MOSTUF NW

Maintenance-free / Wear-resistant / Environmentally-friendly

SOLTRI

MOSTUF NW

CONTENTS

1. Introduction

가혹한 조건하에서도 유지보수가 필요 없고, 사용중 그리스나 오일에 의한 오염이 전혀 없는 환경친화적인 미끄럼 베어링에 대한 수요는 점점 증가하고 있다.

MOSTUF NW Bearing은 높은 하중을 지탱하면서 자기윤활특성(self-lubricating)을 유지하는 미끄럼 베어링 재료로서, 저속에서 회전, 요동, 왕복 운동을 하는 부위에 적용할 수 있다.

높은 내마모 특성과 낮은 마찰계수로 인해 윤활이 불가능하거나 허용되지 않는 부위에 적용시 탁월한 성능을 발휘한다.

There has been a gradual increase in demand for a environmentally-friendly sliding bearing material which is maintenance-free and operates under harsh conditions. This is in response to contamination caused by grease and oil required by existing materials.

MOSTUF NW Bearing is a self-lubricating sliding material, with high load-carrying capacity, and is ideal for operating under slow speed rotating, oscillating and reciprocating movements.

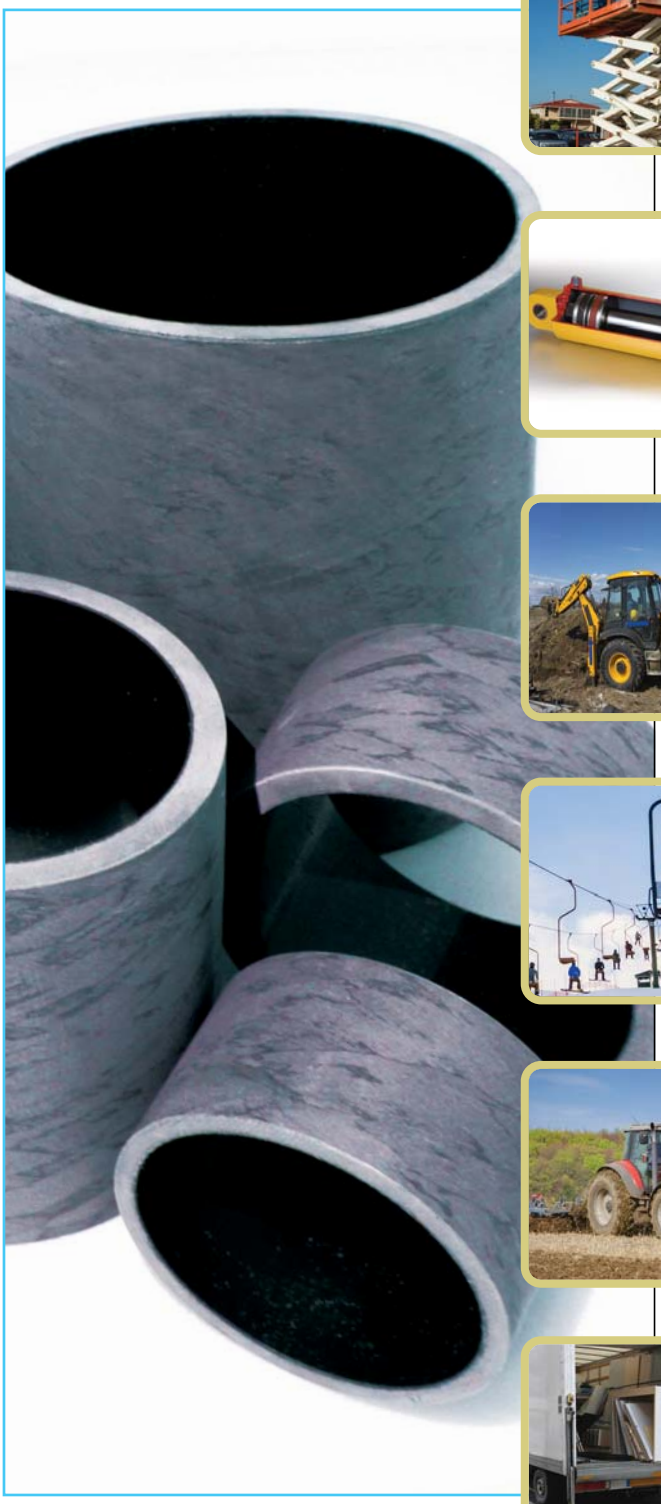
MOSTUF NW Bearings have excellent sliding performance in applications where lubrication is not possible/not permitted as they maintain good wear resistance and low coefficient of friction.

1.1 *Characteristics and Advantages*

- 윤활 불필요
- 유지보수가 필요없는 운전
- 자기윤활특성
- 낮은 마찰계수와 내마모성
- 높은 하중지탱 능력
- 높은 PV 값
- Stick-slip 발생가능성 최소화
- 내부식성
- 비금속 재료

- No need for lubrication
- Maintenance-free in dry operation
- Self-lubricating design
- Low coefficient of friction and wear-resistant
- High load-carrying capacity
- High PV capacity
- Negligible stick-slip
- Corrosion-resistant
- Non-metallic material

1.2 *Applications*



Material handling equipment

- Scissor lift
- Boom lift
- Forklift

Valves and Actuators

- Hydraulic and pneumatic cylinder pivots
- Linear slide
- Butterfly valves

Construction equipment

- Cranes
- Dozer
- Backhoe loader
- Street sweepers

Recreation applications

- Ski lift
- Snow mobiles
- Fitness equipment

Agricultural equipment

- Tractors
- Combines
- Seed treatment units

Automotive

- Lift(Tail) gates
- Suspension system
- Mechanical parking system

1.3 *Technical Data of MOSTUF NW Composite Bearing*

Bearing properties			Value
Permissible load	static	MPa	210
	dynamic	MPa	140
Maximum sliding speed	dry	m/s	0.10
Maximum PV value	dry	MPa.m/s	2.80
Coefficient of friction [1)]	dry		0.03~0.20
Temperature range	max	℃	+160
	min	℃	-100
Thermal expansion	hoop	/ K	$13x10^{-6}$
	axial	/ K	$29x10^{-6}$
Thermal conductivity		W/MK	0.40
Density		g/cm^3	2.03
Water absorption (24h immersion)		%	0.11

Type of maintenance	maintenance-free
Shaft tolerance	h7 (h8)
Housing tolerance	H7
Shaft roughness Ra, μm	0.15 ~ 0.40
Shaft hardness, min. HRC [2)]	35

Operating life :

Dry running	++
Grease and oil lubrication	+
Low friction	++

excellent (++), good (+)

Table 1. Technical data of MOSTUF NW Bearing

1) The stated friction coefficients are based on our test rigs under test conditions. Actual operating environments may vary the properties of our products. We can offer customer-specific friction and wear tests on request.
2) For optimum conditions, the shaft should be hardened. To increase loads, the hardness of the shaft should be at least 55 HRC.

2. Material

2.1 *Structure*

MOSTUF NW Bearing은 2개의 층 (twin layer structure)으로 되어 있다. 내층(inner layer)은 특수하게 직조된 synthetic fiber/PTFE 에 고체윤활제가 균일하게 분산되어 있으며, 외층(outer layer)은 에폭시에 함침된 continuous glass fiber가 특정 와인딩 각도로 필라멘트 와인딩된 구조로 되어 있다.

내층(inner layer)은 sliding layer 역할을 하며, 낮은 마찰계수와 높은 내마모 특성을 갖는다.

외층(outer layer)는 backing layer 역할을 하며, shaft 에서 전달되는 high-load 또는 shock loading을 지탱하는 역할을 한다.

MOSTUF NW Bearing has a twin layer structure. The inner layer is composed of special woven synthetic fiber and PTFE.
The outer layer has high strength continuous glass fibers which are impregnated with epoxy resin in special filament winding at specific angles to provide strength.

The inner layer (sliding layer) has very low coefficient of friction and excellent wear-resist performance.

The outer layer (backing layer) is capable of supporting high-load and shock loading generated by the shaft.

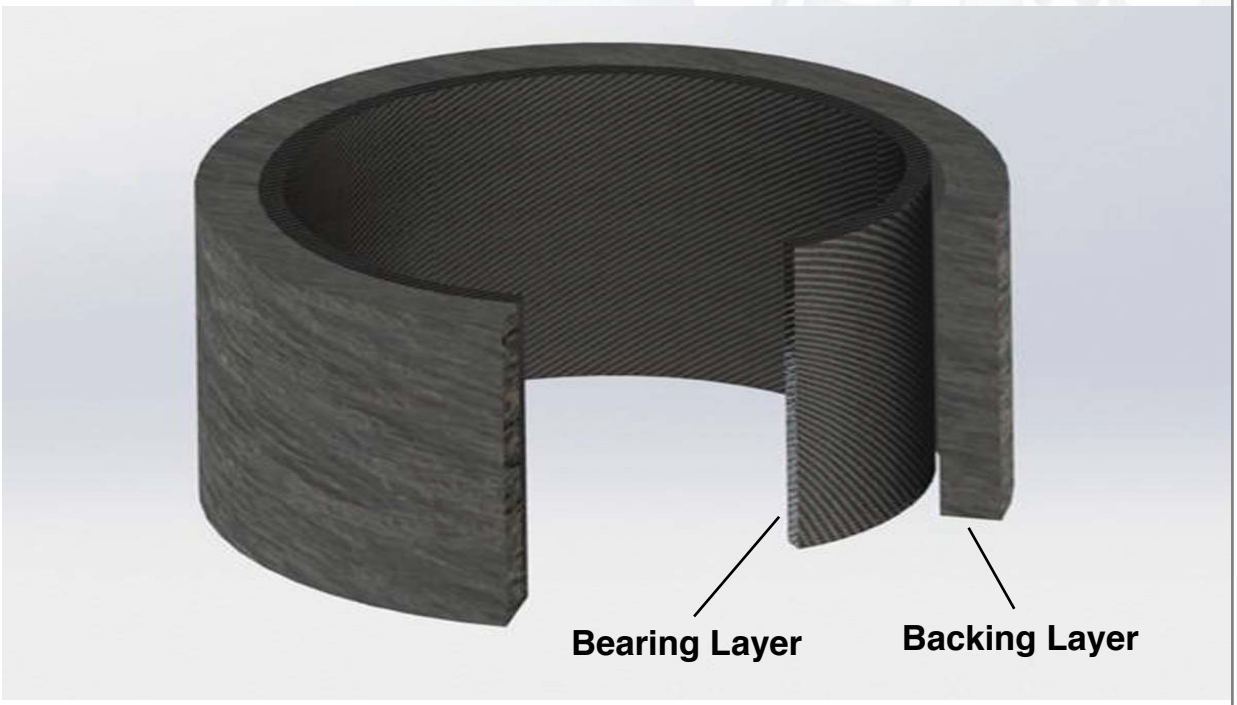


Fig 1. Structure of MOSTUF NW

2.2 *Chemical Resistance*

MOSTUF Bearing은 부식환경에 높은 저항성을 갖는다. Table 2는 상온에서 여러 가지 media에 노출되었을 때의 저항성을 나타낸다.

