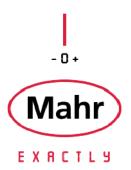
# آزما صنعت گراد



نماینده انحصاری کمپانی Mahr آلمان





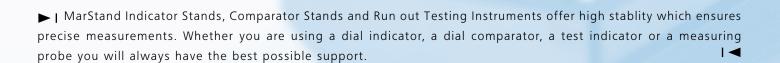
▶ | MarStand. Indicator Stands, Comparator Stands, Run out Testing Instruments

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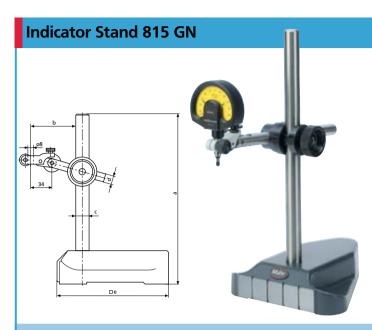
www.mahr.com, WebCode 210



# ► | MarStand. Indicator Stands, Comparator Stands, Run out Testing Instruments

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### **Features**

- Rugged base ensures both maximum stability and sturdiness
- The upper side of the base has a convenient hand grip
- Moves easily over surfaces without vibration
- Front of the base is ground to allow movement of the stand along edges and rules
- Stable due to the three point support

- Support arm can be finely adjusted
- Post and support arm are made from stainless steel
- Indicator can be rotated through ± 90°

### **Technical Data**

Total height with base		Max. projection of support arm	Post dia.		Base surface	Fine adjustment range	Weight	Order no.* Mount dia.	Order no.* Mount dia.
mm	a inch	<b>b</b> mm	<b>c</b> mm	<b>d</b> mm	<b>e</b> mm	mm	kg	8H7	3/8″
300 500 750	12" 20" 30"	185 200 230	18 25 35	14 18 25	150 x 150 190 x 180 190 x 180	2 2 2	4.2 9 10	4413000 4413001 4413005	4413050 4413051 4413052

\* excludes indicating instrument

# **Indicator Stand 2400**

### **Features**

- A stable Height Stand for electronic measurement,
- Fine adjustment in the base allows easy operator set-up, even at high magnification. Up to 3.8 mm / .150" adjustment when arms fully extended
- · Collar has Teflon bearings and metal-to-metal clamping.
- Post is thermally isolated from heat transfer from the base.
- Arm lock is independent of the pivot lock.

- Uses vertical lug mounting
- EHE-2056 Lever gage head mounts directly to arm (as shown) EHE-2048 Lever gage head requires an EAM-1071 adaptor CP-83 Extra arm and swivel

clamp assembly (allows mounting two lever gage heads on one stand)

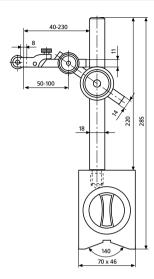
### **Technical Data**

Total hei	ght v	vith base	Arr	n re	each	Post	dia.	force	Base s	urface	Fine adj	ustm	ent range	Order no.*
mm	/	inch	mm	/	inch	mm	/	inch	mm ,	/ inch	mm	/	inch	
457	/	18"	254	/	10"	31.8	/	1.25"	161.7 x 94	6.2 x 3.7	3.8	/	0.150"	2400

excludes indicating instrument

### Indicator Stand 815 MA with magnetic base





### **Features**

- Support arm with two joints
- Base has a powerful
- ON/OFF permanent magnet

  Magnetic force is active across the surfaces and the V-shaped bottom plus the front of the base
- Post and support arm are made from stainless steel
- Support arm can be finely adjusted

### **Technical Data**

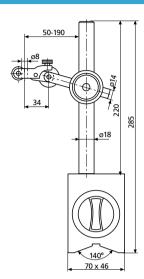
	Total height V-way fo with base shaft dia		Magnetic force	Fine adjustment range	Weight	Order no.* Mount dia.	Order no.* Mount dia.	Order no. wooden
mm	inch	mm	N	mm	kg	8H7	3/8"	case
285	11.2"	20 - 100	450	2	2.5	4416000	4416050	4416001

