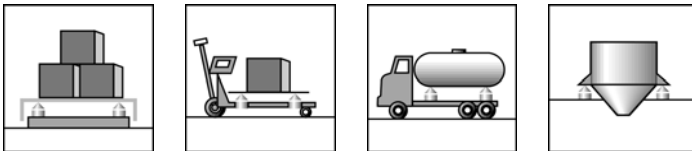




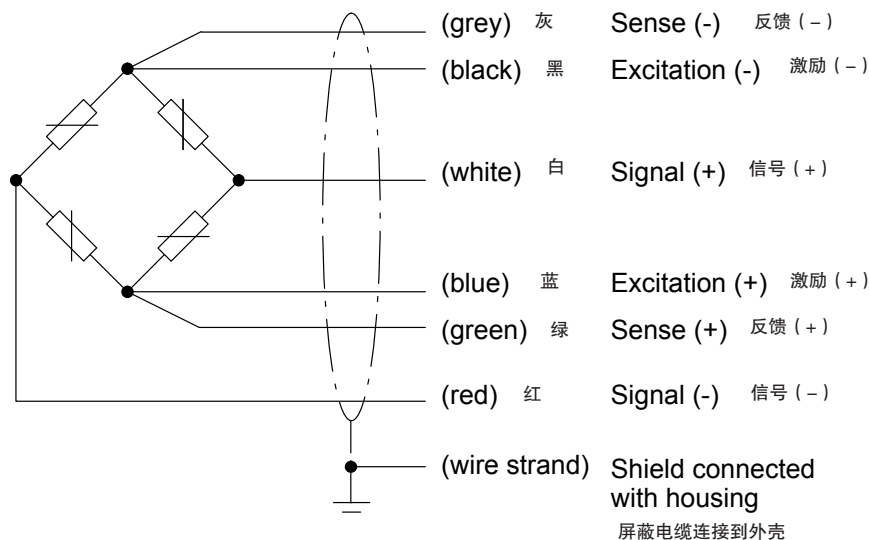
Special features 特点

- Hermetically sealed (IP68)
- Max. capacities: 220 kg ... 10 t
- Stainless steel
- Low overall height
- Meets EMC/ESD requirements according to EN 45 501
- Complies with OIML R60 regulations up to 6000d
- Explosion-proof versions according to ATEX 95 optional

