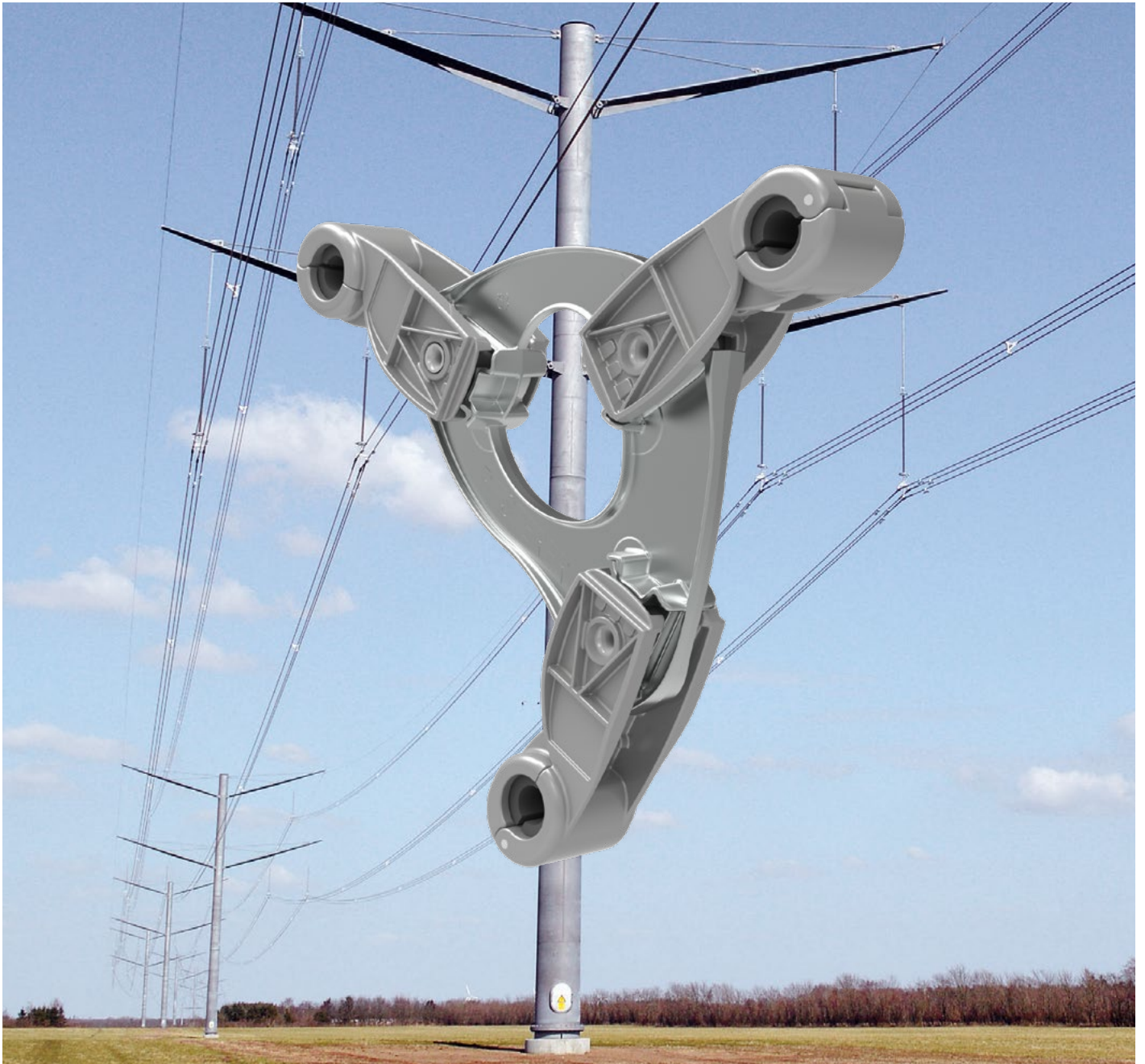


PFISTERER



Spacer Dampers

For Effective Protection of Conductor Bundles

www.pfisterer.com

Best Solution for Each Bundle Configuration

General

For high voltage transmission lines, conductor bundles are used for each phase to fulfil electrical requirements.

Spacing devices are installed on the bundles to maintain subconductor separation. Elastic and damping elements are introduced into the spacing devices for distributing the damping effect along the spans which prevents entrapment of vibration between Spacer Dampers and avoids bending stresses at the clamps.



Triple Spacer Damper



Quad Spacer Damper

Key Data

PFISTERER has been developing Spacer Dampers since 1980 to provide the correct damping of wind-induced vibrations for bundled conductor lines. Modern Spacer Dampers are characterized by an accurate coordination between the inertial and elastic damping properties. This provides maximum effectiveness in controlling the levels of subconductor motions.

Features

- Maintain the design spacing between subconductors under normal service conditions
- Control the levels of aeolian vibrations and subspan oscillations within the internationally accepted safety limits
- Preserve mechanical, elastic and damping properties over the entire service temperature range and for the expected lifetime of the line
- Maintenance-free for the whole lifetime of the line
- Permit movement of the subconductors in any direction without damaging the spacer components or the subconductors strands
- Maintain a suitable clamp grip
- Guarantee high corona extinction voltage due to proper clamp design and manufacturing
- Withstand minimum short circuit current of 63 kA for 1 sec

History PFISTERER's Spacer Damper

1973

Development of PFISTERER first semi flexible Spacer

1979

Setup of PFISTERER outdoor test span for self damping measurements

1980

Development of PFISTERER first Spacer Dampers

1982

First field vibration measurements made by PFISTERER

1986

Introduction of PFISTERER Software for analytical vibration damping studies

1991

Field vibration measurements made by first generation PFISTERER field vibration recorder

2001

New double frame Spacer Damper design developed

2002

Upgrade of PFISTERER internal laboratory for mechanical type testing as acc. to IEC 61854

