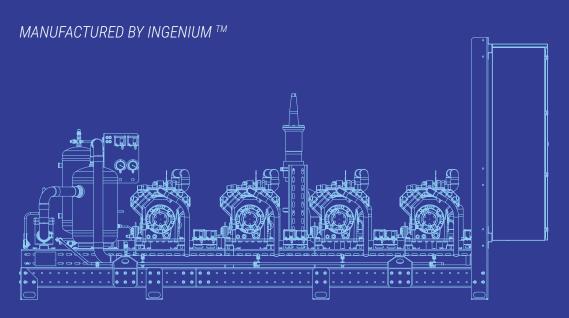


PRODUCT CATALOGUE



I-CU series cooling units

Semi-hermetic piston compressor typeunits with cooling capacity from 1 kW to 460 kW

Semi-hermetic screw compressor type units with cooling capacity from 12 to 1710 kW

Hermetic scroll compressor type units with cooling capacity from 2 to 228 kW

Compressor-condenser unit cooling capacity from 3 to 1500 kW

Heat pump unitwith capacity from 3 to 1500 kW

I-CC series cooling units

Liquid cooling systems - chillers

Semi-hermetic screw compressor type units with cooling capacity from 65 to 1600 kW

Semi-hermetic piston compressor type units with cooling capacity from 1,5 to 460 kW

Hermetic scroll compressor type units with cooling capacity from 2 to 150 kW

I-RU series receiver units

I-PU series pumping units

Cooling units are completed with the original INGENIUM control panels







conforms ISO-2015 QMS

INGENIUM ™ equipment meets the EEU requirements

Field of Application

Food and Processing Industry

- edible food and food raw material process cooling and freezing
- food storage maintenance (meat, poultry, fish, milk, cheese, vegetable oil, beer, beverages, bread, confectionary products and etc.)
- vegetable and fruit long-term CA-storage maintenance (vegetable and fruit storehouse type implementation)
- handling and storage
- process air-conditioning of manufacturing areas

Chemical Industry

clean ethylene, propane, propylene content intake from petroleum and natural gas refinery, synthetic material and nitrogenous fertilizers industrial manufacturing

Construction

indoor climate control systems

Nuclear Industry cooling units

Mining Industry

soil freezing in hole drilling process

Sports facilities

ice rinks and arenas, winter sports

Data processing centers

temperature control in enclosed space within desired limits

Logistics and Retail

low-temperature food storage facilities, distribution centers, wholesale distribution centers, hypermarkets, industrial freezers and freezing chambers

Pharmaceutical Industry

Industrial freezing facilities in drug manufacturing

Metallurgical engineering

cooling systems in processing: wet blast furnace gas cleaning system

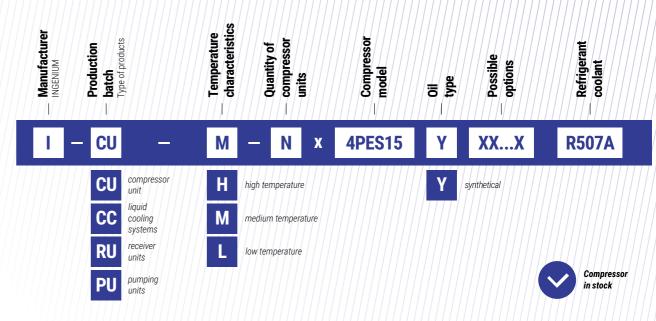
Plastic products

plastic and polymeric materials processing, PET manufacturing, PVC processing, PAP manufacturing, plastic window profile, packing units, cooling systems in injection molding machines and process extrusion lines processing, calender rollers and extruders operating

Shipbuilding Industry

cooling units for fishery products freezing and storage maintenance

Nomenclature



End-to-end options description

Option A - vibration dampers

A1 - vibration isolators set for each compressor

A2 – vibrating bearings set under frame-mounted compressor unit

Option B - economizer, liquid and steam injector

- **B1** mechanically controlled TEV economizer
- **B2** electronically controlled TEV economizer
- **B3** liquid injection system
- **B4** steam injection system

