

Aircraft De-Icing and Towing Services Munich Airport

Price List

Effective as of 1 October 2021 to 30 September 2022



Content

1	Company portrait	2
2	Aircraft towing services	3
3	Aircraft de-/anti-icing services	4
4	Air conditioning / Fan Blade de-icing / Sweeping of jet engine	12
5	Lifter	12
6	Other services	12
7	Appendix	123

1 Company portrait

EFM – Gesellschaft für Enteisen und Flugzeugschleppen am Flughafen München mbH was jointly formed by Lufthansa and Munich Airport (FMG) in 1992. Our ground services for aircraft include towing and pushback as well as de-icing and air conditioning. In addition we offer training, consulting and technical support in towing and de-icing.



EFM employs about 162 people, including 140 tractor drivers, de-icing and operational staff. Currently EFM operates a fleet of 26 towing tractors of all sizes and 22 de-icing vehicles for one-man operation. For air conditioning we provide one air-conditioning vehicle. Four heating units are available for fan blade de-icing.



If you have any questions concerning our services please do not hesitate to contact us.

EFM – Gesellschaft für Enteisen und Flugzeug-
schleppen am Flughafen München mbH
P.O. Box 23 16 25
85325 Munich Airport • Germany
Tel. +49 89 975 98602
E-mail: nelli.ninow@dlh.de
Website: www.munich-airport.de/efm



2 Aircraft towing services

2.1 Price per event

A/C cat.	Price
1	193,00 €
2	265,00 €
3	359,00 €

Prices do not include VAT.

The above mentioned prices are valid for towing services between aprons and maintenance areas including noise protection hangar as well as between apron for aircraft maintenance and maintenance hangar including noise protection hangar.

The event starts with provision of the towing vehicle at the aircraft and ends with parking of the aircraft at its final position. The price per event includes a period of 30 minutes. If the event takes longer than 30 minutes because of reasons which are not caused by EFM, 100 % of the price per event will be invoiced for each following 30-minutes-period.

APU test price is identical to the price per event for towing. Therefore for each APU test minimum one towing event price is charged.

2.2 Aircraft categories

A/C cat.	MTOW			Example
1	0	< 100,0	metric tons	A320, B737
2	100,0	< 200,0	metric tons	A300, B757
3		> 200,0	metric tons	A340, B747

2.3 Walk-Out-Assistance for Pushback

Usually Walk-Out-Assistance is offered by other Ground Handling Companies at the Airport. In the case their staff is missing, EFM is providing the Walk-Out-Assistance to avoid off block delays.

EFM reserves the right to provide SMPB (Single Man Pushback) instead of Walk-Out-Assistance, if applicable. Nevertheless for both the same price will be charged to the Ground Handling company responsible.

Price is 53,00 € for the first 30 minutes, followed by 32,00 € Price per 15 minutes.

3 Aircraft de-/anti-icing services

3.1 Prices for de-icing of aircraft consist of several components:

COLD customers pay a seasonal flat fee (paragraph 3.2). In addition, for every deicing treatment the respective event price (paragraph 3.2) and the actual amount of deicing fluid used (paragraph 3.3) will be invoiced.

The seasonal flat fee is not refundable if flights are cancelled or smaller aircraft type used for operation during the winter schedule period.

Recalculation of fixed charges applies if number of flights increase or bigger aircraft type used for operation during the winter schedule period.

Non-COLD customers will be charged for each deicing treatment with the respective event price (paragraph 3.2) and the actual amount of deicing fluid used (paragraph 3.3).

EFM reserves the right to charge cash or by credit card.

3.2 Flat fee and event prices

The flat fee is calculated as follows:

The total number of departures during the winter schedule (31.10.2021 - 26.03.2022) with the same type of aircraft is divided by the number of weeks (21) of the winter schedule. Except the airline is providing their winter schedule, the typical week provided by Flughafen München GmbH is used for the calculation.

This „average number of departures during one week (typical week provided by FMG, if flight plan is not sent by airline latest October 15th) in the winter schedule“ is multiplied by the respective „base-factor“ for the aircraft type.

To determine this base-factor the length of the aircraft is multiplied by the wingspan. The result is then multiplied by the respective price per m².

The respective event prices are calculated in the same manner as the base-factor.

Price per m ²	Flat fee per starts per week	Event
COLD	2,20 €	0,25 €
Non-COLD	-	2,20 €

For the currently most common types of aircraft base-factors for the flat fee and event prices are listed in the table on pages 7 and 8.

3.3 De-icing fluid will be charged according to consumption.

Prices for de-icing fluid are as follows:

Price per litre	Type I	Type IV
COLD	1,73 €	2,50 €
Non-COLD	3,92 €	5,03 €

3.4 Discount for COLD

2,50%	1.000	<	5.000	departures during the first 21 weeks of winter schedule
5,00%	5.000	<	10.000	departures during the first 21 weeks of winter schedule
7,50%	10.000	<	15.000	departures during the first 21 weeks of winter schedule
10,00%	15.000	<	20.000	departures during the first 21 weeks of winter schedule
12,50%		>	20.000	departures during the first 21 weeks of winter schedule

As winter conditions highly influence EFM’s revenue, EFM implemented additional components to rebate our COLD discount customers in order to reflect this risk distribution. Should the amount of actual de-icings compared to planned de-icings during the winter schedule (31.10.2021 – 26.03.2022) vary more than +/- 15%, the rebate on revenue will also vary accordingly by +/- 2,5%. Based on experience during the past years, for the coming winter schedule EFM plans with an average of 12% de-icing events out of total actual departures during the winter schedule for our COLD customers.

The discount applies to flat fee, event and fluid prices. Other services of EFM are not part of COLD discount.

The discount is offset against the flat fee of the subsequent winter season. If no flat fee is applicable next season, the discount will be fully disbursed.

3.5 Example calculation flat fee

During winter schedule 2021/2022 Example Airways is planning 418 departures with CRJ2, 616 departures with F70 and 132 departures with A320 ex MUC.

Which flat fee amount does Example Airways have to pay ?

