

# ATS-CSF90J

## 90° Elbow Body - Swivel Housing



Single 90° piece body with integrated conduit sealing system. Swivel metal housing for use with Jacob PERFECT cable glands to provide integrated strain relief and optimal cable ingress protection

### Approvals



### Conformity

BSI Kitemark KM-35161  
 CE Low voltage directive  
 NF 16-10/12 I4, F2  
 CEI 11170 LR3 / LR4

### IP Rating

IP40  
 IP65  
 IP68  
 IP69

### Appropriate Conduit

For use with: Type PA / PI / PR / PADL / PF  
 Yes  
 Yes  
 Yes (4 bar 30mins)  
 - -

### Fire Performance

Test Standard	Performance Rating
BS EN 61386-1 & 23	Approved
NFF16-101	I4 F2
ISO 4589-2	24%
BS EN 60695-2-11	850°C
UL94	HB

### Temperature Range

Static Applications: -50°C to +120°C  
 Moving Applications: -45°C to +120°C

NOTE: Temperature may be limited by the use of the Jacob cable gland



### Degree of Mechanical Protection

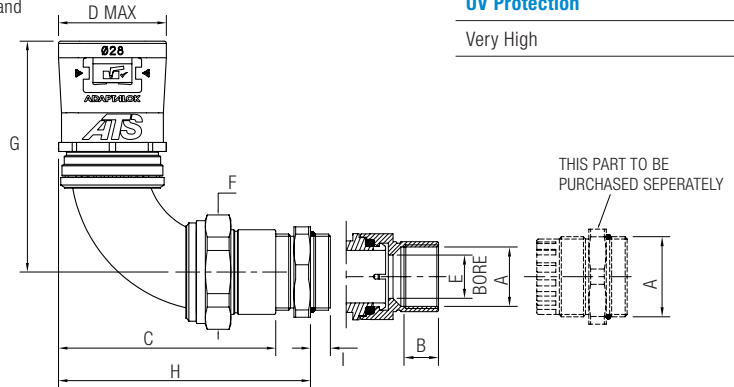
High Impact Resistance

### Material

Polyamide (Nylon) 66  
 Nickel Plated Brass Thread/TPE

### UV Protection

Very High



Metric	Standard thread conforming to EN60423 & BS3643			
	Thread	Ext Thread Outside Diameter	Int Thread Inside Diameter	Pitch
M16	M16	16.0mm	14.4mm	1.5mm
M20	M20	20.0mm	18.4mm	1.5mm
M25	M25	25.0mm	23.4mm	1.5mm
M32	M32	32.0mm	30.4mm	1.5mm
M40	M40	40.0mm	38.4mm	1.5mm
M50	M50	50.0mm	48.4mm	1.5mm
M63	M63	63.0mm	61.4mm	1.5mm

Part no	Thread	Nominal dimensions (mm)								I	
	A	B	C	D	E	F	G	H	Short	Long	
AT16/M16/CSF90J	M16x1.5	10.0	56.7	23.2	9.4	22.0	65.2	63.7	6.0	10.0	
AT21/M20/CSF90J	M20x1.5	11.0	62.2	30.2	13.6	27.0	70.0	71.7	6.5	10.0	
AT28/M25/CSF90J	M25x1.5	11.0	71.4	37.2	16.5	34.0	76.4	80.4	7.0	11.0	
AT34/M32/CSF90J	M32x1.5	11.5	84.7	44.2	21.5	42.0	86.4	94.7	7.5	13.0	
AT42/M40/CSF90J	M40x1.5	13.0	104.7	45.2	27.4	54.0	104.7	115.7	8.5	13.0	
AT54/M50/CSF90J	M50x1.5	14.5	129.6	66.2	35.6	70.0	127.6	142.6	10.0	14.0	
AT54/M63/CSF90J	M63x1.5	14.5	129.6	66.2	48.5	70.0	127.6	142.6	10.0	14.0	



Technical Data

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### BS EN 61386 Classification

Fitting	Compression	Impact	Min Temp	Max Temp	Bending	Electrical	IP Solids	IP Water	Corrosion	Tensile	Non-Flame propagating	Suspended load
ATS	N/A	4	2	4	N/A	0	6	7	0	1	1	0

### Mechanical Properties

Test type	Methods / Standards	Requirements	Status
Tensile Strength	IEC61386-1	2 mins at Specified Value (PAFS21 Conduit)	Class 1
Tensile Strength		Ultimate Pullout (PAFS21 Conduit)	240N
Impact Strength @ -45°C	IEC61386-1	No visible damage	Class 1
Impact Strength @ -5°C	IEC61386-1	No visible damage	Class 3
Impact Strength @ -23°C	IEC61386-1	No visible damage	Class 5

Tensile Tests to IEC 61386 gives the minimum classification value only. Actual values will depend on the type and size of the fittings used and will always be greater than the minimum – Impact strength is the minimum classification value at the minimum temperature – actual values will depend on size and temperature. Specific values available on request.

