STAUFF 645-PP-H smooth hose clamp body, 45 mm

Manufacturer: STAUFF

Manufacturer part number / published order designation: 1130012344

Published model: 645-PP-H

About this compilation

Prepared by Hydmaster from selected manufacturer documentation. Original technical pages follow without cropped drawings, rewritten data or altered units. This cover and index are Hydmaster editorial material, not a manufacturer-issued exact-execution datasheet.

Coverage: selected pages relevant to the identified size and configuration. Other options or neighbouring models retained on an original page apply only where explicitly identified.

Execution notes and conditions

Exact factory card fixes custom bore diameter and material/group; catalogue may list only standard bores. Do not substitute a nearby standard bore or transfer its code.

Body article does not include a full mounting kit unless exact primary BOM says so.

Page185 excluded: its profiled/tension-clearance torque/load scope does not apply to this smooth/RI execution.

Source-page index

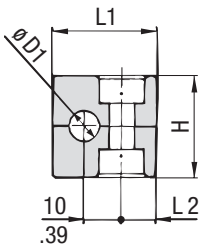
Source page numbers below are physical pages of each complete original PDF. The original printed page labels and technical content remain unchanged. Compiled page numbers count this cover/index.

Source A: Stauff Din 3015 Pipe Clamps

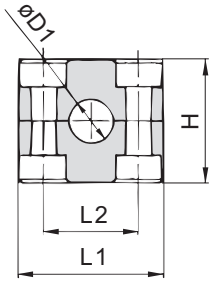
Original pages	Compiled pages	Relevant content
15	2	Correct smooth H clamp body construction and matching group envelope dimension table.
178	3	Confirmed PP clamp-body material properties and their test/temperature context.
182	4	Correct profiled/H/RI purpose and tension-clearance distinction.
184	5	Basic mounting options and line-support spacing; hardware illustration does not establish included hardware.

Clamp Body ▪ Type H

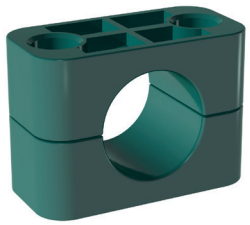
Smooth Inside Surface without Tension Clearance



STAUFF Group 1



STAUFF Group 1A to 8



Group STAUFF	Group DIN	Outside Diameter Hose Ø D1 (mm)	Outside Diameter Hose Ø D1 (in)	Ordering Codes (2 Clamp Halves) (**-H = Material)	Dimensions (mm/in) L1	L2	H	Width
1	0	6		106-**-H				
		6,4	1/4	106.4-**-H				
		8	5/16	108-**-H	28	9,5	26	30
		9,5	3/8	109.5-**-H	1.10	.37	1.02	1.18
		10		110-**-H				
		12		112-**-H				
1A	1	6		106A-**-H				
		6,4	1/4	106.4A-**-H				
		8	5/16	108A-**-H	37	20	26	30
		9,5	3/8	109.5A-**-H	1.46	.79	1.02	1.18
		10		110A-**-H				
		12		112A-**-H				
2	2	12,7	1/2	212.7-**-H				
		13,5		213.5-**-H				
		14		214-**-H	42	26	32	30
		15		215-**-H	1.65	1.02	1.26	1.18
		16	5/8	216-**-H				
		17,2		217.2-**-H				
		18		218-**-H				
3	3	19	3/4	319-**-H				
		20		320-**-H				
		21,3		321.3-**-H	50	33	35,5	30
		22	7/8	322-**-H	1.97	1.30	1.40	1.18
		25		325-**-H				
		25,4	1	325.4-**-H				
4	4	26,9		426.9-**-H				
		28		428-**-H	59	40	41,5	30
		30		430-**-H	2.32	1.57	1.63	1.18
		32		432-**-H				
5	5	32	1-1/4	532-**-H				
		33,7		533.7-**-H				
		35		535-**-H	71	52	56,5	30
		38	1-1/2	538-**-H	2.80	2.05	2.22	1.18
		40		540-**-H				
		42		542-**-H				
6	6	44,5	1-3/4	644.5-**-H				
		48,3		648.3-**-H	86	66	64,5	30
		50,8	2	650.8-**-H	3.39	2.60	2.54	1.18
		54		654-**-H				
7	7	57,2	2-1/4	757.2-**-H				
		60,3		760.3-**-H				
		63,5	2-1/2	763.5-**-H	121	94	92	30
		70	2-3/4	770-**-H	4.76	3.70	3.62	1.18
		73		773-**-H				
		76,1	3	776.1-**-H				
8	8	88,9		888.9-**-H	147	120	116	30
		102	4	8102L-**-H	5.79	4.72	4.57	1.18

Additional outside diameters are available upon request. Please contact STAUFF for further information.