MOSTUF Bearings are highly resistant to corrosive environments. Table 2 shows its resistance to various media at room temperature.

Solvents	
Acetone	○
Toluene	○
Methyl ethyl ketone	○
Trichloroethane	X
Benzene	X
Alcohols	
Methyl alcohol	○
Ethyl alcohol	○
Propyl alcohol	○
Isopropyl alcohol	○
Hydroxy acetone	○
Allyl alcohol	X
Butyl alcohol	X
Oils	
Gear oil	○
Motor oil	○
Hydraulic oil	○
Linseed oil	○
Cotton seed oil	○
Fuels	
Kerosene	○
Diesel	○
Petrol	○
Gases	
Butane	○
Ozone	○
Nitrogen	○
Hydrogen	○
Acetylene	○
Natural gas	○
Carbon dioxide	○
Fluorine	X
Chlorine	X

Salts	
Ammonium chloride	○
Ammonium nitride	○
Ammonium sulphate	○
Iron chloride	○
Magnesium sulphate	○
Sodium acetate	○
Sodium carbonate	○
Acids 10%	
Acetic acid	○
Boric acid	○
Hydrochloric acid	○
Sulphuric acid	○
Citric acid	○
Carbonic acid	X
Nitric acid	X
Hydrofluoric acid	X
Bases	
Sodium hydroxide	○
Calcium hydroxide	○
Ammonium hydroxide	○
Magnesium hydroxide	○
Others	
Freon	○
Formaldehyde	○
Sodium nitride	○
Ethyl glycol	○
Water 20℃	○
Zinc sulphate	○
Ammonia	X
Water 100℃	X

○ : resistant X : not resistant

Table 2. Chemical resistance properties of MOSTUF NW Bearing

3. Performance

3.1 *Friction and Wear Characteristics*

베어링의 마찰/마모 특성은 다음과 같은 여러 가지 인자의 영향을 받는다.

- 하중
- PV 값
- shaft 재질
- shaft 표면 조도
- 온도
- 먼지나 윤활 등 적용되는 환경

Friction and wear characteristics of the bearing is subjected to the influences of various factors such as:

- Specific load
- PV factor
- Shaft material
- Surface roughness of shaft
- Temperature
- Other environmental factors (e.g. dust, lubrication)

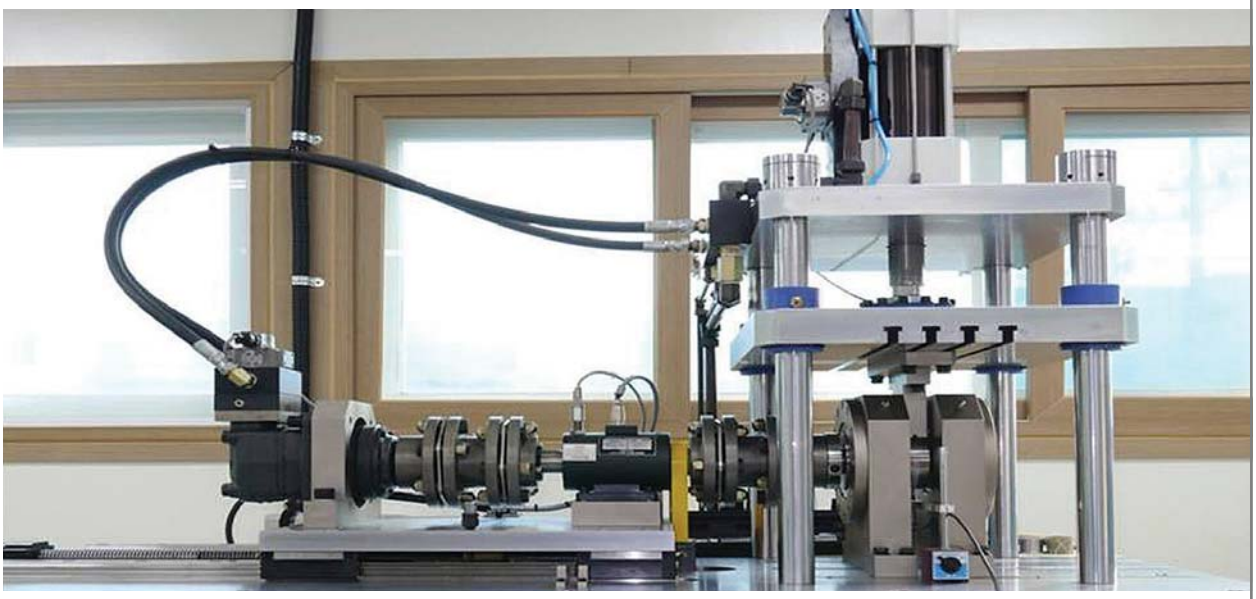
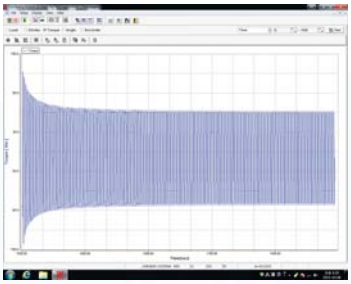


Fig 2. Friction and wear test rig at SOLTRI lab.



Test Screen

Fig. 3은 140 MPa, 0.0199m/s 조건에서 MOSTUF NW Bearing을 무윤활 상태에서 1,000,000 cycle테스트 했을 때의 마찰 특성을 나타낸 것이다. 초기 정마찰계수는 0.10 였으며, steady state 에서의 동마찰계수는0.038 ~ 0.047 범위의 값을 나타냈다.

여러 가지 조건에서 테스트한 결과 MOSTUF NW Bearing의 마찰계수는 0.03~0.20 범위의 값을 나타냈으며, 작용되는 하중이 증가할수록 마찰계수 값은 작아지는 경향을 보였다.

Fig. 3 shows the friction characteristics under 140 MPa, 0.0199m/s and non-lubricated condition with 1,000,000 cycle. The Initial static coefficient of friction is 0.10, the dynamic coefficient of friction in steady state is between 0.038 to 0.047.

The coefficient of friction on Mostuf NW Bearing is 0.03 ~ 0.20, tested in a number of conditions.
It showed a tendency of coefficient of friction decreasing as the load is increased.

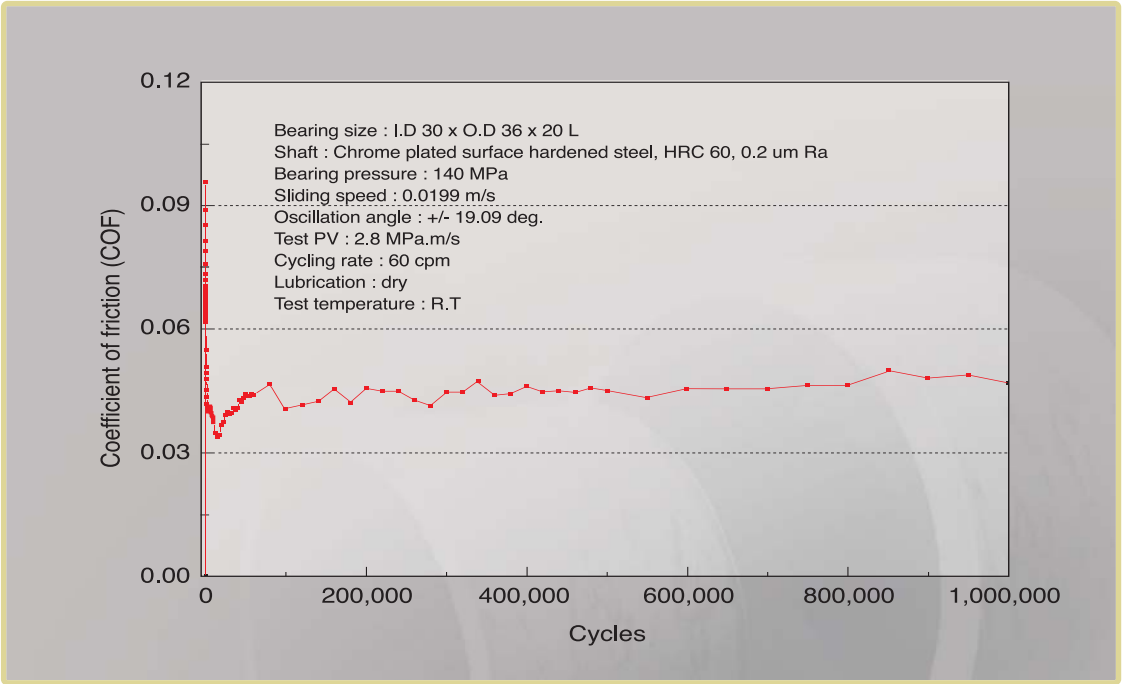


Fig 3. Coefficient of friction on MOSTUF NW bearing as a function of oscillation cycles