2006

Spacer Damper for UHV hex bundle applications developed

2008

World first subspan oscillation recorder introduced

2009

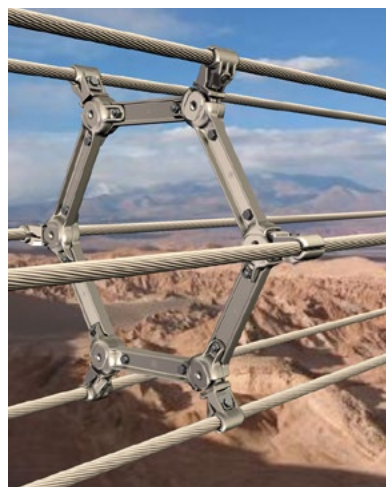
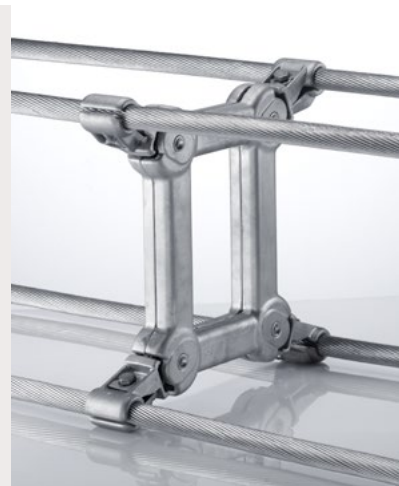
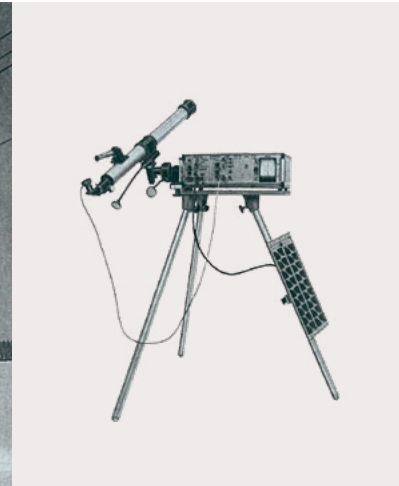
World first wireless field vibration measurement device developed

2014

Upgrade of PFISTERER Spacer Damper designs

2016

High temperature boltless spacer damper clamp type developed

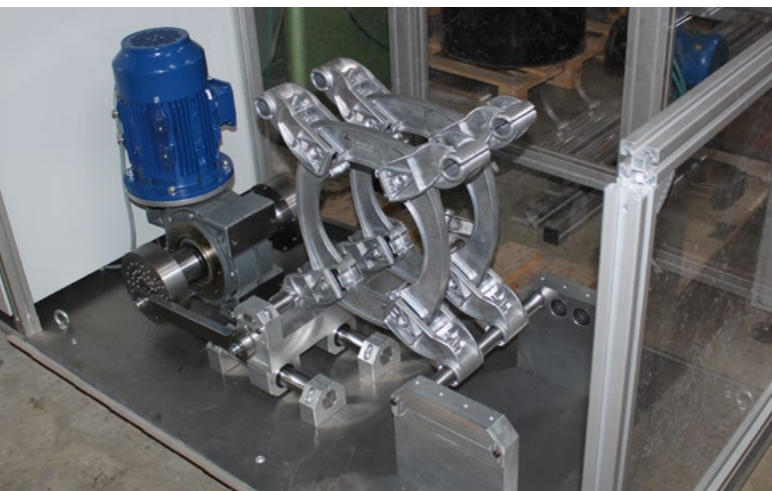
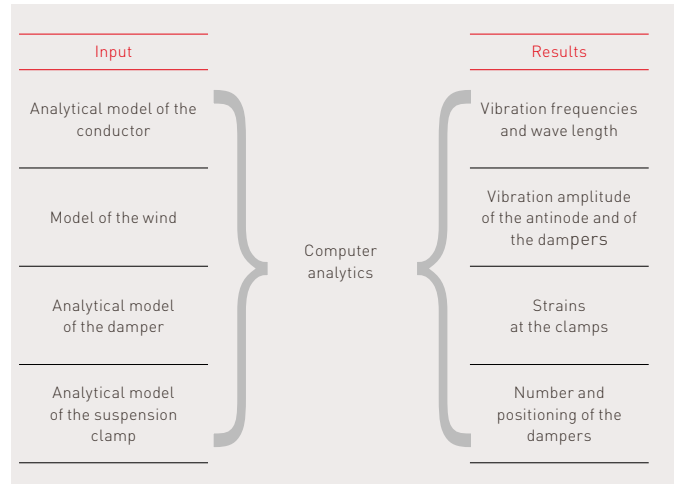


Special Features

Analytical Vibration Damping Study

The analytical vibration damping studies are made at the design stage to predict the vibration behaviour of single and bundled conductors.

The calculations are based on the energy balance between the energy introduced by the wind and the energy dissipated by the conductors with and without the relevant damping units. As a result, the most suitable damping system including the right type, numbers of dampers and their exact position can be provided.



Fatigue type testing of a quad Spacer Damper



Subspan oscillation recorder VR500 PT

Test Facilities

PFISTERER runs its own laboratory for vibration damper and conductor self-damping testing since 1979. In this laboratory, design, type and sample testing is carried out in accordance with the appropriate standards and in the presence of inspectors if required.

The laboratory personnel are in charge of research and development as well as routine quality testing. This ensures that the products are in a worldwide leading position in terms of service, performance and quality consistency, even for large quantities supplies.

Field Vibration Measurements

PFISTERER has developed a unique, wireless, conductor vibration recorder, the VIBREC500, for aeolian and subspan oscillation field measurements. These recorders are used to verify the conductor vibration severity and to confirm that the damping system installed on the transmission line is correct.

