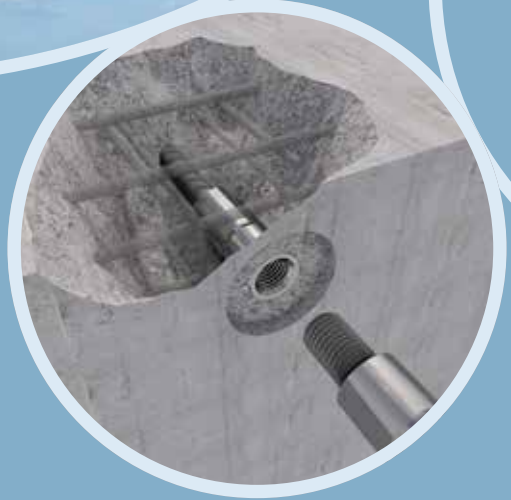
PH Reinforcement Connection System

for permanent reinforcement connections or continuations



PFEIFER

planning & installation

more information online:
PH reinforcement connection system

Highest dynamic resistances for wind towers, high-speed railways and machinery foundations

Your advantages during the planning phase:

- Regulated by approvals
- Bar diameter from 12 to 32 mm

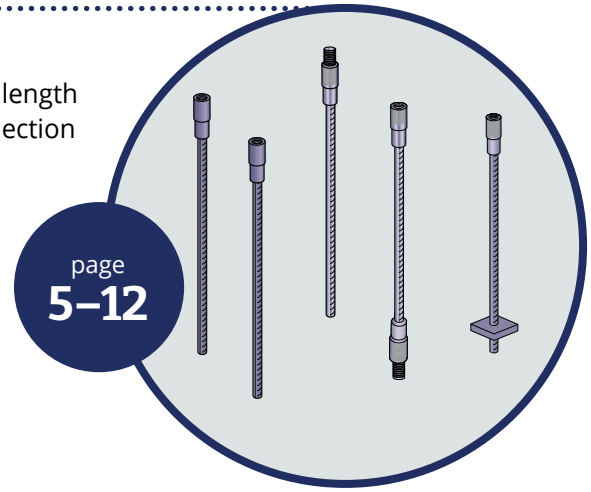
High planning security

ETA, building code safety due to completely approved system for static and dynamic loads, full bar force becomes non-positive, 100 % safe and reliable transmitted (tension + compression).

table of contents/execution types products

female bars

- straight female bar
- female bar in special length
- female bar with connection bolt
- reducing female bar
- double female bar with connection bolt
- female bar with welded anchor plate

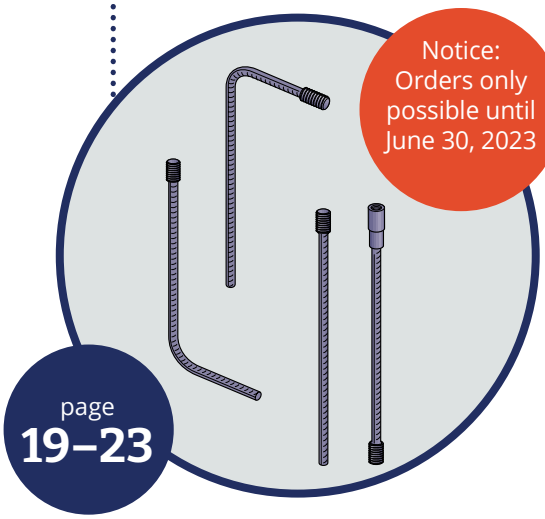


page 5–12

male bars

- male bar with coupler
- straight male bar
- male bar in special design
- bent male bar
- hooked male bar

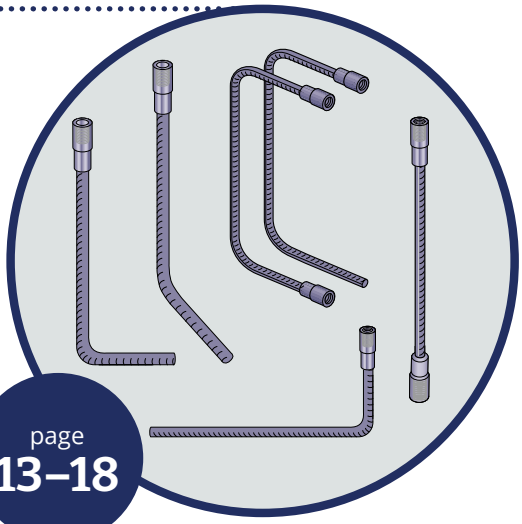
Notice: Orders only possible until June 30, 2023



page 19–23

bent female bars

- bent female bar
- hooked female bar
- female bar with bent in special angle
- double female bar
- female bar as U-shaped stirrup
- double female bar as U-shaped stirrup



page 13–18

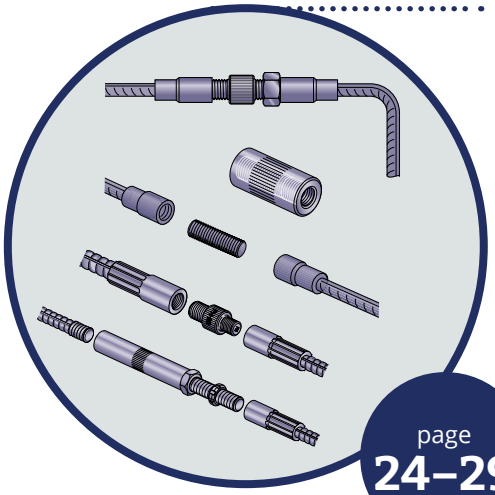
adapter

- welding socket
- end anchorage plate
- pin plate PH and nail plate
- torque wrench

page 30–33

connecting and reducing elements

- connection bolt
- coupling sleeve
- right-left-thread connecting bolt
- reducing bolt
- reducing socket
- positioning connector



page 24–29

- **Usability in earthquake zones on demand**
- **Delivery includes the pin plate PH or nail plate for formwork fixing**
- **Practical through realization of safe construction stages – no protruding bars with risk of accidents**
- **no drilling of the formwork necessary**
- **General technical approval (abZ)**
- **European Technical Assessment (ETA)**

component recommendation

- pillar
- foundations
- beams
- downstand beam
- bridge construction components
- wind turbine tower

technical data

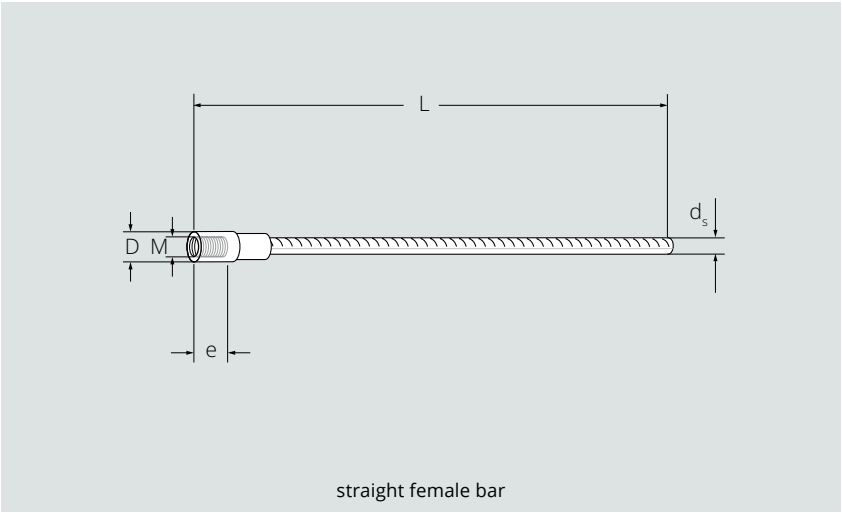
- **material:** black steel

options on request

- other lengths; with reducing socket; with bending (also in special angles); with angled hook; as U-shaped stirrup; as double female bar (also in U-shaped stirrup or with connection bolt); with welded anchor plate

straight female bar

- For screw connection of concrete elements
- Straight reinforcement bar with pressed-on socket and internal thread is used in combination with connecting or reducing elements and another female bar



straight female bar

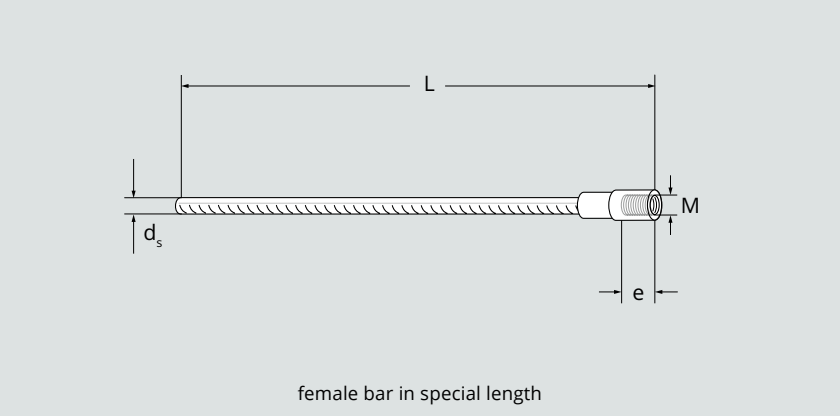
straight female bar										
diameter concrete steel	**d_s**	**mm**	**8**	**8**	**10**	**10**	**12**	**12**	**12**	**12**
total length	**L**	**mm**	**350**	**550**	**400**	**690**	**400**	**570**	**800**	**1500**
thread type			M 12	M 12	M 14	M 14	M 16	M 16	M 16	M 16
screw-in depth	e	mm	15	15	17	17	20	20	20	20
outer diameter socket	D	mm	16	16	19,2	19,2	22,3	22,3	22,3	22,3
packing unit		pcs	1	1	1	1	1	1	1	1
quantity per load carrier		pcs	–	–	–	–	200	200	300	200
Ref. no.			**135178**	**119055**	**135179**	**135181**	**119056**	**119057**	**119058**	**119059**
pin plate PH										
colour			black		–	–	yellow			
Ref. no.			**118515**	**118515**	**–**	**–**	**118516**	**118516**	**118516**	**118516**
nail plate										
colour			–	–	–	–	–	–	–	–
Ref. no.			**–**	**–**	**391648**	**391648**	**–**	**–**	**–**	**–**

straight female bar										
diameter concrete steel	**d_s**	**mm**	**14**	**14**	**14**	**14**	**16**	**16**	**16**	**16**
total length	**L**	**mm**	**400**	**660**	**930**	**1500**	**400**	**1020**	**1440**	**2000**
thread type			M 18	M 18	M 18	M 18	M 20	M 20	M 20	M 20
screw-in depth	e	mm	22	22	22	22	24	24	24	24
outer diameter socket	D	mm	25,5	25,5	25,5	25,5	28,8	28,8	28,8	28,8
packing unit		pcs	1	1	1	1	1	1	1	1
quantity per load carrier		pcs	240	200	200	150	200	200	200	50
Ref. no.			**119061**	**119062**	**119063**	**119064**	**119065**	**119067**	**119069**	**119070**
pin plate PH										
colour			blue				white			
Ref. no.			**118517**	**118517**	**118517**	**118517**	**118518**	**118518**	**118518**	**118518**