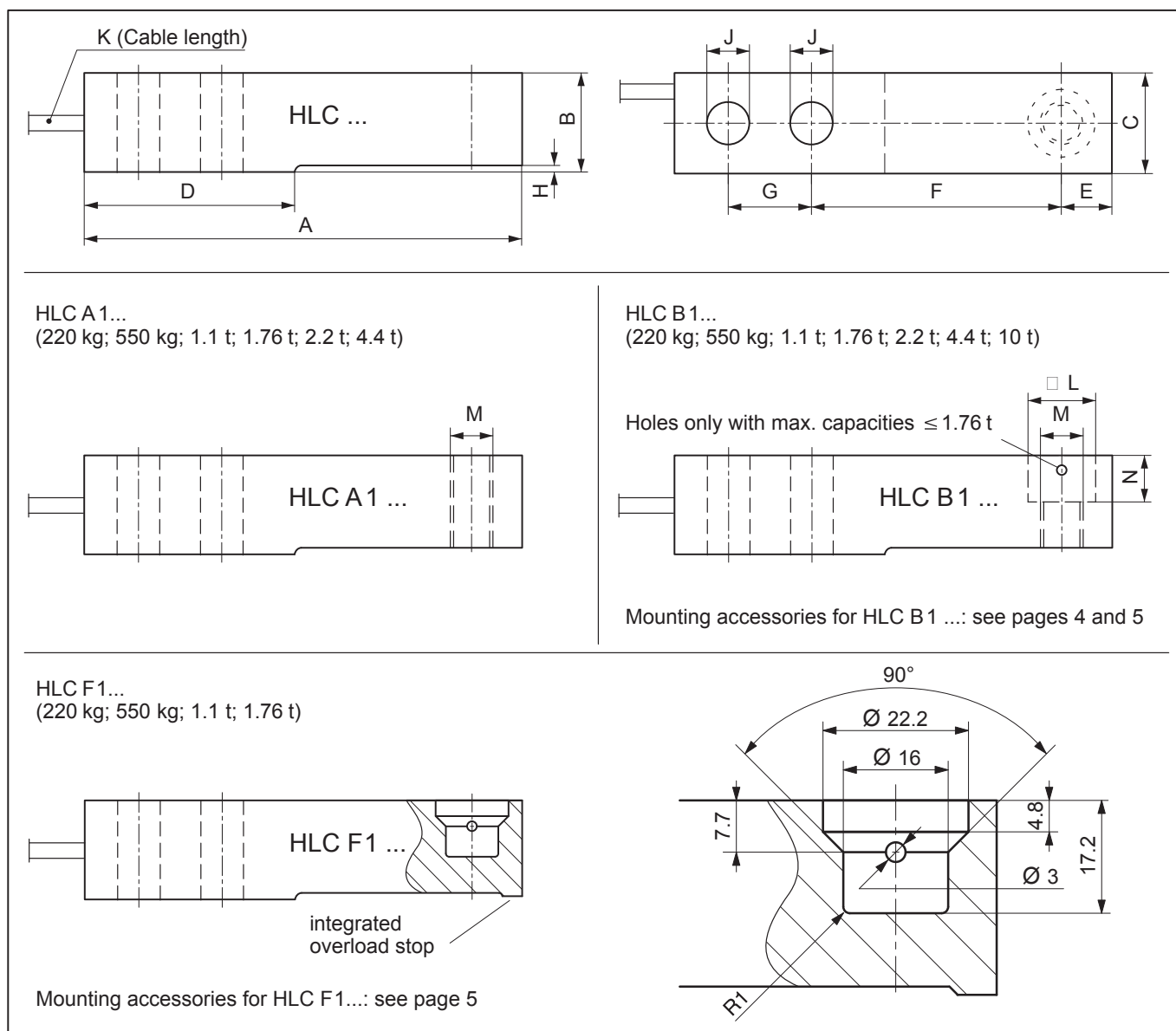


- 全密封 (IP68)
- 最大称重范围: 220kg-10t
- 不锈钢材料
- 整体高度低
- EMC/ESD 认证 (EN 45 501)
- 贸易许可认证, 6000d (OIML R60标准)
- 防爆型版本达到ATEX 95要求

Wiring code (6-wire circuit) 接线 (6线制)



Dimensions (in mm; 1 mm = 0.03937 inches) 尺寸(mm)



Max. capacity	A	B	C	D	E	F	G	H	J	K	Ø L	M	N
220 kg; 550 kg; 1.1 t	133.4	30.2	30.7	57.7	15.4	76.2	25.4	1.7	13	3 m	20.6	M12	14.2
1.76 t;	133.4	30.2	30.7	51.7	15.4	76.2	25.4	1.7	13	3 m	20.6	M12	14.2
2.2 t ²⁾	171.5	36.5	36.8	76.2	19.1	95.3	38.1	2.5	20.5	6 m	30.2	M20	17.0
4.4 t ²⁾	171.5	42.9	42.9	76.2	19.1	95.3	38.1	2.5	20.5	6 m	30.2	M20	20.1
10 t ¹⁾	245.1	72.9	60	119.9	30.2	134.9	50 ±0.05	11.2	27	6 m	51 +0.2	Ø 32	20

¹⁾ Maximum capacities 2.2 t and 4.4 t: HLC A1 ... + HLC B1 ... only

²⁾ Maximum capacity 10 t: HLC B1 D1 ... only

Mounting accessories (to be ordered separately) 安装附件, 需单独订购

In order to minimize error interferences due to load introduction, HBM offers various proven load introductions for the load cell types HLC B1 ... und HLC F1 ..., depending on the mounting situation (see pages 4 and 5)

