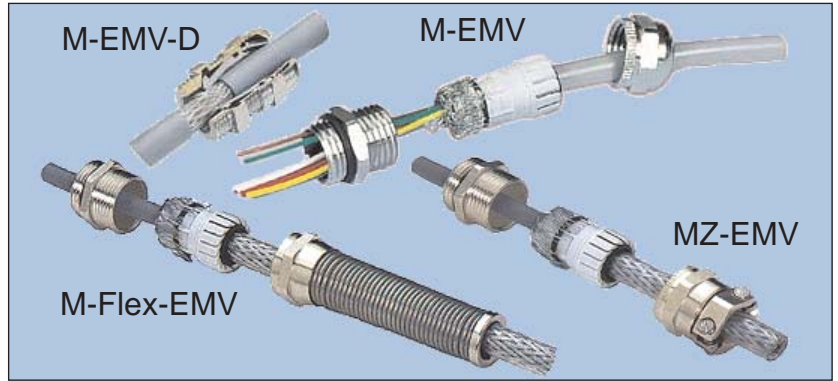


## HSK-EMV Industry Standard

Strain relief fittings in all popular thread types and sizes for a reliable low-ohm shield used in the following areas:

- Machine, apparatus and plant equipment.
- Measuring, control & feedback systems
- Control cabinets
- Railroad cars and vehicles
- Power plants (hydro, gas, coal or wind)

Also used in all areas where besides a reliable seal, high pull-out resistance and anti-rotation provisions, a dependable contact with the cable shield is required.



- METRICA-M-EMV** Metric EMI strain relief fittings
- METRICA-M-Flex-EMV** ... same use above ... with Flex Protection
- HSK-M-EMV** EMI compatible standard strain relief fittings
- HSK-M-Flex-EMV** ... same as above ... but with flex nut
- HSK-M-EMV-D** ... same as above ... but with feed-through suitable for cables with braided or foil shield
- HSK-MZ-EMV** ... same as above ... but with additional clamping provisions and flex protection
- GM-EMV** Special locking nut with cutting edges, suitable for plastic coated metal enclosures

### Assembly Instructions

#### HSK-M-EMV



##### Step 1

- + Strip cable
- + Expose braided shield

##### Step 2

- + Feed cable through dome nut and clamping insert
- + Fold braided shield over clamping insert
- + Make sure that braided shield overlaps the O-Ring by 3/32" (2 mm)



##### Step 3

- + Push clamping insert into body and tighten dome nut
- + Assemble into housing
- + Finished!



### Assembly Instructions

#### HSK-M-EMV-D

##### Option 1

##### Feed-through of cable and shield (braided or foil)

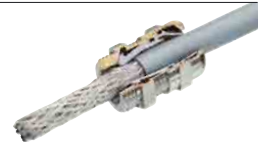
- + Expose shield approximately 7/16" (10 mm)
- + Insert cable into fitting until the shield reaches the contact position
- + Tighten dome nut



##### Option 2

##### Feed-through of shield (braided or foil)

- + Remove cable jacket to expose the shield as required
- + Insert cable into fitting until the shield reaches the contact position
- + Tighten dome nut



##### Option 3

##### Termination of the braided shield in the fitting

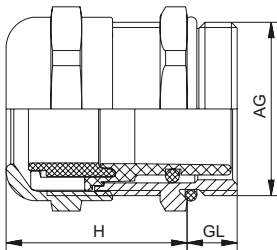
- + Strip cable jacket and braided shield to different lengths
- + For small diameter cables fold the braided shield back over the cable jacket
- + Insert cable into fitting until the shield reaches the contact position
- + Tighten dome nut



## METRICA-M-EMV

### Industry Standard

METRICA-M-EMV (Metric)  
Metric EMI strain relief fittings



Material: Nickel plated brass  
Clamping insert: PA (Nylon)  
Seal: Buna-N  
O-Ring: Buna-N  
Protection: IP 68 – 10 bar within the specified clamping range

Operating Temperature: -40 °C – 100 °C (-40 °F – 212 °F)



