

# Submersible Electric Pumps

## FDLT Series



### MARKET SECTORS

DOMESTIC, AGRICULTURAL, INDUSTRIAL, MUNICIPAL, MINING INDUSTRY.

### APPLICATIONS

- Handling of sewage, liquids, wastewater and industrial sludge, draining of flooded excavations and marshy ground.



### SPECIFICATIONS

- **Delivery:** up to 15 m<sup>3</sup>/h.
- **Head:** up to 47 m.
- Maximum liquid **temperature:** 25-40°C (see hydraulic performance table).
- Maximum immersion depth: 20 m.
- **Passes solids** 6 to 7 mm in diameter.
- Motor with IP 68 protection and class F insulation (155°C).
  - Power supply: single-phase and three-phase, 50 Hz.
- **Motor power:** up to 5 kW.
  - Maximum number of starts per hour: approx. 20 (possibly more, depending on the application).

### CONSTRUCTION CHARACTERISTICS

- Sturdy cast iron construction.
- Open **impeller** with grinder assembly.
- Double seal: Silicon Carbide / Silicon Carbide inner seal, Ceramic / Carbon upper seal or Nitrile Rubber seal ring with interposed oil chamber.
- Adjustable volute bottom cover to compensate for impeller wear and ensure stable long-lasting hydraulic performances.
- Oversized motor bearings.
- 10-metre power supply cable with neoprene sheath (H07RN-F).
- Moisture sensor in oil chamber (see electric data table).
- Control panel included (single-phase models only).

### OPTIONAL FEATURES

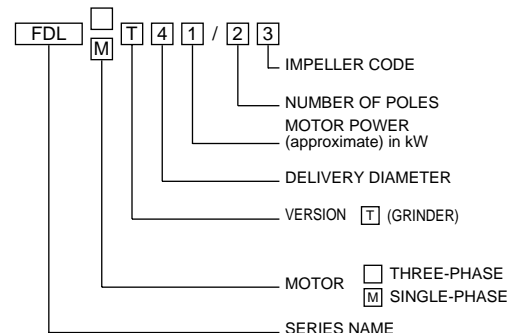
- Cathodic protection
- Cooling sleeve for dry installations

- Version without float.
- Flameproof construction (EEx).

### ACCESSORIES / INSTALLATION

- Lowering system.
- 90° delivery union.
- Threaded flange for delivery port.
- Tripod stand.
- Non-return ball valves.
- Floats for solids-laden waters.
- Control **panels**.

### IDENTIFICATION CODE



### TABLE OF MATERIALS

PART	FDLT MATERIAL
Impeller, Pump body, Motor casing, Volute bottom, Upper cover	250 CAST IRON UNI-ISO 185
Shaft	STAINLESS STEEL (AISI 420B)
Grinder assembly	STAINLESS STEEL (AISI 440)
Bearings	LIFETIME LUBRICATED BALL TYPE
Upper seal	CERAMIC-GRAPHITE OR NITRILE RUBBER SEAL RING
Lower seal	SILICON CARBIDE / SILICON CARBIDE
Gaskets	NITRILE RUBBER
Bolts and screws	STAINLESS STEEL (AISI 304)



## FDLT SERIES ELECTRICAL DATA (50 Hz)

PUMP TYPE	ABSORBED POWER*	rpm	ABSORBED CURRENT In(A)			STARTING CURRENT Isp (A)		ELECTRIC CABLE TYPE	STATOR THERMAL PROTECTION**	WATER SENSOR IN OIL CHAMBER**
			220-240 V	380-415 V		220-240 V	380-415 V			
			Δ	Y	Δ	A	A			
FDLT 41-23	0,8	2850	4,0	2,3		18,3	10,6	4G1,5	NO	NO
FDLT 41-22	1,1	2850	4,3	2,5		19,9	11,5	4G1,5	NO	NO
FDLT 41-21	1,4	2850	5,0	2,9		21,1	12,2	4G1,5	NO	NO
FDLT 42-22	1,5	2850	5,2	3		21,8	12,6	4G1,5	NO	NO
FDLT 42-21	2	2850	6,6	3,8		27,7	16	4G1,5	NO	NO
FDLT 43-22	2,5	2850	7,8	4,5		45,2	26,1	4G2,5	NO	NO
FDLT 43-21	3,2	2850	9,5	5,5		55,2	31,9	4G2,5	NO	NO
FDLT 44-22	3,8	2850	12,1		7	78,7	45,5	12G1,5	YES	YES
FDLT 44-21	4,2	2850	13,0		7,5	84,4	48,8	12G1,5	YES	YES
FDLT 45-21	4,9	2850	14,9		8,6	96,7	55,9	12G1,5	YES	YES

PUMP TYPE	ABSORBED POWER*	rpm	ABSORBED CURRENT In(A) 220-240 V	CAPACITOR		STARTING CURRENT A	ELECTRIC CABLE TYPE	STATOR THERMAL PROTECTION	WATER SENSOR IN OIL CHAMBER
				μf	V				
FDLMT 41-23	0,8	2850	3,7	35	450	13	3G1,5	YES	NO
FDLMT 41-22	1,1	2850	4,5	35	450	15,8	3G1,5	YES	NO
FDLMT 41-21	1,4	2850	6,3	35	450	22,1	3G1,5	YES	NO
FDLMT 42-22	1,5	2850	7,1	35	450	24,8	3G1,5	YES	NO
FDLMT 42-21	2	2850	9,1	35	450	31,8	3G1,5	YES	NO

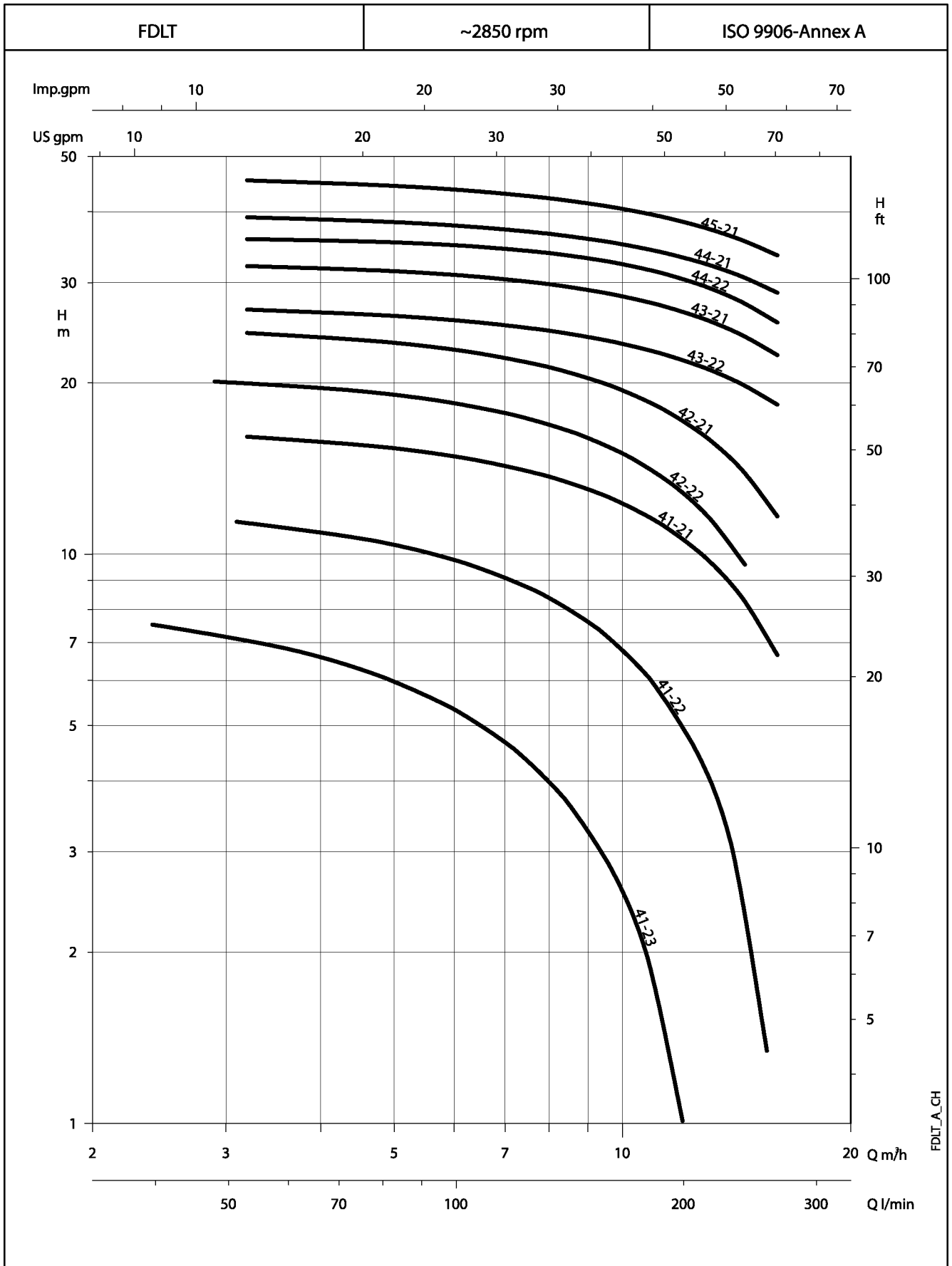
\*Maximum values within the operating range

