

# HM-HMS SERIES

## HORIZONTAL MULTISTAGE CENTRIFUGAL PUMPS

Modern-design noiseless high-efficiency pumps, available in the HM version for domestic applications and in the HMS version for industrial applications (made entirely of AISI 316 stainless steel).

### HM APPLICATIONS (AISI 304 + Technopolymer)

- Clean water circulation for domestic use.
- Pressure boosting units for single- or double-family dwelling water supply.
- Irrigation systems.
- Washing.

### HMS APPLICATIONS (AISI 316)

- Industrial washing systems.
- Cooling and heating circuits.
- Handling of special liquids (demineralized or softened water, washing solutions, oils, etc.).
- Irrigation systems handling water containing nutritive and/or chemically aggressive substances.

### SPECIFICATIONS

- **Delivery:** up to **120 l/min (7,2 m<sup>3</sup>/h)**.
- **Head:** up to **60 m**.
- **Continuous duty.**
- **Max. temperature of pumped liquid:**  
**-10°C to +60°C for HM**  
**-10°C to +110°C for HMS.**
- **Maximum operating pressure: 8 bar.**
- Enclosed motor with external ventilation and **aluminium alloy finned casing.**
- Versions:  
**Single-phase** 220-240 V 50 Hz, built-in automatic reset overload protection.  
**Three-phase** 220-240/380-415 V 50 Hz, overload protection to be provided by user.
- **Class F Insulation.**
- Power up to 0.9 kW.
- **IP 55 protection.**



HM-HMS

### TABLE OF MATERIALS

#### HM SERIES

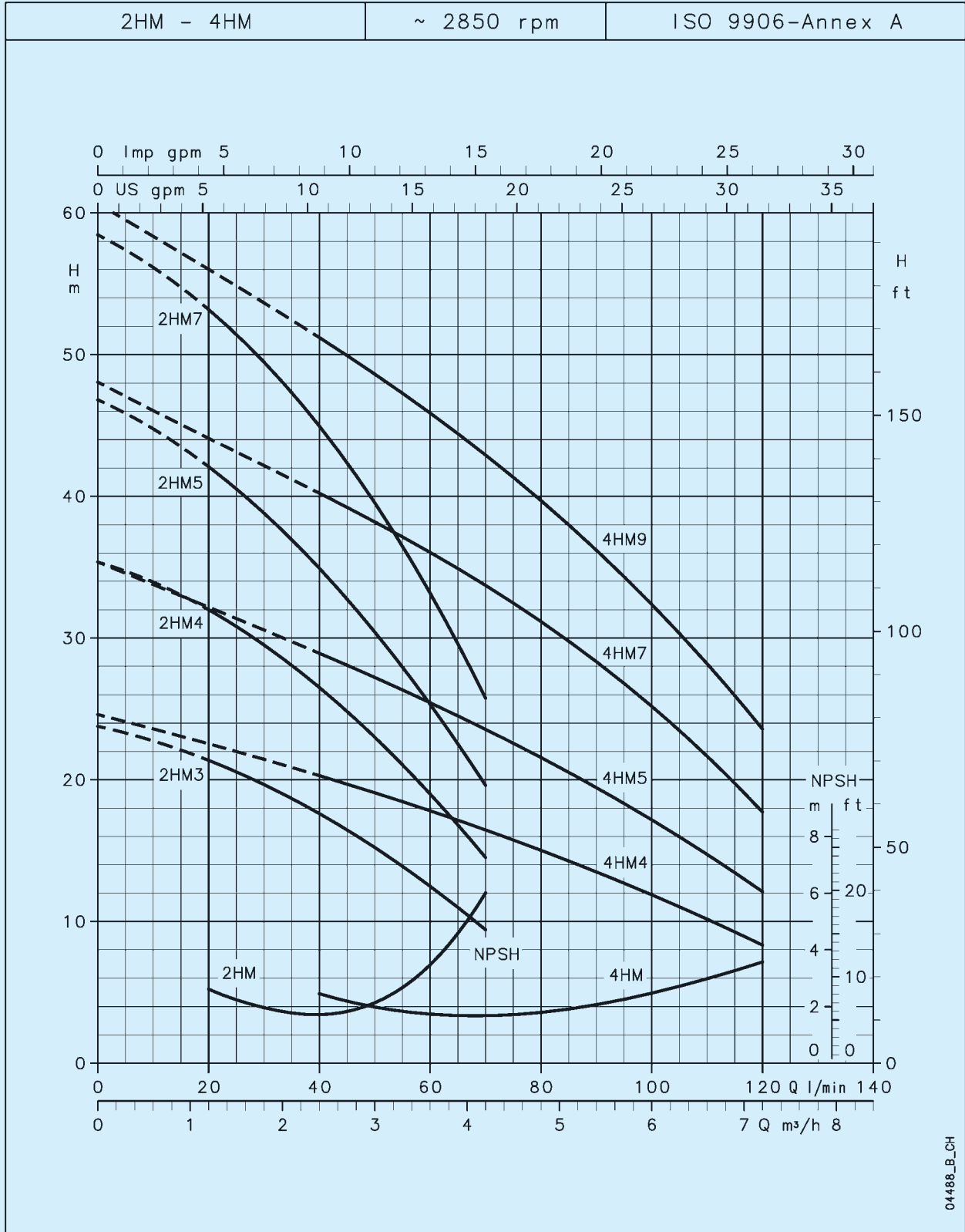
PART	MATERIAL
Pump body, Seal-housing, Diffusers, Covers, Spacers	STAINLESS STEEL (AISI 304 – DIN 1.4301)
Impellers	TECHNOPOLYMER SUITED FOR HANDLING FOOD PRODUCTS
Shaft extension	STAINLESS STEEL (AISI 316L – DIN 1.4404)
Fill and drain plugs	NICKEL-PLATED BRASS
Mechanical seal	CARBON/CERAMIC/EPDM
O-ring seals	EPDM

