



EMPL centrifugal  
fire fighting pump



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# Technical specifications

## **Type**

NP- Normal pressure Pump

- centrifugal pump
- single stage

TO- combined normal and high pressure pump

- centrifugal and peripheral type
- dual stage pump (one normal pressure stage and one high pressure stage)

## **Use**

- vehicle rear mounted pump

## **Material**

- pump housing, impeller
- aluminium, seawater resistant or red brass bearing housing
- pump shaft stainless steel

## **Bearing**

- without oil, maintenance free

## **Shaft sealing**

- mechanical seal, maintenance free

## **Direction of rotation**

- clockwise, look at the drive flange from the pump

## **Drive**

- drive flange

## **Suction inlet, Pressure outlet**

- basic equipment flange, horizontal

## **Priming system**

- VACUMAT Single or Double
- automatic priming pump(s)
- manual switch on or automatic operation
- without oil, maintenance free
- priming time at 7,5 m suction height < 30

seconds

- disconnection at 0,8 bar pressure at pump housing
- Prime time at 3 m suction height appr. 12 sec, but depend on final piping layout

## **Voltage**

- 24 V DC (standard)

## **Colouring**

- fire red RAL 3000 or white aluminium RAL 9006 (standard)

## **Safety unit**

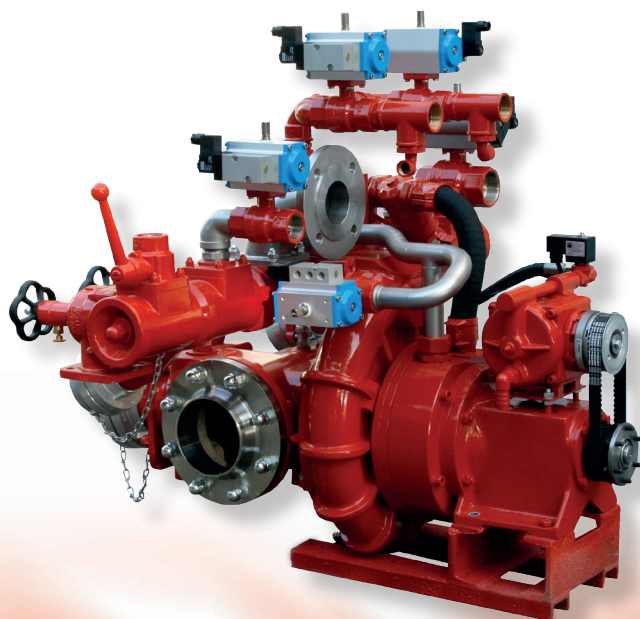
- thermal relief at 74°C with thermal valve (basic equipment) without current outwards, outlet hose spout 1/2"

## **Measuring points**

- connections at the pump for pressure gauges (basic equipment)
- connection for tachometer, standard 10 impulses/rotation (more price tachometer)
- connection for pressure sensor
- limit pressure 17/20 bar, (more price sensor)