Fdlt-2p50\_a\_te

\*\*Featured in the standard version



**FDLT SERIES  
OPERATING CHARACTERISTICS AT 50 Hz**



FDLT\_A\_CH



## FDLT SERIES HYDRAULIC PERFORMANCE TABLE

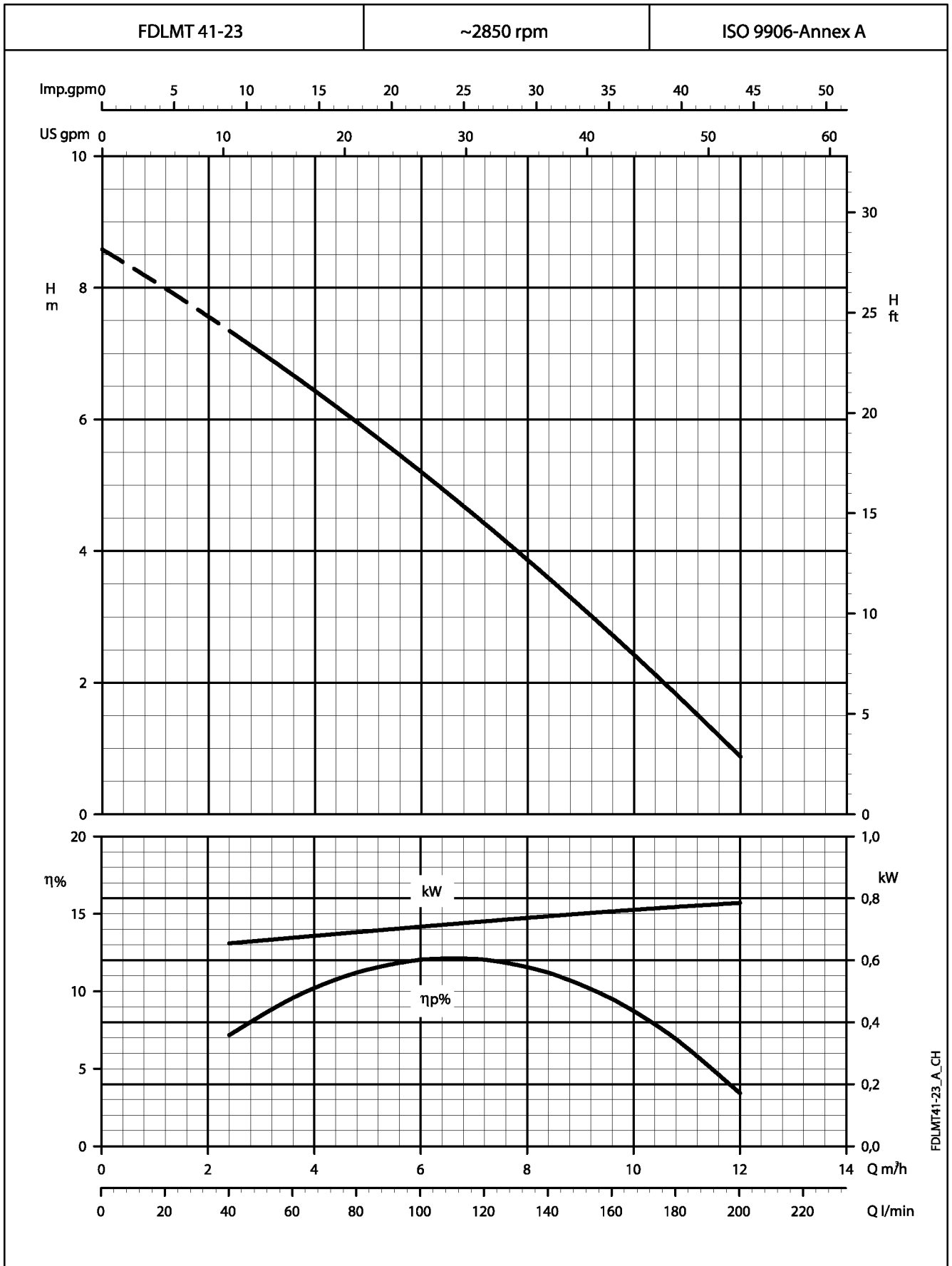
PUMP TYPE	ABSORBED POWER  kW	rpm	Q = DELIVERY										DNM	PASSES SOLIDS UP TO (mm)	MAX LIQUID TEMP. °C
			l/min	50	75	100	125	150	175	200	250				
			m³/h	3	4,5	6	7,5	9	10,5	12	15				
H = TOTAL HEAD METERS COLUMN OF WATER															
FDLMT 41-23	0,8	2850	8,6	7,0	6,1	5,2	4,2	3,2	2,0	0,9		40	6	40	
FDLMT 41-22	1,1	2850	12,7	11,5	10,7	9,8	8,8	7,6	6,4	5,0	1,9	40	6	40	
FDLMT 41-21	1,4	2850	16,9	16,2	15,6	14,9	14,0	13,0	11,9	10,7	7,7	40	6	40	
FDLMT 42-22	1,5	2850	20,9	20,1	19,3	18,4	17,3	16,0	14,5	12,8		40	6	40	
FDLMT 42-21	2,0	2850	25,5	24,6	23,8	22,9	21,7	20,4	18,9	17,2	13,2	40	6	40	
FDLT 41-23	0,8	2850	8,8	7,2	6,3	5,3	4,3	3,3	2,2	1,0		40	6	40	
FDLT 41-22	1,1	2850	12,7	11,5	10,7	9,8	8,8	7,6	6,4	5,0	1,9	40	6	40	
FDLT 41-21	1,4	2850	16,9	16,2	15,6	14,9	14,0	13,0	11,9	10,7	7,7	40	6	40	
FDLT 42-22	1,5	2850	20,9	20,1	19,3	18,4	17,3	16,0	14,5	12,8		40	6	40	
FDLT 42-21	2,0	2850	25,5	24,6	23,8	22,9	21,7	20,4	18,9	17,2	13,2	40	6	40	
FDLT 43-22	2,5	2850	27,7	27,0	26,4	25,8	25,0	24,1	23,1	21,9	19,3	40	7	40	
FDLT 43-21	3,2	2850	32,7	32,1	31,6	31,0	30,1	29,1	28,0	26,7	23,6	40	7	40	
FDLT 44-22	3,8	2850	35,8	35,8	35,5	34,9	34,1	33,1	31,9	30,5	26,9	40	7	40	
FDLT 44-21	4,2	2850	39,9	39,2	38,6	37,8	36,9	35,8	34,6	33,2	30,0	40	7	40	
FDLT 45-21	4,9	2850	46,6	45,5	44,7	43,7	42,6	41,4	40,0	38,4	34,8	40	7	40	

PERFORMANCES MEASURED WITH PURE WATER AT 20 °C

FDLT\_A\_TH



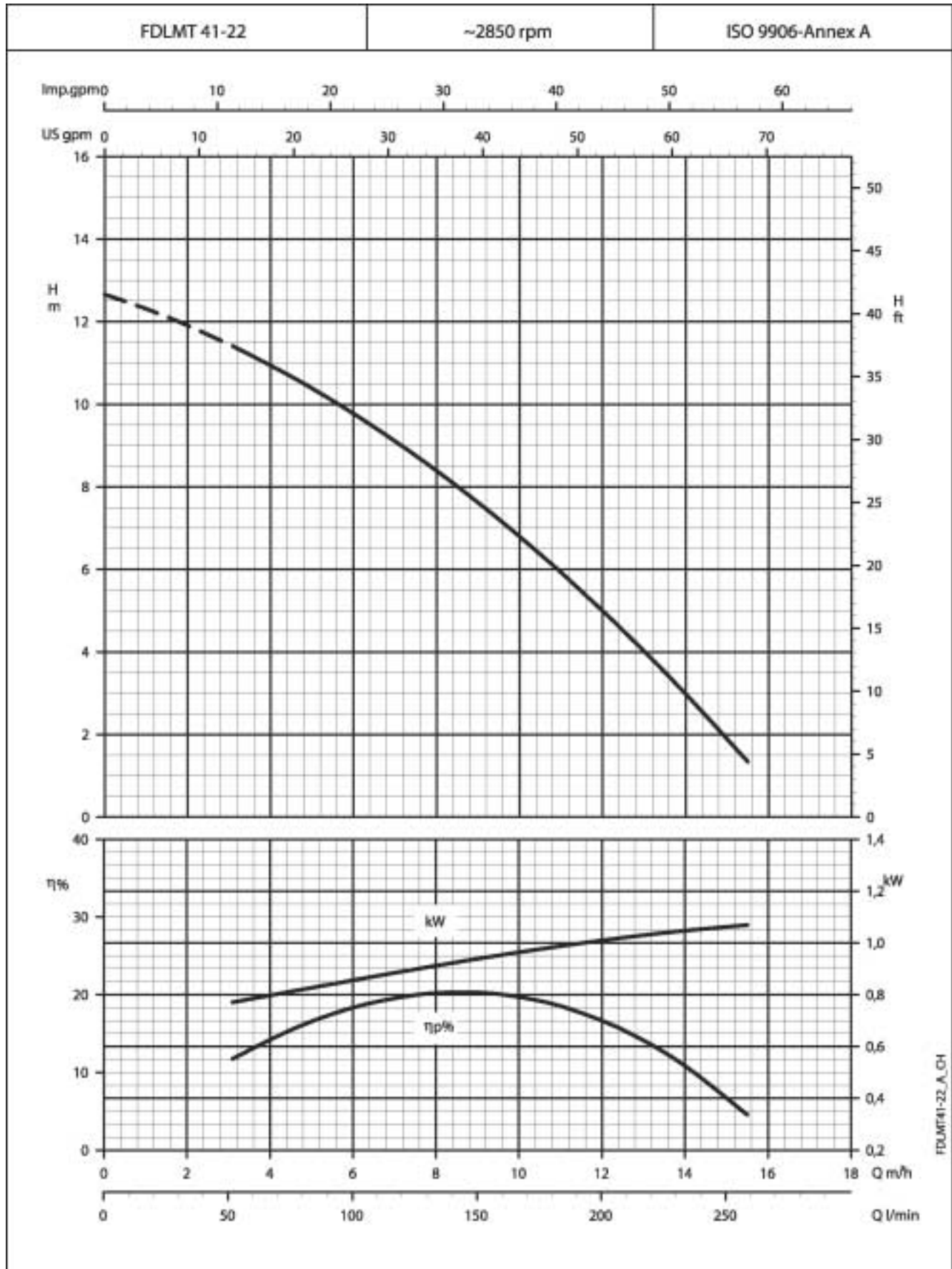
**FDLMT SERIES**  
**OPERATING CHARACTERISTICS AT 2850 rpm 50 Hz**



These performances are valid for liquids with density  $\rho = 1.0 \text{ kg/dm}^3$  and kinematic viscosity  $\gamma = 1 \text{ mm}^2/\text{s}$ .



