

CATALOG
SPOT WELDING MACHINES
Edition: February 2006

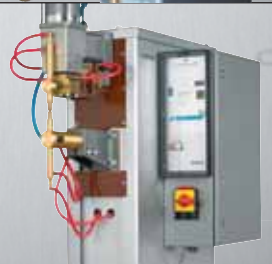
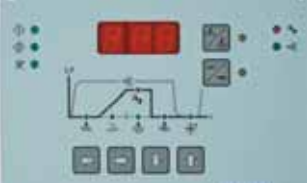


Table of contents

Spot welding machines Series SF / SL 102 / 104	3
Spot welding machines Series SF / SL 202 / 204 / 206	6
Spot welding machines Series PL 40 / 63 / 80 / 100	9
Spot welding guns Series 31	12
Spot welding guns Series 32	13
Spot welding guns Series 33	13
RZ 906 Repair spot welder	15
Welding controls for SF / SL / PL and spot welding guns	16
Accessoires for SF / SL 202 / 204 / 206; Swivelling fittings for SF / SL 202 / 204 / 206	18
Accessoires for PL 40 / 63 / 80 / 100	19
Accessories and wear parts for SF / SL / PL and spot welding guns	20
Electrode tips	33
Water recooling units	37
Spring balancers for spot welding guns	38
Pricelist	

FEATURES:

Spot welding machines Series SF / SL 100



Multi-functional control unit with micro-processor and safety switching. Operation by standardized pictue symbols (not dependant on the language)



Water-cooled, layered high-power transformer suitable for high performance and long duty cycle. Even in shift operation there are no thermal problems.



High value quality components "Made in Germany".

Robust machine framework with Dalex basic technology for light industrial applications.

DALEX Spot welding machines
foot-operated versions, water-cooled

SF 102 / 104

Spot welding machine

standard throat depth 130 – 300 mm infinitely
variable, vertical arm spacing 160 mm,
electrode force max. 220 daN

complete with:
welding control
main power switch in accordance
with VDE 0113
3 m of power cable



Picture: SF 104

SF 102

nominal output at 50% duty cycle: 8 kVA
sec. short-circuit current: 9,1 kA

SF 104

nominal output at 50% duty cycle: 12 kVA
sec. short-circuit current: 11,2 kA

1-time-synchronous welding control

operation modes: with/without welding current
current timer: 1 – 99 cycles
current: 1 – 99 %
thyristor power stage

surcharge for:
mains filter for operation in non-industrial supplies*

*information according to operating instructions

The listed machines are suited for operation on 400 V,
different voltages upon request.

Type

Order-No.

SF 102

SF 102

SF 104

SF 104

DALEX Spot welding machines
foot-operated versions, water-cooled

SL 102 / 104

Spot welding machine

standard throat depth 130 – 300 mm infinitely variable, vertical arm spacing 160 mm, electrode force max. 360 daN

complete with:
welding control
main power switch in accordance with VDE 0113
3 m of power cable



Picture: SL 104

SL 102

nominal output at 50% duty cycle: 8 kVA
sec. short-circuit current: 9,1 kA

SL 102

SL 102

SL 104

nominal output at 50% duty cycle: 12 kVA
sec. short-circuit current: 11,2 kA

SL 104

SL 104

5 timer synchronous welding control
with 2 welding programs
for operation with a thyristor power stage

surcharge for:
double foot pedal for operation mode
„currentless contact“

surcharge for:
mains filter for operation in non-industrial supplies

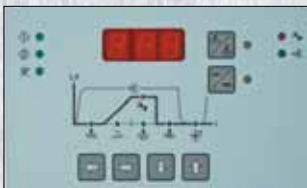
The listed machines are suited for operation on 400 V,
different voltages upon request.

FEATURES:

Spot welding machines Series SF / SL 200 with AFS-Technology



Easily adjustable gap limitation of the upper arm.



Multi-functional control unit with micro-processor and safety switching. Operation by standardized picture symbols (not dependant on the language)

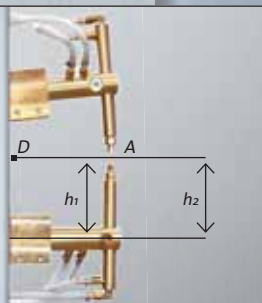


Water-cooled, layered high-power transformer suitable for high performance and long duty cycle. Even in shift operation there are no thermal problems.



High value quality components "Made in Germany".

NEW



$h_1 = h_2$; D = fulcrum
A = working level

DALEX Anti Friction System (AFS)
Through the displacement of the fulcrum of the upper arm on the working level of the lower arm, a friction-free application of the electrodes is guaranteed. Force and current are brought exactly onto the workpiece, the weld is secured.



Excellent access to the machine for service and maintenance.

Extremely rigid machine framework for electrode force up to 420 daN for welding stainless steel etc.

DALEX Spot welding machines
foot-operated versions, water-cooled

SF 202 / 204 / 206

Spot welding machine
standard throat depth 130 – 500 mm infinitely
variable, vertical arm spacing 250 mm,
electrode force max. 360 daN

complete with:
welding control
main power switch in accordance
with VDE 0113
3 m of power cable



Picture: SF 204

SF 202

nominal output at 50% duty cycle: 20 kVA
sec. short-circuit current: 15 kA

SF 204

nominal output at 50% duty cycle: 30 kVA
sec. short-circuit current: 20 kA

SF 206

nominal output at 50% duty cycle: 50 kVA
sec. short-circuit current: 25 kA

1-time-Synchronous welding control

operation modes: with/without welding current
current timer: 1 – 99 cycles
current: 1 – 99 %
thyristor power stage,

surcharge for:
mains filter for operation in non-industrial supplies

The listed machines are suited for operation on 400 V,
different voltages upon request.

Type	Order-No.
SF 202	SF 202
SF 204	SF 204
SF 206	SF 206

DALEX Spot welding machines
pneumatically operated version, water-cooled

SL 202 / 204 / 206

Spot welding machine

with compressed air conditioner, standard throat depth 130 – 500 mm, infinitely variable, vertical arm spacing 250 mm, single stroke cylinder max. 50 mm electrode stroke, electrode force max. 420 daN

complete with:
welding control
main power switch in accordance with VDE 0113
3 m of power cable

SL 202

nominal output at 50% duty cycle: 20 kVA
sec. short-circuit current: 15 kA

SL 204

nominal output at 50% duty cycle: 30 kVA
sec. short-circuit current: 20 kA

SL 206

nominal output at 50% duty cycle: 50 kVA
sec. short-circuit current: 25 kA

5 timer synchronous welding control
with 2 welding programs
for operation with a thyristor power stage

surcharge for:
5 timer synchronous welding control MPS 10
with 8 welding programs
for operation with a thyristor power stage

surcharge for:
double foot pedal for operation mode „currentless contact“
throat depth 380 – 700 mm for SL 202
throat depth 380 – 700 mm for SL 204
throat depth 380 – 700 mm for SL 206

surcharge for:
mains filter for operation in non-industrial supplies

The listed machines are suited for operation on 400 V,
different voltages upon request.



Picture: SL 204

Type	Order-No.
SL 202	SL 202
SL 204	SL 204
SL 206	SL 206

FEATURES:

Spot welding machine Series PL



Multifunction welding control with comfortable memory function for up to 8 material and component pairings.



