# FOCUS ON QUALITY YOUR LIFT EXPERT

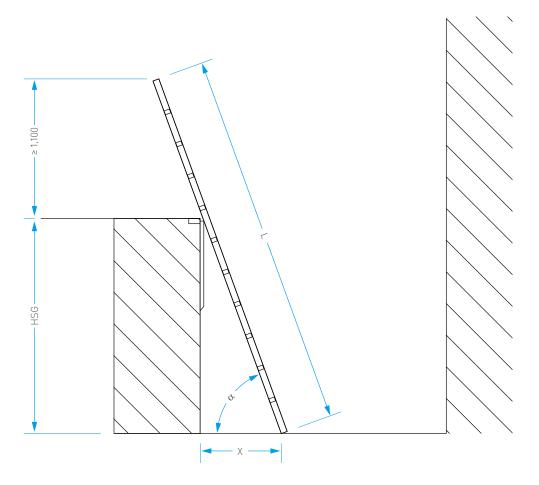


## PIT LADDERS

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## DETERMINING THE NORM-COMPLIANT LADDER LENGTH

ladder length L (m)		depth HSG			ance X (m)	
	$\alpha = 65^{\circ}$		$\alpha = 75^{\circ}$	α = 65°	α = 70°	α = 75°
1.50	0.26	0.310	0.35	0.12	0.11	0.09
1.75	0.49	0.54	0.59	0.23	0.20	0.16
1.80	0.53	0.59	0.64	0.25	0.22	0.17
2.10	0.80	0.87	0.93	0.37	0.32	0.25
2.25	0.94	1.01	1.07	0.44	0.37	0.29
2.30	0.98	1.06	1.12	0.46	0.39	0.30
2.35	1.03	1.11	1.17	0.48	0.40	0.31
2.46	1.13	1.21	1.28	0.53	0.44	0.34
2.50	1.17	1.25	1.31	0.54	0.45	0.35
2.60	1.26	1.34	1.41	0.59	0.49	0.38
2.65	1.30	1.39	1.46	0.61	0.51	0.39
2.85	1.48	1.58	1.65	0.69	0.57	0.44
2.90	1.53	1.63	1.70	0.71	0.59	0.46
3.00	1.62	1.72	1.80	0.75	0.63	0.48
3.15	1.75	1.86	1.94	0.82	0.68	0.52
3.20	1.80	1.91	1.99	0.84	0.69	0.53
3.40	1.98	2.09	2.18	0.92	0.76	0.59
3.50	2.07	2.19	2.28	0.97	0.80	0.61
3.60	2.16	2.28	2.38	1.01	0.83	0.64
3.70	2.25	2.38	2.47	1.05	0.87	0.66
3.75	2.30	2.42	2.52	1.07	0.88	0.68
4.00	2.53	2.66	2.76	1.18	0.97	0.74
4.05	2.57	2.71	2.81	1.20	0.98	0.75
4.10	2.62	2.75	2.86	1.22	1.00	0.77
4.30	2.80	2.94	3.05	1.30	1.07	0.82





PAT. 1063368

## **PIT LADDER TYPE A**

Stationary, inclineable aluminum ladder with contact-protected safety suspension. Ideal for narrow shaft conditions. The safety suspension is made of steel. An electrical contact which stops lift operation as soon as the ladder is inclined is mandatory to ensure DIN EN81 compliance. Contact connection with the safety circuit must be carried out by a competent person/firm.

Every pit ladder comes with the necessary fixing material. The aluminium ladder type A complies with DIN EN 131

**SHAFT SKETCH:** Ladder in stowed position. Set-up height only 55mm.

#### **FURTHER LENGTHS UPON REQUEST!**

WITH SAF	ETY SWITCH		
Item No.	Description	Angle of	DIN EN 81-20 Compliant
	DIN EN 91/20	inclination	Pit Depth (HSG)
	DIN EN 81/50 U		max. or smaller
0311250010	Pit ladder type A with safety switch. 2.50 m/long	70°	1.21 m
0311300010	Pit ladder type A with safety switch. 3.00 m/long	72°	1.79 m
0311360010	Pit ladder type A with safety switch. 3.60 m/long	74°	2.35 m
0311410010	Pit ladder type A with safety switch. 4.10 m/long	75°	2.93 m
WITHOUT	CONTACT PROTECTION		
Item No.	Description	Angle of	Recommended Pit Ladder Length
		inclination	Pit depth (HSG)
			max. or smaller
0322250010	Pit ladder type A without contact protection. 3.00 m/long	70°	1.21 m
0321300010	Pit ladder type A without contact protection. 3.00 m/long	72°	1.79 m
0321360010	Pit ladder type A without contact protection. 3.60 m/long	74°	2.35 m
0321410010	Pit ladder type A without contact protection. 4.10 m/long	75°	2.93 m
WITH POS	ITION SWITCH		
Item No.	Description		
0300250000	Pit ladder type A with position switch. 2.50 m/long	70°	1.21 m
0300300000	Pit ladder type A with position switch. 3.00 m/long	72°	1.79 m
0300360000	Pit ladder type A with position switch. 3.60 m/long	74°	2.35 m
0300410000	Pit ladder type A with position switch. 4.10 m/long	75°	2.93 m