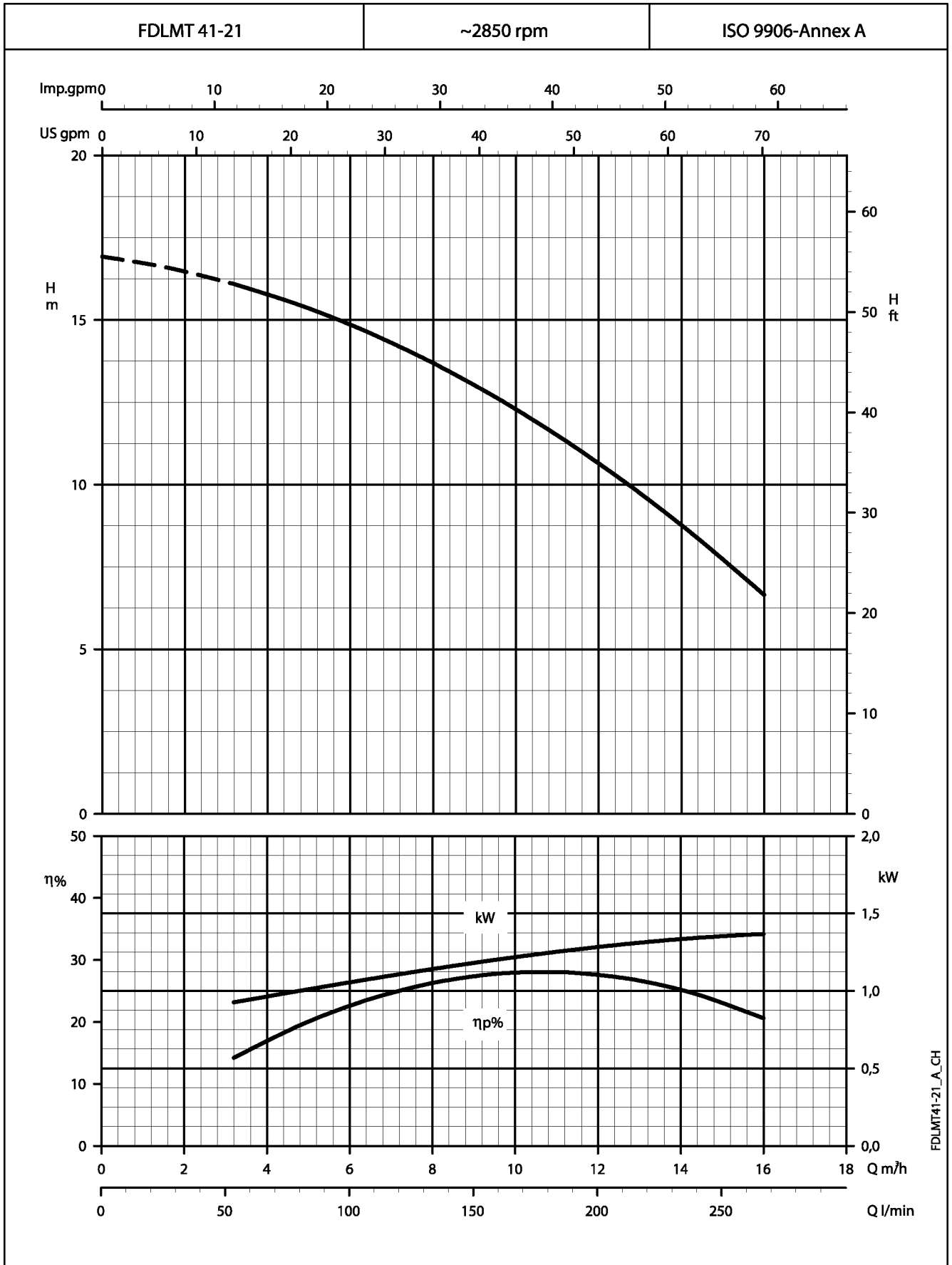
## FDLMT SERIES OPERATING CHARACTERISTICS AT 2850 rpm 50 Hz



These performances are valid for liquids with density  $\rho = 1.0 \text{ kg/dm}^3$  and kinematic viscosity  $\nu = 1 \text{ mm}^2/\text{s}$ .



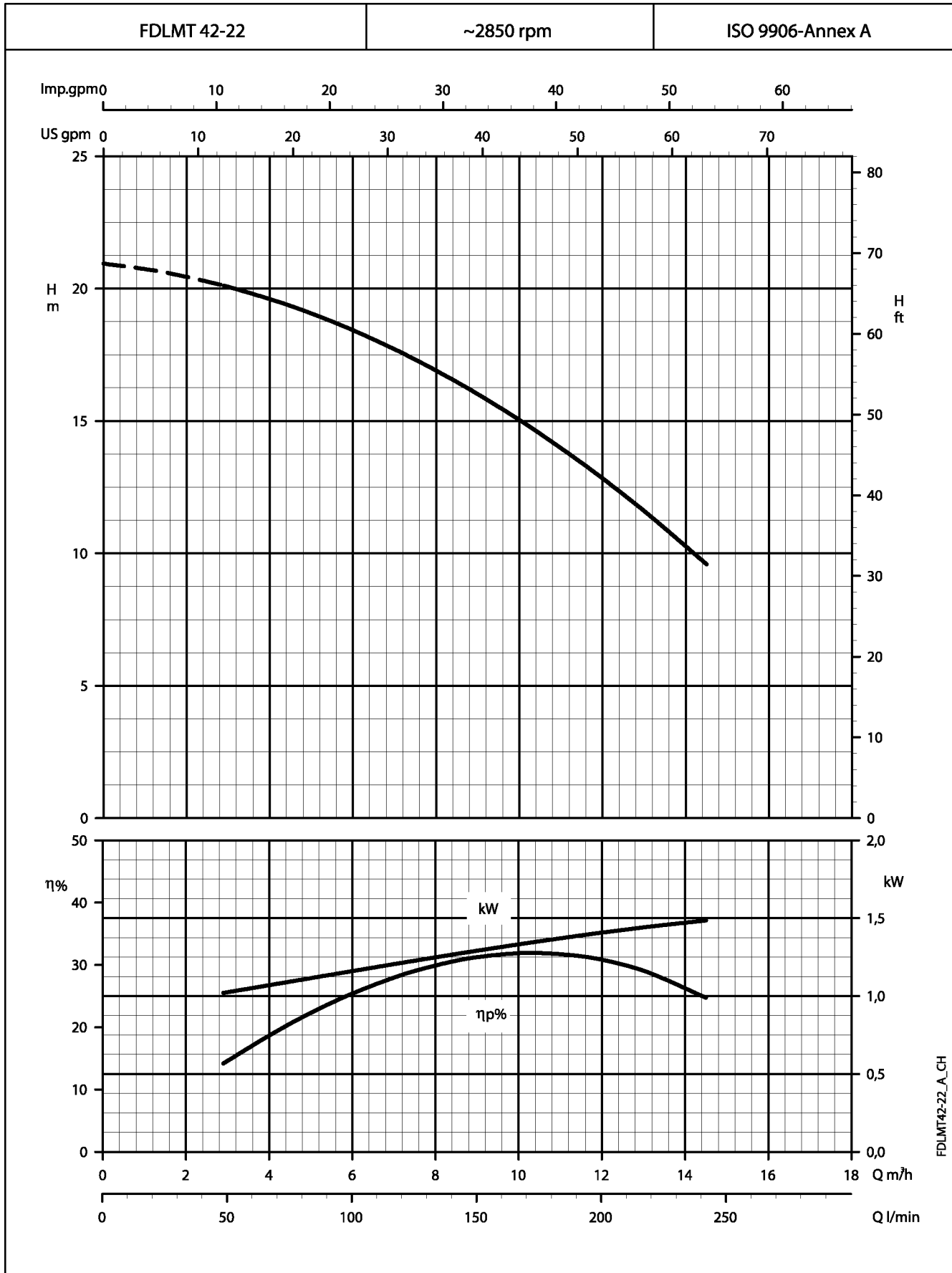
**FDLMT SERIES  
OPERATING CHARACTERISTICS AT 2850 rpm 50 Hz**



These performances are valid for liquids with density  $\rho = 1.0 \text{ kg/dm}^3$  and kinematic viscosity  $\gamma = 1 \text{ mm}^2/\text{s}$ .