Reliable Clamp Designs

General

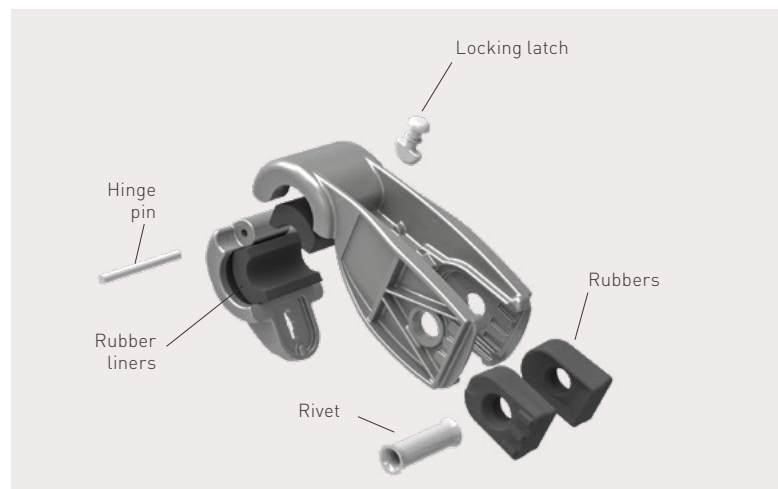
The PFISTERER Spacer Dampers are available with two different clamp designs. Both, the nut cracker and the cantilever clamp type designs provide a firm but gentle and permanent grip while protecting the conductor against the local static and dynamic stresses occurring during normal operation conditions. The weight of the clamps are as light as possible in order to maintain their mobility at the highest frequencies of aeolian vibrations and to avoid nodal points on the conductors that would impair the damping unit performance and increase bending strain at the clamp attachment. They provide sufficient clamp grip to restrain the subconductor from slipping and rotating inside the clamp during the normal service conditions. The fastening systems consider an appropriate anti-unscrewing to prevent any loosening of the clamp due to conductor vibrations and oscillations. Moreover, great care has been taken in selecting the clamp materials to avoid any corrosion.

Nut Cracker Clamp Type

The nut cracker clamp type is rubber lined and boltless. For the correct installation, an additional assembling tool is required to finally lock the clamp system with a quarter turn locking latch.

Materials

- Body and clamps: high pressure die cast aluminium alloy
- Rubber elements: elastomer
- Locking latch: stainless steel



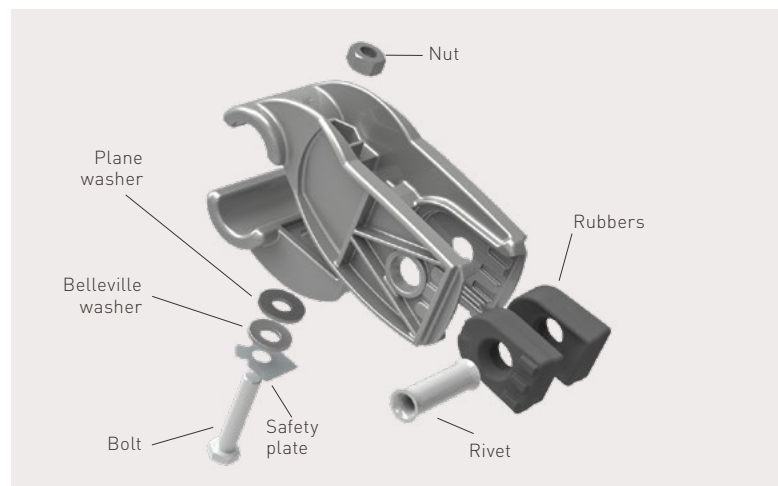
Nut cracker clamp type

Cantilever Clamp Type

The cantilever clamp type is directly attached to the conductor. For the correct installation and tightening of the bolt, the use of a calibrated torque wrench is mandatory.

Materials

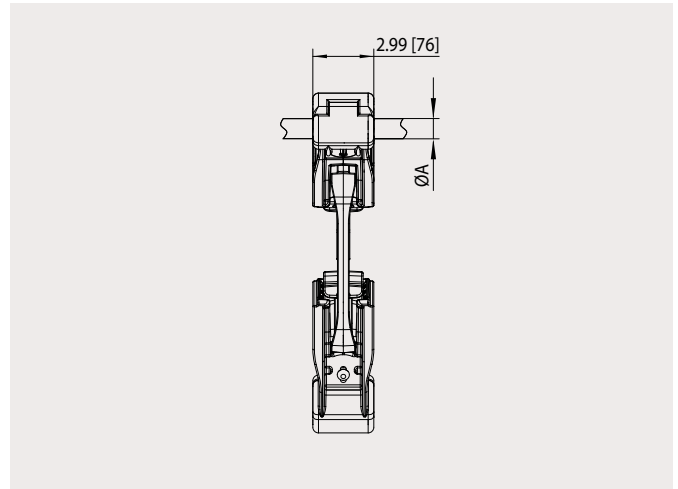
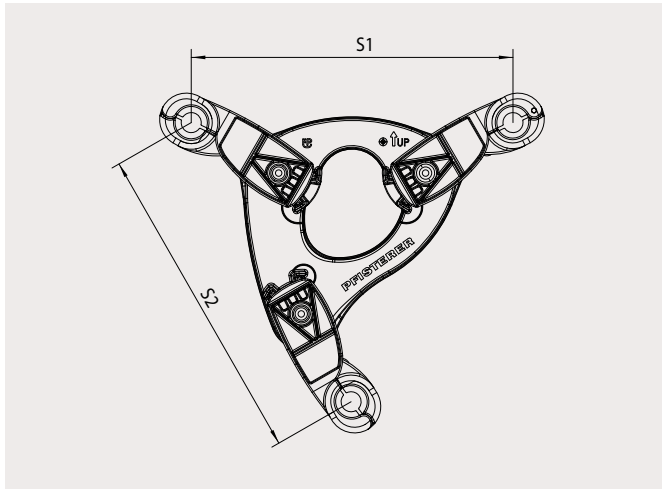
- Body and clamps: high pressure die cast aluminium alloy
- Rubber elements: elastomer
- Bolts, nuts, plain washers: galvanized steel
- Belleville washers: mechanically galvanized steel
- Safety plates: stainless steel



