

DO'CERAM MEGATRON AG ModuleMaster

SPARE PARTS CATALOGUE



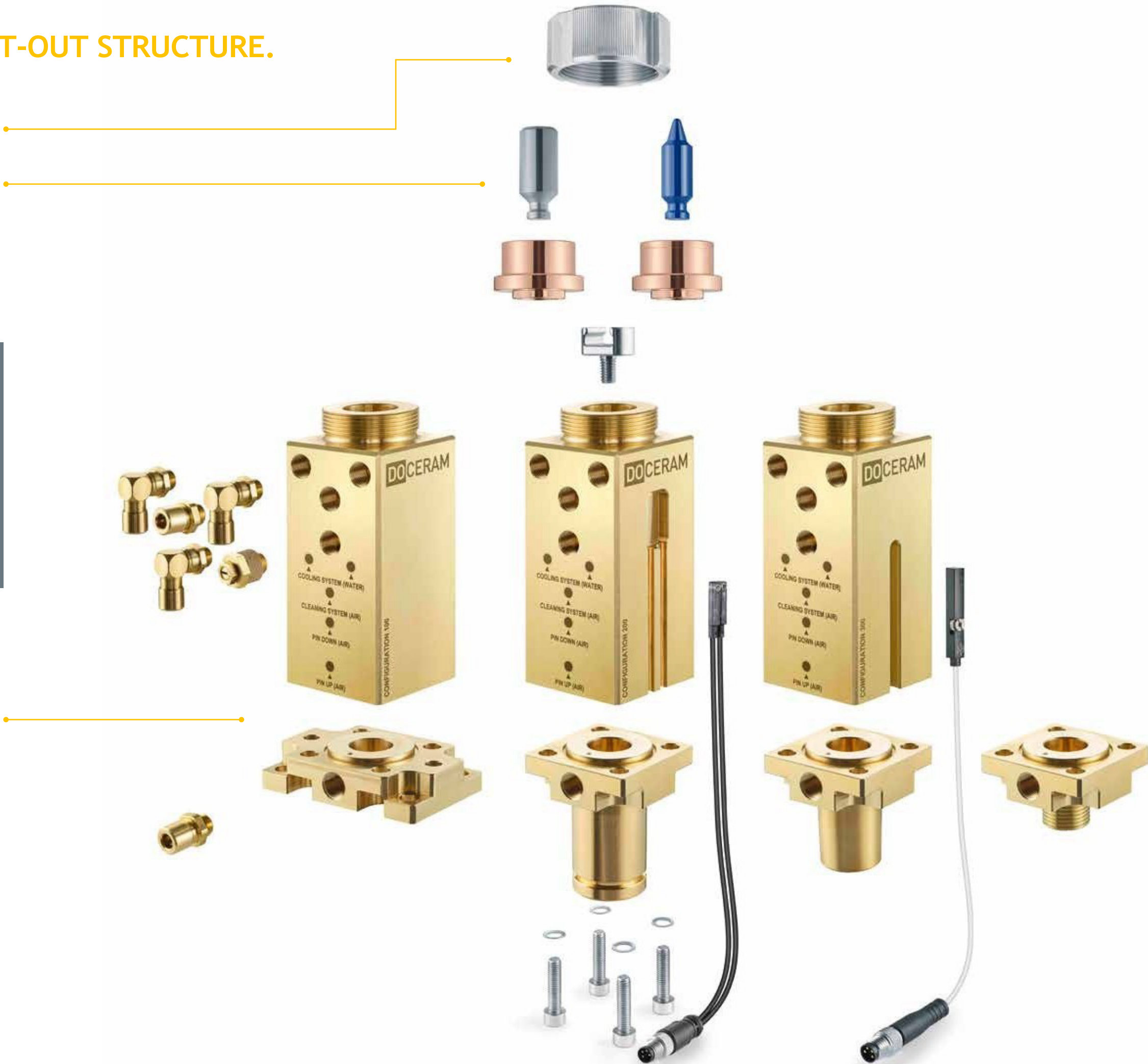
SMART: THE WELL THOUGHT-OUT STRUCTURE.

The **stainless steel union nut** can be opened quickly and securely with the included hook wrench.

Thanks to the new design, **centering pins/centering sleeves** in all available sizes can be used with **one and the same holder**. Swapping to a different size of centering pin or centering sleeve is quick and easy – without having to **disassemble** the device.

