

Overview of the HAFNER Ex-range

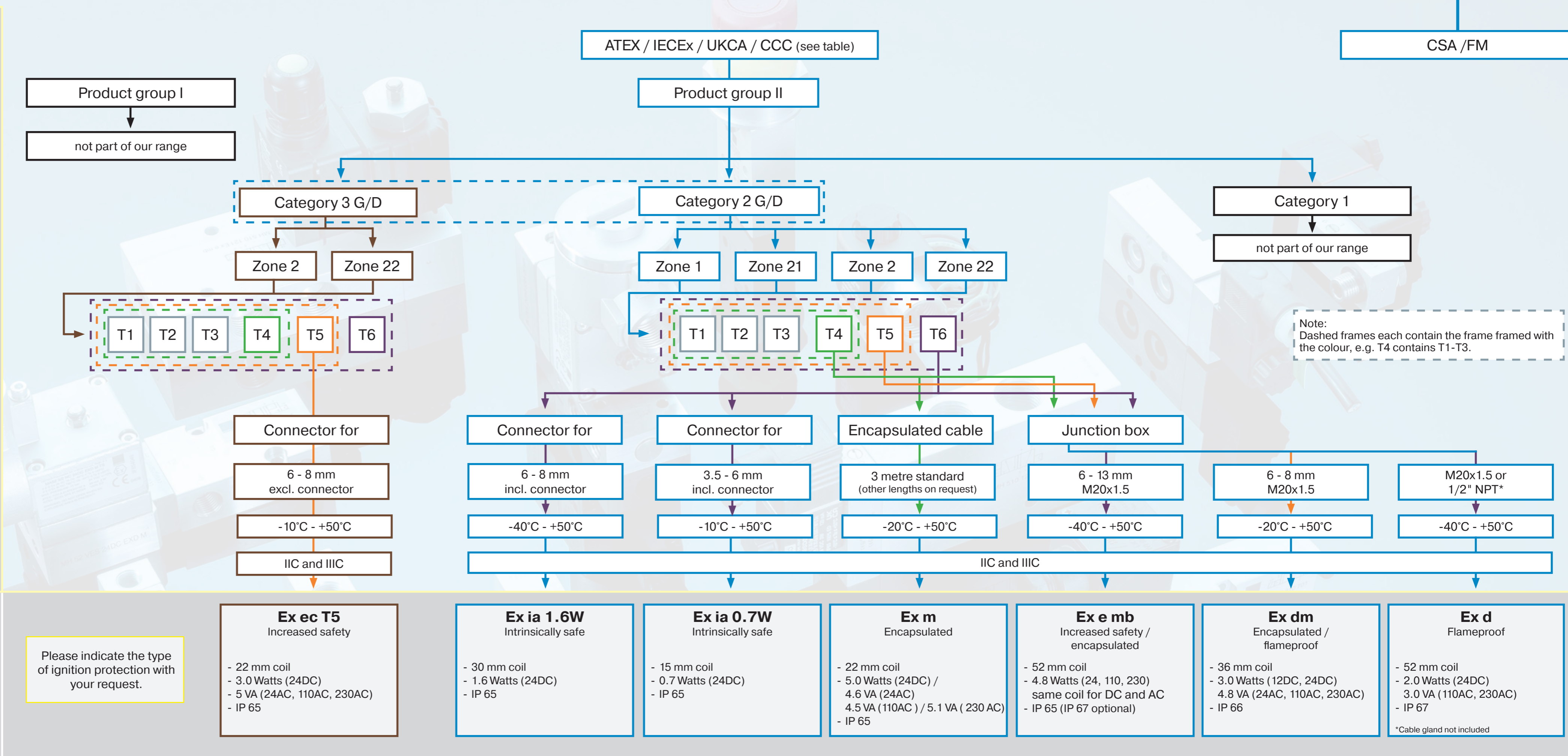


	Non-electric Valves		Electric Valves (Solenoid Valves)							
	Ignition protection									
	h	Ex ec	Ex ia 1.6W	Ex ia 0.7W	Ex m	Ex e mb	Ex dm	Ex d	Ex m CSA/FM	
	Constructional safety	Increased safety	Intrinsically safe	Intrinsically safe	Encapsulation	Increased safety / encapsulation	Encapsulation / flameproof	Flameproof	Encapsulation	
Approval / Certificate	ATEX	✓	✓	✓	✓	✓	✓	✓	-	
	IECEX	-	-	✓	✓	✓	✓	✓	-	
	CSA/FM	-	-	-	-	-	-	-	✓	
	UKCA	-	✓	-	-	-	-	-	-	
	CCC	-	-	on request	-	on request	-	-	on request	
Zone	1 (Gb)	-	✓	✓	✓	✓	✓	✓	✓	
	21 (Db)	-	✓	✓	✓	✓	✓	✓	✓	
	2 (Gc)	✓	✓	✓	✓	✓	✓	✓	✓	
	22 (Dc)	✓	✓	✓	✓	✓	✓	✓	✓	
Category		3G/D 2G/D	3G/D	2G/D	2G/D	2G/D	2G/D	2G/D	2G/D	
Temperature class		T6 (includes T1-T5)	T5 (includes T1-T4)	T6 (includes T1-T5)	T6 (includes T1-T5)	T4 (includes T1-T3)	T6 (includes T1-T5)	T5 (includes T1-T4)	T6 (includes T1-T5)	
Explosion group		IIC and IIIC	IIC and IIIC	IIC and IIIC	IIC and IIIC	IIC and IIIC	IIC and IIIC	IIC and IIIC	IIC and IIIC	
Product Group		II (not included)	II (not included)	II (not included)	II (not included)	II (not included)	II (not included)	II (not included)	II (not included)	
Temperature ranges		-50°C - +50°C (higher on request)	-10°C - +50°C	-40°C - +50°C	-10°C - +50°C	-20°C - +50°C	-40°C - +50°C	-20°C - +50°C	-40°C - +50°C	-20°C - +60°C
Electrical connection		-	Plug for 6 - 8 mm cable excl. connector	Plug for 6 - 8 mm cable incl. connector	Plug for 3.5 - 6 mm cable incl. connector	Encapsulated cable 3 metre standard (other lengths on request)	Junction box M20x1.5 Plug for 6 - 13 mm	Junction box M20x1.5 Plug for 6 - 8 mm	Junction box M20x1.5 or 1/2" NPT Cable gland not included	Conduit 1/2" NPT 60 cm strands