#### HMS SERIES

PART	MATERIAL
Pump body, Seal-housing, Diffusers, Covers, Spacers	STAINLESS STEEL (AISI 316L – DIN 1.4404)
Impellers, Shaft extension, Fill and drain plugs	STAINLESS STEEL (AISI 316L – DIN 1.4404)
Mechanical seal	CARBON/CERAMIC/EPDM
O-ring seals	EPDM

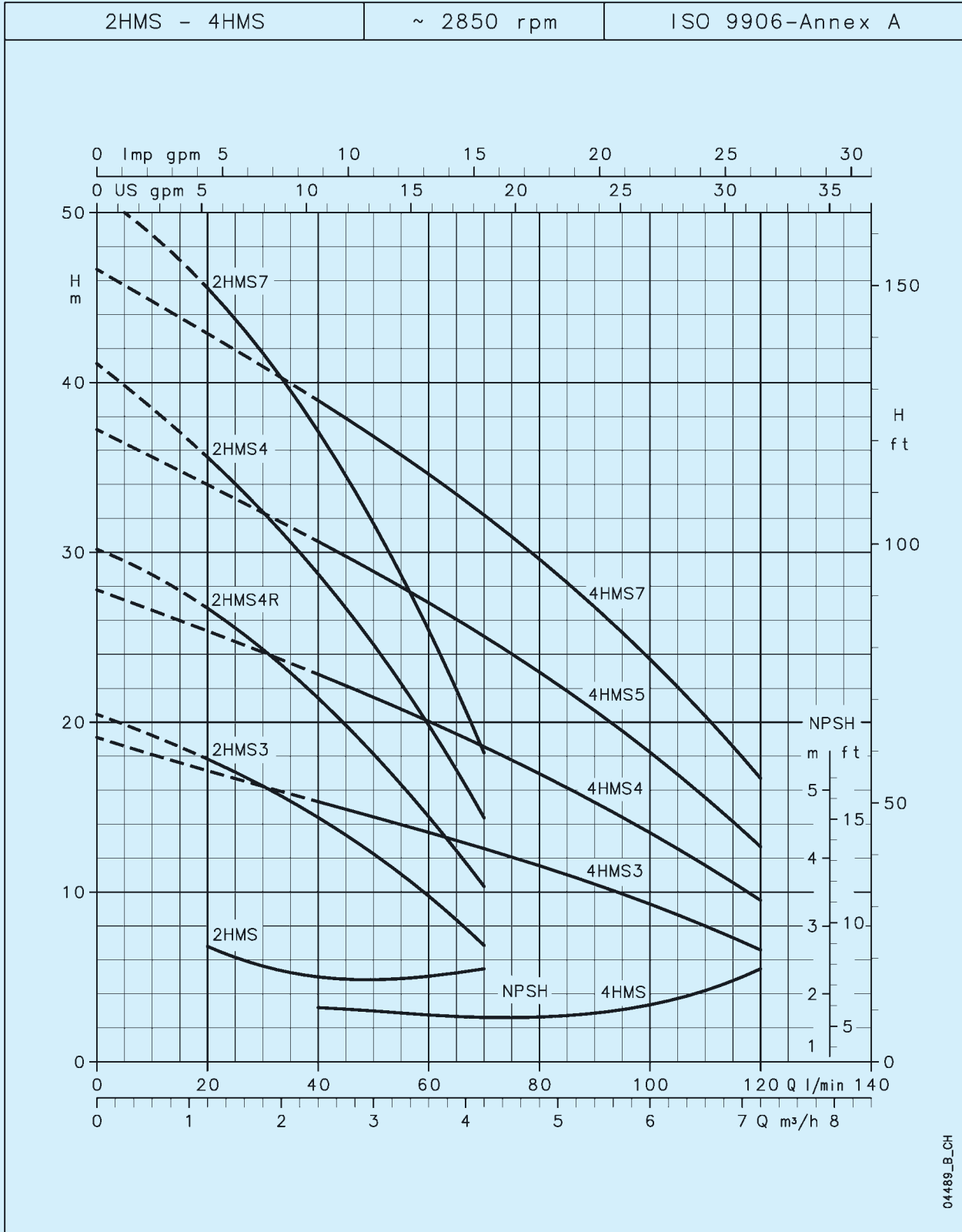
## HM SERIES OPERATING CHARACTERISTICS AT 2850 rpm 50 Hz

HM-HMS



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

## HMS SERIES OPERATING CHARACTERISTICS AT 2850 rpm 50 Hz



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## HM SERIES OPERATING CHARACTERISTICS AT 2850 rpm 50 Hz

PUMP TYPE	RATED POWER		Q = DELIVERY										
			l/min	0	20	30	40	50	60	70	80	100	120
			m <sup>3</sup> /h	0	1.2	1.8	2.4	3	3.6	4.2	4.8	6	7.2
		H = TOTAL HEAD METERS COLUMN WATER											
	kW	HP											