<sup>\*</sup> excludes indicating instrument



### Indicator Stand 815 MB with magnetic base





### **Features**

- Support arm with one joint
- Base has a powerful ON/OFF permanent magnet
  • Magnetic force is active
- across the surfaces and the V-shaped bottom plus the front of the base
- Post and support arm are made from stainless steel
- Support arm can be finely adjusted
- Indicating instrument can be rotated through ± 90°

### **Technical Data**

	Total height with V-way for base shaft dia		Magnetic force	Fine adjustment range	Weight	Order no.* Mount dia.	Order no.* Mount dia.	Order no. wooden
mm	inch	mm	N	mm	kg	8H7	3/8"	case.
285	11.2"	20 - 100	450	2	2.2	4417000	4417050	4416001

<sup>\*</sup> excludes indicating instrument

### **Indicator Stand 815 MG** with magnetic base



### **Features**

- 3D indicator Stand, can reach any position within the operating range
- Easy to position all 3 joints, position can be securely fixed with a handle
- Robust well dimensioned components, excellent stability and accuracy
- Maintenance free mechanical clamping system
- Arm components are made of black anodized high quality aluminum
- Dial Indicator holder with mount dia. 8 mm and dovetail for Test Indicators
- Equipped with micro fine adjustment, free of backlash
- Outstandingly easy to set-up, high repeatability
- Very powerful ON/OFF magnet
- Ideal for measuring instruments with umresolution (only with 4420380)

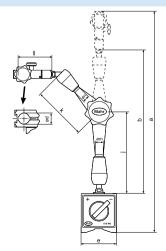
### **Technical Data**

	height base	Projection (max.)	V-way for shaft dia.	Magnetic force	Mounting bore	Fine adjustment range	Weight	Order no.*
mm	inch	mm	mm	N		mm	kg	
224	8.82"	130		300			1.6	4420350
316	12.44"	200	6 –120	800	8H7	2	1.7	4420360
401	15.78"	280	0 - 120	000	0117		1.8	4420370
444	17.48"	330		1000		5	1.9	4420380

<sup>\*</sup> excludes indicating instrument

### **Dimensions**

er no.
20350
20360
20370
20380
2

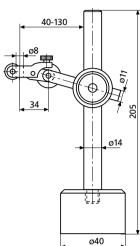






### Indicator Stand 815 P with magnetic base





### **Features**

- Support arm has one joint
- Sturdy circular base with permanent magnet
- Post and support arm are made from stainless steel
- Support arm can be finely adjusted
- Indicating instrument can be rotated through  $\pm$  90°

### **Technical Data**

<b>Total height</b> with base mm <i>inch</i>		Magnetic force	Fine adjustment range	Weight	<b>Order no.*</b> Mount dia.	<b>Order no.*</b> Mount dia.
mm	inch	N	mm	kg	8H7	3/8"
205	8"	250	1.5	0.7	4422000	4422050

<sup>\*</sup> excludes indicating instrument



### Post and Support Assemblies 815 X

For application in inspection equipment for conducting length and concentricity (run-out) tests

### 815 XN

for mounting in a T-slot

- Two joints
- Knurled nut for clamping to the post
- Post and support arm are made from stainless steel
- With fine adjustment

Order no. 4424000

### 815 XMA

with mounting thread

- Two joints
- Post and support arm are made from stainless steel
- With fine adjustment

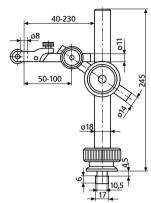
Order no. 4424005

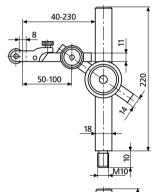
### 815 XMB

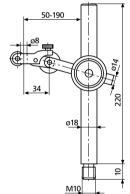
with mounting thread

- One ioint
- Post and support arm are made from stainless steel
- With fine adjustment

Order no. 4424006







### 815 XMS

especially stable version with mounting thread

- One joint
- Post and support arm are made from stainless steel
- With fine adjustment

Post height Order no.