In a first step the average number of departures during one week in the winter schedule is calculated. Then the base-factor is determined. Finally, the flat fee is calculated by multiplying the average number of departures by the respective base-factor for the aircraft type.

1. Average number of departures

The total number of departures during the winter schedule with the same type of aircraft is divided by the number of weeks of the winter schedule.

A/C Type	Departures	Weeks	Departures/Week
CRJ2	418	21	20
F70	616	21	29
A320	132	21	6

2. Base-factor

To determine the base-factor the length of the aircraft is multiplied by the wing-span; the result is then multiplied by the respective price per m².

A/C Type	Length	Wingspan	Result <small>(in round figures)</small>	Price per m ²	Base-factor
CRJ2	26,80 m	x 21,30 m	= 570 m ²	x 2,20 €	= 1.254,00 €
F70	30,91 m	x 28,08 m	= 868 m ²	x 2,20 €	= 1.909,60 €
A320	37,57 m	x 34,10 m	= 1.281 m ²	x 2,20 €	= 2.818,20 €

3. Flatfee

The average number of departures during one week in the winter schedule is multiplied by the respective base-factor for the aircraft type.

A/C Type	Departures/Week	Base-Factor	Flat fee
CRJ2	20	x 1.254,00 €	= 25.080,00 €
F70	29	x 1.909,60 €	= 55.378,40 €
A320	6	x 2.818,20 €	= 16.909,20 €
			97.367,60 €

The respective event prices are calculated in the same manner as the base-factor.

Calculation according to paragraph 3.2 results in the following prices per A/C type:

A/C type	Base-factor flat fee COLD	Event COLD	Event Non-COLD
A124	11.143,00 €	1.266,25 €	11.143,00 €
A148	1.856,80 €	211,00 €	1.856,80 €
A221	2.703,80 €	307,25 €	2.703,80 €
A223	2.987,60 €	339,50 €	2.987,60 €
A225	16.335,00 €	1.856,25 €	16.335,00 €
A300	5.335,00 €	606,25 €	5.335,00 €
A306	5.335,00 €	606,25 €	5.335,00 €
A30B	5.282,20 €	600,25 €	5.282,20 €
A310	4.510,00 €	512,50 €	4.510,00 €
A312	4.510,00 €	512,50 €	4.510,00 €
A313	4.510,00 €	512,50 €	4.510,00 €
A318	2.362,80 €	268,50 €	2.362,80 €
A318neo	2.481,60 €	282,00 €	2.481,60 €
A318W	2.481,60 €	282,00 €	2.481,60 €
A319	2.538,80 €	288,50 €	2.538,80 €
A319neo	2.662,00 €	302,50 €	2.662,00 €
A319W	2.662,00 €	302,50 €	2.662,00 €
A320	2.818,20 €	320,25 €	2.818,20 €
A320neo	2.961,20 €	336,50 €	2.961,20 €
A320W	2.961,20 €	336,50 €	2.961,20 €
A321	3.337,40 €	379,25 €	3.337,40 €
A321neo	3.504,60 €	398,25 €	3.504,60 €
A321W	3.504,60 €	398,25 €	3.504,60 €
A322	2.818,20 €	320,25 €	2.818,20 €
A330	7.827,60 €	889,50 €	7.827,60 €
A332	7.827,60 €	889,50 €	7.827,60 €
A333	8.450,20 €	960,25 €	8.450,20 €
A340	10.518,20 €	1.195,25 €	10.518,20 €
A342	7.878,20 €	895,25 €	7.878,20 €
A343	8.437,00 €	958,75 €	8.437,00 €
A345	9.486,40 €	1.078,00 €	9.486,40 €
A346	10.518,20 €	1.195,25 €	10.518,20 €
A350	10.593,00 €	1.203,75 €	10.593,00 €
A351	10.524,80 €	1.196,00 €	10.524,80 €
A358	8.632,80 €	981,00 €	8.632,80 €
A359	9.528,20 €	1.082,75 €	9.528,20 €
A35K	10.509,40 €	1.194,25 €	10.509,40 €
A380	12.815,00 €	1.456,25 €	12.815,00 €
A388	12.815,00 €	1.456,25 €	12.815,00 €
A3ST	5.539,60 €	629,50 €	5.539,60 €
A400	4.206,40 €	478,00 €	4.206,40 €
A748	1.350,80 €	153,50 €	1.350,80 €
AC90	369,60 €	42,00 €	369,60 €
AEST	261,80 €	29,75 €	261,80 €
AN12	2.767,60 €	314,50 €	2.767,60 €
AN22	8.203,80 €	932,25 €	8.203,80 €
AN24	1.546,60 €	175,75 €	1.546,60 €
AN26	1.529,00 €	173,75 €	1.529,00 €
AN38	759,00 €	86,25 €	759,00 €