Water-cooled, layered high-power transformer suitable for high performance and long duty cycle. Even in shift operation there are no thermal problems.



Throat depth infinitely adjustable from 250 up to 580 e.g. 450 – 750 mm and height adjustable arm gap.

Parallel guided electrode force system up to 600 daN.

DALEX Spot welding machines
 pneumatically operated version, water-cooled

PL 40 / 63

Spot welding machine

Version A = spot weld fitting with foot pedal and front-mounted electrode support, watercircuit with fittings for external re cooler

basic equipment:

throat depth 250 – 550 mm infinitely adjustable,
 vertical arm spacing 150 or 310 mm,
 electrode force 100 – 600 daN,
 single stroke cylinder max. stroke 65 mm

complete with:

add-on control cabinet and
 welding control main power switch
 in accordance with VDE 0113



Picture: PL 63

PL 40

nominal output at 50% duty cycle: 40 kVA
 sec. short-circuit current: 26,2 kA

PL 63

nominal output at 50% duty cycle: 63 kVA
 sec. short-circuit current: 31,5 kA

5 timer synchronous welding control
 with 8 welding programs
 for operation with a thyristor power stage

surcharge for:

double foot pedal for operation mode
 „currentless contact“
 (not available in connection with double stroke cylinder)

throat depth 450 – 750 mm

flow control unit

optional:

with double stroke cylinder
 electrode force 100- 600 daN
 stroke 45 + 20 mm

surcharge for:

mains filter for operation in non-industrial supplies

The listed machines are suited for operation on 400 V,
 different voltages upon request.

Type

Order-No.

PL 40

PL 40

PL 63

PL 63

DALEX Spot welding machines
 pneumatically operated version, water-cooled

PL 80 / 100

Spot welding machine

Version A = spot weld fitting with foot pedal and front-mounted electrode support, watercircuit with fittings for external re cooler

basic equipment:

throat depth 350 – 650 mm infinitely adjustable,
 vertical arm spacing 160 or 360 mm,
 single stroke cylinder max. stroke 90 mm,
 electrode force 100 – 600 daN

complete with:

add-on control cabinet
 and welding control
 main power switch in accordance with VDE 0113

PL 80

nominal output at 50% duty cycle: 80 kVA
 sec. short-circuit current: 35 kA

PL 100

nominal output at 50% duty cycle: 100 kVA
 sec. short-circuit current: 41,5 kA

5 timer synchronous welding control
 with 8 welding programs
 for operation with a thyristor power stage

surcharge for:

double foot pedal for operation mode
 "currentless contact"
 (not available in connection with double stroke cylinder)

flow control unit

optional:

with double stroke cylinder
 electrode force 100 – 600 daN
 stroke 65 + 20 mm

surcharge for:

mains filter for operation in non-industrial supplies




The listed machines are suited for operation on 400 V,
 different voltages upon request.






Picture: PL 100

Type	Order-No.
PL 80	PL 80
PL 100	PL 100



DALEX Spot welding guns for car body repairs

		Type	Order-No.	
(without electrode arms)				
<p>A 3112 Spot welding gun manually operated, air-cooled</p> <p>with double stroke mechanism and short-stroke push-to-lock bolt: short-stroke 25 mm, long stroke 57 mm, with electrode force switch and secondary transformer for the current control</p> <p>nominal output at 50 % duty cycle: 2,4 kVA sec. short-circuit current: 8,5 kA electrode force: 180 daN vertical arm spacing: 120 mm suitable control units: RS 15 Z 16 or Variospot 3.3</p>		 <p>Picture: A 3112</p>		
		A 3112	A3112.11079.1	
<p>A 3119 Spot welding gun manually operated, water-cooled</p> <p>with double stroke mechanism and short-stroke push-to-lock bolt: short stroke 25 mm, long stroke 57 mm, with electrode force switch and secondary transformer for current control</p> <p>nominal output at 50% duty cycle: 8,0 kVA sec. short-circuit current: 9,5 kA electrode force: 180 daN vertical arm spacing: 120 mm welding performance: sheet steel 3+3 mm suitable control units: RS 15 Z 16 or Variospot 3.3 compatible water recooling unit: Cool1 compatible spring balancer: D4/17</p> <p>optionally available: suspension strap with suspension cheeks cardan joint, pivoting</p>		 <p>Picture: A 3119</p>		
		A 3119	A 3119.15064.1	
<p>A 3139 S3 Spot welding gun air operated, water-cooled</p> <p>with double stroke mechanism: long stroke 52 mm, working stroke 27 mm</p> <p>nominal output at 50 % duty cycle: 8 kVA sec. short-circuit current: 9,5 kA electrode force: 300 daN vertical arm spacing: 120 mm welding performance: sheet steel 3 + 3 mm suitable control units: RS 15 Z 16 or Variospot 3.3 compatible water recooling unit: Cool1</p> <p>Upon request: A 3139 S2 Spot welding gun</p> <p>technical data similar to A 3139 S3 however, with cardan joint suitable control units: RS 15 Z 16 or Variospot 3.3 compatible water recooling unit: Cool1 compatible spring balancer: D4/21 or D5/30</p>		 <p>Picture: A 3139 S3</p>		
		A 3139 S3	A3139S3.15068.1	
		A 3139 S2	A3139S2.15067.1	

DALEX Spot welding guns
air operated, water-cooled

	Type	Order-No.	(without electrode arms)
<p>Model 1 with manual control valve and electrode force switch</p> <p>3238 Spot welding gun</p> <p>with double stroke cylinder: long stroke 75 mm, pre-stroke 50 mm, work-stroke with stroke adjustment 0-25 mm</p> <p>nominal output at 50 % duty cycle: 16 kVA sec. short-circuit current: 13,5 kA electrode force: 270 daN vertical arm spacing: 130 mm welding performance: sheet steel 3 + 3 mm max. 4 + 4 mm</p> <p>suitable control units: RS 15 Z 32 compatible water recooling unit: Cool 1 compatible spring balancer: D5 / 45</p>	 <p>Picture: 3238</p>	3238	3238_4.11070.1
<p>Model 2 with 5/2-way solenoid valve</p> <p>3228 Spot welding gun</p> <p>with double stroke cylinder: long stroke 75 mm, pre-stroke 50 mm, work-stroke with stroke adjustment 0-25 mm</p> <p>nominal output at 50 % duty cycle: 16 kVA sec. short-circuit current: 13,5 kA electrode force: 270 daN vertical arm spacing: 130 mm welding performance: sheet steel 3 + 3 mm max. 4 + 4 mm</p> <p>suitable control units: add-on control cabinet B200 + welding control insert MPS 10</p> <p>compatible water recooling unit: Cool 1 compatible spring balancer: D5 / 45</p>	 <p>Picture: 3228</p>	3228	3228_4.11069.1
<p>3328-6 Spot welding gun</p> <p>series-equipped with gyroscopic safety suspension, with double stroke cylinder long stroke 51 mm, pre-stroke 33 mm, working stroke with 0-18 mm</p> <p>nominal output at 50 % duty cycle: 25 kVA sec. short-circuit current: 22,5 kA electrode force: 600 daN vertical arm spacing: 118 mm welding performance: sheet steel 4 + 4 mm</p> <p>suitable control units: add-on control cabinet B200 + welding control insert MPS 10</p> <p>compatible water recooling unit: Cool 1 compatible spring balancer: - for throat depth 170 + 350 mm D5/60 500 – 800 mm D5/75</p> <p>* added price for arm gap 248 mm</p>	 <p>Picture: 3328-6</p>	3328-6	3328_6.11106.1_1