**FDLMT SERIES  
OPERATING CHARACTERISTICS AT 2850 rpm 50 Hz**

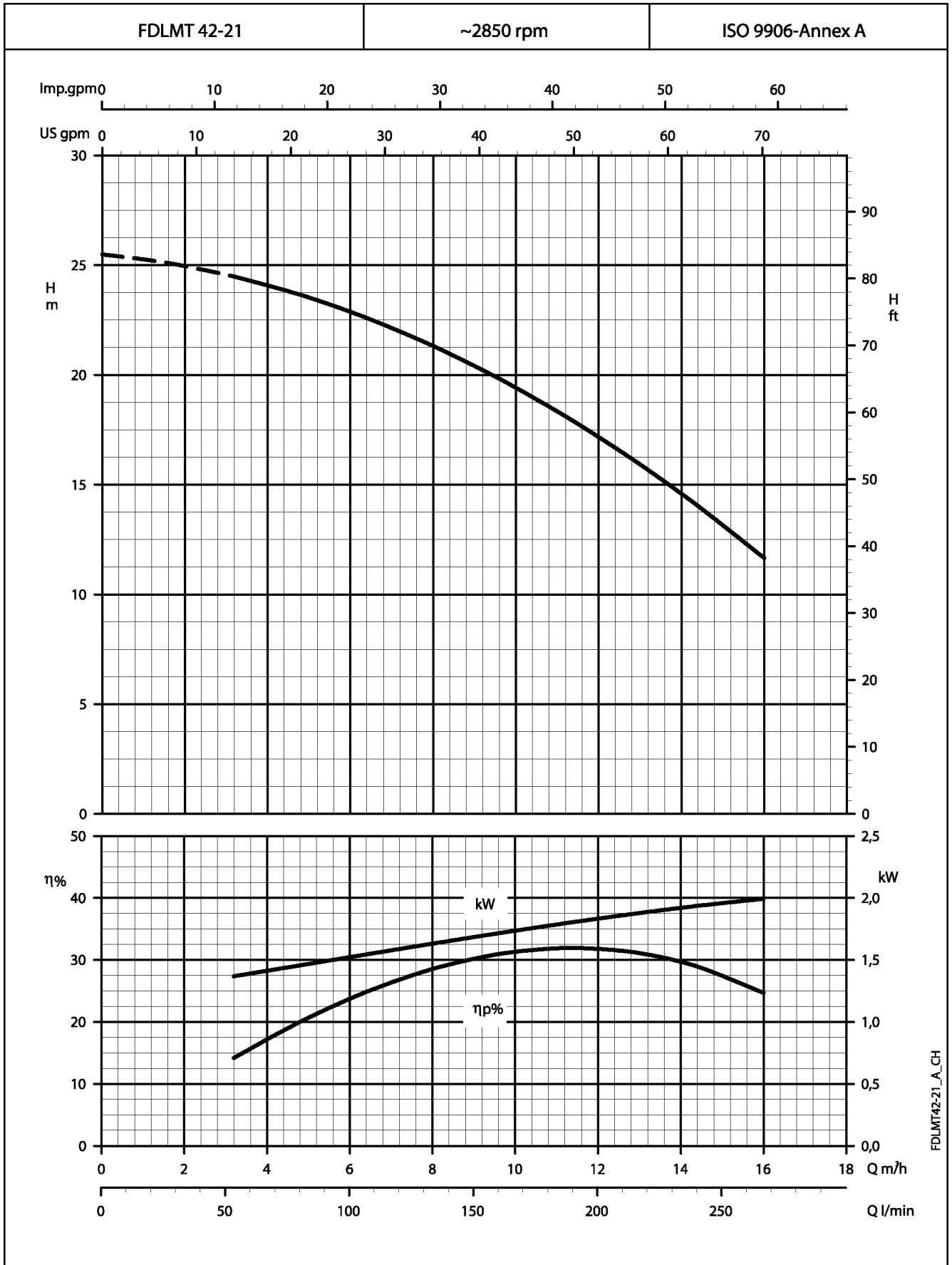


These performances are valid for liquids with density  $\rho = 1.0 \text{ kg/dm}^3$  and kinematic viscosity  $\gamma = 1 \text{ mm}^2/\text{s}$ .





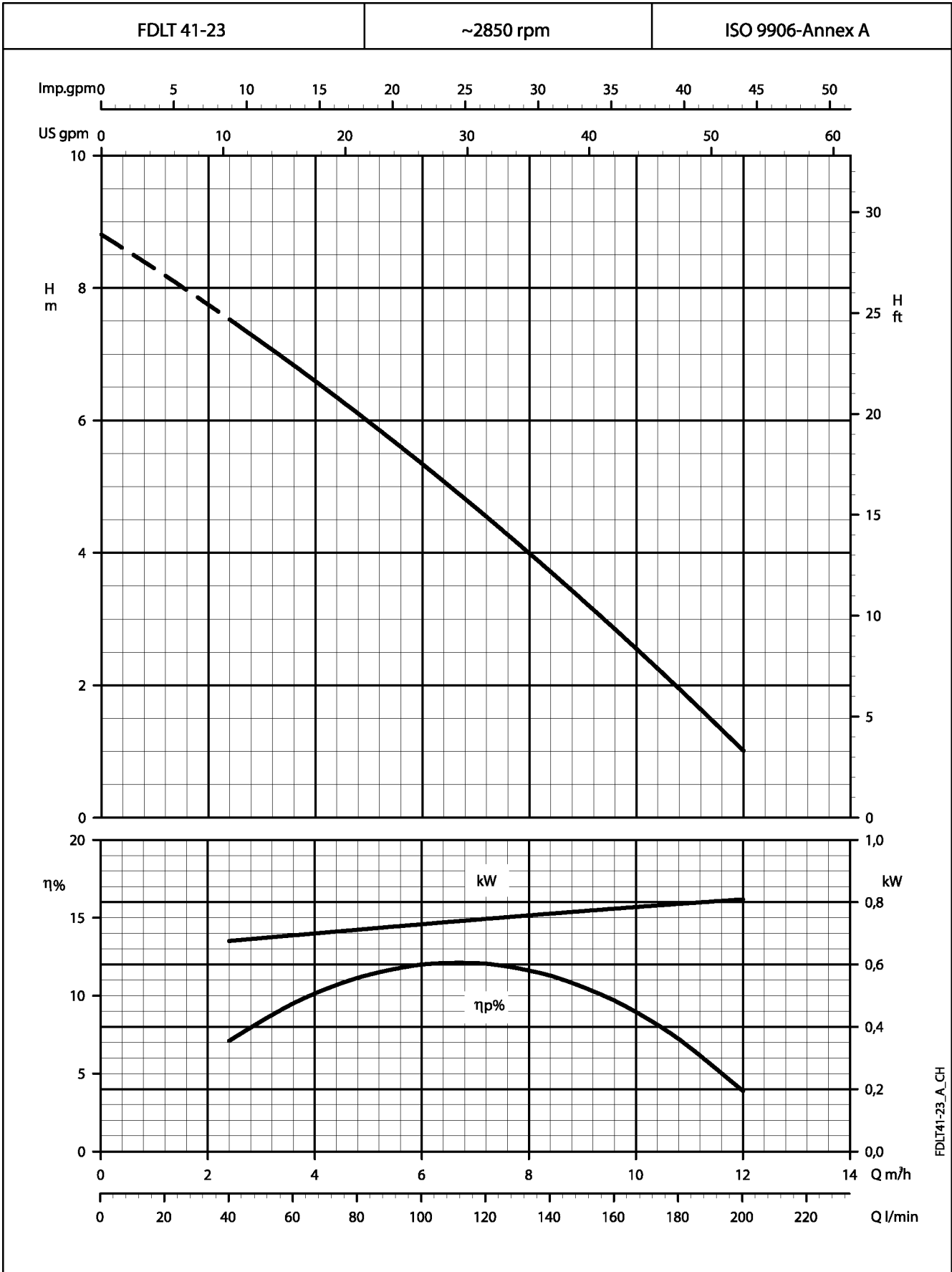
**FDLMT SERIES  
OPERATING CHARACTERISTICS AT 2850 rpm 50 Hz**



These performances are valid for liquids with density  $\rho = 1.0 \text{ kg/dm}^3$  and kinematic viscosity  $\gamma = 1 \text{ mm}^2/\text{s}$ .



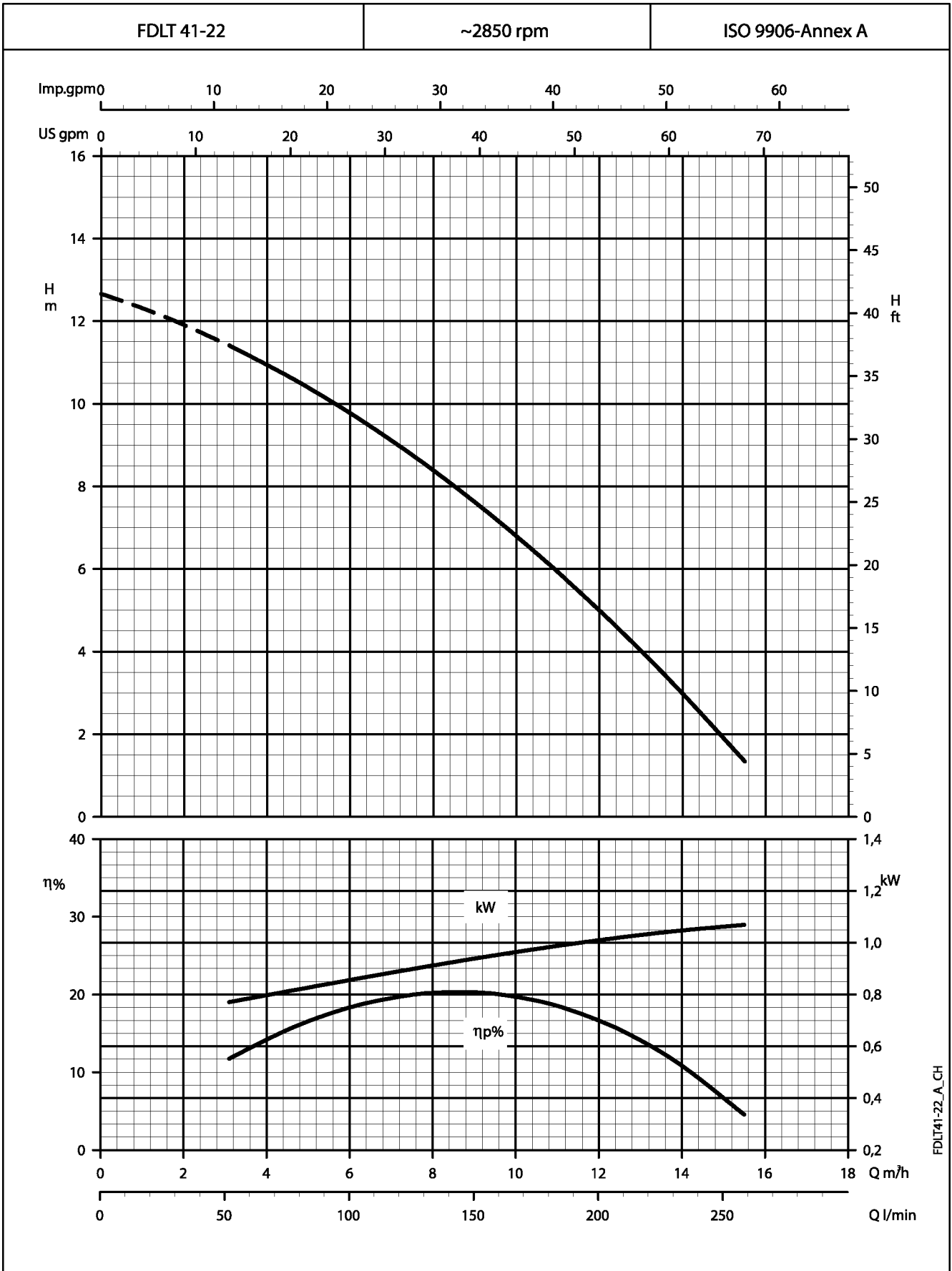
**FDLT SERIES**  
**OPERATING CHARACTERISTICS AT 2850 rpm 50 Hz**



These performances are valid for liquids with density  $\rho = 1.0 \text{ kg/dm}^3$  and kinematic viscosity  $\gamma = 1 \text{ mm}^2/\text{s}$ .



