

## DRIESCHER - Medium voltage- switchgear- and substation accessories



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## DRIESCHER - Medium voltage- switchgear- and substation accessories

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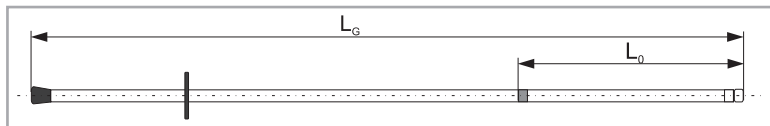


## DRIESCHER - substation accessories

- medium voltage range -

### Insulating sticks

DIN VDE 0681 part 1  
made of glass fibre re-inforced polyester  
with bayonet input for the handling of  
insulating protective barriers  
**Only for indoor substations!**



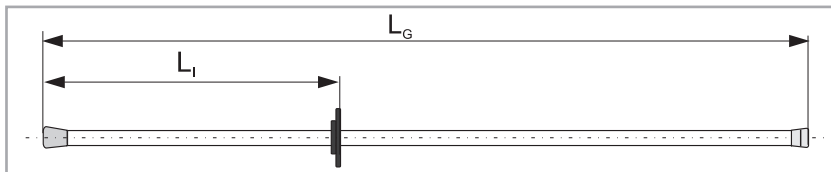
Rated voltage	Part-no.	$L_G$	$L_0$	Weight approx. kg
30 kV	773 43015	1500	500	1,25
30 kV	773 43020	2000	900	1,55



Pic. 1: Insulating stick

### Earthing sticks

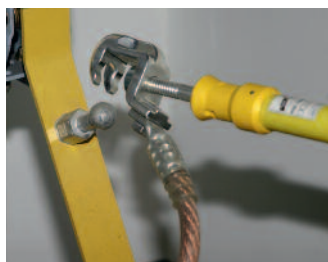
DIN EN 61235 made of  
glass fibre re-inforced polyester  
**Only for indoor substations!**



Part-no.	$L_G$	$L_I$	for the spindle of the earthing device	max. load in kg	Weight approx. kg
773 12110	1000	430	with cross pin	35	0,90
773 12115	1500	930	with cross pin	35	1,16
773 12120	2000	1430	with cross pin	20	1,48
773 12410	1000	430	with hexagon	35	0,45
773 12415	1500	930	with hexagon	35	0,60
773 12420	2000	1430	with hexagon	20	0,75



Pic. 2: Earthing stick while mounting of a earthing device



Pic. 3: Earthing stick with universal clamp with cross pin



Pic. 4: Earthing stick for spindle with cross pin

## DRIESCHER - substation accessories

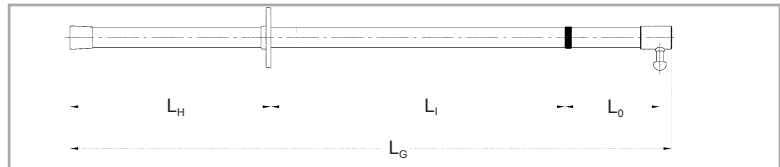
- medium voltage range -

### Switching sticks

DIN VDE 0681 part 2 made of glass fibre re-inforced polyester  
**Only for indoor substations!**



Pic. 5: Switching stick with switching rod head

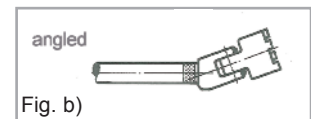
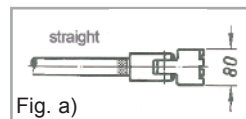
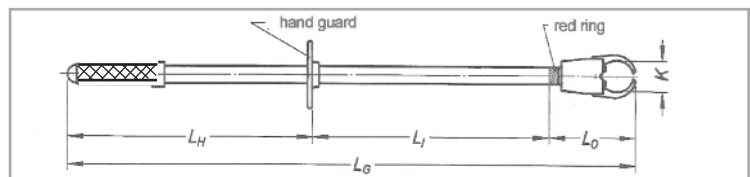


Rated voltage	Part-no.	L <sub>G</sub>	L <sub>H</sub>	L <sub>I</sub>	L <sub>O</sub>	Weight approx. kg
12-36 kV	772 11001	1000	300	525	175	0,85
12-36 kV	772 11002	1500	400	525	575	1,20
12-54 kV	772 11003	2000	500	720	780	1,50
12-54 kV	772 11004	2500	600	720	1180	1,80

### Fuse tongs

DIN VDE 0681 part 3 made of glass fibre re-inforced polyester  
**Only for indoor substations!**

3) K=clamping range for min. and max. protective diameter.  
Clamping range with reducer (accessories) 30 - 60 mm



Rated voltage	Fig.	Part-no.	L <sub>G</sub>	L <sub>H</sub>	L <sub>I</sub>	L <sub>O</sub>	K <sup>3)</sup> mm	Weight approx. kg	Drawing-no.
bis 36 kV	a	772 12101	1060	350	525	185	50 - 90	3,1	HE 4-98650/1
bis 36 kV	a	772 12110	1500	780	525	195	50 - 90	3,2	HE 4-98650/2
bis 36 kV	b	772 12201	1250	540	525	185	50 - 90	2,9	HE 4-102322