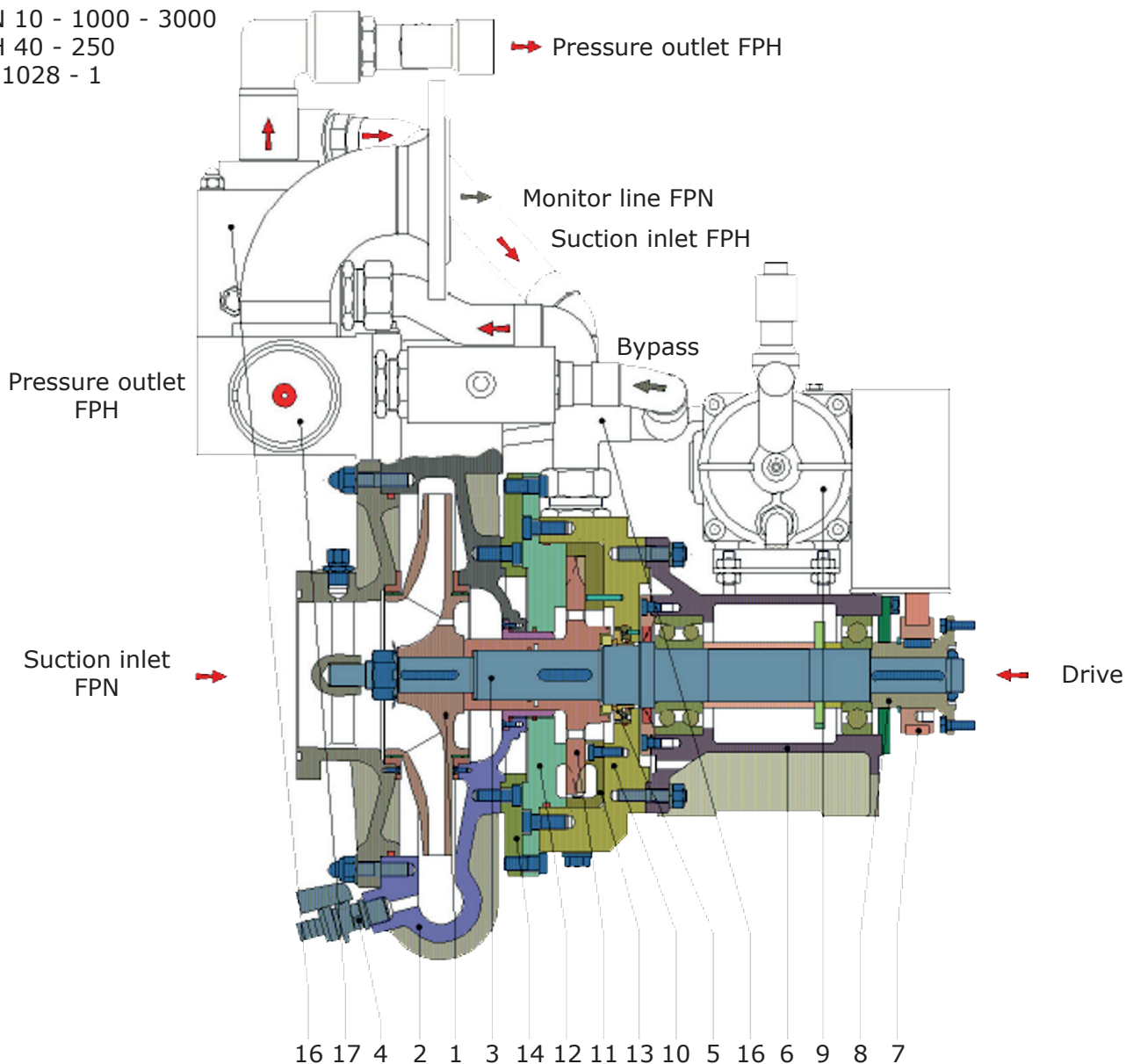
## **Accessories**

- suction inlet as flange
- thread flange G 4 1/2"
- 3-way-valve
- siamesis manifold for pressure outlets with valves
- taps
- auxiliary outlets
- monitor outlet
- instrument panel with gauges
- rev counter