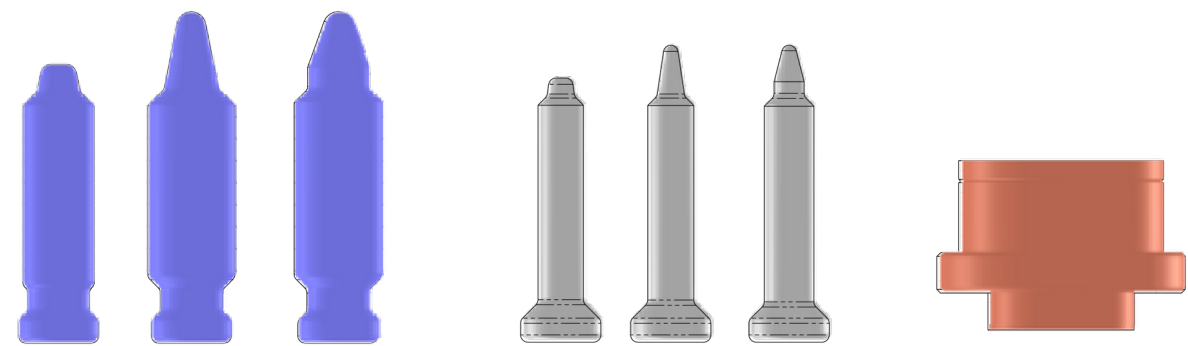
The new **DOCERAM ModulMaster** consists of a cylinder housing with a connection plate, an **interchangeable electrode** and – depending on the application – a pullable, pneumatic centering pin or a centering sleeve made of Cerazur® or Volcera® high-performance ceramics. The pin and sleeve are completely recessed, which allows a variety of other handling options of the components. **DOCERAM®** centering pins achieve up to **40 times longer service life** compared to steel centering pins.

For use in all common projection welding machines, there are four different connection plates to choose from.



CUSTOMIZED PARTS: NUT WELDING

The centering pins can be ordered in Cerazur or Volcera materials. These are available in short, long or waistband versions for sizes M4 - M12 and 7/16" UNF. For all available sizes, we also offer the matching interchangeable electrode.



Exemplary illustration from left to right: Cerazur centering pins M12 short, long and with collar; Volcera M4 centering pins short, long and with collar as well as an interchangeable copper crotde.

Composition	Colour	-	ZrO2 Y-PSZ
Density	Bending strength	-	blue
Compressive strength	(g/cm3)	6	900
Modulus of elasticity	(MPa)	1300	2500
Impact resistance	(MPa)	3000	320
Weibull module	Vickers	(Gpa)	205
Hardness	Thermal		
expansion			
Thermal conductivity	(Mpa m1/2)	12	7
Temp.	-	25	14
Alternating resistance	(HV 0.5)	1150	1650
Maximum operating	(10-6K-1)	10	3,4
temperature Spec.	(W/mK)	<2	22
Resistance at 20°C	(ΔT°C)	280	830
Dielectric strength	(°C)	1000	1200
	(Ω cm)	>1010	>1011
	(kV/mm)	-	20

The values listed were determined on standard test specimens.

The material properties can vary depending on the of the applications and of the component geometry may deviate from these values. For the exact clarification of the material suitability , please contact us. Further technical data on request. Technical changes and errors excepted. As of 2015.

Cerazur®
At the beginning, we always recommend our high-performance ceramic Cerazur in nut welding applications. Due to its outstanding mechanical strength, Cerazur is the optimal material in the majority of these applications.

Volcera®
In isolated applications, an extreme temperature shock acts on the centering pin, e.g. due to high currents and long welding times. In these applications, you should then switch from Cerazur to Volcera.

PARTS FOR WELDING NUT M4

MATERIAL CERAZUR				MATERIAL VOLCERA			
4,5	8228ZVG11000	8228ZVG10000	8228ZVG10300	8443ZVG11000	8443ZVG10000	8443ZVG10300	1111ZVG20000
4,6	8228ZVG11001	8228ZVG10001	8228ZVG10301	8443ZVG11001	8443ZVG10001	8443ZVG10301	1111ZVG20001
4,7	8228ZVG11002	8228ZVG10002	8228ZVG10302	8443ZVG11002	8443ZVG10002	8443ZVG10302	1111ZVG20002
4,8	8228ZVG11003	8228ZVG10003	8228ZVG10303	8443ZVG11003	8443ZVG10003	8443ZVG10303	1111ZVG20003
4,9	8228ZVG11004	8228ZVG10004	8228ZVG10304	8443ZVG11004	8443ZVG10004	8443ZVG10304	1111ZVG20004
5	8228ZVG11005	8228ZVG10005	8228ZVG10305	8443ZVG11005	8443ZVG10005	8443ZVG10305	1111ZVG20005
5,1	8228ZVG11006	8228ZVG10006	8228ZVG10306	8443ZVG11006	8443ZVG10006	8443ZVG10306	1111ZVG20006
5,2	8228ZVG11007	8228ZVG10007	8228ZVG10307	8443ZVG11007	8443ZVG10007	8443ZVG10307	1111ZVG20007
5,3	8228ZVG11008	8228ZVG10008	8228ZVG10308	8443ZVG11008	8443ZVG10008	8443ZVG10308	1111ZVG20008
5,4	8228ZVG11009	8228ZVG10009	8228ZVG10309	8443ZVG11009	8443ZVG10009	8443ZVG10309	1111ZVG20009
5,5	8228ZVG11010	8228ZVG10010	8228ZVG10310	8443ZVG11010	8443ZVG10010	8443ZVG10310	1111ZVG20010
5,6	8228ZVG11011	8228ZVG10011	8228ZVG10311	8443ZVG11011	8443ZVG10011	8443ZVG10311	1111ZVG20011
5,7	8228ZVG11012	8228ZVG10012	8228ZVG10312	8443ZVG11012	8443ZVG10012	8443ZVG10312	1111ZVG20012
5,8	8228ZVG11013	8228ZVG10013	8228ZVG10313	8443ZVG11013	8443ZVG10013	8443ZVG10313	1111ZVG20013
5,9	8228ZVG11014	8228ZVG10014	8228ZVG10314	8443ZVG11014	8443ZVG10014	8443ZVG10314	1111ZVG20014
6	8228ZVG11015	8228ZVG10015	8228ZVG10315	8443ZVG11015	8443ZVG10015	8443ZVG10315	1111ZVG20015