Pic. 6: Fuse tongs straight



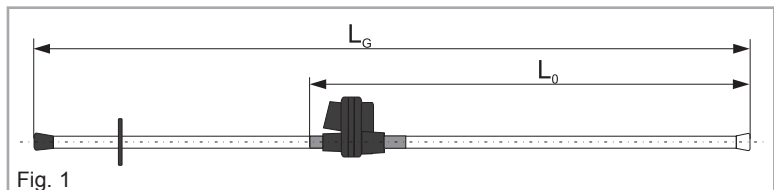
Pic. 7: Fuse tongs angled

## DRIESCHER - substation accessories

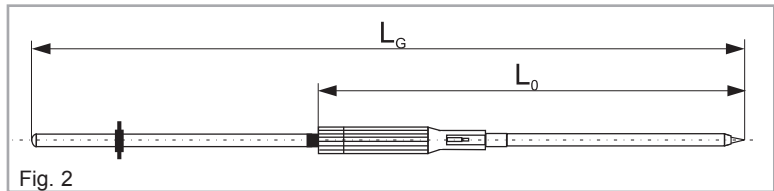
- medium voltage range -

### Voltage detectors

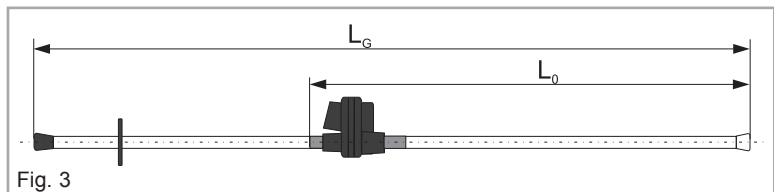
DIN VDE 0682 part 411 / EN 61243-1  
made of glass fibre re-inforced polyester  
passive voltage detector with  
optically LED-indicator  
**Only for indoor substations!**



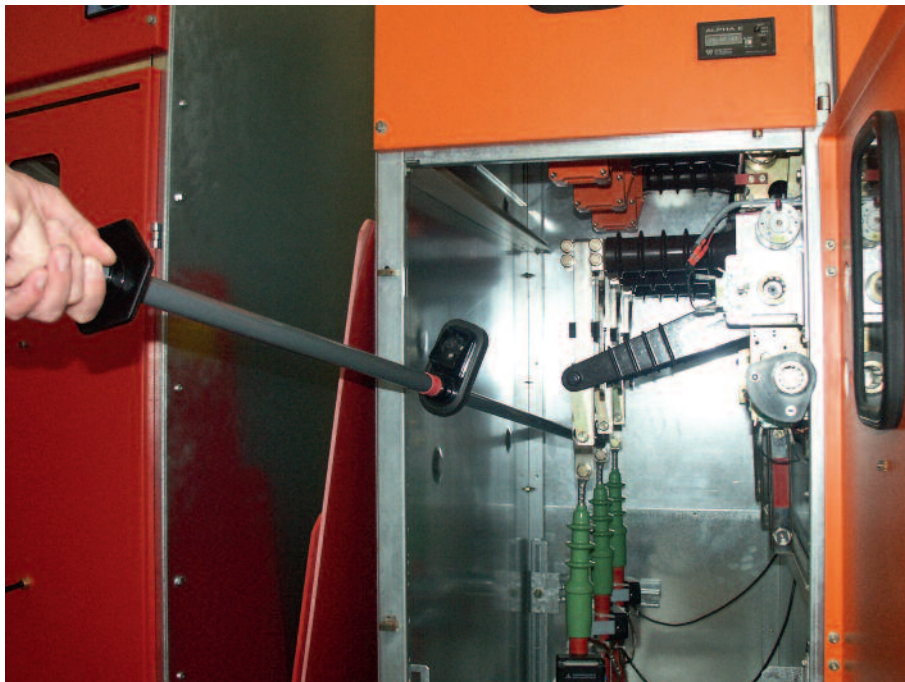
DIN VDE 0682 part 411 / EN 61243-1  
made of glass fibre re-inforced polyester  
optically indicator with implemented  
operator control mechanism  
**Only for indoor substations!**



DIN VDE 0682 part 411 / EN 61243-1  
made of glass fibre re-inforced polyester  
optically indicator with implemented  
operator control mechanism  
**For indoor and outdoor substations!**



Rated voltage	Fig.	Part-no.	L <sub>0</sub>	L <sub>G</sub>	Weight approx. kg
6 kV	1	773 13109	720	1425	0,83
10 kV	1	773 13110	720	1425	0,87
20 kV	1	773 13224	720	1425	0,95
20 kV	2	773 13124	775	1480	0,97
6 - 20 kV	3	773 13126	770	1665	1,00