Ordering Codes

Clamp Body ***1*06-*PP-H**

Clamp Body, STAUFF Group 1A ***1*06A-*PP-H**

One clamp body is consisting of two clamp halves.

- * STAUFF Group **1**
- * Exact outside diameter Ø D1 (mm) **06**
- * Material code (see below) **PP-H**

Standard Materials

Polypropylene
Colour: Green
Material code: **PP-H**

Polypropylene
Colour: Black
Material code: **PP-H-BK**

Polyamide
Colour: Black
Material code: **PA-H**

Thermoplastic Elastomer (87 Shore-A)
Colour: Black
Material code: **SA87-H**

See pages 178 / 179 for material properties and technical information.

Special Materials

Please contact STAUFF for further details on fire-proof clamp body materials, tested and approved according to several international fire-protection standards (such as BS 6853, EN 45545-2, UL 94 and many more).

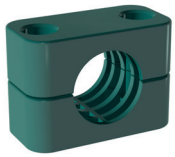
See pages 180 / 181 for material properties and technical information.

Product Features

- Proven, tested and trusted product in various markets
- Recommended for the safe installation of hoses and cables
- Chamfered edges avoid damaging of the hoses and cables
- Available for all commonly used hose and cable outside diameters
- Excellent weathering resistance, even under extreme conditions

Dimensional drawings: All dimensions in mm (in).

Standard Clamp Body Materials






Material Code	PP	PA	AL	SA
Basic Material	Copolymeric Polypropylene	Polyamide	Aluminium AlSi12	Thermoplastic Elastomer
Standard Colour	Green	Black	Natural	Black
Mechanical Properties				
Tensile E-Module	1073 N/mm² (ISO 527)	> 1400 N/mm² (ISO 527)	> 65000 N/mm²	113 N/mm² at +23 °C / +73.4 °F (ASTM D412)
Notch Impact Strength	8 kJ/m² at +23 °C / +73.4 °F (acc. to Charpy / ISO 179 / 1eU)	> 15 kJ/m² at 23 °C / +73.4 °F (acc. to Charpy / ISO 179 / 1eU)		
Low Temperature Notch Impact Strength	3 kJ/m² at -20 °C / -4.0 °F (acc. to Charpy / ISO 179 / 1eU)	> 3 kJ/m² at -30 °C / -22.0 °F (acc. to Charpy / ISO 179 / 1eU)		
Tensile Strength at Yield (Tensile Strength)	26 MPa (ISO 527-2)	> 55 MPa (ISO 527)	> 240 MPa (ISO EN 10002)	15,9 MPa (ASTM D412)
Ball Indentation Hardness (Brinell Hardness)	45,4 MPa (ISO 2039-1)	> 65 MPa (ISO 2039-1)	> 70 HBS	
Shore Hardness				87 A (ISO 868) — Alternative hardnesses are available upon request! Contact STAUFF for details.
Thermal Properties				
Temperature Resistance (Min ... Max)	-30 °C ... +90 °C / -22 °F ... +194 °F	-40 °C ... +120 °C / -40 °F ... +248 °F (Brief exposure up to +140 °C / +284 °F)	up to +300 °C / up to +572 °F	-40 °C ... +125 °C / -40 °F ... +257 °F
Chemical Properties				
Weak Acids	conditionally consistent	conditionally consistent	conditionally consistent	consistent
Solvents	conditionally consistent	conditionally consistent	conditionally consistent	conditionally consistent
Benzine	conditionally consistent	consistent	consistent	conditionally consistent
Mineral Oils	conditionally consistent	consistent	consistent	conditionally consistent
Other Oils	consistent	consistent	consistent	consistent
Alcohols	consistent	consistent	consistent	consistent
Seawater	consistent	consistent	consistent	consistent



Special Clamp Body Materials

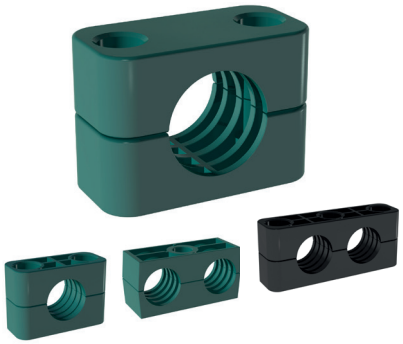
Please contact STAUFF for further details on fire-proof clamp body materials, tested and approved according to several international fire-protection standards (such as BS 6853, EN 45545-2, UL 94 and many more).

See pages 180 / 181 for material properties and technical information.