Option C - check valve

- C1 discharge reinforced check valve for each compressor
- **C2** discharge line check valve following the oil separator

Option D - liquid level sensor

- D1 refrigerant receiver LLS
- D2 refrigerant receiver LLS
- D3 oil receiver tank LLS
- **D4** oil receiver tank HLS
- **D5** oil separator chamber LLS

Option E – control panel

- **E1** control cabinet without controller. Suitable for units without capacity control options
- **E2** control cabinet with a controller for stepwise capacity regulation. Applies to options Q1 and Q2
- **E5** ontrol cabinet with a controller for smooth performance control. Applies to option Q5

Option F – cylinder heads blowdown fan

Option H – hot gas delivery line for operating the consumers defrosting system

Option K - oil cooling set

- K1 ODAF system
- **K2** thermosyphon-type oil cooling system
- **K3** liquid-type oil cooling system
- Option L heat insulated liquid separator on suction line for each compressor

Option M - high- and low-pressure gauge

- Option O oil separator chamber equipped with heater, shutoff valve, filter and inspection window
 - **01** oil level indication line equalization line
 - 02 oil level electrically controlled adjusters

Option P – high- and low-pressure switch on suction and discharge line manifold

- **P1** high pressure control switch for condensing fans cooling, single item
- **P2** high pressure control switch for condensing fan cooling, two items
- P3 high pressure control switch for condensing fan cooling, three items

Option Q - capacity control

- **Q1** compressor capacity regulation per one cylinder block (50..100%)
- **Q2** compressor capacity regulation for two cylinder blocks (10..100%)
- **Q3** master compressor capacity control for three cylinders' modules
- Q4 compressor capacity digital control
- **Q5** frequency control of compressor capacity
- **Q6** two master compressors' capacity frequency control unit

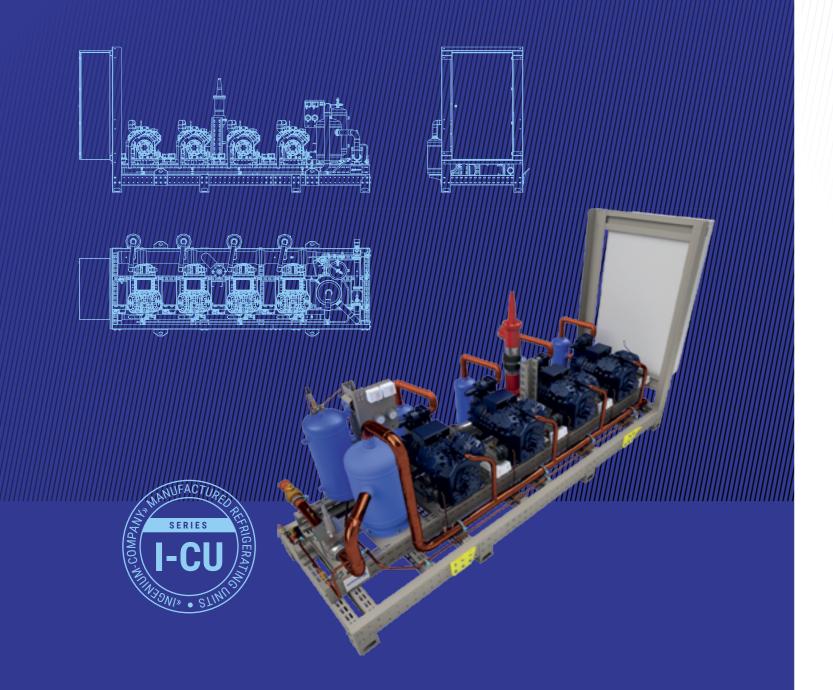
Option R - receiver module and liquid channel