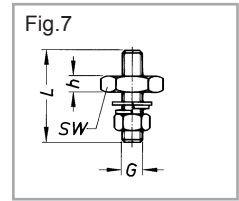
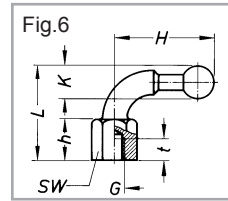
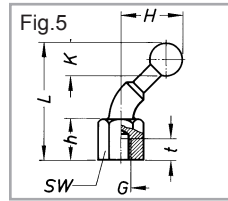
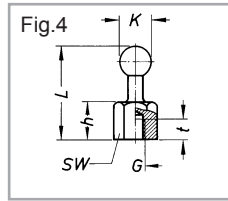
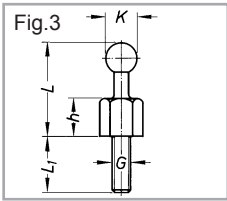


Pic. 8: Passive voltage detector with optically LED-indicator



**DRIESCHER - substation accessories**  
- medium voltage range -

**Spherical terminal and ground terminal studs**



Spherical $\varnothing$	Fig.	Part-no.	G	h	H	L	L <sub>1</sub>	SW	t	Weight approx. kg
20 K	3	381 00042	M 12	25	-	59	35	24	-	0,19
20 K	4	381 00002	M 12	25	-	59	-	24	15	0,13
20 K	5	381 00040	M 12	25	37	60	-	24	15	0,17
20 K	6	381 00041	M 12	25	60	57	-	24	15	0,19
Spherical $\varnothing$	Fig.	Part-no.	G	h	H	L	L <sub>1</sub>	SW	t	Weight approx. kg
25 K	3	381 00047	M 12	24	-	68	45	27	-	0,27
25 K	4	381 00003	M 12	24	-	68	-	27	15	0,22
25 K	5	381 00045	M 12	33	53	98	-	27	15	0,36
25 K	6	381 00046	M 12	33	75	73	-	27	15	0,44
Spherical $\varnothing$	Fig.	Part-no.	G	h	H	L	L <sub>1</sub>	SW	t	Weight approx. kg
-	7	381 00004	M 12	10	-	55	-	32	-	0,12
-	7	381 00005	M 16	12	-	62	-	41	-	0,26



Pic. 9: Ground terminal studs



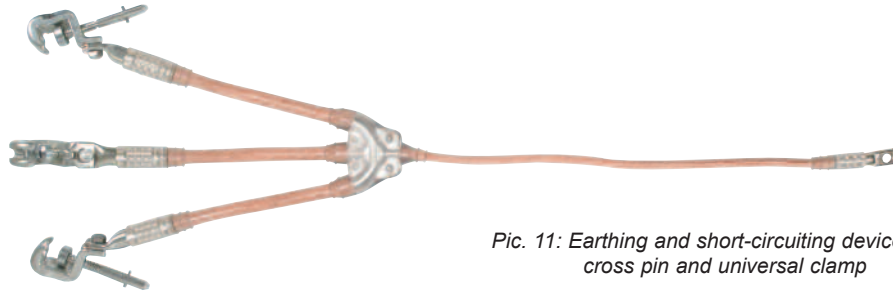
Pic. 10: Spherical terminal studs

## DRIESCHER - substation accessories

- medium voltage range -

### Earthing and short-circuiting devices

DIN VDE 0683 Teil 100 / EN 61230  
**Only for indoor substations!**



Pic. 11: Earthing and short-circuiting devices with cross pin and universal clamp

rope diameter for shorting / earthing	short-circuit current $I_k$ 1s	Part-no.	Type phase end	Type operating spindle	Type earthing end	Weight approx. kg
50/25 mm <sup>2</sup>	9,9 kA	773 11600	universal head	with cross pin	M 12	3,9
70/35 mm <sup>2</sup>	13,8 kA	773 11605	universal head	with cross pin	M 12	4,6
95/35 mm <sup>2</sup>	18,7 kA	773 11610	universal head	with cross pin	M 12	4,6
120/50 mm <sup>2</sup>	23,7 kA	773 11615	universal head	with cross pin	M 12	5,9
50/25 mm <sup>2</sup>	9,9 kA	773 11620	universal head	with cross pin	M 12	3,9
70/35 mm <sup>2</sup>	13,8 kA	773 11625	universal head	with cross pin	M 12	4,6
95/35 mm <sup>2</sup>	18,7 kA	773 11630	universal head	with cross pin	M 12	4,6
120/50 mm <sup>2</sup>	23,7 kA	773 11635	universal head	with cross pin	M 12	5,9
50/50 mm <sup>2</sup>	9,9 kA	773 11640	universal head	with cross pin	M 12	4,2
70/70 mm <sup>2</sup>	13,8 kA	773 11645	universal head	with cross pin	M 12	4,6
95/95 mm <sup>2</sup>	18,7 kA	773 11650	universal head	with cross pin	M 12	7,6
120/120 mm <sup>2</sup>	23,7 kA	773 11655	universal head	with cross pin	M 12	8,5
50/50 mm <sup>2</sup>	9,9 kA	773 11660	universal head	with hexagon	M 12	4,2
70/70 mm <sup>2</sup>	13,8 kA	773 11665	universal head	with hexagon	M 12	4,6
95/95 mm <sup>2</sup>	18,7 kA	773 11670	universal head	with hexagon	M 12	7,6
120/120 mm <sup>2</sup>	23,7 kA	773 11675	universal head	with hexagon	M 12	8,5

All ES-devices earthing end also available with universal earthing clamp with synthetic handle.  
 Moreover earthing and short-circuiting devices on demand.