straight female bar										
diameter concrete steel	**d_s**	**mm**	**20**	**20**	**20**	**20**	**25**	**25**	**25**	**25**
total length	**L**	**mm**	**400**	**1280**	**1800**	**3000**	**400**	**1600**	**2260**	**3600**
thread type			M 24	M 24	M 24	M 24	M 30	M 30	M 30	M 30
screw-in depth	e	mm	32	32	32	32	40	40	40	40
outer diameter socket	D	mm	35,3	35,3	35,3	35,3	44,1	44,1	44,1	44,1
packing unit		pcs	1	1	1	1	1	1	1	1
quantity per load carrier		pcs	100	300	125	50	150	150	50	35
Ref. no.			**119071**	**119073**	**119075**	**119076**	**119078**	**119081**	**119082**	**119083**
pin plate PH										
colour			grey				red			
Ref. no.			**118519**	**118519**	**118519**	**118519**	**118520**	**118520**	**118520**	**118520**

straight female bar										
diameter concrete steel	**d_s**	**mm**	**28**	**28**	**28**	**28**	**32**	**32**	**40**	**40**
total length	**L**	**mm**	**400**	**1790**	**2530**	**3600**	**2000**	**2900**	**2200**	**3500**
thread type			M 36	M 36	M 36	M 36	M 42	M 42	M 52	M 52
screw-in depth	e	mm	42	42	42	42	52	52	70	70
outer diameter socket	D	mm	51	51	51	51	55,8	55,8	70	70
packing unit		pcs	1	1	1	1	1	1	1	1
quantity per load carrier		pcs	75	100	50	50	–	–	–	–
Ref. no.			**119084**	**119088**	**119089**	**119090**	**135176**	**135363**	**149175**	**149176**
pin plate PH										
colour			black				–	–	–	–
Ref. no.			**118521**	**118521**	**118521**	**118521**	**–**	**–**	**–**	**–**
nail plate										
colour			–	–	–	–	–	–	–	–
Ref. no.			**–**	**–**	**–**	**–**	**391655**	**391655**	**391656**	**391656**

female bar in special length

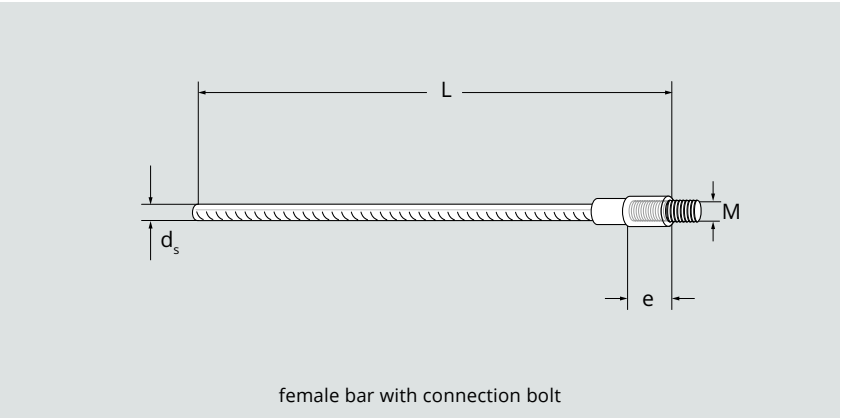


female bar in special length

female bar in special length												
diameter concrete steel	**d_s**	**mm**	**8**	**10**	**12**	**14**	**16**	**20**	**25**	**28**	**32**	**40**
total length	**L[1)]**	**mm**	**customer specifi-cation**	**customer specifi-cation**	**customer specifi-cation**	**customer specifi-cation**	**customer specifi-cation**	**customer specifi-cation**	**customer specifi-cation**	**customer specifi-cation**	**customer specifi-cation**	**customer specifi-cation**
total length minimum	L_{min}	mm	160	192	223	255	288	353	441	510	558	700
thread type			M 12	M 14	M 16	M 18	M 20	M 24	M 30	M 36	M 42	M 52
screw-in depth	e	mm	15	17	20	22	24	32	40	42	52	70
Ref. no.			**020028**	**020029**	**020030**	**020031**	**020032**	**020033**	**020034**	**020035**	**020036**	**020037**
pin plate PH												
colour			black	–	yellow	blue	white	grey	red	black	–	–
Ref. no.			**118515**	**–**	**118516**	**118517**	**118518**	**118519**	**118520**	**118521**	**–**	**–**
nail plate												
colour			–	–	–	–	–	–	–	–	–	–
Ref. no.			**–**	**391648**	**–**	**–**	**–**	**–**	**–**	**–**	**391655**	**391656**

[1)] Length without PH pin plate or nail plate

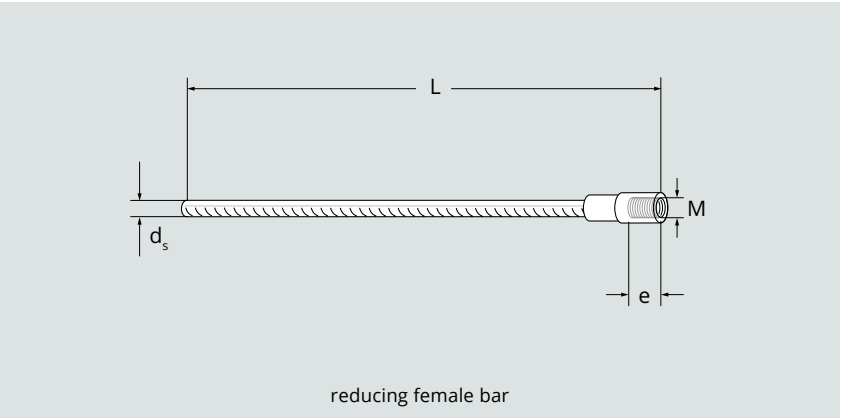
female bar with connection bolt



female bar with connection bolt

female bar with connection bolt												
diameter concrete steel	**d_s**	**mm**	**8**	**10**	**12**	**14**	**16**	**20**	**25**	**28**	**32**	**40**
total length	**L**	**mm**	**customer specifi-cation**	**customer specifi-cation**	**customer specifi-cation**	**customer specifi-cation**	**customer specifi-cation**	**customer specifi-cation**	**customer specifi-cation**	**customer specifi-cation**	**customer specifi-cation**	**customer specifi-cation**
total length minimum	L_{min}	mm	160	192	223	255	288	353	441	510	558	700
thread type			M 12	M 14	M 16	M 18	M 20	M 24	M 30	M 36	M 42	M 52
screw-in depth	e	mm	15	17	20	22	24	32	40	42	52	70
Ref. no.			**020318**	**020319**	**020320**	**020321**	**020322**	**020323**	**020324**	**020325**	**020326**	**020327**
pin plate PH												
colour			black	–	yellow	blue	white	grey	red	black	–	–
Ref. no.			**118515**	**–**	**118516**	**118517**	**118518**	**118519**	**118520**	**118521**	**–**	**–**
nail plate												
colour			–	–	–	–	–	–	–	–	–	–
Ref. no.			**–**	**391648**	**–**	**–**	**–**	**–**	**–**	**–**	**391655**	**391656**

reducing female bar

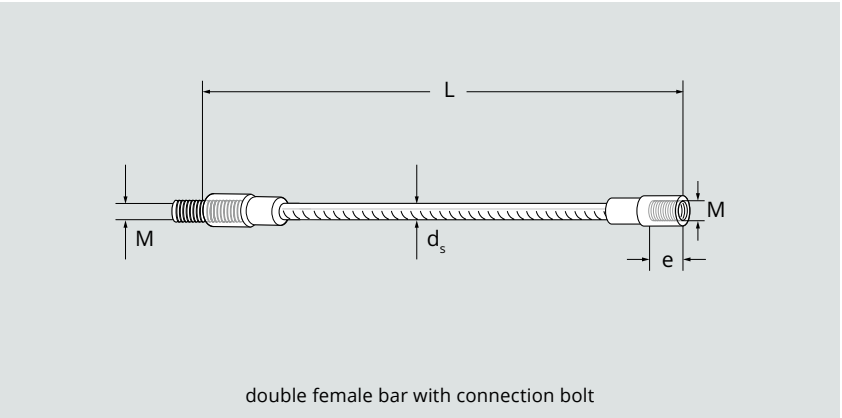


reducing female bar

reducing female bar										
diameter concrete steel	**d_s**	**mm**	**12**	**14**	**16**	**20**	**25**	**28**	**32**	**40**
total length	**L[1)]**	**mm**	**customer specifi-cation**	**customer specifi-cation**	**customer specifi-cation**	**customer specifi-cation**	**customer specifi-cation**	**customer specifi-cation**	**customer specifi-cation**	**customer specifi-cation**
total length minimum	L_{min}	mm	223	255	288	353	441	510	558	700
thread type			M 14	M 16	M 18	M 20	M 24	M 30	M 36	M 42
screw-in depth	e	mm	20	22	24	32	40	42	52	70
Ref. no.			**020203**	**020204**	**020205**	**020206**	**020207**	**020208**	**020209**	**020210**
pin plate PH										
colour			–	yellow	blue	white	grey	red	black	–
Ref. no.			**–**	**118516**	**118517**	**118518**	**118519**	**118520**	**118521**	**–**
nail plate										
colour			–	–	–	–	–	–	–	–
Ref. no.			**391648**	**–**	**–**	**–**	**–**	**–**	**–**	**391655**

[1)] Length without PH pin plate or nail plate

double female bar with connection bolt



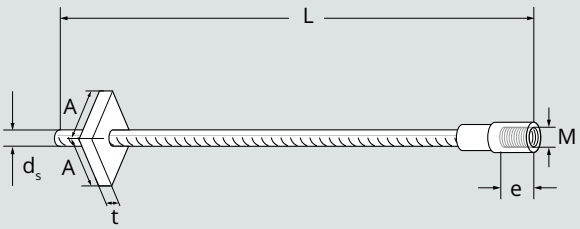
double female bar with connection bolt

double female bar with connection bolt

diameter concrete steel	d_s	mm	**8**	**10**	**12**	**14**	**16**	**20**	**25**	**28**	**32**	**40**
total length	**L**[1)]	mm	**customer specifi-cation**	**customer specifi-cation**	**customer specifi-cation**	**customer specifi-cation**	**customer specifi-cation**	**customer specifi-cation**	**customer specifi-cation**	**customer specifi-cation**	**customer specifi-cation**	**customer specifi-cation**
total length minimum	L_{min}	mm	160	192	223	255	288	353	441	510	558	700
thread type			M 12	M 14	M 16	M 18	M 20	M 24	M 30	M 36	M 42	M 52
screw-in depth	e	mm	15	17	20	22	24	32	40	42	52	70
Ref. no.			**020308**	**020309**	**020310**	**020311**	**020312**	**020313**	**020314**	**020315**	**020316**	**020317**
pin plate PH												
colour			black	–	yellow	blue	white	grey	red	black	–	–
Ref. no.			**118515**	**–**	**118516**	**118517**	**118518**	**118519**	**118520**	**118521**	**–**	**–**
nail plate												
colour			–	–	–	–	–	–	–	–	–	–
Ref. no.			**–**	**391648**	**–**	**–**	**–**	**–**	**–**	**–**	**391655**	**391656**

