECISION TWISTS



PRECISION STRAIGHTS

PS 16 — S — Q — Z — 402 — 402 — B — M500

LENGTH
LENGTH IN mm PREFIXED BY THE LETTER 'M'
E.g. M500 = 500mm

MATERIAL
A= ALUMINIUM
B= BRASS (RECTANGULAR WG ONLY)
C= COPPER (RECTANGULAR WG ONLY)

FLANGE Y
SELECT THE REQUIRED FLANGE BY SELECTING THE LAST 3 DIGITS OF THE FLANGE PART No.
E.g. 402= UBR FLANGE

FLANGE X
SELECT THE REQUIRED FLANGE BY SELECTING THE LAST 3 DIGITS OF THE FLANGE PART No.
E.g. 402= UBR FLANGE

FINISH
Z = UNPLATED (STANDARD, FOR BRASS / COPPER)
H = CHROMATE
F = IRIDITE
A = TIN (OPTIONAL, FOR BRASS / COPPER)
B = SILVER (OPTIONAL, FOR BRASS / COPPER)

PAINT
Q = BLUE (STANDARD)
B = BLACK (OPTIONAL, NON-STANDARD)
G = GREY (OPTIONAL, NON-STANDARD)

TYPE
S = STANDARD

WAVEGUIDE SIZE
USE THE BRITISH WG SIZE FOR RECTANGULAR WAVEGUIDE or THE MIL SPEC. WRD SIZE FOR DOUBLE RIDGE WAVEGUIDE
E.g. 16= WAVEGUIDE SIZE WG16
750 = WRD750

PRODUCT CODE
PS =PRECISION STRAIGHT

Notes:

- 1) The flange material should suit the tube material to remain standard.
- 2) Tin and silver plated finish applies to flanges only.