- R1 receiver unit equipped with shutoff valves, one relief damper, filter drain, inspection window and liquid flow line frame-mounted shutoff valve
- R2 receiver unit equipped with shutoff valves, two relief dampers and three-way valve, as well as with filter drain, inspection window and liquid line framemounted shutoff valve
- R3 two relief dampers with three-way valve mounted on refrigerant receiver

Option S – UV rays shielded insulation, IP55-compliant pressure switch protection, additional compressor crankcase heating

- Option T tubular electric heating element, heating
 - **T1** refrigerant receiver heating system
- Option V shutoff valves set
- Option W condensing pressure control system for discharge line

Semi-hermetic piston compressor type multi-compressor units



Compressor units item name

I-CU - L - 4 x H3400CC - E1LMPVW R507A

- 1 Unit type
- *I-CU* Ingenium compressor unit
- **2. Temperature level** (evaporation temperature)
- L/M/H Low/Medium/High
- 3. Compressor units' quantity
 No number marking in case of single item
- 4. Compressor unit short name In case of different compressor types usage, the marking is indicated with "/"
- Options refer to "End-to-end options description"
- **6. Refrigerant used** (optional)

Semi-hermetic piston compressor type multi-compressor units (standard package + options)

Standard itom list

Semi-hermetically sealed piston compressor equipped with shutoff valves, crankcase heaters, engine protection gear and oil pressure relay within oil pump compressor units, high- and low- pressure switch controller per each compressor unit

Discharge manifold

Oil separator chamber equipped with heater, shutoff valve, filter and inspection window

Receiver unit equipped with shutoff valves, pressure differential valve and one shutoff valve separating oil receiver unit and suction header. Shutoff valve to be installed on the oil delivery line, and electrically operated oil level regulator to be provided for each compressor unit

Suction line mounted cleaning filter

Heat insulated suction manifold

Painted metal frame

Documentation set

tem name	Marking
Vibration isolator set per 1 compressor unit	A1
Vibrating bearings set under frame-mounted compressor unit	A2
Discharge line reinforced check valve per 1 compressor unit	C1
Discharge line check valve following the oil separator	C2
Oil receiver chamber LLS	D3
Oil receiver chamber HLS	D4
Control panel with cable connection	Е
Cylinder heads blowdown fan	F
Heat insulated liquid separator to be installed per each compressor suction line	L
High- and low- pressure gauges	М
High- and low- pressure switches to be installed on the suction and discharge manifolds	Р
One high-pressure switch to control condensing unit fans	P1
Two high-pressure switches to control condensing unit fans	P2
Three high-pressure switches to control condensing unit fans	P3
Master compressor capacity control for one cylinders' module	Q1
Master compressor capacity control for two cylinders' modules	Q2
Master compressor capacity control for three cylinders' modules	Q3
Frequency regulation unit for master compressor capacity control	Q5
Frequency regulation unit for two master compressors capacity control	Q6
UV rays shielded insulation, IP55-compliant pressure switch protection, additional compressor crankcase heating	S
Shutoff valves' set to be installed on the suction and discharge lines, on pressure regulation line within refrigerant receiver	V
Condensing pressure regulation system within pressure line	W

Compressor units can be equipped with extra-standard items with additional options to be provided on request

