



NANO- PROGRESSIVE REPLACEABLE NPR

CHARACTERISTICS

- OPERATES UP TO 300 BAR (4350 PSI)
- DIVIDES OIL OR GREASE
- DROPSA PATENT NP-REPLACEABLE RAIL MOUNT SYSTEM ALLOWS EASE OF ASSEMBLY AND SUBSTITUTION OF AN ELEMENT WITHOUT COMPLETE DISASSEMBLY
- DROPSA PATENTED RIGID-LOCK MODULAR ELEMENT TECHNOLOGY GIVES MONO-BLOCK RIGIDITY TO A SEGMENTED BASE
- TOP OR SIDE OUTPUTS AS STANDARD
- SINGLE OR DUAL OUTLET SETTABLE BY CENTRAL PLUG
- FULL RANGE OF PRESSURE AND SPOOL MONITORING ACCESSORIES INTERCHANGEABLE WITH SMO PRODUCT LINE
- THE TWO OUTPUTS ARE COMBINED BY REPLACING THE ADAPTER. JUST TAKE ONE ITEM OF STOCK
- ASSEMBLING IS SIMPLE AND FLEXIBLE.
- BRIDGELEFT/RIGHT/BOTH ELEMENTS ELIMINATE THE NEED FOR EXTERNAL CROSS PORTING.
- DIFFERENT INLET MODULE WITH DIFFERENT HOLE-CENTERS FOR EASY INTERCHANGEABILITY

METERING DIVIDER ELEMENTS FOR THE VOLUMETRIC DISTRIBUTION OF OILS AND GREASE

Dropsa's nano-Progressive Replaceable (nPr) dividers are the ideal solution for grease lubrication applications that require small and accurately dispensed quantities of lubricant in a compact and solid footprint. Thanks to a patented RigidLock novel interlocking mechanism between the elements it has the rigidity of a mono-block divider but the flexibility of a modular segmented unit.

The nPr, uses the progressive movement of pistons to allow precise quantities of lubricant to be accurately dispensed to multiple points.

The lubrication cycle can be controlled by a single sensor, including the Dropsa solid state Ultrasensor product.

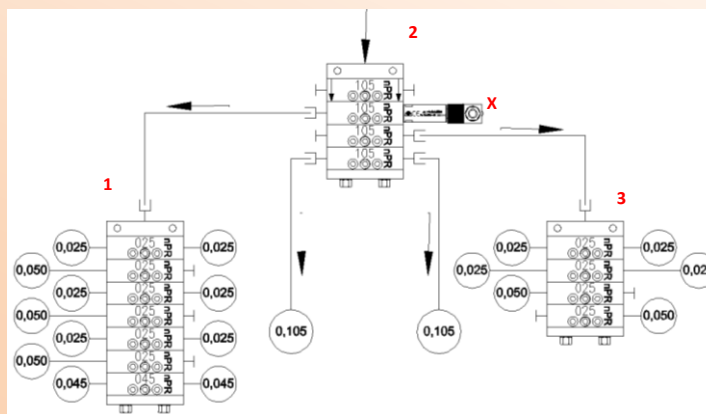


nPr uses an innovative rail & lock concept to allow the element to be replaced or re-organized without the need to completely dismantle the assembly. This is an industry first for segmented progressive dividers allowing quick easy modification or replacement of an assembly element without the cost of a separate base porting module.

The compactness makes them particularly suitable for use in confined spaces. These metering elements may be used in a variety of system configurations and have different working configurations that make them flexible for use in multiple applications.

OPERATING PRINCIPLE

The system can be easily extended and the modular concept provides low cost replacement of component.



The nPr105 metering element (1) pilots a block of 6 metering 0,025 nPr delivering elements and one 0,045 nPr delivering element.

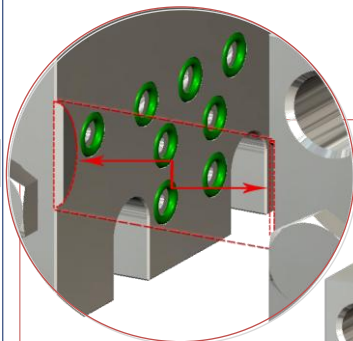
The nPr105 metering element (3) pilots a block of 3 0,025 nPr delivering elements and one 0,050 nPr delivering element.

