

**hinged interfaces**

Hinged fittings allow for protection of cables at breakouts, harness servivability and for the conduit system to self level. They are designed to protect against high pressure washing, excessive cable strain and mechanical abrasion. Variety, flexibility and assembly speed are inherrent in all Harnessflex fittings.

**quality & standards**

Manufacturing is controlled in accordance with BS EN ISO 9001 whilst ongoing testing & approval to international standards, eg: UL recognition, TUV & LCIE, provides any additional confidence required to specify appropriate Harnessflex products across the widest variety of automotive applications including hazardous or aggressive environments.

Conduit has the following approvals,

- FMVSS 302 Ford flammability specification for conduit.
- NFR13-903 French automotive conduit specification.
- UL Recognised American electrical conduit specification.

All components comply with End of Life Vehicle (ELV) directive EU2000/53/EC. Harnessflex also comply to ISO14001 - Environmental Standard

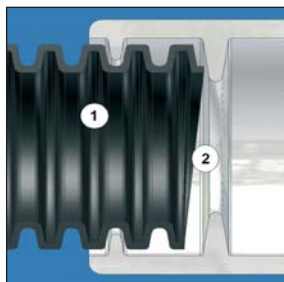
**capabilities**

Through our internal design team we are able to offer unique solutions, specific to our customers applications. Using the latest 3D CAD modelling software we are able to communicate new product designs quickly and efficiently. Rapid prototype parts can be made to order to enable product evaluation early on in the design cycle.

If you have a requirement for a dedicated hinged fitting please contact us to discuss your requirement.

**design features**

1. Radiussed internal form of conduit protects cables from abrasion.
2. Internal backstop (found on all hinged fittings) alleviates any potential problems caused by unevenly cut conduit.



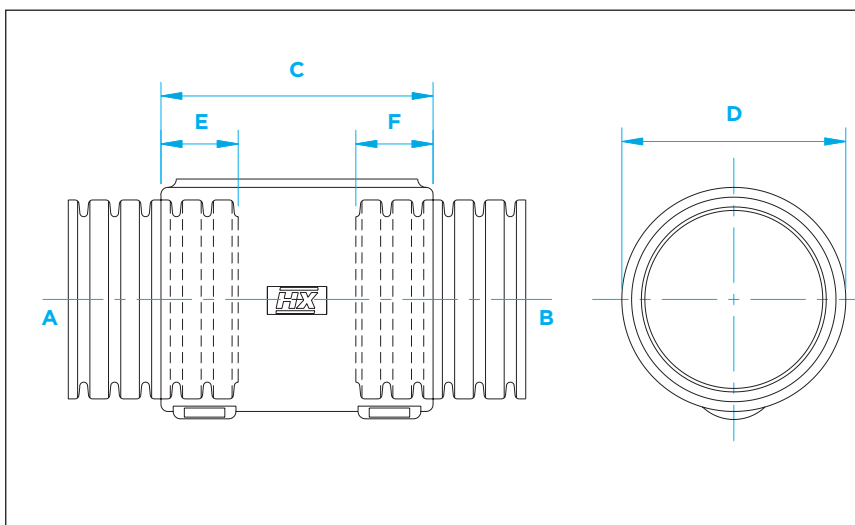
**hints & tips**

1. Multiple breakouts can be achieved from any NC20, NC25 or NC28 exit using our ST splitter range. See page 45 for details.
2. JPS & EPS fittings can be used as conduit enlargers or reducers.
3. Combining multiple XPS fittings (page 23) creates a self levelling manifold, ideal for engine bay or transmission applications.





external hinged joiners dimensions



**Description**

One-piece joiner and elbow hinged fittings allow a variety of conduit size variations.

These fittings are designed to snap together over all types of slit and unslit conduit thus maintaining maximum conduit bore.

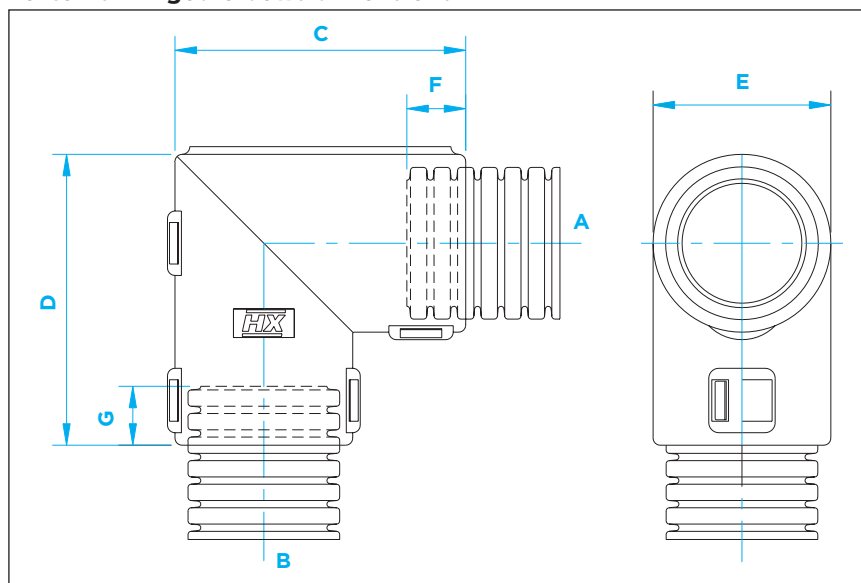
Can be used as a reducer as well as an enlarger.