Technical Data 规格

Type HLC A1 ... 型号 Maximum capacity (E _{max}) 额定量程 (Load introduction = thread through)		HLC A1 D1 / ... + HLC A1 C3 / ... 220 kg; 550 kg; 1.1 t; 1.76 t; 2.2 t; 4.4 t			
Type HLC B1 ... 型号 Maximum capacity (E _{max}) 额定量程 (Load introduction = counterbore + thread) ³⁾		HLC B1 D1 / ... 220 kg; 550 kg; 1.1 t; 1.76 t; 2.2 t; 4.4 t; 10 t HLC B1 C3 / ... 220 kg; 550 kg; 1.1 t; 1.76 t; 2.2 t; 4.4 t HLC B1 C4 / ... + HLC B1 C6 / ... 220 kg; 550 kg; 1.1 t			
Type HLC F1 ... 型号 Maximum capacity (E _{max}) (Load introduction = blind hole + integrated overload stop)		HLC F1 D1 / ... + HLC F1 C3 / ... 220 kg; 550 kg; 1.1 t; 1.76 t			
Accuracy class according to OIML R60 精度等级		D1	C3	C4 ⁵⁾	C6 ⁵⁾
Maximum number of load cell intervals (n _{LC}) 最大检定分度		1000	3000	4000	6000
Minimum LC verification interval (v _{min}) 最小检定分度值	% of E _{max}	0,0285	0.0100 (220kg; 1.76 t; 2.2 t; 4.4 t) 0.0090 (550 kg + 1.1 t)		
Sensitivity (C _N) 灵敏度	mV/V	1.94 (10 t = 2.00 mV/V)			
Sensitivity tolerance 灵敏度误差	%	± 0.5	± 0.1		
Temperature effect on zero balance (TK ₀) 温度对零点影响	% of C _N / 10 K	± 0.0400	± 0.0140 (220 kg; 1.76 t; 2.2 t; 4.4 t) ± 0.0126 (550 kg + 1.1 t)		
Temperature effect on sensitivity (TK _C) ⁴⁾ 温度对灵敏度影响		± 0.0420	± 0.0140	± 0.0105	± 0.0070
Hysteresis error (d _{hy}) ⁴⁾ 滞后误差	% of C _N	± 0.0500	± 0.0166	± 0.0125	± 0.0083
Non-linearity (d _{lin}) ⁴⁾ 线性误差		± 0.0500	± 0.0170	± 0.0166	
Creep (d _{cr}) over 30 min. 30分钟蠕变		± 0.0500	± 0.0166	± 0.0166	± 0.0122
Minimum dead load output return (MDLOR) 蠕变恢复		± 0.0500	± 0.0166	± 0.0125	± 0.0083
Input resistance (R _{LC}) 输入电阻	Ω	350 ... 480			
Output resistance (R ₀) 输出电阻		350 ± 2		350 ± 0.12	
Reference excitation voltage (U _{ref}) 参考激励电压	V	5			
Nominal range of excitation voltage (B _U) 额定激励电压		0.5 ... 15 (Ex-Versions max. 12 V !!!)		5 ... 10	
Insulation resistance (R _{is}) 绝缘电阻	GΩ	> 5			
Nominal temperature range (B _T) 额定温度	°C [°F]	-10 ... +40 [+14 ... +104]			
Service temperature range (B _{tu}) 工作温度		-30 ... +70 [-22 ... +158]			
Storage temperature range (B _{tl}) 存储温度		-50 ... +85 [-58 ... +185]			
Safe load limit (E _L) 安全负载	% of E _{max}	150			
Lateral load limit (E _{lq}) 极限侧载		100			
Breaking load (E _d) 破坏负载		300			
Permissible dynamic load (F _{srel}) 允许动态负载 (vibration amplitude according to DIN 50100)		70			
Deflection at E _{max} (s _{nom}), approx.最大载荷下变形量	mm	0.5 (1.76 t = 1.4 mm)			
Weight (G), approx. 重量	kg	0.9 (220 kg ... 1.76 t); 1.6 (2.2 t); 2.2 (4.4 t); 6.2 (10 t)			
Protection class to EN 60 529 (IEC 529) 保护等级		IP68			
Material: Measuring element 测量体 材料 Cable fitting 电缆密封管 Cable□sheath 电缆屏蔽		Stainless steel ⁶⁾ Stainless steel ⁶⁾ / Gasket: Viton® PVC			

