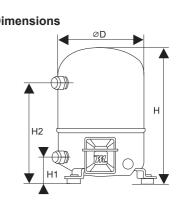
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# Datasheet, technical data

# Maneurop reciprocating compressor, type LTZ028-4

# **General Characteristics**

Model number (on compressor nameplate)	LTZ28JH4A	LTZ28JH4AVE	٦	
Code number for Singlepack*	LTZ28-4I	LTZ28-4VI		
Code number for Industrial pack**	LTZ28-4M	LTZ28-4VM	D	
Drawing number	8501033E	8501026E		
Suction and discharge connections	Rotolock	Rotolock		
Suction connection	1-1/4 " Rotolock	1-1/4 " Rotolock		
Discharge connection	1 " Rotolock	1 " Rotolock		
Suction connection with supplied sleeve	5/8 " ODF	5/8 " ODF		
Discharge connection with supplied sleeve	1/2 " ODF	1/2 " ODF		
Oil sight glass	None	Threaded	7	
Oil equalisation connection	None	3/8" flare SAE		
Oil drain connection	None	None		
LP gauge port	Schrader	Schrader		
IPR valve	30 bar / 8 bar	30 bar / 8 bar		
Cylinders		1		
Swept volume	67,89	cm3/rev		
Displacement @ Nominal speed	11.8 m3/h @ 2900 rpm	- 14.3 m3/h @ 3500 rpm	D	
Net weight	23	3 kg	Н	
Oil charge	0,95 litre,	POE - 160Z	H	
Maximum system test pressure Low Side / High side	25 bar(g)	/ 30 bar(g)	н	
Maximum differential test pressure	30	bar		
Maximum number of starts per hour		12	1	
Refrigerant charge limit	2,	2,5 kg		
Approved refrigerants	R404A	- R507A	Т	



=224 mm =333 mm 1=263 mm 2=68 mm

erminal box

# (1)(2) 4 (3)

# **Electrical Characteristics**

Nominal voltage	400V/3/50Hz - 460V/3/60Hz
Voltage range	360-440 V @ 50Hz - 414-506 V @ 60Hz
Winding resistance (between phases) +/- 7% at 25°C	7.11 Ω
Maximum Continuous Current (MCC)	7.5 A
Locked Rotor Amps (LRA)	23 A
Motor protection	Internal overload protector

# **Recommended Installation torques**

Suction Rotolock nut or valve	90 Nm	
Discharge Rotolock nut or valve	80 Nm	
Oil sight glass	50 Nm	
Power connections / Earth connection	Nm / 2 Nm	
Mounting bolts	15 Nm	

# Parts shipped with compressor

Mounting kit with grommets, bolts, nuts, sleeves and washers Suction & Discharge solder sleeves, rotolock nuts and gaskets (shipped with rotolock version only) Initial oil charge Installation instructions

Approvals : CE certified, UL certified (file SA6873), -

\*Singlepack: Compressor in cardboard box

\*\*Industrial pack: 12 Unboxed compressors on pallet (order per multiples of 12)

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P55 (with cable gland)

- Spade connectors 1/4"
  - Earth M4-12, torque 2 Nm (17 in.lb)
  - Knock-out Ø 21 mm (0.83")
- 4: Hole Ø 21 mm (0.83")

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# Datasheet, accessories and spare parts