External Joiner	Conduit sizes (NC)		Conduit sizes (NW)		C	D	E	F
	A	B	A	B				
JPS1212	12	12	10	10	36	16	10	10
JPS1612	16	12	13	10	36	21	10	10
JPS1616	16	16	13	13	36	21	10	10
JPS2008	20	08	17	7.5	38	26	12	10
JPS2012	20	12	17	10	38	26	12	10
JPS2016	20	16	17	13	38	26	12	10
JPS2020	20	20	17	17	38	26	12	12
JPS2520	25	20	22	17	39	33	12	12
JPS2525	25	25	22	22	39	33	13	13
JPS2820	28	20	23	17	39	33	13	13
JPS2825	28	25	23	22	39	33	13	13
JPS2828	28	28	23	23	39	33	13	13

**note:** dimensions are in mm.



external hinged elbows dimensions



**Description**

One-piece joiner and elbow hinged fittings allow a variety of conduit size variations.

These fittings are designed to snap together over all types of slit and unslit conduit thus maintaining maximum conduit bore.

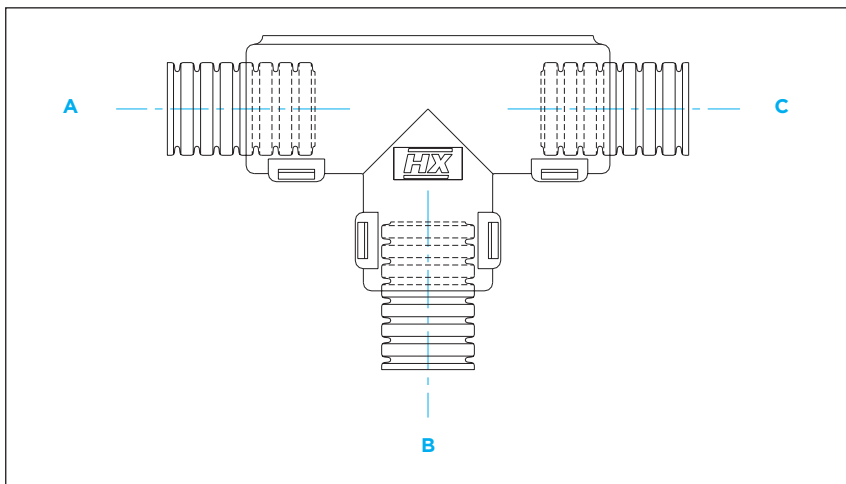
Can be used as a reducer as well as an enlarger.

External Elbow	Conduit sizes (NC)		Conduit sizes (NW)		C	D	E	F	G
	A	B	A	B					
<b>EPS08S08</b>	08	08	7.5	7.5	38	29	20	10	10
<b>EPS12S12</b>	12	12	10	10	38	29	20	10	10
<b>EPS0820</b>	08	20	7.5	17	41	41	25	10	12
<b>EPS1608</b>	16	08	10	7.5	34	34	21	10	10
<b>EPS1612</b>	16	12	13	10	34	34	21	10	10
<b>EPS1616</b>	16	16	13	13	34	34	21	10	10
<b>EPS2012</b>	20	12	17	10	41	41	26	10	10
<b>EPS2016</b>	20	16	17	13	41	41	26	12	10
<b>EPS2020</b>	20	20	17	17	41	41	26	12	12
<b>EPS2520</b>	25	20	22	17	48	48	33	13	12
<b>EPS2525</b>	25	25	22	22	48	48	33	13	13
<b>EPS2812</b>	28	12	23	10	48	48	33	13	10
<b>EPS2816</b>	28	16	23	13	48	48	33	13	10
<b>EPS2820</b>	28	20	23	17	48	48	33	13	12
<b>EPS2825</b>	28	25	23	22	48	48	33	13	13
<b>EPS2828</b>	28	28	23	23	48	48	33	13	13
<b>EPS287025</b>	n/a	n/a	n/a	n/a	51	37	16	n/a	n/a

**note:** dimensions are in mm.



external T-piece

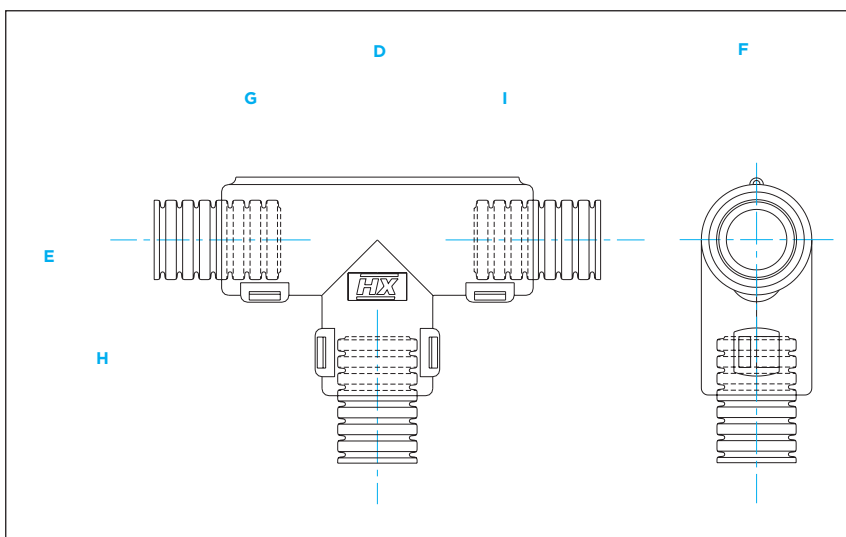


**Description**

One-piece symmetrical 3 junction fittings allow a variety of conduit size variations.