International Certifications pending

AG	∅k mm	GL mm	H mm	 mm	Number	GL mm	Number elongated
M 12 x 1,5	4 - 7	6	20	14	1.683.1200.50	10	1.683.1200.30
M 12 x 1,5	2 - 5	6	20	14	1.683.1200.51	10	1.683.1200.31
M 16 x 1,5	6 - 10	6	25	19	1.683.1600.50	10	1.683.1600.30
M 16 x 1,5	3 - 7	6	25	19	1.683.1600.51	10	1.683.1600.31
M 20 x 1,5	8 - 13	6,5	26	24	1.683.2000.50	10	1.683.2000.30
M 20 x 1,5	7 - 10	6,5	26	24	1.683.2000.51	10	1.683.2000.31
M 25 x 1,5	11 - 17	7	29	29	1.683.2500.50	12	1.683.2500.30
M 25 x 1,5	8 - 13	7	29	29	1.683.2500.51	12	1.683.2500.31
M 32 x 1,5	11 - 21	8	37	34	1.683.3200.50	12	1.683.3200.30
M 32 x 1,5	10 - 15	8	37	34	1.683.3200.51	12	1.683.3200.31
M 40 x 1,5	19 - 28	8	40,5	44	1.683.4000.50	15	1.683.4000.30
M 40 x 1,5	15 - 23	8	40,5	44	1.683.4000.51	15	1.683.4000.31
M 50 x 1,5	27 - 35	9	49,5	55	1.683.5000.50	15	1.683.5000.30
M 50 x 1,5	22 - 29	9	49,5	55	1.683.5000.51	15	1.683.5000.31
M 63 x 1,5	34 - 48	10	49	68	1.683.6300.50	15	1.683.6300.30
M 63 x 1,5	28 - 39	10	49	68	1.683.6300.51	15	1.683.6300.31

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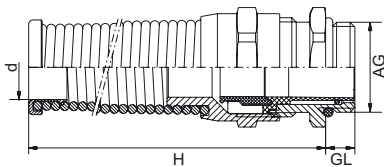


## METRICA-M-Flex-EMV

### Industry Standard

#### METRICA-M-Flex-EMV (Metric)


Metric EMI strain relief fittings with Flex Protection



Material	Nickel plated brass
Steel spring	1.4310
Clamping insert	PA (Nylon)
Seal	Buna-N
O-Ring	Buna-N
Protection	IP 68 – 10 bar within the specified clamping range
Operating Temperature	-40 °C – 100 °C (-40 °F – 212 °F)



International Certifications pending

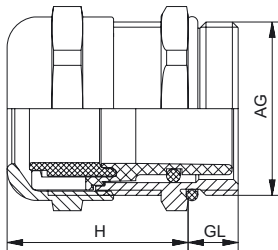
AG	$\varnothing$ mm	GL mm	H mm	d mm	 mm	Number	GL mm	Number elongated
M 12 x 1,5	4 - 7	6	57,5	6,8	14	1.684.1200.50	10	1.684.1200.30
M 12 x 1,5	2 - 5	6	57,5	6,8	14	1.684.1200.51	10	1.684.1200.31
M 16 x 1,5	6 - 10	6	80	10,3	19	1.684.1600.50	10	1.684.1600.30
M 16 x 1,5	3 - 7	6	80	10,3	19	1.684.1600.51	10	1.684.1600.31
M 20 x 1,5	8 - 13	6,5	100	14,3	24	1.684.2000.50	10	1.684.2000.30
M 20 x 1,5	7 - 10	6,5	100	14,3	24	1.684.2000.51	10	1.684.2000.31
M 25 x 1,5	11 - 17	7	115	18,4	29	1.684.2500.50	12	1.684.2500.30
M 25 x 1,5	8 - 13	7	115	18,4	29	1.684.2500.51	12	1.684.2500.31

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## HSK-M-EMV Industry Standard

HSK-M-EMV (Metric / NPT)  
EMI compatible standard strain relief fittings



Material	Nickel plated brass
Clamping insert	PA (Nylon)
Seal	Buna-N
O-Ring	Buna-N
Protection	IP 68 – 10 bar within the specified clamping range
Operating Temperature	-40 °C – 100 °C (-40 °F – 212 °F)