Maneurop reciprocating compressor, type LTZ028-4

Rotolock accessories, suction side	Code no.	
Solder sleeve, P09 (1-1/4" Rotolock, 5/8" ODF)	8153011	
Angle adapter, C09 (1-1/4" Rotolock, 5/8" ODF)	8168009	
Rotolock valve, V09 (1-1/4" Rotolock, 5/8" ODF)	8168033	Gaskets, sleeves and nuts
Gasket, 1-1/4"	8156131	
Rotolock accessories, discharge side	Code no.	
Solder sleeve, P06 (1" Rotolock, 1/2" ODF)	8153007	
Angle adapter, C06 (1" Rotolock, 1/2" ODF)	8168007	
Rotolock valve, V06 (1" Rotolock, 1/2" ODF)	8168031	
Gasket, 1"	8156130	1 2 3
Rotolock accessories, sets	Code no.	1: Gasket
Angle adapter set, C09 (1-1/4"~5/8"), C06 (1"~1/2")	7703012	2: Solder sleeve
Valve set, V09 (1-1/4"~5/8"), V06 (1"~1/2")	7703005	3: Rotolock nut
Gasket set, 1", 1-1/4", 1-3/4", OSG gaskets black & white	8156009	
Oil / lubricants	Code no.	
POE lubricant, 160Z, 1 litre can	7754025	
POE lubricant, 160Z, 2 litre can	7754026	
Crankcase heaters	Code no.	Mounting kit
Crankcase heaters	<b>Code no.</b> 7773001	Mounting kit
PTC crankcase heater, 35 W, incl. heat transfer paste	7773001	Mounting kit
PTC crankcase heater, 35 W, incl. heat transfer paste PTC crankcase heater, 35 W, mounting without paste	7773001 7773125	Mounting kit
PTC crankcase heater, 35 W, incl. heat transfer paste PTC crankcase heater, 35 W, mounting without paste Belt type crankcase heater, 55 W, 230 V, CE mark, UL	7773001 7773125 7773106	Mounting kit
PTC crankcase heater, 35 W, incl. heat transfer paste PTC crankcase heater, 35 W, mounting without paste Belt type crankcase heater, 55 W, 230 V, CE mark, UL Belt type crankcase heater, 54 W, 460 V, UL	7773001 7773125	Mounting kit
PTC crankcase heater, 35 W, incl. heat transfer paste PTC crankcase heater, 35 W, mounting without paste Belt type crankcase heater, 55 W, 230 V, CE mark, UL Belt type crankcase heater, 54 W, 460 V, UL Belt type crankcase heater, 54 W, 240 V, UL	7773001 7773125 7773106 7773111	Mounting kit
PTC crankcase heater, 35 W, incl. heat transfer paste PTC crankcase heater, 35 W, mounting without paste Belt type crankcase heater, 55 W, 230 V, CE mark, UL Belt type crankcase heater, 54 W, 460 V, UL	7773001 7773125 7773106 7773111 7773002	Mounting kit
PTC crankcase heater, 35 W, incl. heat transfer paste PTC crankcase heater, 35 W, mounting without paste Belt type crankcase heater, 55 W, 230 V, CE mark, UL Belt type crankcase heater, 54 W, 460 V, UL Belt type crankcase heater, 54 W, 240 V, UL	7773001 7773125 7773106 7773111 7773002 7773013	Mounting kit
PTC crankcase heater, 35 W, incl. heat transfer paste PTC crankcase heater, 35 W, mounting without paste Belt type crankcase heater, 55 W, 230 V, CE mark, UL Belt type crankcase heater, 54 W, 460 V, UL Belt type crankcase heater, 54 W, 240 V, UL Belt type crankcase heater, 54 W, 400 V, UL	7773001 7773125 7773106 7773111 7773002	Mounting kit
PTC crankcase heater, 35 W, incl. heat transfer paste PTC crankcase heater, 35 W, mounting without paste Belt type crankcase heater, 55 W, 230 V, CE mark, UL Belt type crankcase heater, 54 W, 460 V, UL Belt type crankcase heater, 54 W, 240 V, UL Belt type crankcase heater, 54 W, 400 V, UL Miscellaneous accessories	7773001 7773125 7773106 7773111 7773002 7773013 Code no.	Mounting kit
PTC crankcase heater, 35 W, incl. heat transfer paste   PTC crankcase heater, 35 W, mounting without paste   Belt type crankcase heater, 55 W, 230 V, CE mark, UL   Belt type crankcase heater, 54 W, 460 V, UL   Belt type crankcase heater, 54 W, 240 V, UL   Belt type crankcase heater, 54 W, 240 V, UL   Belt type crankcase heater, 54 W, 400 V, UL   Belt type crankcase heater, 54 W, 400 V, UL   Belt type crankcase heater, 54 W, 400 V, UL   Belt type crankcase heater, 54 W, 400 V, UL	7773001 7773125 7773106 7773111 7773002 7773013 Code no. 7755001	Mounting kit
