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**Dimensioning table
PFEIFER Fastening
for push-pull props**

**PFEIFER
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Gust velocity pressure q_p^{*1} 0,65 kN/m ²					
Pressure coefficient $c_{p,net}$					
2,3			3,4		
Prop angle					
	45°	60°	45°	60°	
Wall area in m ²	4	2,38 kN → MoFi12/ConFi10	3,36 kN → MoFi12/ConFi10	3,52 kN → MoFi12/ConFi10	4,97 kN → MoFi12/ConFi10
	6	3,57 kN → MoFi12/ConFi10	5,05 kN → MoFi12/ConFi10	5,27 kN → MoFi12/ConFi10	7,46 kN → MoFi12/ConFi10
	8	4,76 kN → MoFi12/ConFi10	6,73 kN → MoFi12/ConFi10	7,03 kN → MoFi12/ConFi10	9,94 kN → MoFi12/ConFi10
	10	5,95 kN → MoFi12/ConFi10	8,41 kN → MoFi12/ConFi10	8,79 kN → MoFi12/ConFi10	12,43 kN → MoFi12/ConFi10
	12	7,14 kN → MoFi12/ConFi10	10,09 kN → MoFi12/ConFi10	10,55 kN → MoFi12/ConFi10	14,92 kN → MoFi16/ConFi14
	14	8,32 kN → MoFi12/ConFi10	11,77 kN → MoFi12/ConFi10	12,31 kN → MoFi12/ConFi10	17,4 kN → MoFi16/ConFi14
	16	9,51 kN → MoFi12/ConFi10	13,45 kN → MoFi16/ConFi14	14,06 kN → MoFi16/ConFi14	
	18	10,7 kN → MoFi12/ConFi10	15,14 kN → MoFi16/ConFi14	15,82 kN → MoFi16/ConFi14	
	20	11,89 kN → MoFi12/ConFi10	16,82 kN → MoFi16/ConFi14	17,58 kN → MoFi16/ConFi14	
	22	13,08 kN → MoFi16/ConFi14	18,5 kN → MoFi16/ConFi14	19,34 kN → MoFi16/ConFi14	
	24	14,27 kN → MoFi16/ConFi14			
	26	15,46 kN → MoFi16/ConFi14			
	28	16,65 kN → MoFi16/ConFi14			
	30	17,84 kN → MoFi16/ConFi14			
32	19,03 kN → MoFi16/ConFi14				

Captions:

Stress per anchor →
selected anchor

Gust velocity pressure q_p^{*1} 0,80 kN/m ²					
Pressure coefficient $c_{p,net}$					
2,3			3,4		
Prop angle					
	45°	60°	45°	60°	
Wall area in m ²	4	2,93 kN → MoFi12/ConFi10	4,14 kN → MoFi12/ConFi10	4,33 kN → MoFi12/ConFi10	6,12 kN → MoFi12/ConFi10
	6	4,39 kN → MoFi12/ConFi10	6,21 kN → MoFi12/ConFi10	6,49 kN → MoFi12/ConFi10	9,18 kN → MoFi12/ConFi10
	8	5,85 kN → MoFi12/ConFi10	8,28 kN → MoFi12/ConFi10	8,65 kN → MoFi12/ConFi10	12,24 kN → MoFi12/ConFi10
	10	7,32 kN → MoFi12/ConFi10	10,35 kN → MoFi12/ConFi10	10,82 kN → MoFi12/ConFi10	15,3 kN → MoFi16/ConFi14
	12	8,78 kN → MoFi12/ConFi10	12,42 kN → MoFi12/ConFi10	12,98 kN → MoFi16/ConFi14	18,36 kN → MoFi16/ConFi14
	14	10,25 kN → MoFi12/ConFi10	14,49 kN → MoFi16/ConFi14	15,15 kN → MoFi16/ConFi14	
	16	11,71 kN → MoFi12/ConFi10	16,56 kN → MoFi16/ConFi14	17,31 kN → MoFi16/ConFi14	
	18	13,17 kN → MoFi16/ConFi14	18,63 kN → MoFi16/ConFi14	19,47 kN → MoFi16/ConFi14	
	20	14,64 kN → MoFi16/ConFi14			
	22	16,1 kN → MoFi16/ConFi14			
	24	17,56 kN → MoFi16/ConFi14			
	26	19,03 kN → MoFi16/ConFi14			
	28				
	30				
32					

Captions:

Stress per anchor →
selected anchor

*) In the calculation this value was reduced by the factor 0.5 as described in "Assumptions".

