



ABS2195 Cable Clamps

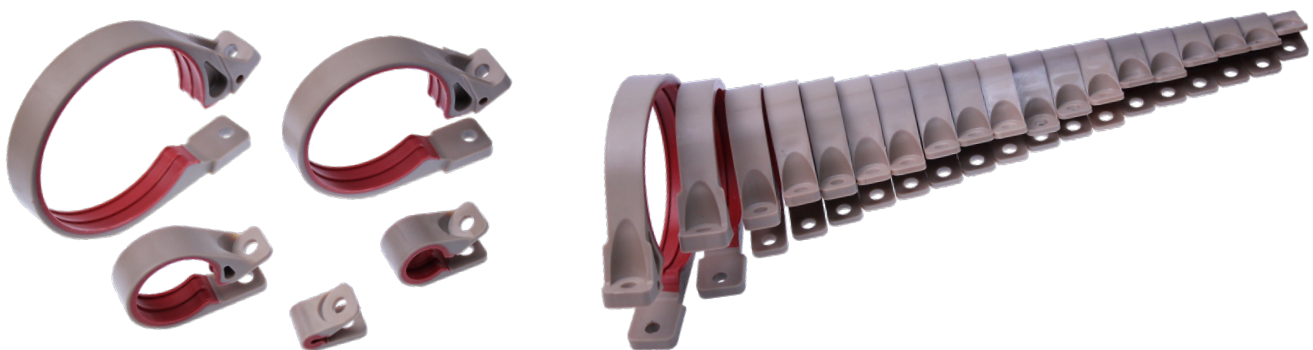
Lightweight composite & silicone clamps,
derived from NSA5516 metallic clamps



Commercial Aerospace

Defence

Space



BROCHURE 02/21 - V5.0

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PRESENTATION

ABS2195 series is a new line of lightweight Cable Clamps, in composite and silicone, derived from the legacy NSA5516 metallic clamps.

WEIGHT SAVING
UP TO 60% !

They are designed to keep the cable harnesses or hydraulic pipes securely maintained on structure. They are closed and fixed on structure by screw (not supplied), in one operation.

TIME SAVING

ABS2195 clamps absorb shocks and vibrations, and offer an unequalled protection of bundles and pipes against pinching, crushing or mechanical wear.

RELIABILITY

They are suited for applications in harsh environment and temperatures up to 200°C.

HIGH TEMPERATURE

They are available in 37 sizes, for bundles or pipes diameters from 3 to 60 mm.

APPLICATIONS IN HARSH ENVIRONMENTS

Commercial Aerospace, Defence and Space

STANDARDS AND QUALIFICATIONS

ABS2195 (products)

ABS1916 (tests)

Micro-VCM according to ECSS-Q-ST-70-02C (outgassing tests)

REACH AND ROHS

In accordance with the REACH spec.

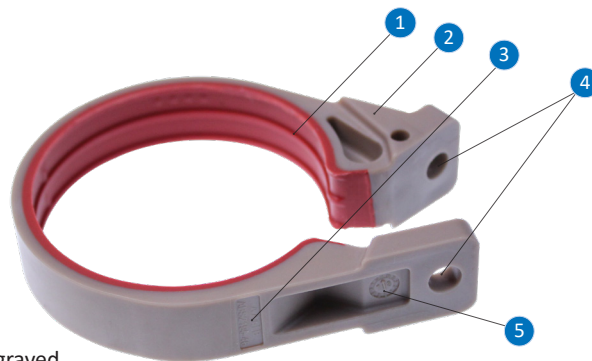
In accordance with the RoHS spec.