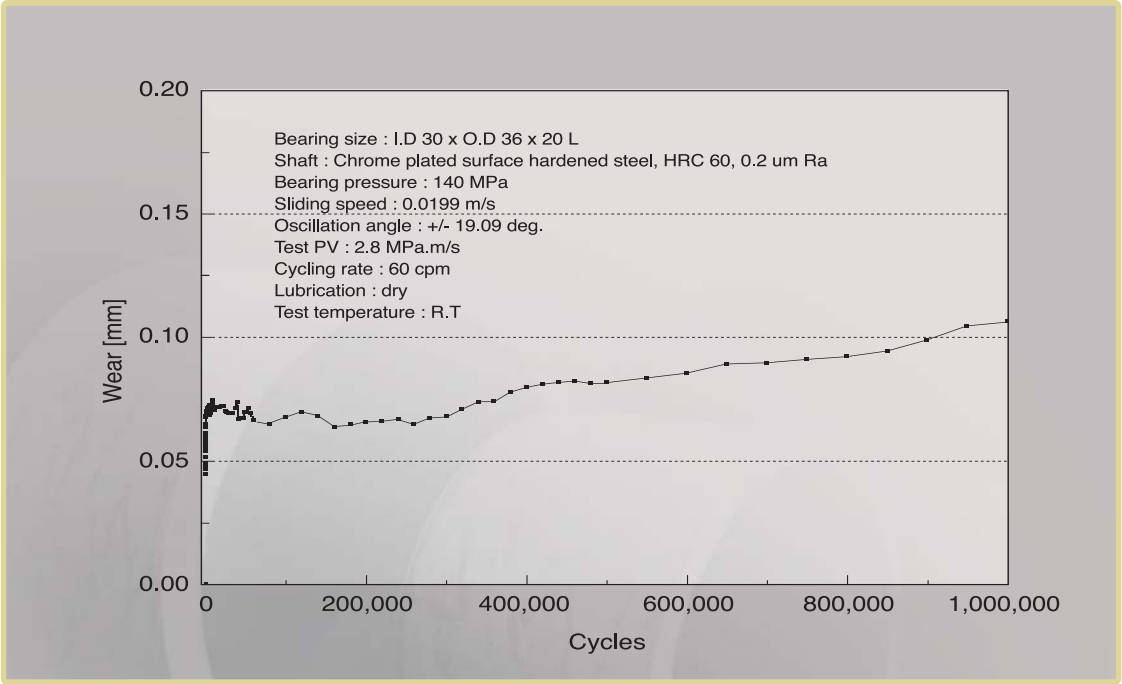


Fig.4 Wear of MOSTUF NW bearing as a function of oscillation cycles

Fig.4는 동일 조건에서 1,000,000 cycle 테스트 했을 때의 마모특성을 나타낸 것으로, running-in 과정에서의 초기 마모는 비교적 빠르게 진행된다. test shaft에 transfer film이 형성되기 시작하면, 마찰계수는 빠르게 감소하여 안정적인 값에 도달하며, wear rate도 테스트가 끝나는 시점까지 균일한 상태를 유지한다.

Fig.4 shows that the wear resistance with 1,000,000 cycles under the same condition. The initial wear in the start-up stage show relatively rapid increase as the self-lubricating boundary layer is created.
Once transfer film is formed on the test shaft, the coefficient of friction rapidly decreased and reached a stable state, as did the wear rate maintaining a steady state until the test was completed.

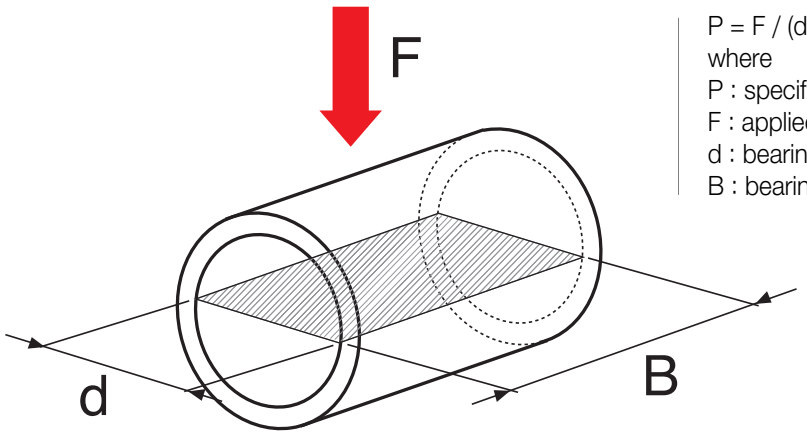
3.2 *Bearing Pressure*

베어링 면압은 투영면적에 가해진 최대하중으로 정의된다. 베어링이 지탱할 수 있는 하중능력은 사용온도가 증가할수록 감소하며, 작용된 하중의 형태에 영향을 받는다.

균일하중이 작용할 때 하중지탱능력이 가장 높고, 동하중 또는 요동운동과 같이 베어링에 피로응력이 작용되는 조건에서는 하중지탱 능력은 감소하게 된다.

Bearing surface pressure is defined as the maximum load applied to the projected bearing area. Load capacity will decline as temperature rises ; this is influenced by type of the applied load.

Best operating load is obtained under uniform load conditions. Performance will decline when the condition generates a fatigue stress, such as dynamic load and oscillating movement.



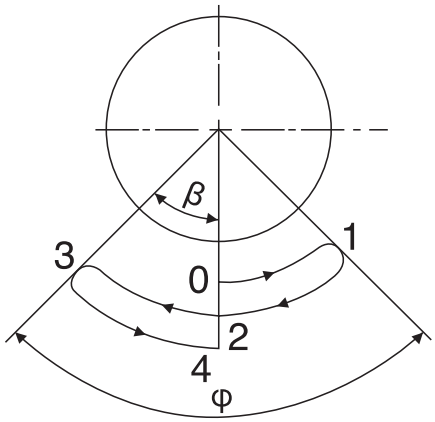
P = F / (d x B)
where
P : specific load, MPa
F : applied load, N
d : bearing ID,mm
B : bearing length, mm

Fig.5 Projected area of bearing

3.3 *Sliding Velocity*

MOSTUF NW 베어링의 최대 허용속도는 0.1m/s 이며, 높은 하중에서 저속에서 작동할 때 탁월한 성능을 발휘한다. 속도가 빠를수록 발생되는 마찰열도 많아지기 때문에, 허용 베어링 면압은 낮아지게 된다.

Maximum permitted sliding velocity of MOSTUF NW bearing is 0.1m/s. Best performance is obtained when operating at low speed in high load applications. High bearing speed, and resulting frictional heat, decreases bearing pressure, and lowers the maximum allowable bearing pressure.



Rotation, $V=5.24 \times 10^{-5} dN$
Oscillation, $V=5.82 \times 10^{-7} dc\beta$
where
V : sliding velocity, m/s
d : bearing ID, mm
N : rotation speed, revs/min
c : cycling rate, cycles/min
β : half turning angle

Fig.6 Angle of oscillation

3.4 *Bearing PV*

PV는 베어링의 성능을 나타내는 값이다. PV 값은 베어링 면압과 속도를 곱한 값으로, 베어링의 수명을 결정하는데 사용되며, 접촉부에서 발생된 마찰열을 의미하기도 한다.

MOSTUF NW 베어링의 허용 PV 한계값은 2.8 MPa.m/s 이다. 한계 PV 값을 초과하면 마찰열과 마모속도가 빠르게 증가한다.

PV is a measure of performance of the bearing. PV value is obtained by multiplying the bearing surface pressure and speed, and is used to determine the life of the bearing. It also represents frictional heat generated in the bearing contact zone.
Maximum allowable PV limit of MOSTUF NW bearing is 2.8 MPa.m/s. If PV limit is exceeded, frictional heat and wear rate will increase at a more rapid rate.

3.5 *Bearing Design Proportions*

베어링의 성능을 극대화할 수 있는 L/d 비는 0.5~2.0 의 범위이다. 이 영역에서 마모에 의해 발생된 마모 부스러기는 쉽게 베어링에서 빠져나올 수 있고, shaft의 좌굴이나 정렬 불량이 발생했을 때도 낮은 민감도를 보이게 된다.

L/d 값이 2.0 이상인 상태로 장착하는 것은 권장하지 않으나, 꼭 필요한 경우 2 개의 베어링을 사용하되, 베어링 사이에 약간의 gap 을 두고 장착하는 것이 좋다. L/d 가 0.5 보다 적을 경우 응력 집중으로 인해 베어링 edge 부에 cracking이 발생할 수 도 있다.

In designing the bearing, the ideal Length to inside diameter (L/d) ratio to maximize the performance of the bearing is in the range of 0.5 to 2.0. Ratio within this range allow wear debris to be easily ejected out of the bearing, and the bearing is still able to accommodate shaft deflection and misalignment.

It is not recommended to have L/d values greater than 2.0. If necessary, it is advisable to consider installing two bearings with a small gap between them. If the value of the L/d is less than 0.5, there is a possibility for some cracking on the edge of bearing due to stress concentrations.

3.6 *Shaft Material and Surface Finish*

shaft는 bearing assembly를 구성하는 중요 요소이기 때문에, 최적화된 shaft 사양의 중요성은 아무리 강조해도 지나치지 않는다. shaft의 표면 경도나 조도는 베어링의 성능에 중요한 영향을 미친다.

낮은 마찰계수를 유지하면서 마모률을 최소화하기 위해서는, shaft의 경도는 최소 35 HRC 이상, 조도는 0.2~0.4 μmRa 이어야 한다.

최적의 작동조건을 확보하기 위해서 shaft는 열처리하는 것이 좋다. 높은 하중이 작용하는 조건에서 사용되는 경우에는 shaft의 경도가 55 HRC 이상이 권장된다.

MOSTUF NW 베어링은 윤활이 필요 없기 때문에, 윤활이나 shaft 소착에 대한 걱정없이 사용할 수 있다. chrome 도금된 shaft 나 스테인레스 shaft를 사용할 수 있으며, 질화처리된 shaft 를 적용할 경우 베어링의 수명을 크게 늘릴 수 있다.

Since the shaft is a highly significant part of the bearing assembly, the importance of optimized shaft material cannot be overemphasized. Surface hardness and roughness of the shaft has a significant influence on the performance of the bearing.

The hardness of shaft should be minimum 35 HRC and roughness should be minimum 0.2~0.4 μmRa in order to minimize wear rate while maintaining low coefficient of friction.

In order to ensure optimal operating conditions, it would be ideal to use heat treated shaft. To use in a high load operating condition, it is recommended to choose a shaft with a hardness greater than HRC 55.

Mostuf NW bearing does not require any lubrication, so there is no need to worry about lubrication and shaft seizure. We recommend chrome plated steel or stainless steel shafts. The best way to increase durability of equipment is to use nitride-hardened shaft.

3.7 *Lubrication, sealing and contamination*

MOSTUF NW 베어링은 윤활없이 dry 상태에서 사용하기를 권장한다.

베어링 running-in 과정에서, PTFE 입자는 미끄럼 계면에서 상대축 표면으로 전이된다. 완전한 전이층이 형성되면 베어링 작동수명은 크게 늘어나게 된다.