Pic. 12: Mounting of a earthing and short-circuiting device with a earthing stick

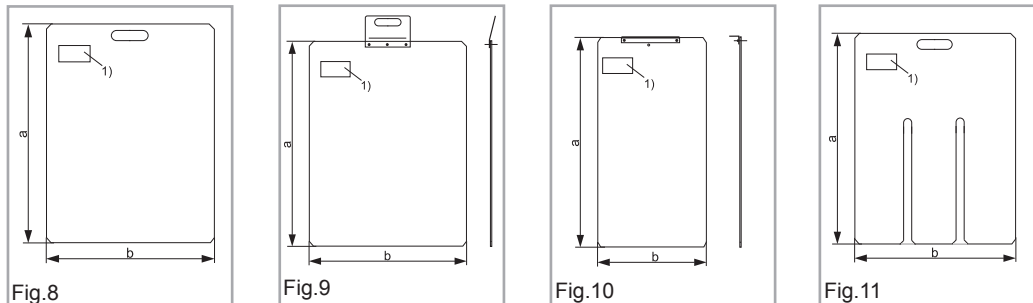


Pic. 13: universal clamp with earthing end synthetic handle

## DRIESCHER - substation accessories - medium voltage range -

### Insulating protective barriers

corresponding to pictures 1, 2, 3 and 4 according to DIN VDE 0682-552

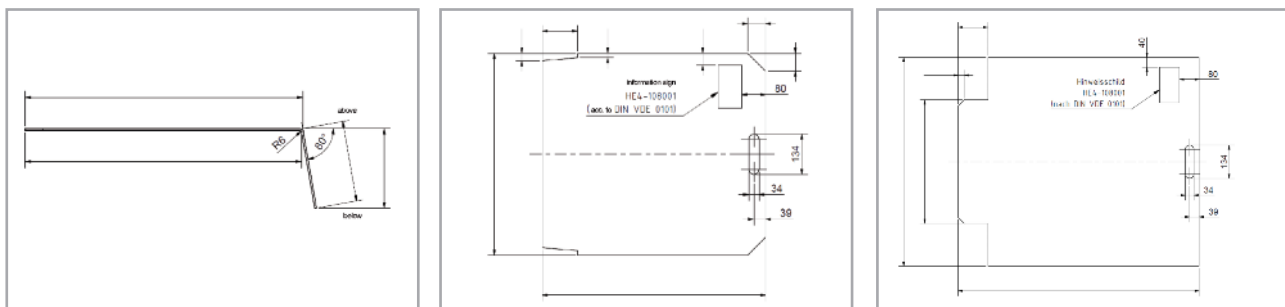


1) Information sign according to EN 62271-200

Fig.	For switch panel type	Part-no.	Length a	Width b	Thickness	Colour	Weight approx. kg	Drawing-no.
8	W12-607519	453 65871	800	510	6	red	3,2	HA 4-107724/1
8	W12-757521	453 65872	730	660	6	red	3,8	HA 4-107724/2
8	W12-907521	453 65873	730	810	6	red	4,6	HA 4-107724/3
8		453 65864	1180	690	6	red	5,5	HA 4-107722/3
8	W24-801121	453 75094	795	1120	8	grey	6,8	HA 3-107731/3
9	W24-901121	780 80301	1400	1094	8	grey	7,0	HA 3-107766/2
10	24 kV compact switchgear	453 65884	1125	395	6	red	3,6	KS 4-107737/1
11	F24-606519	453 65869	800	434	6	red	2,2	HA 4-107723/2

**Insulating protective barriers with other dimensions, customer specific barriers or inflected protective barriers on request!  
Therefore please use attached register sheet.**

Examples for customer specific barriers



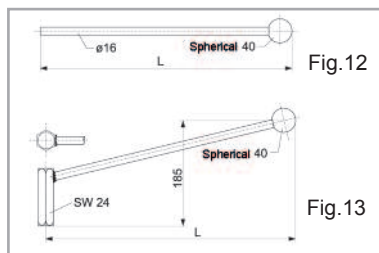
Pic. 14: Inserting of a protective barrier



## DRIESCHER - substation accessories

- medium voltage range -

### Operating levers



Steel parts galvanized!

Type	Fig.	Part-no.	L	Weight approx. kg	Drawing-no.
straight for operating lever actuator	12	774 91350	365	0,66	AZ 4-37694
with hexagon head for D-actuator	13	774 92500	515	1,25	AZ 4-41399

Other customer specific versions on request.