[1)] Length without PH pin plate or nail plate

female bar with welded anchor plate



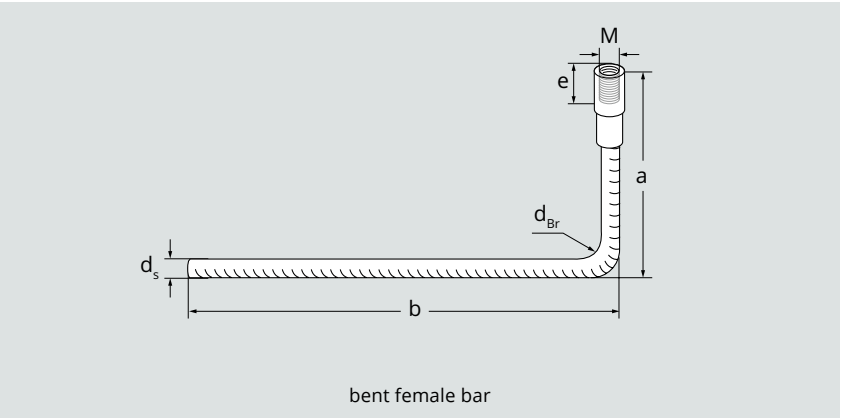
female bar with welded anchor plate

female bar with welded anchor plate

diameter concrete steel	**d_s**	**mm**	**12**	**14**	**16**	**20**	**25**	**28**	**32**
total length	**L[1)]**	**mm**	**customer specification**	**customer specification**	**customer specification**	**customer specification**	**customer specification**	**customer specification**	**customer specification**
total length minimum	L_{min}	mm	223	255	288	353	441	510	558
thread type			M 16	M 18	M 20	M 24	M 30	M 36	M 42
screw-in depth	e	mm	20	22	24	32	40	42	52
	t	mm	10	10	12	12	20	20	20
plate width	A	mm	50	50	70	70	90	100	110
Ref. no.			**020080**	**020081**	**020082**	**020083**	**020084**	**020085**	**020086**
pin plate PH									
colour			yellow	blue	white	grey	red	black	–
Ref. no.			**118516**	**118517**	**118518**	**118519**	**118520**	**118521**	**–**
nail plate									
colour			–	–	–	–	–	–	–
Ref. no.			**–**	**–**	**–**	**–**	**–**	**–**	**391655**

[1)] Length without PH pin plate or nail plate

bent female bar

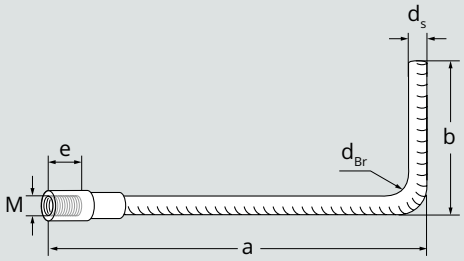


bent female bar

bent female bar												
diameter concrete steel	**d_s**	**mm**	**8**	**10**	**12**	**14**	**16**	**20**	**25**	**28**	**32**	**40**
thread type			M 12	M 14	M 16	M 18	M 20	M 24	M 30	M 36	M 42	M 52
screw-in depth	e	mm	15	17	20	22	24	32	40	42	52	70
dimension 1	a[1)]	mm	customer specification	customer specification	customer specification	customer specification	customer specification	customer specification	customer specification	customer specification	customer specification	customer specification
dimension 1 minimum	a_{min}	mm	120	136	150	170	200	250	300	340	475	555
dimension 2	b	mm	customer specification	customer specification	customer specification	customer specification	customer specification	customer specification	customer specification	customer specification	customer specification	customer specification
dimension 2 minimum	b_{min}	mm	120	120	130	130	150	220	260	250	550	600
bending roller diameter	d_{Br}[2)]	mm	80	100	120	140	160	200	250	280	320	400
Ref. no.			**020038**	**020039**	**020040**	**020041**	**020042**	**020043**	**020044**	**020045**	**020046**	**020047**
pin plate PH												
colour			black	–	yellow	blue	white	grey	red	black	–	–
Ref. no.			**118515**	**–**	**118516**	**118517**	**118518**	**118519**	**118520**	**118521**	**–**	**–**
nail plate												
colour			–	–	–	–	–	–	–	–	–	–
Ref. no.			**–**	**391648**	**–**	**–**	**–**	**–**	**–**	**–**	**391655**	**391656**

[1)] Length without PH pin plate or nail plate
[2)] bending roller diameter 10 d_s, deviating bending roller diameters on request

hooked female bar

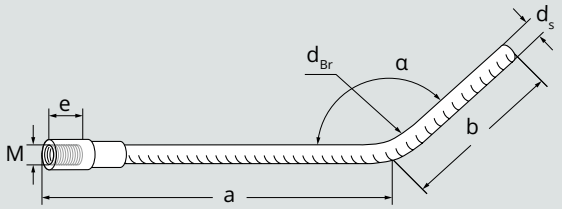


hooked female bar

hooked female bar												
diameter concrete steel	**d_s**	**mm**	**8**	**10**	**12**	**14**	**16**	**20**	**25**	**28**	**32**	**40**
thread type			M 12	M 14	M 16	M 18	M 20	M 24	M 30	M 36	M 42	M 52
screw-in depth	e	mm	15	17	20	22	24	32	40	42	52	70
dimension 1	a[1)]	mm	customer specification	customer specification	customer specification	customer specification	customer specification	customer specification	customer specification	customer specification	customer specification	customer specification
dimension 1 minimum	a_{min}	mm	85	85	120	125	140	210	260	280	355	380
dimension 2	b	mm	customer specification	customer specification	customer specification	customer specification	customer specification	customer specification	customer specification	customer specification	customer specification	customer specification
dimension 2 minimum	b_{min}	mm	85	85	110	130	140	190	210	220	500	500
bending roller diameter	d_{Br}	mm	32	40	48	56	64	140	175	200	220	300
Ref. no.			**020048**	**020049**	**020050**	**020051**	**020052**	**020053**	**020054**	**020055**	**020056**	**020057**
pin plate PH												
colour			black	–	yellow	blue	white	grey	red	black	–	–
Ref. no.			**118515**	**–**	**118516**	**118517**	**118518**	**118519**	**118520**	**118521**	**–**	**–**
nail plate												
colour			–	–	–	–	–	–	–	–	–	–
Ref. no.			**–**	**391648**	**–**	**–**	**–**	**–**	**–**	**–**	**391655**	**391656**

[1)] Length without PH pin plate or nail plate

female bar with bent in special angle



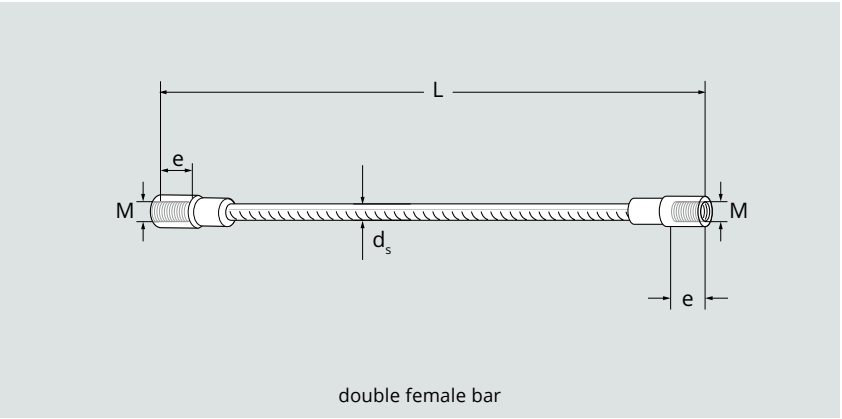
female bar with bent in special angle

female bar with bent in special angle

diameter concrete steel	**d_s**	**mm**	**8**	**10**	**12**	**14**	**16**	**20**	**25**	**28**	**32**	**40**
thread type			M 12	M 14	M 16	M 18	M 20	M 24	M 30	M 36	M 42	M 52
screw-in depth	e	mm	15	17	20	22	24	32	40	42	52	70
dimension 1	a[1)]	mm	customer specification	customer specification	customer specification	customer specification	customer specification	customer specification	customer specification	customer specification	customer specification	customer specification
dimension 2	b	mm	customer specification	customer specification	customer specification	customer specification	customer specification	customer specification	customer specification	customer specification	customer specification	customer specification
bending roller diameter	d_{Br}	mm	80	100	120	140	160	200	250	280	320	400
angle	α	°	customer specification	customer specification	customer specification	customer specification	customer specification	customer specification	customer specification	customer specification	customer specification	customer specification
Ref. no.			**020387**	**020388**	**020389**	**020390**	**020391**	**020392**	**020393**	**020394**	**020395**	**020396**
pin plate PH												
colour			black	–	yellow	blue	white	grey	red	black	–	–
Ref. no.			**118515**	**–**	**118516**	**118517**	**118518**	**118519**	**118520**	**118521**	**–**	**–**
nail plate												
colour			–	–	–	–	–	–	–	–	–	–
Ref. no.			**–**	**391648**	**–**	**–**	**–**	**–**	**–**	**–**	**391655**	**391656**

[1)] Length without PH pin plate or nail plate

double female bar

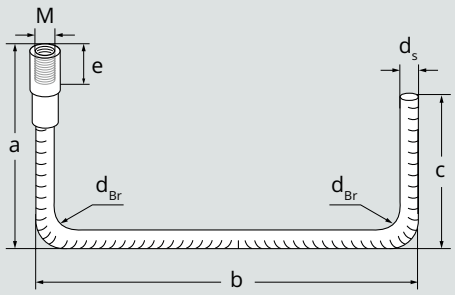


double female bar

double female bar												
diameter concrete steel	**d_s**	**mm**	**8**	**10**	**12**	**14**	**16**	**20**	**25**	**28**	**32**	**40**
total length	**L[1)]**	**mm**	**customer specifi-cation**	**customer specifi-cation**	**customer specifi-cation**	**customer specifi-cation**	**customer specifi-cation**	**customer specifi-cation**	**customer specifi-cation**	**customer specifi-cation**	**customer specifi-cation**	**customer specifi-cation**
total length minimum	L_{min}	mm	160	192	223	255	288	353	441	510	558	700
thread type			M 12	M 14	M 16	M 18	M 20	M 24	M 30	M 36	M 42	M 52
screw-in depth	e	mm	15	17	20	22	24	32	40	42	52	70
Ref. no.			**020058**	**020059**	**020060**	**020061**	**020062**	**020063**	**020064**	**020065**	**020066**	**020067**
pin plate PH												
colour			black	–	yellow	blue	white	grey	red	black	–	–
Ref. no.			**118515**	**–**	**118516**	**118517**	**118518**	**118519**	**118520**	**118521**	**–**	**–**
nail plate												
colour			–	–	–	–	–	–	–	–	–	–
Ref. no.			**–**	**391648**	**–**	**–**	**–**	**–**	**–**	**–**	**391655**	**391656**

[1)] Length without PH pin plate or nail plate

female bar as U-shaped stirrup



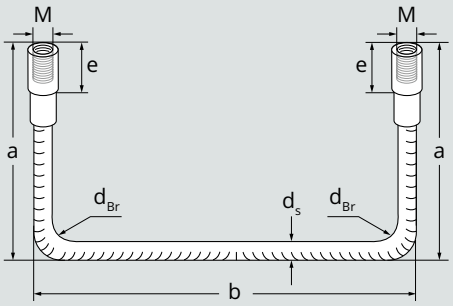
female bar as U-shaped stirrup

female bar as U-shaped stirrup

diameter concrete steel	**d_s**	**mm**	**customer specification**
Thread type[1)]			–
dimension 1	a[1)]	mm	customer specification
dimension 2	b	mm	customer specification
dimension 3	c	mm	customer specification
bending roller diameter	d_{Br}[2)]	mm	customer specification
angle	α	°	customer specification
Ref. no.			**020328**

