

# POLYMER MODIFIED BITUMEN PLANT (PMB)



Available standard models:

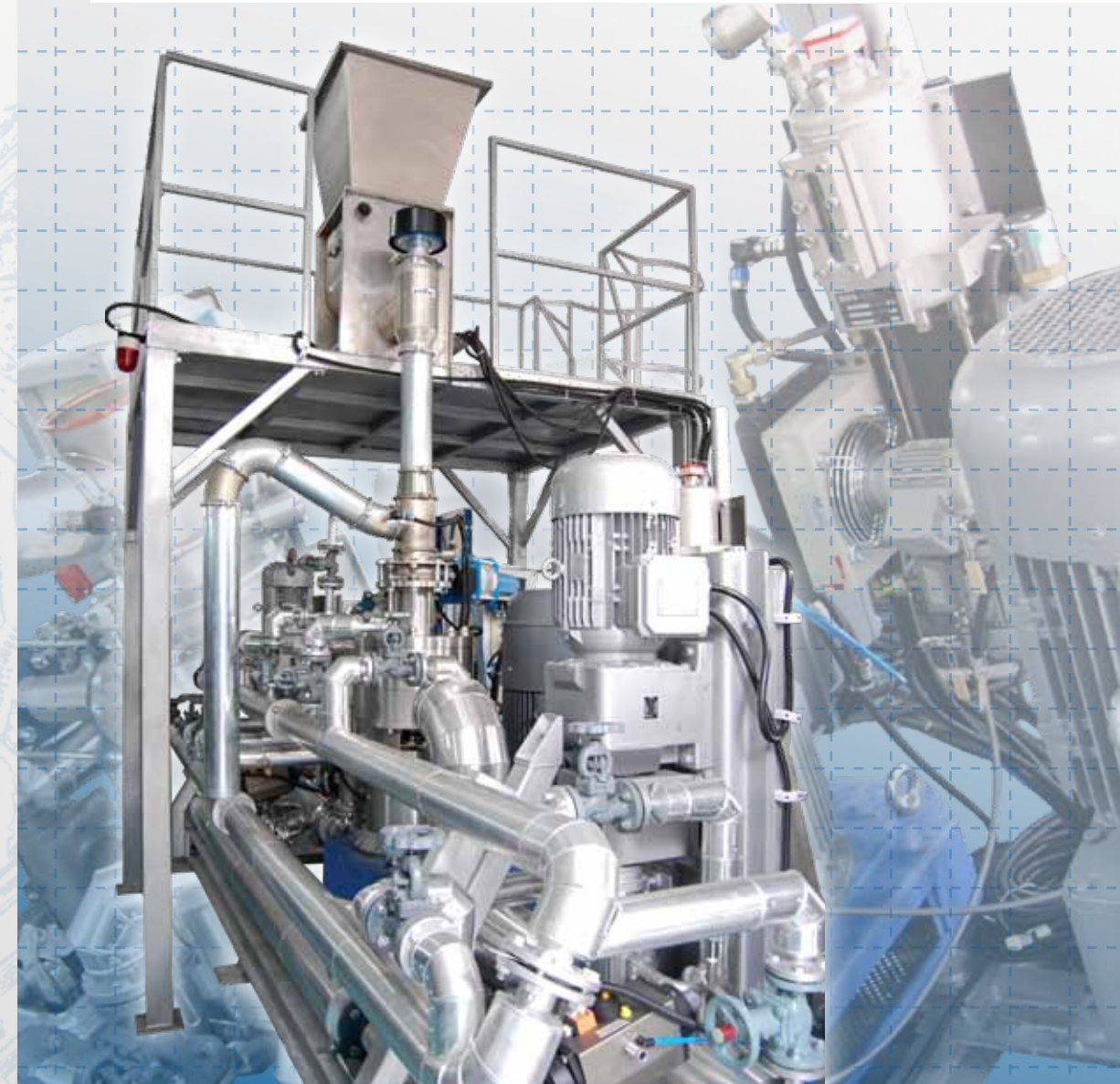
Model	Total flow capacity L/hr	Max. flow capacity polymer L/hr	Drive power approx. kW
DR 2000/05 PB	150 - 700	75	7.5
DR 2000/10 PB	500 - 2,500	400	18.5
DR 2000/20 PB	1,500 - 6,000	900	37.0
DR 2000/30 PB	3,000 - 15,000	3,700	75.0
DR 2000/50 PB	7,000 - 35,000	8,000	160.0