### Thermal Properties

Test type	Methods / Standards	Requirement	Value
Dynamic Applications	IEC 61386-23	5000 Operations at MBR 2hrs	-45°C to +120°C
Static Short Term Temp		Temporary Use (3000hrs)	-50°C to +120°C
Static Long Term Temp		Permanent Use (30,000) Hours	-40°C to +105°C

### Flammability

Test type	Methods / Standards	Requirement	Result	Unit
Glow Wire	BS EN 60695-2-11	Extinguish within 30s	850°C	°C
Flammability	IEC 61386-1-12	1Kw Burner Flame to Self Extinguish	Pass	Pass/Fail
Oxygen Index - Nylon Body	ISO 4589-2		24.1	%
Ignition Rating - Nylon Body	NF F16-101	I Rating	I4	-
Oxygen Index - Elastomer Seal	ISO 4589-2		20.2	%
Ignition Rating - Elastomer Seal	ISO 4589-2	I Rating	I4	-

### Smoke

Test type	Methods / Standards	Requirement	Result	Unit
Fume Rating - Nylon Body	NF F16-101	F Rating	F2	-
Fume Rating - Elastomer Seal	NF F16-101	F Rating	F2	-

### Toxicity

Test type	Methods / Standards	Requirement	Result	Unit
Halogen Free	NFX 70-100	< 0.5%	Pass	Pass/Fail

### Pre Test Conditions

Duration	Standard	Temperature	Relative Humidity
168 (Hours)	IEC61386	23 (°C)	50 (%)



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**Chemical Resistance Chart**

Astm No.1	Diesel oil	Methyl Bromide	Sulphur Dioxide (Gas)
Astm No.2	Diethylamine	MEK	Sulphuric Acid (10%)
Astm No.3	Ethanol	Nitric Acid (10%)	Sulphuric Acid (70%)
Acetic Acid (10%)	Ether	Nitric Acid (70%)	Toluene
Acetone	Ethylamine	Oxalic Acid	Transformer Oil
Aluminium Chloride	Ethylene Glycol	Ozone (Gas)	1,1,1-Trichloroethane
Aniline	Ethyl Ethanoate	Paraffin oil	Trichloroethylene
Benzaldehyde	Freon 32	Petrol	Turpentine
Benzene	Hydrochloric Acid (10%)	Phenol	Vegetable Oil
Carbon tetrachloride	Hydrochloric Acid (36%)	Sea Water	Vinyl Acetate
Chlorine water	Hydrogen Peroxide (35%)	Silver Nitrate	Water
Chloroform	Hydrogen Peroxide (87%)	Skydrol	White Spirit
Citric Acid	Lactic Acid	Sodium Chloride	Zinc Chloride
Copper Sulphate	Lubricating oil	Sodium Hydroxide (10%)	
Cresol	Methanol	Sodium Hydroxide (60%)	

**All Values Based on Size 21 Fittings and PAFS Conduit, For Other Sizes and Conduit Systems Please Consult**

The information above is given as a guide only and is based on published technical data and experience. The chemical resistance of the above products is dependent on factors such as chemical exposure, concentration of the chemical and temperature. The above chemicals are valid for a temperature of 23°C. Use of the above table is at the users own discretion and risk. Those using it must satisfy themselves that their application presents no health and safety risks. The end user should assess compatibility with their application and contact Thomas & Betts for further information.

ADHERENCE TO THE CURRENT WIRING REGULATIONS BS7671 OR NEC WIRING REGULATIONS (FOR USA) IS STRONGLY ADVISED. MINIMUM BEND RADIUS FOR FLEXING IS DEPENDANT UPON MINIMUM TEMPERATURE, BENDING FREQUENCY AND CHEMICAL ENVIRONMENT.

The Company's policy is one of continuous improvement and reserves the right to change specifications at any time without prior notice.