### Hand cranks

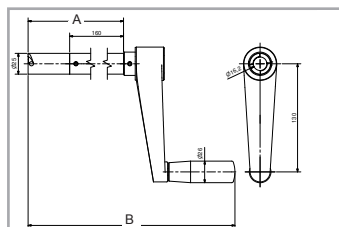


Fig. 14

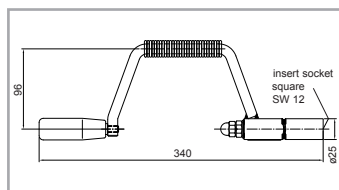


Fig. 15

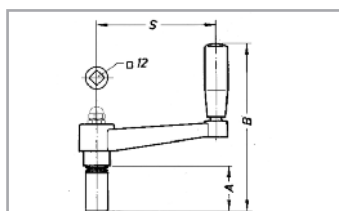


Fig. 16

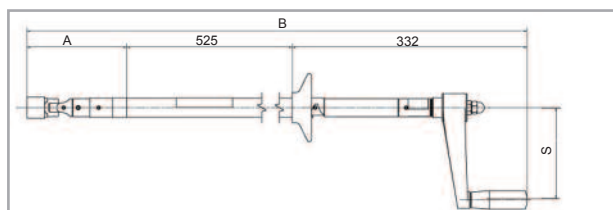


Fig. 17

Steel parts galvanized, partially with torque clutch  
for indoor substations!

Application	Torque clutch	Part-no.	Fig.	A	B	S	Drawing-no.
<b>Vakuum circuit breaker</b>							
manual charging							
fixed mounting	-	770 60113	14	50	184	-	LS 4-096793
withdrawable version	yes	770 60118	15	-	-	-	AZ 4-100095
<b>Motor drive UM</b>							
hand crank UM20 / UM30	yes	776 01001	16	49	182	130	AZ 4-036348
extended hand crank for							
UM 10 / UM 15	yes	770 60125	17	141	1000	130	AZ 3-108317
extended hand crank for							
UM 10 / UM 15	yes	770 60121	17	1016	1875	130	AZ 3-104809
extended hand crank for							
UM 10 / UM 15	yes	770 60126	17	1516	2375	130	AZ 3-111076
extended hand crank for							
UM 10 / UM 15	yes	770 60127	17	2816	3675	130	AZ 3-111077

Other customer specific versions and different lengths on request.



Pic. 15: Operating lever, hand crank and key

## DRIESCHER - substation accessories - medium voltage range -

### Key

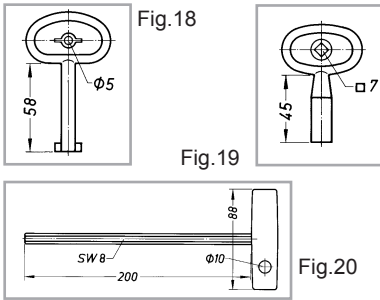


Fig.	Part-no.	Application	Weight ca. kg
18	382 00210	for fastener lock with thorn $\varnothing$ 5	0,05
19	382 00209	for fastener lock with square 7	0,05
20	319 00004	for socket cap screw M10 with hexagon socket head	0,15

### Storage devices

for optimal storage of your substation accessories  
Steel parts galvanized

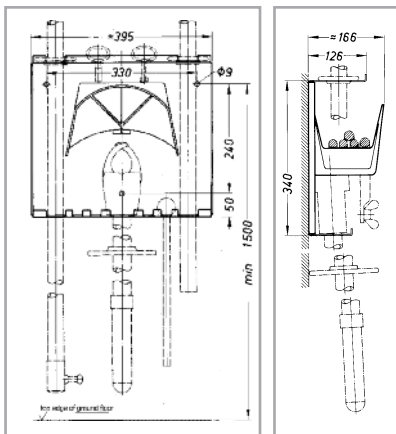


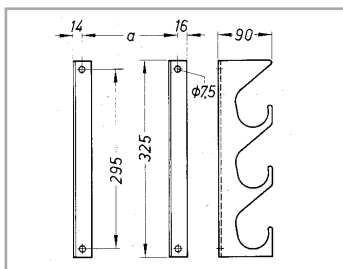
Fig.21

Clamp for	Fig.	Part-no.	Weight approx. kg	Drawing-no.
Substation accessories	21	773 90100	3,55	HA 4-043520
Insulating protective barrier	-	611 30000	0,5	HA 4-064205