Cantilever clamp type

Triple Spacer Damper

Nut Cracker Clamp Type



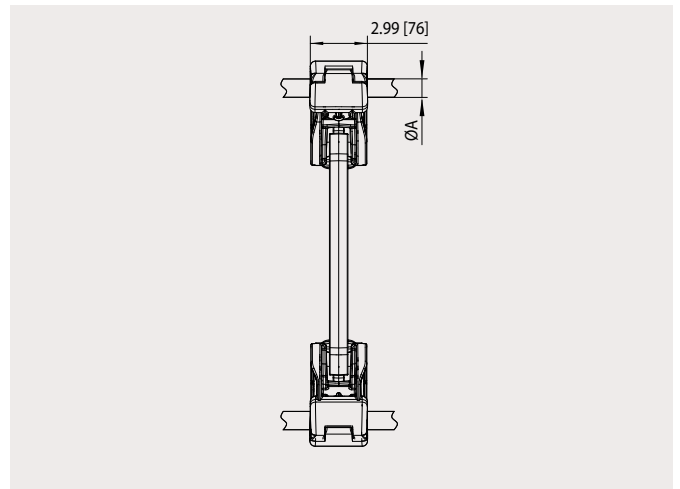
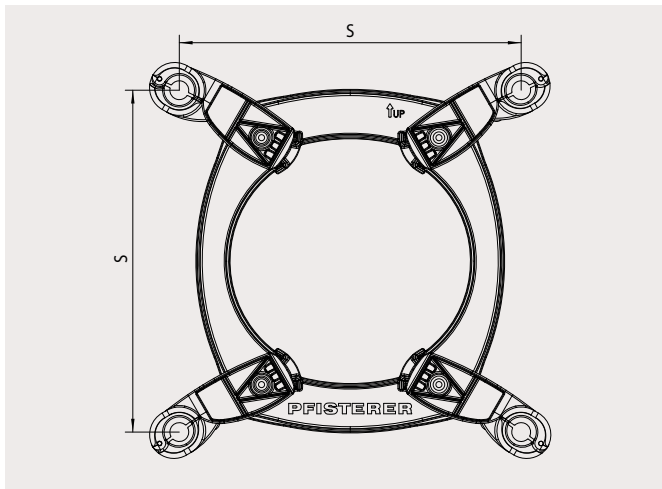
Order Information

Ø Conductor Range „A“ (in [mm])	Bundle Spacing „S1 / S2“ (in [mm])				
	16 / 16 [407 / 407]	18 / 18 [457 / 457]	20 / 20 [507 / 507]	20 / 16 [507 / 407]	25.5 / 18 [648 / 457]
	Part Number	Part Number	Part Number	Part Number	Part Number
Ø 0.63 - 0.65 [16.0 - 16.5]	187 954-641	187 954-711	187 954-781	187 954-851	187 954-921
Ø 0.65 - 0.67 [16.5 - 17.0]	187 954-642	187 954-712	187 954-782	187 954-852	187 954-922
Ø 0.67 - 0.69 [17.0 - 17.5]	187 954-643	187 954-713	187 954-783	187 954-853	187 954-923
Ø 0.69 - 0.71 [17.5 - 18.0]	187 954-644	187 954-714	187 954-784	187 954-854	187 954-924
Ø 0.71 - 0.73 [18.0 - 18.5]	187 954-645	187 954-715	187 954-785	187 954-855	187 954-925
Ø 0.73 - 0.75 [18.5 - 19.0]	187 954-646	187 954-716	187 954-786	187 954-856	187 954-926
Ø 0.75 - 0.77 [19.0 - 19.5]	187 954-647	187 954-717	187 954-787	187 954-857	187 954-927
Ø 0.77 - 0.79 [19.5 - 20.0]	187 954-648	187 954-718	187 954-788	187 954-858	187 954-928
Ø 0.79 - 0.81 [20.0 - 20.5]	187 954-649	187 954-719	187 954-789	187 954-859	187 954-929
Ø 0.81 - 0.83 [20.5 - 21.0]	187 954-650	187 954-720	187 954-790	187 954-860	187 954-930
Ø 0.83 - 0.85 [21.0 - 21.5]	187 954-651	187 954-721	187 954-791	187 954-861	187 954-931
Ø 0.85 - 0.87 [21.5 - 22.0]	187 954-652	187 954-722	187 954-792	187 954-862	187 954-932
Ø 0.87 - 0.89 [22.0 - 22.5]	187 954-653	187 954-723	187 954-793	187 954-863	187 954-933
Ø 0.89 - 0.91 [22.5 - 23.0]	187 954-654	187 954-724	187 954-794	187 954-864	187 954-934
Ø 0.91 - 0.93 [23.0 - 23.5]	187 954-655	187 954-725	187 954-795	187 954-865	187 954-935
Ø 0.93 - 0.94 [23.5 - 24.0]	187 954-656	187 954-726	187 954-796	187 954-866	187 954-936
Ø 0.94 - 0.96 [24.0 - 24.5]	187 954-657	187 954-727	187 954-797	187 954-867	187 954-937
Ø 0.96 - 0.98 [24.5 - 25.0]	187 954-658	187 954-728	187 954-798	187 954-868	187 954-938
Ø 0.98 - 1.00 [25.0 - 25.5]	187 954-659	187 954-729	187 954-799	187 954-869	187 954-939
Ø 1.00 - 1.02 [25.5 - 26.0]	187 954-660	187 954-730	187 954-800	187 954-870	187 954-940
Ø 1.02 - 1.04 [26.0 - 26.5]	187 954-661	187 954-731	187 954-801	187 954-871	187 954-941
Ø 1.04 - 1.06 [26.5 - 27.0]	187 954-662	187 954-732	187 954-802	187 954-872	187 954-942
Ø 1.06 - 1.08 [27.0 - 27.5]	187 954-663	187 954-733	187 954-803	187 954-873	187 954-943
Ø 1.08 - 1.10 [27.5 - 28.0]	187 954-664	187 954-734	187 954-804	187 954-874	187 954-944

