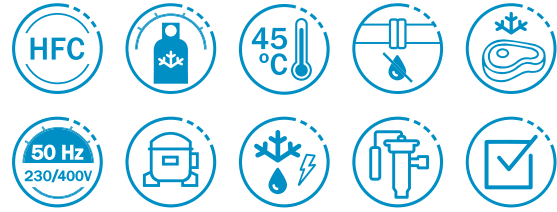


System for meat preservation and maturation



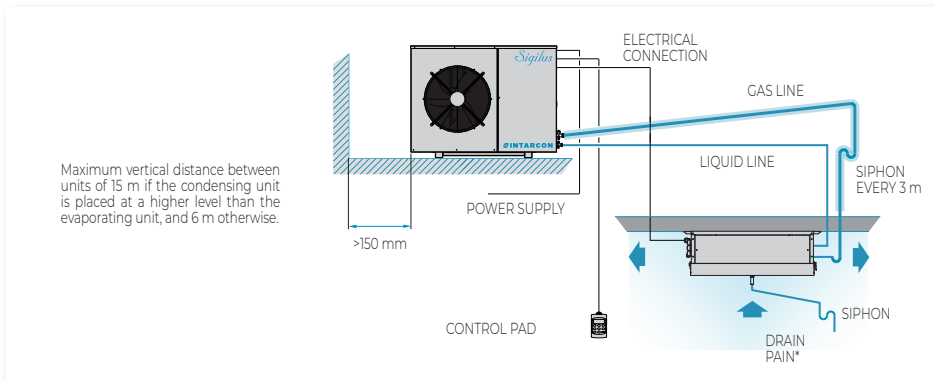
Split refrigeration systems for positive temperature applications, featuring a quasi-static evaporating unit with double air flow, and an axial low-noise or centrifugal condensing unit.

FEATURES

Quasi-static evaporating unit with double air flow and axial motor fans at very low speed.	■
High and low pressure switches.	■
Built-in solenoid valve.	■
Built-in thermostatic expansion valve.	■
Electrical heater defrost.	■
Drain pan.	■
Flare-type connections (up to 1/2"-3/4") and service valves.	■
MCB protection.	■
Liquid receiver.	■
Refrigerant pre-charge for 10 m piping.	■
Multifunctional electronic control with remote keyboard and digital condensation control.	■
Change to 400V 3N 50Hz power supply.	□ + 5 %
Proportional control of condensing pressure through fan speed variation (already included in 2/23 series and above).	□ + 317 €
Coil protection grille.	□ + 117 €
Built-in oil separator.	□ + 745 €
Condenser coil polyurethane anti-corrosion treatment.	□ + 4 %
Control for maturation of meat with humidification and dehumidification functions. VTIPG touch screen display.	By request

■ As standard □ Optional

INSTALLATION SCHEME



Meat preservation

Quasi-static split systems are specifically recommended for unpacked meat preservation in cold rooms at temperature around 0 °C.



Double airflow evaporating units feature fans operating at a minimum speed to emulate the natural air convection inside the cold room, just as in a static evaporating unit.

Minimum air speed prevents moisture loss from the stored goods and keeps the correct level of humidity inside the cold room to prevent bacterial growth on the meat surface.

Meat maturation (optional)

Maturation of meat requires the control of the relative humidity of the cold room in a certain range.

Units for maturation of meat, are configured for cold rooms in the environment of 0 °C and in the range of 40 % to 95 % of relative humidity.

These unit incorporate an advanced electronic regulation to control of the temperature and humidity inside the cold room, with dehumidification and humidification and functions with steam humidification of 3 kg / h capacity, consisting of: steam lances integrated in the evaporator unit, a submerged electrode generating cylinder with feed and water purge valves, and electronic relative humidity controller in the cold room.