These fittings are designed to snap together over all types of slit and unslit conduit thus maintaining maximum conduit bore.

external T-piece dimensions



configuration/part numbers

part number	conduit sizes						nominal dimensions						part number	conduit sizes						nominal dimensions					
	(NC)			(NW)			D	E	F	G	H	I		(NC)			(NW)			D	E	F	G	H	I
A	B	C	A	B	C	A							B	C	A	B	C	A	B						
TPS080808	08	08	08	7.5	7.5	7.5	45.2	31.1	17	10	10	10	TPS202516	20	25	16	17	22	13	64.5	48.5	33	12	13	10
TPS081208	08	12	08	7.5	10	7.5	45.2	31.1	17	10	10	10	TPS250820	25	08	20	22	7.5	17	64.5	48.5	33	13	10	12
TPS081612	08	16	12	7.5	13	10	45.2	31.1	17	10	10	10	TPS250825	25	08	25	22	7.5	22	64.5	48.5	33	13	10	13
TPS100808	10	08	08	8.5	7.5	7.5	45.2	31.1	17	10	10	10	TPS251025	25	10	25	22	8.5	22	64.5	48.5	33	13	10	13
TPS101010	10	10	10	8.5	8.5	8.5	45.2	31.1	17	10	10	10	TPS251220	25	12	20	22	10	17	64.5	48.5	33	13	10	12
TPS101012	10	10	12	8.5	8.5	13	45.2	31.1	17	10	10	10	TPS251225	25	12	25	22	10	22	64.5	48.5	33	13	10	13
TPS120808	12	08	08	10	7.5	7.5	45.2	31.1	17	10	10	10	TPS251620	25	16	20	22	13	17	64.5	48.5	33	13	10	12
TPS120812	12	08	12	10	7.5	10	45.2	31.1	17	10	10	10	TPS251625	25	16	25	22	13	22	64.5	48.5	33	13	10	13
TPS121010	12	10	10	10	8.5	8.5	45.2	31.1	17	10	10	10	TPS252020	25	20	20	22	17	17	64.5	48.5	33	13	12	12
TPS121012	12	10	12	10	8.5	10	45.2	31.1	17	10	10	10	TPS252025	25	20	25	22	17	22	64.5	48.5	33	13	12	13
TPS121208	12	12	08	10	10	7.5	45.2	31.1	17	10	10	10	TPS252520	25	25	20	22	22	17	64.5	48.5	33	13	13	12
TPS121210	12	12	10	10	10	7.5	45.2	31.1	17	10	10	10	TPS252525	25	25	25	22	22	22	64.5	48.5	33	13	13	13
TPS121212	12	12	12	10	10	10	45.2	31.1	17	10	10	10	TPS280820	28	08	20	23	7.5	17	64.5	48.5	33	13	10	12
TPS121612	12	16	12	10	13	10	45.2	31.1	21	10	10	10	TPS280828	28	08	28	23	7.5	23	64.5	48.5	33	13	10	13
TPS160808	16	08	08	13	7.5	7.5	49.1	34.8	21	10	10	10	TPS281020	28	10	20	23	8.5	17	64.5	48.5	33	13	10	12
TPS160812	16	08	12	13	7.5	10	49.1	34.8	21	10	10	10	TPS281028	28	10	28	23	8.5	23	64.5	48.5	33	13	10	13
TPS160816	16	08	16	13	7.5	13	49.1	34.8	21	10	10	10	TPS281220	28	12	20	23	10	17	64.5	48.5	33	13	10	12
TPS161012	16	10	12	13	8.5	10	49.1	34.8	21	10	10	10	TPS281225	28	12	25	23	10	22	64.5	48.5	33	13	10	13
TPS161016	16	10	16	13	8.5	13	49.1	34.8	21	10	10	10	TPS281228	28	12	28	23	10	23	64.5	48.5	33	13	10	13
TPS161212	16	12	12	13	10	10	49.1	34.8	21	10	10	10	TPS281620	28	16	20	23	13	17	64.5	48.5	33	13	10	12
TPS161216	16	12	16	13	10	13	49.1	34.8	21	10	10	10	TPS281625	28	16	25	23	13	22	64.5	48.5	33	13	10	13
TPS161608	16	16	08	13	13	7.5	49.1	34.8	21	10	10	10	TPS281628	28	16	28	23	13	23	64.5	48.5	33	13	10	13
TPS161612	16	16	12	13	13	10	49.1	34.8	21	10	10	10	TPS282020	28	20	20	23	17	17	64.5	48.5	33	13	12	12
TPS161616	16	16	16	13	13	13	49.1	34.8	21	10	10	10	TPS282025	28	20	25	23	17	22	64.5	48.5	33	13	12	13
TPS162012	16	20	12	13	16	10	49.1	34.8	21	10	10	10	TPS282028	28	20	28	23	17	23	64.5	48.5	33	13	12	13
TPS162016	16	20	16	13	16	13	49.1	34.8	21	10	10	10	TPS282525	28	25	25	23	22	22	64.5	48.5	33	13	13	13
TPS200816	20	08	16	16	7.5	13	56.5	41.0	26	12	10	10	TPS282528	28	25	28	23	22	23	64.5	48.5	33	13	13	13
TPS200820	20	08	20	16	7.5	16	56.5	41.0	26	12	10	12	TPS282828	28	28	28	23	23	23	64.5	48.5	33	13	13	13
TPS201016	20	10	16	16	8.5	13	56.5	41.0	26	12	10	10	TPS321625	32	16	25	29	13	22	72.0	55.3	39	13	10	13
TPS201020	20	10	20	16	8.5	16	56.5	41.0	26	12	10	12	TPS322532	32	25	32	29	22	29	72.0	55.3	39	13	10	13
TPS201216	20	12	16	16	10	13	56.5	41.0	26	12	10	10	TPS322025	32	20	25	29	17	22	72.0	55.3	39	13	12	13
TPS201220	20	12	20	16	10	16	56.5	41.0	26	12	10	12	TPS322028	32	20	28	29	17	23	72.0	55.3	39	13	12	13
TPS201612	20	16	12	16	13	10	56.5	41.0	26	12	10	10	TPS322032	32	20	32	29	17	29	72.0	55.3	39	13	12	13
TPS201616	20	16	16	16	13	13	56.5	41.0	26	12	10	10	TPS322525	32	25	25	29	22	22	72.0	55.3	39	13	13	13
TPS201620	20	16	20	16	13	16	56.5	41.0	26	12	10	12	TPS322532	32	25	32	29	22	29	72.0	55.3	39	13	13	13
TPS202012	20	20	12	16	16	10	56.5	41.0	26	12	12	10	TPS323225	32	32	25	29	29	22	72.0	55.3	39	13	13	13
TPS202016	20	20	16	16	16	13	56.5	41.0	26	12	12	10	TPS323232	32	32	32	29	29	29	72.0	55.3	39	13	13	13
TPS202020	20	20	20	16	16	16	56.5	41.0	26	12	12	12													