Running-in 이 끝난 후 윤활을 하는 것은 마찰마모적으로 안정적으로 형성된 MOSTUF NW 베어링의 전이층을 손상시켜 베어링의 작동 수명을 크게 감소시킬 수 있으므로 주의를 요한다.

일반적으로 Mostuf NW Bush 는 sealing 없이 사용이 가능하나, Bush 내부로의 오염물질 유입(ingress of contaminant)이 많은 경우 적절한 sealing을 해주는 것이 바람직하다.

Bush 취급 또는 조립과정에서, Bush가 절삭유 또는 유압작동유에 오염되지 않도록 하는 것이 좋다. 왜냐하면 이러한 유체는 마찰특성의 왜곡을 일으켜, 경우에 따라 stick-slip 발생의 요인으로 작용할 수도 있기 때문이다.

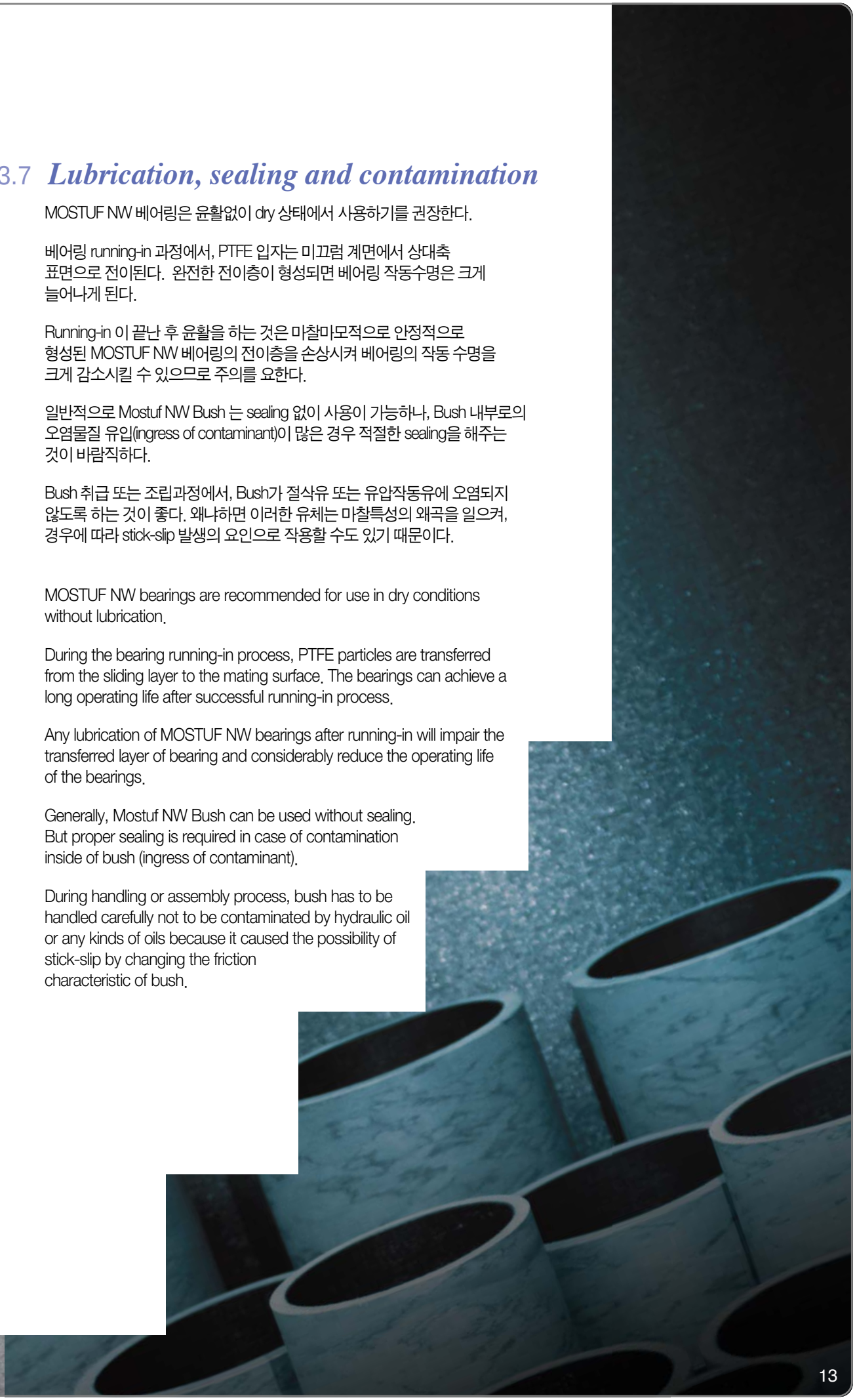
MOSTUF NW bearings are recommended for use in dry conditions without lubrication.

During the bearing running-in process, PTFE particles are transferred from the sliding layer to the mating surface. The bearings can achieve a long operating life after successful running-in process.

Any lubrication of MOSTUF NW bearings after running-in will impair the transferred layer of bearing and considerably reduce the operating life of the bearings.

Generally, Mostuf NW Bush can be used without sealing. But proper sealing is required in case of contamination inside of bush (ingress of contaminant).

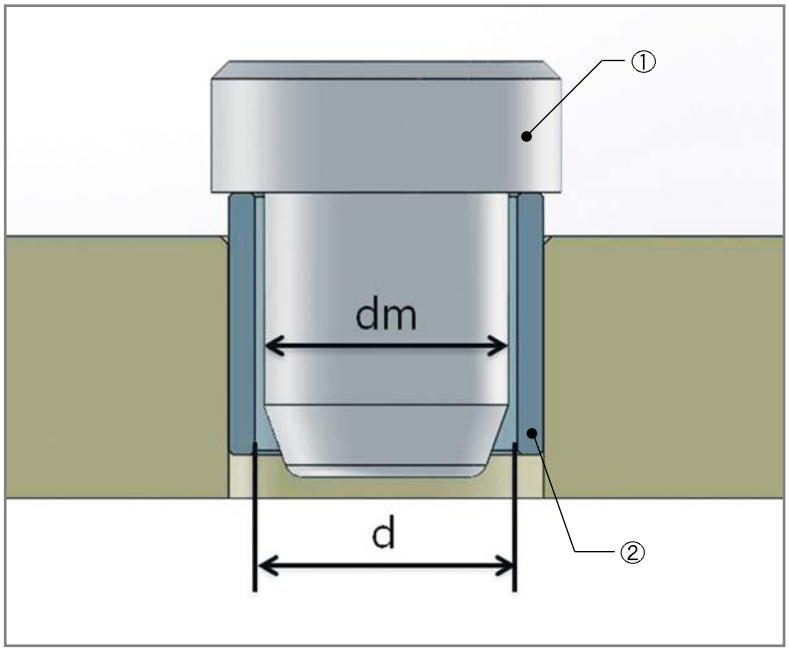
During handling or assembly process, bush has to be handled carefully not to be contaminated by hydraulic oil or any kinds of oils because it caused the possibility of stick-slip by changing the friction characteristic of bush.



4. Installation

Mostuf NW 베어링은 Fig.7과 같은 mandrel을 사용해서 하우징에 압입할 수 있다. 조립용 mandrel의 모따기는 둥근 형태로 하는 것이 좋다.

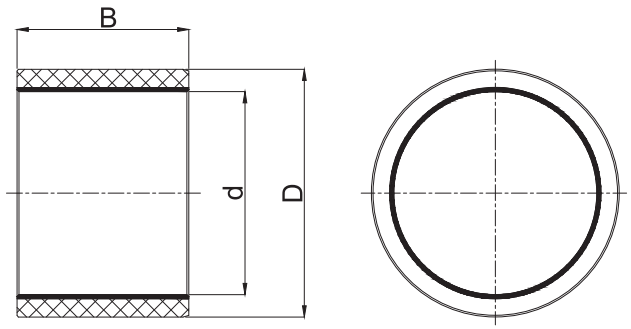
Mostuf NW bearing should be press-fitted into housing by utilizing a mandrel (see Fig.7). The chamfer of the mandrel must be rounded.



① Fitting mandrel
dm = d -0.3 mm to -0.5 mm
② Composite bearing

Fig.7 Installation by fitting mandrel

5. Part Numbering



All edges should be chamfered to ensure proper installation.

1. *Metric size*

NWM 303620

MOSTUF NW bearing standard product, d=30 D=36 B=20 mm

2. *Inch size*

NWI 3236 - 016

MOSTUF NW bearing standard product, d=2″ D=2.25″ B=1″

NWG 2428 - 024, NWP 2428 - 024

MOSTUF NW bearing option product, d=1.5″ D=1.75″ B=1.5″

3. *Length tolerance (B)*

metric		B		
		≤ 75 mm	> 75 to < 150 mm	≥ 150 mm
d	≤75 mm	-0.50 mm	-1.00 mm	-1.50 mm
	> 75 to ≤ 150 mm	-1.00 mm	-1.00 mm	-1.50 mm

inch		B		
		< 3 inch	≥3 to < 6 inch	≥ 6 inch
d	<3 inch	±0.010 inch	±0.020 inch	±0.030 inch
	≥3 to <6 inch	±0.020 inch	±0.020 inch	±0.030 inch

MOSTUF NW Bearing (metric size)