Gust velocity pressure q_p^{*1}					
0,65 kN/m ²					
Pressure coefficient $c_{p,net}$					
2,3			3,4		
Prop angle					
	45°	60°	45°	60°	
Wall area in m ²	4	2,38 kN → MoFi12/ConFi10	3,36 kN → MoFi12/ConFi10	3,52 kN → MoFi12/ConFi10	4,97 kN → MoFi12/ConFi10
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	18	10,7 kN → MoFi16/ConFi14	15,14 kN → MoFi16/ConFi14		
	20	11,89 kN → MoFi16/ConFi14			
	22	13,08 kN → MoFi16/ConFi14			
	24	14,27 kN → MoFi16/ConFi14			
	26	15,46 kN → MoFi16/ConFi14			
	28				
30					
32					

Captions:
Stress per anchor → selected anchor

Gust velocity pressure q_p^{*1}					
0,80 kN/m ²					
Pressure coefficient $c_{p,net}$					
2,3			3,4		
Prop angle					
	45°	60°	45°	60°	
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	20	14,64 kN → MoFi16/ConFi14			
	22				
	24				
	26				
	28				
30					
32					

Captions:
Stress per anchor → selected anchor

*) In the calculation this value was reduced by the factor 0.5 as described in "Assumptions".

Assumptions made when creating the dimensioning table:

■ Components:

- Minimum shell thickness: $\geq 50 \text{ mm}$
- Concrete compressive strength: $f_{ck, \text{cube}} \geq 25 \text{ N/mm}^2$
- Reinforcement of double-wall layer: At least Q188 or equivalent

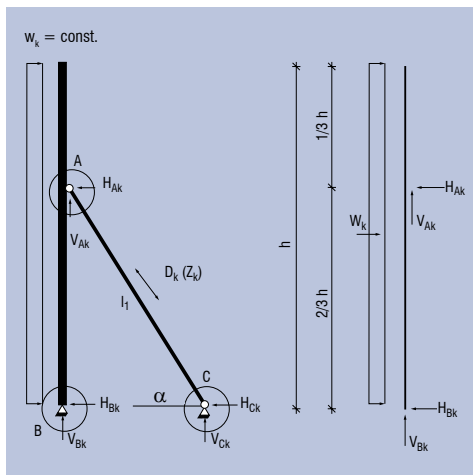
■ Stresses:

- Gust velocity ($h \leq 10 \text{ m}$; inland): $q_p = 0,65 \text{ kN/m}^2$ Wind zone 2
(according to DIN 1991-1-4/NA:2010-12, NA.B.3) $q_p = 0,80 \text{ kN/m}^2$ Wind zone 3
- Reduction: $0,5 \times q_p$ Assembly period between May and August (max. 3 months) or alternatively up to 3 days all year round, no safety measures
(according to DIN 1991-1-4/NA:2010-12, NA.B.5)
- Partial safety factor: $\gamma_w = 1,5$

No further stresses were taken into account for the dimensioning of the braces anchoring points.

■ Brace:

- Static system:
(Braces head is always positioned at $1/3 \times h$)



Notice:

Base point (B) wall-slab must be verified!

- Number of braces: 2 per wall element
- Note: Eccentricities at the braces head and base (union joint) were not considered when creating the table.

Example of application:

Assumptions:

- Double wall area: 6,00 m x 3,00 m
 - Layer thickness: 50 mm
 - Concrete compressive strength: $f_{ck, cube} \geq 25 \text{ N/mm}^2$
 - Non-cracked concrete
 - Surface reinforcement: Q188
 - Wind pressure ($h \leq 10 \text{ m}$; wind zone 2): $q_p = 0,65 \text{ kN/m}^2$
(according to DIN 1991-1-4/NA:2010-12, NA.B.3)
 - Brace inclination: 45°
 - No further relevant stresses during assembly (snow, earthquake, collision) during the assembly
 - Pressure coefficient $c_{p, net}$: 3,4
(In relation to a long wall, area A)
 - Reduction for state of building: $0,5 \times q_p$
(DIN EN 1991-1-4/NA:2010-12, NA.B.5)
- Assembly between May and August (max. 3 months)
or assembly takes 3 days at the most

Procedure for dimensioning with the table:

- Wall area: $6,00 \times 3,00 \text{ m} = 18 \text{ m}^2$ ①

Uncracked concrete ②

Gust velocity pressure q_p^{*1}					
0,65 kN/m ² ③					
Pressure coefficient $c_{p, net}$					
2,3		3,4 ④			
Prop angle					
45°		60°	45° ⑤	60°	
Wall area in m ²	4	2,38 kN → MoFi12/ConFi10	3,36 kN → MoFi12/ConFi10	3,52 kN → MoFi12/ConFi10	4,97 kN → MoFi12/ConFi10
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26	15,46 kN → MoFi16/ConFi14				



Notice:

Partial safety factor of the stress $\gamma_w = 1,5$

Selected:

- 2 x Fastener for push-pull props MoFi 16
- 2 x Concrete Screw ConFi 14



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We look forward to hearing from you!

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This table was created with the greatest of care. Nevertheless, errors cannot be completely ruled out. The user is urged to check the assumptions and the dimensioning results and to check their plausibility on the basis of applicable documents (standards and approvals). The user is solely responsible for the use of the dimensioning table! PFEIFER Seil- und Hebetchnik GmbH accepts no liability for incorrect results. All previous versions lose their validity on publication of a new printed version.

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