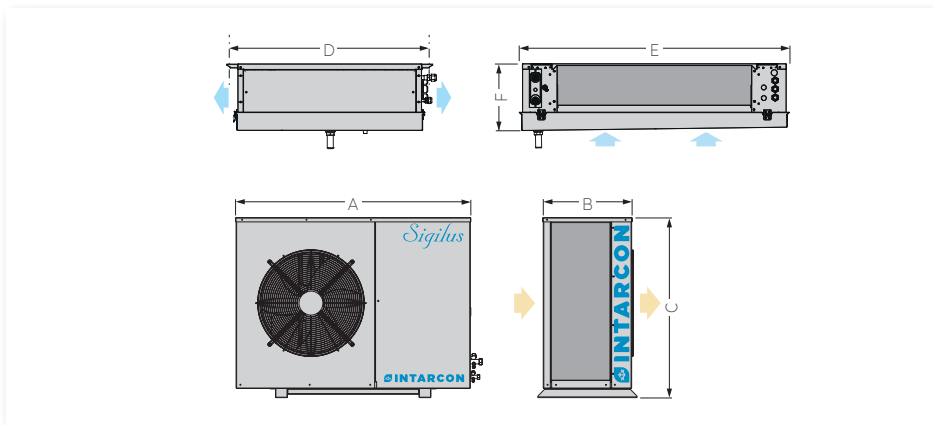
Crankcase heater (optional)

As standard on MSF and optional on MSH series. Its inclusion in outdoor units is recommended.

230V 50Hz / 400V 3N 50Hz | Positive temperature - Meat preservation and maturation | Hermetic compressor | R-134a / R-449A

Refrigerant	Series / Model	Compressor		Cooling capacity / Cold room volume, according to cold room temperature ⁽¹⁾								Input power (W)	Max. current (A)	Evap. flow (m³/h)	Cond. flow (m³/h)	Liq-Gas Cooling Connection	Refrig. charge (kg) ⁽²⁾	Weight (kg)	SPL dB(A) ⁽³⁾	Price (€)
		HP	Power supply	-5 °C		0 °C		5 °C		10 °C										
				W	m³	W	m³	W	m³	W	m³									
R-134a	MSF-UY-11026A	3/4	230V	1145	7.6	1 449	15	1785	24	2 153	41	830	9.4	600	1700	1/4"-1/2"	<2.0	65+32	34	4 700
	MSF-UY-12033A	1	230V	1428	12	1 764	20	2147	34	2 562	53	960	10.0	700	1700	1/4"-5/8"	<3.0	67+45	34	5 601
	MSF-UY-13053A	1 1/2	230V *	2100	22	2 657	40	3 255	56	3 938	86	1500	12.6	1325	1700	1/4"-3/4"	<3.5	77+65	35	6 999
	MSF-UY-13074A	2	230V *	2741	30	3 434	48	4 190	74	5 009	120	1860	16.9	1325	1700	1/4"-3/4"	<4.5	79+65	37	7 999
	MSF-UY-23086A	4	400V 3N	3308	40	4 158	62	5 114	99	6 132	154	2 080	13.4	1325	3700	3/8"-7/8"	<5.5	96+65	38	8 745
	MSF-UY-24108A	5	400V 3N	4431	54	5 576	87	6 825	134	8 243	209	2 740	16.9	2 600	3700	3/8"-7/8"	<7.5	98+65	38	9 990
	MSF-UY-24136A	6 1/2	400V 3N	5444	72	6 815	108	8 306	162	10 038	268	3 440	20.9	2 600	3700	3/8"-1 1/8"	<7.5	101+65	34	11 216
MSF-UY-34171A	8	400V 3N	11151	153	7 539	123	9 293	181	11 146	299	4 060	23.9	2 600	4 000	3/8"-1 1/8"	<8.0	140+65	40	13 289	
R-449A	MSF-UG-1016A	5/8	230V	1215	9.5	1 483	15	1772	25	2 101	40	890	7.5	600	1700	1/4"-1/2"	<2.5	67+32	34	4 471
	MSF-UG-1018A	3/4	230V	1421	12	1 720	19	2 050	30	2 410	48	1 030	8.8	600	1700	1/4"-1/2"	<2.5	68+32	34	5 139
	MSF-UG-1024A	1	230V	1648	15	1 998	24	2 390	37	2 812	59	1 190	11.0	700	1700	3/8"-5/8"	<3.5	82+43	34	5 517
	MSF-UG-1034A	1 1/2	230V *	2235	23	2 699	35	3 193	54	3 739	84	1 840	16.0	700	1700	3/8"-5/8"	<3.5	83+43	35	6 289
	MSF-UG-1038A	1 3/4	400V 3N	2833	31	3 451	47	4 130	72	4 882	115	1 850	7.4	1325	3200	3/8"-5/8"	<4.5	82+63	29	7 360
	MSF-UG-2054A	2 1/2	400V 3N	3784	47	4 600	70	5 447	105	6 426	160	2 380	9.4	1325	3700	3/8"-3/4"	<5.0	85+63	26	8 151
	MSF-UG-2068A	3 1/2	400V 3N	4825	64	5 794	93	6 834	135	8 017	205	3 350	11.4	1325	3700	1/2"-3/4"	<7.0	88+63	25	10 077
MSF-UG-3086A	4	400V 3N	6027	83	7 257	120	8 579	175	10 060	270	4 230	13.9	2 600	4 000	1/2"-7/8"	<7.0	115+66	38	11 939	