## **PIT LADDER TYPE B**

Stationary aluminium ladder with / without mounting brackets. This version is for use in lift shafts with sufficient space conditions. The step-depth of 200 mm fulfills DIN EN 81-20 requirements. The overall setup height is approx.  $235\,\mathrm{mm}$ .

Mounting brackets are made of galvanized sheet steel.

The aluminium ladder type B complies with DIN EN 131 requirements.

#### **FURTHER LENGTHS UPON REQUEST!**



WITH MOL	INTINO DD AOKETC			
WITH MUL	JNTING BRACKETS			
Item No.	Description	Amount of	Angle of	DIN EN 81-20 Compliant
	DINI ENI 04/00	Spacers	inclination	Pit Depth (HSG)
	DIN EN 81/204 DIN EN 81/50			max. or smaller
	DIN EN 81/50			
0361150010	Pit ladder type B, 1.50 m/long	4	90°	0.40 m
0361180010	Pit ladder type B, 1.80 m/long	4	90°	0.70 m
0361250010	Pit ladder type B, 2.50 m/long	4	90°	1.40 m
0361300010	Pit ladder type B, 3.00 m/long	4	90°	1.90 m
0361360010	Pit ladder type B, 3.60 m/long	4	90°	2.50 m
0361420010	Pit ladder type B, 4.20 m/long	6	90°	3.00 m
WITHOUT	MOUNTING BRACKETS			
Item No.	Description	Amount of	Angle of	Recommended Pit Ladder Length
		Spacers	inclination	Pit Depth (HSG)
				max. or smaller
0361150020	Pit ladder type B, 1.50 m/long	0	70°	0.31 m
0361180020	Pit ladder type B, 1.80 m/long	0	70°	0.59 m
0361250020	Pit ladder type B, 2.50 m/long	0	70°	1.25 m
0361300020	Pit ladder type B, 3.00 m/long	0	70°	1.72 m
0361360020	Pit ladder type B, 3.60 m/long	0	70°	2.28 m
0361420020	Pit ladder type B, 4.20 m/long	0	70°	2.75 m



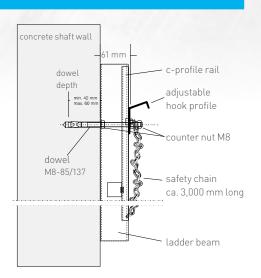
## **PIT LADDER TYPE D**

Aluminum ladder with hook profile meant for placement at the door threshold. The profile is mounted on two guide rails and can be adjusted flexibly to allow ladder use in pits with different depths. The ladder is equipped with changeable anti-skid shoes. 4-edged anti-skid steps connect the ladder bars. Connection of the ladder with the shaft wall is ensured by a metal chain (approx. 3,000 mm) and respective fixing material (dowel, nuts and washers). The ladder comes with all necessary fixing material.

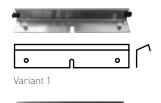
The Pit ladder Type D is manufactured according to DIN EN 131.