Bearing part number	d	D	Shaft (h7)	Housing (H7)	Inside Diameter after pressing-in		Running Clearance	
					min	max	min	max
NWM 2023-XXX	20 +0.194 +0.110	23 +0.068 +0.035	20 0 -0.021	23 +0.021 0	20.042	20.180	0.042	0.201
NWM 2024-XXX		24 +0.068 +0.035		24 +0.021 0				
NWM 2030-XXX		30 +0.068 +0.035		30 +0.021 0				
NWM 2528-XXX	25 +0.194 +0.110	28 +0.068 +0.035	25 0 -0.021	28 +0.021 0	25.042	25.180	0.042	0.201
NWM 2530-XXX		30 +0.068 +0.035		30 +0.021 0				
NWM 2535-XXX	25 +0.198 +0.114	35 +0.072 +0.039		35 +0.025 0	25.042	25.184	0.042	0.205
NWM 2832-XXX	28 +0.194 +0.110	32 +0.082 +0.043	28 0 -0.021	32 +0.025 0	28.028	28.176	0.028	0.197
NWM 2834-XXX		34 +0.082 +0.043		34 +0.025 0				
NWM 2838-XXX		38 +0.082 +0.043		38 +0.025 0				
NWM 3034-XXX	30 +0.194 +0.110	34 +0.082 +0.043	30 0 -0.021	34 +0.025 0	30.028	30.176	0.028	0.197
NWM 3036-XXX		36 +0.082 +0.043		36 +0.025 0				
NWM 3040-XXX		40 +0.082 +0.043		40 +0.025 0				
NWM 3539-XXX	35 +0.220 +0.120	39 +0.082 +0.043	35 0 -0.025	39 +0.025 0	35.038	35.202	0.038	0.227
NWM 3541-XXX		41 +0.082 +0.043		41 +0.025 0				
NWM 3545-XXX		45 +0.082 +0.043		45 +0.025 0				
NWM 4044-XXX	40 +0.220 +0.120	44 +0.082 +0.043	40 0 -0.025	44 +0.025 0	40.038	40.202	0.038	0.227
NWM 4048-XXX		48 +0.082 +0.043		48 +0.025 0				
NWM 4050-XXX		50 +0.082 +0.043		50 +0.025 0				
NWM 4550-XXX	45 +0.230 +0.130	50 +0.099 +0.053	45 0 -0.025	50 +0.025 0	45.031	45.202	0.031	0.227
NWM 4553-XXX		53 +0.099 +0.053		53 +0.030 0	45.031	45.207	0.031	0.232
NWM 4555-XXX		55 +0.099 +0.053		55 +0.030 0				
NWM 5055-XXX	50 +0.230 +0.130	55 +0.099 +0.053	50 0 -0.025	55 +0.030 0	50.031	50.207	0.031	0.232
NWM 5058-XXX		58 +0.099 +0.053		58 +0.030 0				
NWM 5060-XXX		60 +0.099 +0.053		60 +0.030 0				
NWM 5560-XXX	55 +0.260 +0.140	60 +0.099 +0.053	55 0 -0.030	60 +0.030 0	55.041	55.237	0.041	0.267
NWM 5563-XXX		63 +0.099 +0.053		63 +0.030 0				
NWM 5565-XXX		65 +0.099 +0.053		65 +0.030 0				
NWM 6065-XXX	60 +0.254 +0.134	65 +0.099 +0.053	60 0 -0.030	65 +0.030 0	60.035	60.231	0.035	0.261
NWM 6070-XXX	60 +0.260 +0.140	70 +0.105 +0.059		70 +0.030 0				
NWM 6570-XXX	65 +0.260 +0.140	70 +0.105 +0.059	65 0 -0.030	70 +0.030 0	65.035	65.231	0.035	0.261
NWM 6575-XXX		75 +0.105 +0.059		75 +0.030 0				
NWM 7075-XXX	70 +0.270 +0.150	75 +0.105 +0.059	70 0 -0.030	75 +0.030 0	70.045	70.241	0.045	0.271
NWM 7080-XXX		80 +0.105 +0.059		80 +0.030 0				

MOSTUF NW Bearing (metric size)

Bearing part number	d	D	Shaft (h7)	Housing (H7)	Inside Diameter after pressing-in		Running Clearance	
					min	max	min	max
NWM 7580-XXX	75 +0.270 +0.150	80 +0.125 +0.071	75 0 -0.030	80 +0.030 0	75.025	75.229	0.025	0.259
NWM 7585-XXX		85 +0.125 +0.071		85 +0.035 0	75.025	75.234	0.025	0.264
NWM 8085-XXX	80 +0.270 +0.150	85 +0.125 +0.071	80 0 -0.030	85 +0.035 0	80.025	80.234	0.025	0.264
NWM 8090-XXX		90 +0.125 +0.071		90 +0.035 0				
NWM 8590-XXX	85 +0.310 +0.170	90 +0.125 +0.071	85 0 -0.035	90 +0.035 0	85.045	85.274	0.045	0.309
NWM 8595-XXX		95 +0.125 +0.071		95 +0.035 0				
NWM 9095-XXX	90 +0.302 +0.162	95 +0.125 +0.071	90 0 -0.035	95 +0.035 0	90.037	90.266	0.037	0.301
NWM 90100-XXX		100 +0.125 +0.071		100 +0.035 0				
NWM 90105-XXX	90 +0.310 +0.170	105 +0.133 +0.079		105 +0.035 0				
NWM 95100-XXX	95 +0.302 +0.162	100 +0.125 +0.071	95 0 -0.035	100 +0.035 0	95.037	95.266	0.037	0.301
NWM 95105-XXX	95 +0.310 +0.170	105 +0.133 +0.079		105 +0.035 0				
NWM 95110-XXX		110 +0.133 +0.079		110 +0.035 0				
NWM 100105-XXX	100 +0.310 +0.170	105 +0.133 +0.079	100 0 -0.035	105 +0.035 0	100.037	100.266	0.037	0.301
NWM 100110-XXX		110 +0.133 +0.079		110 +0.035 0				
NWM 100115-XXX		115 +0.133 +0.079		115 +0.035 0				
NWM 105110-XXX	105 +0.320 +0.180	110 +0.133 +0.079	105 0 -0.035	110 +0.035 0	105.047	105.276	0.047	0.311
NWM 105115-XXX		115 +0.133 +0.079		115 +0.035 0				
NWM 105120-XXX		120 +0.133 +0.079		120 +0.035 0				
NWM 110115-XXX	110 +0.320 +0.180	115 +0.155 +0.092	110 0 -0.035	115 +0.035 0	110.025	110.263	0.025	0.298
NWM 110120-XXX		120 +0.155 +0.092		120 +0.035 0				
NWM 110125-XXX		125 +0.155 +0.092		125 +0.040 0	110.025	110.268	0.025	0.303
NWM 120125-XXX	120 +0.320 +0.180	125 +0.155 +0.092	120 0 -0.035	125 +0.040 0	120.025	120.268	0.025	0.303
NWM 120130-XXX		130 +0.155 +0.092		130 +0.040 0				
NWM 120135-XXX		135 +0.155 +0.092		135 +0.040 0				
NWM 130135-XXX	130 +0.352 +0.192	135 +0.155 +0.092	130 0 -0.040	135 +0.040 0	130.037	130.300	0.037	0.340
NWM 130140-XXX		140 +0.155 +0.092		140 +0.040 0				
NWM 130145-XXX	130 +0.360 +0.200	145 +0.163 +0.100		145 +0.040 0				
NWM 140145-XXX	140 +0.360 +0.200	145 +0.163 +0.100	140 0 -0.040	145 +0.040 0	140.037	140.300	0.037	0.340
NWM 140150-XXX		150 +0.163 +0.100		150 +0.040 0				
NWM 140155-XXX		155 +0.163 +0.100		155 +0.040 0				
NWM 150155-XXX	150 +0.362 +0.202	155 +0.163 +0.100	150 0 -0.040	155 +0.040 0	150.039	150.302	0.039	0.342
NWM 150160-XXX		160 +0.163 +0.100		160 +0.040 0				
NWM 150165-XXX	150 +0.370 +0.210	165 +0.171 +0.108		165 +0.040 0				

1/8″ wall series - MOSTUF NW Bearing (inch sizes) - standard products, NWI XXXX-XXX

Bearing part number	Nominal Size	d	D	Recommended Housing Bore	Press Fit	Recommended Shaft Size
NWI 0812-XXX	1/2 x 3/4	0.5040 0.5020	0.7515 0.7505	0.7500 0.7495	0.0020 0.0005	0.4990 0.4985
NWI 1014-XXX	5/8 x 7/8	0.6290 0.6270	0.8765 0.8755	0.8750 0.8745	0.0020 0.0005	0.6240 0.6235
NWI 1216-XXX	3/4 x 1	0.7555 0.7525	1.0025 1.0005	1.0000 0.9995	0.0030 0.0005	0.7490 0.7485
NWI 1418-XXX	7/8 x 1-1/8	0.8805 0.8775	1.1275 1.1255	1.1250 1.1245	0.0030 0.0005	0.8745 0.8740
NWI 1620-XXX	1 x 1-1/4	1.0055 1.0025	1.2525 1.2505	1.2500 1.2495	0.0030 0.0005	0.9990 0.9985
NWI 1822-XXX	1-1/8 x 1-3/8	1.1335 1.1305	1.3785 1.3765	1.3750 1.3745	0.0040 0.0015	1.1250 1.1245
NWI 2024-XXX	1-1/4 x 1-1/2	1.2555 1.2525	1.5025 1.5005	1.5000 1.4995	0.0030 0.0005	1.2490 1.2485
NWI 2226-XXX	1-3/8 x 1-5/8	1.3830 1.3790	1.6285 1.6265	1.6250 1.6245	0.0040 0.0015	1.3745 1.3735
NWI 2428-XXX	1-1/2 x 1-3/4	1.5080 1.5040	1.7535 1.7515	1.7500 1.7495	0.0040 0.0015	1.4995 1.4990
NWI 2630-XXX	1-5/8 x 1-7/8	1.6330 1.6290	1.8785 1.8765	1.8750 1.8745	0.0040 0.0015	1.6245 1.6240
NWI 2832-XXX	1-3/4 x 2	1.7580 1.7540	2.0035 2.0015	2.0000 1.9995	0.0040 0.0015	1.7495 1.7490
NWI 3236-XXX	2 x 2-1/4	2.0080 2.0040	2.2535 2.2515	2.2505 2.2495	0.0040 0.0010	1.9995 1.9985
NWI 3640-XXX	2-1/4 x 2-1/2	2.2580 2.2540	2.5040 2.5020	2.5005 2.4995	0.0045 0.0015	2.2490 2.2485
NWI 3842-XXX	2-3/8 x 2-5/8	2.3850 2.3810	2.6290 2.6270	2.6255 2.6245	0.0045 0.0015	2.3750 2.3740
NWI 4044-XXX	2-1/2 x 2-3/4	2.5100 2.5060	2.7540 2.7520	2.7505 2.7495	0.0045 0.0015	2.4995 2.4985
NWI 4246-XXX	2-5/8 x 2-7/8	2.6370 2.6330	2.8790 2.8770	2.8755 2.8745	0.0045 0.0015	2.6245 2.6235
NWI 4448-XXX	2-3/4 x 3	2.7620 2.7580	3.0040 3.0020	3.0005 2.9990	0.0050 0.0015	2.7495 2.7485
NWI 4852-XXX	3 x 3-1/4	3.0140 3.0100	3.2540 3.2520	3.2505 3.2490	0.0050 0.0015	2.9995 2.9985
NWI 5256-XXX	3-1/4 x 3-1/2	3.2640 3.2600	3.5040 3.5020	3.5010 3.4990	0.0050 0.0010	3.2495 3.2485
NWI 5660-XXX	3-1/2 x 3-3/4	3.5140 3.5100	3.7540 3.7520	3.7510 3.7490	0.0050 0.0010	3.4995 3.4985
NWI 6064-XXX	3-3/4 x 4	3.7640 3.7600	4.0040 4.0020	4.0010 3.9990	0.0050 0.0010	3.7495 3.7485
NWI 6468-XXX	4 x 4-1/4	4.0140 4.0100	4.2540 4.2520	4.2510 4.2490	0.0050 0.0010	3.9995 3.9985
NWI 6872-XXX	4-1/4 x 4-1/2	4.2640 4.2600	4.5040 4.5020	4.5010 4.4990	0.0050 0.0015	4.2495 4.2485
NWI 7276-XXX	4-1/2 x 4-3/4	4.5140 4.5100	4.7540 4.7520	4.7510 4.7490	0.0050 0.0010	4.4995 4.4985
NWI 7680-XXX	4-3/4 x 5	4.7640 4.7600	5.0040 5.0020	5.0010 4.9990	0.0050 0.0010	4.7495 4.7485
NWI 8084-XXX	5 x 5-1/4	5.0140 5.0100	5.2540 5.2520	5.2510 5.2490	0.0050 0.0010	4.9995 4.9985