*Pic. 16: Clamp for substation accessories and insulating protective barriers*

### Storage devices for HH-capacity fuses

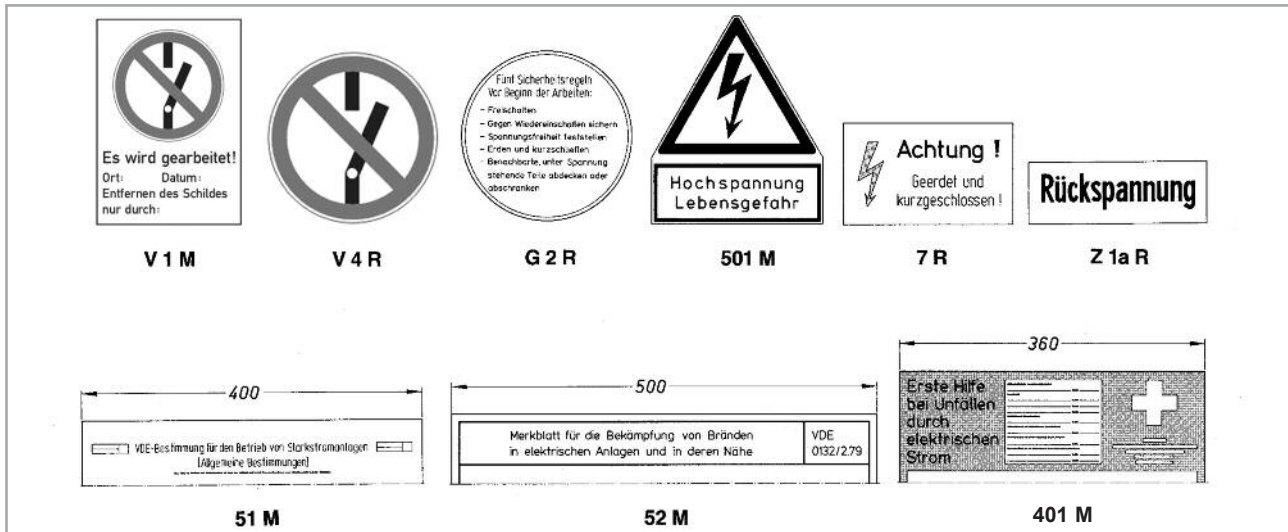


Steel parts galvanized

for kV	Part-no.	a	Weight approx. kg	Drawing-no.
12	773 60100	303	0,85	HH 4-014350
24	773 60100	453	0,85	HH 4-014350
36	773 60100	548	0,85	HH 4-014350

## DRIESCHER - substation accessories - medium voltage range -

### Warning and information signs



Sign-no.	Part-no.	Dimensions mm		On set unit
V 1 M	410 01010	210 x 297	no switching - work is carried on- place- removal of the sign only by...	2
V 4 R	470 01012	∅ 200	symbol / no switching - danger exists	1
G 2 R	470 01014	∅ 200	five safety rules	1
501 M	410 01011	200 x 240	high voltage - danger of life	2
7 R	470 01002	200 x 120	Attention! - grounded and interconnected!	1
Z 1a R	470 01011	210 x 74	reverse voltage	2
51 M	410 01002	400 x 600	VDE-standard for operation of high voltage installations-VDE 0105 part 1/5.75	1
52 M	410 01003	500 x 700	leaflet for fire prevention - VDE 01 32t.79	1
401 M	410 01005	360 x 520	emergency action in case of accident by electrical current	1
Satz	780 80800		set of warning and information signs standard according to VDE 0105	

All warning and informatin signs are available for magnet mounting.



Pic. 17: Set of warning and information signs

## DRIESCHER - substation accessories

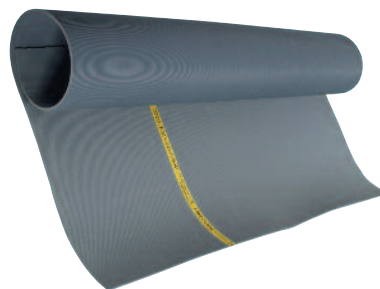
- medium voltage range -

### Other substation accessories

Designation	Description	Part-no.
<b>Insulating mat</b>	Screen mat for elec. control rooms according to VDE 0303, width 1 m	175 71002
<b>Insulating mat</b>	Screen mat for elect. control rooms according to VDE 0303, width 1,2 m	175 71001
<b>hand-held fire extinguisher</b>	Carbon dioxide, 5 kg, suited for elec. substations according to DIN 14406	389 01000
<b>LED- Work- and hand emergency light with charging set</b>	Optimal lighting for operating area, LED, 6 V / 7 Ah	337 01044
<b>Wall holder for emergency light</b>		337 01045
<b>Wall desk</b>	Wood, DIN A3 resting surface with box	389 02005
<b>Circuit-diagram pocket</b>	Carbon dioxide, DIN A4 on edge, self-stick	316 01303
<b>Safety bar</b>	60 x 17 mm, L = 1200 mm, red, hardwood smooth planed	618 00030
<b>Safety bar</b>	60 x 40 mm, L = 1680 mm, red, hardwood smooth planed	618 00040
<b>Mounting for safety bar</b>	Sheet, for safety bar 60 x 17 mm, hot-galvanized	621 52700
<b>Mounting for safety bar</b>	Sheet, for safety bar 60 x 40 mm, hot-galvanized	621 46990
<b>Occupational safety helmet without safety screen</b>	Special-polyethylene, according to DIN EN 397	389 01020
<b>Safety screen for occupational safety helmet</b>	against internal fault, antifog, according to DIN EN 166	389 01021
<b>Touch-up paint</b>	1 kg (500ml), different RAL-colors	191 1xxxx
<b>Plastic cable clamp</b>	K 26/38	395 00015
<b>Plastic cable clamp</b>	K 36/52	395 00016
<b>Substation documentation</b>	DIN A4, 12 pages	819 00011