DALEX Spot welding guns
air operated, water-cooled

		Type	Order-No.	(without electrode arms)
<p>3329 Spot welding gun</p> <p>with double stroke cylinder: long stroke 60 mm, pre-stroke 40 mm, work-stroke with stroke adjustment 0 – 20 mm</p> <p>nominal output at 50 % duty cycle: 25 kVA sec. short-circuit current: 17 kA electrode force: 440 daN vertical arm spacing: 140 mm welding performance: sheet steel 3 + 3 mm max. 4 + 4 mm suitable control unit: add-on control cabinet B 200 + welding control insert MPS 10 compatible water recooling unit: Cool 1 compatible spring balancer: D5/60</p>		 <p>Picture: 3329</p>	3329	3329.16474.1
<p>C-Gun with 5/2-way-solenoid-valve 3346, 3348, 3349 Spot welding gun</p> <p>choice of single stroke cylinder and adjustment stroke 5 – 45 mm (3346, 3349) or double stroke cylinder: electrode stroke max. 70 mm (3348)</p> <p>nominal output at 50 % duty cycle: 3346 22 kVA 3348 25 kVA 3349 35 kVA sec. short-circuit current: 3346 17 kA 3348 18,2 kA 3349 26,3 kA electrode force: 360 daN vertical arm spacing: 100 mm welding performance: sheet steel 3 + 3 mm max. 4 + 4 mm suitable control unit: add-on control cabinet B 200 + welding control insert MPS 10 compatible water recooling unit: Cool 1 compatible spring balancer: 3346 D5/45 3348 D5/60 3349 D5/75</p>		 <p>Picture: 3348</p>	3346 3348 3349	3346_4.11073.1 3348_4.11074.1 3349.16480.1

DALEX RZ 906
Repair spot welder

Repair spot welder RZ 906

Spot welding with quality control:
special programmes for coated metal or sheet metal
with rest adhesive an vanish

Technical Data RZ 906

Rating power at 50 % d. c.: 20 kVA
Short-circuit current: 12 kA
Electrode force max.: 340 daN



Picture: RZ906

Basics: mobile welding unit with integrated
welding controller, inverter, cooler, middle
frequency transformer, bar, balancer, spotter
with bulge hammer and accessories.

RZ906.16496.1

C-gun with monitoring of welding quality
optional with:

C-bow transverse incl. set of electrodes, air cooled

RZ906.97102.3

150 mm C-bow incl. set of electrodes, water cooled

RZ906.97103.3

350 mm C-bow incl. set of electrodes, water cooled

RZ906.97104.3

500 mm C-bow incl. set of electrodes, water cooled

RZ906.97105.3

X-gun with monitoring of welding quality
and standard arms (window 92mm x 110mm),
water cooled

RZ906.16494.1

DALEX
Welding controls

Type

Order-No.

for SF machines

current setting for phase shift,
digital parameter input

RS 15



Picture: RS 15

1 timer synchronous welding control

operating modes: with / without current
current: 1 – 99 %
current time: 1 – 99 cycles

for SL machines

current setting via phase shift
(solenoid valve voltage 24 V)

upslope 0 – 15 cycles
parameter setting via arrow keys



Picture: RS 17

5 timer synchronous welding control
with 2 welding programs

operating modes: single (EP) / series (SP)
squeeze time, Hold time,
off time and cool time: each 1 – 99 cycles
current time: 0,5 – 9,5; 10 – 99 cycles
welding current: 0 – 99 %
impulses: 1 – 99
upslope time: 0,5 – 9,5; 10 – 15 cycles

for PL machines

current setting via phase shift
(solenoid valve voltage 24 V)

upslope 0 – 15 cycles
parameter setting via arrow keys



Picture: MPS 10

MPS 10

5 timer synchronous welding control
with 8 welding programs

operating modes: single (EP) / series (SP)
squeeze time, Hold time,
off time and cool time: each 1 – 99 cycles
current time: 0,5 – 9,5; 10 – 99 cycles
welding current: 0 – 99 %
impulses: 1 – 99
upslope time: 0,5 – 9,5; 10 – 15 cycles

DALEX Welding control and Sheet Steel processing unit

for Spot welding guns
A 3112 / A 3119

A 3139 S2 / A 3139 S3

RS 15 Z 16 Control unit

for Spot welding gun
3238

RS 15 Z 32 Control unit

1-timer-thyristor control unit, current: 1-99 %, current time: 1-99 cycles, current control via secondary transformer with main power switch in accordance with VDE 0113



Picture: RS 15 Z 16

Type

Order-No.

RS 15 Z 16

RS_15_Z_16

RS 15 Z 32

RS_15_Z_32

for Spot welding guns
A 3112 / A 3119

A 3139 S2 / A 3139 S3

Control unit with
Sheet steel processing unit

Type Variospot 3.3, technical equipment as RS 15, in addition equipped with selector switch for operating DALEX spot welding guns or poke gun electrode with secondary welding cable, 1600 mm long, with accessory case and exchangeable electrodes for shrinking, welding-on of pins, bolts, disks, nails and wire electrodes, dinging hammer.

line filter for interference suppression in accordance with EMV law
Euro standard EN50081-1
power cable and 16 A CEE plug



Picture: Variospot 3.3

Variospot 3.3

VARIOSPOT_3_3

for Spot welding guns
3228
3328-6
3329
3346 / 3348 / 3349

Add-on control cabinet B 200
welding control insert MPS 10

with plug connection
for connection on to DALEX spot welding guns

fitted with:
main switch according to VDE 0113
3 m mains connection cable

8 welding programs for
operation with thyristor power stage

- digital current and time adjustment
- up-slope and impulse function
- voltage drop compensation
(automatic acknowledgement of frequency 50/60 Hz)
- parameter input via keyboard
- status indication via LED's
- international operating symbols
- interlocking and stepping contact



Picture: Add-on control cabinet B 200

3328-6
3228 / 3329 / 3346 / 3348
3349

MPS 10
MPS 10
MPS 10

S_78.96832.1_5
S_78.96832.1
S_78.96832.1_7

DALEX
Optional equipment and
Swivelling fittings

for SF 102 / 104; SL 102 / 104

Electrode arm, complete 32 mm Ø, 300 mm mit 1B20, stright

Z_6.51411.3

Electrode arm, complete 32 mm Ø, 300 mm, mit 1C20, inclined

Z_6.51278.3

Vice Electrode 16 ES 8, clamping range 3-8 mm Ø

Z_5.51480.3

Standard electrode arm, 32 mm Ø, 300 mm, complete with electrode holder SF 8.51209.3

SF8.51208.3

Electrode holder, standard, 16 mm Ø, 140 mm, mit 1 A20

SF8.51209.3

for SF / SL 202 / 204 / 206

short electrode holder 25 mm (, 50 mm, with 2R1/1A20

50_Z_2.51816.3

long electrode holder 25 mm (, 300 mm, with 2R1/1A20

300_Z_2.51816.3

standard electrode holder 25 mm (, 180 mm, with 2R1/1A20

SL16.51307.3

bar electrode holder, electrode surface 20 x 100 mm

Type 25 BE 100

100_Z_3.53239.3

pendulum electrode holder, electrode surface 20 x 85 mm

Type 25 BE 85

85_Z_3.53233.3

angular electrode holder, straight

Type 25 WE 100 G

Z_4.52717.3

angular electrode holder, angled

Type 25 WE 100 S

822_9206.1

vice electrode clamping range 5 – 15 mm ø

Type 25 ES 15

Z_5.51713.3

tube arm, complete, 45 mm, 500 mm with 2B30, straight

Angled electrode holder
Spot welding tight steel profiles
made possible with the angled
electrode holder – choice of ang-
led or straight electrode seat.