285 mm **4435011** 485 mm **4435015** 

### 815 XMG

with mounting thread

- Flexible in any direction, arm can be locked in position
- With fine adjustment

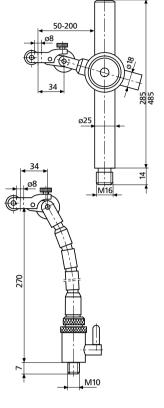
Order no. 4424010

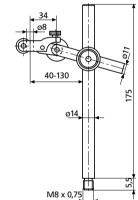
### 815 XP

with mounting thread

- One ioint
- Post and support arm are made from stainless steel
- With fine adjustment

Order no. 4424015





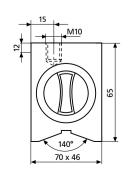
# Magnetic Bases 815 Y

For the setting up of inspection equipment or as a base for adjusting devices on machine tools.

### 815 YM Standard Version

- Base has a powerful ON/OFF permanent magnet
- With threaded mounting hole
- V-groove in base
- Front is flat
- Magnetic force 450 N

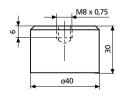
Order no. 4425000



### 815 YP Round Version

- Permanent magnet plus threaded mounting hole
- Underside of the base is flat
- Magnetic force 250 N

Order no. 4425002





### **Center Bench 818**



### **Features**

 Ideal for quick and accurate concentricity / run-out checks

### Bench:

- Flatness of the surface is in accordance to DIN 876/1
- Two T-slots for Tailstock and / or Support Arm

### Tailstock:

- Both Tailstocks can be relocated (slide into position)
- The Tailstock on the right side has a retractable (spring actuated) precision aligned center
- The Tailstocks have a peak height of 75 mm with a 90° prism for workpieces without a center, to a diameter of 20 mm (.79")

### **Support Arm 818 XNB:**

- Support arm with one joint
- with fine adjustment

### **Technical Data**

	ght of nters (inch)	<b>Dista</b> i <b>between</b> mm		Base size (L x W) mm	Lateral and/or height difference of Tailstocks mm	<b>T-slot</b> <b>width</b> mm	<b>Weight</b> kg	Order no.*
50	(2")	0 - 200	(0-8")	350 x 110	0.01	10H7	8	4622200
75	(3")	0 - 350	(0-14")	500 x 110	0.01	10H7	12	4622201
100	(4")	0 - 450	(0-18")	700 x 180	0.01	12H7	35	4622202
150	(6")	0 - 450	(0-18")	700 x 180	0.01	12H7	38	4622203

<sup>\*</sup> excludes indicating instrument

### Center Bench 818 with V-support

V-support Base size height (L x W) mm mm	height	<b>T-slot</b> <b>width</b> mm	<b>Weight</b> kg	<b>Order no.</b> (excludes indicating instrument)
70 350 x 110	70	10H7	6.5	4622260
70 500 x 110		10H7	9.5	4622261
120 700 x 180		12H7	30	4622262

### **Center Bench 818 with Roller support**

Roller support height mm	Base size (L x W) mm	T-slot width mm	<b>Weight</b> kg	Order no. (excludes indicating instrument)
70	350 x 110	10H7	6.5	4622250
70	500 x 110	10H7	9.5	4622251
120	700 x 180	12H7	30	4622252



### Modular Units 818 for individual center benches

_									
Α	_	r	Δ	c	c	<u> </u>	rı	Δ	C

**V-support anvils 818 pe** in pairs (to change with peaks)

Center height mm	<b>Dia. range</b> mm	Order no.
50 / 75	3 - 15	4622210
100	8 - 45	4622211

### V-support 818 pb in pairs

<b>Height *</b> mm	<b>Dia. range</b> mm	T-slot width mm	Order no.
65	5 - 20	10	4622215
100	5 - 45	12	4622216

### Roller support 818 ab in pairs

Height *	<b>Dia. range</b> mm	T-slot width mm	Order no.
65	3 - 20	10	4622220
100	3 - 45	12	4622221

<sup>\*</sup> referred to the center of shaft with dia. 10 mm

### **Supporting table**

<b>Center height</b> mm	Base size (L x W) mm	Order no.
50	350 x 110	4622265
75	500 x 110	4622266
100 / 150	700 x 180	4622267

### Pointed support in pairs

Center height	Order no.
mm	
50	4622270
75	4622271
100	4622272
150	4622273

### Support arm 818 XNB

Center height mm		ort Arm Length mm	Order no.
50 / 75	18	210	4622275
100	18	260	4622276
150	18	360	4622277