PARTS FOR WELDING NUT M5

MATERIAL CERAZUR				MATERIAL VOLCERA			
5,5	8228ZVG11016	8228ZVG10016	8228ZVG10316	8443ZVG11016	8443ZVG10016	8443ZVG10316	1111ZVG20010
5,6	8228ZVG11017	8228ZVG10017	8228ZVG10317	8443ZVG11017	8443ZVG10017	8443ZVG10317	1111ZVG20011
5,7	8228ZVG11018	8228ZVG10018	8228ZVG10318	8443ZVG11018	8443ZVG10018	8443ZVG10318	1111ZVG20012
5,8	8228ZVG11019	8228ZVG10019	8228ZVG10319	8443ZVG11019	8443ZVG10019	8443ZVG10319	1111ZVG20013
5,9	8228ZVG11020	8228ZVG10020	8228ZVG10320	8443ZVG11020	8443ZVG10020	8443ZVG10320	1111ZVG20014
6	8228ZVG11021	8228ZVG10021	8228ZVG10321	8443ZVG11021	8443ZVG10021	8443ZVG10321	1111ZVG20015
6,1	8228ZVG11022	8228ZVG10022	8228ZVG10322	8443ZVG11022	8443ZVG10022	8443ZVG10322	1111ZVG20016
6,2	8228ZVG11023	8228ZVG10023	8228ZVG10323	8443ZVG11023	8443ZVG10023	8443ZVG10323	1111ZVG20017
6,3	8228ZVG11024	8228ZVG10024	8228ZVG10324	8443ZVG11024	8443ZVG10024	8443ZVG10324	1111ZVG20018
6,4	8228ZVG11025	8228ZVG10025	8228ZVG10325	8443ZVG11025	8443ZVG10025	8443ZVG10325	1111ZVG20019
	8228ZVG11026	8228ZVG10026	8228ZVG10326	8443ZVG11026	8443ZVG10026	8443ZVG10326	1111ZVG20020
	8228ZVG11027	8228ZVG10027	8228ZVG10327	8443ZVG11027	8443ZVG10027	8443ZVG10327	1111ZVG20021
6,5	8228ZVG11028	8228ZVG10028	8228ZVG10328	8443ZVG11028	8443ZVG10028	8443ZVG10328	1111ZVG20022
6,6	8228ZVG11029	8228ZVG10029	8228ZVG10329	8443ZVG11029	8443ZVG10029	8443ZVG10329	1111ZVG20023
6,7	8228ZVG11030	8228ZVG10030	8228ZVG10330	8443ZVG11030	8443ZVG10030	8443ZVG10330	1111ZVG20024
6,8	8228ZVG11031	8228ZVG10031	8228ZVG10331	8443ZVG11031	8443ZVG10031	8443ZVG10331	1111ZVG20025

PARTS FOR WELDING NUT M6

MATERIAL CERAZUR

ØD	In short	long	with waistband
6,5	8228ZVG11032	8228ZVG10032	8228ZVG10332
6,6	8228ZVG11033	8228ZVG10033	8228ZVG10333
6,7	8228ZVG11034	8228ZVG10034	8228ZVG10334
6,8	8228ZVG11035	8228ZVG10035	8228ZVG10335
6,9	8228ZVG11036	8228ZVG10036	8228ZVG10336
7	8228ZVG11037	8228ZVG10037	8228ZVG10337
7,1	8228ZVG11038	8228ZVG10038	8228ZVG10338
7,2	8228ZVG11039 8228ZVG11040	8228ZVG10039 8228ZVG10040	8228ZVG10339 8228ZVG10340
7,3	8228ZVG11041	8228ZVG10041	8228ZVG10341
7,4	8228ZVG11042	8228ZVG10042	8228ZVG10342
7,5	8228ZVG11043	8228ZVG10043	8228ZVG10343
7,6	8228ZVG11044	8228ZVG10044	8228ZVG10344
7,7	8228ZVG11045	8228ZVG10045	8228ZVG10345
7,8	8228ZVG11046	8228ZVG10046	8228ZVG10346
7,9	8	8228ZVG11047	8228ZVG10047
8	8228ZVG11047	8228ZVG10047	8228ZVG10347
8,1	8228ZVG11048	8228ZVG10048	8228ZVG10348
8,2	8228ZVG11049	8228ZVG10049	8228ZVG10349
8,3	8228ZVG11050	8228ZVG10050	8228ZVG10350
8,4	8228ZVG11051	8228ZVG10051	8228ZVG10351
8,5	8228ZVG11052	8228ZVG10052	8228ZVG10352