Z_6.52579.3

tube arm, complete, 45 mm, 500 mm with 2C25, angled

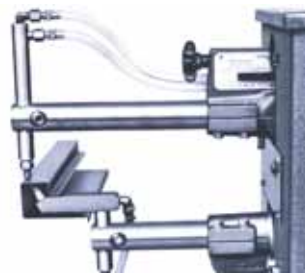
Z_6.52581.3

tube arm, complete, 45 mm, 700 mm with 2B30, straight

Z_6.52580.3

tube arm, complete, 45 mm, 700 mm with 2C25, angled

Z_6.52582.3



SL 202 / 204 / 206
Spot welding machine

fittings made of 140 mm or 300 - 500 mm

throat depth 300 mm

Z_29.51513.3

throat depth 500 mm SL 204

Z_29.51514.3

throat depth 700 mm

Z_29.51515.3



Swivel fitting
Welding in hard to reach areas:
the electrode holder on the swi-
vel fitting can be adjusted axially;
the lower electrode arm adjusted
radially and additionally in the
height.

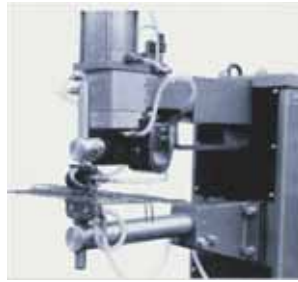
DALEX Accessoires

for PL 40 / 63

- standard electrode holder
- short electrode holder
- long electrode holder
- angular electrode holder, straight
max. electrode force 280 daN
- angular electrode holder, angled
max. electrode force 280 daN
- pendulum electrode holder
- bar electrode holder
- vice electrode
- standard electrode arm, bottom
250 – 550 mm throat depth
- standard electrode arm, bottom
450 – 750 mm throat depth
- tube arm, straight 250 – 550 mm
- tube arm, straight 450 – 750 mm
- tube arm, angled 250 – 550 mm
- tube arm, angled 450 – 750 mm

for PL 80 / 100

- standard electrode holder, top
- standard electrode holder, bottom
- short electrode holder
- long electrode holder
- angular electrode holder, straight
max. electrode force 300 daN
- angular electrode holder, angled
max. electrode force 300 daN
- pendulum electrode holder
- bar electrode holder
- vice electrode
- standard electrode arm, bottom
350 – 650 mm throat depth
- tube arm, straight 350 – 650 mm
- tube arm, angled 350 – 650 mm



Pendulum and Bar
electrode holder
Multiple welds in one stroke
require (e.g. cross-wires) a pendu-
lum electrode holder above and a
beam electrode below.



Vice electrode
For welding on bolts, threaded
rods etc. via current-carrying
clamps.



Tube arm
For spot welding cylindrical
components.

Type	Order-No.	
E25/2/180	180_Z_2.51105.3	74,-
E25/2/63	63_Z_2.51105.3	66,-
E25/2/300	300_Z_2.51105.3	90,-
25 WE 100 G	Z_4.52717.3	
25 WE 100 S	822_9206.1	
25 PE 85	85_Z_3.53233.3	
25 BE 100	100_Z_3.53239.3	
25 ES 15	Z_5_51713.3	
	PL40_2.13954.0	
	PL40_2.13955.0	
	Z_6.52812.3	
	Z_6.52813.3	
	Z_6.52814.3	
	Z_6.52815.3	
E 30/2/170	170_Z_2.51818.3	
E 30/2/240	240_Z_2.51818.3	
E 30/2/75	75_Z_2.51818.3	
E 30/2/400	400_Z_2.51818.3	
30 WE 100 G	Z_4.53093.3	
30 WE 100 S	Z_4.53029.3	
2 PE 85	85_Z_3.53236.3	
30 BE 100	100_Z_3.53240.3	
30 ES 15	Z_5_51714.3	
	PL80_2.13987.0	
	Z_6.52816.3	
	Z_6.52817.3	

DALEX Accessoires	Type	Order-No.	
or SF / SL			
compressed air hose with textile inlay, oil-resistant, NG 8	per m	029_3132.0	
threaded hose clamp for NG 8	pc.	029_3580.0	
high pressure water hose with textile inlay, NG 8	per m	029_3128.0	
air servicing oil	0,5 l can	2405095	
for PL			
high pressure water hose NG 20 ¾"	per m	029_4436.0	
threaded hose clamp for NG 20	pc.	029_3572.0	
compressed air hose NG 10 ¾"	per m	029_3133.0	
threaded hose clamp for NG 10	pc.	029_3581.0	
threaded hose clamp for NG 10	0,5 l can	2405095	
for Spot welding gun A 3112			
suspension strap with clamps		A3111_95585.3	
special electrode material DA 12 mm Ø	per m	RD_12.0_QUAL_1A	
special extension cord 3 x 4 m ² , with trip line, plug and coupler socket 5 m long		5_S_59.96985.3	
square tube V 20 N for electrode arms	per m	3111.14999.0	
base for stationary operation incl. foot-operated lever		19165023	
for cleaning spot welding electrodes:			
ratchet for crowned surfaces		X_35540	
polishing block no. 120		X_SCHLEIFFIX_120	
for Spot welding guns 3228 / 3238			
compressed air hose with textile inlay, oil-resistant NG 10	per m	029_3133.0	
threaded hose clamp NG 6 and NG 8		029_3580.0	
high pressure water hose with textile inlay NG 8	per m	029_3128.0	
air servicing	0,5 l can	2405095	
air servicing unit NG 10		Z_18.53101.3	

DALEX
Accessories

for Spot welding gun
3328-6

compressed air hose with textile inlay oil-resistant NG 10	per m
threaded hose clamp NG 10	
high pressure water hose with textile inlay NG 8	per m
air servicing oil	0,5 l can
air servicing unit	
sliding piece*	St. 50

*necessary for electrode arms with
800 mm throat

Electrode tips:
For the spot welding gun 3328-6 you can use electrode tip with seat
no. 8 (Type No., those that begin with the number 8).

for Spot welding guns
3329 / 3346 / 3348 / 3349

compressed air hose with textile inlay, oil-resistant NG 10	per m
threaded hose clamp NG 6 and NG 8	
threaded hose clamp NG 10 and NG 13	
high pressure water hose with textile inlay NG 8	per m
air servicing oil	0,5 l can
air servicing unit NG 10 for 3346/3348/3329	
air servicing unit NG 13 for 3349	
intermediate piece for arm gap 270 mm for 3329	
electrode holder compl. 25 mm Ø with 2 A 30, 290 mm for 3329	
*sliding piece for 3329	St. 50