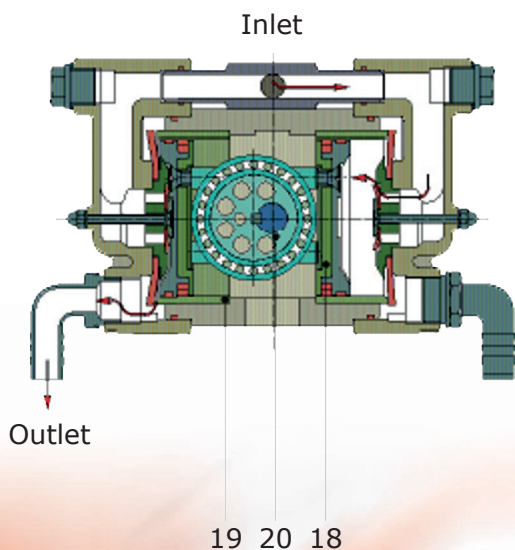




FPN 10 - 1000 - 3000  
 FPH 40 - 250  
 EN 1028 - 1



**VACUMAT**



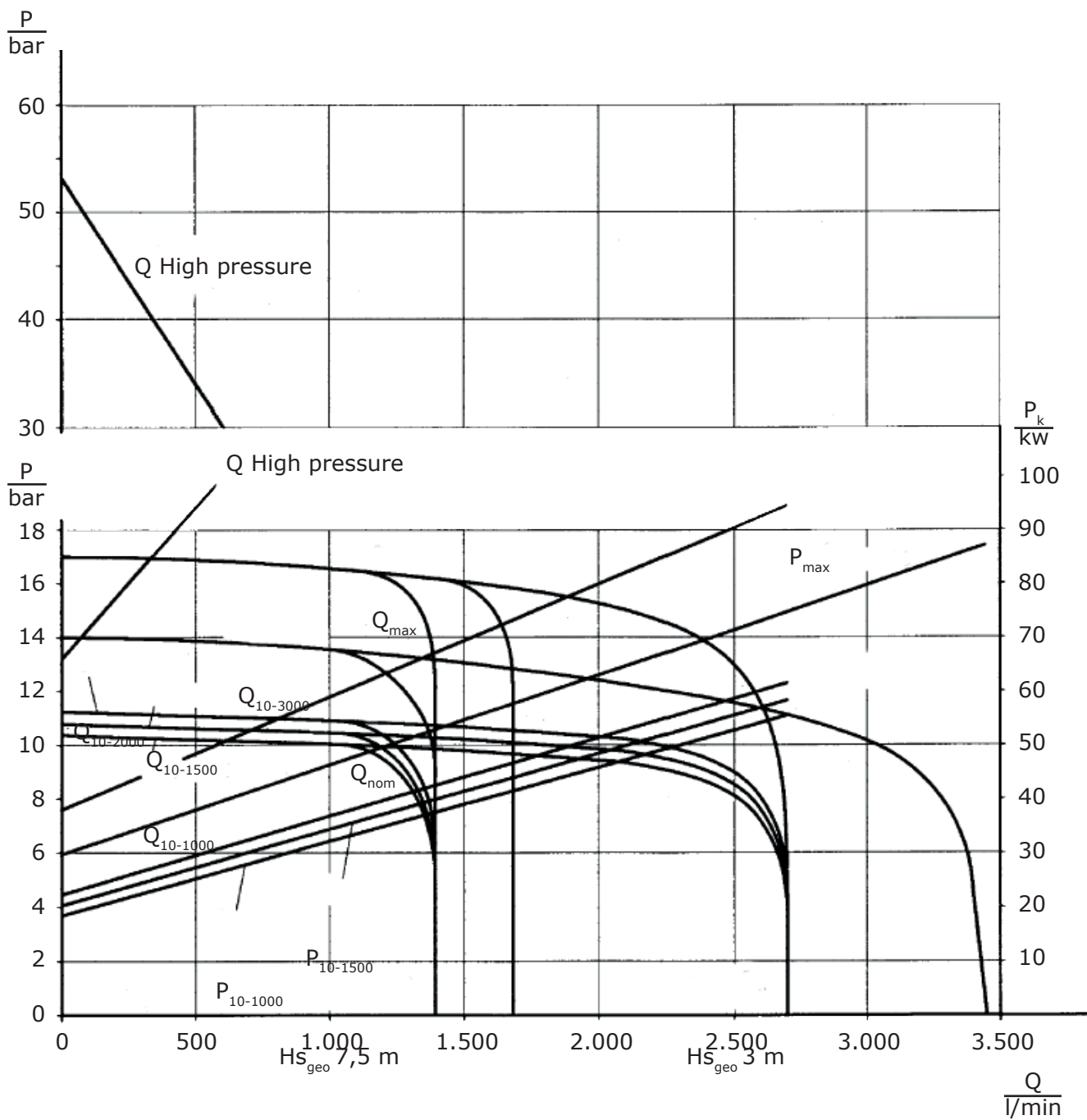
- 1 ... FPN-Impeller
- 2 ... Pump shaft
- 3 ... Pump shaft
- 4 ... Drain outlet
- 5 ... mechanical seal
- 6 ... bearing
- 7 ... Drivebelt (Antrieb Vacumat)
- 8 ... Coupling flange
- 9 ... Vacumat
- 10 ... FPH-Pump body
- 11 ... FPH-Impeller
- 12 ... FPH-casing with transfer passages
- 13 ... FPH-Cap of transfer passages
- 14 ... Flange
- 16 ... Controll attaching
- 17 ... Pressure water line
- 18 ... Pistons
- 19 ... Cylinder
- 20 ... Excentric