Semi-hermetic piston compressor type multi-compressor units

Model	Cooling capacity, kW	Power consumption, kW	Maximum current rating, A	Overall dimensions, LxWxH, mm	Weight, kg	Oil receiver chamber volume, l	Discharge line, mm	Suction line, mm
eduim tempei	rature un	its		R404A/R	507A, t _k = +4	5°C, t _o = -	10°C, SH =	=10K, SC=
✓ I-CU-M-2x4DES7Y	25,3	11,9	34,0	1700x1300x700	400	8	22	42
I-CU-M-2x4CES6Y	31,5	15,0	36,4	1700x1300x700	400	8	22	42
▼ I-CU-M-2x4CES9Y	31,5	15,0	41,4	1700x1300x700	400	8	22	42
I-CU-M-2x4BES9Y	34,6	16,7	37,0	1700x1300x700	400	8	22	42
I-CU-M-2x4VES7Y	32,4	15,2	34,2	1900x1400x900	450	12	28	54
I-CU-M-2x4VES10Y	32,4	14,6	40,8	1900x1400x900	450	12	28	54
I-CU-M-2x4TES9Y	39,6	18,6	40,8	1900x1400x900	450	12	28	54
I-CU-M-2x4TES12Y	39,5	18,0	51,2	1900x1400x900	450	12	28	54
✓ I-CU-M-2x4PES12Y	45,0	20,6	46,4	1900x1400x900	450	12	28	54
I-CU-M-2x4PES15Y	44,8	20,4	57,4	1900x1400x900	450	12	28	54
I-CU-M-2x4NES14Y	53,8	25,0	54,2	1900x1400x900	450	12	28	54
I-CU-M-2x4NES20Y	54,0	24,4	67,4	1900x1400x900	500	12	28	54
I-CU-M-2x4JE15Y	62,4	28,2	62,6	2000x1400x1000	500	16	35	65
I-CU-M-2x4JE22Y	60,8	27,2	75,4	2000x1400x1000	500	16	35	65
✓ I-CU-M-2x4HE18Y	73,2	33,8	74,4	2000x1400x1000	500	16	35	65
I-CU-M-2x4HE25Y	71,8	32,4	89,0	2000x1400x1000	500	16	35	65
● I-CU-M-2x4GE23Y	84,8	40,2	88,8	2000x1400x1000	500	16	35	65
I-CU-M-2x4GE30Y	82,6	37,4	103,4	2000x1400x1000	500	16	35	65
✓ I-CU-M-2x4FE28Y	93,0	41,8	93,8	2000x1400x1000	500	25	42	Ду80
I-CU-M-2x4FE35Y I-CU-M-2x6JE25Y	90,0 100,6	40,0 47,8	107,4 106,6	2000x1400x1000 2000x1400x1000	500 500	25 25	42 42	Ду80 Ду80
I-CU-M-2x6JE33Y	99,6	46,6	125,2	2000x1400x1000 2000x1400x1000	500	25	42	Ду80
I-CU-M-2x6HE28Y	107,6	49,8	107,4	2000x1400x1000 2000x1400x1000	500	25	42	Ду80
I-CU-M-2x6HE35Y	105,6	48,4	129,8	2000x1400x1000	500	25	42	Ду80
I-CU-M-2x6GE34Y	125,8	60,2	132,0	2000x1400x1000	500	25	42	Ду80
I-CU-M-2x6GE40Y	120,4	56,0	148,8	2000x1400x1000	500	25	42	Ду80
✓ I-CU-M-2x6FE44Y	150,8	72,0	167,4	2000x1400x1000	500	25	42	Ду80
I-CU-M-2x6FE50Y	147,0	69,2	193,4	2000x1400x1000	500	25	42	Ду80
○ I-CU-M-3x4DES7Y	38,0	17,9	50,5	2400x1300x900	600	12	28	54
I-CU-M-3x4CES6Y	47,3	22,5	54,1	2400x1300x900	600	12	28	54
○ I-CU-M-3x4CES9Y	47,3	22,5	61,6	2400x1300x900	600	12	28	54
I-CU-M-3x4BES9Y	52,0	25,1	55,0	2400x1300x900	600	12	28	54
I-CU-M-3x4VES7Y	48,6	22,8	50,8	2600x1400x1100	650	12	28	54
I-CU-M-3x4VES10Y	48,6	22,0	60,7	2600x1400x1100	650	12	28	54
I-CU-M-3x4TES9Y	59,4	27,8	60,7	2600x1400x1100	650	12	28	54
I-CU-M-3x4TES12Y	59,3	27,1	76,3	2600x1400x1100	650	12	28	65
I-CU-M-3x4PES12Y	67,5	30,9	69,1	2600x1400x1100	650	16	35	65
I-CU-M-3x4PES15Y	67,2	30,6	85,6	2600x1400x1100	650	16	35	65
▼ I-CU-M-3x4NES14Y	80,7	37,5	80,8	2600x1400x1100	650	16	35	65
I-CU-M-3x4NES20Y	81,0	36,6	100,6	2600x1400x1100	650	16	35	65
I-CU-M-3x4JE15Y	93,6	42,3	93,4	2700x1400x1200	700	25	42	Ду80
I-CU-M-3x4JE22Y	91,2	40,8	112,6	2700x1400x1200	700	25	42	Ду80
	109,8	50,7	111,1	2700x1400x1200	700	25	42	Ду80
I-CU-M-3x4HE25Y ✓ I-CU-M-3x4GE23Y	107,7	48,6	133,0	2700x1400x1200 2700x1400x1200	700 700	25	42 42	Ду80
I-CU-M-3x4GE23Y	127,2 123,9	60,3 56,1	132,7 154,6	2700x1400x1200 2700x1400x1200	700	25 25	42	Ду80 Ду80
 I-CU-M-3x4GE30Y I-CU-M-3x4FE28Y 	139,5	62,7	140,2	2700x1400x1200	700	25	42	Ду80
I-CU-M-3x4FE35Y	135,0	60,0	160,6	2700x1400x1200 2700x1400x1200	700	25	42	Ду80
I-CU-M-3x4FE35Y	150,9	71,7	159,4	2700x1400x1200	700	25	42	Ду80
I-CU-M-3x6JE33Y	149,4	69,9	187,3	2700x1400x1200 2700x1400x1200	700	25	42	Ду80
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Semi-hermetic piston compressor type multi-compressor units