PTC crankcase heater, 35 W, incl. heat transfer paste   PTC crankcase heater, 35 W, mounting without paste   Belt type crankcase heater, 55 W, 230 V, CE mark, UL   Belt type crankcase heater, 54 W, 460 V, UL   Belt type crankcase heater, 54 W, 240 V, UL   Belt type crankcase heater, 54 W, 400 V, UL   Belt type crankcase heater, 54 W, 400 V, UL   Belt type crankcase heater, 54 W, 400 V, UL   Belt type crankcase heater, 54 W, 400 V, UL   Belt type crankcase heater, 54 W, 400 V, UL   Spare parts	7773001 7773125 7773106 7773111 7773002 7773013 Code no. 7755001 8153127 Code no.	1: Bolt (3x)
PTC crankcase heater, 35 W, incl. heat transfer paste   PTC crankcase heater, 35 W, mounting without paste   Belt type crankcase heater, 55 W, 230 V, CE mark, UL   Belt type crankcase heater, 54 W, 460 V, UL   Belt type crankcase heater, 54 W, 240 V, UL   Belt type crankcase heater, 54 W, 400 V, UL   Belt type crankcase heater, 54 W, 400 V, UL   Belt type crankcase heater, 54 W, 400 V, UL   Belt type crankcase heater, 54 W, 400 V, UL   Belt type crankcase heater, 54 W, 400 V, UL   Belt type crankcase heater, 54 W, 400 V, UL   Belt type crankcase heater, 54 W, 400 V, UL	7773001 7773125 7773106 7773111 7773002 7773013 <b>Code no.</b> 7755001 8153127	1: Bolt (3x) 2: Lock washer (3x)
PTC crankcase heater, 35 W, incl. heat transfer paste   PTC crankcase heater, 35 W, mounting without paste   Belt type crankcase heater, 55 W, 230 V, CE mark, UL   Belt type crankcase heater, 54 W, 460 V, UL   Belt type crankcase heater, 54 W, 240 V, UL   Belt type crankcase heater, 54 W, 400 V, UL   Belt type crankcase heater, 54 W, 400 V, UL   Belt type crankcase heater, 54 W, 400 V, UL   Belt type crankcase heater, 54 W, 400 V, UL   Belt type crankcase heater, 54 W, 400 V, UL   Spare parts	7773001 7773125 7773106 7773111 7773002 7773013 Code no. 7755001 8153127 Code no.	1: Bolt (3x) 2: Lock washer (3x) 3: Flat washer (3x)
PTC crankcase heater, 35 W, incl. heat transfer paste   PTC crankcase heater, 35 W, mounting without paste   Belt type crankcase heater, 55 W, 230 V, CE mark, UL   Belt type crankcase heater, 54 W, 460 V, UL   Belt type crankcase heater, 54 W, 240 V, UL   Belt type crankcase heater, 54 W, 400 V, UL   Belt type crankcase heater, 54 W, 400 V, UL   Belt type crankcase heater, 54 W, 400 V, UL   Belt type crankcase heater, 54 W, 400 V, UL   Belt type crankcase heater, 54 W, 400 V, UL   Belt type crankcase heater, 54 W, 400 V, UL   Belt type crankcase heater, 54 W, 400 V, UL   Belt type crankcase heater, 54 W, 400 V, UL   Belt type crankcase heater, 54 W, 400 V, UL   Belt type crankcase heater, 54 W, 400 V, UL   Belt type crankcase heater, 54 W, 400 V, UL   Belt type crankcase heater, 54 W, 400 V, UL   Belt type crankcase heater, 54 W, 400 V, UL   Belt type crankcase heater, 54 W, 400 V, UL   Belt type crankcase heater, 54 W, 400 V, UL   Belt type crankcase heater, 54 W, 400 V, UL   Belt type crankcase heater, 54 W, 400 V, UL   Belt type crankcase heater, 54 W, 400 V, UL   Mousting kit with bolts for 1 and 2 cylinder compressor	7773001 7773125 7773106 7773111 7773002 7773013 <b>Code no.</b> 7755001 8153127 <b>Code no.</b> 8156001	1: Bolt (3x) 2: Lock washer (3x) 3: Flat washer (3x) 4: Sleeve (3x)
PTC crankcase heater, 35 W, incl. heat transfer paste   PTC crankcase heater, 35 W, mounting without paste   Belt type crankcase heater, 55 W, 230 V, CE mark, UL   Belt type crankcase heater, 54 W, 460 V, UL   Belt type crankcase heater, 54 W, 240 V, UL   Belt type crankcase heater, 54 W, 400 V, UL   Belt type crankcase heater, 54 W, 400 V, UL   Belt type crankcase heater, 54 W, 400 V, UL   Belt type crankcase heater, 54 W, 400 V, UL   Belt type crankcase heater, 54 W, 400 V, UL   Belt type crankcase heater, 54 W, 400 V, UL   Belt type crankcase heater, 54 W, 400 V, UL   Belt type crankcase heater, 54 W, 400 V, UL   Spare parts   Mounting kit with bolts for 1 and 2 cylinder compressor   Sight glass with gaskets (black & white)	7773001 7773125 7773106 7773111 7773002 7773013 <b>Code no.</b> 7755001 8153127 <b>Code no.</b> 8156001 8156001 8156019	1: Bolt (3x) 2: Lock washer (3x) 3: Flat washer (3x)