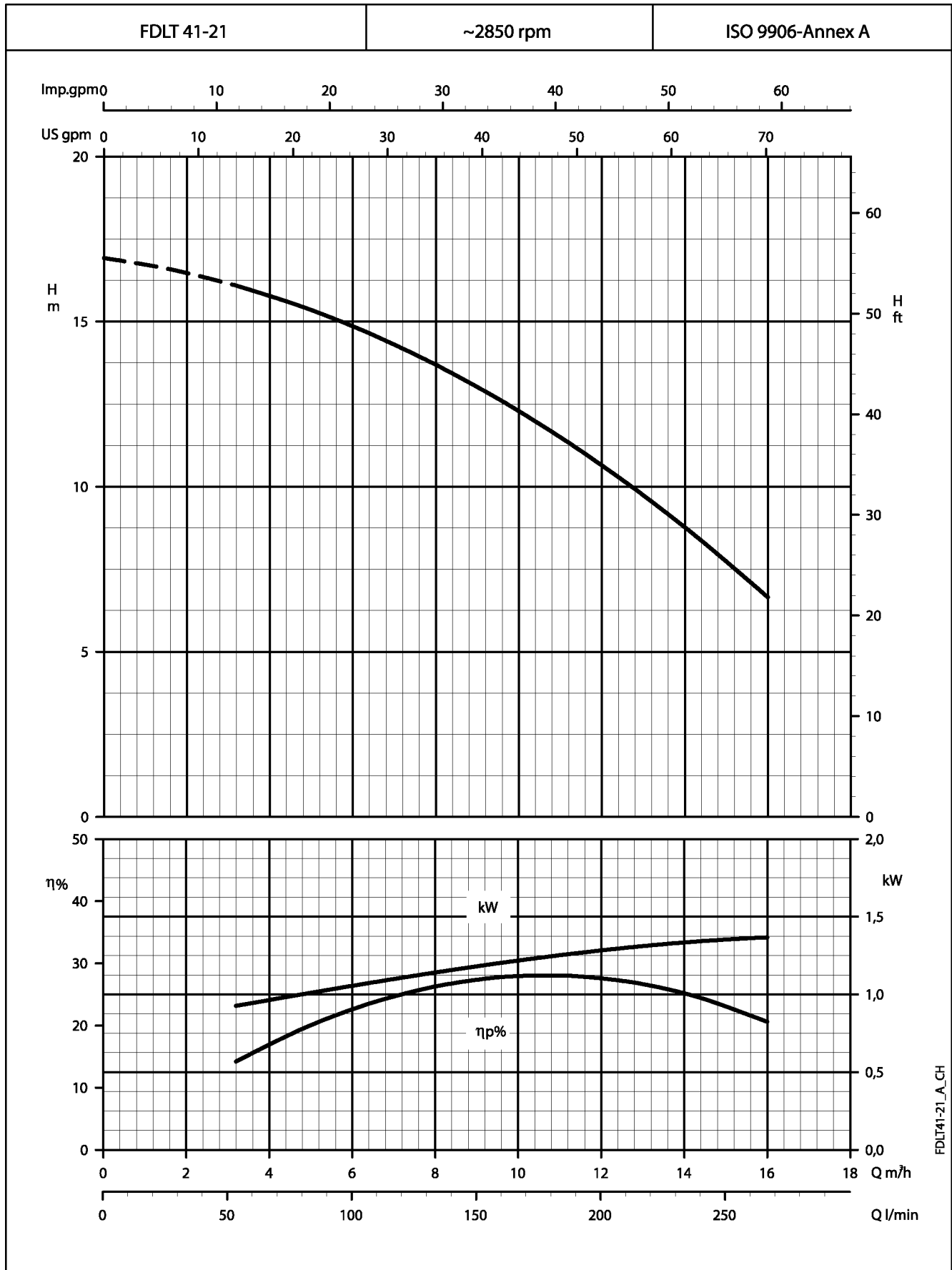
**FDLT SERIES**  
**OPERATING CHARACTERISTICS AT 2850 rpm 50 Hz**



These performances are valid for liquids with density  $\rho = 1.0 \text{ kg/dm}^3$  and kinematic viscosity  $\gamma = 1 \text{ mm}^2/\text{s}$ .



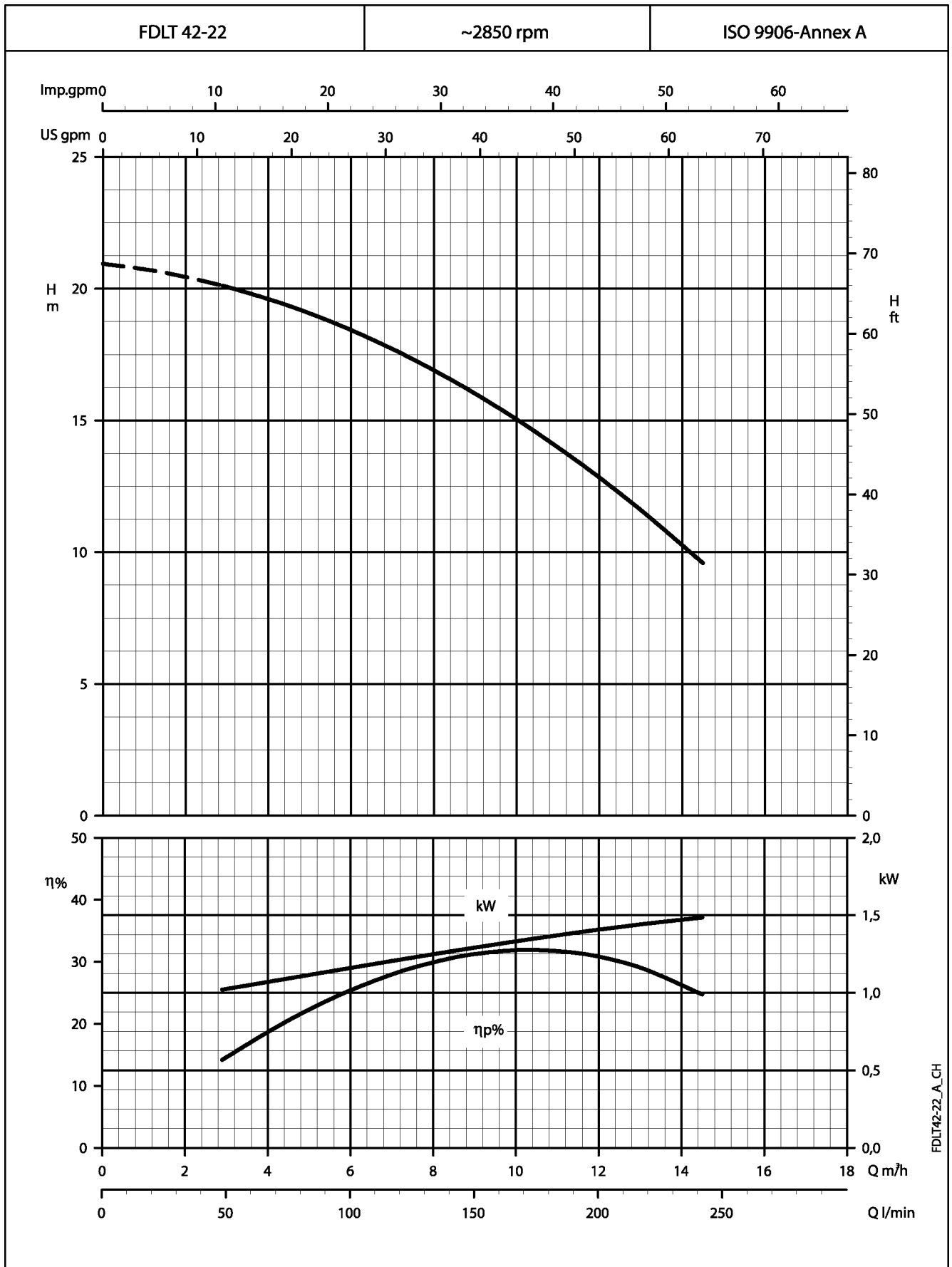
**FDLT SERIES**  
**OPERATING CHARACTERISTICS AT 2850 rpm 50 Hz**



These performances are valid for liquids with density  $\rho = 1.0 \text{ kg/dm}^3$  and kinematic viscosity  $\gamma = 1 \text{ mm}^2/\text{s}$ .