³⁾ Maximum capacity 10 t: Load introduction = counterbore + hole

⁴⁾ The data for Non-linearity (d_{lin}), Hysteresis error (d_{hy}) and Temperature effect on sensitivity (TK_C) are typical values. The sum of these data meets the requirements according to OIML R60. 非线性误差, 滞后误差和温度对灵敏度影响的数据是平均值, 这些值的总和达到OIML R60

⁵⁾ Accuracy classes C4 and C6: HLC B1 ... / 220 kg; 550 kg; 1.1 t only

⁶⁾ According to EN 10088-1

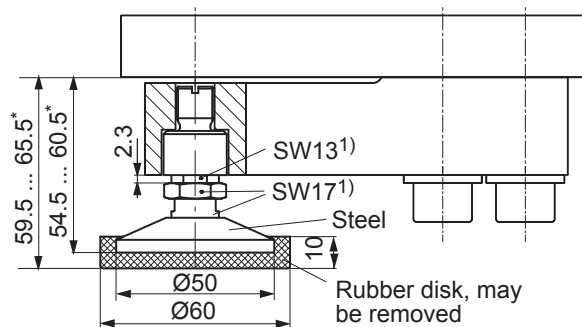
Mounting accessories (to be ordered separately) 附件, 需单独订购

In order to minimize error interferences due to load introduction, HBM offers various proven load introductions for the load cell types HLC B1 ... und HLC F1 ..., depending on the mounting situation (see pages 4 and 5)

HLC B 安装附件

Mounting accessories for HLC B ... (to be ordered separately; Dimensions in mm; 1 mm = 0.03937 inches)

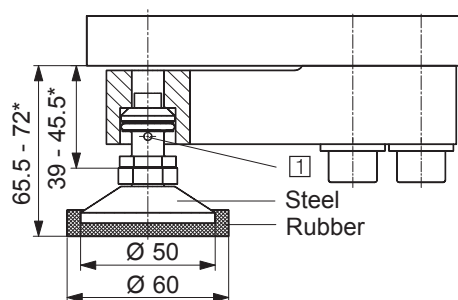
HLCB/PCX/1.76 t - Load introduction swivel foot (stainless steel) for HLC B / 220 kg ... 1.76 t, applicable up to accuracy class C6:



1) SW = Width across flats

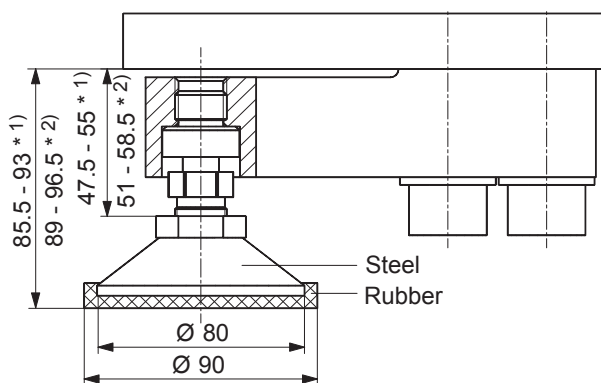
* Height adjustment

HLCB/ZFP/1.76 T - Load introduction swivel foot (stainless steel) for HLC B / 220 kg ... 1.76 t:



1 Foot fixed in the load cell with the enclosed spring shackle

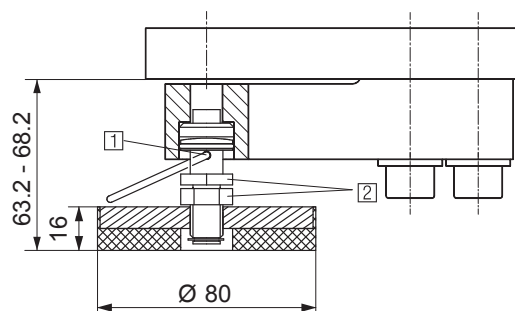
HLCB/ZFP/4.4 T - Load introduction swivel foot (stainless steel) for HLC B / 2.2 t + 4.4 t:



* Height adjustment

(¹) = Maximum capacity 2.2 t / (²) = Maximum capacity 4.4 t

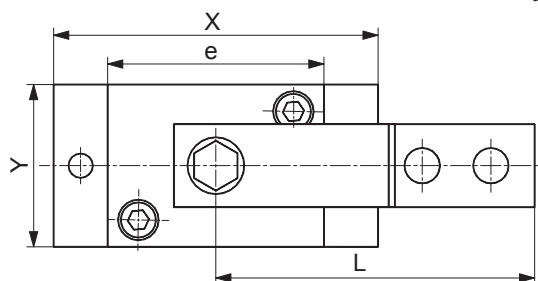
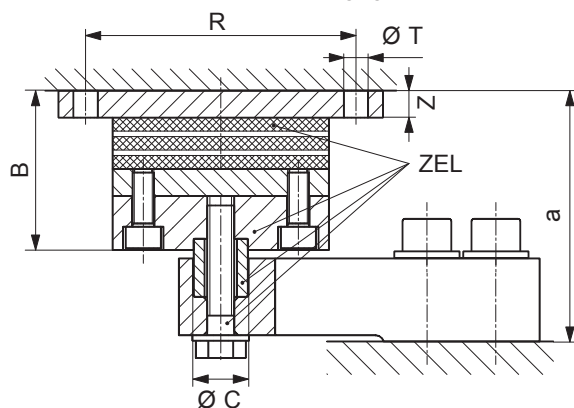
HLCB/ZAK/1.76T - Load introduction swivel foot (stainless steel) for HLC B ≤ 1.76 t



1 Foot fixed in the load cell with the enclosed spring shackle

2 Width across flats 19

HLCB/...T/ZEL - Rubber-metal bearing (galvanized material; HLCB/1.76T/ZEL R = stainless steel) for HLC B 摆支撑



Maximum permissible lateral shift (when loaded with max. capacity):

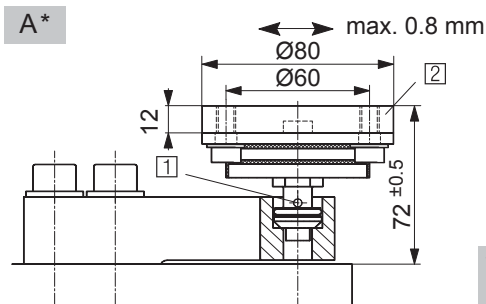
HLCB/1.76T/ZEL: 4.5 mm
HLCB/4.4T/ZEL: 8 mm
HLCB/10T/ZEL: 9.5 mm

Type	Max. capacity	B	Ø C _{0.1}	L	R	Ø T	X	Y	Z	a	e
HLCB/1.76T/ZEL HLCB/1.76T/ZELR	220 kg ... 1.76 t	58.8	20	118	100	9	120	60	10	92	80
HLCB/4.4T/ZEL	2.2 t	71.2	30	152.4	125	11	150	100	10	113	100
HLCB/4.4T/ZEL	4.4 t	71.2	30	152.4	125	11	150	100	10	116	100
HLCB/10T/ZEL	10 t	85	50.8	214.9	175	13	200	100	12	167	150

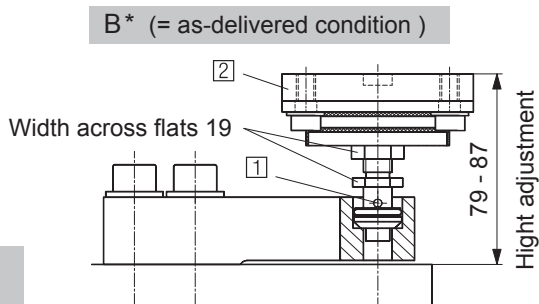
HLC B 安装附件

Accessories for HLC B ... + HLC F ... (to be ordered separately; Dimensions in mm; 1 mm = 0.03937 inches)

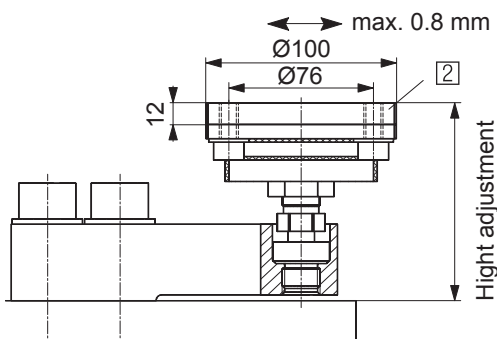
HLCB/ZDP/1.76 T Easy top - Rubber-metal bearing for HLC B / 220 kg ... 1.76 t
(Load introduction: stainless steel, Welding plate: galvanized material)