A/C type	Base-factor flat fee COLD	Event COLD	Event Non-COLD
AN70	3.938,00 €	447,50 €	3.938,00 €
AN72	1.971,20 €	224,00 €	1.971,20 €
AT42	1.227,60 €	139,50 €	1.227,60 €
AT43	1.227,60 €	139,50 €	1.227,60 €
AT44	1.227,60 €	139,50 €	1.227,60 €
AT45	1.227,60 €	139,50 €	1.227,60 €
AT72	1.621,40 €	184,25 €	1.621,40 €
AT73	1.621,40 €	184,25 €	1.621,40 €
AT75	1.621,40 €	184,25 €	1.621,40 €
AT76	1.621,40 €	184,25 €	1.621,40 €
ATP	1.751,20 €	199,00 €	1.751,20 €
ATR	1.225,40 €	139,25 €	1.225,40 €
B146	2.477,20 €	281,50 €	2.477,20 €
B190	644,60 €	73,25 €	644,60 €
B350	552,20 €	62,75 €	552,20 €
B37M	2.809,40 €	319,25 €	2.809,40 €
B38M	3.119,60 €	354,50 €	3.119,60 €
B39M	3.328,60 €	378,25 €	3.328,60 €
B461	1.520,20 €	172,75 €	1.520,20 €
B462	1.661,00 €	188,75 €	1.661,00 €
B463	1.799,60 €	204,50 €	1.799,60 €
B46X	1.799,60 €	204,50 €	1.799,60 €
B701	3.652,00 €	415,00 €	3.652,00 €
B703	4.554,00 €	517,50 €	4.554,00 €
B707	4.551,80 €	517,25 €	4.551,80 €
B712	2.376,00 €	270,00 €	2.376,00 €
B717	2.367,20 €	269,00 €	2.367,20 €
B721	2.939,20 €	334,00 €	2.939,20 €
B722	3.379,20 €	384,00 €	3.379,20 €
B727	3.379,20 €	384,00 €	3.379,20 €
B732	1.898,60 €	215,75 €	1.898,60 €
B733	2.123,00 €	241,25 €	2.123,00 €
B733W	2.285,80 €	259,75 €	2.285,80 €
B734	2.314,40 €	263,00 €	2.314,40 €
B735	1.977,80 €	224,75 €	1.977,80 €
B735W	2.127,40 €	241,75 €	2.127,40 €
B736	2.354,00 €	267,50 €	2.354,00 €
B736W	2.457,40 €	279,25 €	2.457,40 €
B737	2.543,20 €	289,00 €	2.543,20 €
B737BBJ	2.653,20 €	301,50 €	2.653,20 €
B737W	2.653,20 €	301,50 €	2.653,20 €
B738	2.981,00 €	338,75 €	2.981,00 €
B738BBJ	3.110,80 €	353,50 €	3.110,80 €
B738W	3.110,80 €	353,50 €	3.110,80 €
B739	3.176,80 €	361,00 €	3.176,80 €
B739BBJ	3.315,40 €	376,75 €	3.315,40 €
B739W	3.315,40 €	376,75 €	3.315,40 €
B73G	3.315,40 €	376,75 €	3.315,40 €
B73X	3.315,40 €	376,75 €	3.315,40 €

A/C type	Base-factor flat fee COLD	Event COLD	Event Non-COLD
B741	9.255,40 €	1.051,75 €	9.255,40 €
B742	9.270,80 €	1.053,50 €	9.270,80 €
B743	9.270,80 €	1.053,50 €	9.270,80 €
B744	10.032,00 €	1.140,00 €	10.032,00 €
B747	10.032,00 €	1.140,00 €	10.032,00 €
B748	11.499,40 €	1.306,75 €	11.499,40 €
B74S	7.381,00 €	838,75 €	7.381,00 €
B752	3.953,40 €	449,25 €	3.953,40 €
B752W	4.276,80 €	486,00 €	4.276,80 €
B753	4.556,20 €	517,75 €	4.556,20 €
B753W	4.928,00 €	560,00 €	4.928,00 €
B757	3.962,20 €	450,25 €	3.962,20 €
B762	5.077,60 €	577,00 €	5.077,60 €
B763	5.748,60 €	653,25 €	5.748,60 €
B763W	6.146,80 €	698,50 €	6.146,80 €
B764	6.998,20 €	795,25 €	6.998,20 €
B767	7.011,40 €	796,75 €	7.011,40 €
B76F	7.011,40 €	796,75 €	7.011,40 €
B771	8.542,60 €	970,75 €	8.542,60 €
B772	8.562,40 €	973,00 €	8.562,40 €
B773	9.917,60 €	1.127,00 €	9.917,60 €
B777	10.538,00 €	1.197,50 €	10.538,00 €
B77L	9.094,80 €	1.033,50 €	9.094,80 €
B77W	10.535,80 €	1.197,25 €	10.535,80 €
B783	6.474,60 €	735,75 €	6.474,60 €
B788	7.497,60 €	852,00 €	7.497,60 €
B789	8.302,80 €	943,50 €	8.302,80 €
B78X	9.031,00 €	1.026,25 €	9.031,00 €
BA11	2.043,80 €	232,25 €	2.043,80 €
BA31	503,80 €	57,25 €	503,80 €
BA41	781,00 €	88,75 €	781,00 €
BCS1	2.703,80 €	307,25 €	2.703,80 €
BCS3	2.987,60 €	339,50 €	2.987,60 €
BC85	1.249,60 €	142,00 €	1.249,60 €
BE10	376,20 €	42,75 €	376,20 €
BE2	209,00 €	23,75 €	209,00 €
BE20	492,80 €	56,00 €	492,80 €
BE30	492,80 €	56,00 €	492,80 €
BE36	189,20 €	21,50 €	189,20 €
BE4	4.184,40 €	475,50 €	4.184,40 €
BE40	433,40 €	49,25 €	433,40 €
BE4W	433,40 €	49,25 €	433,40 €
BE5	290,40 €	33,00 €	290,40 €
BE55	235,40 €	26,75 €	235,40 €
BE60	272,80 €	31,00 €	272,80 €
BE80	363,00 €	41,25 €	363,00 €
BE95	202,40 €	23,00 €	202,40 €
BE99	418,00 €	47,50 €	418,00 €
BE9L	363,00 €	41,25 €	363,00 €