CLAMP RANGE

37 sizes available

CAPTION

- 1 - Silicone Cushion
- 2 - Clamp Band
- 3 - ABS2195 P/N engraved
- 4 - Fixing Ø 5,2 mm
- 5 - Date Code



Size	02	03	04	06	07	08	10	12	13	14	15	17	18	19	21	22	23	25	27
Bundle / Pipe diameter	3	4	5	6,3	7	8	9,5	11	12	12,7	14	15	15,9	17	18	19	20	22	24

Size	29	31	33	35	37	39	41	42	44	46	48	49	51	53	55	57	59	61
Bundle / Pipe diameter	25,4	28	30	31,8	34	36	38,1	40	42	44	46	48	50,8	52	54	56	58	60

MAIN TECHNICAL FEATURES

MATERIAL

Clamp Band : Thermoplastic

Cushion : Silicone elastomer

ENVIRONMENTAL

Operating Temperature : -55° to +200°C permanent

Solar radiation : suitable for outdoor use (56 days of exposure according to procedure II level A1 of the MIL STD 810 G method 505.5 test standard)

ELECTRICAL : as per ABS1916 standard

Insulation resistance : > 10⁶ MΩ

FLAMMABILITY / SMOKE / TOXICITY

ABD 0031

FAR 25.853

FLUIDS RESISTANCE : as per ABS1916 standard

Spray tests : Fuels, Hydraulic fluids, Lubrication Oils, Solvent and Cleaning fluids, De-icing fluids, insecticides

WEIGHTS

Size	02	03	04	06	07	08	10	12	13	14	15	17	18	19	21	22	23	25	27
Weight (g)	1,5	1,6	1,8	2,05	2,1	2,25	2,5	2,7	2,85	3	3,4	3,55	3,9	4,1	4,2	4,35	4,7	5	5,35

Size	29	31	33	35	37	39	41	42	44	46	48	49	51	53	55	57	59	61
Weight (g)	5,5	7,15	7,55	8	8,9	9,35	9,8	11,15	11,6	12,4	12,8	13,35	14,05	14,2	14,7	15,2	15,7	16,15

MECHANICAL : as per ABS1916 standard

Shocks : 6g during 20 ms

Vibrations : 3 H per axis, resonance frequency > 30 Hz

Windmilling test : 6g, frequency 2,9 to 30 Hz

Load test : depending on the clamp size, in 4 directions

Nose wheel imbalance : 3,5 to 10g, frequency 5 to 27 Hz

MOUNTING : as per ABS1916 standard

Closure and Fixing : Screw / washer Ø 5,2 mm

Screw / washer (recommended) : NSA5191-3 / NAS1149D0332J

Tightening torque : 4,2 Nm

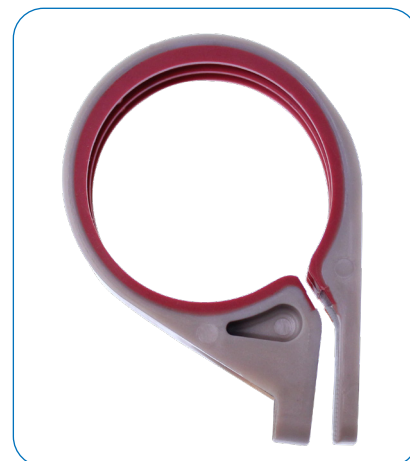
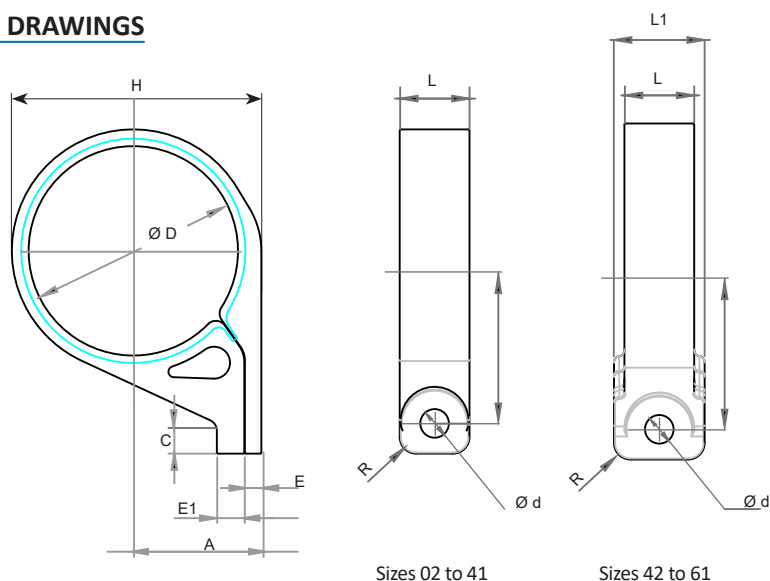
Clamp opening : 90° maximum recommended