[1)] depending on the selected bar diameter d_s
[2)] Length without PH pin plate or nail plate

double female bar as U-shaped stirrup



double female bar as U-shaped stirrup

double female bar as U-shaped stirrup

diameter concrete steel	d_s	**mm**	**8**	**10**	**12**	**14**	**16**	**20**	**25**	**28**	**32**	**40**
thread type			M 12	M 14	M 16	M 18	M 20	M 24	M 30	M 36	M 42	M 52
screw-in depth	e	mm	15	17	20	22	24	32	40	42	52	70
dimension 1	a[1)]	mm	customer specifi-cation	customer specifi-cation	customer specifi-cation	customer specifi-cation	customer specifi-cation	customer specifi-cation	customer specifi-cation	customer specifi-cation	customer specifi-cation	customer specifi-cation
dimension 1 minimum	a_{min}	mm	110	135	150	170	200	250	300	350	380	490
dimension 2	b	mm	customer specifi-cation	customer specifi-cation	customer specifi-cation	customer specifi-cation	customer specifi-cation	customer specifi-cation	customer specifi-cation	customer specifi-cation	customer specifi-cation	customer specifi-cation
dimension 2 minimum	b_{min}	mm	280	280	280	280	280	620	630	640	650	680
bending roller diameter	d_{Br}[2)]	mm	80	100	120	140	160	200	250	280	320	400
Ref. no.			**020068**	**020069**	**020070**	**020071**	**020072**	**020073**	**020074**	**020075**	**020076**	**020077**
pin plate PH												
colour			black	–	yellow	blue	white	grey	red	black	–	–
Ref. no.			**118515**	**–**	**118516**	**118517**	**118518**	**118519**	**118520**	**118521**	**–**	**–**
nail plate												
colour			–	–	–	–	–	–	–	–	–	–
Ref. no.			**–**	**391648**	**–**	**–**	**–**	**–**	**–**	**–**	**391655**	**391656**

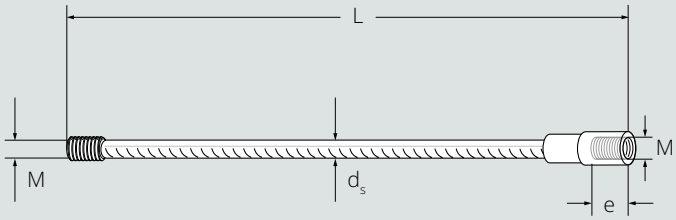
[1)] Length without PH pin plate or nail plate
[2)] bending roller diameter 10 d_s, deviating bending roller diameters on request

male bar with coupler

technical data

- **bar:** concrete bar steel B500 B
- **socket:** precision steel pipe E355

Notice:
Orders only possible until June 30, 2023



male bar with coupler

male bar with coupler – black steel

type		mm	PH-AM-12	PH-AM-14	PH-AM-16	PH-AM-20	PH-AM-25	PH-AM-28
diameter concrete steel	**d_s**	**mm**	**12**	**14**	**16**	**20**	**25**	**28**
total length	**L[1)]**	**mm**	**customer specification**	**customer specification**	**customer specification**	**customer specification**	**customer specification**	**customer specification**
total length minimum	L_{min}	mm	223	255	288	353	441	510
thread size			M 16	M 18	M 20	M 24	M 30	M 36
screw-in depth	e	mm	20	22	24	32	40	42
Ref. no.			**020022**	**020023**	**020024**	**020025**	**020026**	**020027**

[1)] Length without PH pin plate or nail plate

Notice:
All length specifications with a tolerance of ± 10 mm.

Notice:
Please take into account the fastening with the 8 mm thick pin plate (sizes PH 12-28) for custom-fit lengths.

- **Highest dynamic resistances (PH-A – PH-KM – PH-A)**
- **Practical through realisation of safe construction sections – no protruding bars with risk of accidents**
- **no drilling of the formwork necessary**
- **Colour-coded thread protection caps for quick assignment of the system size**
- **European Technical Assessment (ETA)**

technical data

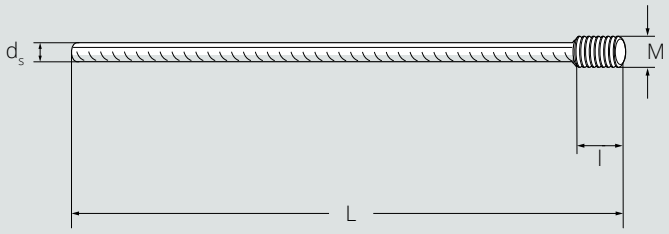
- **Stahl:** concrete bar steel B500 B

component recommendation

- pillar
- foundations
- beams
- downstand beam
- bridge construction components
- wind turbine tower

straight male bar

- For screw connection of concrete elements
- Straight rebar with external thread – used in combination with female bars and couplers or reducers



Notice:
Orders only possible until June 30, 2023

straight male bar – black steel

type		mm	PH-A-12/400	PH-A-12/570	PH-A-12/800	PH-A-12/1500	PH-A-14/400	PH-A-14/660	PH-A-14/930	PH-A-14/1500	PH-A-16/400	PH-A-16/1020	PH-A-16/1440	PH-A-16/2000	PH-A-20/400
diameter concrete steel	d_s	**mm**	**12**	**12**	**12**	**12**	**14**	**14**	**14**	**14**	**16**	**16**	**16**	**16**	**20**
total length	**L**	**mm**	**400**	**570**	**800**	**1500**	**400**	**660**	**930**	**1500**	**400**	**1020**	**1440**	**2000**	**400**
thread length	l	mm	1,7	1,7	1,7	1,7	2,0	2,0	2,0	2,0	2,3	2,3	2,3	2,3	3,0
colour protective cover			yellow				blue				weiss				grey
thread size			M 16	M 16	M 16	M 16	M 18	M 18	M 18	M 18	M 20	M 20	M 20	M 20	M 24
Ref. no.			**235683**	**235684**	**235685**	**235686**	**236452**	**236453**	**236454**	**236455**	**236457**	**236459**	**236461**	**236462**	**236464**

straight male bar – black steel

type		mm	PH-A-20/1280	PH-A-20/1800	PH-A-20/3000	PH-A-25/400	PH-A-25/1600	PH-A-25/2260	PH-A-25/3600	PH-A-28/400	PH-A-28/1790	PH-A-28/2530	PH-A-28/3600	PH-A-32/2000	PH-A-32/2900
diameter concrete steel	d_s	**mm**	**20**	**20**	**20**	**25**	**25**	**25**	**25**	**28**	**28**	**28**	**28**	**32**	**32**
total length	**L**	**mm**	**1280**	**1800**	**3000**	**400**	**1600**	**2260**	**3600**	**400**	**1790**	**2530**	**3600**	**2000**	**2900**
thread length	l	mm	3,0	3,0	3,0	3,8	3,8	3,8	3,8	4,0	4,0	4,0	4,0	5,0	5,0
colour protective cover			grey			red				black				–	–
thread size			M 24	M 24	M 24	M 30	M 30	M 30	M 30	M 36	M 36	M 36	M 36	M 42	M 42
Ref. no.			**236465**	**236466**	**236467**	**236468**	**236469**	**236470**	**236471**	**235687**	**235688**	**235689**	**235690**	**377759**	**419886**

Hinweise:

- For the bar diameters 8, 10 and 40 mm and from 3.6 m length for all diameters, the PFEIFER female bar PH-MU in combination with the PFEIFER connection bolt PH-K is available as an alternative. A maximum length of up to 3.6 m is possible.
- Standard versions without corrosion protection. Special versions on request.
- Delivery of the male bars including thread protection cap with corresponding colour coding.

Notice:

All length specifications with a tolerance of ± 10 mm.

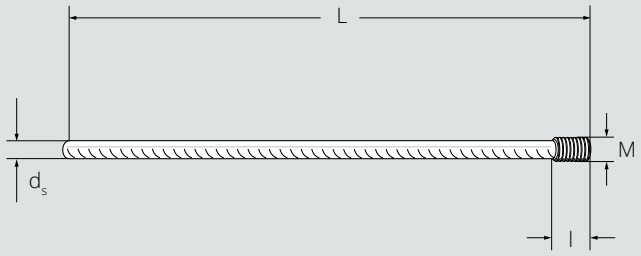
male bar in special design
(straight in special length)

technical data

▸ **bar:** concrete bar steel B500 B

CE

Notice:
Orders only possible until June 30, 2023



male bar in special design (straight in special length)

male bar in special length – black steel

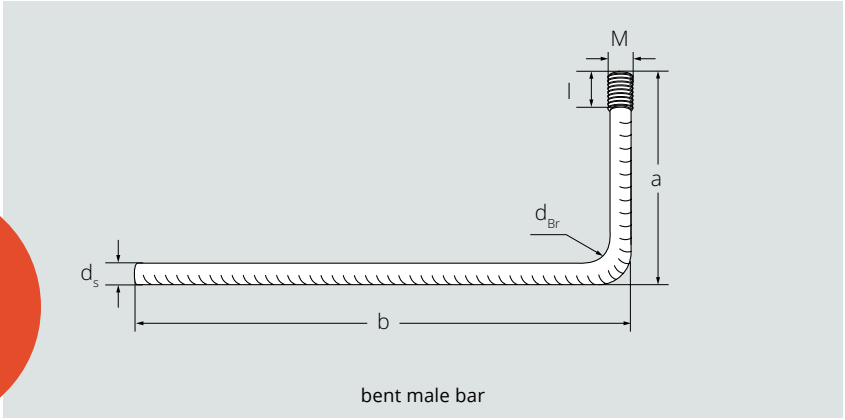
type		mm	PH-AL-12	PH-AL-14	PH-AL-16	PH-AL-20	PH-AL-25	PH-AL-28	PH-AL-32
diameter concrete steel	d_s	mm	12	14	16	20	25	28	32
total length	L	mm	customer specification	customer specification	customer specification	customer specification	customer specification	customer specification	
thread size			M 16	M 18	M 20	M 24	M 30	M 36	M 42
thread length	l	mm	17	20	23	30	38	40	50
Ref. no.			**020004**	**020005**	**020006**	**020007**	**020008**	**020009**	**020433**

bent male bar

technical data

- **bar:** concrete bar steel B500 B

Notice:
Orders only possible until June 30, 2023



bent male bar

bent male bar – black steel

type		mm	PH-AB-12	PH-AB-14	PH-AB-16	PH-AB-20	PH-AB-25	PH-AB-28
diameter concrete steel	**d_s**	**mm**	**12**	**14**	**16**	**20**	**25**	**28**
thread length	l	mm	17	20	23	30	38	40
thread size			M 16	M 18	M 20	M 24	M 30	M 36
dimension 1	a	mm	customer specification	customer specification	customer specification	customer specification	customer specification	customer specification
dimension 1 minimum	a_{min}	mm	164	193	223	267	324	358
dimension 2	b	mm	customer specification	customer specification	customer specification	customer specification	customer specification	customer specification
dimension 2 minimum	b_{min}	mm	164	193	223	267	324	358
bending roller diameter	d_{Br} [1]	mm	120	140	160	200	250	280
Ref. no.			**020010**	**020011**	**020012**	**020013**	**020014**	**020015**