Model	Cooling capacity, kW	Power consumption, kW	Maximum current rating, A	Overall dimensions, LxWxH, mm	Weight, kg	Oil receiver chamber volume, l	Discharge line, mm	Suction line, mm
I-CU-M-3x6HE35Y	158,4	72,6	194,2	2700x1400x1200	700	25	42	Ду80
▼ I-CU-M-3x6GE34Y	188,7	90,3	197,5	2700x1400x1200	700	25	54	Ду100
I-CU-M-3x6GE40Y	180,6	84,0	222,7	2700x1400x1200	700	25	54	Ду100
▼ I-CU-M-3x6FE44Y	226,2	108,0	250,6	2700x1400x1200	700	25	54	Ду100
I-CU-M-3x6FE50Y	220,5	103,8	289,6	2700x1400x1200	700	25	54	Ду100
I-CU-M-4x4DES7Y	50,6	23,9	68,0	2650x1300x900	750	16	28	54
I-CU-M-4x4CES6Y	63,0	30,0	72,8	2650x1300x900	750	16	35	54
I-CU-M-4x4CES9Y	63,0	30,0	82,8	2650x1300x900	750	16	35	54
I-CU-M-4x4BES9Y	69,3	33,4	74,0	2650x1300x900	750	16	35	Ду65
I-CU-M-4x4VFS7Y	64,8	30,4	68,4	2900x1400x1100	1100	16	35	Ду65
I-CU-M-4x4VES10Y	64,8	29,3	81,6	2900x1400x1100	1100	16	35	Ду65
I-CU-M-4x4TES9Y	79,2	37,1	81,6	2900x1400x1100	1100	25	35	Ду65
I-CU-M-4x4TES12Y	79,0	36,1	102,4	2900x1400x1100	1100	25	35	Ду65
▼ I-CU-M-4x4PES12Y	90,0	41,2	92,8	2900x1400x1100	1100	25	35	Ду65
I-CU-M-4x4PES15Y	89,6	40,8	114,8	2900x1400x1100	1100	25	35	Ду65
▼ I-CU-M-4x4NES14Y	107,6	50,0	108,4	2900x1400x1100	1100	25	42	Ду80
I-CU-M-4x4NES20Y	108,0	48,8	134,8	2900x1400x1100	1100	25	42	Ду80
I-CU-M-4x4JE15Y	124,8	56,4	125,2	3000x1400x1200	1300	25	42	Ду80
I-CU-M-4x4JE22Y	121,6	54,4	150,8	3000x1400x1200	1300	25	42	Ду80
▼ I-CU-M-4x4HE18Y	146,4	67,6	148,8	3000x1400x1200	1300	25	42	Ду80
I-CU-M-4x4HE25Y	143,6	64,8	178,0	3000x1400x1200	1300	25	54	Ду80
▼ I-CU-M-4x4GE23Y	169,6	80,4	177,6	3000x1400x1200	1300	25	54	Ду100
I-CU-M-4x4GE30Y	165,2	74,8	206,8	3000x1400x1200	1300	25	54	Ду100
✓ I-CU-M-4x4FE28Y	186,0	83,6	187,6	3000x1400x1200	1300	25	54	Ду100
I-CU-M-4x4FE35Y	180,0	80,0	214,8	3000x1400x1200	1300	25	54	Ду100