## General view of classification to EN 1028-1

Type	Classification to EN1028-1	Nominal output l/min	Coupling force kW	Vacumat
NP 500	FPN 6-500	3000	18	VACUMAT
NP 1000	FPN 10-750	3250	22	VACUMAT
	FPN 10-1000	3400	28	VACUMAT
NP 1000S	FPN 10-1000	1700	28	VACUMAT
NP 2000F	FPN 15-1000	3800	55	VACUMAT
	FPN 15-1500	3800	67	VACUMAT
	FPN 15-2000	3800	95	VACUMAT
NP 3000	FPN 10-750	2640	26	VACUMAT
	FPN 10-1000	2660	32	VACUMAT
	FPN 10-1500	2725	41	VACUMAT
	FPN 10-2000	2800	51	VACUMAT
	FPN 10-3000	3000	79	VACUMAT
	FPN 15-1000	3300	40	VACUMAT
	FPN 15-2000	3400	78	VACUMAT
NP 3000F	FPN 15-1500	4520	65	VACUMAT
	FPN 15-2000	4520	82	VACUMAT
	FPN 15-3000	4520	108	VACUMAT
NP 4000	FPN 10-4000	2800	110	VACUMAT plus
NP 4000S	FPN 10-3000	2100	85	VACUMAT plus
	FPN 10-4000	2200	110	VACUMAT plus
	FPN 15-3000	2500	160	VACUMAT plus
NP 6000	FPN 10-5000	2900	130	VACUMAT plus
	FPN 10-6000	3000	150	VACUMAT plus
NP 6000S	FPN 10-5000	2100	125	VACUMAT plus
	FPN 10-6000	2200	150	VACUMAT plus
NP 8000	FPN 10-8000	1650	180	VACUMAT plus
NP 10.000	FPN 10-10000	1700	215	VACUMAT plus

Type	Classification to EN1028-1	Nominal output l/min	Coupling force kW	Vacumat
TO 3000	FPN 10-1000/FPH 40-250	2660	90	VACUMAT
	FPN 10-2000/FPH 40-250	2800	110	VACUMAT
	FPN 10-3000/FPH 40-250	3000	140	VACUMAT
	FPN 10-1000/FPH 40-400	2660	130	VACUMAT
	FPN 10-2000/FPH 40-400	2800	150	VACUMAT
	FPN 10-3000/FPH 40-400	3000	180	VACUMAT
TO 4000	FPN 10-4000/FPH 40-250	2800	175	VACUMAT plus
	FPN 10-4000/FPH 40-400	2800	210	VACUMAT plus
TO 4000S	FPN 10-4000/FPH 40-250	2200	175	VACUMAT plus
	FPN 10-4000/FPH 40-400	2200	210	VACUMAT plus
TO 6000	FPN 10-5000/FPH 40-250	2900	205	VACUMAT plus
	FPN 10-6000/FPH 40-250	3000	225	VACUMAT plus
	FPN 10-5000/FPH 40-400	2900	240	VACUMAT plus
	FPN 10-6000/FPH 40-400	3000	260	VACUMAT plus
TO 6000S	FPN 10-5000/FPH 40-250	2100	190	VACUMAT plus
	FPN 10-6000/FPH 40-250	2200	225	VACUMAT plus
	FPN 10-5000/FPH 40-400	2100	225	VACUMAT plus
	FPN 10-6000/FPH 40-400	2200	260	VACUMAT plus
TO 8000	FPN 10-8000/FPH 40-400	1800	275	VACUMAT plus
TO 10.000	FPN 10-10000/FPH 40-400	1800	320	VACUMAT plus
HP 250	FPH 35-250	3500	60	ohne