[1] bending roller diameter 10 d_s, other bending roller diameters on request

Notice:
All length specifications with a tolerance of ± 10 mm.

bent male bars
bending roller diameter
d_{Br} = 10 $\varnothing_s$
deviations:
according to DIN EN 1992-1-1

stretched length L = a + b – x
PH-AB maximum 3,6 m
b = L – a + x
a = L – b + x

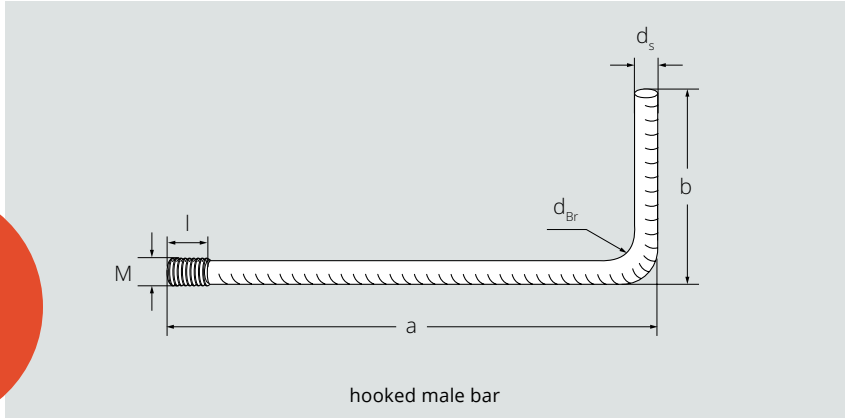
Notice:
The bent male bar can no longer be aligned with the bent end after screwed into a female bar set in concrete. Should alignment be necessary the use of right-left-thread connecting bolt in combination with two female bars is recommended.

hooked male bar

technical data

- **bar:** concrete bar steel B500 B

Notice:
Orders only possible until June 30, 2023



hooked male bar

hooked male bar – black steel

type		mm	PH-AW-12	PH-AW-14	PH-AW-16	PH-AW-20	PH-AW-25	PH-AW-28
diameter concrete steel	**d_s**	**mm**	**12**	**14**	**16**	**20**	**25**	**28**
thread length	l	mm	17	20	23	30	38	40
thread size			M 16	M 18	M 20	M 24	M 30	M 36
dimension 1	a	mm	customer specification	customer specification	customer specification	customer specification	customer specification	customer specification
dimension 1 minimum	a_{min}	mm	97	114	126	188	232	268
dimension 2	b	mm	customer specification	customer specification	customer specification	customer specification	customer specification	customer specification
dimension 2 minimum	b_{min}	mm	97	114	126	188	232	268
bending roller diameter	d_{Br}	mm	48	56	64	140	175	200
Ref. no.			**020016**	**020017**	**020018**	**020019**	**020020**	**020021**

Notice:
All length specifications with a tolerance of ± 10 mm.

hooked male bars bending roller diameter
d_{Br} = 4 $\varnothing_s$ bei $\varnothing_s$ < 20 mm
d_{Br} = 7 $\varnothing_s$ bei $\varnothing_s \geq$ 20 mm
b_{min} according to DIN EN 1992-1-1

stretched length L = a + b – x
PH-AW maximum 3,6 m
b = L – a + x
a = L – b + x

- **Usability in earthquake zones on request**
- **high-strength material**
- **General technical approval (abZ)**
- **European Technical Assessment (ETA)**

technical data

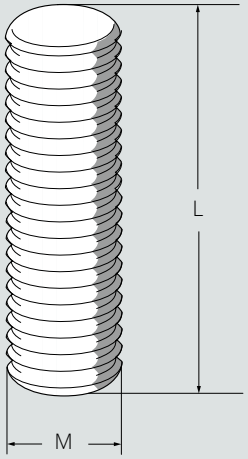
- **Material:** black steel

Options on request

- connection bolt PH-KD with torque control

connection bolt

- For connecting of two PH female bars
- Simply screw the female bars into the coupling sleeve from both sides.



connection bolt

connection bolt

for diameter concrete steel		**mm**	**8**	**10**	**12**	**14**	**16**	**20**	**25**	**28**	**32**	**40**
thread type			M 12	M 14	M 16	M 18	M 20	M 24	M 30	M 36	M 42	M 52
bolt length	L	mm	28	34	40	43	50	65	80	85	106	145
packing unit		pcs	1	1	1	1	1	1	1	1	1	1
Ref. no.			**119263**	**135169**	**135170**	**119264**	**119265**	**119266**	**119267**	**119268**	**135171**	**149216**

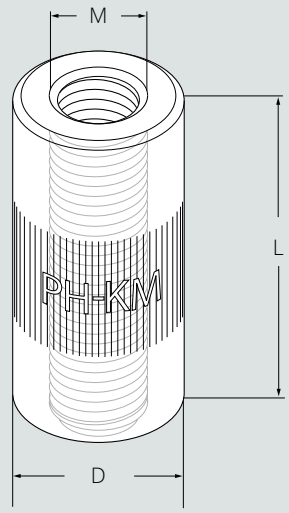
- **high-strength material**
- **General technical approval (abZ)**
- **European Technical Assessment (ETA)**

technical data

- **Material:** black steel

coupling sleeve

- For connecting of two PH female bars with connection bolt



coupling sleeve

coupling sleeve									
for diameter concrete steel		**mm**	**12**	**14**	**16**	**20**	**25**	**28**	**32**
total length	**L**	**mm**	**45**	**52**	**58**	**73**	**88**	**90**	**111**
thread type			M 16	M 18	M 20	M 24	M 30	M 36	M 42
outer diameter socket	D	mm	22,3	25,5	28,8	35,3	44,1	51	55,8
packing unit		pcs	1	1	1	1	1	1	1
Ref. no.			**363511**	**363512**	**363513**	**363514**	**363515**	**363516**	**363517**

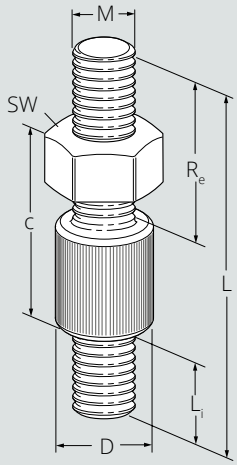
- **Innovative connection even with complicated reinforcement routing**
- **high-strength material**
- **General technical approval (abZ)**
- **European Technical Assessment (ETA)**

technical data

- **Material:** black steel

right-left-thread connecting bolt

- For connecting angled PH female bars
- If angled female bars are placed next to each other a free rotation of the bars is not possible - due to the opposite threads of the coupler, the components can still be screwed together.



right-left-thread connecting bolt

right-left-thread connecting bolt

for diameter concrete steel		**mm**	**8**	**10**	**12**	**14**	**16**	**20**	**25**	**28**	**32**
total length	**L**	**mm**	**61**	**71**	**79**	**85**	**90**	**109**	**131**	**145**	**170**
thread type			M 12	M 14	M 16	M 18	M 20	M 24	M 30	M 36	M 42
wrench size	SW	mm	19	22	24	27	30	36	46	55	65
outer diameter socket	D	mm	16,5	18,5	20,5	24	27	33,5	42	48,5	50,5
length right-hand thread	Re	mm	24	30	35	39	42	53	67	74	90
length left-hand thread	Li	mm	12	16	19	21	23	31	39	41	50
minimum distance nut	c_{min}	mm	37	39	41	43	44	47	53	63	70
packing unit		pcs	1	1	1	1	1	1	1	1	1
Ref. no.			**119269**	**135172**	**135173**	**119270**	**119271**	**119272**	**119273**	**119274**	**135174**

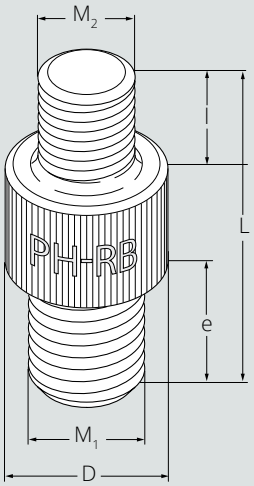
- **economic grading of the reinforcement cross-sections**
- **high-strength material**
- **General technical approval (abZ)**
- **European Technical Assessment (ETA)**

technical data

- **Material:** black steel

reducing bolt

- For connecting two PH female bars with different diameters
- Use for ascending screw reinforcement over several floors where the statically necessary cross-sections are reduced floor by floor



reducing bolt

reducing bolt								
for diameter concrete steel 1		**mm**	**12**	**14**	**16**	**16**	**20**	**25**
total length	**L**	**mm**	**60**	**65**	**69**	**67**	**79**	**95**
thread size site 1	**M_1**		**M 16**	**M 18**	**M 20**	**M 20**	**M 24**	**M 30**
for diameter concrete steel 2		**mm**	**10**	**12**	**14**	**12**	**16**	**20**
thread size site 2	**M_2**		**M 14**	**M 16**	**M 18**	**M 16**	**M 20**	**M 24**
screw-in depth	e	mm	19	21	23	23	31	39
thread length	l	mm	16	19	21	19	23	31
outer diameter socket	D	mm	20,5	24	27	27	33,5	42
packing unit		pcs	1	1	1	1	1	1
Ref. no.			**211277**	**211278**	**211279**	**211285**	**211280**	**211281**

reducing bolt							
for diameter concrete steel 1		**mm**	**28**	**28**	**32**	**32**	**40**
total length	**L**	**mm**	**110**	**102**	**119**	**121**	**160**
thread size site 1	**M_1**		**M 36**	**M 36**	**M 42**	**M 42**	**M 52**
for diameter concrete steel 2		**mm**	**25**	**20**	**25**	**28**	**32**
thread size site 2	**M_2**		**M 30**	**M 24**	**M 30**	**M 36**	**M 42**
screw-in depth	e	mm	41	41	50	50	70
thread length	l	mm	39	31	39	41	50
outer diameter socket	D	mm	48,5	48,5	50,5	50,5	70,5
packing unit		pcs	1	1	1	1	1
Ref. no.			**211282**	**211286**	**211287**	**211283**	**211284**

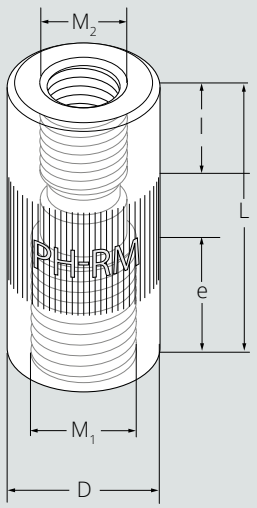
- **economic grading of the reinforcement cross-sections**
- **high-strength material**
- **General technical approval (abZ)**
- **European Technical Assessment (ETA)**

technical data

- **Material:** black steel

reducing socket

- For connecting two PH female bars incl. connecting bolts with different diameters
- Use for ascending screw reinforcement over several floors, where the statically necessary cross-sections are reduced floor by floor.