*necessary for electrode arms with long throats

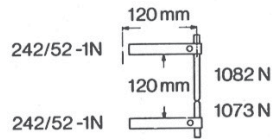
Type	Order-No.
	029_3133.0
	029_3581.0
	029_3128.0
	2405095
	Z_18.53101.3
	SZ.77141.1
	029_3133.0
	029_3580.0
	029_3581.0
	029_3128.0
	2405095
	Z_18.53101.3
	Z_18.53102.3
	3326_3.51154.3
	3326.51975.3
	SZ.77141.1

DALEX
Electrode arms

for Spot welding gun A 3112
made of drawn, tough-pitch copper,
complete with spot welding electrodes made
of 12 mm Ø DA material and clamping piece

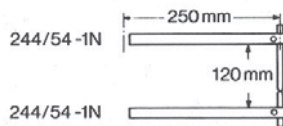
standard electrode arms, complete

throat depth 120 mm

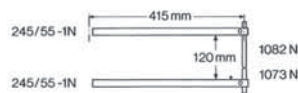


Type	Order-No.	
242/52 N	upper 3111.96805.3 lower 3111.96806.3	30,50 29,50
244/54 N	upper 3111.96907.3 lower 3111.96908.3	45,50 44,50
245/55 N	upper 3111.96909.3 lower 3111.96910.3	59,50 54,50
244/1074 N	upper 3111.96911.3 lower 3111.96911.3	55,- 55,-
252 N	upper 3111.96912.3 lower 3111.96912.3	35,- 35,-
252/1080-99 N	upper 3111.96916.3 lower 3111.96917.3	48,50 43,50
252/1090 N	upper 3111.96913.3 lower 3111.96913.3	44,50 44,50
252/1091-87 N	upper 3111.96914.3 lower 3111.96915.3	38,50 46,50
2001 N	upper 3111.96918.3 lower 3111.96918.3	74,- 74,-

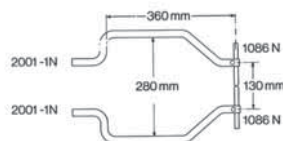
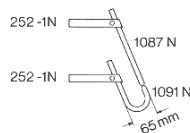
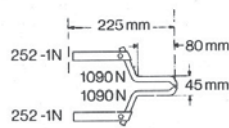
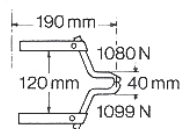
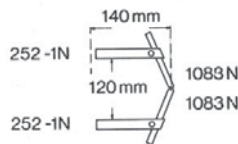
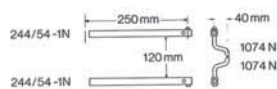
throat depth 250 mm



throat depth 415 mm



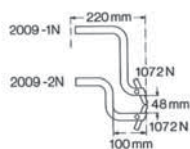
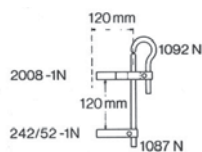
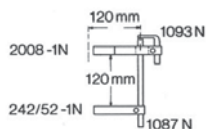
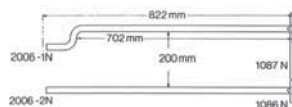
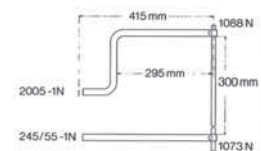
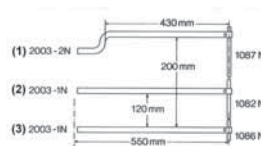
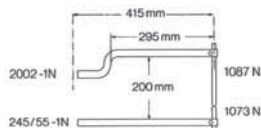
electrode arms for car body repairs
complete



DALEX
Electrode arms

for Spot welding gun A 3112
made of drawn, tough-pitch copper,
complete with spot welding electrodes made
of 12 mm Ø DA material and clamping piece

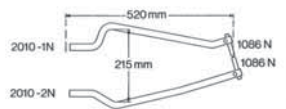
2003 N 3-parts
top arm straight
and curved



Type	Order-No.
2002 N	upper 3111.96919.3 lower 3111.96910.3
2003 N (1) 2003-2 N / 1087 N (2) 2003-1 N / 1082 N (3) 2003-1N / 1086 N	upper 3111.96922.3 upper 3111.96923.3 upper 3111.96924.3
2005 N	upper 3111.96927.3 upper 3111.96910.3
2006 N	upper 3111.96928.3 lower 3111.96929.3
2008 N	upper 3111.96930.3 lower 3111.96931.3
2008/1092 N	upper 3111.96932.3 lower 3111.96931.3
2009 N	upper 3111.96933.3 lower 3111.96934.3

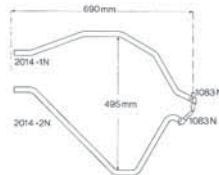
DALEX
Electrode arms

for Spot welding gun A 3112
made of drawn, tough-pitch copper,
complete with spot welding electrodes made
of 12 mm Ø DA material and clamping piece



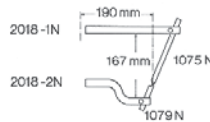
2010 N

upper 3111.96935.3
lower 3111.96936.3



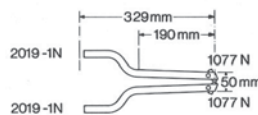
2014 N

upper 3111.96937.3
lower 3111.96938.3



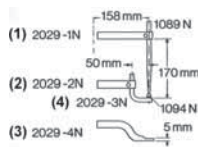
2018 N

upper 3111.96939.3
lower 3111.96940.3



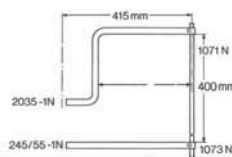
2019 N

upper 3111.96941.3
lower 3111.96941.3



2029 N

(1) 2029-1 / 1089 N upper 3111.96942.3
(2) 2029-2 N+3 lower 3111.96943.3
(3) 2029-3 N / 1094 lower 3111.96825.3
(4) 2029-4 N angle 3111.11876.0



2035 N

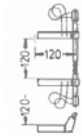
upper 3111.96944.3
lower 3111.96910.3

DALEX
Electrode tips
for air-cooled spot welding guns

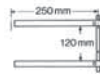
Type	Order-No.	
1071 N	3111.11808.0	
1072 N	3111.11819.0	
1073 N	3111.11814.0	
1074 N	3111.11716.0	
1075 N	3111.11817.0	
1076 N	3111.11812.0	
1077 N	3111.11818.0	
1079 N	3111.11821.0	
1080 N	3111.11822.0	
1082 N	3111.11809.0	
1083 N	3111.11816.0	
1086 N	3111.11810.0	
1087 N	3111.11811.0	
1088 N	3111.11813.0	
1089 N	3111.11825.0	
1090 N	3111.11704.0	
1091 N	3111.11826.0	
1092 N	3111.11827.0	
1093 N	3111.11699.0	
1094 N	3111.11828.0	
1099 N	3111.11831.0	