NWG Series - 1/8″

1/8″ wall series - MOSTUF NW Bearing (inch sizes) - option products, NWG XXXX-XXX

Bearing part number	Nominal Size	d	D	Recommended Housing Bore	Recommended Shaft Size	Running Clearance
NWG 0812-XXX	1/2 x 3/4	0.5070	0.7535	0.7505	0.5000	0.0065
		0.5040	0.7515	0.7500	0.4995	0.0005
NWG 1014-XXX	5/8 x 7/8	0.6320	0.8785	0.8755	0.6250	0.0065
		0.6290	0.8765	0.8750	0.6245	0.0005
NWG 1216-XXX	3/4 x 1	0.7570	1.0035	1.0005	0.7500	0.0065
		0.7540	1.0015	1.0000	0.7495	0.0005
NWG 1418-XXX	7/8 x 1-1/8	0.8820	1.1285	1.1255	0.8750	0.0065
		0.8790	1.1265	1.1250	0.8745	0.0005
NWG 1620-XXX	1 x 1-1/4	1.0070	1.2535	1.2505	1.0000	0.0065
		1.0040	1.2515	1.2500	0.9995	0.0005
NWG 1822-XXX	1-1/8 x 1-3/8	1.1320	1.3785	1.3755	1.1250	0.0065
		1.1290	1.3765	1.3750	1.1245	0.0005
NWG 2024-XXX	1-1/4 x 1-1/2	1.2570	1.5035	1.5005	1.2500	0.0065
		1.2540	1.5015	1.5000	1.2495	0.0005
NWG 2226-XXX	1-3/8 x 1-5/8	1.3820	1.6285	1.6255	1.3750	0.0065
		1.3790	1.6265	1.6250	1.3745	0.0005
NWG 2428-XXX	1-1/2 x 1-3/4	1.5070	1.7535	1.7505	1.5000	0.0065
		1.5040	1.7515	1.7500	1.4995	0.0005
NWG 2630-XXX	1-5/8 x 1-7/8	1.6320	1.8785	1.8755	1.6250	0.0065
		1.6290	1.8765	1.8750	1.6245	0.0005
NWG 2832-XXX	1-3/4 x 2	1.7580	2.0035	2.0005	1.7500	0.0075
		1.7550	2.0015	2.0000	1.7495	0.0015
NWG 3034-XXX	1-7/8 x 2-1/8	1.8830	2.1285	2.1255	1.8750	0.0075
		1.8800	2.1265	2.1250	1.8745	0.0015
NWG 3236-XXX	2 x 2-1/4	2.0095	2.2545	2.2510	2.0000	0.0085
		2.0055	2.2525	2.2500	1.9995	0.0010
NWG 3438-XXX	2-1/8 x 2-3/8	2.1345	2.3795	2.3760	2.1250	0.0085
		2.1305	2.3775	2.3750	2.1245	0.0010
NWG 3640-XXX	2-1/4 x 2-1/2	2.2595	2.5045	2.5010	2.2500	0.0085
		2.2555	2.5025	2.5000	2.2495	0.0010
NWG 3842-XXX	2-3/8 x 2-5/8	2.3845	2.6295	2.6260	2.3750	0.0090
		2.3805	2.6275	2.6250	2.3740	0.0010
NWG 4044-XXX	2-1/2 x 2-3/4	2.5100	2.7545	2.7510	2.5000	0.0095
		2.5060	2.7525	2.7500	2.4990	0.0015
NWG 4448-XXX	2-3/4 x 3	2.7600	3.0050	3.0015	2.7500	0.0095
		2.7560	3.0030	3.0000	2.7490	0.0010
NWG 4852-XXX	3 x 3-1/4	3.0105	3.2550	3.2515	3.0000	0.0100
		3.0065	3.2530	3.2500	2.9990	0.0015
NWG 5256-XXX	3-1/4 x 3-1/2	3.2605	3.5055	3.5020	3.2500	0.0100
		3.2565	3.5035	3.5000	3.2490	0.0010
NWG 5660-XXX	3-1/2 x 3-3/4	3.5105	3.7555	3.7520	3.5000	0.0100
		3.5065	3.7535	3.7500	3.4990	0.0010
NWG 6064-XXX	3-3/4 x 4	3.7605	4.0055	4.0020	3.7500	0.0100
		3.7565	4.0035	4.0000	3.7490	0.0010
NWG 6468-XXX	4 x 4-1/4	4.0140	4.2570	4.2520	4.0000	0.0130
		4.0090	4.2540	4.2500	3.9990	0.0020
NWG 6872-XXX	4-1/4 x 4-1/2	4.2640	4.5070	4.5020	4.2500	0.0130
		4.2590	4.5040	4.5000	4.2490	0.0020
NWG 7276-XXX	4-1/2 x 4-3/4	4.5140	4.7570	4.7520	4.5000	0.0130
		4.5090	4.7540	4.7500	4.4990	0.0020
NWG 7680-XXX	4-3/4 x 5	4.7640	5.0070	5.0020	4.7500	0.0130
		4.7590	5.0040	5.0000	4.7490	0.0020
NWG 8084-XXX	5 x 5-1/4	5.0140	5.2570	5.2520	5.0000	0.0130
		5.0090	5.2540	5.2500	4.9990	0.0020

1/8″ wall series - MOSTUF NW Bearing (inch sizes) - option products, NWP XXXX-XXX

Bearing part number	Nominal Size	d	D	Recommended Housing Bore	Press Fit	Recommended Shaft Size	Running Clearance
NWP 0812-XXX	1/2 x 3/4	0.5088	0.7545	0.7520	0.0045	0.5000	0.0103
		0.5058	0.7525	0.7500	0.0005	0.4980	0.0013
NWP 1014-XXX	5/8 x 7/8	0.6339	0.8796	0.8770	0.0046	0.6230	0.0104
		0.6309	0.8776	0.8750	0.0005	0.6250	0.0013
NWP 1216-XXX	3/4 x 1	0.7590	1.0046	1.0020	0.0046	0.7500	0.0104
		0.7560	1.0026	1.0000	0.0006	0.7480	0.0014
NWP 1418-XXX	7/8 x 1-1/8	0.8841	1.1297	1.1270	0.0047	0.8750	0.0105
		0.8811	1.1277	1.1250	0.0006	0.8730	0.0014
NWP 1620-XXX	1 x 1-1/4	1.0092	1.2547	1.2520	0.0047	1.0000	0.0105
		1.0062	1.2527	1.2500	0.0007	0.9980	0.0015
NWP 1822-XXX	1-1/8 x 1-3/8	1.1344	1.3798	1.3770	0.0048	1.1250	0.0107
		1.1314	1.3778	1.3750	0.0007	1.1230	0.0016
NWP 2024-XXX	1-1/4 x 1-1/2	1.2594	1.5048	1.5020	0.0048	1.2500	0.0106
		1.2564	1.5028	1.5000	0.0008	1.2480	0.0016
NWP 2226-XXX	1-3/8 x 1-5/8	1.3856	1.6299	1.6270	0.0049	1.3750	0.0117
		1.3816	1.6279	1.6250	0.0008	1.3730	0.0017
NWP 2428-XXX	1-1/2 x 1-3/4	1.5107	1.7549	1.7520	0.0049	1.5000	0.0118
		1.5067	1.7529	1.7500	0.0009	1.4980	0.0018
NWP 2630-XXX	1-5/8 x 1-7/8	1.6358	1.8800	1.8770	0.0050	1.6250	0.0118
		1.6318	1.8780	1.8750	0.0009	1.6230	0.0018
NWP 2832-XXX	1-3/4 x 2	1.7609	2.0050	2.0020	0.0050	1.7500	0.0119
		1.7569	2.0030	2.0000	0.0010	1.7480	0.0019
NWP 3034-XXX	1-7/8 x 2-1/8	1.8860	2.1301	2.1270	0.0051	1.8750	0.0119
		1.8820	2.1281	2.1250	0.0011	1.8730	0.0019
NWP 3236-XXX	2 x 2-1/4	2.0111	2.2551	2.2520	0.0051	2.0000	0.0120
		2.0071	2.2531	2.2500	0.0011	1.9980	0.0020
NWP 3438-XXX	2-1/8 x 2-3/8	2.1373	2.3812	2.3780	0.0062	2.1250	0.0132
		2.1333	2.3792	2.3750	0.0012	2.1230	0.0021
NWP 3640-XXX	2-1/4 x 2-1/2	2.2623	2.5062	2.5030	0.0062	2.2500	0.0131
		2.2583	2.5042	2.5000	0.0012	2.2480	0.0021
NWP 3842-XXX	2-3/8 x 2-5/8	2.3875	2.6313	2.6280	0.0063	2.3750	0.0132
		2.3835	2.6293	2.6250	0.0013	2.3730	0.0022
NWP 4044-XXX	2-1/2 x 2-3/4	2.5126	2.7563	2.7530	0.0063	2.5000	0.0133
		2.5086	2.7543	2.7500	0.0013	2.4980	0.0023
NWP 4448-XXX	2-3/4 x 3	2.7628	3.0064	3.0030	0.0064	2.7500	0.0144
		2.7588	3.0044	3.0000	0.0014	2.7470	0.0024
NWP 4852-XXX	3 x 3-1/4	3.0130	3.2565	3.2530	0.0065	3.0000	0.0145
		3.0090	3.2545	3.2500	0.0015	2.9970	0.0025
NWP 5256-XXX	3-1/4 x 3-1/2	3.2632	3.5066	3.5030	0.0066	3.2500	0.0146
		3.2592	3.5046	3.5000	0.0016	3.2470	0.0026
NWP 5660-XXX	3-1/2 x 3-3/4	3.5135	3.7567	3.7530	0.0067	3.5000	0.0148
		3.5095	3.7547	3.7500	0.0017	3.4970	0.0028
NWP 6064-XXX	3-3/4 x 4	3.7637	4.0068	4.0030	0.0068	3.7500	0.0149
		3.7597	4.0048	4.0000	0.0018	3.7470	0.0029
NWP 6468-XXX	4 x 4-1/4	4.0139	4.2569	4.2530	0.0069	4.0000	0.0150
		4.0099	4.2549	4.2500	0.0019	3.9970	0.0030
NWP 6872-XXX	4-1/4 x 4-1/2	4.2641	4.5070	4.5030	0.0070	4.2500	0.0151
		4.2601	4.5050	4.5000	0.0020	4.2470	0.0031
NWP 7276-XXX	4-1/2 x 4-3/4	4.5144	4.7571	4.7530	0.0071	4.5000	0.0153
		4.5104	4.7551	4.7500	0.0021	4.4970	0.0033
NWP 7680-XXX	4-3/4 x 5	4.7646	5.0072	5.0030	0.0072	4.7500	0.0154
		4.7606	5.0052	5.0000	0.0022	4.7470	0.0034
NWP 8084-XXX	5 x 5-1/4	5.0148	5.2573	5.2530	0.0073	5.0000	0.0155
		5.0108	5.2553	5.2500	0.0023	4.9970	0.0035