# Performance Curve

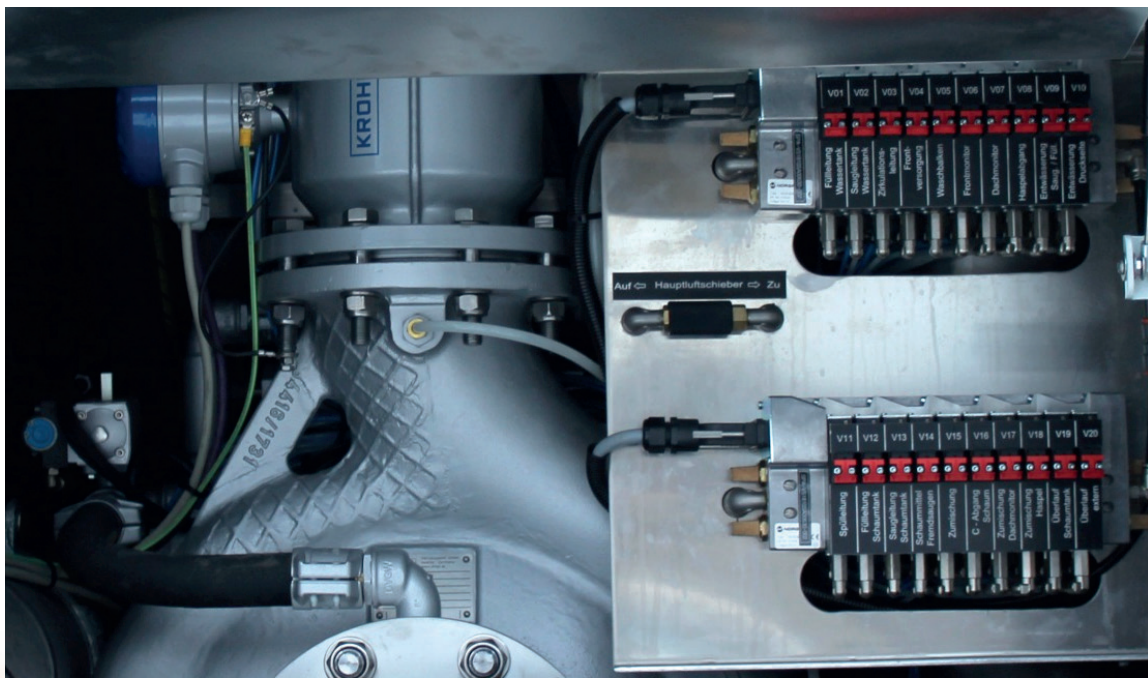
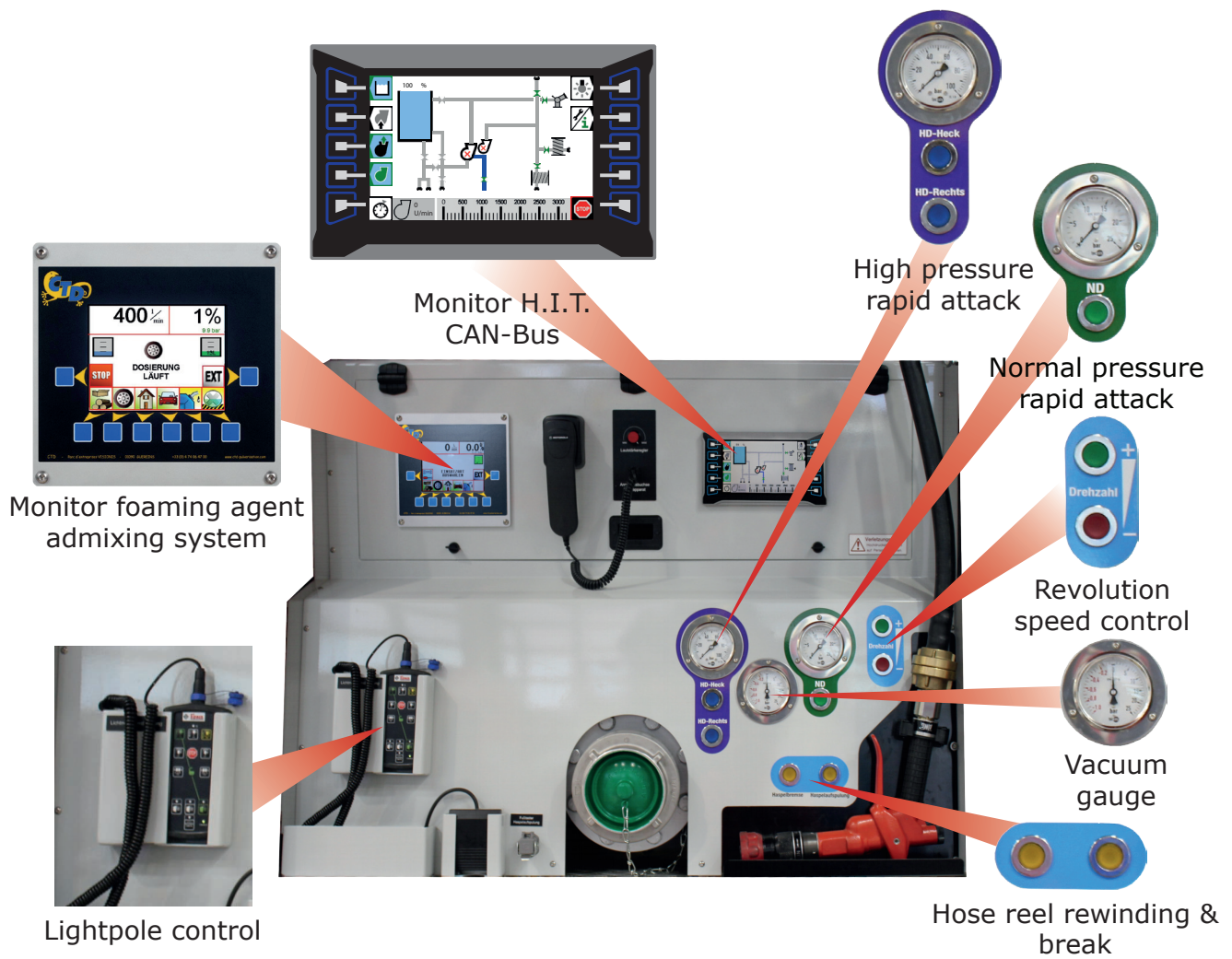