DALEX
Electrode arms

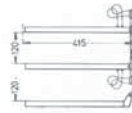
for Spot welding guns A 3119 / A 3139
model A
made from extruded section of electrolyte hard copper
or extruded section of copper-chrome-alloy,
compl. water-cooled



o-242-1 K upper 3116.51652.3
u-242-1 K lower 3116.51653.3
V20/6/120 s 3116.51384.3
V20/6/120 g 120_3116.96440.3



o-244/54-1 K upper 3116.51654.3
u-244/54-1 K lower 3116.51655.3
V20/6/250 s 3116.51386.3



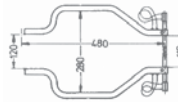
o-245/55-1 K upper 3116.51656.3
u-245/55-1 K lower 3116.51657.3
V20/6/415 s 3116.51387.3



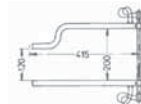
o-2003-1 K upper 3116.51658.3
u-2003-1 K lower 3116.51659.3
V20/6/550 s 3116.51388.3



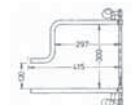
252 K 3116.51660.3



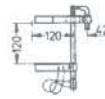
2001 K 3116.51661.3



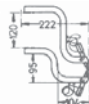
2002 K upper 3116.51662.3
245/55-1 K lower 3116.51657.3



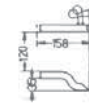
2005 K upper 3116.51663.3
245/55-1 K lower 3116.51657.3



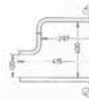
2008 K upper 3116.51669.3
u-242-1 K lower 3116.51670.3



2009-1 K upper 3116.51671.3
2009-2 K lower 3116.51672.3



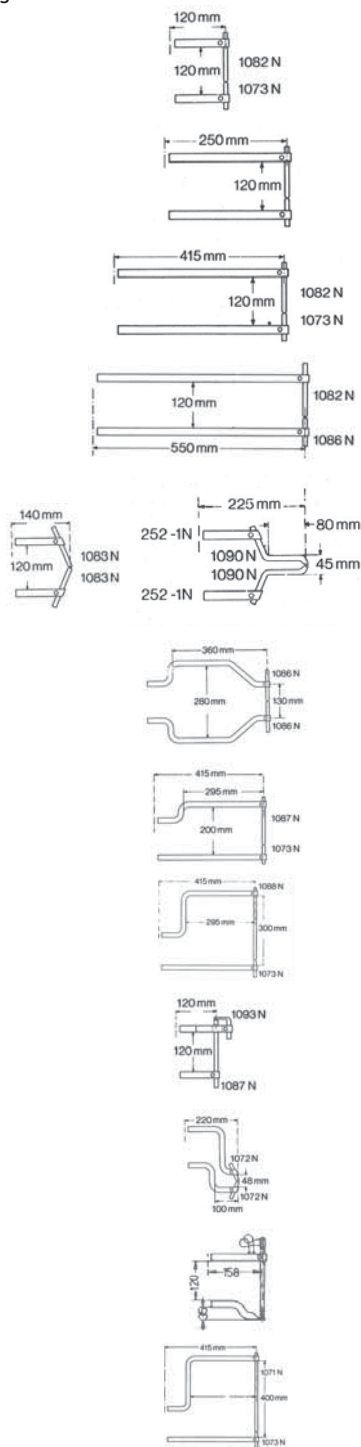
2029-1 K upper 3116.51683.3
2029-4 K lower 3116.51399.3



2035 K upper 3116.51668.3
u-245/55-1 K lower 3116.51657.3

DALEX
Electrode arms

for Spot welding guns A 3119 / A 3139
model B
made from extruded section of electrolyte
hard copper or extruded section of
copper-chrome-alloy, only electrode arms
water-cooled, electrode tip not cooled



Type	Order-No.
o-242-1 KuE u-242-1 KuE	upper 3119.96953.3 lower 3119.96954.3
o-244/54-1 KuE u-244/54-1 KuE	upper 3119.96956.3 lower 3119.96957.3
o-245/55-1 KuE u-245/55-1 KuE	upper 3119.96959.3 lower 3119.96960.3
o-2003-1 KuE u-2003-1 KuE	upper 3119.96962.3 lower 3119.96963.3
252 KuE 252/1090 KuE	3119.96965.3 3119.96967.3
2001 KuE	3119.96969.3
o-2002-1 KuE u-245/55-1 KuE	upper 3119.96971.3 lower 3119.96960.3
o-2005-1 KuE u-245/55-1 KuE	upper 3119.96973.3 lower 3119.96960.3
2008-1 KuE u-242-1 KuE	upper 3116.51669.3 lower 3119.96975.3
o-2009-1 KuE u-2009-1 KuE	upper 3119.96977.3 lower 3119.96978.3
o-2029-1 KuE 2029-4 K	upper 3119.96980.3 lower 3116.51399.3
o-2035-1 KuE u-245/55-1 KuE	upper 3119.96982.3 lower 3119.96960.3

DALEX
Electrode arms

for Spot welding guns 3228 und 3238

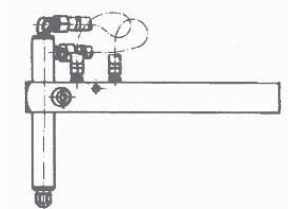
upper electrode arms
compl. with electrode holder,
clamping pieces and electrode tips

straight:

throat depth 170 mm 30/20/170 g

throat depth 350 mm 30/20/350 g

throat depth 500 mm 30/20/500 g



3218.52605.3

3218.52606.3

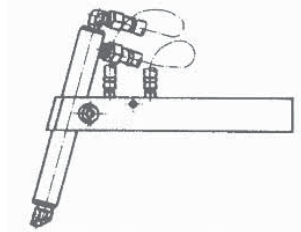
3218.52607.3

Inclined:

throat depth 170 mm 30/20/170 s

throat depth 350 mm 30/20/350 s

throat depth 500 mm 30/20/500 s



3218.52610.3

3218.52611.3

3218.52612.3

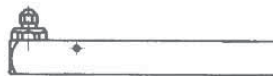
lower electrode arms
compl. with electrode tips

straight:

throat depth 170 mm 30/1/170 g

throat depth 350 mm 30/1/350 g

throat depth 500 mm 30/1/500 g



3218.52615.3

3218.52616.3

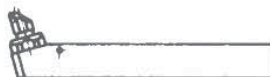
3218.52617.3

inclined:

throat depth 170 mm 30/1/170 s

throat depth 350 mm 30/1/350 s

throat depth 500 mm 30/1/500 s



3218.52620.3

3218.52621.3

3218.52622.3

DALEX
Square electrode arms

for Spot welding gun 3328-6
torsionally stiff, small deflection
electron beam welded head piece

upper electrode arms
compl. with electrode holder,
clamping pieces and electrode tips

straight:

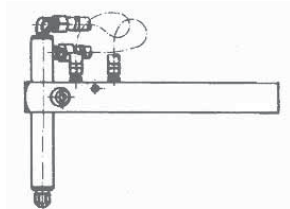
throat depth 170 mm E 34/25/170 g

throat depth 350 mm E 34/25/350 g

throat depth 500 mm E 34/25/500 g

throat depth 650 mm E 34/25/650 g

throat depth 800 mm E 34/25/800 g



3328_5.53055.3

3328_5.53056.3

3328_5.53057.3

3328_5.53058.3

3328_5.53059.3

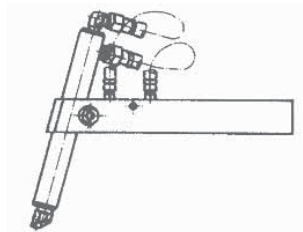
inclined:

throat depth 350 mm E 34/25/350 s

throat depth 500 mm E 34/25/500 s

throat depth 650 mm E 34/25/650 s

throat depth 800 mm E 34/25/800 s



3328_5.53060.3

3328_5.53061.3

3328_5.53062.3

3328_5.53063.3

lower electrode arms
compl. with electrode tips

straight:

throat depth 170 mm E 34/8/170 g

throat depth 350 mm E 34/8/350 g

throat depth 500 mm E 34/8/500 g

throat depth 650 mm E 34/8/650 g

throat depth 800 mm E 34/8/800 g



3328_5.53045.3

3328_5.53046.3

3328_5.53047.3

3328_5.53048.3

3328_5.53049.3

inclined:

throat depth 170 mm E 34/8/170 s

throat depth 350 mm E 34/8/350 s

throat depth 500 mm E 34/8/500 s

throat depth 650 mm E 34/8/650 s

throat depth 800 mm E 34/8/800 s



3328_5.53050.3

3328_5.53051.3

3328_5.53052.3

3328_5.53053.3

3328_5.53054.3

DALEX
Square electrode arms

for Spot welding gun 3329

upper electrode arms
compl. with electrode-holder,
clamping pieces and electrode tips

straight:

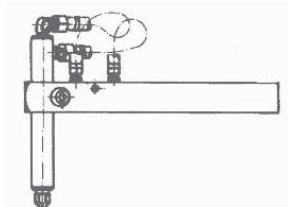
throat depth 170 mm 34/25/170 g

throat depth 350 mm 34/25/350 g

throat depth 500 mm 34/25/500 g

throat depth 650 mm 34/25/650 g

throat depth 800 mm 34/25/800 g



3326.52500.3

3326.52501.3

3326.52502.3

3326.52503.3

3326.52504.3

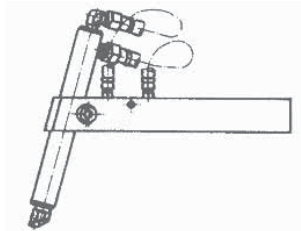
inclined:

throat depth 350 mm 34/24/350 s

throat depth 500 mm 34/25/500 s

throat depth 650 mm 34/25/650 s

throat depth 800 mm 34/25/800 s



3326.52505.3

3326.52506.3

3326.52507.3

3326.52508.3

lower electrode arms
compl. with electrode tips

straight:

throat depth 170 mm 34/2/170 g

throat depth 350 mm 34/2/350 g

throat depth 500 mm 34/2/500 g

throat depth 650 mm 34/2/650 g

throat depth 800 mm 34/2/800 g



3326.52509.3

3326.52510.3

3326.52511.3

3326.52512.3

3326.52513.3

inclined:

throat depth 170 mm 34/2/170 s

throat depth 350 mm 34/2/350 s

throat depth 500 mm 34/2/500 s

throat depth 650 mm 34/2/650 s

throat depth 800 mm 34/2/800 s



3326.52514.3

3326.52515.3

3326.52516.3

3326.52517.3

3326.52518.3

DALEX
Electrode arms
C-type electrode arms, compl. with electrode tips

for Spot welding guns 3346 and 3349

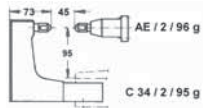
lower electrode arms
with flange-on electrode holder

straight:

throat depth 95 mm

C 34/2/95 g

AE 2/96 g



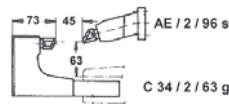
3346.51403.3

3346.51401.3

throat depth 63 mm

C 34/2/63 g

AE 2/96 s



3346.51404.3

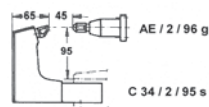
3346.51402.3

inclined:

throat depth 95 mm

C 34/2/95 s

AE 2/96 g



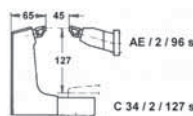
3346.51405.3

3346.51401.3

throat depth 127 mm

C 34/2/127 s

AE 2/96 s



3346.51406.3

3346.51402.3

for Spot welding gun 3348

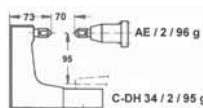
lower electrode arms
with flange-on electrode holder

straight:

throat depth 95 mm

C-DH 34/2/95 g

AE 2/96 g



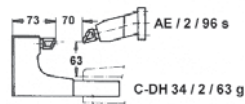
3348.96630.3

3346.51401.3

throat depth 63 mm

C-DH 34/2/63 g

AE 2/96 s



3348.96631.3

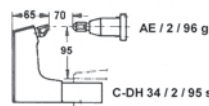
3346.51402.3

inclined:

throat depth 95 mm

C-DH/34/2/95 s

AE 2/96 g



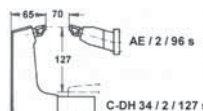
3348.96632.3

3346.51401.3

throat depth 127 mm

C-DH 34/2/127 s

AE 2/96 s



3348.96633.3

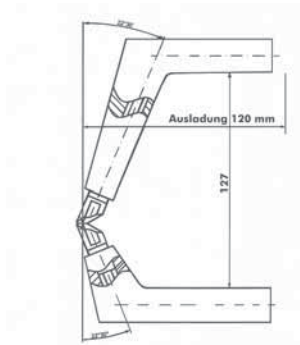
3346.51402.3

DALEX
 Electrode arms
 special – electrode arms

Type

Order-No.

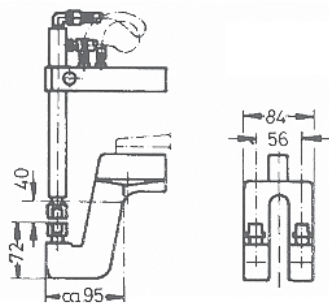
for Spot welding guns A 3119 / A 3139



77962

for Spot welding gun 3329

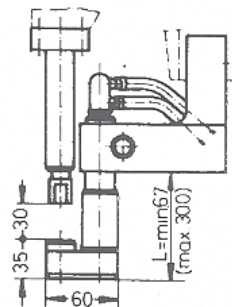
for welding of concrete-reinforcing steel
 insertion depth = dimension L 40 mm



3326.52019.3




for Spot welding guns 3346 und 3349

for welding of concrete-reinforcing steel
 insertion depth = dimension L 40 mm
 for larger insertion depth possible up to
 max. 300 mm – further 50 mm each




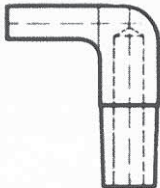
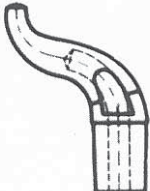


3346.51808.3

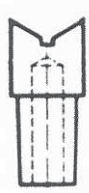

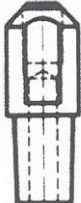
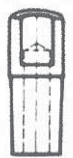
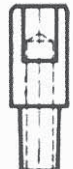
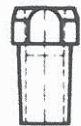
DALEX
Electrode tips
for water-cooled spot welding guns and machines