DIMENSIONS



Dimensions (mm)		A	B	C	D	E	F	Evaporator fans
R-134a	11 series	1 030	380	577	798	736	310	1x Ø 360
	12 series	1 030	380	577	798	1 086	310	1x Ø 360
	13 series	1 030	380	577	798	1 786	310	2x Ø 360
	23 series	1 080	416	827	798	1 786	310	2x Ø 360
	24 series	1 080	416	827	888	2 186	360	2x Ø 450
	34 series	1 150	487	1 097	888	2 186	360	2x Ø 450
R-449A	MSF-UG-1016A and 1018A	1 030	380	577	798	736	310	1x Ø 360
	MSF-UG-1024A and 1034A	1 030	380	577	798	1 086	310	1x Ø 360
	MSF-UG-1038A	1 030	380	577	798	1 786	310	2x Ø 360
	MSF-UG-2054A and 2068A	1 080	416	827	798	1 786	310	2x Ø 360
MSF-UG-3086A	1 150	487	1 097	888	2 186	360	2x Ø 450	

⁽¹⁾ Nominal performances refer to operation with cold room temperatures of 0 °C and ambient temperature of 35 °C. Estimated cold room volume according to conditions of the calculation bases (page 12).

⁽²⁾ Units with refrigerant charge less than 5 tons of CO₂ equivalent (3.5 kg of R-134a or R-449A) exempt from leak checking, Regulation (EU) No 517/2014.

⁽³⁾ Sound pressure level, with directivity 1, measured at 10 m from the unit (non-binding value calculated from sound power).

* Available units with 400V 3N 50Hz power supply.

Centrifugal version

Refrigerant	Series / Model	HP	Cooling capacity		Price (€)	
			0 °C	5 °C		
		W		m³		
R-134a	MSH-CUY-11026A	3/4	1 281	12	4 415	
	MSH-CUY-11033A	1	1 517	15	5 370	
	MSH-CUY-22033A	1	1 811	22	5 735	
	MSH-CUY-22053A	1 1/2	2 174	28	6 325	
	MSH-CUY-33053A	1 1/2	2 657	35	6 932	
	MSH-CUY-33074A	2	3 402	47	7 760	
	MSH-CUY-43086A	4	4 153	70	9 332	
R-449A	MSH-CUG-43108A	5	5 219	84	10 195	
	MSH-CUY-44108A	5	5 555	89	10 977	
	MSH-CUY-44136A	6 1/2	6 773	108	13 609	
	MSH-CUG-1016A	5/8	1 349	13	4 201	
	MSH-CUG-1018A	3/4	1 545	16	5 108	
	MSH-CUG-2024A	1	1 978	23	5 455	
	MSH-CUG-2034A	1 1/2	2 627	34	6 229	
R-449A	MSH-CUG-3038A	1 3/4	3 265	44	7 145	
	MSH-CUG-4054A	2 1/4	4 590	69	8 383	
	MSH-CUG-4068A	3 1/2	5 783	93	9 858	