The nPr105 metering element (2) directly lubricates two point of the machine.

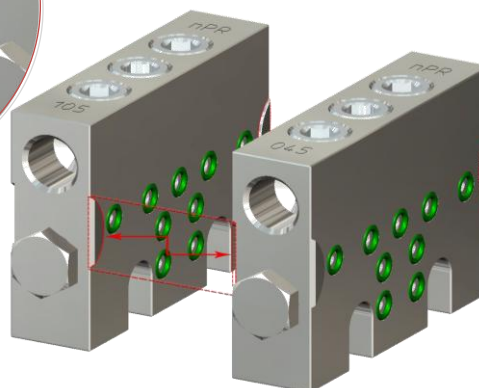
The cycle is controlled by the Ultrasensor cycle indicator (X).

APPLICATION

- MACHINE TOOLS
- TEXTILES
- ANY SMALL-MEDIUM OIL AND GREASE SYSTEMS



RIGIDLOCK



THE RIGIDLOCK SYSTEMS CREATE RIGID INTERLOCKING MECHANISMS BETWEEN THE ELEMENTS, VIRTUALLY ELIMINATING LEAKS TYPICALLY FOUND ON PREVIOUS SEGMENTED ELEMENTS CAUSED BY TORSION OR TENSION IN THE TUBING.



NANO- PROGRESSIVE REPLACEABLE NPR

ADVANTAGES

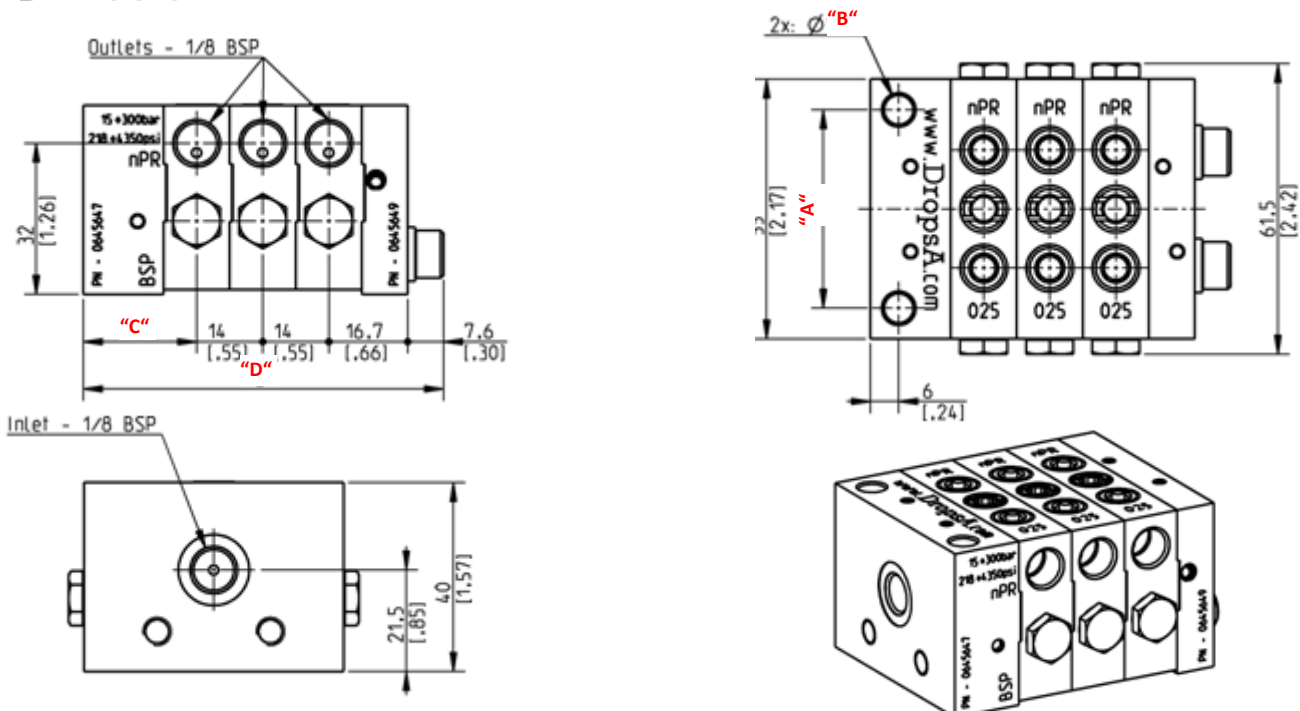
- By combining a reduced space-envelope and maintaining modularity in a single package the **nano-Progressive** Replaceable dividers offer many of the features found in top-of-line dividers at a fraction of the cost.
- The **RigidLock Systems** create rigid interlocking mechanisms between the elements virtually eliminating leaks typically found on previously segmented elements caused by torsion or tension in the tubing
- A full range of accessories and bridge elements allow for flexible engineering choices.