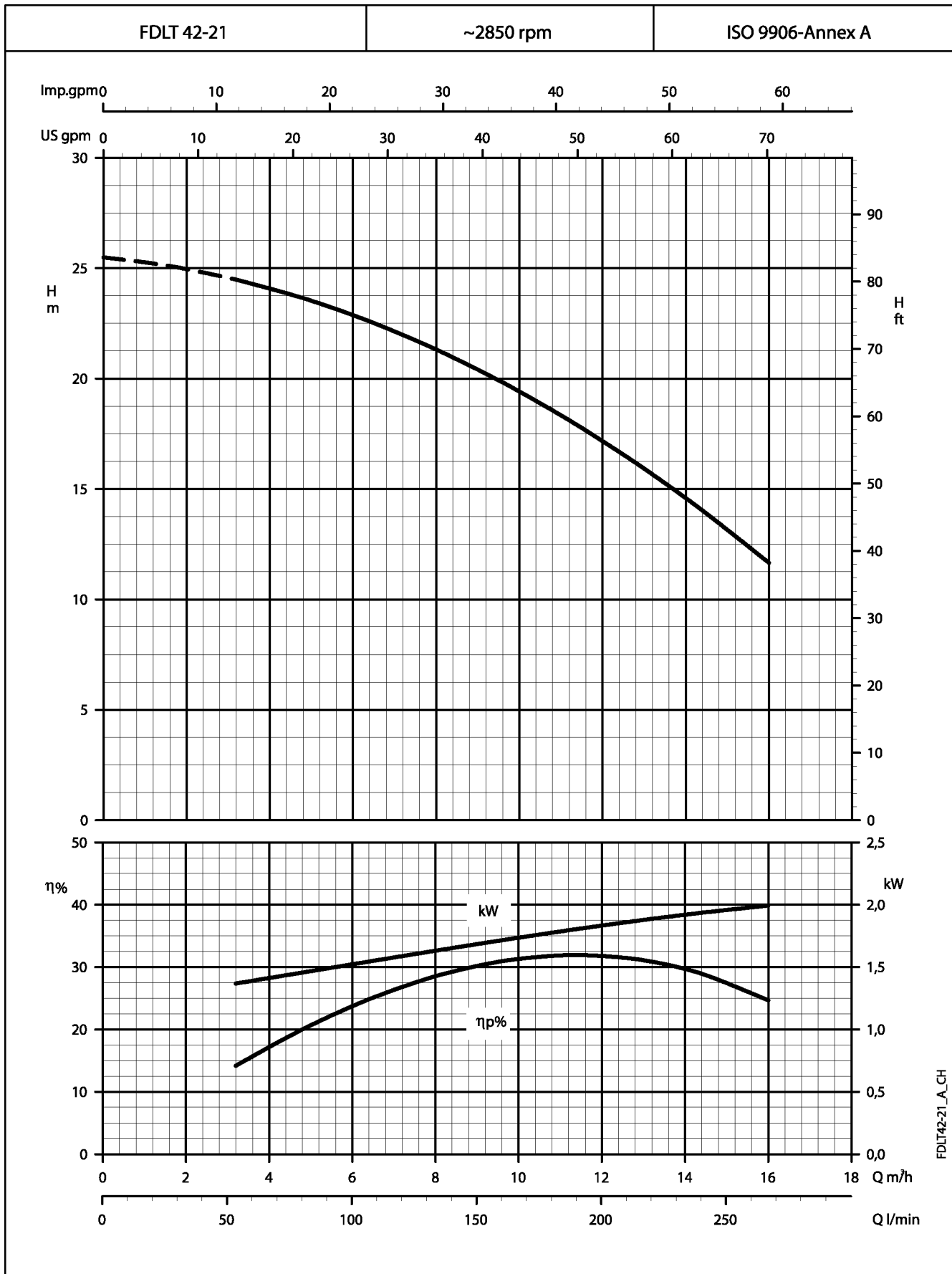
**FDLT SERIES  
OPERATING CHARACTERISTICS AT 2850 rpm 50 Hz**



These performances are valid for liquids with density  $\rho = 1.0 \text{ kg/dm}^3$  and kinematic viscosity  $\gamma = 1 \text{ mm}^2/\text{s}$ .



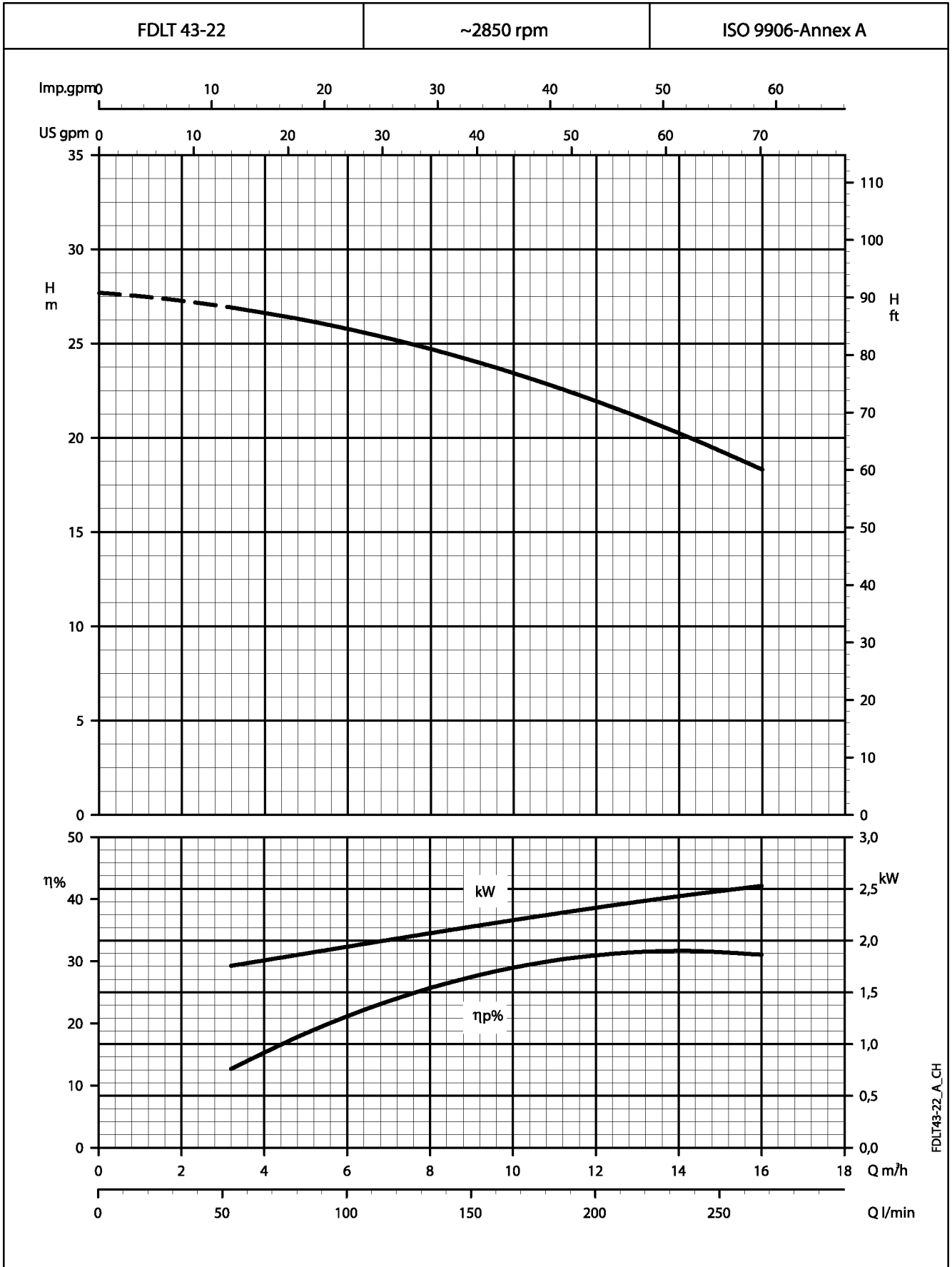
**FDLT SERIES**  
**OPERATING CHARACTERISTICS AT 2850 rpm 50 Hz**



These performances are valid for liquids with density  $\rho = 1.0 \text{ kg/dm}^3$  and kinematic viscosity  $\gamma = 1 \text{ mm}^2/\text{s}$ .



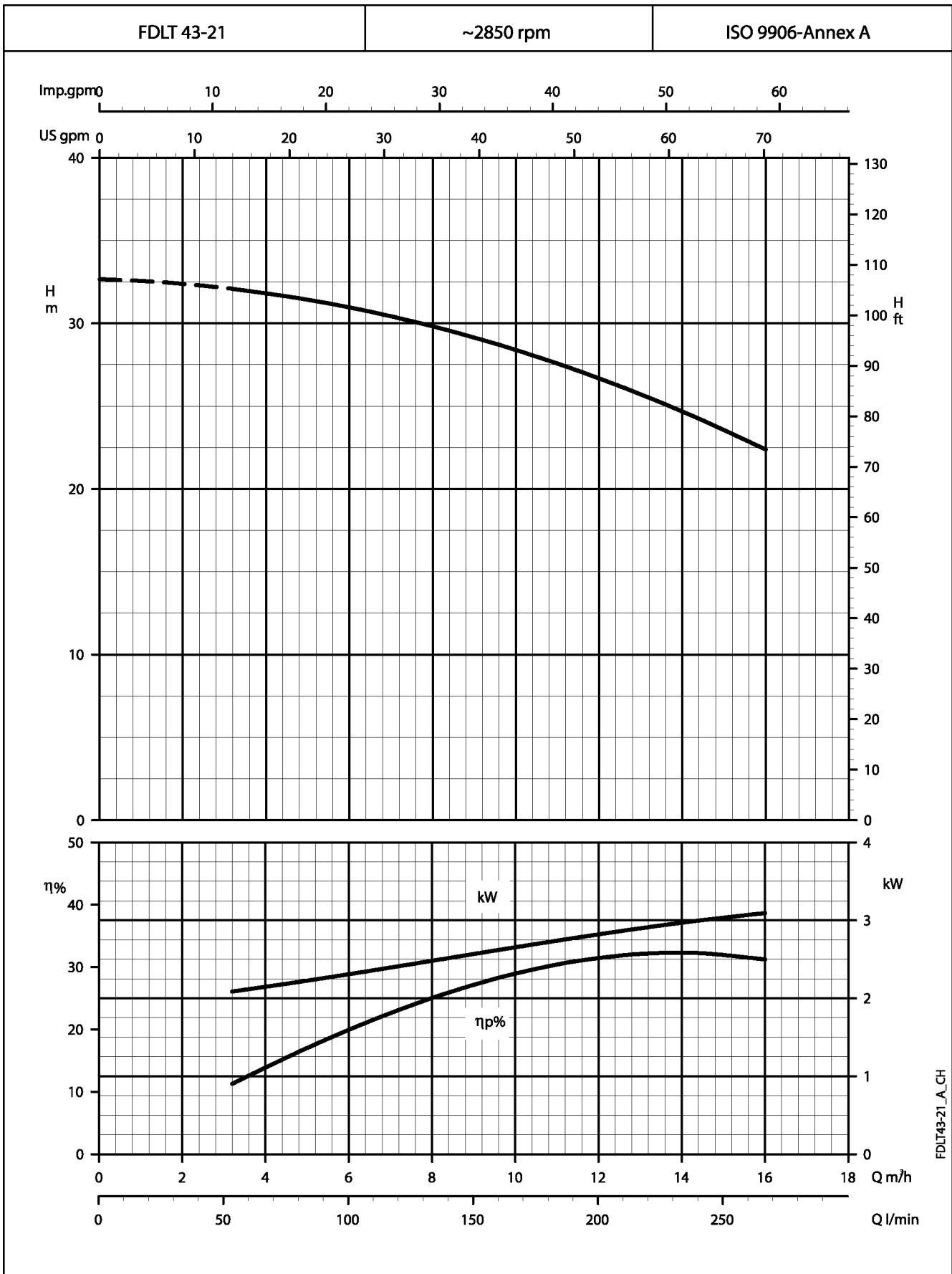
**FDLT SERIES**  
**OPERATING CHARACTERISTICS AT 2850 rpm 50 Hz**