AG	∅K mm	GL mm	H mm	 mm	Number	GL mm	Number elongated
M 12 x 1,5	3 - 6,5	6,5	19	14	1.691.1200.50	10	1.691.1200.30
M 12 x 1,5	2 - 5	6,5	19	14	1.691.1200.51	10	1.691.1200.31
M 16 x 1,5	5 - 10	6	22	20	1.691.1600.50	10	1.691.1600.30
M 16 x 1,5	3 - 7	6	22	20	1.691.1600.51	10	1.691.1600.31
M 20 x 1,5	10 - 14	6	23	24	1.691.2000.50	10	1.691.2000.30
M 20 x 1,5	7 - 12	6	23	24	1.691.2000.51	10	1.691.2000.31
M 25 x 1,5	13 - 18	7	24	30	1.691.2500.50	12	1.691.2500.30
M 25 x 1,5	9 - 16	7	24	30	1.691.2500.51	12	1.691.2500.31
M 32 x 1,5	18 - 25	8	31	40	1.691.3200.50	12	1.691.3200.30
M 32 x 1,5	13 - 20	8	31	40	1.691.3200.51	12	1.691.3200.31
M 40 x 1,5	22 - 32	8	37	50	1.691.4000.50	15	1.691.4000.30
M 40 x 1,5	20 - 26	8	37	50	1.691.4000.51	15	1.691.4000.31
M 50 x 1,5	32 - 38	9	37	57	1.691.5000.50		
M 50 x 1,5	25 - 31	9	37	57	1.691.5000.51		
M 63 x 1,5	37 - 44	10	38	64/68	1.691.6300.50		
M 63 x 1,5	29 - 35	10	38	64/68	1.691.6300.51		
3/8" NPT	4 - 8	15	21	17/19	1.691.3800.70		
3/8" NPT	2 - 6	15	21	17/19	1.691.3800.71		
1/2" NPT	6 - 12	13	24	22/24	1.691.1200.70		
1/2" NPT	5 - 9	13	24	22/24	1.691.1200.71		
3/4" NPT	13 - 18	13	25	30	1.691.3400.70		
3/4" NPT	9 - 16	13	25	30	1.691.3400.71		

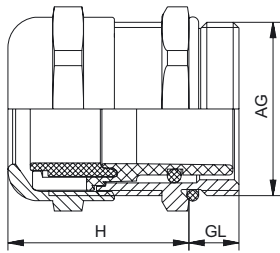
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## HSK-M-EMV Industry Standard

### HSK-M-EMV (PG)


EMI compatible standard strain relief fittings



Material: Nickel plated brass  
 Clamping insert: PA (Nylon)  
 Seal: Buna-N  
 O-Ring: Buna-N  
 Protection: IP 68 – 10 bar within the specified clamping range  
 Operating Temperature: -40 °C – 100 °C (-40 °F – 212 °F)



Available also in PVDF, -35 °C – 150 °C (-31 °F – 302 °F)

AG	∅K mm	GL mm	H mm	 mm	Number	GL mm	Number elongated
PG 7	3 - 6,5	5	19	14	1.691.0700.01	10	1.691.0700.60
PG 7	2 - 5	5	19	14	1.691.0700.15	10	1.691.0700.61
PG 9	4 - 8	6	21	17	1.691.0900.01	10	1.691.0900.60
PG 9	2 - 6	6	21	17	1.691.0900.15	10	1.691.0900.61
PG 11	5 - 10	6	22	20	1.691.1100.01	10	1.691.1100.60
PG 11	3 - 7	6	22	20	1.691.1100.15	10	1.691.1100.61
PG 13,5	6 - 12	6,5	24	22	1.691.1300.01	10	1.691.1300.60
PG 13,5	5 - 9	6,5	24	22	1.691.1300.15	10	1.691.1300.61
PG 16	10 - 14	6,5	23	24	1.691.1600.01	10	1.691.1600.60
PG 16	7 - 12	6,5	23	24	1.691.1600.15	10	1.691.1600.61
PG 21	13 - 18	7	24	30	1.691.2100.01	12	1.691.2100.60
PG 21	9 - 16	7	24	30	1.691.2100.15	12	1.691.2100.61
PG 29	18 - 25	8	29	40	1.691.2900.01	12	1.691.2900.60
PG 29	13 - 20	8	29	40	1.691.2900.15	12	1.691.2900.61
PG 36	22 - 32	8	35	50	1.691.3600.01	15	1.691.3600.60
PG 36	20 - 26	8	35	50	1.691.3600.15	15	1.691.3600.61
PG 42	32 - 38	9	37	57	1.691.4200.01	15	1.691.4200.60
PG 42	25 - 31	9	37	57	1.691.4200.15	15	1.691.4200.61
PG 48	37 - 44	10	38	64	1.691.4800.01	15	1.691.4800.60
PG 48	29 - 35	10	38	64	1.691.4800.15	15	1.691.4800.61