A/C type	Base-factor flat fee COLD	Event COLD	Event Non-COLD
BELF	4.428,60 €	503,25 €	4.428,60 €
C12	140,80 €	16,00 €	140,80 €
C130	3.064,60 €	348,25 €	3.064,60 €
C135	3.643,20 €	414,00 €	3.643,20 €
C141	5.517,60 €	627,00 €	5.517,60 €
C150	162,80 €	18,50 €	162,80 €
C160	2.851,20 €	324,00 €	2.851,20 €
C17	6.039,00 €	686,25 €	6.039,00 €
C182	206,80 €	23,50 €	206,80 €
C188	220,00 €	25,00 €	220,00 €
C20	1.320,00 €	150,00 €	1.320,00 €
C208	444,40 €	50,50 €	444,40 €
C210	211,20 €	24,00 €	211,20 €
C25A	475,20 €	54,00 €	475,20 €
C25B	541,20 €	61,50 €	541,20 €
C25C	556,60 €	63,25 €	556,60 €
C25M	411,40 €	46,75 €	411,40 €
C27J	1.432,20 €	162,75 €	1.432,20 €
C303	244,20 €	27,75 €	244,20 €
C30J	3.064,60 €	348,25 €	3.064,60 €
C340	244,20 €	27,75 €	244,20 €
C404	376,20 €	42,75 €	376,20 €
C411	330,00 €	37,50 €	330,00 €
C414	330,00 €	37,50 €	330,00 €
C421	312,40 €	35,50 €	312,40 €
C425	376,20 €	42,75 €	376,20 €
C441	376,20 €	42,75 €	376,20 €
C5	11.248,60 €	1.278,25 €	11.248,60 €
C500	422,40 €	48,00 €	422,40 €
C501	422,40 €	48,00 €	422,40 €
C510	382,80 €	43,50 €	382,80 €
C525	409,20 €	46,50 €	409,20 €
C550	503,80 €	57,25 €	503,80 €
C55B	503,80 €	57,25 €	503,80 €
C551	503,80 €	57,25 €	503,80 €
C560	541,20 €	61,50 €	541,20 €
C56X	591,80 €	67,25 €	591,80 €
C650	503,80 €	57,25 €	503,80 €
C680	822,80 €	93,50 €	822,80 €
C68A	924,00 €	105,00 €	924,00 €
C700	1.029,60 €	117,00 €	1.029,60 €
C750	943,80 €	107,25 €	943,80 €
C9	2.191,20 €	249,00 €	2.191,20 €
CARJ	1.249,60 €	142,00 €	1.249,60 €
CL30	895,40 €	101,75 €	895,40 €
CL35	965,80 €	109,75 €	965,80 €
CL60	902,00 €	102,50 €	902,00 €
CL85	1.249,60 €	142,00 €	1.249,60 €
CN35	1.214,40 €	138,00 €	1.214,40 €

A/C type	Base-factor flat fee COLD	Event COLD	Event Non-COLD
CONC	3.498,00 €	397,50 €	3.498,00 €
CONI	2.855,60 €	324,50 €	2.855,60 €
CRJ1	1.254,00 €	142,50 €	1.254,00 €
CRJ2	1.254,00 €	142,50 €	1.254,00 €
CRJ7	1.672,00 €	190,00 €	1.672,00 €
CRJ9	1.982,20 €	225,25 €	1.982,20 €
CRJX	2.259,40 €	256,75 €	2.259,40 €
CS10	2.633,40 €	299,25 €	2.633,40 €
CS30	2.934,80 €	333,50 €	2.934,80 €
D228	620,40 €	70,50 €	620,40 €
D328	983,40 €	111,75 €	983,40 €
D32J	983,40 €	111,75 €	983,40 €
DA22	171,60 €	19,50 €	171,60 €
DA42	255,20 €	29,00 €	255,20 €
DC10	6.153,40 €	699,25 €	6.153,40 €
DC3	1.256,20 €	142,75 €	1.256,20 €
DC8	5.700,20 €	647,75 €	5.700,20 €
DC9	2.558,60 €	290,75 €	2.558,60 €
DC91	1.916,20 €	217,75 €	1.916,20 €
DC92	1.999,80 €	227,25 €	1.999,80 €
DC93	2.285,80 €	259,75 €	2.285,80 €
DC94	2.402,40 €	273,00 €	2.402,40 €
DC95	2.558,60 €	290,75 €	2.558,60 €
DH8A	1.271,60 €	144,50 €	1.271,60 €
DH8B	1.271,60 €	144,50 €	1.271,60 €
DH8C	1.566,40 €	178,00 €	1.566,40 €
DH8D	2.063,60 €	234,50 €	2.063,60 €
DHC2	301,40 €	34,25 €	301,40 €
DHC6	657,80 €	74,75 €	657,80 €
DHC7	1.537,80 €	174,75 €	1.537,80 €
E110	477,40 €	54,25 €	477,40 €
E120	871,20 €	99,00 €	871,20 €
E121	391,60 €	44,50 €	391,60 €
E135	1.168,20 €	132,75 €	1.168,20 €
E140	1.260,60 €	143,25 €	1.260,60 €
E145	1.322,20 €	150,25 €	1.322,20 €
E170	1.709,40 €	194,25 €	1.709,40 €
E175	1.812,80 €	206,00 €	1.812,80 €
E190	2.299,00 €	261,25 €	2.299,00 €
E195	2.453,00 €	278,75 €	2.453,00 €
E19X	2.453,00 €	278,75 €	2.453,00 €
E275	2.208,80 €	251,00 €	2.208,80 €
E290	2.688,40 €	305,50 €	2.688,40 €
E295	3.205,40 €	364,25 €	3.205,40 €
E35L	1.232,00 €	140,00 €	1.232,00 €
E45X	1.381,60 €	157,00 €	1.381,60 €
E50P	345,40 €	39,25 €	345,40 €
E545	853,60 €	97,00 €	853,60 €
E550	915,20 €	104,00 €	915,20 €