note: dimensions are in mm.

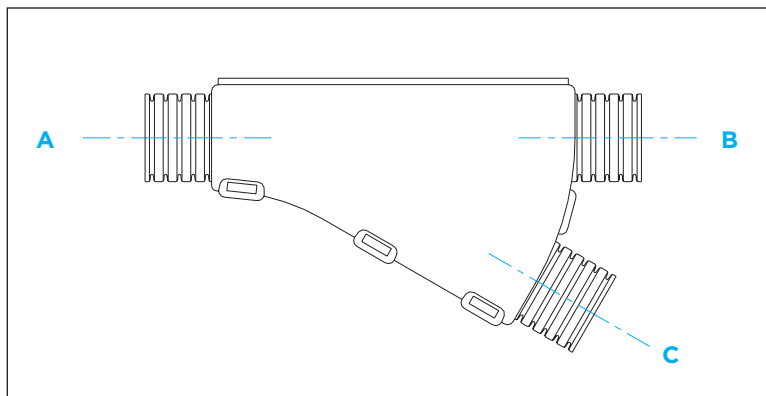


**Description**

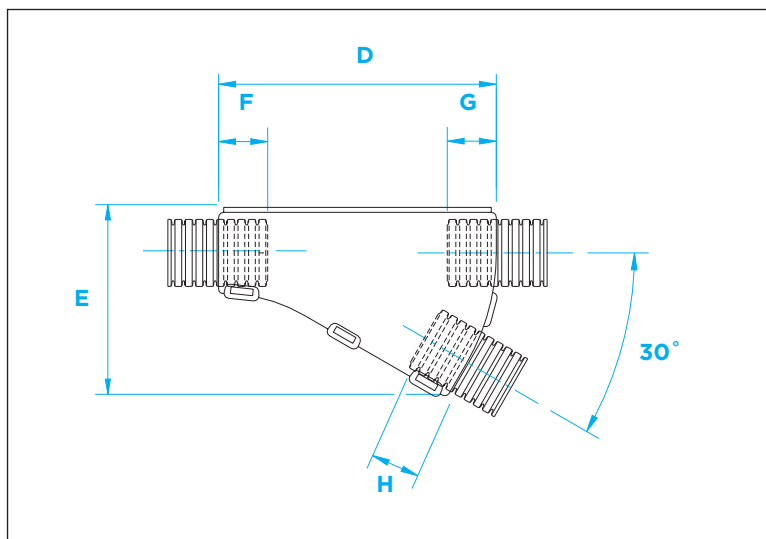
One-piece asymmetrical 3 junction fittings allow a variety of conduit variations.

These fittings are designed to snap together over all types of slit and unslit conduit thus maintaining maximum conduit bore.