These performances are valid for liquids with density  $\rho = 1.0 \text{ kg/dm}^3$  and kinematic viscosity  $\gamma = 1 \text{ mm}^2/\text{s}$ .



**FDLT SERIES**  
**OPERATING CHARACTERISTICS AT 2850 rpm 50 Hz**

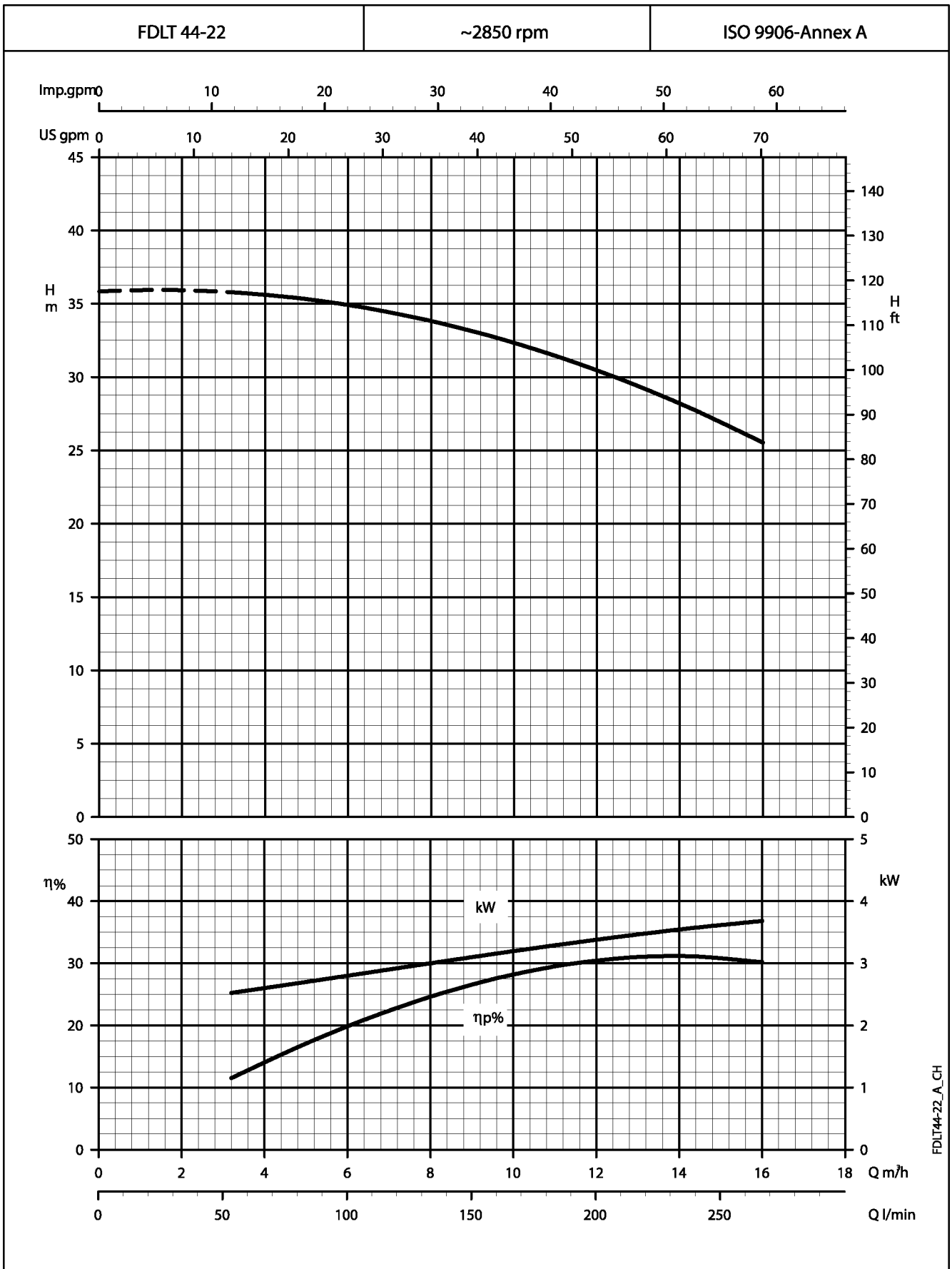


These performances are valid for liquids with density  $\rho = 1.0 \text{ kg/dm}^3$  and kinematic viscosity  $\gamma = 1 \text{ mm}^2/\text{s}$ .





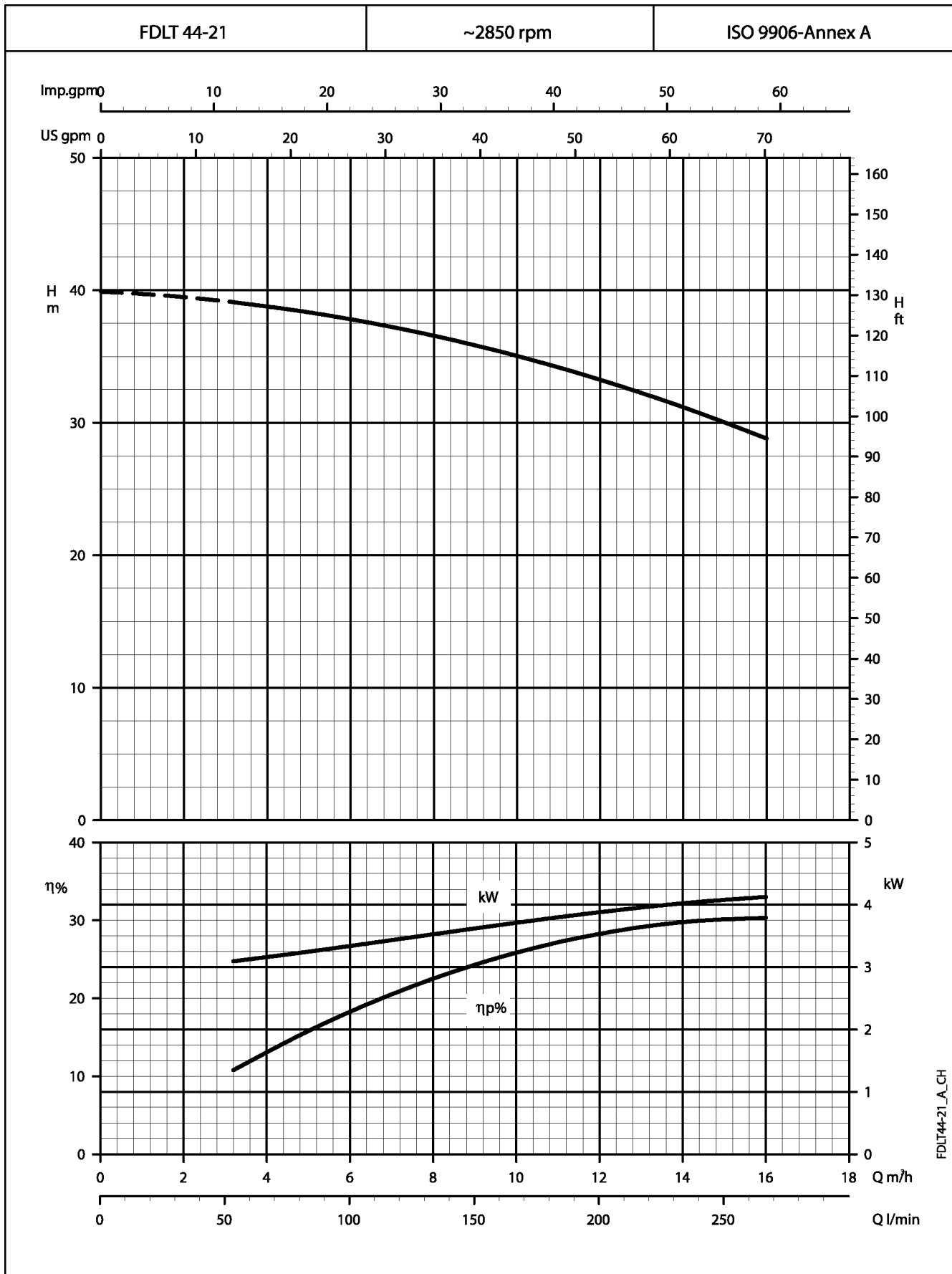
**FDLT SERIES  
OPERATING CHARACTERISTICS AT 2850 rpm 50 Hz**



These performances are valid for liquids with density  $\rho = 1.0 \text{ kg/dm}^3$  and kinematic viscosity  $\gamma = 1 \text{ mm}^2/\text{s}$ .