2HM3(T)	0.3	0.4	23.8	21.4	19.7	17.6	15.2	12.5	9.4				
2HM4(T)	0.45	0.6	35.4	32.0	29.5	26.5	23.0	19.0	14.5				
2HM5(T)	0.55	0.75	46.8	42.1	38.8	34.9	30.4	25.3	19.6				
2HM7(T)	0.75	1	58.5	53.2	49.5	44.9	39.5	33.2	25.8				
4HM4(T)	0.45	0.6	24.6			20.3	19.1	17.8	16.5	15.0	11.9	8.3	
4HM5(T)	0.55	0.75	35.4			28.9	27.2	25.4	23.6	21.6	17.2	12.1	
4HM7(T)	0.75	1	48.1			40.2	38.2	36.0	33.7	31.2	25.2	17.7	
4HM9(T)	0.9	1.2	60.7			51.2	48.6	45.9	42.9	39.7	32.4	23.6	

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HM-HMS

PUMP TYPE	INPUT POWER*	INPUT CURRENT*	CAPACITOR			
				SINGLE-PHASE		
				220-240 V		
	kW	A	μF / 450 V			
2HM3	0.51	2.34	10			
2HM4	0.66	2.92	14			
2HM5	0.85	3.72	16			
2HM7	1.13	5.09	20			
4HM4	0.62	2.77	14			
4HM5	0.86	3.76	16			
4HM7	1.29	5.74	25			
4HM9	2.45	6.49	25			