external Y-piece dimensions



external Y-piece dimensions

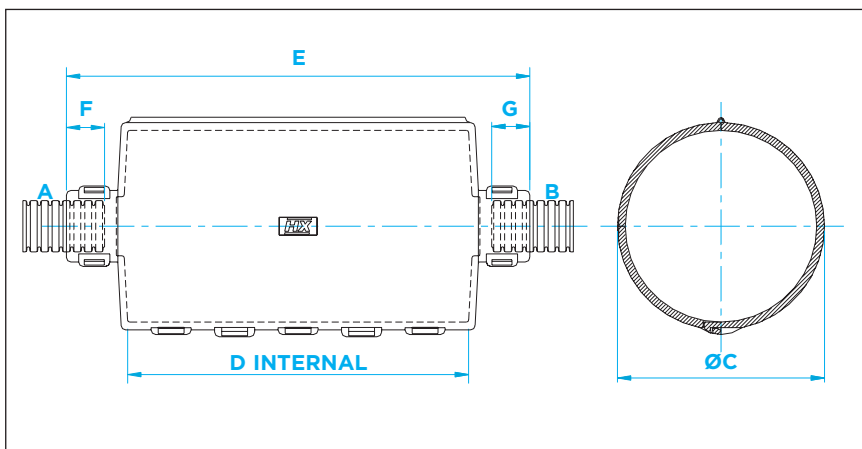


configuration/part numbers

part number	conduit sizes (NC)			conduit sizes (NW)			nominal dimensions (mm)					part number	conduit sizes (NC)			conduit sizes (NW)			nominal dimensions (mm)				
	A	B	C	A	B	C	D	E	F	G	H		A	B	C	A	B	C	D	E	F	G	H
YPS080808	08	08	08	7.5	7.5	7.5	55	37	10	10	10	YPS252016	25	20	16	22	17	13	54	49	13	12	10
YPS080812	08	08	12	7.5	7.5	10	55	37	10	10	10	YPS252020	25	20	20	22	17	17	54	49	13	12	12
YPS081208	08	12	08	7.5	10	7.5	55	37	10	10	10	YPS252508	25	25	08	22	22	7.5	67	56	13	12	10
YPS101010	10	10	10	8.5	8.5	8.5	55	37	10	10	10	YPS252510	25	25	10	22	22	8.5	67	56	13	13	10
YPS120808	12	08	08	10	7.5	7.5	55	37	10	10	10	YPS252512	25	25	12	22	22	10	67	56	13	13	10
YPS120810	12	08	10	10	7.5	8.5	55	37	10	10	10	YPS252516	25	25	16	22	22	13	67	56	13	13	10
YPS121010	12	10	10	10	8.5	8.5	55	37	10	10	10	YPS252520	25	25	20	22	22	17	77	60	13	13	12
YPS121208	12	12	08	10	10	7.5	55	37	10	10	10	YPS252525	25	25	25	22	22	22	91	67	13	13	13
YPS121210	12	12	10	10	10	8.5	55	37	10	10	10	YPS282012	28	20	12	23	17	10	54	49	13	12	10
YPS121212	12	12	12	10	10	10	55	37	10	10	10	YPS282016	28	20	16	23	17	13	54	49	13	12	10
YPS160812	16	08	12	13	7.5	10	55	40	10	10	10	YPS282020	28	20	20	23	17	17	54	49	13	12	12
YPS161010	16	10	10	13	8.5	8.5	55	40	10	10	10	YPS282512	28	25	12	23	22	10	67	56	13	13	10
YPS161208	16	12	08	13	10	7.5	55	40	10	10	10	YPS282516	28	25	16	23	22	13	67	56	13	13	10
YPS161210	16	12	10	13	10	8.5	55	40	10	10	10	YPS282520	28	25	20	23	22	17	77	60	13	13	12
YPS161212	16	12	12	13	10	10	55	40	10	10	10	YPS282525	28	25	25	23	22	22	91	67	13	13	13
YPS161608	16	16	08	13	13	7.5	55	40	10	10	10	YPS282808	28	28	08	23	23	7.5	67	56	13	13	10
YPS161610	16	16	10	13	13	8.5	55	40	10	10	10	YPS282812	28	28	12	23	23	10	67	56	13	13	10
YPS161612	16	16	12	13	13	10	55	40	10	10	10	YPS282816	28	28	16	23	23	13	67	56	13	13	10
YPS200808	20	08	08	17	7.5	7.5	43	37	12	10	10	YPS282820	28	28	20	23	23	17	77	60	13	13	12
YPS201208	20	12	08	17	10	7.5	43	37	12	10	10	YPS282825	28	28	25	23	23	22	91	67	13	13	13
YPS201210	20	12	10	17	10	8.5	43	37	12	10	10	YPS282828	28	28	28	23	23	23	91	67	13	13	13
YPS201212	20	12	12	17	10	10	43	37	12	10	10	YPS322032	32	20	32	29	17	29	100	77	13	12	13
YPS201608	20	16	08	17	13	7.5	48	40	12	10	10	YPS322516	32	25	16	29	22	13	100	75	13	13	10
YPS201612	20	16	12	17	13	10	48	40	12	10	10	YPS322520	32	25	20	29	22	17	100	76	13	13	12
YPS201616	20	16	16	17	13	13	64	48	12	10	10	YPS322525	32	25	25	29	22	22	100	79	13	13	13
YPS202008	20	20	08	17	17	7.5	56	45	12	10	10	YPS322532	32	25	32	29	22	29	100	82	13	13	13
YPS202010	20	20	10	17	17	8.5	58	45	12	12	10	YPS323216	32	32	16	29	29	13	100	75	13	13	10
YPS202012	20	20	12	17	17	10	58	45	12	12	10	YPS323220	32	32	20	29	29	17	100	76	13	13	12
YPS202016	20	20	16	17	17	13	64	48	12	12	10	YPS323225	32	32	25	29	29	22	100	79	13	13	13
YPS252012	25	20	12	22	17	10	54	49	13	12	10	YPS323232	32	32	32	29	29	29	100	82	13	13	13

note: dimensions are in mm.

external hinged protective shrouds configurations



**Description**

One-piece cover providing protection for in-line connectors, fuse links, circuit breakers and splicing areas.

The CPS shrouds can be used as a harness datum, due to the interated cable tie/ fir tree facility.

The strong construction allows for the protection of delicate connections, or as an alternative when an interface/backshell isn't available.