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**R404A** 

# Datasheet, performance data

# Maneurop reciprocating compressor. type LTZ028-4

# Performance data at 50 Hz, Asercom rating conditions

Cond. temp. in				Evapora	ting temperature i	n °C (to)		
°C (tc)	-45	-40	-35	-30	-25	-20		
Cooling capacity	y in W							
30	716	1 143	1 673	2 318	3 093	4 010		
35	574	973	1 466	2 068	2 791	3 650		
40	436	803	1 257	1 812	2 482	3 279		
45	305	637	1 049	1 554	2 166	2 899		
50	184	479	845	1 298	1 849	2 514		
55	-	331	649	1 046	1 534	2 128		
60	-	-	464	802	1 224	1 743		
		•	•	•	•	•	-	•
ower input in V	v							
30	1 044	1 316	1 581	1 840	2 092	2 335		
35	995	1 288	1 576	1 860	2 137	2 409		1

35	995	1 288	1 576	1 860	2 137	2 409		
40	931	1 247	1 559	1 869	2 175	2 477		
45	850	1 189	1 528	1 866	2 203	2 537		
50	748	1 113	1 480	1 848	2 216	2 584		
55	-	1 015	1 412	1 812	2 214	2 617		
60	-	-	1 322	1 755	2 192	2 632		

#### Current consumption in A

30	2.90	3.13	3.41	3.72	4.02	4.30		
35	2.87	3.12	3.42	3.74	4.08	4.40		
40	2.82	3.08	3.40	3.76	4.13	4.50		
45	2.73	3.02	3.37	3.76	4.18	4.59		
50	2.62	2.93	3.32	3.75	4.21	4.68		
55	-	2.81	3.23	3.71	4.22	4.75		
60	-	-	3.12	3.65	4.21	4.80		

#### Mass flow in kg/h

30	25	38	54	73	95	120		
35	21	35	51	70	92	117		
40	18	32	48	67	88	113		
45	14	28	44	63	84	109		
50	9	23	39	58	80	105		
55	-	18	34	53	75	99		
60	-	-	29	47	69	93		

#### Coefficient of performance (C.O.P.)

		,						
30	0.69	0.87	1.06	1.26	1.48	1.72		
35	0.58	0.76	0.93	1.11	1.31	1.52		
40	0.47	0.64	0.81	0.97	1.14	1.32		
45	0.36	0.54	0.69	0.83	0.98	1.14		
50	0.25	0.43	0.57	0.70	0.83	0.97		
55	-	0.33	0.46	0.58	0.69	0.81		
60	-	-	0.35	0.46	0.56	0.66		

#### Nominal performance at to = -35 °C, tc = 40 °C

Cooling capacity	1 257	W
Power input	1 559	W
Current consumption	3.40	А
Mass flow	48	kg/h
C.O.P.	0.81	

to: Evaporating temperature at dew point

tc: Condensing temperature at dew point

Rating conditions : Superheat = 10 K , Subcooling = 0 K

Pressure switch settings	
Maximum HP switch setting	

1	Maximum HP switch setting	27.7	bar(g)
	Minimum LP switch setting	0.1	bar(g)
1	LP pump down setting	0.1	bar(g)

Sound power data

Sound power level	69	dB(A)
With accoustic hood	62	dB(A)

All performance data +/- 5%



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**R404A** 

# Datasheet, performance data

# Maneurop reciprocating compressor. type LTZ028-4

# Performance data at 50 Hz, ARI rating conditions

Cond. temp. in		Evaporating temperature in °C (to)									
°C (tc)	-45	-40	-35	-30	-25	-20					
- ()	-40	-40	-55	-50	-25	-20			i		

#### Cooling capacity in W

30	805	1 280	1 867	2 580	3 434	4 441		
35	653	1 102	1 655	2 327	3 131	4 082		
40	504	923	1 439	2 066	2 818	3 710		
45	359	746	1 222	1 801	2 499	3 330		
50	223	574	1 007	1 537	2 178	2 945		
55	-	411	799	1 277	1 859	2 560		
60	-	-	600	1 025	1 547	2 183		