IP protection class		-	IP 65	IP 65	IP 65	IP 65	IP 65 (IP 67 optional)	IP 66	IP 67	IP 65
Power consumption		-	3.0 Watts (24DC) 5 VA (24AC, 110AC, 230AC)	1.6 Watts (24DC)	0.7 Watts (24DC)	5.0 Watts (24DC) 4.6 VA (24AC) / 4.5 VA (110AC) 5.1 VA (230 AC)	4.8 Watts (24, 110, 230) same coil for DC and AC	3.0 Watts (12DC, 24DC) 4.8 VA (24AC, 110AC, 230AC)	2.0 Watts (24DC) 3.0 VA (110AC, 230AC)	4.5 Watts (12DC) / 4.6 Watts (24DC) 6.8 VA (110AC) / 7.7 VA (220AC, 240AC)

Specifications in accordance to CSA certificate: Class I, Division 1, Groups A, B, C and D, Class II, Groups E, F and G, Class III, Division 2, Groups A, B, C, D.
 Specifications in accordance to FM certificate: Explosion-proof Class I, Division 1, Groups A, B, C, D, T4, Ta = 60 °C; encapsulation/explosion-proof Class I, Zone 1, AExm II T4, Ta = 60 °C; dust-ignition-proof for Class II/III, Division 1, Groups E, F and G, T4, Ta = 60 °C
 Nonincendive Class I, Division 2, Groups A, B, C, D, T4, Ta = 60 °C
 Suitable for Class II, III, Division 2, Groups E, F, G, T4, Ta = 60 °C
 The current standards can be found in the certificates.

Selection guide - Find your HAFNER Ex-system

- Approval / Certificate
- Product group
- Equipment Category
- Zone
- Temperature class
- Electrical connection
- Cable connection
- Temperature range
- Explosion group
- Ignition protection



CSA / FM

*Cable gland not included