The information for the Polyamide material PA have been determined in a conditioned state according to ISO 1110.
For Aluminium, the tensile strength (under reversed bending stress) and impact bending strength both rise constantly at decreasing temperatures whilst the value for breaking elongation decreases.

STAUFF preserves the right to supply products made from alternative, but comparable materials with matching technical characteristics.

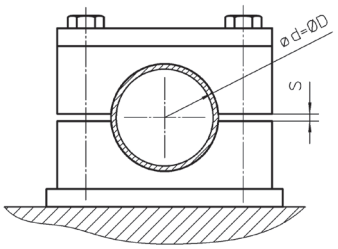
Standard Clamp Body Designs

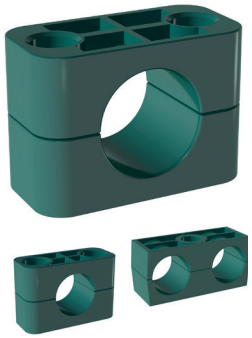


Profiled Design

Profiled Inside Surface with Tension Clearance

- Available in the Standard, Heavy, Twin and Heavy Twin Series
- Recommended for the safe installation of rigid pipes or tubes
- Available for all commonly used outside diameters and nominal sizes
- Vibration/noise reducing and impact absorbing effect towards the direction of the line provided by the grooves on the inside of the clamp bodies
- Clearance S between the clamp halves provides tension of the tube or pipe
- To be used as fixed point clamp preventing the line from sliding (see page 161 for Maximum Loads in Pipe Direction)

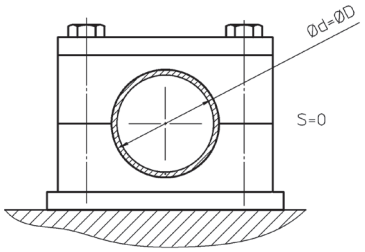




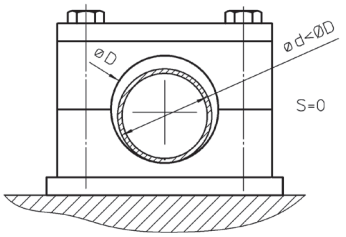
Type H (Smooth)

Smooth Inside Surface w/o Tension Clearance

- Available in the Standard, Heavy and Twin Series
- Recommended for the safe installation of hoses or cables
- Available for all commonly used outside diameters and nominal sizes
- Smooth inside surface and chamfered edges avoid damaging of the hose or cable



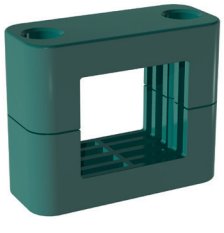
- Choose the diameter ØD of the clamp body slightly larger (in accordance to your specific requirements) than the outside diameter Ød of the pipe, tube, hose or cable in order to use it as a longitudinal guide allowing the line to slide





Type RI (with Elastomer Insert)

- Available in the Standard, Heavy and Heavy Twin Series
- Recommended for the extra-gentle installation of pipes, tubes, hoses or cables
- Available for all commonly used outside diameters and nominal sizes
- Elastomer insert made of Thermoplastic Elastomer with a hardness of 73 Shore-A provides most effective reduction of vibration and noise caused by vibration



Rectangular Design ▪ Type VK

- Available in the Standard Series (STAUFF Group 5)
- Recommended for the safe installation of proximity switches according to DIN EN 60947-5-2 or similar, rectangular construction, with a square of 40 mm x 40 mm (1.57 in x 1.57 in) or 40 mm x 36 mm (1.57 in x 1.42 in)

Basic Installation Instructions







Installation on Weld Plate

Different types of weld plates are available for all STAUFF Clamps according to DIN 3015 as well as for most of the other series and many custom-designed special clamps.

- Mark the positions of the weld plates to ensure best alignment.
- Place weld plates in their designated positions. Please make sure these positions are suitable for the expected loads.
- Weld the weld plates into position. Elongated weld plates can also be mounted to their positions by using screws or bolts.
- Push bottom clamp half onto weld plate.
- Insert pipe, tube, hose, cable or any other type of line.
- Place second clamp half and cover plate (optional) on top and mount clamp assembly by using screws or bolts.

Unless otherwise stated, the bolt lengths indicated for clamps according to DIN 3015 refer to the installation on weld plages and mouting rails as well as multi-level (stacking) installation. For direct installation, different lengths may be required.

Installation on Mounting Rail

STAUFF Mounting Rails are available in different heights. STAUFF Rail Nuts are available for all STAUFF Clamps according to DIN 3015 (Heavy Series up to STAUFF Group 6S only) as well as for many custom-designed special clamps.