# Power input in W

30	1 044	1 316	1 581	1 840	2 092	2 335		
35	995	1 288	1 576	1 860	2 137	2 409		
40	931	1 247	1 559	1 869	2 175	2 477		
45	850	1 189	1 528	1 866	2 203	2 537		
50	748	1 113	1 480	1 848	2 216	2 584		
55	-	1 015	1 412	1 812	2 214	2 617		
60	-	-	1 322	1 755	2 192	2 632		

#### Current consumption in A

30	2.90	3.13	3.41	3.72	4.02	4.30		
35	2.87	3.12	3.42	3.74	4.08	4.40		
40	2.82	3.08	3.40	3.76	4.13	4.50		
45	2.73	3.02	3.37	3.76	4.18	4.59		
50	2.62	2.93	3.32	3.75	4.21	4.68		
55	-	2.81	3.23	3.71	4.22	4.75		
60	-	-	3.12	3.65	4.21	4.80		

#### Mass flow in kg/h

30	24	38	54	73	94	119		
35	21	35	51	70	91	116		
40	18	31	47	66	88	113		
45	14	27	43	62	84	109		
50	9	23	39	58	79	104		
55	-	18	34	53	74	99		
60	-	-	29	47	68	93		

#### Coefficient of performance (C.O.P.)

30	0.77	0.97	1.18	1.40	1.64	1.90		
35	0.66	0.86	1.05	1.25	1.46	1.69		
40	0.54	0.74	0.92	1.11	1.30	1.50		
45	0.42	0.63	0.80	0.97	1.13	1.31		
50	0.30	0.52	0.68	0.83	0.98	1.14		
55	-	0.40	0.57	0.70	0.84	0.98		
60	-	-	0.45	0.58	0.71	0.83		

#### Nominal performance at to = -35 °C, tc = 40 °C

Cooling capacity	1 439	W
Power input	1 559	W
Current consumption	3.40	А
Mass flow	47	kg/h
C.O.P.	0.92	

to: Evaporating temperature at dew point

tc: Condensing temperature at dew point

Rating conditions : Superheat = 11.1 K , Subcooling = 8.3 K

Pressure switch settings
Maximum HP switch setting
Minimum I P switch setting

Maximum HP switch setting	27.7	bar(g)
Minimum LP switch setting	0.1	bar(g)
LP pump down setting	0.1	bar(g)

# Sound power data

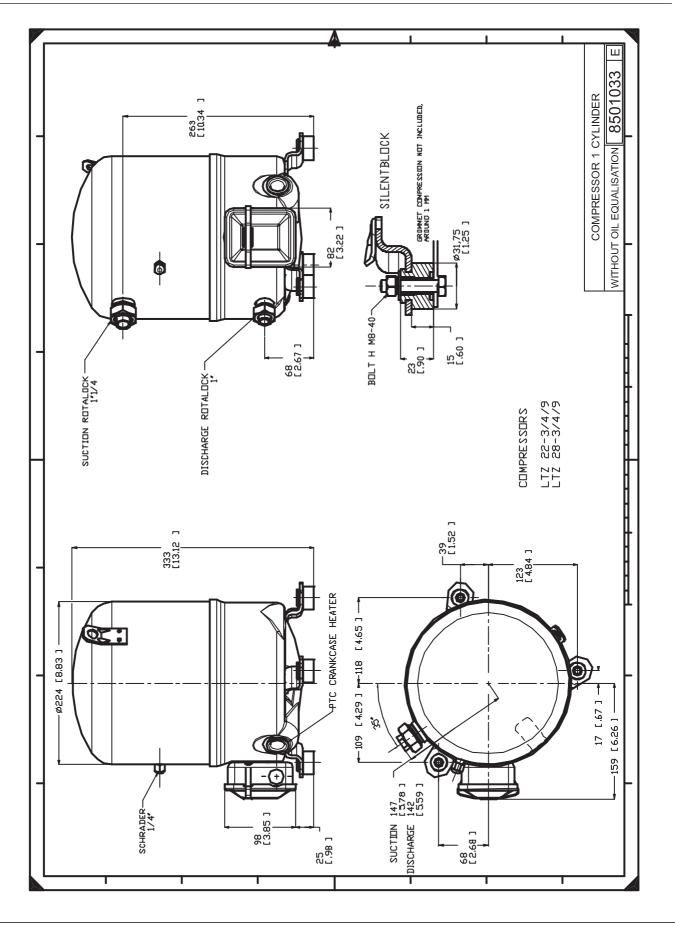
Sound power level	69	dB(A)
With accoustic hood	62	dB(A)

All performance data +/- 5%





# Maneurop scroll compressor



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# Maneurop scroll compressor