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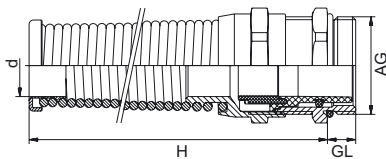


## HSK-M-Flex-EMV

### Industry Standard

#### HSK-M-Flex-EMV (Metric / NPT)

EMI compatible standard strain relief fittings with flex nut



Material	Nickel plated brass
Steel spring	1.4310
Clamping insert	PA (Nylon)
Seal	Buna-N
O-Ring	Buna-N
Protection	IP 68 – 10 bar within the specified clamping range
Operating Temperature	-40°C – 100°C (-40°F – 212 °F)



AG	$\varnothing$ mm	GL mm	H mm	d mm	 mm	Number	GL mm	Number elongated
M 12 x 1,5	3 - 6,5	6,5	55	6,8	14	1.624.1200.50	10	1.624.1200.30
M 12 x 1,5	2 - 5	5	55	6,8	14	1.624.1200.51	10	1.624.1200.31
M 16 x 1,5	5 - 10	6	77	10,3	20	1.624.1600.50	10	1.624.1600.30
M 16 x 1,5	3 - 7	6	77	10,3	20	1.624.1600.51	10	1.624.1600.31
M 20 x 1,5	10 - 14	6	98	14,3	24	1.624.2000.50	10	1.624.2000.30
M 20 x 1,5	7 - 12	6	98	14,3	24	1.624.2000.51	10	1.624.2000.31
M 25 x 1,5	13 - 18	7	111	18,4	30	1.624.2500.50	12	1.624.2500.30
M 25 x 1,5	9 - 16	7	111	18,4	30	1.624.2500.51	12	1.624.2500.31
3/8" NPT	4 - 8	15	66	8,2	17 / 19	1.624.3800.70		
3/8" NPT	2 - 6	15	66	8,2	17 / 19	1.624.3800.71		
1/2" NPT	6 - 12	13	88	12,3	22 / 24	1.624.1200.70		
1/2" NPT	5 - 9	13	88	12,3	22 / 24	1.624.1200.71		
3/4" NPT	13 - 18	13	111	18,4	30	1.624.3400.70		
3/4" NPT	9 - 16	13	111	18,4	30	1.624.3400.71		

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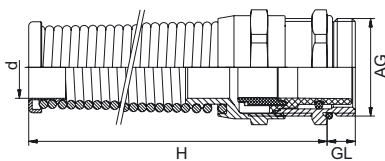


## HSK-M-Flex-EMV

### Industry Standard

#### HSK-M-Flex-EMV (PG)


EMI compatible standard strain relief fittings with flex nut



Material	Nickel plated brass
Steel spring	1.4310
Clamping insert	PA (Nylon)
Seal	Buna-N
O-Ring	Buna-N
Protection	IP 68 – 10 bar within the specified clamping range
Operating Temperature	-40 °C – 100 °C (-40 °F – 212 °F)

**RoHS**

Available also in PVDF, -35 °C – 150 °C (-31 °F – 302 °F)