I-CU-M-4x6JE25Y	201,2	95,6	213,2	3000x1400x1200	1300	25	54	Ду100
I-CU-M-4x6JE33Y	199,2	93,2	250,4	3000x1400x1200	1300	25	54	Ду100
I-CU-M-4x6HE28Y	215,2	99,6	214,8	3000x1400x1200	1300	25	54	Ду100
I-CU-M-4x6HE35Y	211,2	96,8	259,6	3000x1400x1200	1300	25	54	Ду100
▼ I-CU-M-4x6GE34Y	251,6	120,4	264,0	3000x1400x1200	1300	25	Ду65	Ду100
I-CU-M-4x6GE40Y	240,8	112,0	297,6	3000x1400x1200	1300	25	Ду65	Ду100
☑ I-CU-M-4x6FE44Y	301,6	144,0	334,8	3000x1400x1200	1300	25	Ду65	Ду125
I-CU-M-4x6FE50Y	294,0	138,4	386,8	3000x1400x1200	1300	25	Ду65	Ду125
▼ I-CU-M-5x4FE28Y	232,5	104,5	234,0	3450x1400x1200	1800	25	2 1/8"	Ду100
I-CU-M-5x4FE35Y	225,0	100,0	268,0	3450x1400x1200	1800	25	2 1/8"	Ду100
I-CU-M-5x6HE28Y	269,0	124,5	268,0	3450x1400x1200	1800	25	2 1/8"	Ду125
I-CU-M-5x6HE35Y	264,0	121,0	324,0	3450x1400x1200	1800	25	2 1/8"	Ду125
● I-CU-M-5x6GE34Y	314,5	150,5	329,5	3450x1400x1200	1800	25	Ду65	Ду125
I-CU-M-5x6GE40Y	301,0	140,0	371,5	3450x1400x1200	1800	25	Ду65	Ду125
✓ I-CU-M-5x6FE44Y	377,0	180,0	418,0	3450x1400x1200	1800	25	Ду65	Ду125
I-CU-M-5x6FE50Y	367,5	173,0	483,0	3450x1400x1200	1800	25	Ду65	Ду125
▼ I-CU-M-6x4FE28Y	279,0	125,4	280,4	4000x1400x1200	2100	25	Ду65	Ду125
I-CU-M-6x4FE35Y	279,0	120,0	321,2	4000x1400x1200 4000x1400x1200	2100	25	Ду65	Ду125
I-CU-M-6x6HE28Y	322,8	149,4	321,2	4000x1400x1200	2100	25	Ду65	
I-CU-M-6x6HE35Y	316,8	145,2	388,4	4000x1400x1200 4000x1400x1200	2100	25	Ду65	Ду125 Ду125
 I-CU-M-6x6GE34Y 	377,4	180,6	395,0	4000x1400x1200	2100	25	Ду65	Ду125
I-CU-M-6x6GE40Y	361,2	168,0	445,4	4000x1400x1200 4000x1400x1200	2100	25	Ду65	Ду125
✓ I-CU-M-6x6FE44Y	452,4	216,0	501,2	4000x1400x1200	2100	25	Ду80	Ду150
I-CU-M-6x6FE50Y	441,0	207,6	579,2	4000x1400x1200	2100	25	Ду80	Ду150
1 00 141 0001 2001	1 11,0	207,0	0, ,,2	1 100001 10001200	1 2.00	1 20	H 4700	H, 100