\* Maximum value in specified range

PUMP TYPE	INPUT POWER*	INPUT CURRENT*	INPUT CURRENT*			
				THREE-PHASE		
				220-240 V		
	kW	A	380-415 V A			
2HM3T	0.47	1.80	1.04			
2HM4T	0.67	2.56	1.48			
2HM5T	0.87	2.94	1.70			
2HM7T	1.12	3.74	2.16			
4HM4T	0.62	2.51	1.45			
4HM5T	0.88	2.96	1.71			
4HM7T	1.21	4.33	2.50			
4HM9T	1.38	4.61	2.66			

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## HMS SERIES OPERATING CHARACTERISTICS AT 2850 rpm 50 Hz

PUMP TYPE	RATED POWER		Q = DELIVERY										
			l/min	0	20	30	40	50	60	70	80	100	120
			m <sup>3</sup> /h	0	1.2	1.8	2.4	3	3.6	4.2	4.8	6	7.2
		H = TOTAL HEAD METERS COLUMN OF WATER											
	kW	HP											
2HMS3(T)	0.3	0.4	20.5	17.8	16.2	14.4	12.3	9.8	6.9				
2HMS4R(T)	0.45	0.6	30.2	26.7	24.3	21.4	18.1	14.4	10.3				
2HMS4(T)	0.45	0.6	41.1	35.6	32.4	28.7	24.6	19.8	14.4				
2HMS7(T)	0.75	1	51.2	45.6	41.7	37.1	31.7	25.4	18.2				
4HMS3(T)	0.3	0.4	19.1			15.3	14.4	13.5	12.6	11.6	9.3	6.6	
4HMS4(T)	0.45	0.6	27.8			22.8	21.5	20.1	18.6	17.0	13.5	9.5	
4HMS5(T)	0.55	0.75	37.2			30.6	28.9	27.0	25.1	23.0	18.2	12.7	
4HMS7(T)	0.75	1	46.7			38.9	36.8	34.6	32.2	29.6	23.7	16.7	

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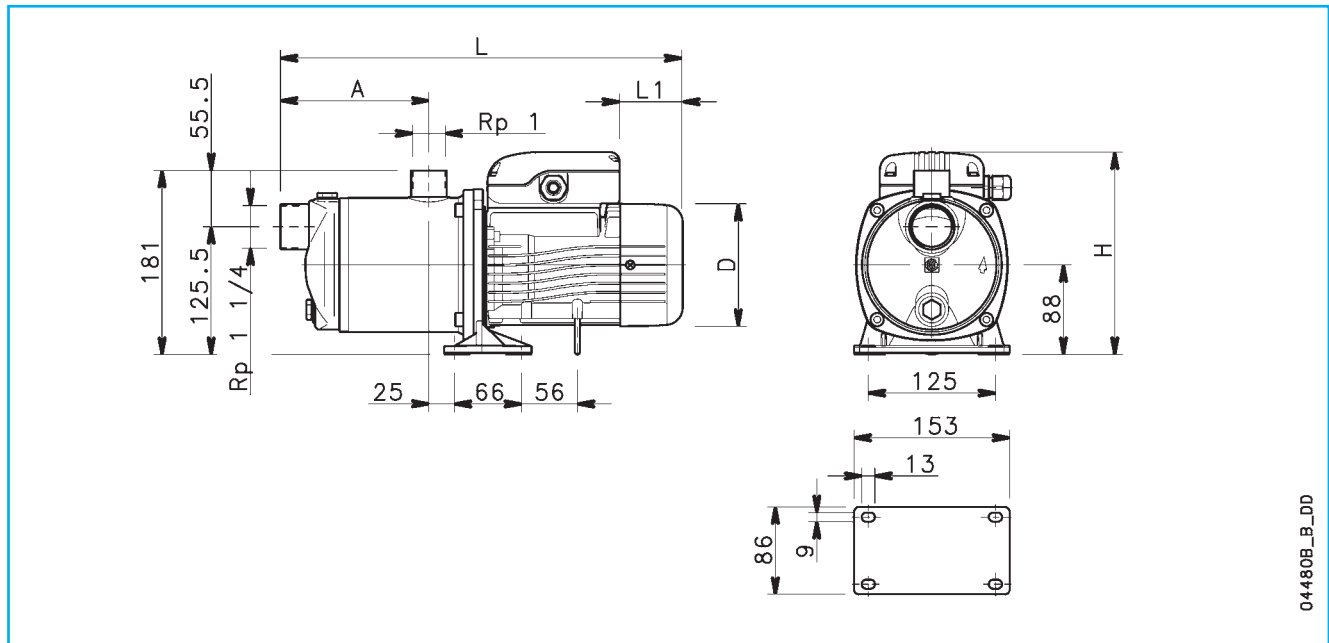
PUMP TYPE	INPUT POWER*	INPUT CURRENT*	CAPACITOR			
				SINGLE-PHASE		
				220-240 V		
	kW	A	μF / 450 V			
2HMS3	0.47	2.25	10			
2HMS4R	0.61	2.75	14			
2HMS4	0.73	3.28	16			
2HMS7	1.00	4.61	20			
4HMS3	0.51	2.35	10			
4HMS4	0.68	2.99	14			
4HMS5	0.81	3.54	16			
4HMS7	1.13	5.08	20			