Electrical interconnections

For the interconnection of the condenser and evaporator units, the following cable sections must be provided for a length of 10 m (hoses not included):

Power supply	230V 50Hz	400V 3N 50Hz
Probes	4 x 1 mm ²	
Manoeuvre	2 x 1 mm ²	3 x 1 mm ²
Defrost	2 x 1,5 mm ² + T	4 x 1,5 mm ² + T
Control pad	2 x 1 mm ²	
Switch door*	2 x 1 mm ²	
Cold room light*	2 x 1 mm ² + T	

* Optional not included.
To know electrical interconnections of each model: see technical manual.

HFC cooling connections

INTARCON commercial range split units are delivered pre-adjusted in factory, with a R-134a or R-449A refrigerant charge enough for up to 10 m of cooling pipes.

Condensing units feature service valves and Flare-type connections for a flared copper pipe for diameters up to 3/4" and ready-to-solder connections for diameters from 7/8".

We recommend using the following nominal pipe diameters for both, liquid and gas lines, according to the length of the cooling pipes. For total length longer than 10 m some extra refrigerant and polyester oil (POE) charge must be added as indicated in the following table:

Model	Connections	Connection and recommended liquid-gas pipe diameter depending on pipe length							Additional charge in grams of refrigerant / oil					
		5 m	10 m	15 m	20 m	25 m	30 m	15 m	20 m	25 m	30 m			
R-134a	HIGH TEMPERATURE	- 015	Flare 1/4"-1/2"	1/4"-1/2"	1/4"-1/2"	1/4"-1/2"								
		- 026	Flare 1/4"-1/2"	1/4"-1/2"	1/4"-5/8"	1/4"-5/8"	1/4"-5/8"				125 / 100			
		- 033	Flare 1/4"-5/8"	1/4"-5/8"	1/4"-5/8"	1/4"-3/4"	1/4"-3/4"	1/4"-3/4"	1/4"-3/4"		125 / 150	250 / 300	375 / 450	500 / 450
		- 053	Flare 3/8"-3/4"	3/8"-3/4"	3/8"-3/4"	3/8"-3/4"	3/8"-3/4"	3/8"-7/8"	3/8"-7/8"	3/8"-7/8"	300 / 200	600 / 400	900 / 600	1200 / 600
		- 074	Flare 3/8"-3/4"	3/8"-3/4"	3/8"-7/8"	3/8"-7/8"	3/8"-7/8"	3/8"-7/8"	3/8"-7/8"	3/8"-7/8"	300 / 200	600 / 400	900 / 600	1200 / 600