*Pic. 18: LED-Hand emergency light in the wall-mounting holder and mounting for insulating protective barriers*

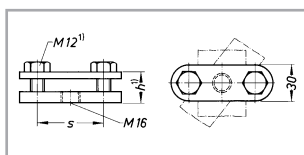


*Pic. 19: Insulating mat*

## DRIESCHER - substation accessories

- medium voltage range -

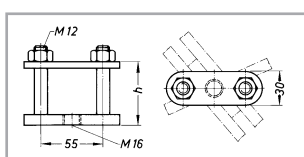
### Conductor support for flat bars



#### Typ III

Ground and end plate hot galvanized  
for indoor and outdoor

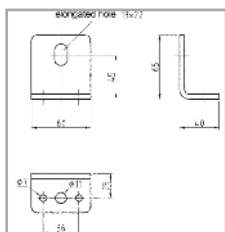
for flat bars	s	for single bus bars Part-no.	h	for double bus bars Part-no.	h	Weight approx. kg	Drawing- no.
up to 40 x 10	55	773 28040	26	773 28042	-	0,35	HE 4-43795
from 40 x 10 to 60 x 10	75	773 28060	26	773 28062	-	0,45	HE 4-43795
from 60 x 10 to 100 x 10	115	773 28100	28	773 28102	48	0,61	HE 4-43795



#### Typ IV

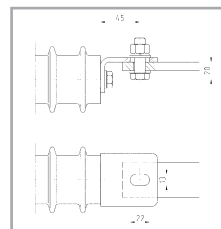
Ground and end plate hot galvanized  
for indoor and outdoor,  
stainless screws

for flat bars (vertical bars)	Part-no.	h	Weight approx. kg	Drawing- no.
40 x 10	773 29040	56	0,39	HE 4-043796
50 x 10	773 29050	66	0,42	HE 4-043796
60 x 10	773 29060	76	0,45	HE 4-043796
80 x 10	773 29080	96	0,51	HE 4-043796
100 x 10	773 29100	116	0,57	HE 4-043796



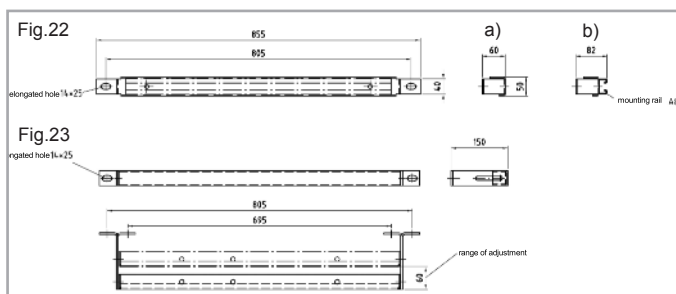
#### Conductor- and final conductor support hot galvanized

Terminal screws M 12 x 40 with nut, spring washer and shed are included



Designation	Part-no.	Weight approx. kg	Drawing- no.
Conductor- and final conductor support	773 20040	0,38	HE 4-093292

### Cable fixing cross-arms



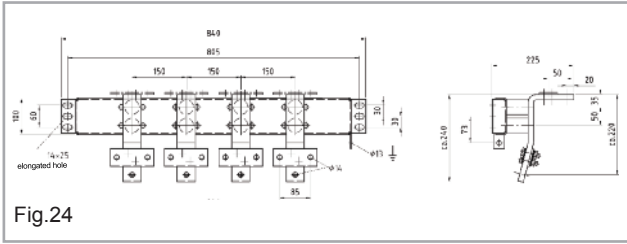
#### Cable fixing cross-arms hot galvanized

Fig.	Traverse	Part-no.	Weight approx. kg	Drawing- no.
22a	Angle section	621 05347	3,73	HA 4-021725/3a
22b	Anchor bar	641 33820	2,70	HA 4-021725/3b
23	Angle section adjustable	773 90400	3,40	HA 4-021725/4



**DRIESCHER - substation accessories**  
- and more -

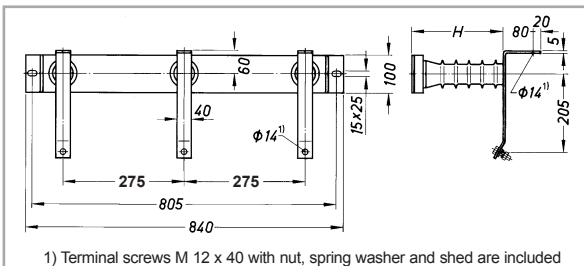
**Low voltage cable connection cross-arm**



**Low voltage cable connection cross-arm**  
Steel parts hot galvanized

Fig.	Cable connection cross-arm	Part-no.	Drawing-no.
24	for 630 kVA transformer up to max. 910 A nominal current	773 90300	HA 4-021725/1
-	for 630 kVA transformer up to max. 1800 A nominal current	773 90230	HA 4-069771/1
-	for 630 kVA transformer up to max. 2900 A nominal current	773 90232	HA 4-069771/2