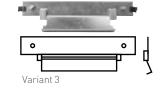
#### **FURTHER LENGTHS UPON REQUEST!**

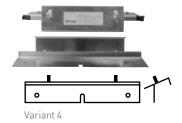
LOCKABLE SUSPENSION FITTING FOR LADDER SEE PAGE 47

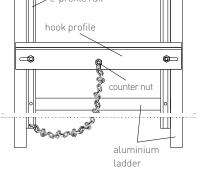


#### **HOOK PROFILE VARIANTS**









Variant 2

Item No.	Description	With chain and hook	With chain and hook	Angle of	DIN EN 81-20 Compliant
	DIN EN 81/20,	profile variant 1 and	profile variant 2 and	inclination	Pit Depth (HSG)
	DIN EN 81/50 💙	floor attachement	floor attachement		max. or smaller
0355150010	Pit ladder type D, 1.50 m/long	•		70°	0.31 m
0355180010	Pit ladder type D, 1.80 m/long	•		70°	0.59 m
0355250010	Pit ladder type D, 2.50 m/long	•		70°	1.25 m
0355300010	Pit ladder type D, 3.00 m/long	•		70°	1.72 m
0355360010	Pit ladder type D, 3.60 m/long	•		70°	2.28 m
0355410010	Pit ladder type D, 4.10 m/long	•		70°	2.75 m
0356150120	Pit ladder type D, 1.50 m/long		•	70°	0.31 m
0356180120	Pit ladder type D, 1.80 m/long		•	70°	0.59 m
0356250110	Pit ladder type D, 2.50 m/long		•	70°	1.25 m
Item No.	Description	With chain and hook		Angle of	DIN EN 81-20 Compliant
		profile variant 1		inclination	Pit Depth (HSG)
					max. or smaller
0352150010	Pit ladder type D, 1.50 m	•		70°	0.31 m
0352180010	Pit ladder type D 1.80 m	•		70°	0.59 m
0352250010	Pit ladder type D, 2.50 m	•		70°	1.25 m
0352300010	Pit ladder type D, 3.00 m	•		70°	1.72 m
0352360010	Pit ladder type D, 3.60 m	•		70°	2.28 m
0352410010	Pit ladder type D, 4.10 m	•		70°	2.75 m

ACCESS0	RIES
Item No.	Description
303999003	Floor attachement for pit ladder
303999006	Hook profile variant 1, rigid hang-in depth 35 mm
303999007	Hook profile variant 2, for revolving doors with 2 spigots
303999008	Hook profile variant 3, space-saving and tiltable
303999009	Hook profile variant 4, flexible hang-in depth (two-part) from 48 to 68 mm

## **PIT LADDER TYPE E**

Two-piece folding ladder made of aluminium with steel joints. Equipped with a mounting profile [1] meant for placement in the sill groove to avoid tilt back. The profile can be easily adjusted according to the given pit depth. The bottom of the ladder is securely connected to a steel jack [2] which is fixed to the shaft floor.

The folding ladder is especially suitable in lift shafts where fixing to the wall is impossible. Pit ladder type E requires a minimum shaft depth of 1.450 mm. The unfolded and locked ladder (4) has a vertical height of approx. 2.200 mm. Exterior ladder width 350 mm. The ladder complies with German DIN and VBG 74 standards set by the German Berufsgenossenschaft (Statutory Accident Insurance Institution). It comes with all necessary fixing material.

The ladder is pulled up from the pit with a chain (ca. 3.000 mm, to be connected with the shaft wall) and placed against the door threshold. Steel joints lock-in automatically while the mounting profile is placed in the sill groove.

After use, the ladder has to be lifted slightly and the joints have to be unlocked with a separate release rope before folding it back into the pit.

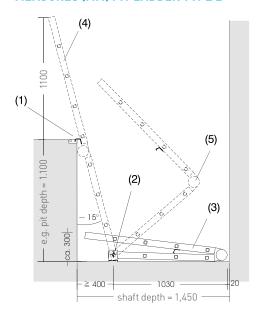
The aluminium ladder complies with DIN EN 131 + DIN EN 81-20/50 requirements.

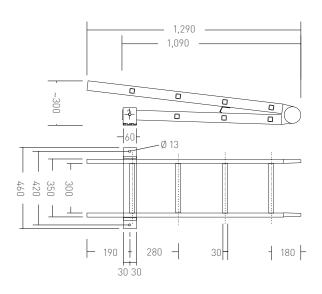
#### **FURTHER LENGTHS UPON REQUEST!**





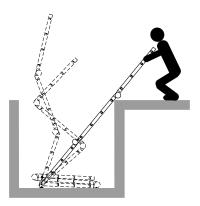
#### **MEASURES (MM) PIT LADDER TYPE E**

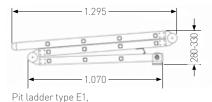


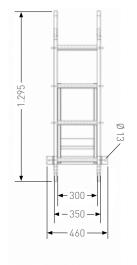


Item No.	Description	2-part	Angle of	DIN EN 81-20 Compliant	
	DIN EN 81/20 DIN EN 81/50	foldable	inclination	Pit Depth (HSG)	
	DIN EN 81/50 C			max. or smaller	
0370225010	Pit ladder type E, 2.25 m/long	•	70°	1.01 m	

ACCESS0	RIES
Item No.	Description
304999001	Metal support with electrical switch
304999002	Wall mounted adapter
303999006	Hook profile variant 1, rigid hang-in depth 35mm
303999007	Hook profile variant 2, for revolving doors with 2 spigots
303999008	Hook profile variant 3, space-saving and tiltable
303999009	Hook profile variant 4, flexible hang-in depth (two-part) from 48 to 68 mm







unfolded app. 3,40 m long

## **PIT LADDER TYPE E1**

This 3-piece folding ladder is especially suitable for shaft pits which do not allow the fixing of a pitladder to the shaft wall or if floor fixing is required due to design reasons (e.g. panoramic lifts).