TECHNICAL INFORMATION

GENERAL CHARACTERISTICS	
Singular outlet Flowrate	0.0015 cu.inch – 0.0027 cu.inch – 0.0045 cu.inch - 0.0064 cu.inch (0,025cm ³ - 0,045cm ³ - 0,075cm ³ - 0,105cm ³)
Number of Divider elements	3 ÷ 12
Working pressure	15bar (218psi) ÷ 300bar (4350psi)
Working temperature	-20°C ÷ +80°C
Material	Nickel-plated steel
Number of inversions per minute	200 max.
Inlet thread	G1/8" – UNI ISO 228/1
Outlet thread	G1/8" – UNI ISO 228/1
Lubricants	Min. Oil. 32 cSt –max. 2 NLGI grease

N.B.: The pressure is directly proportional to the number of cycles.
The oil and grease viscosity values always refer to the operating temperature.

DIMENSIONS



N° elements	INLET nPr – standard version mm [inch]				INLET nPr -S 20mm reduced hole centers mm [inch]			
	"A"	"B"	"C"	"D"	"A"	"B"	"C"	"D"
3				76.3 [3]				82.8 [3.26]
4				90.3 [3.55]				96.8 [3.82]
5				104.3 [4.11]				110.8 [4.36]
6				118.3 [4.66]				124.8 [4.91]
7	42 [1.65]	6.2 [0.24]	24 [0.94]	132.3 [5.21]	20 [0.79]	5.5 [0.22]	30.5 [1.2]	138.8 [5.46]
8				146.3 [5.76]				152.8 [6.02]
9				160.3 [6.31]				166.8 [6.57]
10				174.3 [6.86]				180.8 [7.12]
11				188.3 [7.41]				194.8 [7.67]
12				202.3 [7.96]				208.8 [8.22]

CONFIGURATION INFORMATION

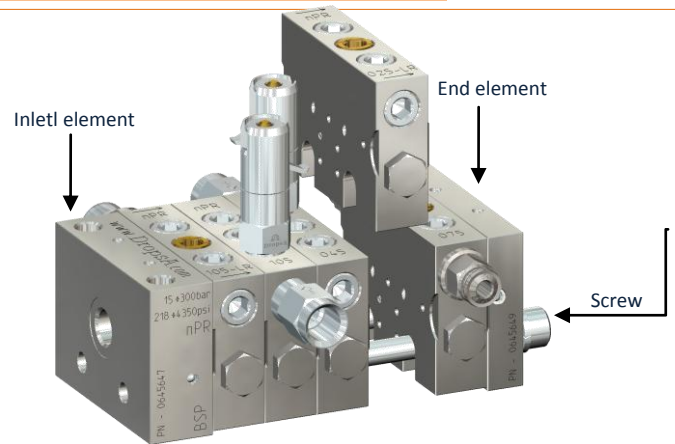
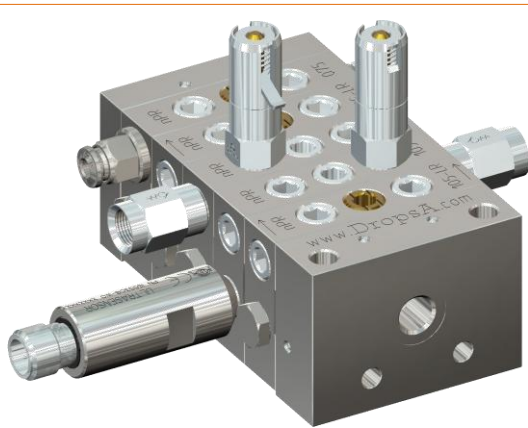
IN A FEW STEPS YOU CAN COMPOSE DIFFERENT KINDS OF MODULES AS NEEDED:

1. INLET ELEMENT

2. DIVIDER ELEMENT

3. END ELEMENT

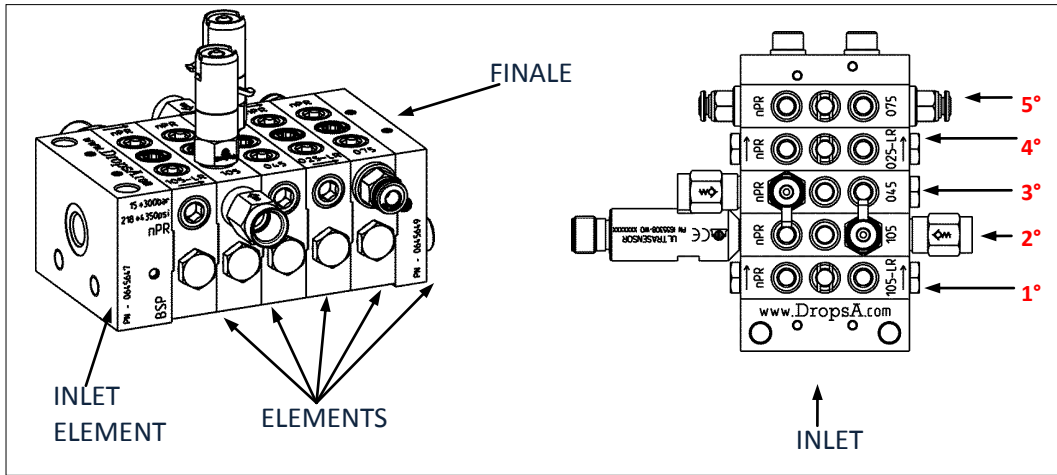
STANDARD ELEMENT	-S 20mm reduced	FLOWRATE Q _v cm ³	STANDARD ELEMENT	ELEMENT WITH INDICATOR	BRIDGE ELEMENT			PART NO.
					LEFT	RIGHT	LEFT/RIGHT	
0645647	0645648	0,025	0645650	0645678	0645654	0645658	0645662	0645649 + 0016047 (ø6 washer)
		0,045	0645651	0645679	0645655	0645659	0645663	
		0,075	0645652	0645680	0645656	0645660	0645664	
		0,105	0645653	0645681	0645657	0645661	0645665	



4. FITTINGS

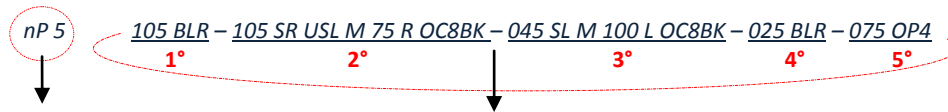
ITEM	DESCRIPTION	PART N.
PRESSURE INDICATOR	30bar with memory pin	3290000
	50bar with memory pin	3290001
	75bar with memory pin	3290022
	100bar with memory pin	3290002
	150bar with memory pin	3290003
	200bar with memory pin	3290004
	250bar with memory pin	3290005
	300bar with memory pin	3290021
	20bar with pin	3290019
	30bar with pin	3290006
	50bar with pin	3290007
	100bar with pin	3290008
	150bar with pin	3290009
	200bar with pin	3290010
	250bar with pin	3290011
	30 bar with membrane	3290012
	50 bar with membrane	3290013
	100 bar with membrane	3290014
	150 bar with membrane	3290015
	200 bar with membrane	3290016
250 bar with membrane	3290017	
CYCLE INDICATOR	ULTRASENSOR + (M12 Connector)	1655308 + 0039999