A/C type	Base-factor flat fee COLD	Event COLD	Event Non-COLD
E55P	567,60 €	64,50 €	567,60 €
E75L	2.208,80 €	251,00 €	2.208,80 €
E75S	1.812,80 €	206,00 €	1.812,80 €
EA50	244,20 €	27,75 €	244,20 €
EUFI	385,00 €	43,75 €	385,00 €
EXPL	272,80 €	31,00 €	272,80 €
F100	2.200,00 €	250,00 €	2.200,00 €
F200	862,40 €	98,00 €	862,40 €
F27	1.628,00 €	185,00 €	1.628,00 €
F28	1.639,00 €	186,25 €	1.639,00 €
F2TH	862,40 €	98,00 €	862,40 €
F406	393,80 €	44,75 €	393,80 €
F50	1.614,80 €	183,50 €	1.614,80 €
F60	1.614,80 €	183,50 €	1.614,80 €
F70	1.909,60 €	217,00 €	1.909,60 €
F900	862,40 €	98,00 €	862,40 €
FA10	400,40 €	45,50 €	400,40 €
FA20	616,00 €	70,00 €	616,00 €
FA50	774,40 €	88,00 €	774,40 €
FA70	1.337,60 €	152,00 €	1.337,60 €
FA7X	1.331,00 €	151,25 €	1.331,00 €
FA8X	1.414,60 €	160,75 €	1.414,60 €
FA9	866,80 €	98,50 €	866,80 €
G100	624,80 €	71,00 €	624,80 €
G150	646,80 €	73,50 €	646,80 €
G159	1.210,00 €	137,50 €	1.210,00 €
G200	739,20 €	84,00 €	739,20 €
G280	858,00 €	97,50 €	858,00 €
G450	1.421,20 €	161,50 €	1.421,20 €
G550	1.848,00 €	210,00 €	1.848,00 €
GA5C	1.623,60 €	184,50 €	1.623,60 €
GA6C	1.850,20 €	210,25 €	1.850,20 €
GALX	737,00 €	83,75 €	737,00 €
GELX	1.907,40 €	216,75 €	1.907,40 €
GEX	1.907,40 €	216,75 €	1.907,40 €
GL5T	1.856,80 €	211,00 €	1.856,80 €
GL6T	1.907,40 €	216,75 €	1.907,40 €
GL7T	2.362,80 €	268,50 €	2.362,80 €
GLEX	1.907,40 €	216,75 €	1.907,40 €
GLF2	1.126,40 €	128,00 €	1.126,40 €
GLF3	1.331,00 €	151,25 €	1.331,00 €
GLF4	1.423,40 €	161,75 €	1.423,40 €
GLF5	1.623,60 €	184,50 €	1.623,60 €
GLF6	2.032,80 €	231,00 €	2.032,80 €
H25	565,40 €	64,25 €	565,40 €
H25A	490,60 €	55,75 €	490,60 €
H25B	569,80 €	64,75 €	569,80 €
H25C	569,80 €	64,75 €	569,80 €
HA4T	882,20 €	100,25 €	882,20 €

A/C type	Base-factor flat fee COLD	Event COLD	Event Non-COLD
I114	1.775,40 €	201,75 €	1.775,40 €
IL18	2.954,60 €	335,75 €	2.954,60 €
IL62	5.055,60 €	574,50 €	5.055,60 €
IL76	5.176,60 €	588,25 €	5.176,60 €
IL86	6.349,20 €	721,50 €	6.349,20 €
IL96	7.337,00 €	833,75 €	7.337,00 €
J328	983,40 €	111,75 €	983,40 €
JS31	503,80 €	57,25 €	503,80 €
JS32	503,80 €	57,25 €	503,80 €
JS41	781,00 €	88,75 €	781,00 €
JU52	1.218,80 €	138,50 €	1.218,80 €
K35R	3.663,00 €	416,25 €	3.663,00 €
L101	5.973,00 €	678,75 €	5.973,00 €
L188	2.118,60 €	240,75 €	2.118,60 €
L410	638,00 €	72,50 €	638,00 €
L420	638,00 €	72,50 €	638,00 €
L45	567,60 €	64,50 €	567,60 €
L49	2.855,60 €	324,50 €	2.855,60 €
L60	270,60 €	30,75 €	270,60 €
L610	1.205,60 €	137,00 €	1.205,60 €
LJ31	440,00 €	50,00 €	440,00 €
LJ35	396,00 €	45,00 €	396,00 €
LJ36	396,00 €	45,00 €	396,00 €
LJ40	554,40 €	63,00 €	554,40 €
LJ45	567,60 €	64,50 €	567,60 €
LJ55	495,00 €	56,25 €	495,00 €
LJ60	528,00 €	60,00 €	528,00 €
LJ70	578,60 €	65,75 €	578,60 €
LJ75	602,80 €	68,50 €	602,80 €
LJ85	858,00 €	97,50 €	858,00 €
M20P	182,60 €	20,75 €	182,60 €
MD11	6.969,60 €	792,00 €	6.969,60 €
MD80	3.264,80 €	371,00 €	3.264,80 €
MD81	3.264,80 €	371,00 €	3.264,80 €
MD82	3.262,60 €	370,75 €	3.262,60 €
MD83	3.262,60 €	370,75 €	3.262,60 €
MD87	2.875,40 €	326,75 €	2.875,40 €
MD90	3.372,60 €	383,25 €	3.372,60 €
MU2	316,80 €	36,00 €	316,80 €
N262	924,00 €	105,00 €	924,00 €
P180	446,60 €	50,75 €	446,60 €

A/C type	Base-factor flat fee COLD	Event COLD	Event Non-COLD
P28A	200,20 €	22,75 €	200,20 €
P28T	200,20 €	22,75 €	200,20 €
P3	2.380,40 €	270,50 €	2.380,40 €
P46T	250,80 €	28,50 €	250,80 €
PA27	239,80 €	27,25 €	239,80 €
PA28	178,20 €	20,25 €	178,20 €
PA31	272,80 €	31,00 €	272,80 €
PA34	231,00 €	26,25 €	231,00 €
PA42	424,60 €	48,25 €	424,60 €
PA46	253,00 €	28,75 €	253,00 €
PAY1	272,80 €	31,00 €	272,80 €
PAY2	288,20 €	32,75 €	288,20 €
PAY4	424,60 €	48,25 €	424,60 €
PC12	517,00 €	58,75 €	517,00 €
PC24	629,20 €	71,50 €	629,20 €
PC6P	341,00 €	38,75 €	341,00 €
PRM	422,40 €	48,00 €	422,40 €
PRM1	422,40 €	48,00 €	422,40 €
R722	3.421,00 €	388,75 €	3.421,00 €
RJ1H	1.799,60 €	204,50 €	1.799,60 €
RJ70	1.522,40 €	173,00 €	1.522,40 €
RJ85	1.661,00 €	188,75 €	1.661,00 €
S210	2.497,00 €	283,75 €	2.497,00 €
SATA	215,60 €	24,50 €	215,60 €
SB20	1.485,00 €	168,75 €	1.485,00 €
SBR1	426,80 €	48,50 €	426,80 €
SF34	930,60 €	105,75 €	930,60 €
SH33	888,80 €	101,00 €	888,80 €
SH36	1.082,40 €	123,00 €	1.082,40 €
SR20	187,00 €	21,25 €	187,00 €
SR22	189,20 €	21,50 €	189,20 €
SU95	1.828,20 €	207,75 €	1.828,20 €
SW3	400,40 €	45,50 €	400,40 €
SW4	690,80 €	78,50 €	690,80 €
SWM	693,00 €	78,75 €	693,00 €
T134	2.367,20 €	269,00 €	2.367,20 €
T154	3.962,20 €	450,25 €	3.962,20 €
T204	4.259,20 €	484,00 €	4.259,20 €
TBM7	297,00 €	33,75 €	297,00 €
TBM8	297,00 €	33,75 €	297,00 €

3.6 Contamination Checks

Contamination Checks and Hands on Checks are offered on request of the airlines before and after de-icing.