Ø Conductor Range „A“ [in [mm]]	Bundle Spacing „S1 / S2“ [in [mm]]				
	16 / 16 [407 / 407]	18 / 18 [457 / 457]	20 / 20 [507 / 507]	20 / 16 [507 / 407]	25.5 / 18 [648 / 457]
	Part Number	Part Number	Part Number	Part Number	Part Number
Ø 1.10 - 1.12 [28.0 - 28.5]	187 954-665	187 954-735	187 954-805	187 954-875	187 954-945
Ø 1.12 - 1.14 [28.5 - 29.0]	187 954-666	187 954-736	187 954-806	187 954-876	187 954-946
Ø 1.14 - 1.16 [29.0 - 29.5]	187 954-667	187 954-737	187 954-807	187 954-877	187 954-947
Ø 1.16 - 1.18 [29.5 - 30.0]	187 954-668	187 954-738	187 954-808	187 954-878	187 954-948
Ø 1.18 - 1.20 [30.0 - 30.5]	187 954-669	187 954-739	187 954-809	187 954-879	187 954-949
Ø 1.20 - 1.22 [30.5 - 31.0]	187 954-670	187 954-740	187 954-810	187 954-880	187 954-950
Ø 1.22 - 1.24 [31.0 - 31.5]	187 954-671	187 954-741	187 954-811	187 954-881	187 954-951
Ø 1.24 - 1.26 [31.5 - 32.0]	187 954-672	187 954-742	187 954-812	187 954-882	187 954-952
Ø 1.26 - 1.28 [32.0 - 32.5]	187 954-673	187 954-743	187 954-813	187 954-883	187 954-953
Ø 1.28 - 1.30 [32.5 - 33.0]	187 954-674	187 954-744	187 954-814	187 954-884	187 954-954
Ø 1.30 - 1.32 [33.0 - 33.5]	187 954-675	187 954-745	187 954-815	187 954-885	187 954-955
Ø 1.32 - 1.34 [33.5 - 34.0]	187 954-676	187 954-746	187 954-816	187 954-886	187 954-956
Ø 1.34 - 1.36 [34.0 - 34.5]	187 954-677	187 954-747	187 954-817	187 954-887	187 954-957
Ø 1.36 - 1.38 [34.5 - 35.0]	187 954-678	187 954-748	187 954-818	187 954-888	187 954-958
Ø 1.38 - 1.40 [35.0 - 35.5]	187 954-679	187 954-749	187 954-819	187 954-889	187 954-959
Ø 1.40 - 1.42 [35.5 - 36.0]	187 954-680	187 954-750	187 954-820	187 954-890	187 954-960
Ø 1.42 - 1.44 [36.0 - 36.5]	187 954-681	187 954-751	187 954-821	187 954-891	187 954-961
Ø 1.44 - 1.46 [36.5 - 37.0]	187 954-682	187 954-752	187 954-822	187 954-892	187 954-962
Ø 1.46 - 1.48 [37.0 - 37.5]	187 954-683	187 954-753	187 954-823	187 954-893	187 954-963
Ø 1.48 - 1.50 [37.5 - 38.0]	187 954-684	187 954-754	187 954-824	187 954-894	187 954-964
Ø 1.50 - 1.52 [38.0 - 38.5]	187 954-685	187 954-755	187 954-825	187 954-895	187 954-965
Ø 1.52 - 1.54 [38.5 - 39.0]	187 954-686	187 954-756	187 954-826	187 954-896	187 954-966
Ø 1.54 - 1.56 [39.0 - 39.5]	187 954-687	187 954-757	187 954-827	187 954-897	187 954-967
Ø 1.56 - 1.57 [39.5 - 40.0]	187 954-688	187 954-758	187 954-828	187 954-898	187 954-968
Ø 1.57 - 1.59 [40.0 - 40.5]	187 954-689	187 954-759	187 954-829	187 954-899	187 954-969
Ø 1.59 - 1.61 [40.5 - 41.0]	187 954-690	187 954-760	187 954-830	187 954-900	187 954-970
Ø 1.61 - 1.63 [41.0 - 41.5]	187 954-691	187 954-761	187 954-831	187 954-901	187 954-971
Ø 1.63 - 1.65 [41.5 - 42.0]	187 954-692	187 954-762	187 954-832	187 954-902	187 954-972
Ø 1.65 - 1.67 [42.0 - 42.5]	187 954-693	187 954-763	187 954-833	187 954-903	187 954-973
Ø 1.67 - 1.69 [42.5 - 43.0]	187 954-694	187 954-764	187 954-834	187 954-904	187 954-974
Ø 1.69 - 1.71 [43.0 - 43.5]	187 954-695	187 954-765	187 954-835	187 954-905	187 954-975
Ø 1.71 - 1.73 [43.5 - 44.0]	187 954-696	187 954-766	187 954-836	187 954-906	187 954-976
Ø 1.73 - 1.75 [44.0 - 44.5]	187 954-697	187 954-767	187 954-837	187 954-907	187 954-977
Ø 1.75 - 1.77 [44.5 - 45.0]	187 954-698	187 954-768	187 954-838	187 954-908	187 954-978
Ø 1.77 - 1.79 [45.0 - 45.5]	187 954-699	187 954-769	187 954-839	187 954-909	187 954-979
Ø 1.79 - 1.81 [45.5 - 46.0]	187 954-700	187 954-770	187 954-840	187 954-910	187 954-980
Ø 1.81 - 1.83 [46.0 - 46.5]	187 954-701	187 954-771	187 954-841	187 954-911	187 954-981
Ø 1.83 - 1.85 [46.5 - 47.0]	187 954-702	187 954-772	187 954-842	187 954-912	187 954-982
Ø 1.85 - 1.87 [47.0 - 47.5]	187 954-703	187 954-773	187 954-843	187 954-913	187 954-983
Ø 1.87 - 1.89 [47.5 - 48.0]	187 954-704	187 954-774	187 954-844	187 954-914	187 954-984
Ø 1.89 - 1.91 [48.0 - 48.5]	187 954-705	187 954-775	187 954-845	187 954-915	187 954-985
Ø 1.91 - 1.93 [48.5 - 49.0]	187 954-706	187 954-776	187 954-846	187 954-916	187 954-986
Ø 1.93 - 1.95 [49.0 - 49.5]	187 954-707	187 954-778	187 954-847	187 954-917	187 954-987
Ø 1.95 - 1.97 [49.5 - 50.0]	187 954-708	187 954-779	187 954-848	187 954-918	187 954-988