These fittings are designed to snap together over all types of slit and unslit conduit thus maintaining maximum conduit bore.

External Joiner	Internal Diameter	Conduit sizes (NC)		Conduit sizes (NW)		C	D	E	F	G
		A	B	A	B					
<b>CPS341212</b>	35	12	12	10	10	38	73	100	10	10
<b>CPS421212</b>	43	12	12	10	10	47	77	104	10	10
<b>CPS421616</b>	43	16	16	13	13	47	77	104	10	10
<b>CPS421620</b>	43	16	20	13	17	47	77	104	10	12
<b>CPS422020</b>	43	20	20	17	17	47	77	104	12	12

**note:** dimensions are in mm.





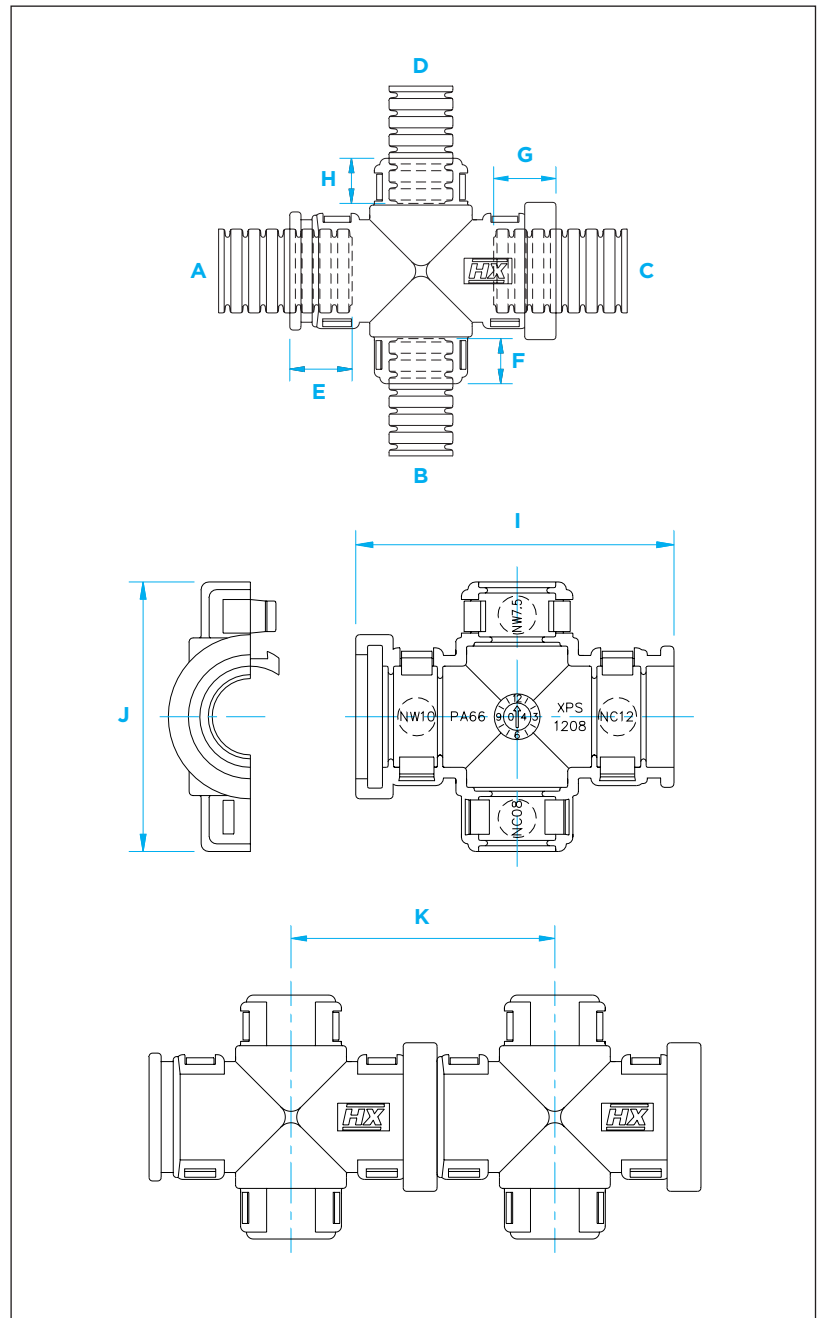
**Description**

Two-piece symmetrical 4 junction fittings providing a variety of conduit size combinations.

These fittings are designed to snap together over all types of slit and unslit conduit thus maintaining maximum conduit bore.

In addition, several fittings can be snapped together to provide multiple outlets without the need of short conduit joints.

**external X-piece dimensions**



**configuration/part numbers**

part number	conduit sizes (NC)				conduit sizes (NW)				conduit engagement (mm)				overall dimensions		
	A	B	C	D	A	B	C	D	E	F	G	H	I	J	K
XPS1208	12	08	12	08	10	7.5	10	7.5	9.5	7.0	9.5	7.0	42	35.5	38.0