		- 086	Weld 3/8"-7/8"	3/8"-7/8"	3/8"-7/8"	3/8"-7/8"	3/8"-1/8"	3/8"-1/8"	3/8"-1/8"	3/8"-1/8"	300 / 250	600 / 500	900 / 750	1200 / 750
		- 108	Weld 3/8"-7/8"	3/8"-7/8"	3/8"-7/8"	3/8"-7/8"	3/8"-1/8"	3/8"-1/8"	3/8"-1/8"	3/8"-1/8"	300 / 250	600 / 500	900 / 750	1200 / 750
		- 136	Weld 1/2"-1/8"	1/2"-1/8"	1/2"-1/8"	1/2"-1/8"	1/2"-1/8"	1/2"-1/8"	1/2"-1/8"	1/2"-1/8"	600 / 250	1200 / 500	1800 / 750	2400 / 750
		- 160	Weld 1/2"-1/8"	1/2"-1/8"	1/2"-1/8"	1/2"-1/8"	1/2"-1/8"	1/2"-1/8"	1/2"-1/8"	1/2"-1/8"	600 / 250	1200 / 600	1800 / 900	2400 / 900
		- 215	Weld 1/2"-1/8"	1/2"-1/8"	1/2"-1/8"	1/2"-1/8"	1/2"-1/8"	1/2"-1/8"	1/2"-1/8"	1/2"-1/8"	600 / 300	1200 / 600	1800 / 900	2400 / 900
	- 010	Flare 1/4"-3/8"	1/4"-3/8"	1/4"-3/8"	1/4"-1/2"									
	- 01015	Flare 1/4"-3/8"	1/4"-3/8"	1/4"-1/2"	1/4"-1/2"									
	- 1015	Flare 1/4"-1/2"	1/4"-1/2"	1/4"-1/2"	1/4"-1/2"	1/4"-5/8"				125 / 100				
	- 026	Flare 1/4"-1/2"	1/4"-1/2"	1/4"-1/2"	1/4"-5/8"	1/4"-5/8"				125 / 100				
	POSITIVE TEMPERATURE	- 033	Flare 1/4"-1/2"	1/4"-1/2"	1/4"-1/2"	1/4"-5/8"	1/4"-5/8"	1/4"-3/4"		125 / 100	250 / 300			
		- 053	Flare 1/4"-5/8"	1/4"-5/8"	1/4"-5/8"	1/4"-5/8"	1/4"-5/8"	1/4"-3/4"		125 / 100	250 / 300			
		- 074	Flare 1/4"-3/4"	1/4"-3/4"	1/4"-3/4"	1/4"-3/4"	1/4"-3/4"	3/8"-7/8"	3/8"-7/8"	125 / 150	1200 / 400	1500 / 600	1800 / 600	
		- 068	Flare 3/8"-3/4"	3/8"-3/4"	3/8"-3/4"	3/8"-3/4"	3/8"-3/4"	3/8"-7/8"	3/8"-7/8"	300 / 150	600 / 400	900 / 600	1200 / 600	
		- 086	Weld 3/8"-7/8"	3/8"-7/8"	3/8"-7/8"	3/8"-7/8"	3/8"-7/8"	3/8"-7/8"	3/8"-7/8"	300 / 200	600 / 400	900 / 750	1200 / 750	
		- 108	Weld 3/8"-7/8"	3/8"-7/8"	3/8"-7/8"	3/8"-7/8"	3/8"-7/8"	3/8"-1/8"	3/8"-1/8"	300 / 200	600 / 500	900 / 750	1200 / 750	
		- 136 / - 171	Weld 3/8"-1/8"	3/8"-1/8"	3/8"-1/8"	3/8"-1/8"	3/8"-1/8"	3/8"-1/8"	3/8"-1/8"	300 / 250	600 / 500	900 / 750	1200 / 750	
- 215		Weld 3/8"-1/8"	3/8"-1/8"	3/8"-1/8"	3/8"-1/8"	1/2"-1/8"	1/2"-1/8"	1/2"-1/8"	600 / 250	1200 / 600	1800 / 900	2400 / 900		