reducing socket

reducing socket												
for diameter concrete steel 1		**mm**	**12**	**14**	**16**	**20**	**25**	**28**	**28**	**16**	**28**	**32**
total length	**L**	**mm**	**50**	**55**	**60**	**75**	**90**	**105**	**115**	**60**	**95**	**115**
thread size site 1	**M_1**		**M 16**	**M 18**	**M 20**	**M 24**	**M 30**	**M 36**	**M 42**	**M 20**	**M 36**	**M 42**
for diameter concrete steel 2		**mm**	**10**	**12**	**14**	**16**	**20**	**25**	**32**	**12**	**20**	**25**
thread size site 2	**M_2**		**M 14**	**M 16**	**M 18**	**M 20**	**M 24**	**M 30**	**M 36**	**M 16**	**M 24**	**M 30**
screw-in depth	e	mm	20	22	24	32	40	42	52	24	42	52
thread length	l	mm	17	20	22	24	32	40	42	20	32	40
outer diameter socket	D	mm	22	25	30	35	45	50	55	30	50	55
packing unit		pcs	1	1	1	1	1	1	1	1	1	1
Ref. no.			**211288**	**211289**	**211290**	**211291**	**211292**	**211293**	**211294**	**211296**	**211297**	**211298**

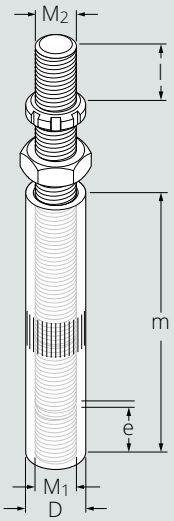
- **flexible due to practical tolerance zones**
- **high-strength material**
- **General technical approval (abZ)**
- **European Technical Assessment (ETA)**

technical data

- **Material:** black steel

positioning connector

- For connecting PH female bars that are not freely rotatable
- Stepless adjustment of the installation length possible. Fixation via lock nut



positioning connector

positioning connector										
for diameter concrete steel		**mm**	**12**	**14**	**16**	**20**	**25**	**28**	**32**	**40**
thread size site 1	**M_1**		**M 16**	**M 18**	**M 20**	**M 24**	**M 30**	**M 36**	**M 42**	**M 52**
thread size site 2	**M_2**		**M 16**	**M 18**	**M 20**	**M 24**	**M 30**	**M 36**	**M 42**	**M 52**
screw-in depth	e	mm	20	22	24	32	40	42	52	70
thread length	l	mm	30	32	34	42	50	52	62	80
outer diameter socket	D	mm	22,3	25,5	28,8	35,3	44,1	51	55,8	70
socket length	m	mm	120	128	136	188	222	230	278	350
packing unit		pcs	1	1	1	1	1	1	1	1
Ref. no.			**211299**	**211300**	**211301**	**211302**	**211303**	**211304**	**211305**	**211306**

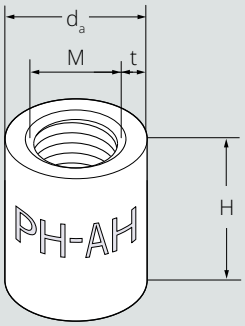
- **good weldable material**
- **General technical approval (abZ)**
- **European Technical Assessment (ETA)**

technical data

▸ **Material:** black steel

welding socket

- For the connection of reinforcement screw connections and steel construction elements
- The socket is welded onto the steel component, into which a PH female bar with coupling/reducing element can be screwed in
- Side of the weld seam without thread, opposite side with defined screw-in depth for PH components



welding socket

welding socket										
for diameter concrete steel		**mm**	**12**	**14**	**16**	**20**	**25**	**28**	**32**	**40**
thread type			**M 16**	**M 18**	**M 20**	**M 24**	**M 30**	**M 36**	**M 42**	**M 52**
socket height	H	mm	35	40	40	50	60	65	75	90
Außendurchmesser	d_a	mm	25	27	30	40	50	55	60	75
wall thickness socket	t	mm	5,5	5,75	6,25	9,5	11,75	11,5	11,25	14
packing unit		pcs	1	1	1	1	1	1	1	1
Ref. no.			**211307**	**211308**	**211309**	**211310**	**211311**	**211312**	**211313**	**211314**

- **Realization of an end anchorage according to standard IN EN 1992-1-1**
- **Dynamic stresses possible**
- **General technical approval (abZ)**

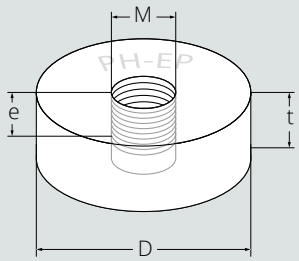
technical data

- **Material:** black steel

CE

end anchorage plate

- For the realization of an end anchorage in the reinforcement guide
- The end anchoring plate is combined with PH female bars and connecting bolts
- The products are simply screwed together via the internal thread of the plate. Thus, loads can be transferred from a PH screw connection or an overlap joint into the component



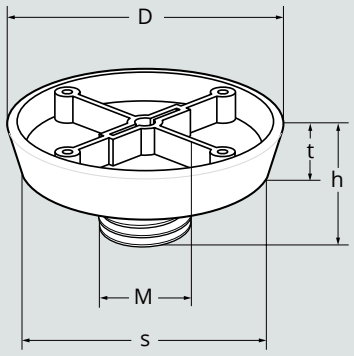
end anchorage plate

end anchorage plate								
for diameter concrete steel		**mm**	**12**	**14**	**16**	**20**	**25**	**28**
thread type			**M 16**	**M 18**	**M 20**	**M 24**	**M 30**	**M 36**
screw-in depth	e	mm	16	18	20	24	30	36
outer diameter socket	D	mm	45	55	60	75	95	105
plate thickness	t	mm	19	21	23	27	33	39
packing unit		pcs	1	1	1	1	1	1
Ref. no.			**218365**	**218366**	**218367**	**218368**	**218369**	**218370**

- **flexible formwork fastening – gluing, nailing, screwing**
- **colour-coded nail plates for quick assignment of the system size**

pin plate PH und nail plate

- for formwork fixing of PH female bars
- also protects the internal thread of the sleeves from contamination and damage



pin plate PH

pin plate PH – plastic

for diameter concrete steel			**8**	**12**	**14**	**16**	**20**	**25**	**28**
colour			black	yellow	blue	white	grey	red	black
thread size			M 12	M 16	M 18	M 20	M 24	M 30	M 36
outer diameter	D	mm	55	55	55	55	80	80	80
diameter lower edge, outside	s	mm	45	45	45	45	70	70	70
total height	h	mm	18	18	18	20	20	23	25
plate thickness	t	mm	8	8	8	8	8	8	8
packing unit		pcs	1	1	1	1	1	1	1
Ref. no.			**118515**	**118516**	**118517**	**118518**	**118519**	**118520**	**118521**

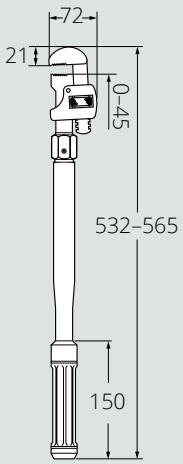
nail plate

for diameter concrete steel			**10**	**32**	**40**
thread size			M 14	M 42	M 52
outer diameter	D	mm	59,0	67,5	81,0
diameter lower edge, outside	s	mm	55,5	63,0	76,0
plate thickness	t	mm	10	13	13
packing unit		pcs	200	50	50
Ref. no.			**391648**	**391655**	**391656**

- **controlled, approval-compliant torque**
- **self-locking, serrated gripper jaws**
- **wide torque range from 40 to 200 Nm**

torque wrench

- Tightening of connections (e. g. of the PH system) under a controlled torque in conformity with the approval



torque wrench

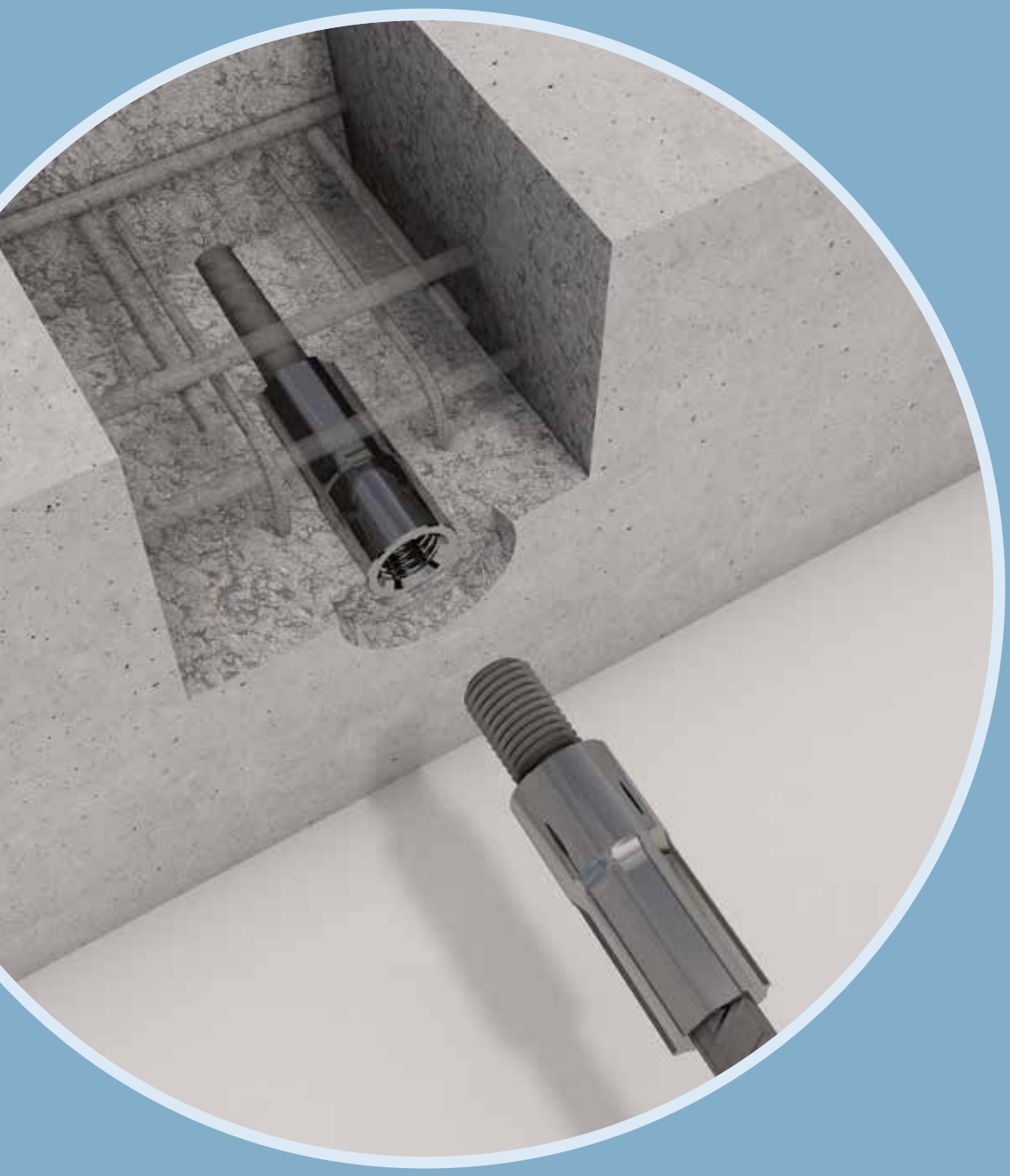
torque wrench			
for diameter concrete steel			**14–40**
packing unit		pcs	1
Ref. no.			**219272**

assembly torques M_T PH-System

at type	M_T
PH-8	20
PH-10	25
PH-12	30
PH-14	40
PH-16	60
PH-20	80
PH-25	100
PH-28	140
PH-32	180
PH-40	200

application area torque wrench

dimensioning



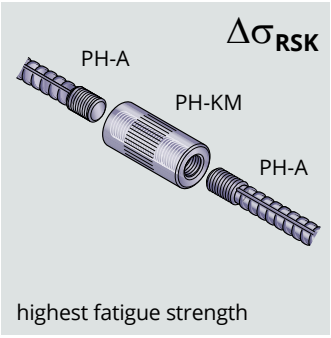
Load capacity PH system

System size/ Bar diameter	Decisive tension cross section [1]	Steel load capacity
d_s [mm]	A_s [mm²]	N_{Rd} [kN]
8	50	21,9
10	78	34,1
12	113	49,2
14	154	66,9
16	201	87,4
20	314	136,6
25	491	213,4
28	616	267,7
32	804	349,7
40	1257	546,3