- Mark the positions of the mounting rails to ensure best alignment.
- Place mounting rails in their designated positions. Please make sure these bases are suitable for the expected loads.
- Weld the mounting rails into position. Mounting rails can also be mounted to their positions by using side-mounting brackets with screws or bolts.
- Insert rail nuts into mounting rail and turn until stop to lock (Standard and Twin Series) or slide in rail nut (Heavy Series).
- Push bottom clamp half onto rail nuts.
- Insert pipe, tube, hose, cable or any other type of line.
- Place second clamp half and cover plate (optional) on top and mount clamp assembly by using screws or bolts.

The exact positions of the clamp assemblies can still be adjusted before being firmly bolted.

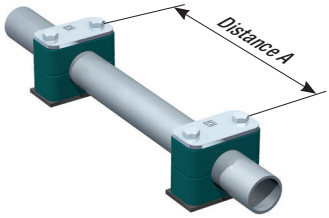
Multi-Level (Stacking) Installation

Stacking bolts permit the multi-level assembly of clamps of identical group sizes. Safety locking plates inserted between the levels prevent the stacking bolts from turning. The Twin Series also allows stacking of different group sizes (STAUFF Groups 2D to 5D).

- Push bottom clamp half onto weld plate or rail nuts.
- Insert pipe, tube, hose, cable or any other type of line.
- Place second clamp half.
- Insert stacking bolts into the clamp assembly and tighten using the following tightening torques (or in a way that the clamp halves are in contact with the line over the entire internal contact surface):
  Standard Series 1 ... 2 N·m / .75 ... 1.5 ft·lb (hand-tightened)
  Heavy Series 5 N·m / 3.75 ft·lb
  Twin Series 1 ... 2 N·m / .75 ... 1.5 ft·lb (hand-tightened)
- Place safety locking plate on top of clamp assembly.
- Proceed with next levels. Top level to be assembled with cover plate and hexagon head bolts using the tightening torques as indivated on page 185.

STAUFF multi-level clamp assemblies can be mounted both to weld plates or to mounting rails (with rail nuts).

Recommended Distance between Clamps

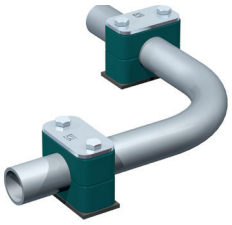


Please note: The recommended distances between clamps stated below are standard values and valid for static loads only.

Outside Diameter (mm)	(in)	Distance A (m)	(ft)
6,0 ... 12,7	.23 ... .50	1,00	3,28
12,7 ... 22,0	.50 ... .86	1,20	3,94
22,0 ... 32,0	.86 ... 1.25	1,50	4,92
32,0 ... 38,0	1.25 ... 1.50	2,00	6,56
38,0 ... 57,0	1.5 ... 2.25	2,70	8,86
57,0 ... 75,0	2.25 ... 2.95	3,00	9,84
75,0 ... 76,1	2.95 ... 3.00	3,50	11,48
76,1 ... 88,9	3.00 ... 3.50	3,70	12,14
88,9 ... 102,0	3.50 ... 4.00	4,00	13,12
102,0 ... 114,0	4.00 ... 4.50	4,50	14,76

Outside Diameter (mm)	(in)	Distance A (m)	(ft)
114,0 ... 168,0	4.50 ... 6.60	5,00	16,40
168,0 ... 219,0	6.60 ... 8.60	6,00	19,68
219,0 ... 324,0	8.60 ... 12.70	6,70	21,98
324,0 ... 356,0	12.70 ... 14.00	7,00	22,96
356,0 ... 406,0	14.00 ... 16.00	7,50	24,60
406,0 ... 419,0	16.00 ... 16.50	8,20	26,90
419,0 ... 508,0	16.50 ... 20.00	8,50	27,88
508,0 ... 521,0	20.00 ... 20.50	9,00	29,52
521,0 ... 558,0	20.50 ... 22.00	10,00	32,80
558,0 ... 800,0	22.00 ... 31.50	12,50	41,00

Installation next to Pipe Bends, Connectors / Couplings and Valves



Please note the following information on the installation of STAUFF Clamps next to pipe bends, connectors / couplings and valves:

Pipe Bends

Pipe bends should be supported by STAUFF Clamps as close to the bends as possible. Furthermore, it is recommended to design these clamps as fixed point clamps.

Connections / Couplings

The first clamp should be placed directly next to the connector / coupling. This protects the connector / coupling from vibrations.

Valves

If valves are incorporated in the pipelines, it is recommended that support is provided in front of and behind these valves.

Contact STAUFF for further information.