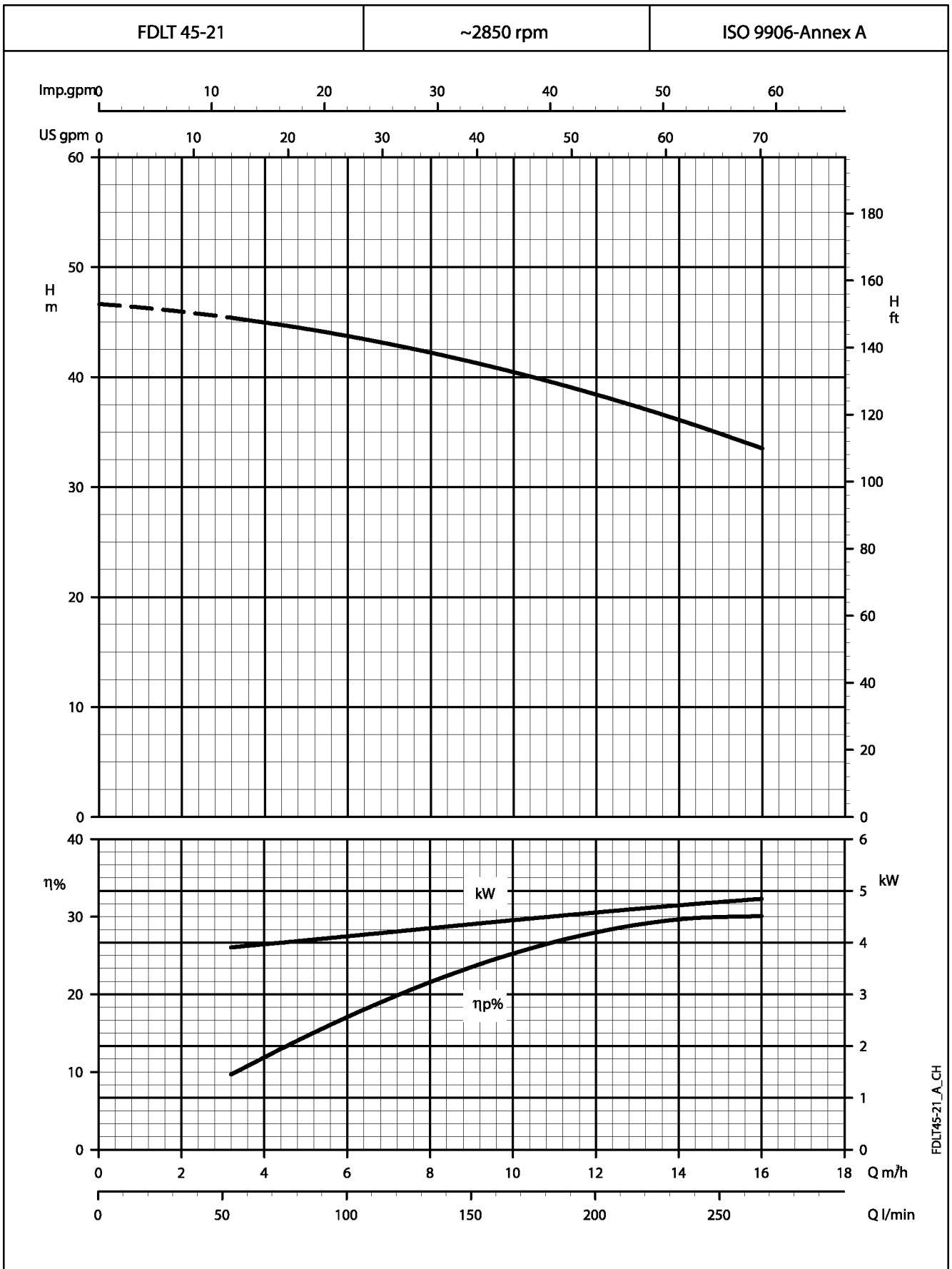
**FDLT SERIES**  
**OPERATING CHARACTERISTICS AT 2850 rpm 50 Hz**



These performances are valid for liquids with density  $\rho = 1.0 \text{ kg/dm}^3$  and kinematic viscosity  $\nu = 1 \text{ mm}^2/\text{s}$ .

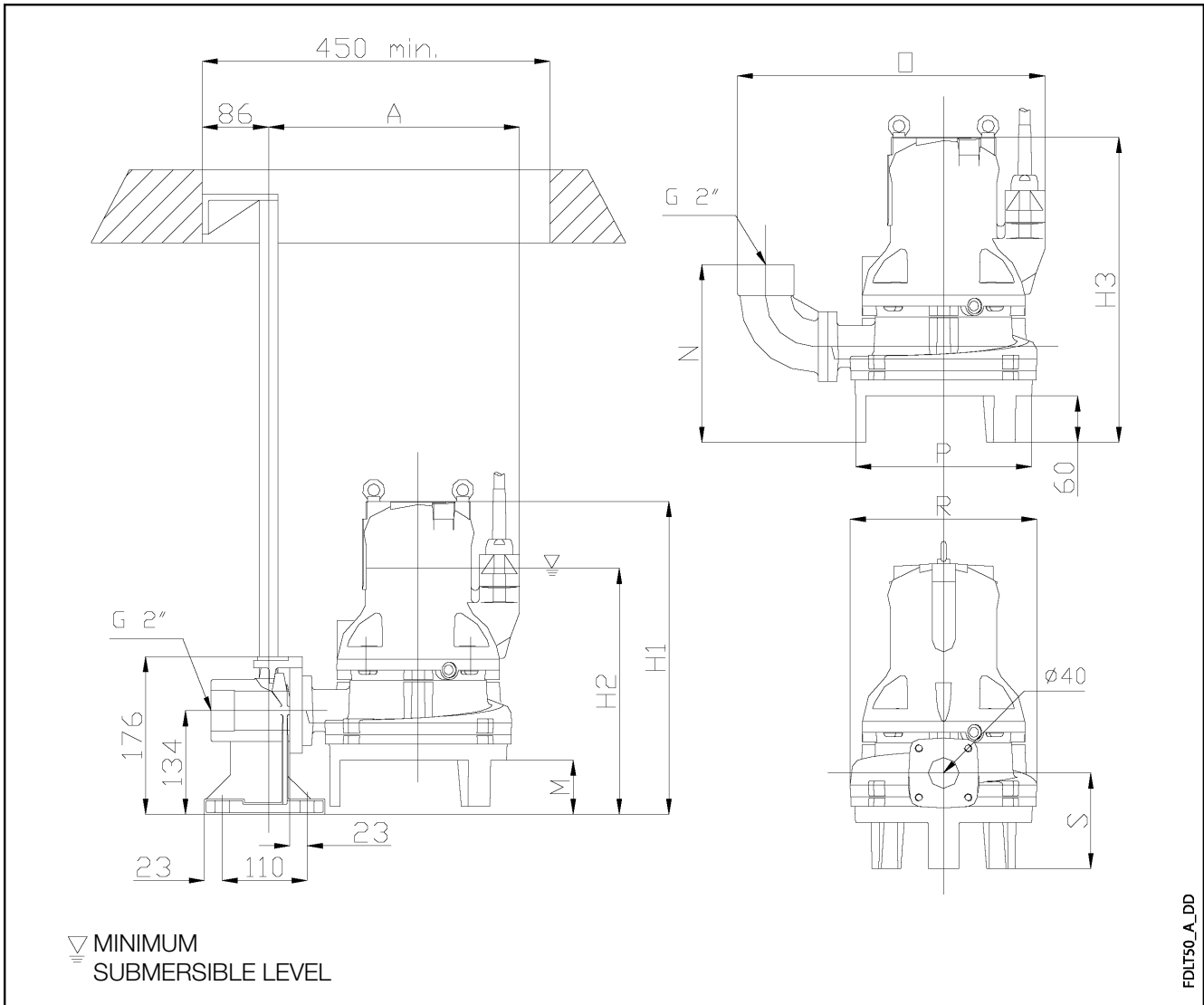


**FDLT SERIES  
OPERATING CHARACTERISTICS AT 2850 rpm 50 Hz**



These performances are valid for liquids with density  $\rho = 1.0 \text{ kg/dm}^3$  and kinematic viscosity  $\gamma = 1 \text{ mm}^2/\text{s}$ .

**DIMENSIONS AND WEIGHTS, FDLT SERIES**



PUMP TYPE	DIMENSIONS (mm)										DNM	WEIGHT kg
	A	M	N	O	P	R	S	H1	H2	H3		
FDLMT 41-23	308	113	186	381	208	208	81	521	325	468	40	37
FDLMT 41-22	308	113	186	381	208	208	81	521	325	468	40	37
FDLMT 41-21	308	113	186	381	208	208	81	521	325	468	40	37
FDLMT 42-22	308	113	186	381	208	208	81	521	325	468	40	37
FDLMT 42-21	308	113	186	381	208	208	81	521	325	468	40	37
FDLT 41-23	308	113	186	381	208	208	81	521	325	468	40	37
FDLT 41-22	308	113	186	381	208	208	81	521	325	468	40	37
FDLT 41-21	308	113	186	381	208	208	81	521	325	468	40	37
FDLT 42-22	308	113	186	381	208	208	81	521	325	468	40	37
FDLT 42-21	308	113	186	381	208	208	81	521	325	468	40	37
FDLT 43-22	292	70	207	358	240	240	112	460	345	450	40	45
FDLT 43-21	292	70	207	358	240	240	112	460	345	450	40	45
FDLT 44-22	325	70	230	398	240	240	126	519	374	509	40	60
FDLT 44-21	325	70	230	398	240	240	126	519	374	509	40	60
FDLT 45-21	325	70	230	398	240	240	126	519	374	509	40	60

FDLT50\_A\_TD

**PUMP SECTION  
FDLT SERIES**

**FDLT**