**Medium voltage cable connection cross-arm**



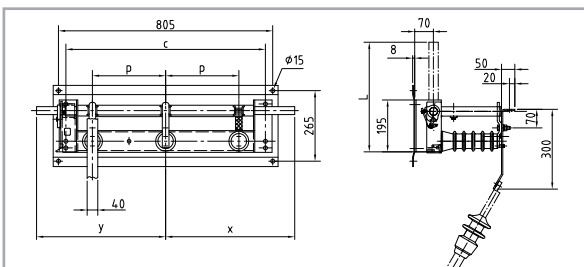
**Medium voltage cable connectin cross-arm**  
Steel parts hot galvanized



Pic. 20: medium voltage cable connection cross-arm

Rated voltage	Cable connection cross-arm	Part-no.	H	Weight approx. kg	Drawing-no.
12 kV	without spherical and ground terminal studs	773 90212	162	7,35	HA 4-021725/2a
24 kV	without spherical and ground terminal studs	773 90224	242	9,00	HA 4-021725/2b
24 kV	with spherical and ground terminal studs $\phi 20$ /M12	773 90225	242	10,00	HA 4-021725/2c
24 kV	with spherical and ground terminal studs $\phi 25$ /M12	773 90227	242	10,25	HA 4-021725/2e

**3-pol. indoor earthing switch for transformer earthing on high voltage side**



**3-pol. Indoor earthing switch for high voltage transformer earthing**  
Steel parts hot galvanized

Drive components:  
shaft extension AZ 4-43851  
bearing block AZ 3-46600/3, bushing for D-actuator AZ 4-41400, operating lever AZ 4-41399

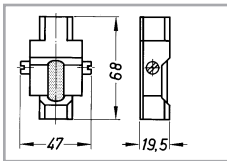
Rated voltage	Rated short-time current	x / y	c	p	L	Earthing switch	Part-no.	Weight approx. kg	Drawing-no.
12	20 kA	450	600	210	325	ES 12-20	734 61030		IT 4-103277/1
12	31,5 kA	450	600	210	325	ES 12-31,5	734 61040		IT 4-103277/2
24	20 kA	565	750	275	405	ES 24-20	734 71030		IT 4-103277/3

## DRIESCHER - substation accessories - and more -

### Lubricants and cleaning agents

Designation	Application	Part-no.	Delivery type	Quantity
<b>Rivolta S.K.D 4002</b>	contact lubricant for indoor switches	490 07011	tube	100 g
<b>Barrierta L55/1</b>	contact lubricant for outdoor switches and partly for indoor switches	490 07012	tube	10 g
<b>Omnigliss-spray</b>	lubricant for hinge and slide points	490 06004	spray	400 ml
<b>SÄKA-cleaning paste</b>	cleaning paste for insulators and other insulating parts	490 09003	tube	750 g
<b>Rivolta S.L.X 500</b>	cleaning of contact surfaces covered with Barrierta	490 09102	spray	300 ml
<b>Rivolta M.T.X 60 forte</b>	high capacity cleaner	490 09100	spray	400 ml

### Short-circuit indicator



**Short-circuit indicator  
with liquid crystal display**

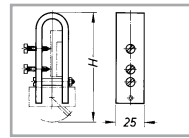


Fig. 25: Clamp yoke

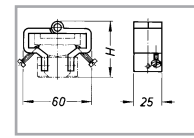


Fig. 26: Hinge yoke

Fig.	for flat bars	Mounting	Part-no.	Operating current (min)	H	Weight approx. kg
25	30 x 4 bis 40 x 15	Clamp yoke	337 03001	400 A	82	0,23
26	30 x 4 bis 40 x 10	Hinge yoke	337 03002	400 A	49	0,17

### General

- Brochure 711** indoor / outdoor - insulators and bushings
- Brochure 774** indoor actuators and accessories
- Brochure 776** outdoor actuators and accessories
- Brochure 810** low voltage switchgears and substation accessories
- Brochure 891** NH-capacity fuses

## **Our range of products includes:**

### **Medium-voltage systems**

- Single-bus and duplicate-bus switchgear
- Non-withdrawable, withdrawable, and truck-type units
- Compact switchgear assemblies
- Custom-made models
- Industrial systems

### **Medium-voltage switchgear**

- Indoor switches, disconnectors, and earthing switches (single and triple pole)
- Indoor circuit breakers (vacuum)
- Outdoor switches (low oil content and vacuum)
- High-voltage high-breaking-capacity fuses

### **Low-voltage systems**

- Open-framework design
- Enclosed break devices (up to 6.300 A)
- Cable and fixed-station distribution cabinets

### **Low-voltage switchgear**

- Switch disconnectors
- Switch and fuse blocks
- Low-voltage high-breaking-capacity fuses

### **Driving gear**

- Hand-operated and motor-operated mechanisms
- Indoor and outdoor driving gear

### **Accessories**

- For medium and low voltages
- For station equipment
- Insulators (0.5 kV - 38.5 kV)
- Plastic and glass-reinforced plastic screening

Dimensions, weights , diagrams and descriptions in the list are non-binding. Subject to change without notice.

**switching • electricity • safely**

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