MATERIAL VOLCERA

In short	long	with waistband	Interchangeable electrode
8443ZVG11032	8443ZVG10032	8443ZVG10332	1111ZVG20026
8443ZVG11033	8443ZVG10033	8443ZVG10333	1111ZVG20027
8443ZVG11034	8443ZVG10034	8443ZVG10334	1111ZVG20028
8443ZVG11035	8443ZVG10035	8443ZVG10335	1111ZVG20029
8443ZVG11036	8443ZVG10036	8443ZVG10336	1111ZVG20030
8443ZVG11037	8443ZVG10037	8443ZVG10337	1111ZVG20031
8443ZVG11038	8443ZVG10038	8443ZVG10338	1111ZVG20032
8443ZVG11039 8443ZVG11040	8443ZVG10039 8443ZVG10040	8443ZVG10339 8443ZVG10340	1111ZVG20033 1111ZVG20034
8443ZVG11041	8443ZVG10041	8443ZVG10341	1111ZVG20035
8443ZVG11042	8443ZVG10042	8443ZVG10342	1111ZVG20036
8443ZVG11043	8443ZVG10043	8443ZVG10343	1111ZVG20037
8443ZVG11044	8443ZVG10044	8443ZVG10344	1111ZVG20038
8443ZVG11045	8443ZVG10045	8443ZVG10345	1111ZVG20039
8443ZVG11046	8443ZVG10046	8443ZVG10346	1111ZVG20040
8443ZVG11047	8443ZVG10047	8443ZVG10347	1111ZVG20041
8443ZVG11048	8443ZVG10048	8443ZVG10348	1111ZVG20042
8443ZVG11049	8443ZVG10049	8443ZVG10349	1111ZVG20043
8443ZVG11050	8443ZVG10050	8443ZVG10350	1111ZVG20044
8443ZVG11051	8443ZVG10051	8443ZVG10351	1111ZVG20045
8443ZVG11052	8443ZVG10052	8443ZVG10352	1111ZVG20046

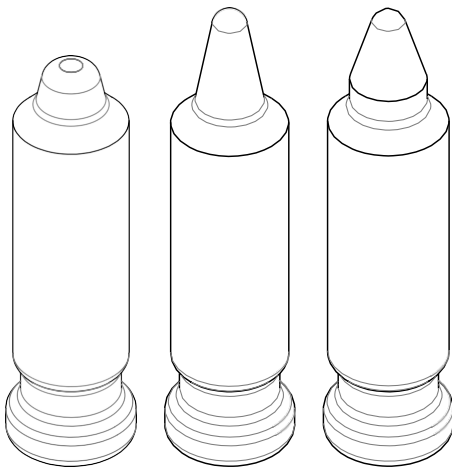
PARTS FOR WELDING NUT M8

MATERIAL CERAZUR

ØD	In short	long	with waistband
8,5	8228ZVG11053	8228ZVG10053	8228ZVG10353
8,6	8228ZVG11054	8228ZVG10054	8228ZVG10354
8,7	8228ZVG11055	8228ZVG10055	8228ZVG10355
8,8	8228ZVG11056	8228ZVG10056	8228ZVG10356
8,9	8228ZVG11057	8228ZVG10057	8228ZVG10357
9	8228ZVG11058	8228ZVG10058	8228ZVG10358
9,1	8228ZVG11059	8228ZVG10059	8228ZVG10359
9,2	8228ZVG11060	8228ZVG10060	8228ZVG10360
9,3	8228ZVG11061 8228ZVG11062	8228ZVG10061 8228ZVG10062	8228ZVG10361 8228ZVG10362
9,4	8228ZVG11063	8228ZVG10063	8228ZVG10363
9,5	8228ZVG11064	8228ZVG10064	8228ZVG10364
9,6	8228ZVG11065	8228ZVG10065	8228ZVG10365
9,7	8228ZVG11066	8228ZVG10066	8228ZVG10366
9,8	8228ZVG11067	8228ZVG10067	8228ZVG10367
9,9	8228ZVG11068	8228ZVG10068	8228ZVG10368
10	8228ZVG11069	8228ZVG10069	8228ZVG10369
10,1	8228ZVG11070	8228ZVG10070	8228ZVG10370
10,2	8228ZVG11071	8228ZVG10071	8228ZVG10371
10,3	8228ZVG11072	8228ZVG10072	8228ZVG10372
10,4	8228ZVG11073	8228ZVG10073	8228ZVG10373
10,5	8228ZVG11074	8228ZVG10074	8228ZVG10374
10,6	8228ZVG11075	8228ZVG10075	8228ZVG10375
10,7	8228ZVG11076	8228ZVG10076	8228ZVG10376
10,8	8228ZVG11077	8228ZVG10077	8228ZVG10377
10,9	8228ZVG11078	8228ZVG10078	8228ZVG10378
11			