NWI Series - 1/4″

1/4″ wall series - MOSTUF NW Bearing (inch sizes) - standard products, NWI XXXX-XXX

Bearing part number	Nominal Size	d	D	Recommended Housing Bore	Press Fit	Recommended Shaft Size
NWI 0816-XXX	1/2 x 1	0.5040 0.5020	1.0025 1.0005	1.0000 0.9995	0.0030 0.0005	0.4990 0.4985
NWI 1018-XXX	5/8 x 1-1/8	0.6290 0.6270	1.1275 1.1255	1.1250 1.1245	0.0030 0.0005	0.6240 0.6235
NWI 1220-XXX	3/4 x 1-1/4	0.7555 0.7525	1.2525 1.2505	1.2500 1.2495	0.0030 0.0005	0.7490 0.7485
NWI 1422-XXX	7/8 x 1-3/8	0.8805 0.8775	1.3785 1.3765	1.3750 1.3745	0.0040 0.0015	0.8745 0.8740
NWI 1624-XXX	1 x 1-1/2	1.0055 1.0025	1.5025 1.5005	1.5000 1.4995	0.0030 0.0005	0.9990 0.9985
NWI 1826-XXX	1-1/8 x 1-5/8	1.1335 1.1305	1.6285 1.6265	1.6250 1.6245	0.0040 0.0015	1.1250 1.1245
NWI 2028-XXX	1-1/4 x 1-3/4	1.2555 1.2525	1.7535 1.7515	1.7500 1.7495	0.0040 0.0015	1.2490 1.2485
NWI 2230-XXX	1-3/8 x 1-7/8	1.3830 1.3790	1.8785 1.8765	1.8750 1.8745	0.0040 0.0015	1.3745 1.3740
NWI 2432-XXX	1-1/2 x 2	1.5080 1.5040	2.0035 2.0015	2.0000 1.9995	0.0040 0.0015	1.4995 1.4990
NWI 2634-XXX	1-5/8 x 2-1/8	1.6330 1.6290	2.1285 2.1265	2.1255 2.1245	0.0040 0.0015	1.6246 1.6240
NWI 2836-XXX	1-3/4 x 2-1/4	1.7580 1.7540	2.2535 2.2515	2.2505 2.2495	0.0040 0.0010	1.7495 1.7490
NWI 3240-XXX	2 x 2-1/2	2.0080 2.0040	2.5040 2.5020	2.5005 2.4995	0.0045 0.0015	1.9995 1.9985
NWI 3644-XXX	2-1/4 x 2-3/4	2.2580 2.2540	2.7540 2.7520	2.7505 2.7495	0.0045 0.0015	2.2490 2.2480
NWI 3846-XXX	2-3/8 x 2-7/8	2.3850 2.3810	2.8790 2.8770	2.8755 2.8745	0.0045 0.0015	2.3750 2.3740
NWI 4048-XXX	2-1/2 x 3	2.5100 2.5060	3.0040 3.0020	3.0005 2.9990	0.0050 0.0015	2.4995 2.4990
NWI 4250-XXX	2-5/8 x 3-1/8	2.6370 2.6330	3.1290 3.1270	3.1255 3.1240	0.0050 0.0015	2.6245 2.6240
NWI 4452-XXX	2-3/4 x 3-1/4	2.7620 2.7580	3.2540 3.2520	3.2505 3.2490	0.0050 0.0015	2.7495 2.7485
NWI 4856-XXX	3 x 3-1/2	3.0140 3.0100	3.5040 3.5020	3.5010 3.4990	0.0050 0.0010	2.9995 2.9985
NWI 5260-XXX	3-1/4 x 3-3/4	3.2640 3.2600	3.7540 3.7520	3.7510 3.7490	0.0050 0.0010	3.2495 3.2485
NWI 5664-XXX	3-1/2 x 4	3.5140 3.5100	4.0040 4.0020	4.0010 3.9990	0.0050 0.0010	3.4995 3.4985
NWI 6068-XXX	3-3/4 x 4-1/4	3.7640 3.7600	4.2540 4.2520	4.2510 4.2490	0.0050 0.0010	3.7495 3.7485
NWI 6472-XXX	4 x 4-1/2	4.0140 4.0100	4.5040 4.5020	4.5010 4.4990	0.0050 0.0010	3.9995 3.9985
NWI 6876-XXX	4-1/4 x 4-3/4	4.2640 4.2600	4.7540 4.7520	4.7510 4.7490	0.0050 0.0010	4.2495 4.2485
NWI 7280-XXX	4-1/2 x 5	4.5140 4.5100	5.0040 5.0020	5.0010 4.9990	0.0050 0.0010	4.4995 4.4985
NWI 7684-XXX	4-3/4 x 5-1/4	4.7640 4.7600	5.2540 5.2520	5.2510 5.2490	0.0050 0.0010	4.7495 4.7485
NWI 8088-XXX	5 x 5-1/2	5.0140 5.0100	5.5040 5.5020	5.5010 5.4990	0.0050 0.0010	4.9995 4.9985

1/4″ wall series - MOSTUF NW Bearing (inch sizes) - option products, NWG XXXX-XXX

Bearing part number	Nominal Size	d	D	Recommended Housing Bore	Recommended Shaft Size	Running Clearance
NWG 0816-XXX	1/2 x 1	0.5070 0.5040	1.0035 1.0015	1.0005 1.0000	0.5000 0.4995	0.0065 0.0005
NWG 1018-XXX	5/8 x 1-1/8	0.6320 0.6290	1.1285 1.1265	1.1255 1.1250	0.6250 0.6245	0.0065 0.0005
NWG 1220-XXX	3/4 x 1-1/4	0.7570 0.7540	1.2535 1.2515	1.2505 1.2500	0.7500 0.7495	0.0065 0.0005
NWG 1422-XXX	7/8 x 1-3/8	0.8820 0.8790	1.3785 1.3765	1.3755 1.3750	0.8750 0.8745	0.0065 0.0005
NWG 1624-XXX	1 x 1-1/2	1.0070 1.0040	1.5035 1.5015	1.5005 1.5000	1.0000 0.9995	0.0065 0.0005
NWG 1826-XXX	1-1/8 x 1-5/8	1.1320 1.1290	1.6285 1.6265	1.6255 1.6250	1.1250 1.1245	0.0065 0.0005
NWG 2028-XXX	1-1/4 x 1-3/4	1.2570 1.2540	1.7535 1.7515	1.7505 1.7500	1.2500 1.2495	0.0065 0.0005
NWG 2230-XXX	1-3/8 x 1-7/8	1.3820 1.3790	1.8785 1.8765	1.8755 1.8750	1.3750 1.3745	0.0065 0.0005
NWG 2432-XXX	1-1/2 x 2	1.5070 1.5040	2.0035 2.0015	2.0005 2.0000	1.5000 1.4995	0.0065 0.0005
NWG 2634-XXX	1-5/8 x 2-1/8	1.6320 1.6290	2.1285 2.1265	2.1255 2.1250	1.6250 1.6245	0.0065 0.0005
NWG 2836-XXX	1-3/4 x 2-1/4	1.7580 1.7550	2.2545 2.2525	2.2510 2.2500	1.7500 1.7495	0.0070 0.0005
NWG 3038-XXX	1-7/8 x 2-3/8	1.8830 1.8800	2.3795 2.3775	2.3760 2.3750	1.8750 1.8745	0.0070 0.0005
NWG 3240-XXX	2 x 2-1/2	2.0095 2.0055	2.5045 2.5025	2.5010 2.5000	2.0000 1.9995	0.0085 0.0010
NWG 3442-XXX	2-1/8 x 2-5/8	2.1345 2.1305	2.6295 2.6275	2.6260 2.6250	2.1250 2.1245	0.0085 0.0010
NWG 3644-XXX	2-1/4 x 2-3/4	2.2595 2.2555	2.7545 2.7525	2.7510 2.7500	2.2500 2.2495	0.0085 0.0010
NWG 3846-XXX	2-3/8 x 2-7/8	2.3845 2.3805	2.8795 2.8775	2.8760 2.8750	2.3750 2.3740	0.0090 0.0010
NWG 4048-XXX	2-1/2 x 3	2.5100 2.5060	3.0050 3.0030	3.0015 3.0000	2.5000 2.4990	0.0095 0.0010
NWG 4452-XXX	2-3/4 x 3-1/4	2.7600 2.7560	3.2550 3.2530	3.2515 3.2500	2.7500 2.7490	0.0095 0.0010
NWG 4856-XXX	3 x 3-1/2	3.0105 3.0065	3.5055 3.5035	3.5020 3.5000	3.0000 2.9990	0.0100 0.0010
NWG 5260-XXX	3-1/4 x 3-3/4	3.2605 3.2565	3.7555 3.7535	3.7520 3.7500	3.2500 3.2490	0.0100 0.0010
NWG 5664-XXX	3-1/2 x 4	3.5105 3.5065	4.0055 4.0035	4.0020 4.0000	3.5000 3.4990	0.0100 0.0010
NWG 6068-XXX	3-3/4 x 4-1/4	3.7605 3.7565	4.2555 4.2535	4.2520 4.2500	3.7500 3.7490	0.0100 0.0010
NWG 6472-XXX	4 x 4-1/2	4.0140 4.0090	4.5070 4.5040	4.5020 4.5000	4.0000 3.9990	0.0130 0.0020
NWG 6876-XXX	4-1/4 x 4-3/4	4.2640 4.2590	4.7570 4.7540	4.7520 4.7500	4.2500 4.2490	0.0130 0.0020
NWG 7280-XXX	4-1/2 x 5	4.5140 4.5090	5.0070 5.0040	5.0020 5.0000	4.5000 4.4990	0.0130 0.0020
NWG 7684-XXX	4-3/4 x 5-1/4	4.7640 4.7590	5.2570 5.2540	5.2520 5.2500	4.7500 4.7490	0.0130 0.0020
NWG 8088-XXX	5 x 5-1/2	5.0140 5.0090	5.5070 5.5040	5.5020 5.5000	5.0000 4.9990	0.0130 0.0020