\* Maximum value in specified range

PUMP TYPE	INPUT POWER*	INPUT CURRENT*	INPUT CURRENT*			
				THREE-PHASE		
				220-240 V		
	kW	A	380-415 V A			
2HMS3T	0.42	1.77	1.02			
2HMS4RT	0.61	2.51	1.45			
2HMS4T	0.73	2.79	1.61			
2HMS7T	0.98	3.53	2.04			
4HMS3T	0.48	1.8	1.04			
4HMS4T	0.69	2.58	1.49			
4HMS5T	0.82	2.89	1.67			
4HMS7T	1.10	3.65	2.11			

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## DIMENSIONS AND WEIGHTS, HM, HMS SERIES



**HM-HMS**

PUMP TYPE	DIMENSIONS (mm)						WEIGHT kg
	NUMBER OF STAGES	A	D	L	L1	H	
2HM3	2	96	120	345	62	199	7
2HM4	3	121	120	370	62	199	8.1
2HM5	4	146	120	395	62	199	8.9
2HM7	5	171	140	434	76	209	11.7
4HM4	2	96	120	345	62	199	8.7
4HM5	3	121	120	370	62	199	8.5
4HM7	4	146	140	409	31	218	11.3
4HM9	5	171	140	434	31	218	12.4
2HM3T	2	96	120	345	62	199	7.1
2HM4T	3	121	120	370	62	199	7.9
2HM5T	4	146	120	395	62	199	8.9
2HM7T	5	171	140	434	76	209	11.7
4HM4T	2	96	120	345	62	199	7.6
4HM5T	3	121	120	370	62	199	8.4
4HM7T	4	146	140	409	76	209	11.7
4HM9T	5	171	140	434	76	209	12.2
2HMS3	2	96	120	345	62	199	7.3
2HMS4R	3	121	120	370	62	199	8.4
2HMS4	4	146	120	395	62	199	9.3
2HMS7	5	171	140	434	76	209	12
4HMS3	2	96	120	345	62	199	7.4
4HMS4	3	121	120	370	62	199	8.4
4HMS5	4	146	120	395	62	199	9.2
4HMS7	5	171	140	434	76	209	12
2HMS3T	2	96	120	345	62	199	7.2
2HMS4RT	3	121	120	370	62	199	8.3
2HMS4T	4	146	120	395	62	199	9
2HMS7T	5	171	140	434	76	209	11.7
4HMS3T	2	96	120	345	62	199	7.2
4HMS4T	3	121	120	370	62	199	8.5
4HMS5T	4	146	120	395	62	199	9.2
4HMS7T	5	171	140	434	76	209	12

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