MATERIAL VOLCERA

In short	long	with waistband	Interchangeable electrode
8443ZVG11053	8443ZVG10053	8443ZVG10353	1111ZVG20046
8443ZVG11054	8443ZVG10054	8443ZVG10354	1111ZVG20047
8443ZVG11055	8443ZVG10055	8443ZVG10355	1111ZVG20048
8443ZVG11056	8443ZVG10056	8443ZVG10356	1111ZVG20049
8443ZVG11057	8443ZVG10057	8443ZVG10357	1111ZVG20050
8443ZVG11058	8443ZVG10058	8443ZVG10358	1111ZVG20051
8443ZVG11059	8443ZVG10059	8443ZVG10359	1111ZVG20052
8443ZVG11060	8443ZVG10060	8443ZVG10360	1111ZVG20053
8443ZVG11061 8443ZVG11062	8443ZVG10061 8443ZVG10062	8443ZVG10361 8443ZVG10362	1111ZVG20054 1111ZVG20055
8443ZVG11063	8443ZVG10063	8443ZVG10363	1111ZVG20056
8443ZVG11064	8443ZVG10064	8443ZVG10364	1111ZVG20057
8443ZVG11065	8443ZVG10065	8443ZVG10365	1111ZVG20058
8443ZVG11066	8443ZVG10066	8443ZVG10366	1111ZVG20059
8443ZVG11067	8443ZVG10067	8443ZVG10367	1111ZVG20060
8443ZVG11068	8443ZVG10068	8443ZVG10368	1111ZVG20061
8443ZVG11069	8443ZVG10069	8443ZVG10369	1111ZVG20062
8443ZVG11070	8443ZVG10070	8443ZVG10370	1111ZVG20063
8443ZVG11071	8443ZVG10071	8443ZVG10371	1111ZVG20064
8443ZVG11072	8443ZVG10072	8443ZVG10372	1111ZVG20065
8443ZVG11073	8443ZVG10073	8443ZVG10373	1111ZVG20066
8443ZVG11074	8443ZVG10074	8443ZVG10374	1111ZVG20067
8443ZVG11075	8443ZVG10075	8443ZVG10375	1111ZVG20068
8443ZVG11076	8443ZVG10076	8443ZVG10376	1111ZVG20069
8443ZVG11077	8443ZVG10077	8443ZVG10377	1111ZVG20070
8443ZVG11078	8443ZVG10078	8443ZVG10378	1111ZVG20071



True-to-scale illustration of the centering pin variants of size M8 short, long and with collar.

PARTS FOR WELDING NUT M10

MATERIAL CERAZUR

ØD	In short	long	with waistband
11	8228ZVG11079	8228ZVG10079	8228ZVG10379
11,1	8228ZVG11080	8228ZVG10080	8228ZVG10380
11,2	8228ZVG11081	8228ZVG10081	8228ZVG10381
11,3	8228ZVG11082	8228ZVG10082	8228ZVG10382
11,4	8228ZVG11083	8228ZVG10083	8228ZVG10383
11,5	8228ZVG11084	8228ZVG10084	8228ZVG10384
11,6	8228ZVG11085	8228ZVG10085	8228ZVG10385
11,7	8228ZVG11086	8228ZVG10086	8228ZVG10386
11,8	8228ZVG11087	8228ZVG10087	8228ZVG10387
11,9	8228ZVG11088	8228ZVG10088	8228ZVG10388
12	8228ZVG11089	8228ZVG10089	8228ZVG10389
12,1	8228ZVG11090	8228ZVG10090	8228ZVG10390
12,2	8228ZVG11091	8228ZVG10091	8228ZVG10391
12,3	8228ZVG11092	8228ZVG10092	8228ZVG10392
12,4	8228ZVG11093	8228ZVG10093	8228ZVG10393
12,5	8228ZVG11094	8228ZVG10094	8228ZVG10394
12,6	8228ZVG11095	8228ZVG10095	8228ZVG10395
12,7	8228ZVG11096	8228ZVG10096	8228ZVG10396
12,8	8228ZVG11097	8228ZVG10097	8228ZVG10397
12,9	8228ZVG11098	8228ZVG10098	8228ZVG10398
13	8228ZVG11099	8228ZVG10099	8228ZVG10399

MATERIAL VOLCERA

In short	long	with waistband	Interchangeable electrode
8443ZVG11079	8443ZVG10079	8443ZVG10379	1111ZVG20075
8443ZVG11080	8443ZVG10080	8443ZVG10380	1111ZVG20076
8443ZVG11081	8443ZVG10081	8443ZVG10381	1111ZVG20077
8443ZVG11082	8443ZVG10082	8443ZVG10382	1111ZVG20078
8443ZVG11083	8443ZVG10083	8443ZVG10383	1111ZVG20079
8443ZVG11084	8443ZVG10084	8443ZVG10384	1111ZVG20080
8443ZVG11085	8443ZVG10085	8443ZVG10385	1111ZVG20081
8443ZVG11086	8443ZVG10086	8443ZVG10386	1111ZVG20082
8443ZVG11087	8443ZVG10087	8443ZVG10387	1111ZVG20083
8443ZVG11088	8443ZVG10088	8443ZVG10388	1111ZVG20084
8443ZVG11089	8443ZVG10089	8443ZVG10389	1111ZVG20085
8443ZVG11090	8443ZVG10090	8443ZVG10390	1111ZVG20086
8443ZVG11091	8443ZVG10091	8443ZVG10391	1111ZVG20087
8443ZVG11092	8443ZVG10092	8443ZVG10392	1111ZVG20088
8443ZVG11093	8443ZVG10093	8443ZVG10393	1111ZVG20089
8443ZVG11094	8443ZVG10094	8443ZVG10394	1111ZVG20090
8443ZVG11095	8443ZVG10095	8443ZVG10395	1111ZVG20091
8443ZVG11096	8443ZVG10096	8443ZVG10396	1111ZVG20092
8443ZVG11097	8443ZVG10097	8443ZVG10397	1111ZVG20093
8443ZVG11098	8443ZVG10098	8443ZVG10398	1111ZVG20094
8443ZVG11099	8443ZVG10099	8443ZVG10399	1111ZVG20095