### **Small Comparator Stands 820**

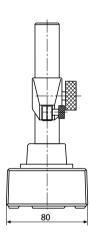
### 820 N

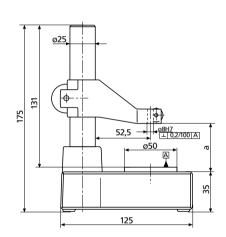


Indicating instruments are sold seperately

### **Features**

- Sturdy design
- Plate is made from either hardened steel or black granite or ceramic
- Rugged ground post made of stainless steel
- Fine adjustment, consisting of a strong, rigid parallel spring assembly (Small Comparator Stands 820 FG and 820 FC)
- Adjustable support arm for a indicating instrument





820 N

Technical Data									
	orking ange a (inch)	Grade	Flatness tolerance (DIN 876) mm	Fine adjustment range	<b>Weight</b> kg	Order no.* Mount dia. 8H7	Order no.* Mount dia. 3/8 inch	Remarks	
<b>820 N</b> 0 - 110 <b>820 NG</b> 0 - 130 <b>820 FG</b> 0 - 130 <b>820 NC</b> 0 - 110 <b>820 FC</b> 0 - 110 * excludes indicating	(0 - 4.3") (0 - 5.1") (0 - 5.1") (0 - 4.3") (0 - 4.3")	steel granite granite ceramic ceramic	00 0 0 00 00	± 0.2 ± 0.2	2.6 3.2 3.2 4.0 4.0	4430000 4430100 4431100 4432100 4433100	4430018 4430110 4431110 4432120 4433110	fine adjustment	

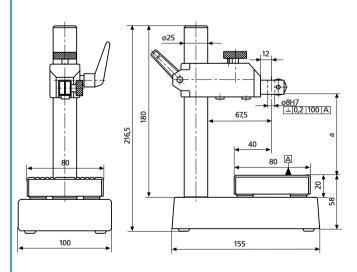


## **Small Comparator Stands 820**

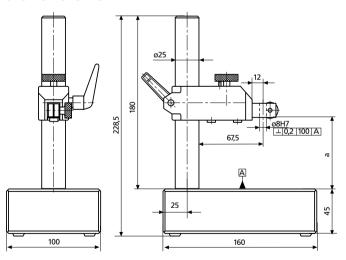




### 820 FC / 820 NC



### 820 FG / 820 NG



### **Accessories**

V-Block 108° for checking small, cylindrical work pieces for out of roundness and polygon errors (for further details please refer to Page 12-9)

		Order no.
107 V	(Single) (Pair)	4229000 4229001



### Comparator Stands 35 B



### **Features**

- Model 35B has a precision ground base. Indicator arms with and without fine adjustment are available. Models are also available with lapped anvils for the highest precision work.
- Alternate post lengths, Indicators, Anvils and special fixturing available upon request. Contact Mahr Federal Technical Assistance

Excludes indicating instrument. Only indicating instruments that have a horiziontal lug back can be used.

### **Technical Data**

Capacity	Post Diameter	Throat Depth	Reference Surface	Gaging Arm	Anvil	Order no. (w/o indicator)
<b>0 - 8.75"</b> 0 - 222 mm	<b>1.25"</b> 31.75 mm	<b>2.5"</b> 62.5 mm	<b>1 x 3"</b> 25 x 75 mm	adjustable AM-146 plain AM-3 adjustable AM-146 adjustable AM-146	plain none none serrated	OMI-35B-21 OMI-35B-30 OMI-35B-32 OMI-35B-41

### **Accessories**

### **Replacement Anvils**

• Anvils for Comparator Stands 35B-21 and 35B-41 are available: Surface is lapped flat to within .00001"

Туре	Dimensions	Order no.
plain surface	25 x 25 x 75 mm <b>(1 x 1 x 3")</b>	AL-96
serrated surface	25 x 25 x 75 mm (1 x 1 x 3")	AL-97

### **Fine Adjustment Arm**

• The Fine Adjust Arm is available separately to convert 35B Comparator Stands with plain arms

	Dimensions	Order no.	Range	Order no.
9	25 x 25 x 75 mm (1 x 1 x 3")	AL-96	1.5 mm / <b>0.060"</b>	AM-146
face	25 x 25 x 75 mm (1 x 1 x 3")	AL-97		

Readout Specification: Because of the versatility of the Series 35B and NB-60 Stands, almost any type of readout can be used.