[1] Decisive cross section of the reinforcement bar

Fatigue strength

Combination of products[1]	Fatigue strength
	$\Delta\sigma_{RSK}$ [N/mm²]
PH-MU | PH-A	70
PH-MU | PH-K | PH-MU	70
PH-A | PH-KM | PH-A	125
PH-MU | PH-RL | PH-MU	70
PH-MU | PH-PA | PH-A	70
PH-MU | PH-EP	70
PH-MU | screw | PH-EP	70



highest fatigue strength

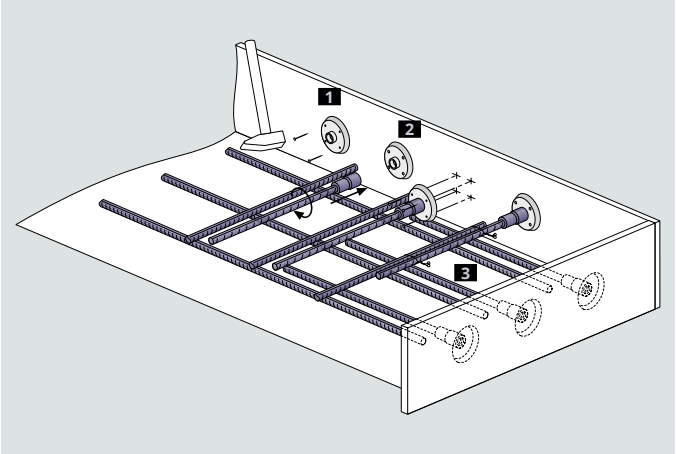
You can find further information in the approvals or certificates available at:

www.pfeifer.info/ph-reinforcement

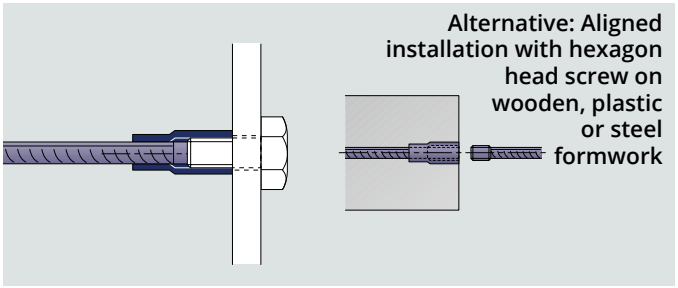
installation

installation instructions precast factory

female bar PH-MU

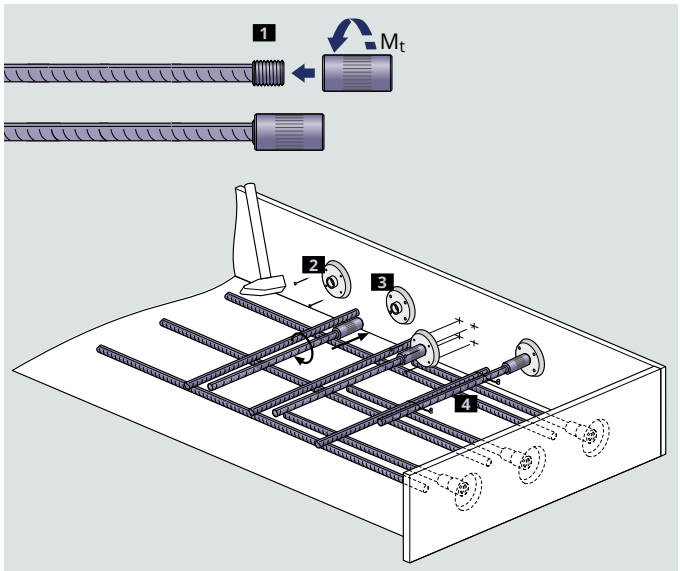


1. Nailing the pin plate to the formwork
2. Press on female bar and turn 90°. Alternative: Plug the pin plate into the female bar and nail it onto the formwork.
3. Install further reinforcement, connect female bar to the reinforcement and concreting

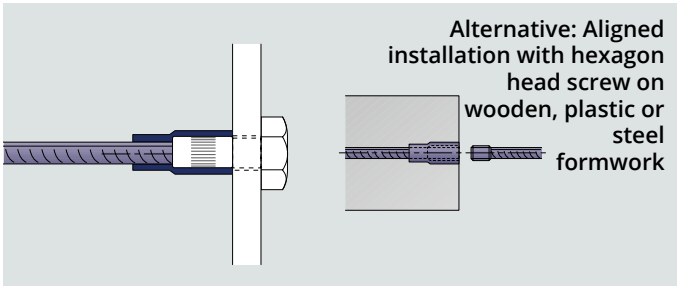


Alternative: Aligned installation with hexagon head screw on wooden, plastic or steel formwork

male bar PH-A mit coupling sleeve PH-KM



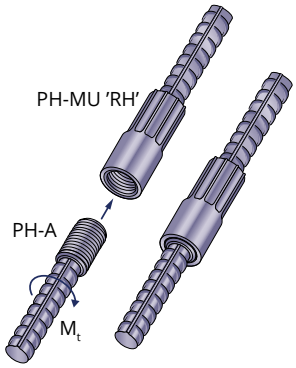
1. The coupling sleeve is attached to one of the male bars and tightened with the corresponding torque.
2. Nailing the pin plate to the formwork
3. Press on female bar and turn 90°. Alternative: Plug the pin plate into the female bar and nail it onto the formwork.
4. Install further reinforcement, connect female bar to the reinforcement and concreting

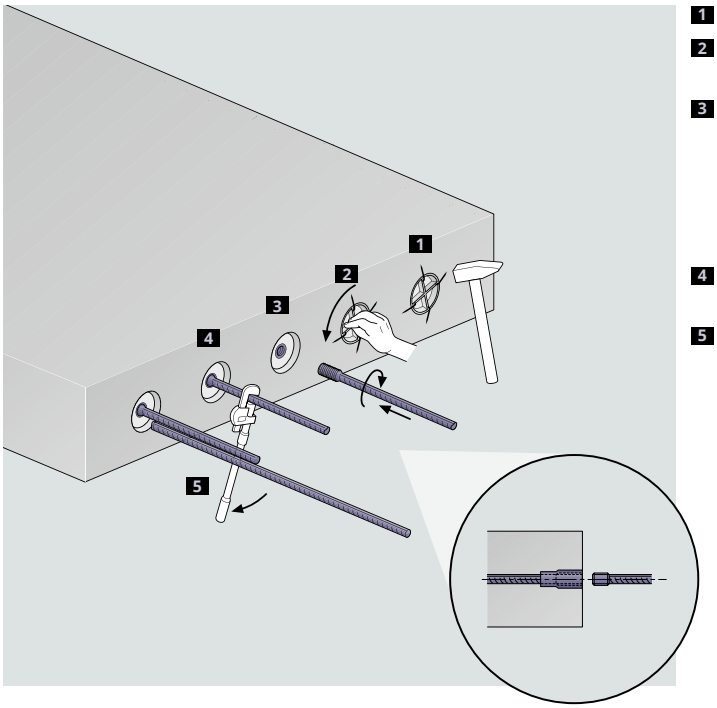


Alternative: Aligned installation with hexagon head screw on wooden, plastic or steel formwork

assembly instructions construction site

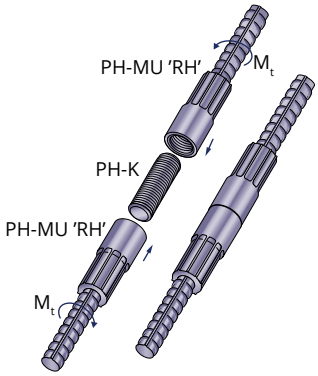
female bar PH-MU/MUR with male bar PH-A

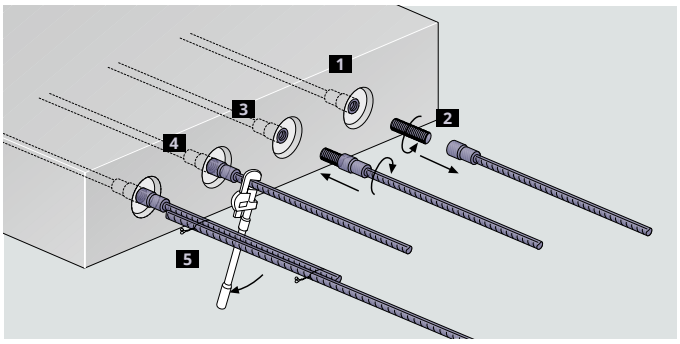




1. stripping
2. Unsrew colour-coded pin plate
3. Prepare the male bar with the same colour cap, remove the cap and insert the male bar into the clean socket thread by hand or with a pipe wrench
4. apply torque with torque wrench
5. anodising further reinforcement

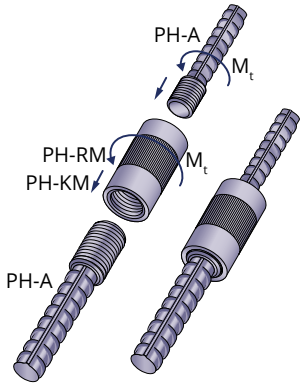
female bar PH-MU with connection bolt PH-K

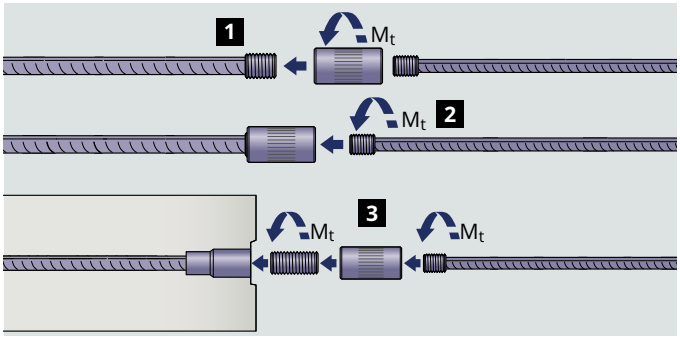




1. Unsrew colour-coded pin plate
2. Screwing in the connection bolt into the second female bar (normal right-hand thread) by hand (does not have to be be tightened)
3. Screw together into embedded female bar with hand or pipe wrench
4. apply torque with torque wrench
5. anodising further reinforcement

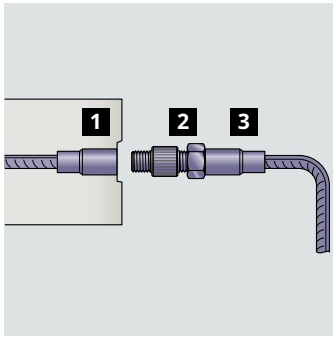
male bar with coupling sleeve PH-KM or reducing socket PH-RM





1. The reducing socket is screwed onto one of the male bars and secured with the appropriate torque
2. Afterwards the second male bar with a different diameter is srewed into the other thread of the socket completely and tightened with the diameter-dependent torque.
3. As an alternative to the male bars at this type of connection female bars with connection bolts can also used!