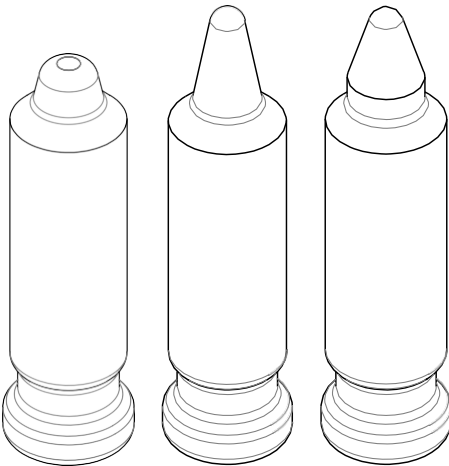
PARTS FOR WELDING NUT M12

MATERIAL CERAZUR

ØD	In short	long	with waistband
13	8228ZVG11100	8228ZVG10100	8228ZVG10400
13,1	8228ZVG11101	8228ZVG10101	8228ZVG10401
13,2	8228ZVG11102	8228ZVG10102	8228ZVG10402
13,3	8228ZVG11103	8228ZVG10103	8228ZVG10403
13,4	8228ZVG11104	8228ZVG10104	8228ZVG10404
13,5	8228ZVG11105	8228ZVG10105	8228ZVG10405
13,6	8228ZVG11106	8228ZVG10106	8228ZVG10406
13,7	8228ZVG11107	8228ZVG10107	8228ZVG10407
13,8	8228ZVG11108	8228ZVG10108	8228ZVG10408
13,9	8228ZVG11109	8228ZVG10109	8228ZVG10409
14	8228ZVG11110	8228ZVG10110	8228ZVG10410
14,1	8228ZVG11111	8228ZVG10111	8228ZVG10411
14,2	8228ZVG11112	8228ZVG10112	8228ZVG10412
14,3	8228ZVG11113	8228ZVG10113	8228ZVG10413
14,4	8228ZVG11114	8228ZVG10114	8228ZVG10414
14,5	8228ZVG11115	8228ZVG10115	8228ZVG10415
14,6	8228ZVG11116	8228ZVG10116	8228ZVG10416
14,7	8228ZVG11117	8228ZVG10117	8228ZVG10417
14,8	8228ZVG11118	8228ZVG10118	8228ZVG10418
14,9	8228ZVG11119	8228ZVG10119	8228ZVG10419
15	8228ZVG11120	8228ZVG10120	8228ZVG10420

MATERIAL VOLCERA

In short	long	with waistband	Interchangeable electrode
8443ZVG11100	8443ZVG10100	8443ZVG10400	1111ZVG20095
8443ZVG11101	8443ZVG10101	8443ZVG10401	1111ZVG20096
8443ZVG11102	8443ZVG10102	8443ZVG10402	1111ZVG20097
8443ZVG11103	8443ZVG10103	8443ZVG10403	1111ZVG20098
8443ZVG11104	8443ZVG10104	8443ZVG10404	1111ZVG20099
8443ZVG11105	8443ZVG10105	8443ZVG10405	1111ZVG20100
8443ZVG11106	8443ZVG10106	8443ZVG10406	1111ZVG20101
8443ZVG11107	8443ZVG10107	8443ZVG10407	1111ZVG20102
8443ZVG11108	8443ZVG10108	8443ZVG10408	1111ZVG20103
8443ZVG11109	8443ZVG10109	8443ZVG10409	1111ZVG20104
8443ZVG11110	8443ZVG10110	8443ZVG10410	1111ZVG20105
8443ZVG11111	8443ZVG10111	8443ZVG10411	1111ZVG20106
8443ZVG11112	8443ZVG10112	8443ZVG10412	1111ZVG20107
8443ZVG11113	8443ZVG10113	8443ZVG10413	1111ZVG20108
8443ZVG11114	8443ZVG10114	8443ZVG10414	1111ZVG20109
8443ZVG11115	8443ZVG10115	8443ZVG10415	1111 Z V G 2 0110
8443ZVG11116	8443ZVG10116	8443ZVG10416	1111 Z V G 2 0111
8443ZVG11117	8443ZVG10117	8443ZVG10417	1111ZVG20112
8443ZVG11118	8443ZVG10118	8443ZVG10418	1111ZVG20113
8443ZVG11119	8443ZVG10119	8443ZVG10419	1111ZVG20114
8443ZVG11120	8443ZVG10120	8443ZVG10420	1111ZVG20115



True-to-scale illustration of the centering pin variants of size M8 short, long and with collar.