ITEM	DESCRIPTION	PART N.
FITTINGS	1/8" valved fitting for OUTLETS	0092335
	1/8" valved fitting for INLET	0092555
	Ø6 Compression Fittings (150bar)	0092080
	Ø4 Compression Fittings (150bar)	0092069
	Ø4 ring fitting (250bar)	3084577
	Push-in Ø4 (65bar)	3084578
	Push-in Ø6 (65bar)	3084696
	Swivel Push-in 90° Ø6 (150bar)	3084695
	Swivel Push-in 90° Ø4 (150bar)	3084696
	TUBING	Ø6x1 Drawn steel tube (400bar)
Ø4x1 Drawn steel tube (500bar)		5119832
ASTM Ø6x0,71 Copper steel tube (310bar)		5118001
ASTM Ø4x0,71 Copper steel tube (500bar)		5118000
Ø4x0,5 Annealed copper tube (133bar)		5501201
Ø6x1 Annealed copper tube (200bar)		5501203
PA Ø4xØ2,5 Tube (60bar)		5717202
PA Ø6xØ4 Tube (50bar)		5717203
SCREWS order 2 per assembly	3 elements	0014396
	4 elements	0014181
	5 elements	0014397
	6 elements	0014182
	7 elements	0014191
	8 elements	0014398
	9 elements	0014399
	10 elements	0014400
	11 elements	0014401
	12 elements	0014402



Note: to determine the left and right outlets, take note that the assembly is seen vertically and metering elements are numbered sequentially starting from the bottom (inlet).

Indicate the full string of the package as in the following ordering example :



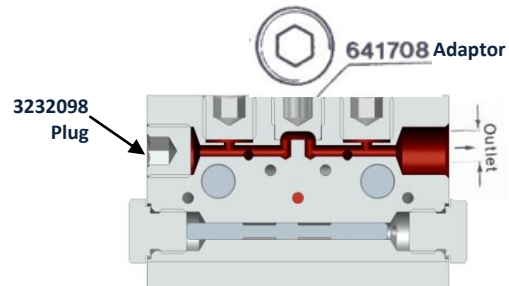
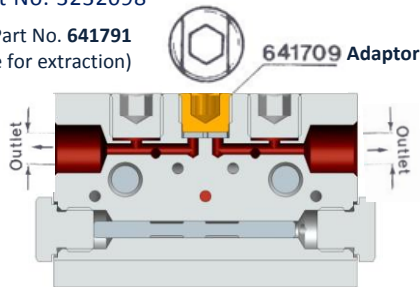
Config. INIZIAL and PACK		
TYPE	INIZIAL	N° ELEMENTS
nP	Empty Standard Hole centers 42mm	3÷12
S	Reduced Hole center 20mm	

ELEMENT configuration (repeat for N° element)							
FLOWRATE [cm³]	OUTLET	CYCLE CONTROL	PRESSURE CONTROL			OUTLET FITTINGS	
			TYPE	PRESSURE [bar]	POSITION		
025 0,025	Empty both	US Ultrasensor right side	M with memory rod	30-50-75 100-150-200 250-300	L left	OP4 Ø4 Push-in	
045 0,045	SL single left	USL Ultrasensor left side	P with rod	20-30-50 100-150 200-250	R right	OP6 Ø6 Push-in	
075 0,075	SR single right	V visual right side	B with membrane	30-50 100-150 200-250	LR let right	OC8BK 1/8" BSP valved	
105 0,105	BL bridge left	VL visual left side			UL Single left upper	OC8NK 1/8" NPT valved	
	BR bridge right				UR Single right upper		
	BLR bridge left & right				URL Single right & left upper		
	U Both Upper						
	UL Single left upper						
	UR Single right upper						

SINGLE AND DOUBLE OUTLET CONVERSION

It is possible to double the delivery of a single element by replacing the yellow Adapter Part No. 0641709 and O-ring Part No. 641791 with the white Adapter Part No. 0641708 as shown in the drawing below. When converted into single, plug off the second outlet with a plug Part No. 3232098

O-ring Part No. 641791
(with hole for extraction)



sales@dropsa.com
www.dropsa.com

ITALIA
Dropsa SpA
t. +39 02-250791

U.S.A.
Dropsa USA Incorporated
t. +1 586-566-1540

U.K.
Dropsa (UK) Ltd
t. +44 (0)1784 431177

AUSTRALIA
Dropsa Australia Ltd.
t. +61 (02)-9938-6644

GERMANY
Dropsa Schmiertechnik GmbH
t. +49 (0)211 39 40 11

BRAZIL
Dropsa do Brazil
t. +55 (0)11-563-10007

FRANCE
AME Dropsa
t. +33 (0)1 39 93 00 33

CHINA
Dropsa Lubrication Systems (Shanghai) Co., Ltd
t. +86 (021) 67740275