*\* On request : Larger capacities*

## Polymer Modified Bitumen Plant and R & D Pilot Plant

# IKA®

**IKA®**  
**100**  
years



## R & D PILOT PLANT



- Enable small scale trial down to 5L batch (minimal waste generated)
- Parameters obtained scalable to industrial sizes since system designed to same principle as industrial models
- Compact & self contained unit
- Easy to operate, readily movable & transportable
- Customisable

## Ready to assist you...

For further assistance or enquiry regarding R & D Bitumen Plant and other IKA® Process Technology product range, suitability of application purposes, customised solutions for your needs, trial applications, repair and servicing, please contact IKA® from the detail listed below:

IKA®-Werke GmbH & Co. KG  
Janke & Kunkel-Str. 10 · 79219 Staufen · Germany  
Tel. +49 7633 831-0 Fax + 49 7633 831-98  
process@ika.de www.ika.net www.ikaprocess.com

IKA® Japan KK.  
293-1 Kobayashi-cho · Yamato Koriyama Shi  
Nara · 639-1026 Japan  
Tel. +81 743 58-4611 Fax +81 743 58-4612  
info@ika.ne.jp www.ikaprocess.jp

IKA® Works (Asia) Sdn Bhd  
(Company no: 340448-K)  
No.17 & 19, Jalan PJU 3/50 · Sunway Damansara Technology Park  
47810 Petaling Jaya · Selangor · Malaysia  
Tel. +60 3 7804-3322 Fax +60 3 7806-1854  
salesprocess@ika.com.my www.ika.com.my

IKA® India Private Limited  
(Subsidiary of IKA® Werke GMBH, Germany)  
814/475, Survey No: 129/1- Kengeri · Mysore Road  
Bangalore - 560 060 (Karnataka) · India  
Tel. +91 80 26253900 (Board Line) +91 80 26253909 (Direct Line)  
Fax +91 80 26253901  
info@ikaindia.com www.ikaprocess.com

IKA® Works Guangzhou  
173 - 175 Friendship Road · Guangzhou  
Economic and Technological Development District  
510730 Guangzhou · China  
Tel. +86 20 8222-6771 Fax +86 20 8222-6776  
process@ikagz.com.cn www.ikaprocess.cn

IKA® Works Inc.  
2635 North Chase · Pkwy SE  
Wilmington · NC 28405-7419 USA  
Tel. +1 910 452-7059 Fax +1 910 452-7693  
usa@ika.net www.ikausa.com

## Polymer Modified Bitumen Plant (PMB)

## R & D Pilot Plant



 **Designed to work perfectly**

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# WORLD FIRST!