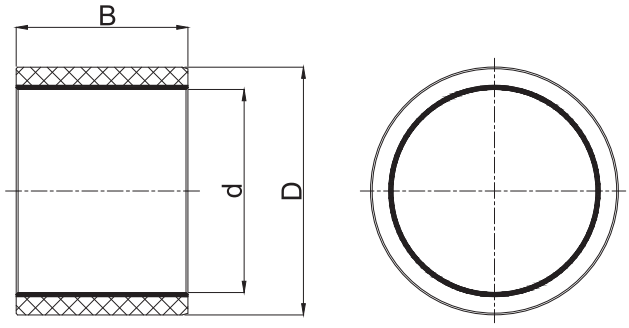
NWP Series - 1/4″

1/4″ wall series - MOSTUF NW Bearing (inch sizes) - option products, NWP XXXX-XXX

Bearing part number	Nominal Size	d	D	Recommended Housing Bore	Press Fit	Recommended Shaft Size	Running Clearance
NWP 0816-XXX	1/2 x 1	0.5088	1.0045	1.0020	0.0045	0.5000	0.0103
		0.5058	1.0025	1.0000	0.0005	0.4980	0.0013
NWP 1018-XXX	5/8 x 1-1/8	0.6339	1.1296	1.1270	0.0046	0.6250	0.0104
		0.6309	1.1276	1.1250	0.0005	0.6230	0.0013
NWP 1220-XXX	3/4 x 1-1/4	0.7590	1.2546	1.2520	0.0046	0.7500	0.0104
		0.7560	1.2526	1.2500	0.0006	0.7480	0.0014
NWP 1422-XXX	7/8 x 1-3/8	0.8841	1.3797	1.3770	0.0047	0.8750	0.0105
		0.8811	1.3777	1.3750	0.0006	0.8730	0.0014
NWP 1624-XXX	1 x 1-1/2	1.0092	1.5047	1.5020	0.0047	1.0000	0.0105
		1.0062	1.5027	1.5000	0.0007	0.9980	0.0015
NWP 1826-XXX	1-1/8 x 1-5/8	1.1344	1.6298	1.6270	0.0048	1.1250	0.0107
		1.1314	1.6278	1.6250	0.0007	1.1230	0.0016
NWP 2028-XXX	1-1/4 x 1-3/4	1.2594	1.7548	1.7520	0.0048	1.2500	0.0106
		1.2564	1.7528	1.7500	0.0008	1.2480	0.0016
NWP 2230-XXX	1-3/8 x 1-7/8	1.3856	1.8799	1.8770	0.0049	1.3750	0.0117
		1.3816	1.8779	1.8750	0.0008	1.3730	0.0017
NWP 2432-XXX	1-1/2 x 2	1.5107	2.0049	2.0020	0.0049	1.5000	0.0118
		1.5067	2.0029	2.0000	0.0009	1.4980	0.0018
NWP 2634-XXX	1-5/8 x 2-1/8	1.6358	2.1300	2.1270	0.0050	1.6250	0.0118
		1.6318	2.1280	2.1250	0.0009	1.6230	0.0018
NWP 2836-XXX	1-3/4 x 2-1/4	1.7609	2.2550	2.2520	0.0050	1.7500	0.0119
		1.7569	2.2530	2.2500	0.0010	1.7480	0.0019
NWP 3038-XXX	1-7/8 x 2-3/8	1.8860	2.3801	2.3770	0.0051	1.8750	0.0119
		1.8820	2.3781	2.3750	0.0011	1.8730	0.0019
NWP 3240-XXX	2 x 2-1/2	2.0111	2.5051	2.5020	0.0051	2.0000	0.0120
		2.0071	2.5031	2.5000	0.0011	1.9980	0.0020
NWP 3442-XXX	2-1/8 x 2-5/8	2.1373	2.6312	2.6280	0.0062	2.1250	0.0132
		2.1333	2.6292	2.6250	0.0012	2.1230	0.0021
NWP 3644-XXX	2-1/4 x 2-3/4	2.2623	2.7562	2.7530	0.0062	2.2500	0.0131
		2.2583	2.7542	2.7500	0.0012	2.2480	0.0021
NWP 3846-XXX	2-3/8 x 2-7/8	2.3875	2.8813	2.8780	0.0063	2.3750	0.0132
		2.3835	2.8793	2.8750	0.0013	2.3730	0.0022
NWP 4048-XXX	2-1/2 x 3	2.5126	3.0063	3.0030	0.0063	2.5000	0.0133
		2.5086	3.0043	3.0000	0.0013	2.4980	0.0023
NWP 4452-XXX	2-3/4 x 3-1/4	2.7628	3.2564	3.2530	0.0064	2.7500	0.0144
		2.7588	3.2544	3.2500	0.0014	2.7470	0.0024
NWP 4856-XXX	3 x 3-1/2	3.0130	3.5065	3.5030	0.0065	3.0000	0.0145
		3.0090	3.5045	3.5000	0.0015	2.9970	0.0025
NWP 5260-XXX	3-1/4 x 3-3/4	3.2632	3.7566	3.7530	0.0066	3.2500	0.0146
		3.2592	3.7546	3.7500	0.0016	3.2470	0.0026
NWP 5664-XXX	3-1/2 x 4	3.5135	4.0067	4.0030	0.0067	3.5000	0.0148
		3.5095	4.0047	4.0000	0.0017	3.4970	0.0028
NWP 6068-XXX	3-3/4 x 4-1/4	3.7637	4.2568	4.2530	0.0068	3.7500	0.0149
		3.7597	4.2548	4.2500	0.0018	3.7470	0.0029
NWP 6472-XXX	4 x 4-1/2	4.0139	4.5069	4.5030	0.0069	4.0000	0.0150
		4.0099	4.5049	4.5000	0.0019	3.9970	0.0030
NWP 6876-XXX	4-1/4 x 4-3/4	4.2641	4.7570	4.7530	0.0070	4.2500	0.0151
		4.2601	4.7550	4.7500	0.0020	4.2470	0.0031
NWP 7280-XXX	4-1/2 x 5	4.5144	5.0071	5.0030	0.0071	4.5000	0.0153
		4.5104	5.0051	5.0000	0.0021	4.4970	0.0033
NWP 7684-XXX	4-3/4 x 5-1/4	4.7646	5.2572	5.2530	0.0072	4.7500	0.0154
		4.7606	5.2552	5.2500	0.0022	4.7470	0.0034
NWP 8088-XXX	5 x 5-1/2	5.0148	5.5073	5.5030	0.0073	5.0000	0.0155
		5.0108	5.5053	5.5000	0.0023	4.9970	0.0035

베어링 설계 기초자료 (Data for bearing design)

적용 부분에 대한 설명	Description of application	☐	기존설계	Existing design
		☐	신규설계	New design
		Quantity / Month		
☐	요동운동 Oscillating motion	☐	회전운동 Rotational motion	☐ 직선운동 Liner motion



치 수 (Dimensions) [mm or inch]		
내 경 (d)	Inner diameter	
외 경 (D)	Outer diameter	
길 이 (B)	Length	
샤프트 치수	Shaft	
하우징 치수	Housing	

하 중 (Loading)		
정 하 중	Static	☐
동 하 중	Dynamic	☐
교번하중	Alternating	☐
충격하중	Impact	☐
반경방향하중 (kN)	Radial load	

상대 축 (Mating Material)		
재질	Material	
경도 (HRC)	Hardness	
조도 (Ra.um)	Roughness	
표면처리	Surface treatment	

운동방식 (Motion)		
회전속도 (rpm)	Rotational speed	
요동반각 (°, β)	Half turning angle	
요동빈도 (cycles/min)	Oscillating frequency	
스트로그 길이	Length of stroke	
스트로그 빈도 (/min)	Frequency of stroke	

운전시간 (Operating time)		
연속운전	Continuous operation	☐
단속운전	Intermittent operation	☐
운전일수 (day / year)	Operating days	

환경조건 (Environmental conditions)		
주변온도 (℃)	Ambient Temperature	
사용최대온도 (℃)	Max. Temp.	
사용최소온도 (℃)	Min. Temp.	
윤활	Lubrication	
오염	Contamination	

Remarks

Company name	
Contact person	
Mobile phone	
E-mail	

MOSTUF NW

High Performance Composite Bearing

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