Semi-hermetic piston compressor type multi-compressor units

Model	Cooling capacity, KW	Power consumption, kW	Maximum current rating, A	Overall dimensions, LxWxH, mm	Weight, kg	Oil receiver chamber volume, l	Discharge line, mm	Suction line, mm
ow tempera	ture units			R404A/R	507A, t _k = +4	5°C, t ₀ = -	25°C, SH :	=10K, SC
I-CU-L-2x4CES6Y	14,6	10,7	34,0	1700x1300x700	400	8	16	1 3/8"
I-CU-L-2x4BES9Y	16,0	11,9	41,4	1700x1300x700	400	8	16	1 5/8"
I-CU-L-2x4VES7Y	14,3	10,2	34,2	1900x1400x900	450	8	16	1 5/8"
I-CU-L-2x4TES9Y	17,9	12,7	40,8	1900x1400x900	450	8	22	1 5/8"
✓ I-CU-L-2x4PES12	,	13,8	46,4	1900x1400x900	450 450	8	22	1 5/8" 1 5/8"
✓ I-CU-L-2x4NES14 I-CU-L-2x4JE15Y	Y 24,3 29,1	17,2 20,2	54,2 62,6	1900x1400x900 2000x1400x1000	500	8	22	2 1/8"
I-CU-L-2x4HE18Y	34,6	24,0	74,4	2000x1400x1000 2000x1400x1000	500	16	28	2 1/8"
✓ I-CU-L-2x4GE23Y	40,8	28,6	88,8	2000x1400x1000	500	16	28	2 5/8"
✓ I-CU-L-2x4FE28Y	43,4	29,6	93,8	2000x1400x1000	500	16	28	2 5/8"
I-CU-L-2x6JE25Y	48,8	34,2	106,6	2000x1400x1000	500	16	28	Ду80
I-CU-L-2x6HE28Y	51,0	35,4	107,4	2000x1400x1000	500	16	28	Ду80
✓ I-CU-L-2x6GE34Y	61,6	43,6	132,0	2000x1400x1000	500	16	28	Ду80
✓ I-CU-L-2x6FE44Y	73,2	52,4	167,4	2000x1400x1000	500	16	35	Ду80
I-CU-L-3x4CES6Y	21,9	16,1	50,5	2400x1300x900	600	16	22	1 5/8"
I-CU-L-3x4BES9Y	24,0	17,9	61,6	2400x1300x900	600	16	22	1 5/8"
I-CU-L-3x4VES7Y	21,5	15,2	50,8	2600x1400x1100	650	16	22	2 1/8"
I-CU-L-3x4TES9Y	26,8	19,1	60,7	2600x1400x1100	650	16	28	2 1/8"
✓ I-CU-L-3x4PES12		20,6	69,1	2600x1400x1100	650	16	28	2 1/8"
✓ I-CU-L-3x4NES14		25,7	80,8	2600x1400x1100	650	16	28	2 1/8"
I-CU-L-3x4JE15Y	43,6	30,3	93,4	2700x1400x1200	700	25	35	Ду65
✓ I-CU-L-3x4HE18Y	51,9	36,0	111,1	2700x1400x1200	700	25	35	Ду65
○ I-CU-L-3x4GE23Y ○ I-CU-L-3x4G	61,2	42,9	132,7	2700x1400x1200	700	25	35	Ду80