Quad Spacer Damper

Nut Cracker Clamp Type



Order Information

Ø Conductor Range „A“ (in [mm])	Bundle Spacing „S“ (in [mm])		
	16 / 16 [407 / 407]	18 / 18 [457 / 457]	20 / 20 [507 / 507]
	Part Number	Part Number	Part Number
Ø 0.63 - 0.65 [16.0 - 16.5]	187 954-361	187 954-431	187 954-501
Ø 0.65 - 0.67 [16.5 - 17.0]	187 954-362	187 954-432	187 954-502
Ø 0.67 - 0.69 [17.0 - 17.5]	187 954-363	187 954-433	187 954-503
Ø 0.69 - 0.71 [17.5 - 18.0]	187 954-364	187 954-434	187 954-504
Ø 0.71 - 0.73 [18.0 - 18.5]	187 954-365	187 954-435	187 954-505
Ø 0.73 - 0.75 [18.5 - 19.0]	187 954-366	187 954-436	187 954-506
Ø 0.75 - 0.77 [19.0 - 19.5]	187 954-367	187 954-437	187 954-507
Ø 0.77 - 0.79 [19.5 - 20.0]	187 954-368	187 954-438	187 954-508
Ø 0.79 - 0.81 [20.0 - 20.5]	187 954-369	187 954-439	187 954-509
Ø 0.81 - 0.83 [20.5 - 21.0]	187 954-370	187 954-440	187 954-510
Ø 0.83 - 0.85 [21.0 - 21.5]	187 954-371	187 954-441	187 954-511
Ø 0.85 - 0.87 [21.5 - 22.0]	187 954-372	187 954-442	187 954-512
Ø 0.87 - 0.89 [22.0 - 22.5]	187 954-373	187 954-443	187 954-513
Ø 0.89 - 0.91 [22.5 - 23.0]	187 954-374	187 954-444	187 954-514
Ø 0.91 - 0.93 [23.0 - 23.5]	187 954-375	187 954-445	187 954-515
Ø 0.93 - 0.94 [23.5 - 24.0]	187 954-376	187 954-446	187 954-516
Ø 0.94 - 0.96 [24.0 - 24.5]	187 954-377	187 954-447	187 954-517
Ø 0.96 - 0.98 [24.5 - 25.0]	187 954-378	187 954-448	187 954-518
Ø 0.98 - 1.00 [25.0 - 25.5]	187 954-379	187 954-449	187 954-519
Ø 1.00 - 1.02 [25.5 - 26.0]	187 954-380	187 954-450	187 954-520
Ø 1.02 - 1.04 [26.0 - 26.5]	187 954-381	187 954-451	187 954-521
Ø 1.04 - 1.06 [26.5 - 27.0]	187 954-382	187 954-452	187 954-522
Ø 1.06 - 1.08 [27.0 - 27.5]	187 954-383	187 954-453	187 954-523
Ø 1.08 - 1.10 [27.5 - 28.0]	187 954-384	187 954-454	187 954-524

Ø Conductor Range „A“ (in [mm])	Bundle Spacing „S“ (in [mm])		
	16 / 16 [407 / 407]	18 / 18 [457 / 457]	20 / 20 [507 / 507]
	Part Number	Part Number	Part Number
Ø 1.10 - 1.12 [28.0 - 28.5]	187 954-385	187 954-455	187 954-525
Ø 1.12 - 1.14 [28.5 - 29.0]	187 954-386	187 954-456	187 954-526
Ø 1.14 - 1.16 [29.0 - 29.5]	187 954-387	187 954-457	187 954-527
Ø 1.16 - 1.18 [29.5 - 30.0]	187 954-388	187 954-458	187 954-528
Ø 1.18 - 1.20 [30.0 - 30.5]	187 954-389	187 954-459	187 954-529
Ø 1.20 - 1.22 [30.5 - 31.0]	187 954-390	187 954-460	187 954-530
Ø 1.22 - 1.24 [31.0 - 31.5]	187 954-391	187 954-461	187 954-531
Ø 1.24 - 1.26 [31.5 - 32.0]	187 954-392	187 954-462	187 954-532
Ø 1.26 - 1.28 [32.0 - 32.5]	187 954-393	187 954-463	187 954-533
Ø 1.28 - 1.30 [32.5 - 33.0]	187 954-394	187 954-464	187 954-534
Ø 1.30 - 1.32 [33.0 - 33.5]	187 954-395	187 954-465	187 954-535
Ø 1.32 - 1.34 [33.5 - 34.0]	187 954-396	187 954-466	187 954-536
Ø 1.34 - 1.36 [34.0 - 34.5]	187 954-397	187 954-467	187 954-537
Ø 1.36 - 1.38 [34.5 - 35.0]	187 954-398	187 954-468	187 954-538
Ø 1.38 - 1.40 [35.0 - 35.5]	187 954-399	187 954-469	187 954-539
Ø 1.40 - 1.42 [35.5 - 36.0]	187 954-400	187 954-470	187 954-540
Ø 1.42 - 1.44 [36.0 - 36.5]	187 954-401	187 954-471	187 954-541
Ø 1.44 - 1.46 [36.5 - 37.0]	187 954-402	187 954-472	187 954-542
Ø 1.46 - 1.48 [37.0 - 37.5]	187 954-403	187 954-473	187 954-543
Ø 1.48 - 1.50 [37.5 - 38.0]	187 954-404	187 954-474	187 954-544
Ø 1.50 - 1.52 [38.0 - 38.5]	187 954-405	187 954-475	187 954-545
Ø 1.52 - 1.54 [38.5 - 39.0]	187 954-406	187 954-476	187 954-546
Ø 1.54 - 1.56 [39.0 - 39.5]	187 954-407	187 954-477	187 954-547
Ø 1.56 - 1.57 [39.5 - 40.0]	187 954-408	187 954-478	187 954-548
Ø 1.57 - 1.59 [40.0 - 40.5]	187 954-409	187 954-479	187 954-549
Ø 1.59 - 1.61 [40.5 - 41.0]	187 954-410	187 954-480	187 954-550
Ø 1.61 - 1.63 [41.0 - 41.5]	187 954-411	187 954-481	187 954-551
Ø 1.63 - 1.65 [41.5 - 42.0]	187 954-412	187 954-482	187 954-552
Ø 1.65 - 1.67 [42.0 - 42.5]	187 954-413	187 954-483	187 954-553
Ø 1.67 - 1.69 [42.5 - 43.0]	187 954-414	187 954-484	187 954-554
Ø 1.69 - 1.71 [43.0 - 43.5]	187 954-415	187 954-485	187 954-555
Ø 1.71 - 1.73 [43.5 - 44.0]	187 954-416	187 954-486	187 954-556
Ø 1.73 - 1.75 [44.0 - 44.5]	187 954-417	187 954-487	187 954-557
Ø 1.75 - 1.77 [44.5 - 45.0]	187 954-418	187 954-488	187 954-558
Ø 1.77 - 1.79 [45.0 - 45.5]	187 954-419	187 954-489	187 954-559
Ø 1.79 - 1.81 [45.5 - 46.0]	187 954-420	187 954-490	187 954-560
Ø 1.81 - 1.83 [46.0 - 46.5]	187 954-421	187 954-491	187 954-561
Ø 1.83 - 1.85 [46.5 - 47.0]	187 954-422	187 954-492	187 954-562
Ø 1.85 - 1.87 [47.0 - 47.5]	187 954-423	187 954-493	187 954-563
Ø 1.87 - 1.89 [47.5 - 48.0]	187 954-424	187 954-494	187 954-564
Ø 1.89 - 1.91 [48.0 - 48.5]	187 954-425	187 954-495	187 954-565
Ø 1.91 - 1.93 [48.5 - 49.0]	187 954-426	187 954-496	187 954-566
Ø 1.93 - 1.95 [49.0 - 49.5]	187 954-427	187 954-497	187 954-567
Ø 1.95 - 1.97 [49.5 - 50.0]	187 954-428	187 954-498	187 954-568