Thanks to its two pairs of hinges, type E1 is the ideal access ladder in shafts with low shaft depths and high pit depths.

The pit ladder type E1 is available in three lengths.

OPTIONAL: Electrical switch plus holder.

The pit ladder is equipped with an adjustable hook profile which has to be placed in the sill groove to avoid tilt back during use. If the ladder can be installed only parallel to the shaft door opening, an optional electrical switch should be used. The switch can be installed on the floor or at the shaft wall alternatively. The ladder is pulled up from the pit with a

chain and locks in automatically. After use, the type E1 is unlocked with a separate release rope before it can be folded back into the pit. The floor-mounted jack ensures a safe ladder position at any time. It also functions as a guiding system when the ladder is brought from a folded position into an unfolded position. For hydraulic lifts the jack can be fixed to the shaft wall with an additional wall mounted adapter in order to avoid drill holes on the shaft floor which are generally not allowed.

The ladder comes with fixing material. Besides the electrical switch and the jack holder for hydraulic lifts it can also be equipped optionally with a handrail extension.

The aluminium ladder complies with DIN EN 131 + DIN EN 81-20/50 requirements.

#### **FURTHER LENGTHS UPON REQUEST!**



Europäisches Patent Nr. 1609943

					2
Item No.	Description	3-part	Number of	Angle of	DIN EN 81-20 Compliant
	DIN EN 81/20 DIN EN 81/50	foldable	steps	inclination	Pit Depth (HSG)
	DIN EN 81/50 U				max. or smaller
0370175020	Pit ladder type E1, 1.75 m/long	•	3x2	70°	0.54 m
0370246020	Pit ladder type E1, 2.46 m/long	•	3x3	70°	1.21 m
0370340020	Pit ladder type E1, 3.40 m/long	•	3x4	70°	2.09 m

ACCESS0	RIES
304999001	Metal support with electrical switch
304999002	Wall mounted adapter
303999006	Hook profile variant 1, fixed hook depth 35mm
303999007	Hook profile variant 2, with 2 studs for swing doors
303999008	Hook profile variant 3, space-saving and collapsible
303999009	Hook profile variant 4, flexible hook depth (two-part) from 48 to 68mm

## **PIT LADDER TYPE F**

This static stepladder has spacers that pivot forward. A spring mechanism ensures that the ladder lies directly against the shaft wall, leaving a gap to the floor of the shaft, when it is not being used.

This means that a small installation depth of only around 80-90 mm (depending on the length of the ladder) is required. The step depth required by accident prevention regulations is respected if the ladder is pulled as far forward as possible in an 85° movement until it rests on the floor of the shaft. The ladder can then be used. The ladder automatically returns to the shaft wall once weight is removed from it.

**BENEFITS:** • Quick and cost-efficient solution • Suitable for use in narrow spaces • Thanks to the spring mechanism, there is no need for a monitoring contact to monitor the position of the ladder • The spacers can be attached to any crimped ladder step with a standard external width of 350 mm and a step profile of at least 30x30 mm • Short installation time

The aluminium ladder complies with DIN EN 131 + DIN EN 81-20/50 requirements.

The delivery includes various mounting parts.

#### **FURTHER LENGTHS UPON REQUEST!**





Patent Nr. 1609943

Item No.	Description	Angle of	DIN EN 81-20 Compliant
	DIN EN 81/20+ DIN EN 81/50	inclination	Pit Depth (HSG)
	DIN EN 81/50 💙		max. or smaller
3752150000	Pit ladder type F, 1.50 m/long	90°	0.40 m
3752180000	Pit ladder type F, 1.80 m/long	90°	0.70 m
3752250000	Pit ladder type F, 2.50 m/long	90°	1.40 m
3752300000	Pit ladder type F, 3.00 m/long	90°	1.90 m
3752360000	Pit ladder type F, 3.60 m/long	90°	2.50 m

3.00 m



### **LOCKABLE SUSPENSION FITTING FOR LADDER**

90°

#### **GALVANISED LOCK BOX WITH 3-EDGE LOCK**

Pit ladder type F, 4.10 m/long

Item No Description

3753410000

303999001 Length 25cm, depth 4.5cm, height: 10cm. For ladder stiles with max. 58mm and

steps 29x29mm. With fixing material for walls

#### **GALVANISED LOCK BOX WITH PAD-LOCK OPTION**

Item No. Description 303999002

Length 25cm, depth 4.5cm, height: 10cm. For ladder stiles with max. 58mm

and steps 29x29mm. With fixing material for walls





## PIT LADDER TYPE J

Mobile aluminium ladder meant for placement at the door threshold. Folds together to a handy size in stowed position. It can be stowed at the shaft wall.