AG	∅k mm	GL mm	H mm	d mm	 mm	Number	GL mm	Number elongated
PG 7	3 - 6,5	5	55	6,8	14	1.624.0700.01	10	1.624.0700.60
PG 7	2 - 5	5	55	6,8	14	1.624.0700.15	10	1.624.0700.61
PG 9	4 - 8	6	66	8,2	17	1.624.0900.01	10	1.624.0900.60
PG 9	2 - 6	6	66	8,2	17	1.624.0900.15	10	1.624.0900.61
PG 11	5 - 10	6	77	10,3	20	1.624.1100.01	10	1.624.1100.60
PG 11	3 - 7	6	77	10,3	20	1.624.1100.15	10	1.624.1100.61
PG 13,5	6 - 12	6,5	88	12,3	22	1.624.1300.01	10	1.624.1300.60
PG 13,5	5 - 9	6,5	88	12,3	22	1.624.1300.15	10	1.624.1300.61
PG 16	10 - 14	6,5	98	14,3	24	1.624.1600.01	10	1.624.1600.60
PG 16	7 - 12	6,5	98	14,3	24	1.624.1600.15	10	1.624.1600.61
PG 21	13 - 18	7	111	18,4	30	1.624.2100.01	12	1.624.2100.60
PG 21	9 - 16	7	111	18,4	30	1.624.2100.15	12	1.624.2100.61

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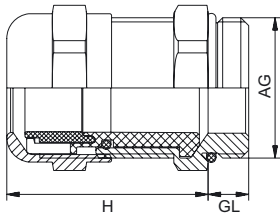


## HSK-M-EMV-D

### Industry Standard

#### HSK-M-EMV-D (Metric / PG / NPT)

EMI compatible standard strain relief fittings with feed-through suitable for cables with braided or foil shield



Material	Nickel plated brass
Clamping insert	Metal coated PA (Nylon)
Seal	Buna-N
O-Ring	Buna-N
Protection	IP 68 – 10 bar within the specified clamping range
Operating Temperature	-40 °C – 100 °C (-40 °F – 212 °F)



AG	$\varnothing$ mm	GL mm	H mm	 mm	Number	GL mm	Number elongated
M 12 x 1,5	3 - 6,5	6,5	25	14	1.631.1200.50	10	1.631.1200.30
M 16 x 1,5	5 - 10	6	32	20	1.631.1600.50	10	1.631.1600.30
M 20 x 1,5	10 - 14	6	33	24	1.631.2000.50	10	1.631.2000.30
M 25 x 1,5	13 - 18	7	39	30	1.631.2500.50	12	1.631.2500.30
M 32 x 1,5	18 - 25	8	45	40	1.631.3200.50	12	1.631.3200.30
M 40 x 1,5	24 - 32	8	51	50	1.631.4000.50	15	1.631.4000.30
M 50 x 1,5	32 - 38	9	57,5	57	1.631.5000.50		
M 63 x 1,5	37 - 44	10	52	64/68	1.631.6300.50		
PG 7	3 - 6,5	5	24	14	1.631.0700.01		
PG 9	4 - 8	6	28	17	1.631.0900.01		
PG 11	5 - 10	6	29	20	1.631.1100.01		
PG 13,5	6 - 12	6,5	31	22	1.631.1300.01		
PG 16	10 - 14	6,5	32	24	1.631.1600.01		
PG 21	13 - 18	7	38	30	1.631.2100.01		
PG 29	18 - 25	8	43	40	1.631.2900.01		
PG 36	24 - 32	8	48	50	1.631.3600.01		
PG 42	32 - 38	9	45	57	1.631.4200.01		
PG 48	37 - 44	10	46	64	1.631.4800.01		
3/8" NPT	4 - 8	15	29	17/19	1.631.3800.70		
1/2" NPT	6 - 12	13	32,5	22/24	1.631.1200.70		
3/4" NPT	13 - 18	13	39	30	1.631.3400.70		

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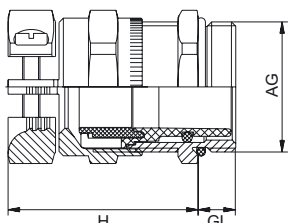


## HSK-MZ-EMV

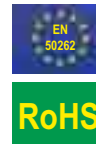
### Industry Standard

#### HSK-MZ-EMV (Metric / PG / NPT)

EMI compatible standard strain relief fittings with additional clamping provisions and flex protection



Material: Nickel plated brass  
 Clamping insert: PA (Nylon)  
 Seal: Buna-N  
 O-Ring: Buna-N  
 Protection: IP 68 – 10 bar within the specified clamping range  
 Operating Temperature: -40°C – 100°C (-40°F – 212°F)