	Sitz	Type	Order-No.	
<p>A</p> 	1	1 A 20	WN.09351.1	
		1 A 30	WN.09352.1	
		1 A 60	WN.09353.1	
	2	2 A 20	WN.09355.1	
		2 A 30	WN.09356.1	
		2 A 50	WN.09357.1	
		2 A 80	WN.09358.1	
	3	3 A 35	WN.09361.1	
		3 A 70	WN.09362.1	
	6	6 Av 15	WN.09731.1	
		6 Av 25	WN.09732.1	
		6 Av 40	WN.09733.1	
	7	7 A 20	WN.09371.1	
		7 A 30	WN.09372.1	
		7 A 60	WN.09373.1	
	8	8 A 25	WN.09375.1	
		8 A 35	WN.09376.1	
		8 A 50	WN.09377.1	
	<p>B</p> 	1	1 B 20	WN.09401.1
			1 B 30	WN.09402.1
			1 B 60	WN.09403.1
		2	2 B 30	WN.09406.1
			2 B 50	WN.09407.1
			2 B 80	WN.09408.1
3		3 B 35	WN.09411.1	
		3 B 70	WN.09412.1	
6		6 Bv15	WN.09736.1	
		6 Bv25	WN.09737.1	
7		7 B 20	WN.09421.1	
		7 B 30	WN.09422.1	
		7 B 60	WN.09423.1	
8		8 B 25	WN.09424.1	
		8 B 35	WN.09426.1	
		8 B 50	WN.09427.1	
<p>C</p> 		1	1 C 20	WN.09451.1
		2	2 C 25	WN.09454.1
		3	3 C 30	WN.09457.1
		6	6 Cv 15	WN.09741.1
		7	7 C 20	WN.09463.1
		8	8 C 25	WN.09466.1














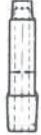


DALEX
Electrode tips
for water-cooled spot welding guns and machines

	Sitz	Type	Order-No.
D 	1	1 D 20	WN.09551.1
		1 D 30	WN.09552.1
		1 D 60	WN.09553.1
	2	2 D 30	WN.09556.1
		2 D 50	WN.09557.1
		2 D 80	WN.09558.1
	3	3 D 35	WN.09561.1
		3 D 70	WN.09562.1
7	7 D 20	WN.09571.1	
8	8 D 25	WN.09575.1	
E 	1	1 E 20	WN.09601.1
		1 E 30	WN.09602.1
		1 E 60	WN.09603.1
	6	6 Ev 40	WN.09753.1
	7	7 E 20	WN.09621.1
		7 E 30	WN.09622.1
		7 E 60	WN.09623.1
F 	1	1 F 35	WN.09514.1
	2	2 F 50	WN.09511.1
	7	7 F 35	WN.09515.1
	8	8 F 50	WN.09512.1
G 	2	2 G 30	WN.09165.1
H 	1	1 H 80	X_1_H_80
	2	2 H 80	WN.09527.1
	3	3 H 80	WN.09528.1
	8	8 H 80	WN.09529.1

DALEX Electrode tips
Standard caps and Electrode caps
for water-cooled spot welding guns and machines

	Sitz	Type	Order-No.	
J 	1	1 J 20	WN.09651.1	
	2	2 J 30	WN.09652.1	
	3	3 J 35	WN.09653.1	
	6	6 J 15	WN.09656.1	
	7	7 J 20	WN.09657.1	
	8	8 J 25	WN.09658.1	
	K 	1	1 K 35	WN.09301.1
		2	2 K 35	WN.09302.1
6		6 K 32	WN.09310.1	
7		7 K 32	WN.09311.1	
8		8 K 32	WN.09312.1	
L 		1	1 L 25	WN.09676.1
		2	2 L 35	WN.09677.1
M 		1	1 M 20	WN.09701.1
		1 M 30	WN.09702.1	
		1 M 60	WN.09703.1	
	2	2 M 30	WN.09706.1	
		2 M 50	WN.09707.1	
		2 M 80	WN.09708.1	
	3	3 M 35	WN.09711.1	
	8	8 M 25	WN.09725.1	
	8 M 50	WN.09727.1		
N 	1	1 N 20	WN.09761.1	
	2	2 N 30	WN.09766.1	
	8	8 N 25	WN.09786.1	
standard caps R 	2	2 R 1	WN.09951.1	
		2 R 7	WN.09956.1	
	3	3 R 2	WN.09952.1	
		3 R 8	WN.09957.1	
	7	7 R 6	WN.09961.1	
	8	8 R 1	WN.09960.1	
		8 R 7	WN.09962.1	

DALEX Electrode shafts and
Electrode key
for water-cooled spot welding guns and machines

		Sitz	Type	Order-No.
 		2	2 V2/42	WN.09976.1
			2 V2/75	WN.09980.1
		3	3 V2/45	WN.09977.1
		8	8 V 8/35	WN.09978.1
electrode caps	 		K 12 A 20	WN.09810.1
	 		K 12 B 20	WN.09811.1
	 		K 12 D 20	WN.09812.1
	 		K 12 M 20	WN.09813.1
	 		K 12 L 20	WN.09800.1
electrode shafts	 	2	2 S 30	WN.09820.1
			2 S 50	WN.09821.1
			2 S 80	WN.09822.1
		2	2 SL 30	WN.09830.1
			2 SL 80	WN.09831.1
electrode key				X_SCHLÜSSEL_53
DALEX special key for loosening of spot welding electrodes up to 20 mm diamete				

DALEX Spring balancers
carrying capacity 3 – 100 kg

carrying capacity 3 – 5 kg
dead load 2,9 kg
wire length 2000 mm

carrying capacity 4,5 – 7 kg
dead load 3,1 kg
wire length 2000 mm

carrying capacity 6 – 10 kg
dead load 3,2 kg
wire length 2000 mm

carrying capacity 9 – 14 kg
dead load 3,4 kg
wire length 2000 mm

carrying capacity 13 – 17 kg
dead load 3,6 kg
wire length 2000 mm

carrying capacity 16 – 21 kg
dead load 3,8 kg
wire length 2000 mm



Type

Order-No.

D 4/5

D_4_5

D 4/7

D_4_7

D 4/10

D_4_10

D 4/14

D_4_14

D 4/17

D_4_17

D 4/21

D_4_21

carrying capacity 21 – 30 kg
dead load 16,3 kg
wire length 2000 mm

carrying capacity 31 – 45 kg
dead load 18 kg
wire length 2000 mm

carrying capacity 46 – 60 kg
dead load 18,4 kg
wire length 2000 mm

carrying capacity 61 – 75 kg
dead load 19,8 kg
wire length 2000 mm

carrying capacity 76 – 90 kg
dead load 20,8 kg
wire length 2000 mm

carrying capacity 91 – 100 kg
dead load 21 kg
wire length 2000 mm

spring balancer with a capacity
above 100 kg upon request



D 5/30-1

D_5_30_1

D 5/45-1

D_5_45_1

D 5/60-1

D_5_60_1

D 5/75-1

D_5_75_1

D 5/90-1

D_5_90_1

D 5/100-1

D_5_100_1

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DALEX
WELDING TECHNOLOGY