- 271		Weld 1/2"-1/8"	1/2"-1/8"	1/2"-1/8"	1/2"-1/8"	1/2"-1/8"	1/2"-1/8"	1/2"-1/8"	600 / 300	1200 / 600	1800 / 900	2400 / 900		
R-449A		HIGH TEMPERATURE	- 008 / - 010	Flare 1/4"-3/8"	1/4"-3/8"	1/4"-3/8"	1/4"-3/8"			100 / 25				
	- 012		Flare 1/4"-3/8"	1/4"-3/8"	1/4"-3/8"	1/4"-3/8"	1/4"-3/8"							
	- 014		Flare 1/4"-1/2"	1/4"-1/2"	1/4"-1/2"	3/8"-1/2"	3/8"-1/2"	3/8"-1/2"	3/8"-1/2"	300 / 50	600 / 100	900 / 150	1200 / 150	
	- 016		Flare 1/4"-1/2"	1/4"-1/2"	1/4"-1/2"	3/8"-1/2"	3/8"-1/2"	3/8"-1/2"	3/8"-1/2"	300 / 50	600 / 100	900 / 150	1200 / 150	
	- 018		Flare 1/4"-1/2"	1/4"-1/2"	3/8"-1/2"	3/8"-1/2"	3/8"-1/2"	3/8"-1/2"	3/8"-1/2"	300 / 50	600 / 100	900 / 150	1200 / 150	
	- 024 / - 026		Flare 3/8"-5/8"	3/8"-5/8"	3/8"-5/8"	3/8"-5/8"	3/8"-5/8"	3/8"-5/8"	3/8"-5/8"	300 / 100	600 / 200	900 / 300	1200 / 300	
	- 034		Flare 3/8"-5/8"	3/8"-5/8"	3/8"-5/8"	3/8"-5/8"	3/8"-5/8"	3/8"-3/4"	3/8"-3/4"	300 / 100	600 / 450	900 / 600	1200 / 600	
	- 038		Flare 3/8"-5/8"	3/8"-5/8"	3/8"-5/8"	3/8"-5/8"	3/8"-3/4"	3/8"-3/4"	3/8"-3/4"	300 / 150	600 / 450	900 / 600	1200 / 600	
	- 048		Flare 1/2"-3/4"	1/2"-3/4"	1/2"-3/4"	1/2"-3/4"	1/2"-3/4"	1/2"-7/8"	1/2"-7/8"	600 / 150	1100 / 300	1700 / 800	2300 / 800	
	- 054		Flare 1/2"-3/4"	1/2"-3/4"	1/2"-3/4"	1/2"-3/4"	1/2"-3/4"	1/2"-7/8"	1/2"-7/8"	600 / 150	1100 / 600	1700 / 800	2300 / 800	
	- 060 / - 068	Weld 1/2"-7/8"	1/2"-7/8"	1/2"-7/8"	1/2"-7/8"	1/2"-7/8"	1/2"-7/8"	1/2"-7/8"	900 / 400	1800 / 800	2700 / 1200	3600 / 1200		
	- 086 / - 108	Weld 5/8"-1/8"	5/8"-1/8"	5/8"-1/8"	5/8"-1/8"	5/8"-1/8"	5/8"-1/8"	5/8"-1/8"	900 / 400	1800 / 800	2700 / 1200	3600 / 1200		
	POSITIVE TEMPERATURE	- 008 / - 010	Flare 1/4"-3/8"	1/4"-3/8"	1/4"-3/8"	1/4"-3/8"				100 / 50				
		- 012	Flare 1/4"-3/8"	1/4"-3/8"	1/4"-3/8"	1/4"-1/2"	1/4"-1/2"							
		- 014	Flare 1/4"-1/2"	1/4"-1/2"	1/4"-1/2"	1/4"-1/2"	1/4"-1/2"	1/4"-1/2"			100 / 50			
		- 016	Flare 1/4"-1/2"	1/4"-1/2"	1/4"-1/2"	1/4"-1/2"	1/4"-1/2"	1/4"-1/2"			100 / 50	200 / 100		