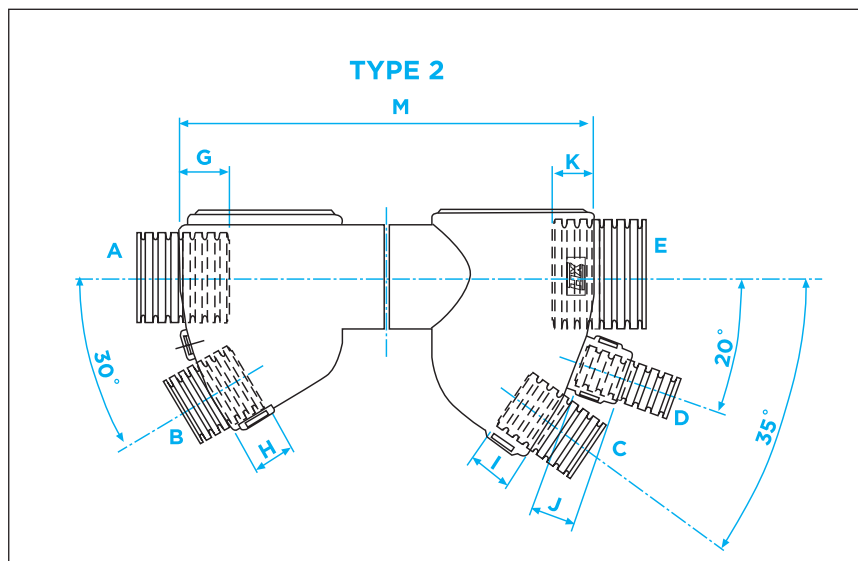
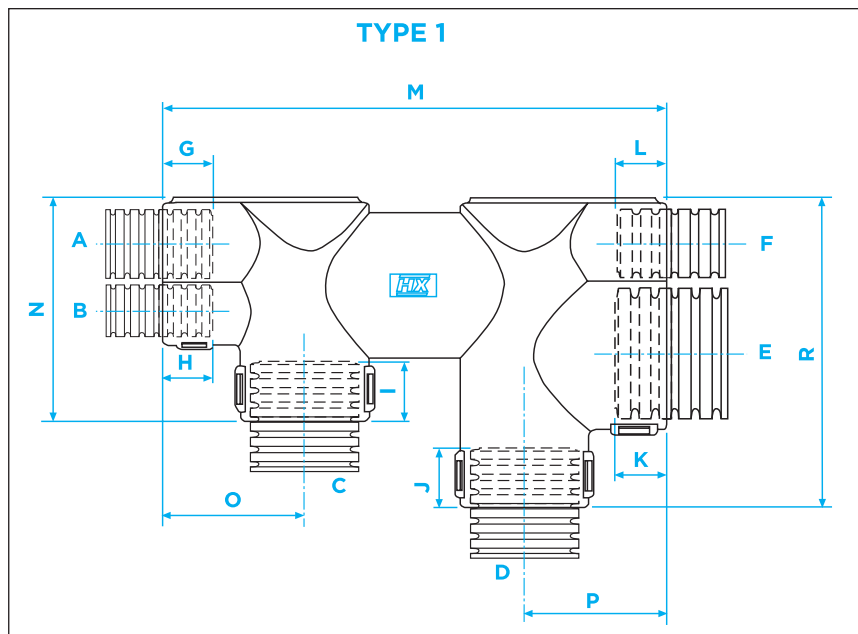
**note:** dimensions are in mm.



**Description**

One-piece hinged fittings designed to suit specific project or application requirements.

**nominal dimensions**



**nominal dimensions**

	type	conduit size (NC)						conduit engagement						overall dimensions					weight (gms)
		A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	R	
MPS100	1	12	08	20	20	25	12	10	10	12	12	13	12	98	43	28	28	59	22
MPS101	2	20	16	16	08	25	-	12	10	10	10	13	-	97	-	-	-	-	23
MPS102	2	16	08	16	08	25	-	10	10	10	10	13	-	97	-	-	-	-	23
MPS103	2	16	16	16	08	25	-	10	10	10	10	13	-	97	-	-	-	-	23

**note:** dimensions are in mm.



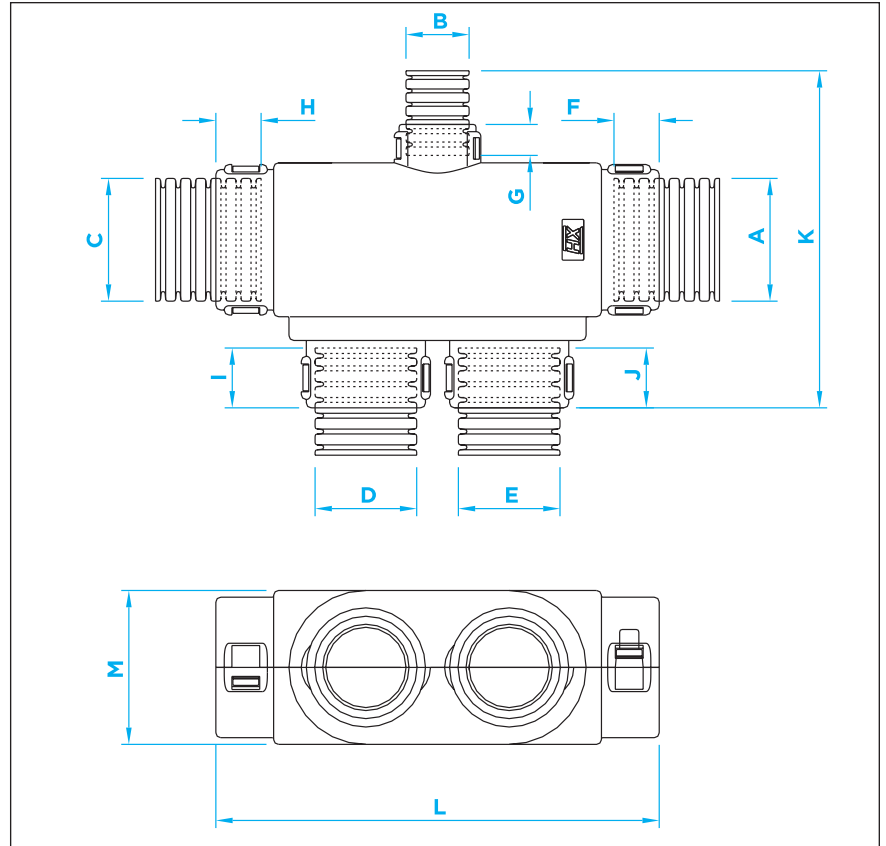
**Description**

Two identical half shells snap together to give a 5-way conduit manifold.