	65,1 73,2	44,4 51,3	140,2 159,4	2700x1400x1200 2700x1400x1200	700 700	25 25	35 35	Ду80 Ду80
I-CU-L-3x6HE28Y	76,5	53,1	160,6	2700x1400x1200	700	25	35	Ду80
✓ I-CU-L-3x6GE34Y	92,4	65,4	197,5	2700x1400x1200	700	25	35	Ду100
● I-CU-L-3x6FE44Y	109,8	78,6	250,6	2700x1400x1200	700	25	42	Ду100
I-CU-L-4x4CES6Y	29,2	21,4	68,0	2650x1300x900	750	16	22	2 1/8"
I-CU-L-4x4BES9Y	32,0	23,8	82,8	2650x1300x900	750	16	22	2 1/8"
I-CU-L-4x4VES7Y		20,3	68,4	2900x1400x1100	1100	16	22	2 1/8"
I-CU-L-4x4TES9Y	35,8	25,4	81,6	2900x1400x1100	1100	25	28	2 1/8"
✓ I-CU-L-4x4PES12	39,4	27,5	92,8	2900x1400x1100	1100	25	28	2 1/8"
● I-CU-L-4x4NES14	Y 48,6	34,3	108,4	2900x1400x1100	1100	25	28	Ду65
I-CU-L-4x4JE15Y	58,2	40,4	125,2	3000x1400x1200	1300	25	35	Ду65
✓ I-CU-L-4x4HE18Y	69,2	48,0	148,8	3000x1400x1200	1300	25	35	Ду80
✓ I-CU-L-4x4GE23Y	81,6	57,2	177,6	3000x1400x1200	1300	25	35	Ду80
I-CU-L-4x4FE28Y	86,8	59,2	187,6	3000x1400x1200	1300	25	35	Ду80
I-CU-L-4x6JE25Y	97,6	68,4	213,2	3000x1400x1200	1300	25	42	Ду80
I-CU-L-4x6HE28Y	. , .	70,8	214,8	3000x1400x1200	1300	25	42 42	Ду80
I-CU-L-4x6GE34YI-CU-L-4x6FE44Y	123,2 146,4	87,2 104,8	264,0 334,8	3000x1400x1200 3000x1400x1200	1300 1300	25 25	42	Ду100 Ду100
•							,.	
✓ I-CU-L-5x4FE28Y	108,5	74,0	234,0	3450x1400x1200	1800	25	42	Ду100
I-CU-L-5x6HE28Y ✓ I-CU-L-5x6GE34Y	127,5	88,5	268,0	3450x1400x1200 3450x1400x1200	1800 1800	25	42 лу50	Ду100
I-CU-L-5x6GE34Y✓ I-CU-L-5x6FE44Y	154,0 183,0	109,0 131,0	329,5 418,0	3450x1400x1200 3450x1400x1200	1800	25	Ду50 Ду50	Ду100 Ду100
A LOUL 6 4556311	100.0	00.0	000.4	4000::1400-1000	0100	0.5	п. го	D 405
✓ I-CU-L-6x4FE28Y	130,2	88,8	280,4	4000x1400x1200	2100	25	Ду50	Ду125
I-CU-L-6x6HE28Y ✓ I-CU-L-6x6GE34Y		106,2	321,2 395,0	4000x1400x1200 4000x1400x1200	2100	25 25	Ду50	Ду125
▼ 1-60-L-0X0GE34Y	184,8	130,8	393,0	40003140031200	2100	25	Ду50	Ду125



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