		- 018	Flare 1/4"-1/2"	1/4"-1/2"	1/4"-1/2"	1/4"-1/2"	1/4"-1/2"	1/4"-1/2"			100 / 50	200 / 100		
		- 024	Flare 1/4"-1/2"	1/4"-1/2"	1/4"-1/2"	1/4"-1/2"	3/8"-1/2"	3/8"-1/2"			100 / 50	900 / 100		
		- 026	Flare 3/8"-5/8"	3/8"-5/8"	3/8"-5/8"	3/8"-5/8"	3/8"-5/8"	3/8"-5/8"	3/8"-5/8"	300 / 100	600 / 200	900 / 300	1200 / 300	
		- 034	Flare 1/4"-5/8"	1/4"-1/2"	1/4"-1/2"	1/4"-5/8"	1/4"-5/8"	1/4"-5/8"	3/8"-5/8"	100 / 25	200 / 50	300 / 100	1000 / 250	
		- 038	Flare 3/8"-5/8"	3/8"-5/8"	3/8"-5/8"	3/8"-5/8"	3/8"-5/8"	3/8"-5/8"	3/8"-5/8"	300 / 100	600 / 200	900 / 300	1200 / 300	
- 048		Flare 1/4"-5/8"	1/4"-5/8"	1/4"-5/8"	1/4"-5/8"	1/4"-5/8"	3/4"-5/8"	3/4"-5/8"	100 / 25	500 / 125	800 / 200	1000 / 250		
- 054		Flare 3/8"-5/8"	3/8"-5/8"	3/8"-5/8"	3/8"-5/8"	3/8"-5/8"	3/8"-3/4"	3/8"-3/4"	300 / 100	600 / 450	900 / 600	1200 / 600		
NEGATIVE TEMPERATURE	- 018	Flare 1/4"-1/2"	1/4"-1/2"	1/4"-1/2"	1/4"-1/2"									
	- 026	Flare 3/8"-1/8"	3/8"-1/8"	3/8"-1/8"	3/8"-1/8"	3/8"-1/8"	3/8"-1/8"	3/8"-1/8"	250 / 200	500 / 400	750 / 500	1000 / 750		
	- 034	Flare 1/4"-1/2"	1/4"-1/2"	1/4"-1/2"	1/4"-1/2"				100 / 100					
	- 055	Flare 3/8"-5/8"	3/8"-5/8"	3/8"-5/8"	3/8"-5/8"	3/8"-5/8"	3/8"-5/8"	3/8"-5/8"	300 / 100	600 / 200				
	- 075	Flare 1/4"-5/8"	1/4"-5/8"	1/4"-5/8"	1/4"-3/4"	1/4"-3/4"	1/4"-3/4"	1/4"-3/4"	100 / 75	200 / 150	250 / 200	300 / 250		
	- 096	Flare 3/8"-5/8"	3/8"-5/8"	3/8"-5/8"	3/8"-5/8"	3/8"-5/8"	3/8"-3/4"	3/8"-3/4"	300 / 300	600 / 450	900 / 800	1200 / 800		
	- 108	Weld 3/8"-7/8"	3/8"-7/8"	3/8"-7/8"	3/8"-7/8"	3/8"-7/8"	3/8"-7/8"	3/8"-7/8"	160 / 100	320 / 200	480 / 300	640 / 400		
	- 136	Weld 3/8"-7/8"	3/8"-7/8"	3/8"-7/8"	3/8"-7/8"	3/8"-7/8"	3/8"-11/8"	3/8"-11/8"	160 / 100	320 / 200	560 / 350	740 / 460		
	- 215	Weld 1/2"-11/8"	1/2"-11/8"	1/2"-11/8"	1/2"-11/8"	1/2"-11/8"	1/2"-11/8"	1/2"-11/8"	190 / 120	370 / 230	560 / 350	740 / 460		
	- 271	Weld 1/2"-13/8"	1/2"-13/8"	1/2"-13/8"	1/2"-13/8"	1/2"-13/8"	1/2"-13/8"	1/2"-15/8"	240 / 150	470 / 290	760 / 300	1010 / 630		