* Mounting alternatively



HLCB/ZDP/4.4 T Easy top - Rubber-metal bearing for HLC B / 2.2 t + 4.4 t
(Load introduction: stainless steel, Welding plate: galvanized material)



1 Easy top fixed in the load cell with the enclosed spring shackle

2 Welding plate (schematically top view)
ZPU/1.76T: 4x M8
ZPU/2.2T + 4.4T: 4x M10



1) = Maximum capacity 2.2 t

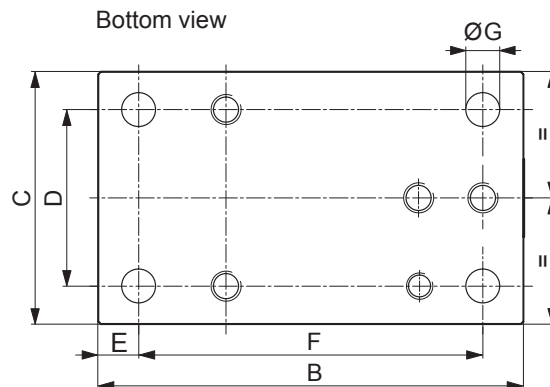
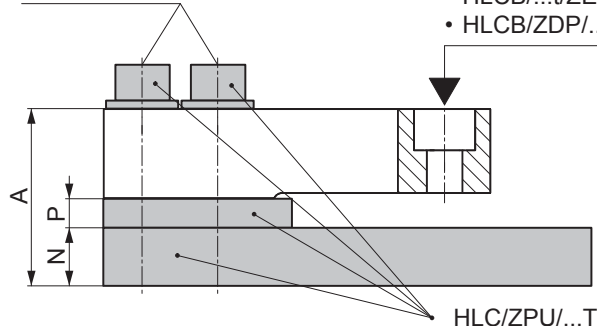
2) = Maximum capacity 4.4 t

HLC/ZPU/...T - Base plate / Mounting kit (galvanized material) for HLC B

Wrench torque for screws M_A :
see table

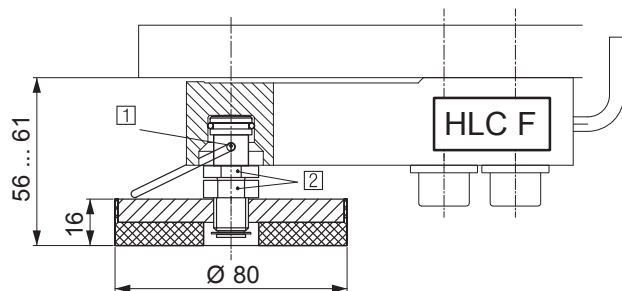
Load introduction via:

- HLCB/...t/ZEL
- HLCB/ZDP/...t



Type	Max. capacity	Breaking load	A	B	C	D	E	F	G	N	P	M_A
HLC/ZPU/1.76 T	220 kg ... 1.76 t	3.52 t	60.5	168	100	70	16	136	13.5	20	10	130 N·m
HLC/ZPU/2.2 T	2.2 t	4.4 t	81.5	212	120	84	18	175	14	25	20	400 N·m
HLC/ZPU/4.4 T	4.4 t	8.8 t	88	212	120	84	18	175	14	25	20	400 N·m

HLCF/ZKP/1.76T - Load introduction swivel foot (stainless steel) for HLC F ≤ 1.76 t



1 Foot fixed in the load cell with the enclosed spring shackle

2 Width across flats 19

K-HLC

Code	Option 6: Miscellaneous 其他
N	without

K-HLC - - - - - N

- Explosion-proof versions according to ATEX:
防爆型号符合ATEX

II 2G Ex ia IIC T4 resp. T6 (Zone 1) *)
II 2D Ex tD A21 IP68 T 80°C (Zone 21) *)
*) with EC-Type Examination Certificate

II 3G Ex nA II T6 (Zone 2)
II 3D Ex tD A22 IP68 T 80°C (Zone 22 for non-conductive dust)

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