PARTS FOR WELDING NUT 7/16" UNF

MATERIAL CERAZUR

ØD	In short	long	with waistband
12	8228ZVG17189	8228ZVG17089	8228ZVG17389
12,1	8228ZVG17190	8228ZVG17090	8228ZVG17390
12,2	8228ZVG17191	8228ZVG17091	8228ZVG17391
12,3	8228ZVG17192	8228ZVG17092	8228ZVG17392
12,4	8228ZVG17193	8228ZVG17093	8228ZVG17393
12,5	8228ZVG17194	8228ZVG17094	8228ZVG17394
12,6	8228ZVG17195	8228ZVG17095	8228ZVG17395
12,7	8228ZVG17196	8228ZVG17096	8228ZVG17396
12,8	8228ZVG17197	8228ZVG17097	8228ZVG17397
12,9	8228ZVG17198	8228ZVG17098	8228ZVG17398
13	8228ZVG17199	8228ZVG17099	8228ZVG17399
13,1	8228ZVG17200	8228ZVG17100	8228ZVG17400
13,2	8228ZVG17201	8228ZVG17101	8228ZVG17401
13,3	8228ZVG17202	8228ZVG17102	8228ZVG17402
13,4	8228ZVG17203	8228ZVG17103	8228ZVG17403
13,5	8228ZVG17204	8228ZVG17104	8228ZVG17404
13,6	8228ZVG17205	8228ZVG17105	8228ZVG17405
13,7	8228ZVG17206	8228ZVG17106	8228ZVG17406
13,8	8228ZVG17207	8228ZVG17107	8228ZVG17407
13,9	8228ZVG17208	8228ZVG17108	8228ZVG17408
14	8228ZVG17209	8228ZVG17109	8228ZVG17409
14,1	8228ZVG17210	8228ZVG17110	8228ZVG17410
14,2	8228ZVG17211	8228ZVG17111	8228ZVG17411
14,3	8228ZVG17212	8228ZVG17112	8228ZVG17412
14,4	8228ZVG17213	8228ZVG17113	8228ZVG17413
14,5	8228ZVG17214	8228ZVG17114	8228ZVG17414
14,6	8228ZVG17215	8228ZVG17115	8228ZVG17415
14,7	8228ZVG17216	8228ZVG17116	8228ZVG17416
14,8	8228ZVG17217	8228ZVG17117	8228ZVG17417
14,9	8228ZVG17218	8228ZVG17118	8228ZVG17418
15	8228ZVG17219	8228ZVG17119	8228ZVG17419

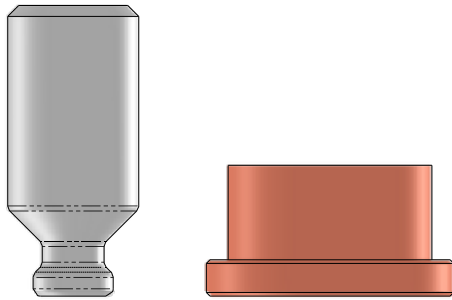
MATERIAL VOLCERA

In short	long	with waistband	Interchangeable electrode
8443ZVG17189	8443ZVG17089	8443ZVG17389	1111ZVG20085
8443ZVG17190	8443ZVG17090	8443ZVG17390	1111ZVG20086
8443ZVG17191	8443ZVG17091	8443ZVG17391	1111ZVG20087
8443ZVG17192	8443ZVG17092	8443ZVG17392	1111ZVG20088
8443ZVG17193	8443ZVG17093	8443ZVG17393	1111ZVG20089
8443ZVG17194	8443ZVG17094	8443ZVG17394	1111ZVG20090
8443ZVG17195	8443ZVG17095	8443ZVG17395	1111ZVG20091
8443ZVG17196	8443ZVG17096	8443ZVG17396	1111ZVG20092
8443ZVG17197	8443ZVG17097	8443ZVG17397	1111ZVG20093
8443ZVG17198	8443ZVG17098	8443ZVG17398	1111ZVG20094
8443ZVG17199	8443ZVG17099	8443ZVG17399	1111ZVG20095
8443ZVG17200	8443ZVG17100	8443ZVG17400	1111ZVG20096
8443ZVG17201	8443ZVG17101	8443ZVG17401	1111ZVG20097
8443ZVG17202	8443ZVG17102	8443ZVG17402	1111ZVG20098
8443ZVG17203	8443ZVG17103	8443ZVG17403	1111ZVG20099
8443ZVG17204	8443ZVG17104	8443ZVG17404	1111ZVG20100
8443ZVG17205	8443ZVG17105	8443ZVG17405	1111ZVG20101
8443ZVG17206	8443ZVG17106	8443ZVG17406	1111ZVG20102
8443ZVG17207	8443ZVG17107	8443ZVG17407	1111ZVG20103
8443ZVG17208	8443ZVG17108	8443ZVG17408	1111ZVG20104
8443ZVG17209	8443ZVG17109	8443ZVG17409	1111ZVG20105
8443ZVG17210	8443ZVG17110	8443ZVG17410	1111ZVG20106
8443ZVG17211	8443ZVG17111	8443ZVG17411	1111ZVG20107
8443ZVG17212	8443ZVG17112	8443ZVG17412	1111ZVG20108
8443ZVG17213	8443ZVG17113	8443ZVG17413	1111ZVG20109
8443ZVG17214	8443ZVG17114	8443ZVG17414	1111 Z V G 2 0110
8443ZVG17215	8443ZVG17115	8443ZVG17415	1111 Z V G 2 0111
8443ZVG17216	8443ZVG17116	8443ZVG17416	1111ZVG20112
8443ZVG17217	8443ZVG17117	8443ZVG17417	1111ZVG20113
8443ZVG17218	8443ZVG17118	8443ZVG17418	1111ZVG20114
8443ZVG17219	8443ZVG17119	8443ZVG17419	1111ZVG20115

CUSTOMIZED PARTS: STUD WELDING

The ModulMaster welding fixture can also be used to weld screws and bolts. Centering sleeves made of Volcera high-performance ceramics with matching interchangeable electrodes are available especially for this purpose.