Visual contamination checks before and after de-icing are included in each de-icing event price.

All available checks and prices:

Checks			de-icing remote		de-icing on stand		no de-icing	
			COLD	Non-COLD	COLD	Non-COLD	COLD	Non-COLD
Contamination Check visual	on stand	pre-de-icing	79 €	183 €	included		79 €	183 €
		post-de-icing	n/a		included		n/a	
	remote	pre-de-icing	included		n/a		79 €*	183 €
		post-de-icing	included		n/a		n/a	
Hands on Check tactile	on stand	pre-de-icing	79 €	183 €	79 €	183 €	79 €	183 €
		post-de-icing	n/a		79 €	183 €	n/a	
	remote	pre-de-icing	79 €	183 €	n/a		79 €	183 €
		post-de-icing	79 €	183 €	n/a		n/a	

* included during ongoing de-icing operation on the de-icing pads where the Contamination Check visual is requested

Sample how to read the table: Contamination Check on stand is ordered and done pre-de-icing, afterwards de-icing is done remote (instead of on stand), so the Contamination Check on stand pre-de-icing is charged. Post-de-icing on stand is not possible in this case, for the de-icing is done remote.

4 Air conditioning / Fan Blade de-icing / Sweeping of jet engine

Price per 15 minutes (or part thereof) per device used: 99,00 €
For an offer concerning a higher number of services p.a. please contact us.

5 Lifter

Price per 15 minutes (or part thereof) per device used: 77,00 €

6 Lending of towbars

Price per day: 275,00 €
Hourly lending is not available.

7 Other services

Prices for other services have to be fixed in individual contracts.

8 Appendix

- Allgemeine Geschäftsbedingungen für Flugzeugschleppen und sonstige Dienstleistungen, durchgeführt von der EFM – Gesellschaft für Enteisen und Flugzeugschleppen am Flughafen München mbH als Auftragnehmer (AGB)/Standard Terms of Aircraft Towing and Other Services performed by EFM - Gesellschaft für Enteisen und Flugzeugschleppen am Flughafen München mbH as the Handling Company
- Standard Conditions for Aircraft De-/Anti-Icing Services at Munich Airport

ALLGEMEINE GESCHÄFTSBEDINGUNGEN FÜR FLUGZEUGSCHLEPPEN UND –ENTEISEN UND SONSTIGE DIENSTLEISTUNGEN, durchgeführt von der EFM - Gesellschaft für Enteisen und Flugzeugschleppen am Flughafen München mbH
GENERAL TERMS AND CONDITIONS OF AIRCRAFT TOWING AND DEICING AND OTHER SERVICES performed by EFM - Gesellschaft für Enteisen und Flugzeugschleppen am Flughafen München mbH

1. Durchführung von Flugzeugschlepps und anderen Leistungen

- 1.1. Auf Veranlassung des Auftraggebers führt EFM Flugzeugenteisungen, Flugzeugschlepps und andere, umseitig spezifizierte Leistungen durch.
- 1.2. Die Durchführung von Flugzeugschlepps richtet sich nach Teil I, Abschnitt 2.3. der Flughafenbenutzungsordnung.
- 1.3. Die Durchführung von Flugzeugenteisungen richtet sich nach Teil II, Abschnitte 2.5.5 und 2.8 der Flughafenbenutzungsordnung und erfolgt unter Beachtung der weltweiten Standards für Flugzeugenteisungen gemäß ICAO/IATA/SAE AS 6286. Die eingesetzten Enteisungsflüssigkeiten entsprechen den internationalen Standards SAE AMS 1424 bzw. 1428.
- 1.4. Der „After Anti-Icing Check“ wird grundsätzlich als visuelle Kontrolle durchgeführt. Andere Überprüfungsverfahren (z.B. „hands-on“) werden nur auf ausdrücklichen Wunsch des Auftraggebers angewendet.
- 1.5. Sofern nicht schriftlich anders vereinbart, findet die am Tag der Leistungserbringung gültige Preisliste der EFM Anwendung. Sonn- und Feiertagszuschläge werden nicht erhoben.

2. Voraussetzungen der Leistungserbringung

- 2.1. EFM ist nur verpflichtet, bestellte Leistungen im Rahmen ihrer Möglichkeiten zu erbringen.
- 2.2. EFM wird von der Verpflichtung zur Leistung frei, wenn sie dem Auftraggeber unverzüglich mitteilt, dass sie aus einem der folgenden Gründe zur Leistungserbringung nicht in der Lage ist:
 - arbeitsrechtliche Auseinandersetzungen, die Streiks und sonstige Arbeitsniederlegungen einschließen oder
 - höhere Gewalt oder andere Ursachen, die für EFM nicht beeinflussbar sind.