Triple Spacer Damper

Cantilever Clamp Type

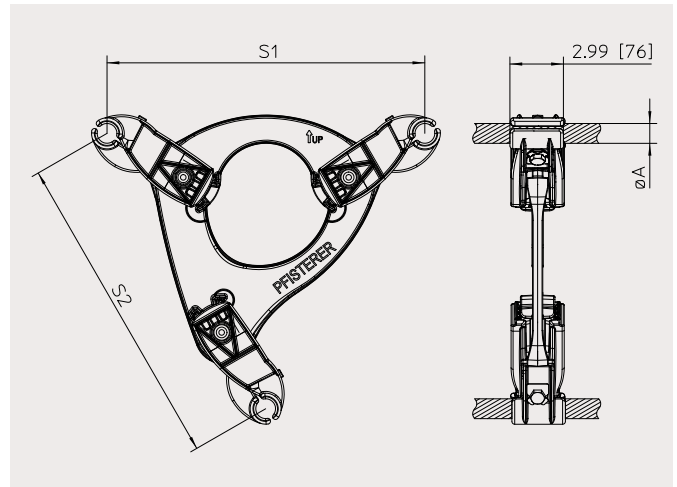
Clamp option

Component code:

- B Shear head caps
- S Stainless steel bolts
- BS Shear head caps and stainless steel bolts

Orders with clamp option

Orders for clamp option must be indicated with the component code of the desired option at the end of the part number.



Order Information

Ø Conductor Range „A“ [in [mm]]	Bundle Spacing „S1 / S2“ [in [mm]]				
	16 / 16 [407 / 407]	18 / 18 [457 / 457]	20 / 20 [507 / 507]	20 / 16 [507 / 407]	25.5 / 18 [648 / 457]
	Part Number	Part Number	Part Number	Part Number	Part Number
Ø 0.65 - 0.70 [16.4 - 17.7]	187 953-331	187 953-301	187 953-361	187 953-901	187 953-801
Ø 0.70 - 0.75 [17.7 - 19.0]	187 953-332	187 953-302	187 953-362	187 953-902	187 953-802
Ø 0.75 - 0.80 [19.0 - 20.3]	187 953-333	187 953-303	187 953-363	187 953-903	187 953-803
Ø 0.80 - 0.85 [20.3 - 21.6]	187 953-334	187 953-304	187 953-364	187 953-904	187 953-804
Ø 0.85 - 0.90 [21.6 - 22.9]	187 953-335	187 953-305	187 953-365	187 953-905	187 953-805
Ø 0.90 - 0.95 [22.9 - 24.2]	187 953-336	187 953-306	187 953-366	187 953-906	187 953-806
Ø 0.95 - 1.00 [24.2 - 25.5]	187 953-337	187 953-307	187 953-367	187 953-907	187 953-807
Ø 1.00 - 1.06 [25.5 - 26.8]	187 953-338	187 953-308	187 953-368	187 953-908	187 953-808
Ø 1.06 - 1.11 [26.8 - 28.1]	187 953-339	187 953-309	187 953-369	187 953-909	187 953-809
Ø 1.11 - 1.16 [28.1 - 29.4]	187 953-340	187 953-310	187 953-370	187 953-910	187 953-810
Ø 1.16 - 1.21 [29.4 - 30.7]	187 953-341	187 953-311	187 953-371	187 953-911	187 953-811
Ø 1.21 - 1.26 [30.7 - 32.0]	187 953-342	187 953-312	187 953-372	187 953-912	187 953-812
Ø 1.26 - 1.31 [32.0 - 33.3]	187 953-343	187 953-313	187 953-373	187 953-913	187 953-813
Ø 1.31 - 1.36 [33.3 - 34.6]	187 953-344	187 953-314	187 953-374	187 953-914	187 953-814
Ø 1.36 - 1.41 [34.6 - 35.9]	187 953-345	187 953-315	187 953-375	187 953-915	187 953-815
Ø 1.41 - 1.46 [35.9 - 37.2]	187 953-346	187 953-316	187 953-376	187 953-916	187 953-816
Ø 1.46 - 1.52 [37.2 - 38.5]	187 953-347	187 953-317	187 953-377	187 953-917	187 953-817
Ø 1.52 - 1.57 [38.5 - 39.8]	187 953-348	187 953-318	187 953-378	187 953-918	187 953-818
Ø 1.57 - 1.62 [39.8 - 41.1]	187 953-349	187 953-319	187 953-379	187 953-919	187 953-819
Ø 1.62 - 1.67 [41.1 - 42.4]	187 953-350	187 953-320	187 953-380	187 953-920	187 953-820
Ø 1.67 - 1.72 [42.4 - 43.7]	187 953-351	187 953-321	187 953-381	187 953-921	187 953-821
Ø 1.72 - 1.77 [43.7 - 45.0]	187 953-352	187 953-322	187 953-382	187 953-922	187 953-822
Ø 1.77 - 1.82 [45.0 - 46.3]	187 953-353	187 953-323	187 953-383	187 953-923	187 953-823
Ø 1.82 - 1.87 [46.3 - 47.6]	187 953-354	187 953-324	187 953-384	187 953-924	187 953-824
Ø 1.87 - 1.93 [47.6 - 48.9]	187 953-355	187 953-325	187 953-385	187 953-925	187 953-825
Ø 1.93 - 1.98 [48.9 - 50.2]	187 953-356	187 953-326	187 953-386	187 953-926	187 953-826