· With Dial or Digital Indicators having a horizontal lug back

### **Comparator Stand NB-60**



### **Features**

• Model NB-60 and NB-61 have the largest base and greatest throat depth. Indicator arms with and without fine adjust are available. Base has a pattern of 1/4-20 tapped holes for mounting platens or special tooling

Shown with optional 1086 indicating instrument. Only indicating instruments that have a horiziontal lug back can be used.

### **Technical Data**

Capacity	Post Diameter	Throat Depth	Reference Surface	Gaging Arm	Anvil	Order no. (w/o indicator)
0 - 8"	1.25"	4.88"	9.38 x 6.5"	plain AM-10011	none	OMI-NB-60
0 - 203 mm	31.75 mm	124 mm	238 x 165 mm	adjustable AM-147	none	OMI-NB-61

### **Accessories**

### **Platens**

Туре	Dimensions	Order no.
serrated	114 x 152 mm <b>(4.5 x 6")</b>	PL-99
serrated	152 x 203 mm <b>(6 x 8")</b>	PL-147

Note: (4) screws SW-1338 are required

### **Fine Adjustment Arm**

• The Fine Adjustment Arm is available separately to convert NB-60 Comparator Stands with plain arms

Range	Order no.
1.5 mm / <b>0.060"</b>	AM-147

Readout Specification: Because of the versatility of the Series 35B and NB-60 Stands, almost any type of readout can be used.

With Air Probes or Electronic Probes having a 3/8 in dia., order Mounting Adapter AAD-66

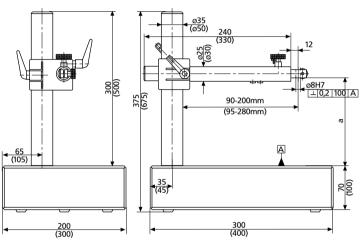
### **Large Comparator Stands 821**



### **Features**

- · Extremely sturdy design
- Plate is made from lapped black granite
- Heavy duty post and adjustable support arm for maximum stability
- Post made from stainless steel and precision ground

- Support arm has a fall brake
- Fine adjustment, consisting of a strong, rigid parallel spring assembly (Large Comparator Stand 821FG)



821 FG

# **Technical Data**

	rar	rking nge a	Flatness tolerance (DIN 876)	Fine adjustment range	Weight	<b>Order no.*</b> Mount dia. 8H7	Order no.* Mount dia. 3/8 inch	Remarks
	mm	(inch)	Grade	mm	kg			
821 NG	0 - 250	(0 -10")	0	-	15.8	4435100	4435150	
	0 - 430	(0 -17")	0	_	48	4435110	4435160	
821 FG	0 - 250	(0 -10")	0	± 0.2	15.8	4435101	4435151	Fine adjustment
	0 - 430	(0 -17")	0	± 0.2	48	4435111	4435161	Fine adjustment

<sup>\*</sup> excludes indicating instrument

### **Accessories**

V-Block 108° for checking small, cylindrical work pieces for out of roundness and polygon errors (for further details please refer to Page 12-9)

Orde	er no.
------	--------

107 V	(Single)	4229000
	(Pair)	4229001



### **Heavy Comparator Stands 824**



**Precision Stand 824 NT** 

Without fine adjustment



**Precision Stand 824 FT** 

With fine adjustment, consisting of a strong, rigid parallel spring assembly



**Precision Stand 824 GT** 

For Large Type Millimess. With fine adjustment by way of vertical movement of the mounting socket

### **Features**

### **Basic Units**

- Sturdy, T-shaped base which is made from a special cast
- Extremely stable
- Fine adjustment, consisting of a strong, rigid parallel spring assembly
- Support arm has a rotation lock, height of the arm via the toothed rack is adjustable

- Measuring faces are hardened and lapped
- Longitudinal grooves
- Plates for sum measurements have a 8H7 mm mounting hole for Inductive Probes

### **Technical Data**

### **Basic Unit**

	Working range		Fine adjustment Weight range		Order no.* Order no.*  Mount dia. Mount dia.		
	mm	(inch)	mm	kg	8H7	28H7	3/8 inch
824 NT	0 - 210	(0 - 8.2")	-	17	4442100		4442105
824 FT	0 - 210	(0 - 8.2")	± 0.2	19	4443100		4443105
824 GT	0 - 200	(0 - 8.0")	± 1.5	18		4444200	