3. Zahlungsbedingungen

- 3.1. Die Rechnungslegung kann durch EFM, ein von dieser beauftragtes Inkassobüro oder die Flughafen München GmbH erfolgen.
- 3.2. Der gesamte Rechnungsbetrag wird mit Erhalt der Rechnung fällig und ist sofort und ohne Abzüge zahlbar. Der Auftraggeber gerät in Verzug, wenn er fällige Zahlungen nicht spätestens 14 Tage nach Zugang der Rechnung oder einer gleichwertigen Zahlungsaufforderung begleicht. Ist der Auftraggeber mit der Zahlung in Verzug, so werden Verzugszinsen fällig, deren Höhe sich nach § 288 Abs. 2 BGB richtet.
- 3.3. Beschwerden sind spätestens 30 Tage nach Rechnungslegung in schriftlicher Form mitzuteilen. Nach ungenutztem Verstreichen dieser Frist gilt die Rechnung als uneingeschränkt genehmigt durch den Auftraggeber.
- 3.4. EFM ist berechtigt, Vorauszahlungen bis zur vollen Höhe des voraussichtlichen Rechnungsbetrages zu verlangen. Diese sind vor Leistungserbringung zu bewirken. Überzahlungen werden erstattet, Unterzahlungen werden nachberechnet.
- 3.5. Sofern schriftlich nicht anders vereinbart, sind Zahlungen ausschließlich in EURO (€) und auf eines der in der Rechnung angegebenen Bankkonten zu leisten.
- 3.6. Der Auftraggeber ist zur Aufrechnung mit eigenen Forderungen oder zur Geltendmachung von Zurückbehaltungsrechten nicht berechtigt, soweit solche Ansprüche nicht von EFM anerkannt oder von einem zuständigen Gericht rechtskräftig festgestellt wurden.

4. Haftung und Schadenersatz

- 4.1. Bei fahrlässig verursachten Sach- und Vermögensschäden haften EFM und ihre Erfüllungsgehilfen nur bei Verletzung einer wesentlichen Vertragspflicht, jedoch beschränkt auf die bei Vertragsschluss vorhersehbaren und vertragstypischen Schäden; wesentliche Vertragspflichten sind solche, durch deren Erfüllung der Vertrag geprägt ist und auf deren Einhaltung der Auftraggeber regelmäßig vertraut und vertrauen darf. Im Falle einer Flugzeugbeschädigung haftet EFM auch für vorhersehbare und vertragstypische Schäden nur in der Höhe, in der vom Auftraggeber oder vom Flugzeugeigentümer keine Leistungen aus einer ggf. für das Flugzeug bestehenden Sachversicherung beansprucht werden können.
- 4.2. Unter den gleichen Voraussetzungen und im selben Umfang werden EFM, ihre Mitarbeiter und sonstigen Erfüllungsgehilfen durch den Auftraggeber auch von jeglichen Ansprüchen Dritter freigestellt, die im Zusammenhang mit der umseitig beschriebenen Leistung geltend gemacht werden.
- 4.3. Datenschutzrechtliche Anspruchsgrundlagen werden von den vorstehenden Haftungsbeschränkungen nicht erfasst.

5. Allgemeine Bestimmungen

- 5.1. Gerichtsstand für alle aus diesem Vertrag entstehenden Ansprüche und Streitigkeiten ist München, Bundesrepublik Deutschland.
- 5.2. Für Anwendung, Beurteilung und Auslegung dieses Vertrags und alle daraus entstehenden Streitigkeiten und Ansprüche gilt das Recht der Bundesrepublik Deutschland.

6. Anwendbarkeit und Teilnichtigkeit

- 6.1. Diese Allgemeinen Geschäftsbedingungen der EFM sind auf alle umseitig beschriebenen Leistungen uneingeschränkt anwendbar und gehen jeglichen beim Auftraggeber bestehenden Regelungen vor. Vom Auftraggeber verwendete Allgemeine Geschäftsbedingungen finden keine Anwendung.
- 6.2. Sollten einzelne Bestimmungen dieses Vertrags oder Teile solcher Bestimmungen unwirksam sein, so bleiben die übrigen Bestimmungen, die gültigen Teile einzelner Bestimmungen und der Vertrag selbst hiervon unberührt.

1. Aircraft towing and other services

- 1.1. At the Principal's request, EFM carries out aircraft de-icing, aircraft towing and other services specified on the reverse side.
- 1.2. Aircraft towing is carried out in accordance with Part I, Section 2.3 of the Airport User Regulations.
- 1.3. Aircraft de-icing is carried out in accordance with Part II, Sections 2.5.5 and 2.8 of the Airport User Regulations and in compliance with the global aircraft de-icing standards pursuant to ICAO/IATA/SAE AS 6286. The de-icing fluids comply with the international standards SAE AMS 1424 and 1428.
- 1.4. In general, the post-deicing check is carried out as a visual check. Other methods (e.g. "hands-on") are applied only at the express request of the Principal.
- 1.5. Unless otherwise agreed in writing, EFM's price list in effect on the day of the service shall apply. There are no surcharges for Sunday or holiday services.

2. Requirements for performance of services

- 2.1. EFM is obliged to provide ordered services only to the best of its ability.
- 2.2. EFM is exempt from the obligation to provide services if it informs the Principal without delay that services cannot be provided for one of the following reasons:
 - labor conflicts, including strikes or other stoppages or
 - *force majeure* or other causes beyond EFM's control.

3. Terms of payment

- 3.1. The invoice can be issued by EFM, a collection agency acting on its behalf, or Flughafen München GmbH.
- 3.2. The full invoiced amount is due on receipt and shall be paid immediately without deductions. The Principal will be in arrears if payable amounts are not settled within 14 days of the receipt of the invoice or an equivalent request for payment. If the Principal is in arrears with the payment, then interest on arrears will be payable in accordance with Section 288 Par. 2 of the German Civil Code (BGB).
- 3.3. Any complaints must be submitted in writing within 30 days of invoicing. After the expiry of this deadline without submission of a complaint, the invoice will be deemed to be accepted by the Principal without qualification.
- 3.4. The Contract is authorized to demand advance payments up to the expected amount of the invoice. These payments must be made before services are provided. Excess payments will be reimbursed and negative differences will be subsequently invoiced.
- 3.5. Unless otherwise agreed in writing, payments must be made exclusively in euros (€) into one of the bank accounts indicated on the invoice.
- 3.6. The Principal is not authorized to offset invoiced amounts against its own claims or to assert the right to withhold payments unless such claims are recognized by EFM or by a court in a final ruling.