Available in lengths from 1.80 m up to  $4.30\,m$  (closed) and  $1.45\,m$  up to  $4.00\,m$  (opened).

**FEATURES:** • The pit ladder type J can be folded together to a space-saving bar of only 64x48 mm. Thus, it can be easily stowed on the shaft wall. • The ladder opens itself easily and without effort. • With a weight of less than 2.25 kg/m the ladder can be mounted easily at the door

threshold. • The ladder locks itself automatically when unfolded. It is equipped with anti-skid rubber feet. • The ladder withstands forces of up to 350 kg. • The rungs are 37 mm wide with slightly curved upper side and anti-slip grooves. • High quality and durability thanks to aluminium alloy AlMgSi0,5/F25, anodised. Axles and rivets made of stainless steel A2 70 DaN/mm².

The aluminium ladder type J complies with DIN EN 131.

**OPTIONAL ACCESSORIES:** • Anti-skid floor edging • Surveillance contact









				No.	
Item No	Description /	Number	with	Angle of	DIN EN 81-20 Compliant
	Length of Ladder closed / opened	of Steps	floor	inclination	Pit Depth (HSG)
	DIN EN 81/20 DIN EN 81/50		attachement		max. or smaller
	DIN EN 81/50 <b>O</b>				
0335180000	Pit ladder type J, 1.80 m / 1.45 m	4	•	70°	n.a.
0335210000	Pit ladder type J, 2.10 m / 1.75 m	5	•	70°	0.59 m
0335235000	Pit ladder type J, 2.35 m / 2.00 m	6	•	70°	0.78 m
0335265000	Pit ladder type J, 2.65 m / 2.30 m	7	•	70°	1.06 m
0335290000	Pit ladder type J, 2.90 m / 2.60 m	8	•	70°	1.34 m
0335320000	Pit ladder type J, 3.20 m / 2.85 m	9	•	70°	1.58 m
0335350000	Pit ladder type J, 3.50 m / 3.15 m	10	•	70°	1.86 m DIN EN 81/20
0335375000	Pit ladder type J, 3.75 m / 3.40 m	11	•	70°	2.09 m DIN EN 81/50
0335405000	Pit ladder type J, 4.05 m / 3.70 m	12	•	70°	2.38 m
0335430000	Pit ladder type J, 4.30 m / 4.00 m	13	•	70°	2.66 m

ACCESSO!	ACCESSORIES		
Item No	Description		
303999003	Floor attachement for pit ladder		
309999002	Floor attachment and chain for ladder type J		
309999003	Set of pit ladder hooks for ladder type J		
309999004	Set of floor brackets for ladder type J		
309999005	Wallholder for the ladder type J with position switch		



## PIT LADDER TYPE S

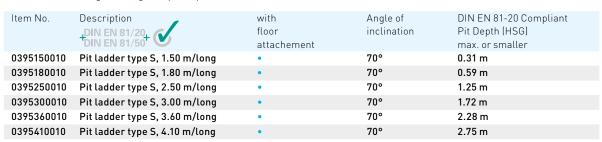
Mobile pit ladder with hook profile meant for placement in the groove of a telescopic or centrally opening lift door. This pit ladder type is especially suitable in cases where fastening to the shaft wall or stowage on the shaft floor is impossible.

The ladder is vertically stowed in a floor-mounted holder close to the lift door. The hook profile (20°) folds away automatically in stow position and avoids tilt back during use. It is mounted on two guide rails and can be adjusted within a range of approx. 1.000 mm according to the given pit depth. That

saves costly changes on site, facilitates planning and ensures a safe angle of inclination during use. The hook profile is equipped with synthetic buffers on each side to prevent damage to the lift doors. A metal chain connects the ladder with the lift shaft. Holder and fixing material come with every ladder. Set-up height is only 65 mm.

The ladder complies with DIN EN 131.

## FURTHER LENGTHS UPON REQUEST.



### **ACCESSORIES**

Item No.	Description
303999003	Floor attachment for pit ladder
305999002	Floor holder



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