This fitting is designed to fit different types of slit and unslit conduit including NC, CPTA, modified PP and deep section PP

Additional configurations possible (dependent on volume). Contact us for details.

**split manifold dimensions**

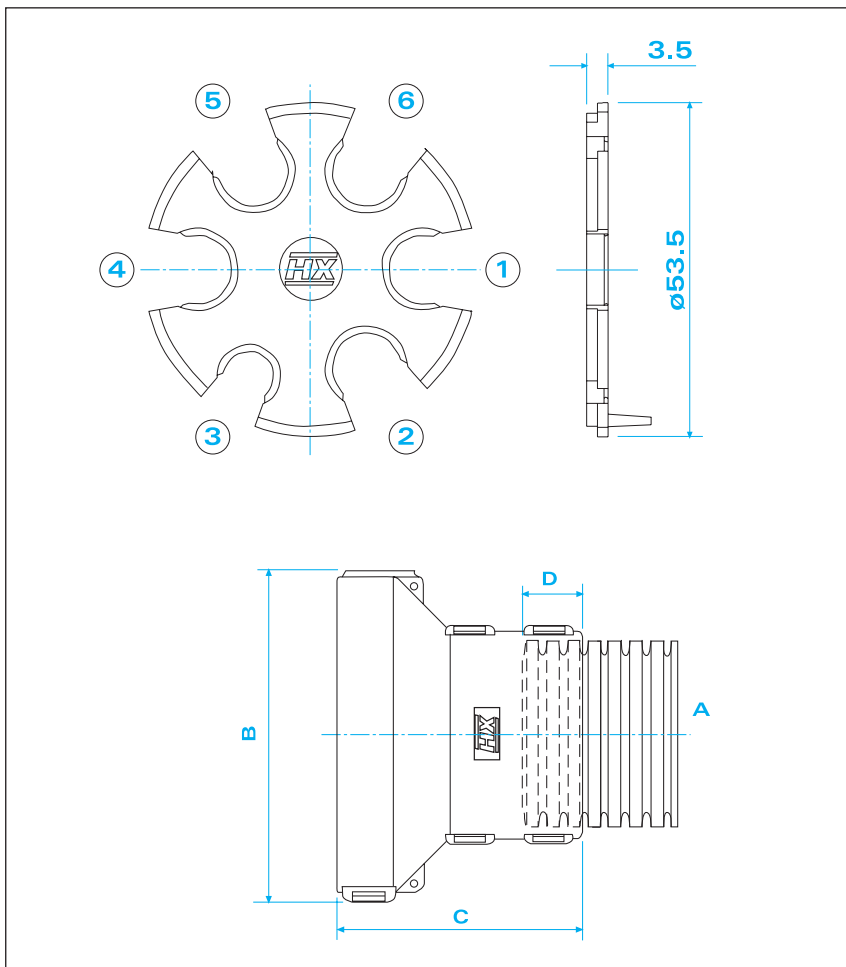


**configuration/part numbers**

part number	conduit sizes (NC)					nominal dimensions (mm)							
	A	B	C	D	E	F	G	H	I	J	K	L	M
<b>MPS121212-2020</b>	12	12	12	20	20	10	7	10	10	10	59	92	32
<b>MPS122812-2020</b>	12	28	12	20	20	10	12	10	10	10	67	92	32
<b>MPS201220-2020</b>	20	12	20	20	20	12	7	12	10	10	59	92	32
<b>MPS202820-2020</b>	20	28	20	20	20	12	12	12	10	10	67	92	32
<b>MPS251225-2020</b>	25	12	25	20	20	11	7	11	10	10	59	92	32
<b>MPS252825-2020</b>	25	28	25	20	20	11	12	11	10	10	67	92	32

**note:** dimensions are in mm.

**in-line circular manifolds dimensions**



**Description**

One-piece straight fittings providing in-line 'customised' combinations of multiple conduit breakouts.

ST break out disk configuration can be made to order, for more details see website for specification and ordering sheet.

**nominal dimensions**

Part No.	conduit	nominal dimensions		
	A	B	C	D
<b>CI20-A31</b>	NC20 NW17	62	45	12
<b>CI25-A31</b>	NC25 NW22	62	45	13
<b>CI32-A31</b>	NC32 NW29	62	45	13

**note:** dimensions are in mm.

Part No	Breakout Type					
	1	2	3	4	5	6
<b>ST31-100</b>	NC08	NC08	NC08	BLANK	NC08	NC08
<b>ST31-101</b>	NC12	NC12	NC08	BLANK	BLANK	NC12
<b>ST31-102</b>	NC08	NC08	NC08	NC08	NC08	NC08

**note:** other configurations available on request.