\* Available also in PVDF, -35°C – 150°C (-31°F – 302°F)

AG	Øk	GL	H		Number	GL	Number elongated
	mm	mm	mm	mm		mm	
M 12 x 1,5	3 - 6,5	6,5	26	14	1.692.1200.50	10	1.692.1200.30
M 16 x 1,5	6 - 10	6	29	20	1.692.1600.50	10	1.692.1600.30
M 20 x 1,5	10 - 14	6	32	24	1.692.2000.50	10	1.692.2000.30
M 25 x 1,5	13 - 18	7	35	30	1.692.2500.50	12	1.692.2500.30
M 32 x 1,5	18 - 25	8	41	40	1.692.3200.50	12	1.692.3200.30
M 40 x 1,5	22 - 32	8	48	50	1.692.4000.50	15	1.692.4000.30
M 50 x 1,5	32 - 38	9	51	57	1.692.5000.50		
M 50 x 1,5	25 - 31	9	51	57	1.692.5000.51		
M 63 x 1,5	37 - 44	10	52	64/68	1.692.6300.50		
M 63 x 1,5	29 - 35	10	52	64/68	1.692.6300.51		
PG 7 *	3 - 6,5	5	26	14	1.692.0700.01	10	1.692.0700.60
PG 9 *	4 - 8	6	28	17	1.692.0900.01	10	1.692.0900.60
PG 11 *	6 - 10	6	29	20	1.692.1100.01	10	1.692.1100.60
PG 13,5 *	6 - 12	6,5	33	22	1.692.1300.01	10	1.692.1300.60
PG 16 *	10 - 14	6,5	32	24	1.692.1600.01	10	1.692.1600.60
PG 21 *	13 - 18	7	35	30	1.692.2100.01	12	1.692.2100.60
PG 29 *	18 - 25	8	41	40	1.692.2900.01	12	1.692.2900.60
PG 36 *	22 - 32	8	48	50	1.692.3600.01	15	1.692.3600.60
PG 42 *	32 - 38	9	51	57	1.692.4200.01	15	1.692.4200.60
PG 42 *	25 - 31	9	51	57	1.692.4200.15	15	1.692.4200.61
PG 48 *	37 - 44	10	51	64	1.692.4800.01	15	1.692.4800.60
PG 48 *	29 - 35	10	51	64	1.692.4800.15	15	1.692.4800.61
3/8" NPT	4 - 8	15	28	17/19	1.692.3800.70		
1/2" NPT	6 - 12	13	29	22/24	1.692.1200.70		
3/4" NPT	13 - 18	13	35	30	1.692.3400.70		

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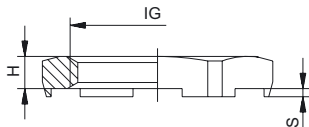


## GM-EMV

### Industry Standard

#### GM-EMV (Metric / PG)


Special locking nut with cutting edges, suitable for plastic coated metal enclosures



Material

Nicked plated brass



IG	H mm	 mm	S mm	Number
M 12 x 1,5	2,8	15	0,7	1.167.1200.50
M 16 x 1,5	2,8	19	0,7	1.167.1600.50
M 20 x 1,5	3,0	24	0,7	1.167.2000.50
M 25 x 1,5	3,5	30	0,7	1.167.2500.50
M 32 x 1,5	4,5	36	0,7	1.167.3200.50
M 40 x 1,5	5,0	46	0,7	1.167.4000.50
M 50 x 1,5	5,0	60	0,7	1.167.5000.50
M 63 x 1,5	6,0	70	0,7	1.167.6300.50
PG 9	2,8	18	0,7	1.167.0900.01
PG 11	3,0	21	0,7	1.167.1100.01
PG 13,5	3,0	23	0,7	1.167.1300.01
PG 16	3,0	26	0,7	1.167.1600.01
PG 21	3,5	32	0,7	1.167.2100.01
PG 29	4,0	41	0,7	1.167.2900.01
PG 36	5,0	51	0,7	1.167.3600.01
PG 42	5,0	60	0,7	1.167.4200.01
PG 48	5,5	64	0,7	1.167.4800.01

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