Quad Spacer Damper

Cantilever Clamp Type

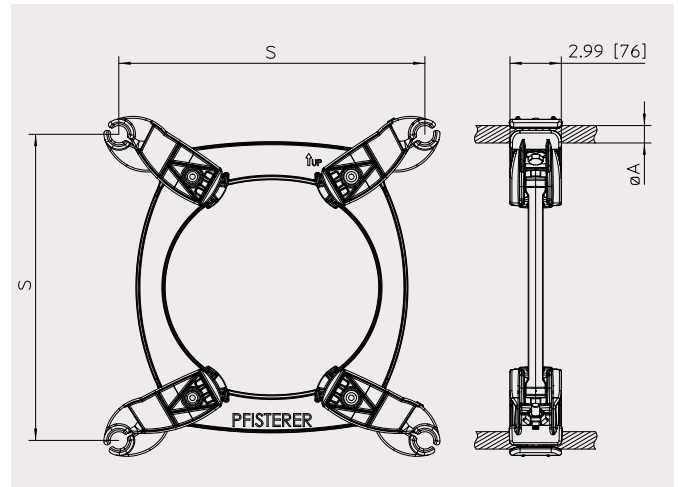
Clamp option

Component code:

- B Shear head caps
- S Stainless steel bolts
- BS Shear head caps and stainless steel bolts

Orders with clamp option

Orders for clamp option must be indicated with the component code of the desired option at the end of the part number.



Order Information

Ø Conductor Range „A“ (in [mm])	Bundle Spacing „S“ (in [mm])		
	16 / 16 [407 / 407]	18 / 18 [457 / 457]	20 / 20 [507 / 507]
	Part Number	Part Number	Part Number
Ø 0.65 - 0.70 [16.4 - 17.7]	187 953-401	187 953-521	187 953-601
Ø 0.70 - 0.75 [17.7 - 19.0]	187 953-402	187 953-522	187 953-602
Ø 0.75 - 0.80 [19.0 - 20.3]	187 953-403	187 953-523	187 953-603
Ø 0.80 - 0.85 [20.3 - 21.6]	187 953-404	187 953-524	187 953-604
Ø 0.85 - 0.90 [21.6 - 22.9]	187 953-405	187 953-525	187 953-605
Ø 0.90 - 0.95 [22.9 - 24.2]	187 953-406	187 953-526	187 953-606
Ø 0.95 - 1.00 [24.2 - 25.5]	187 953-407	187 953-527	187 953-607
Ø 1.00 - 1.06 [25.5 - 26.8]	187 953-408	187 953-528	187 953-608
Ø 1.06 - 1.11 [26.8 - 28.1]	187 953-409	187 953-529	187 953-609
Ø 1.11 - 1.16 [28.1 - 29.4]	187 953-410	187 953-530	187 953-610
Ø 1.16 - 1.21 [29.4 - 30.7]	187 953-411	187 953-531	187 953-611
Ø 1.21 - 1.26 [30.7 - 32.0]	187 953-412	187 953-532	187 953-612
Ø 1.26 - 1.31 [32.0 - 33.3]	187 953-413	187 953-533	187 953-613
Ø 1.31 - 1.36 [33.3 - 34.6]	187 953-414	187 953-534	187 953-614
Ø 1.36 - 1.41 [34.6 - 35.9]	187 953-415	187 953-535	187 953-615
Ø 1.41 - 1.46 [35.9 - 37.2]	187 953-416	187 953-536	187 953-616
Ø 1.46 - 1.52 [37.2 - 38.5]	187 953-417	187 953-537	187 953-617
Ø 1.52 - 1.57 [38.5 - 39.8]	187 953-418	187 953-538	187 953-618
Ø 1.57 - 1.62 [39.8 - 41.1]	187 953-419	187 953-539	187 953-619
Ø 1.62 - 1.67 [41.1 - 42.4]	187 953-420	187 953-540	187 953-620
Ø 1.67 - 1.72 [42.4 - 43.7]	187 953-421	187 953-541	187 953-621
Ø 1.72 - 1.77 [43.7 - 45.0]	187 953-422	187 953-542	187 953-622
Ø 1.77 - 1.82 [45.0 - 46.3]	187 953-423	187 953-543	187 953-623
Ø 1.82 - 1.87 [46.3 - 47.6]	187 953-424	187 953-544	187 953-624
Ø 1.87 - 1.93 [47.6 - 48.9]	187 953-425	187 953-545	187 953-625
Ø 1.93 - 1.98 [48.9 - 50.2]	187 953-426	187 953-546	187 953-626

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