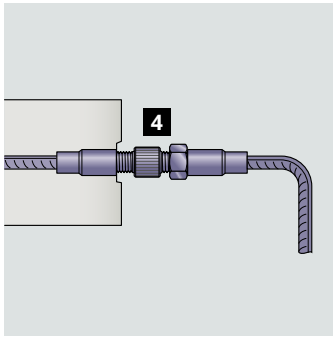
right-left-thread connecting bolt PH-RL und PH-RB



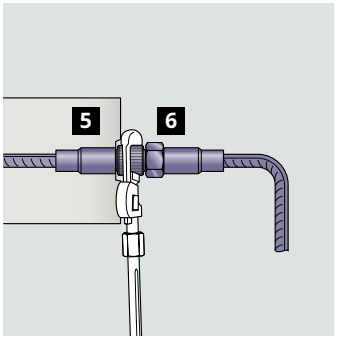
1 Left-hand threaded female bar set in concrete first.

2 Turn lock nut on the coupler against thickening by hand.

3 Turn right-left-thread connecting bolt once (no more!) into the right-hand threaded socket

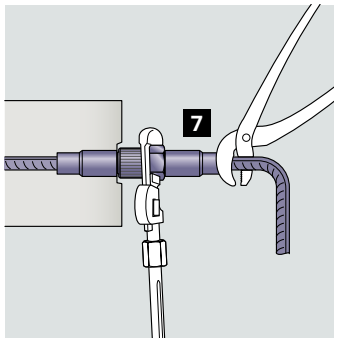


4 Turn coupler with connection socket bar into concreted female bar **clockwise** by hand. First the knurled thickening of the coupler is at the left-hand threaded connecting bolt (set in concrete). If this is not the case, it should not be screwed too deep at step 3.

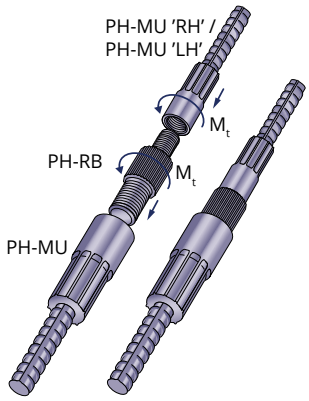


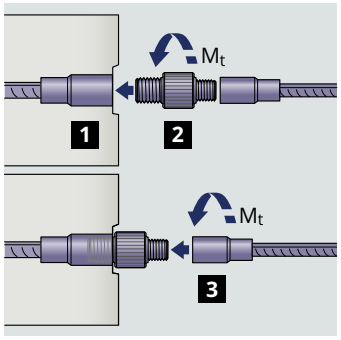
5 Tighten the coupler with torque wrench to the nominal torque as with for normal male bar.

6 Screw lock nut against coupler



7 Hold right female bar with pliers and tighten lock nut with torque tongs to torque as for male bar.



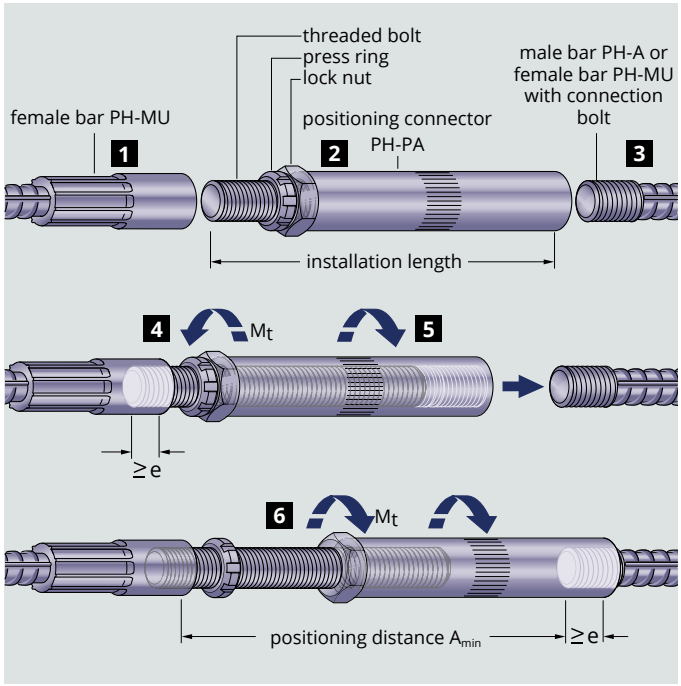


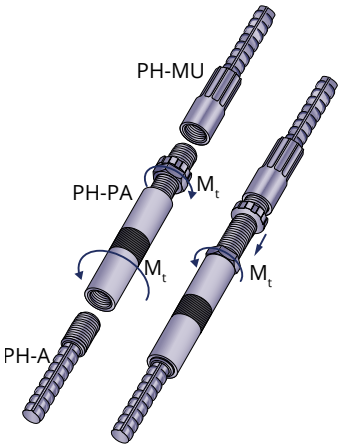
1 Concreted female bar with larger diameter.

2 Reducing bolt with the larger thread is turned into the female bar set in concrete and tightened with the required tightening torque.

3 The female bar of the smaller diameter is srewed on the remaining threaded bolt, until the entire thread is screwed in. The bar is also tightend with the corresponding torque.

positioning connector PH-PA





1 Already installed female bar with right-hand thread. (Attention: Use only Positioning connection with right-hand thread socket or connecting bar)!

2 Positioning socket with completely srewed bolt is to be placed in between the connected bars.

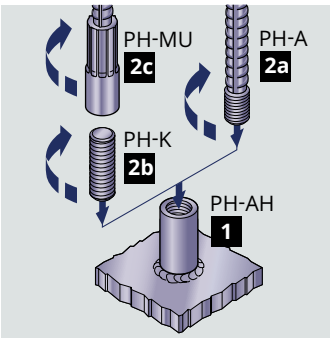
3 Conditionally displaceable male bar (customary position tolerances must be observed in axial direction and transverse direction so that the threads meet).

4 The positioning connection is screwed into the female bar set in concrete with the threaded bolt and tightened with the diameter-related torque.

5 The socket part of the positioning connection is screwed out within the approval tolerances until the male bar is completely screwed in.

6 By tightening the socket and the lock nut with the diameter-related tightening torque the connection is secured.

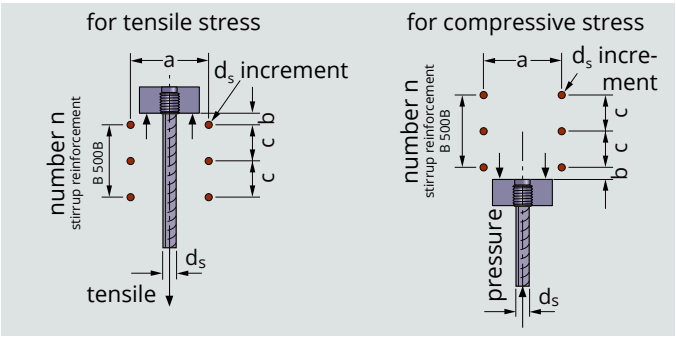
welding socket PH-AP



1 The welding socket is attached to the steel component to be connected by means of a weld seam, which is to be dimensioned by the responsible planner.

2 The male bar (2a) or femal bar with connection bolt (2b and 2c) is screwed completely into the socket and secured with the required tightening torque.

end anchorage plate PH-EP



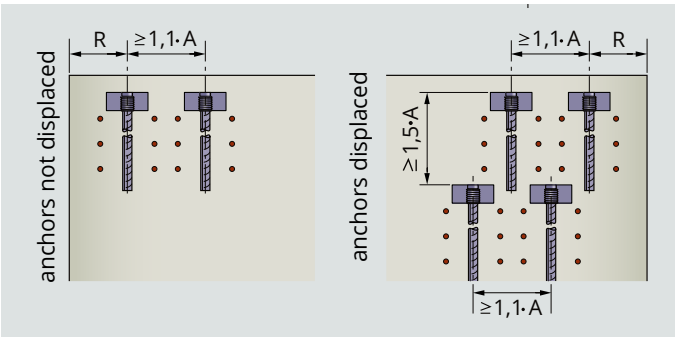


table 1: end anchorage plate PH-EP – spacing and reinforcement

type	A [mm]	R [mm]	number n	$d_{s,increment}$	a [mm]	b [mm]	c [mm]
PH-EP 12	85	65	3	6	60	20	28
PH-EP 14	85	65	3	6	60	20	28
PH-EP 16	100	70	3	6	70	20	30
PH-EP 20	130	85	4	6	100	20	32
PH-EP 25	145	95	4	6	120	15	41
PH-EP 28	170	105	3	6	140	10	41

Notice:

The bar with the plate can be installed after the end anchoring plate has been screwed to the PFEIFER PH-A reinforcement connection in accordance with the approval. In principle, verification must be provided by the responsible planner in accordance with EN 1992-1-1. The reinforcement shown in the picture on the left is only a reinforcement that absorbs splitting forces from the end anchorage. A distinction must be made between compression and tension. Likewise, the specified minimum edge and intermediate distances according to the drawing and table must be observed.

Other information:

Table 2: Torques

type labelling	nominal-Ø BSt Ø [mm]	assembly torque M_T [Nm]
PH 8	8	20
PH 10	10	25
PH 12	12	30
PH 14	14	40
PH 16	16	60
PH 20	20	80
PH 25	25	100
PH 28	28	140
PH 32	32	180
PH 40	40	200

Table 3: Outer diameter sockets PH-MU and PH-KM

type labelling	sockets Ø [mm]
PH 8	16,0
PH 10	19,2
PH 12	22,3
PH 14	25,5
PH 16	28,8
PH 20	35,3
PH 25	44,1
PH 28	51,0
PH 32	55,8
PH 40	70,0

Table 4: Weight determination for special lengths

$$G_{\text{special bar}} = G_{\text{standard bar}} + (L_{\text{special bar}} - L_{\text{standard bar}}) \times g/100$$

G in [kg]
L in [cm]

Where g is determined according to the table below:

type	$Ø_s$ [mm]	g [kg/100 cm]
PH 8	8	0,40
PH 10	10	0,61
PH 12	12	0,89
PH 14	14	1,21
PH 16	16	1,58
PH 20	20	2,47
PH 25	25	3,85
PH 28	28	4,83
PH 32	32	6,31
PH 40	40	9,86

Material used for PFEIFER Reinforcement Connection system PH

Generally approved reinforcing steel bars B500 B according to DIN 488, high ductility

Products of the PH system are supplied as standard without corrosion protection delivered!

Notes

Notes

PFEIFER

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