The centering sleeves can be used for bolts in sizes M4 - M12 in different lengths. For all available sizes , we also offer the matching interchangeable electrode.



Exemplary illustration of a Volcera centering sleeve and the matching interchangeable copper electrode.



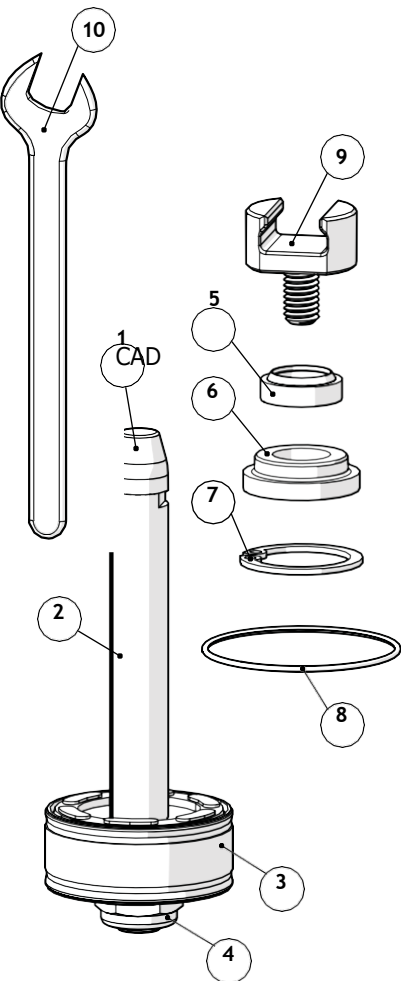
CENTERING SLEEVE M4 - M12 VOLCERA

Bolt Length	For Bolt M4	For Bolt M5	For Bolt M6	For Bolt M8	For Bolt M10F	for Bolt M12
10	8443ZVG13000	8443ZVG14000	8443ZVG15000	-	-	-
15	8443ZVG13010	8443ZVG14010	8443ZVG15010	8443ZVG16010	8443ZVG17010	-
20	8443ZVG13020	8443ZVG14020	8443ZVG15020	8443ZVG16020	8443ZVG17020	8443ZVG18020
25	8443ZVG13030	8443ZVG14030	8443ZVG15030	8443ZVG16030	8443ZVG17030	8443ZVG18030
30	8443ZVG13040	8443ZVG14040	8443ZVG15040	8443ZVG16040	8443ZVG17040	8443ZVG18040
35	8443ZVG13050	8443ZVG14050	8443ZVG15050	8443ZVG16050	8443ZVG17050	8443ZVG18050
40	8443ZVG13060	-	-	-	-	-

Bolt size	M4	M5	M6	M8	M10	M12
Article number	1111ZVG22000	1111ZVG22001	1111ZVG22002	1111ZVG22003	1111ZVG22004	1111ZVG22005

TOOLS AND SPARE PARTS SETS

Description	Item no.	Qty
Hook wrench	170330145	1
8 mm open-end wrench (flat)	7	1
	170330145	
	8	



Variant	Item no. Spare parts set	Pos.	Description	Item no. Individual parts	Qty
N100	7910300000	1	Insertion aid	1703301643	1
		2	Piston rod	1703301425	1
		3	Piston 100	1703301561	1
		4	Lock nut M8	1703301426	1
		5	Cylinder seal	1123300003	1
		6	plain bearing	1123300007	1
		7	Retaining ring Ø 20 mm x 1 mm	1703301427	1
		8	O-ring Ø 32 mm x 1 mm	1123300006	1
		9	Piston rod attachment	1703301213	1
		10	8 mm open-end wrench (flat)	1703301458	1
N20 0 N30 0 S300	793030 0 0 0 0	1	Insertion aid	1703301643	1
		2	Piston rod	1703301425	1
		3	Piston 200 + 300	1703301066	1
		4	Lock nut M8	1703301426	1
		5	Cylinder gasket	1123300003	1
		6	Plain bearings	1123300007	1
		7	Retaining ring Ø 20 mm x 1 mm	1703301427	1
		8	O-ring Ø 32 mm x 1 mm	1123300006	1
		9	Piston rod attachment	1703301213	1
		10	8 mm open-end wrench (flat)	1703301458	1

ONLINE CONFIGURATION OF YOUR MODULMASTER WELDING FIXTURE

The ModulMaster welding fixture can also be configured online. All product variants are stored in our CAD portal - the adjustment is quick and easy by entering the parameters for your welding process.

Once configured, the created configuration is available as a file can be downloaded in all popular formats so that you can integrate them directly into your design.

- The extensive configuration catalog includes the following DOCERAM products:
- ModulMaster Welding Fixtures
 - Positioning and cylindrical pins
 - Pick-up bolts
 - Insulating bushings

The portal can be accessed at:
<https://doceram.partcommunity.com/3d-cad-models/>
Alternatively, you can scan the QR code here and you will be sent directly to the portal.

Our consulting team for technical applications will be happy to inform you details about the new ModulMaster welding fixture. Call or write to us!

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MEGATRON AG

Your DOCERAM sales partner:

DOCERAM GmbH