\* excludes indicating instrument, excludes plate

### **Plates**

	Plate size		Plate size Flatness tolerance		Weight	Order no.	Remarks
	mm		μm	mm	kg		
827 b 31	100 x	40	1		1.2	4082731	for single measurement
827 b 32	100 x	40	1	8H7	1.0	4082732	for sum measurement
827 b 33	130 x	130	1		2.5	4082733	for single measurement
827 b 34	130 x	130	1	8H7	2.5	4082734	for sum measurement

### **Accessories**

V-Block 108° for checking small, cylindrical work pieces for out of roundness and polygon errors (for further details please refer

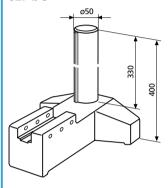
to rage 12-9)		Order no.
107 V	(Single) (Pair)	4229000 4229001

## Modular Units 827 for individual comparator stands

For the combination of comparator stands for special tasks, to adapt existing stands as well as the incorporation into inspection equipment for all types of length measurements.

### **Base with Post**

827 b 5

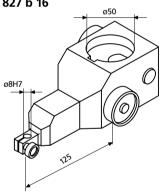


- T-shaped base which is made from a special cast iron
- Post has a chrome finish

4082705 Order no.

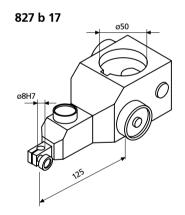
### **Support Arms**

827 b 16



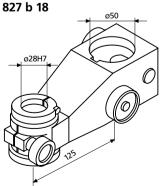
- Mounting hole 8 mm
- Without fine adjustment

Order no. 4082716



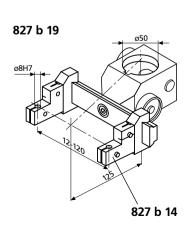
- Mounting hole 8 mm
- Fine adjustment, consisting of a strong, rigid parallel spring assembly

4082717 Order no.



- Mounting hole 28 mm

4082718



### 827 b 19

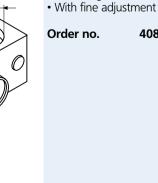
• Support arm with dovetail guide

4082719 Order no.

### 827 b 14

• With probe holder, mounting hole 8 mm

Order no. 4082714



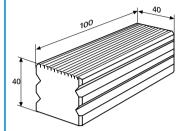
4082732



### Modular Units 827 for individual comparator stands

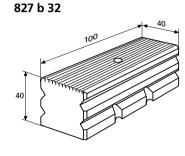
### **Plates**

### 827 b 31



- For single measurement
- Hardened and lapped
- Reversible
- Measuring surface has longitudinal grooves
- Flatness deviation 1 µm

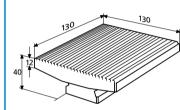
Order no.



- For sum measurement
- Measuring surface has longitudinal grooves, hardened and lapped
- With mounting hole 8H7 mm/ .375" and a clamp for inductive probes
- Flatness deviation 1 µm

Order no.

### 827 b 33



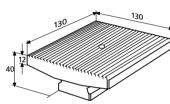
- For single measurement
- Large measuring surfaces which has longitudinal grooves, hardened and lapped

4082731

• Flatness deviation 1 μm

Order no. 4082733



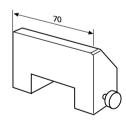


- For sum measurement
- Large measuring surfaces which have longitudinal grooves, hardened and lapped
- With mounting hole 8H7 mm/ .375" and a clamp for inductive probes
- Flatness deviation 1 μm

Order no. 4082734

### **Adjustable Stop**

### 827 b 35

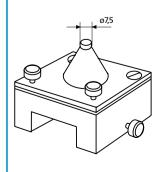


- Ensures that a work piece is correctly positioned
- To be attached to plates 827 b 31 and 827 b 32

4082735 Order no.

### **Attachment Stand**

827 b 36



- With adjustment screws for parallel alignment of 2 plan surfaces
- Particularly suitable for mounting Pin Gages 426 M
- To be attached to plates 827 b 31 and 827 b 32

Order no. 4082736

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