OUTGASSING : test according to ECSS-Q-ST-70-02C

	Thermoplastic	Silicone elastomer	Requirement
TML (Total Mass Loss)	0,31 %	0,46 %	/
RML (Recovered Mass Loss)	0,13 %	0,42 %	< 1,00 %
CVCM (Collected Volatile Condensable Material)	0,00 %	0,09 %	< 0,10 %
WVR (Water Vapour Regained)	0,18 %	0,04 %	/

PART NUMBERS & DIMENSIONS

TECHNICAL DRAWINGS



PART NUMBERS AND DIMENSIONS

Part Number ABS	Clamp size	Bundle / Pipe diameter ØD (mm)	A		K		C	E	E1	R	L	L1	Ød	H (for information)	
			mm	tolerance	mm	tolerance	mm	mm	mm	± 0,2	max.	max.	mm	mm	tolerance
ABS2195-02	02	3	4,5	± 0,3	11,6	± 0,5	5,5	2	2	3	13,1	--	5,2	8,15	± 0,5
ABS2195-03	03	4	5,3		12,1									9,45	
ABS2195-04	04	5	5,8		12,6									10,65	
ABS2195-06	06	6,3	6,6		13,4									12,125	
ABS2195-07	07	7	6,8		13,6									12,65	
ABS2195-08	08	8	7,3		14,1									13,65	
ABS2195-10	10	9,5	8,1		14,9									15,2	
ABS2195-12	12	11	8,8		15,6									16,65	
ABS2195-13	13	12	9,3		16,1									17,65	
ABS2195-14	14	12,7	9,8		16,6									18,5	
ABS2195-15	15	14	10,3	18,9	19,65										
ABS2195-17	17	15	10,8	19,4	20,65										
ABS2195-18	18	15,9	11,3	19,9	21,6										
ABS2195-19	19	17	11,8	20,4	22,65										
ABS2195-21	21	18	12,3	20,9	23,83										
ABS2195-22	22	19	12,8	21,3	24,65										
ABS2195-23	23	20	13,3	21,9	25,85										
ABS2195-25	25	22	14,3	22,9	28										
ABS2195-27	27	24	15,3	23,9	29,85										
ABS2195-29	29	25,4	15,8	24,4	31,05										
ABS2195-31	31	28	18,3	26,4	35,15										
ABS2195-33	33	30	19,3	27,4	37,15										
ABS2195-35	35	31,8	20,3	28,4	39,025										
ABS2195-37	37	34	21,3	29,4	41,35										
ABS2195-39	39	36	22,3	30,4	43,5										
ABS2195-41	41	38,1	23,3	31,4	45,4										
ABS2195-42	42	40	24,3	32,4	47,55										
ABS2195-44	44	42	25,3	33,4	49,55										
ABS2195-46	46	44	26,3	34,4	51,55										
ABS2195-48	48	46	27,3	35,4	53,55										
ABS2195-49	49	48	28,3	36,4	55,55										
ABS2195-51	51	50,8	29,8	37,9	58,45										
ABS2195-53	53	52	30,3	38,4	59,55										
ABS2195-55	55	54	31,3	39,4	61,55										
ABS2195-57	57	56	32,3	40,4	63,55										
ABS2195-59	59	58	33,3	41,4	65,55										
ABS2195-61	61	60	34,3	42,4	67,55										

IMPLEMENTATION

RECOMMENDATIONS

Regarding the insertion of cable bundles or hydraulic pipes inside the ABS2195 Cable Clamps, Amphenol Air LB France recommend a maximum opening angle of 90°.



ABS2195 clamps are closed and fixed on structure, in one operation, using a screw and a washer (not supplied) matching the diameter of the fixing hole (5,2 mm). The ABS2195 standard recommend to use the following hardware :

- Screw : NSA5191-3
- Washer : NAS1149D0332J

Tightening torque recommended : 4,2 Nm