# IKA®

# SCALING UP METHOD FROM R&D TO INDUSTRIAL PRODUCTION SCALE



### PMB Production Methods : A Comparison

Parameter	Batch	Semi-Continuous	IKA® Continuous Inline process
Equipment	- Agitating vessel	- Agitating vessel - MK module	- Agitating vessel - DR module - Stabilisation tank - Transfer pump
Polymer	- Low shear type only - Prefers fine size pellets	- Processing all polymer types, both low or high shear type, no restriction - Processing all size pellets	
Dosing material & product quality	- Exact polymer dosing - Inconsistencies of product if mixing and digesting time are not enough - Up to 4% polymer	- Exact polymer dosing - Consistent product because polymer completely digested - Up to 4% to 5% polymer	- Not true exact dosing of polymer but could be reduced up to 0.1% max error by calibration - Consistent product - More than 5% polymer
Production time vs. capacity, example	- Longest time - Limited capacity - 45 MT per 15 hours	- Even longtime - Limited capacity - 45 MT per 10 hours	- Shortest time - Unlimited capacity - 45 MT per 3 hours
Product quantity for same time, 15 h	- 45 MT per 15 hours	- 67.5 MT of PMB	- 225 MT of PMB
Power (pumping + mixing, comparison only)	- 8.0 kWh/MT of PMB	- 7.8 kWh/MT of PMB	- 7.1 kWh/MT of PMB
Energy for thermal oil heating	- > 12.5 litres fuel/MT of PMB	- 8.3 litres fuel/MT of PMB	- 2.5 litres fuel/MT of PMB

### Benefits

- Easy and accurate scalability from R & D unit to industrial production sizes
- Direct mixing and dispersing of additives continuously inline without the need for premixing, thus reducing footprint for the plant
- Accurate control of additives and bitumen dosing ensures consistent compliance to recipe formulations
- Standard HMI (human-machine-interface) control system enable accurate control and the capability to acquire and store processing parameters for record and quality control purposes
- Customisation available for special features

SCALE-UP FOR INDUSTRIAL

Customisation upon request

**DR 2000/50 PB**  
Capacity: 7,000 - 35,000L/hr

**DR 2000/30 PB**  
Capacity: 3,000 - 15,000L/hr

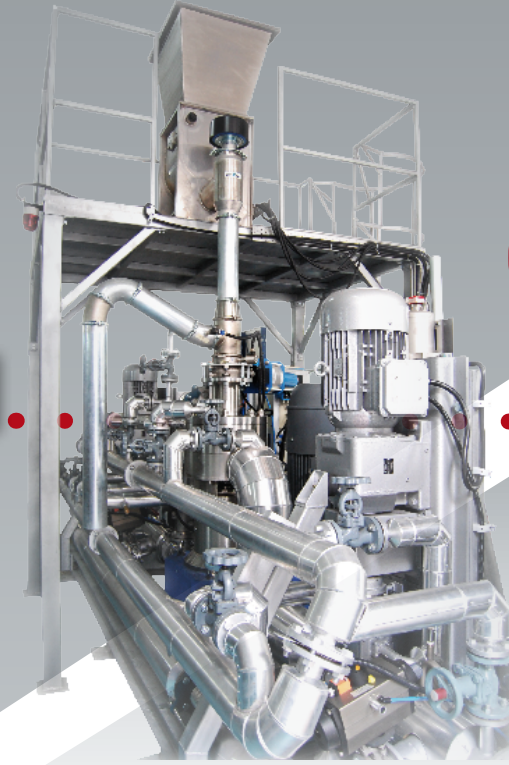
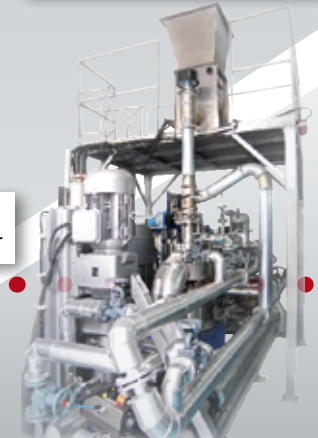
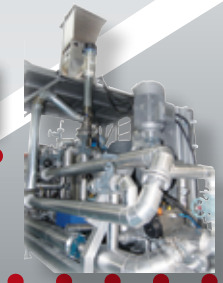
**DR 2000/20 PB**  
Capacity: 1,500 - 6,000L/hr

**DR 2000/10 PB**  
Capacity: 500 - 2,500L/hr

**DR 2000/05 PB**  
Capacity: 150 - 700L/hr

**R & D Pilot Plant**  
Capacity: 5 - 120L/hr

## Polymer Modified Bitumen Plants (PMB)



2000/50

2000/30

2000/20

2000/10

2000/05

R & D Pilot Plant