FPN 10-1000/FPH 40-250	n=2660 min <sup>-1</sup>
FPN 10-1500/FPH 40-250	n=2725 min <sup>-1</sup>
FPN 10-2000/FPH 40-250	n=2800 min <sup>-1</sup>
FPN 10-3000/FPH 40-250	n=3000 min <sup>-1</sup>
	n <sub>max</sub> =3400 min <sup>-1</sup>

Technical design may be subject to change.



# H.I.T. CAN-Bus Pump control panel



# Fire fighting vehicles of EMPL - Focus on innovation

***State of the art computer controlled production systems together with highly trained staff guarantee top quality EMPL products.***

The most up to date computer-controlled production systems, combined with the best trained employees, guarantee the high quality of EMPL products. The high-tech machines can be used for individual products just as economically as for series productions.



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***Continous performance and safety assesments***

Highest customer satisfaction is extremely important. Therefore, processes are continuously being observed and optimized. The consistent fulfillment of customer expectations and the willingness to implement innovative solutions together with the customer play a significant role.

EMPL is one of the few body builders, tests the bodies prior to delivery on its own test track. This ensures that users can rely on the vehicle performing perfectly even under extreme working conditions.



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Even after the purchase, the company pays particular attention to their customers. In a modern presentation room, the vehicles are handed over to the users. In addition, training courses are held worldwide on-site to guarantee optimum operating efficiency of the products. The permanent reachability of the after-sales employees and the worldwide supply of spare parts make EMPL to a reliable partner.



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Continuous investment in modernising the plants are one of the recipes for success.





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