4. Liability and compensation for damages

- 4.1. In case of negligent damage to property or assets, EFM and its agents are liable only in case of a breach of a material contractual duty; liability in such cases is limited to foreseeable damages typical of the contractual relationship; material contractual duties are those that are integral to the Contract and which the Principal generally relies on and trusts EFM to perform. In case of damage to an aircraft, EFM is liable – even in case of foreseeable damages typical of the contractual relationship – only to the extent that the damage cannot be covered through claims by the Principal or the aircraft owner under property insurance coverage for the aircraft, if such coverage exists.
- 4.2. Under the same conditions and to the same extent, the Principal shall hold EFM, its employees and other agents harmless from any third-party claims asserted in connection with the services described on the reverse side.
- 4.3. Circumstances pertaining to claims under data protection laws are not covered by the above limitations on liability.

5. General provisions

- 5.1. The place of jurisdiction for any and all claims and disputes arising from this Contract is Munich in the Federal Republic of Germany.
- 5.2. For the application, assessment and interpretation of this Contract and all claims and disputes arising from it, the laws of the Federal Republic of Germany shall apply.

6. Applicability and partial invalidity

- 6.1. The above General Terms and Conditions of EFM are applicable to all services described on the reverse side and take precedence over any regulations of the Principal that may exist. General terms and conditions used by the Principal do not apply.
- 6.2. If individual provisions of this Contract or parts of such provisions prove ineffective, this shall have no effect on other provisions, the valid parts of individual provisions or the Contract itself.

Standard Conditions for Aircraft De-/Anti-Icing Services at Munich Airport performed by EFM - Gesellschaft für Enteisen und Flugzeugschleppen am Flughafen München mbH - (Aircraft De-icing and Towing at Munich Airport), 85356 Munich Airport, RGS 5, Apron East
(hereinafter referred to as „The Handling Company“)

1 Provision of De-/Anti-Icing Services

- 1.1 The Handling Company shall perform de-/anti-icing services for the Carrier on special de-icing areas at Munich Airport according to the „Flughafenbenutzungsordnung“ (User Regulations of Munich Airport) part II, section 2.5.5 with appendix „Central Infrastructure Facilities“ and section 2.8.
- 1.2 Unless otherwise agreed in writing, Handling Company's price list for De-icing at Munich-Airport („Non-Cold“) valid at the time of performance of work shall apply. No extra charges shall be made to the Carrier for providing de-/anti-icing services on Sundays or on public holidays.

2 Standard of Work

- 2.1 Aircraft de-/anti-icing services shall be made available within the bounds of possibilities of the EFM. Services to be performed are in accordance with Part II, Sections 2.5.5 and 2.8 of the Airport User Regulations and in compliance with the global aircraft de-icing standards pursuant to ICAO/IATA/SAE AS 6286. The de-icing fluids comply with the international standards SAE AMS 1424 and 1428.
- ICAO/IATA/SAE AS 6286 does not specify requirements for particular aeroplane model types. Particular airline or aircraft manufacturer published manuals, procedures or methods supplement the information contained in this International Standard. This additional information shall be provided by the Carrier.
- Regarding the aircraft related limits, the application of de-/anti-icing fluid shall be in accordance with the guidelines of the airframe/engine manufacturers. These guidelines shall be provided by the Carrier.
- 2.2 The after anti-icing check will be performed by visual inspection only and is excluding any inspection by touch. If any other inspections than visual become essential these must be initiated by the Carrier.
- 2.3 The Handling Company shall be exempt from obligation, if prompt notification is given, in respect of any failure to perform its obligations under these Conditions arising from
- labour disputes involving complete or partial stoppage of work or delay in the performance of work; or
 - force majeure or any other cause beyond control of the Handling Company.
- 2.4 Sequence for de-/anti-icing services is given by Air Traffic Control and cannot be influenced by the Handling Company.

3 Payments

- 3.1 The total amount invoiced for the services is due and immediately payable without any deduction upon submission of the invoice. If the Carrier is in default with the payment the Handling Company may, after a formal notice, demand and the Carrier agrees to pay interest at an annual rate of three (3) per cent above the discount rate of the German Federal Reserve Bank from due date.
- 3.2 Complaints regarding invoices must be made in writing not later than thirty (30) days after the invoice has been submitted (term of preclusion).
- 3.3 The Handling Company is entitled to demand advance payment up to the full estimated amount to be invoiced. Advance payments shall be effected before the redelivery of the subject matter. Over-collections will be refunded, under-collections will be invoiced.
- 3.4 Unless otherwise agreed upon in writing, payments must be made in Euro to one of the bank accounts stated on the invoice.
- 3.5 The Carrier is not entitled to set off any claims against the Handling Company's claims nor to claim a right of retention, unless such rights are acknowledged by the Handling Company or by the final decision of a competent court.
- 3.6 Settlement of invoices shall be effected through Flughafen München Gesellschaft (FMG), unless otherwise agreed between the Carrier and the Handling Company. Invoices may be settled by a collection agency on behalf of EFM.

4 Liability and Indemnity

- 4.1 The Handling Company, its personnel and its subcontractors shall not be liable towards the Carrier, except in cases of wilful misconduct or gross negligence of the Handling Company. This release by the Carrier includes any damage to or loss of property including any aircraft as well as bodily injury or death or other damages sustained by the Carrier.
- This provision shall apply for any such liabilities arising in any way in connection with the performance of work by the Handling Company or its subcontractors.
- 4.2 The Carrier shall indemnify and hold harmless the Handling Company, its personnel and its subcontractors from any and all liabilities of any third party arising in any way in connection with these standard conditions during or after the performance of work by the Handling Company.
- This indemnification shall not apply in cases of proven wilful misconduct or gross negligence of the Handling Company. These claims and liabilities include costs and expenses incident thereto as well as consequential damages.

5 General

- 5.1 The exclusive place of jurisdiction for any legal actions that should arise out of or in connection with these standard conditions shall be Munich.
- 5.2 The law of the Federal Republic of Germany shall apply.

6 Partial Nullity

In case of partial nullity of these conditions, both parties agree that such part or parts thereof which are not null shall remain in force.

7 Duration and Termination

The above-stated terms and conditions of the Handling Company are exclusive and take precedence over the terms and conditions of any other document of the Carrier concerning the services performed hereunder. General terms used by the Carrier cannot be applied.